Chapter 4
Comments and Responses

This section contains the comment letters that were received on the Draft EIR. Following each comment letter is a response intended to either: supplement, clarify, or amend information provided in the Draft EIR and/or refer the reader to the appropriate place in the document where the requested information can be found. Comments that are not directly related to environmental issues may be discussed or noted for the record. Where text changes in the Draft EIR are warranted based upon comments on the Draft EIR, those changes are generally included following the response to comment.

Letter 1

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
111 GRAND AVENUE
P. O. BOX 23660
OAKLAND, CA 94623-0660
PHONE (510) 622-5491
FAX (510) 286-5559
TTY 711

Flex your power!
Be energy efficient!

September 21, 2009

SM084125
SM-84-R26.037
SCH# 2005062161

Mr. Thomas Rogers
City of Menlo Park
Community Development Department/Planning Division
701 Laurel Street
Menlo Park, CA 94025

Dear Mr. Rogers:

MENLO GATEWAY PROJECT – DRAFT ENVIRONMENTAL IMPACT REPORT AND TECHNICAL APPENDIX A

Thank you for continuing to include the California Department of Transportation (Department) in the environmental review process for the Menlo Gateway Project. The following comments are based on the Draft Environmental Impact Report (DEIR) and Appendix A. Our previous comments still apply and are incorporated here by reference. 1-0

Environmental Maintenance and Maintenance Services
The proposed project is located along the frontage road near northbound (NB) US-101 at the State Route (SR) 84 and Marsh Road interchange (I/C). A mixed-use development of this magnitude will have impacts on maintenance of the state facility. Potential maintenance impacts such as litter and trash, wear and tear on pavement, load onto drainage systems, and vandalism on the state facility need to be addressed. Since the Department's maintenance resource is limited, the City of Menlo Park should require maintenance agreement(s) with the project proponent as a condition of approval. The Department enters into maintenance agreements only with the local agency. Options such as the Adopt a Highway program could be initiated and implemented by the local agency. 1-1

The Department's facility, Henderson pump, is located just south of the US-101/Marsh Road I/C. This pump floods during heavy rains and storms. Therefore, any potential surface water generated by this proposed development needs to be kept away from this drainage system within state right of way (ROW). 1-2

Please note that the Department plans to do the following work in the project vicinity. These roadway projects should be taken into account when planning your construction schedule: 1-3

1. Asphalt concrete resurfacing on US-101 near the project vicinity beginning in the Spring 2009 and ending Summer 2010.
2. Auxiliary lanes and other roadway improvement beginning Spring 2011 and ending in the Fall 2013.

Letter 1

Highway Operations

1. During the construction period, we recommend using alternative routes other than Constitution Drive during PM peak hours. We anticipate that construction vehicles entering Constitution Drive would cause significant traffic impedance to EB Marsh Road resulting in a traffic backup for any given time period due to the lack of a right-turn deceleration and refuge lane, geometric curvature, proximity to the NB Marsh Road off-ramp, and high eastbound (EB) traffic volumes. 1-4
2. Page 3.11-6: The US-101 and SR 84 level of service (LOS) should not be considered LOS F, based on the 1990-1991 monitoring program of San Mateo County Congestion Management Program 2009 (CMP). The LOS should be re-evaluated to reflect current proposed freeway projects. 1-5
3. Independence Drive from Marsh Road has direct access to both project sites. There needs to be mitigation measures to improve ingress and/or reconfigure the geometrics in order to implement the auxiliary lanes from Marsh Road to Embarcadero Road interchanges in order to reduce the US-101 from LOS F to LOS E. 1-6
4. Page3.11-41, TR-3.1: The DEIR should be updated to reflect the Department's proposed project to build auxiliary lanes from Marsh Road to the Embarcadero Road interchanges. 1-7

Signal Operations

Page 3.11-2: Study intersections 12, 14, and 15 need to be improved. We recommend the following improvements:

1. Intersection 12: Chrysler Drive left-turn needs to be a double left-turn lane. 1-8
2. Intersection 14: US-101 SB left-turn may cause problems. Please provide additional storage length. 1-9
3. Intersection 15: US-101 NB right-turn may cause problems. Please provide additional storage length. 1-10

Community Planning

Table 3.11-10, page 3.11-41: The proposed project will worsen the unacceptable condition of LOS F on SR 84 and US-101 north of Marsh Road and south of Willow Road. The Department encourages the City to make the additional improvements, including refreshing crosswalk striping and providing a complete pedestrian network. These additional improvements along with implementing the Transportation Demand Management (TDM) program will promote pedestrian travel and reduce vehicle trips and impacts on the state highway system. 1-11

Please feel free to call or email Sandra Finegan of my staff at (510) 622-1644 or sandra_finegan@dot.ca.gov with any questions regarding this letter.

Sincerely,

Lisa Carboni

LISA CARBONI
District Branch Chief
Local Development – Intergovernmental Review

c: State Clearinghouse

Letter 1: STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Response to Comment 1-0

Please see Responses to Comments 1-1 through 1-11, below that addresses the comments raised by Caltrans.

Response to Comment 1-1

The comment is referencing long-term maintenance of a state highway. The comment does not concern the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. The concern raised by Caltrans is noted and the City of Menlo Park will take it into consideration relative to the project.

Response to Comment 1-2

Drainage from the project site would not drain towards the Henderson pump. As discussed in the Preliminary Hydrology Report[1] prepared for the project site, both the existing and proposed project site drainage is currently discharged to underground storm drains that discharge to a pump station located at the northeast corner of the Constitution Drive site.

The Caltrans right-of-way is located outside the project boundary, near the intersection of Marsh Road and Bayfront Expressway and will be landscaped with a pathway connecting the project site to Marsh Road. The area of this off-site parcel is approximately 22,100 square feet (sf). Runoff flows overland to a series of inlets that deliver flow to the existing 24-inch storm drain at the intersection of Marsh Road and Bayfront Expressway. The Caltrans right-of-way would be relatively unchanged in land use from existing conditions. The peak runoff from this area was approximately 0.5 cfs for the 10-year event and 0.7 cfs for the 100-year event for both existing and proposed conditions. Therefore, the proposed project would not contribute more stormwater runoff to the Caltrans right-of-way or the Henderson pump.

Response to Comment 1-3

The comment does not concern the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The roadway projects identified will be taken into account during project construction if the project is approved. As part of a standard condition of approval, the project sponsor will provide a traffic construction plan that indicates truck routes during construction, which would ensure there would be no conflicts with any proposed or ongoing roadway construction in the area.

---

[1] Philip Williams & Associates, Ltd., June 3, 2009. Preliminary Hydrology Report, Menlo Gateway Project 100-190 Independence Drive & 101-155 Constitution Drive Menlo Park.

Response to Comment 1-4

The City will require that the project sponsor or developer prepare a construction traffic management plan prior to commencement of construction. The suggestion of alternate routes will be considered.

Response to Comment 1-5

The original project was analyzed in 2005 under the LOS criteria described in the latest available CMP which was the 2003 CMP for San Mateo County. The project analysis only includes future projects that are fully funded. As of mid-October 2009, the proposed auxiliary lanes on US 101 between the Marsh Road and Embarcadero Road interchanges have only been approved for future consideration of funding. Additional capacity provided by the auxiliary lane project would most likely not eliminate the project-related impact for the Route of Regional Significance on US 101 south of Willow Road (see Table 1-5, below). For this impact to be eliminated, the capacity would need to more than triple.

Table 1-5: Routes of Regional Significance-Project Conditions

Route	Segment	Existing LOS[1]	LOS Standard[1]	Estimated Capacity (vph)	Net-New Project Trips[2]	Percent of Capacity	Significant Impact?
SR 82	South of Ravenswood Ave.	D	E	3,420[3]	6	<1 %	N
SR 82	North of Fair Oaks Ln.	D	E	3,420[3]	15	<1 %	N
SR 84	East of University	F	F	6,900	136	2.0 %	Y
US 101	South of Willow Rd.	F	F	9,200	291	3.2 %	Y
US 101	North of Marsh Rd.	F	F	9,200	82	<1 %	N

Notes:
1. Source: 2003 San Mateo County CMP Monitoring Report.
2. For peak direction of project traffic.
3. Based on 60 percent green time of 1900 vehicles per hour per lane saturation flow rate.

Response to Comment 1-6

No physical aspect of the project has any impact on the proposed auxiliary lanes on US 101 between the Marsh Road and Embarcadero Road interchanges. There are no known ingress or geometric conflicts of the project with the auxiliary lane project.

Response to Comment 1-7

Please see Response to Comment 1-5, above regarding the inclusion and effect of the proposed auxiliary lanes between the Marsh Road and Embarcadero Road interchanges.

Response to Comment 1-8

The Draft EIR considers adding an additional eastbound left turn only lane and restriping the existing eastbound right turn only lane to a shared left-right turn lane as mitigation, which mitigate the project's potential impact, but is considered infeasible due to right-of-way limitations and Caltrans' jurisdiction. Therefore, Caltrans' suggestion as to a "double left turn" lane would be unnecessary.

Response to Comment 1-9

Caltrans expresses a concern that the US 101 southbound off-ramp left turn may experience a queue that backs up onto the highway. The City of Menlo Park Traffic Impact Analysis Guidelines does not include significance thresholds for off-ramps. Thus, the text presented in this response is for informational purposes only, and is not considered part of the EIR impact analysis.

The southbound left queue capacity is approximately 760 feet long and has the capacity to handle approximately 38 vehicles. Under the Long Term without Project Condition, the southbound left turn 95th percentile queue would extend to 17 vehicles during the AM peak period and 45 vehicles during the PM peak hour. Thus, under the Long Term No Project Condition, the queue would extend beyond the ramp capacity during the PM peak hour by about 7 vehicles. Under the Long Term plus Project Condition, the southbound left turn 95th percentile queue would reach 19 vehicles during the AM peak period and 49 vehicles during the PM peak period. The proposed project would add an additional 4 vehicles to the southbound left-turn queue during the long term PM peak hour. It is anticipated that, based on this analysis, an additional 240-foot southbound left off-ramp lane would be needed to accommodate the total queue demand. However, the queue capacity was not analyzed and no mitigation is required because the City does not have established significance thresholds for off-ramps.

Response to Comment 1-10

The comment expresses a concern that the northbound right turn queue at the intersection of Marsh Road and the US 101 northbound ramps would extend into northbound US 101. As noted above in Response to Comment 1-9, the City of Menlo Park Traffic Impact Analysis Guidelines does not include significance thresholds for off-ramps. Thus, the text presented in this response is for informational purposes only.

The northbound right turn queue capacity is approximately 500 feet or 25 vehicles at this location. Under the Long Term without Project Condition, the northbound right turn 95th percentile queue would reach 15 vehicles during the AM peak hour and 5 vehicles during the PM peak hour. Under the Long Term plus Project Condition, the northbound right turn 95th percentile queue would reach 31 vehicles during the AM peak hour and 11 vehicles during the PM peak hour. It is anticipated that an additional 140-foot northbound right lane would be needed to accommodate the AM peak hour 95th percentile queue; however, the queue capacity was not analyzed because the City does not have established significance thresholds for off-ramps and no mitigation is required. Furthermore, the aforementioned auxillary lane project between the Embarcadero Road and Marsh Road interchanges will add an auxillary lane, thus reducing queuing on the freeway through lanes.

Response to Comment 1-11

As discussed on page 3.11-42 of the Draft EIR under Impact TR-5, the proposed project includes bicycle, pedestrian, and transportation demand management (TDM) program elements. The proposed project would provide enhanced bicycle and pedestrian connectivity measures, a more complete network of pathways, and amenities to reduce single occupant vehicle trips and encourage the use of

non-auto travel. The City may consider requiring any additional elements as conditions of approval. As part of the project, crosswalks within the project site will be restriped to promote pedestrian safety and to encourage pedestrian activity.

As noted on page 3.11-42 of the Draft EIR,

> Class II bicycle facilities currently exist in the project vicinity and near the project area along Willow Road and Bay Road. A Class I bicycle facility exists along Bayfront Expressway between Haven Avenue and the Dumbarton Bridge, which provides a divided bicycle facility. In the immediate vicinity of the project area, there are no bicycle lanes on local and collector streets, and cyclists must share the roadways with vehicular traffic. The proposed project includes a TDM program, as detailed in Chapter 2, Project Description and is included as Appendix J in the Draft EIR. The TDM program would incorporate small plazas and public gathering spaces that would encourage pedestrian use. Sidewalks would be provided adjacent to and within the project area, and would promote linkages to and from the Bayfront Park area, as well as to blocks located in the center of the project area. Additionally, as part of the project, landscaping would be provided to encourage pedestrian and bicycle trips. Additionally, walkway linkages would be provided between the two sites. The project proposes to promote bicycle use and provides storage lockers, showers and bike racks in accordance with the TDM plan.
>
> The various bicycle-related TDM measures are anticipated to result in a small reduction of vehicle trips. Similar land uses in the vicinity of the proposed project currently generate a relatively low number of bicycle trips and the proposed project is anticipated to generate a low number of bicycle trips. Potentially significant impacts to bicycle and pedestrian access, safety and facilities are not anticipated.
>
> The City of Menlo Park has several projects listed in the City's Bicycle Development Plan:
>
> 1. Class I Connector Path along Independence Drive – a combined bike and pedestrian path from Constitution Drive to the corner of Marsh Road and Bayfront Expressway
>
> 2. Class II Bike Lanes on Marsh Road between Bay Road and Bayfront Expressway
>
> 3. Class III Bike Route on Constitution Drive from Marsh Road to Chilco Street
>
> The first and third bike project is included as a part of the proposed project. The Class I connector path along Independence Drive would be constructed by the project sponsor and the Class III bike route signs would be installed along Constitution Drive. The Class II bike lanes on Marsh Road between Bay Road and Bayfront Expressway would include lateral space concerns and is partially in Caltrans' jurisdiction. As such, this improvement is not a part of the project. With these bikeway and pedestrian improvements, the proposed project is not anticipated to create significant impacts to bike and pedestrian facilities.

Planning Division
1017 Middlefield Road
P.O. Box 391
Redwood City, CA 94063

Telephone (650) 780-7234
Email: jekas@redwoodcity.org
Website: www.redwoodcity.org
Fax: 650-780-0128

September 16, 2009

Mr. Thomas Rogers
Associate Planner
City of Menlo Park
701 Laurel Street
Menlo Park, CA 94025

RECEIVED
SEP 22 2009
CITY OF MENLO PARK
BUILDING

Dear Mr. Rogers

The City of Redwood City appreciates the opportunity to comment on the Menlo Gateway Project Draft Environmental Impact Report. As indicated in my e-mail dated August 6, there are two significant development projects being proposed in South Redwood City that may contribute traffic to the Marsh Road/Highway 101 Interchange and should be included in your traffic analysis. First, the Stanford Medical Clinic Project would occupy 35 acres of a larger 48 acre office campus that is bisected by Broadway, Highway 101, Bay Road, Second Avenue and Douglas Avenue in Redwood City. It would include Stanford University administrative offices, R & D, and a medical clinic. Redwood City staff is preparing an EIR for the project and will notify the EIR consultant of your project. More details on the project are located on the City's web site at: http://www.redwoodcity.org/cds/planning/stanford_in_redwoodcity/index.html 2-1

The second project is the Saltworks development proposal which is located in the northeastern portion of Redwood City, east of Seaport Boulevard and north of U.S. Highway 101. If approved, the project would consist of 8,000 - 12,000 residential units with open space and other land uses. More details on the project are located on the City's web site at: http://www.redwoodcity.org/cds/planning/saltworks/index.asp 2-2

According you your e-mail dated August 6, both projects were considered in the cumulative analysis of the Menlo Gateway Project Draft EIR via the 1 percent annual growth factor applied to the existing traffic neighborhood. Our Engineering staff has reviewed this methodology and factor, and finds them acceptable. Also our Engineering staff has determined that there would be no significant infrastructure impacts created on Redwood City. 2-3

Also as addressed in my previous e-mail, Redwood City would appreciate if you could put on your mailing list the Friendly Acres Neighborhood Association which is the closest Redwood City neighborhood to your project. The contact is Bonnie Miller, Chair, 1224 5th Avenue, Redwood City, Ca. 94063. Also you might also want to contact the Fair Oaks Neighborhood Association which is located in the unincorporated area of 2-4

San Mateo County (between Atherton and Redwood City). The San Mateo County Planning Department should have a contact for that organization. 2-4 (cont.)

Once again, thank you for the opportunity to comment on the project. Feel free to contact me at 650-780-7237 if you have any questions.

Sincerely,

Tom Passanisi
Principal Planner

C: Jill Ekas, Planning Manager
Peter Vorametsanti, City Engineeer

Letter 2: CITY OF REDWOOD CITY, PLANNING DIVISION

Response to Comment 2-1

CEQA Guidelines section 15125 requires that an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published. The NOP was published in May 2007, before certain projects mentioned by the commentor were in the development pipeline.

Nevertheless, in an attempt to effectively "capture" potential cumulative impacts from future projects, a growth factor has been incorporated into the cumulative traffic analysis to account for additional traffic associated with projects that are not yet approved. It is expected that this growth factor of one percent per year would address the effects of projects such as Stanford Medical Clinic Project identified by the City of Redwood City on the roadways and intersections studied.

Response to Comment 2-2

As noted in Response to Comment 2-1, above, a growth factor has been incorporated into the cumulative traffic analysis to account for additional traffic associated with projects that are not yet approved. The Saltworks project has not yet been analyzed or approved by the City of Redwood City.

Response to Comment 2-3

The commentor concurs with the use of the one percent growth factor applied in the Menlo Gateway cumulative traffic analysis as adequately addressing the potential traffic effects of the Stanford Medical Clinic Project and the Saltworks development. Accordingly, no further response is warranted in this Final EIR document.

Response to Comment 2-4

The comment does not concern the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. .While a response is not required to comply with CEQA, the following information is provided for clarification. The City sent letters in early August 2009 to the Friendly Acres and Fair Oaks neighborhood associations informing them about the project and providing information on how to sign up for future project bulletins.

Town of Atherton

Town Administrative Offices
91 Ashfield Road
Atherton, California 94027
650-752-0500
Fax 650-688-6528

September 21, 2009

RECEIVED
SEP 21 2009
CITY OF MENLO PARK
BUILDING

Community Development Department
City of Menlo Park
701 Laurel Street
Menlo Park, CA 94025

RE: Menlo Gateway Project Draft Environmental Impact Report

Ladies and Gentlemen,

The Town of Atherton staff and Transportation Committee have reviewed the Menlo Gateway Project Draft Environmental Impact Report (DEIR) dated July 2009 and have the following comments. 3-0

Air Quality

The project would create new area and mobile sources of air pollutants that would exceed BAAQMD's significance thresholds. This is a significant and unavoidable impact where no mitigation measures are available. 3-1

Traffic and Circulation

The traffic analysis apparently does not include proposed developments on El Camino Real in the background traffic calculation because they have not yet been approved. We believe this is in error and that those projects should be included in the background traffic. 3-2

The project would increase congestion and delays at several intersections and roadway segments during peak hours causing a significant impact to the operation of the intersections listed below (only intersections and segments that could effect a substantial number of Atherton residents are cited): 3-3

Marsh Road between Bohannan Drive and Bay Road

The EIR contains a statement "There is no feasible mitigation measure to reduce the proposed project related traffic impacts to the segment of Marsh Road from Scott Drive to Bohannan Drive to less-than-significant levels." 3-3 (cont.)

Marsh Road between Bay Road and Middlefield Road

Also under the traffic section, it is noted that the Bohannan Drive to Bay Road segment of Marsh Road increases by 2508 vehicles. The Marsh Road/Bay Road to Middlefield Road segment was not included in the study, apparently because the report authors did not have the Atherton "significance criteria". As in the past, Atherton agrees that Menlo Park may apply their significance criteria to impacts in our jurisdiction. It is suspected that the majority of vehicles traveling on that segment (Bohannan Drive to Bay Road) will continue to Middlefield Road, with only a small diversion to Bay Road. This means that Marsh Road between Bay Road and Middlefield Road will be impacted and the impact is not covered by the study. Due to the magnitude of this project, significant traffic impacts may be far reaching. The study limits need to be extended as needed to adequately define the significant impacts. 3-4

Middlefield Road North of Marsh Road

The next segment that needs additional study is Middlefield Road north of Marsh Road. The intersection study indicates most of the traffic will go to and come from the north on Middlefield Road. This will then impact that segment of Middlefield Road. It is unclear what route the traffic will take north of Marsh Road. If it goes to 5th Avenue, then the intersection of 5th Avenue and El Camino Real should be studied, along with the intervening County intersections. Here, San Mateo County should be involved since they would have to agree to any widening or other physical changes beyond the Atherton city limits. If it goes to Fair Oaks Lane, then that street and the intersection of Fair Oaks Lane and El Camino Real should be studied. 3-5

In addition, impacts to the North Fair Oaks community should be emphasized, including Atherton streets such as Holbrook Lane, Palmer Lane and San Benito Avenue. 3-6

US 101 North of Marsh Road

The EIR contains a statement "There is no feasible mitigation measure to reduce this impact to less-than-significant." 3-7

Marsh Road/Bohannan Drive Intersection

Although the EIR contains recommended mitigation measures for reduction of this impact, the document concludes that "The impact would remain significant and unavoidable with implementation of this mitigation measure due to the need for coordination with the City of Redwood City." 3-8

Marsh Rood/Middlefield Road (Atherton) 3-9

The EIR analysis of traffic at this intersection indicates that it would operate at acceptable levels under cumulative future conditions without the proposed project. Operation projections are level of service (LOS) D during the AM peak hour and LOS E during the PM peak hour. However, addition of the proposed project would increase the delay time and decrease the level of service to LOS D during the AM peak hour and LOS F during the PM peak hour at this intersection. A mitigation measure suggested in the EIR includes adding a second southbound left-turn only lane from Middlefield Road to Marsh Road and widening Marsh Road to provide two receiving lanes. The measure would also require obtaining additional right-of-way to accomplish. Approval by the Town of Atherton is required for implementation. 3-9 (cont.)

In this analysis it is noted that the Marsh/Middlefield intersection AM LOS reduces from C to D with a delay increase of 24% or 6.5 seconds (from 27 seconds to 33.5 seconds). The PM LOS stays at LOS D but the delay increases by a significant 42% or 15.2 seconds (from 36.5 seconds to 51.7 seconds). This means that the PM peak hour is more significantly effected than the AM, with more than double the delay increase. This is a significant impact by any test. 3-10

Under Public Resources Code section 21081, Menlo Park cannot certify an EIR that identifies significant effects unless certain findings are made. Of relevance here is that Menlo Park must either require mitigation or make a finding that: "Those changes or alterations [i.e., mitigation measures] are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency." (Pub. Resources Code, § 21081(a)(2); see also CEQA Guideline 15091.) 3-11

Here, the DEIR analysis is inadequate because it is not sufficient to state that mitigation is infeasible because mitigation measures would require coordination with another public agency. Such a location focuses on the geographic location of the impact, rather than on whether Menlo Park has the power to impose the mitigation through conditions of approval. (Remy, et al., *Guide to CEQA* (2007), p. 388; see also CEQA Guideline 15402.) For example, in the seminal case of *Citizens for Quality Growth v. City of Mount Shasta* (1988) 198 Cal.App.3d 433, 441, the appellate court found that the city erred in not incorporating any proposed mitigation measures after the EIR identified a significant impact. Specifically, the petitioners had contended that the city erred in failing to consider one feasible mitigation measure, which was subject to the jurisdiction of another agency. (*Id.* at 441, fn. 8.) The appellate court rejected the city's argument that it need not consider a mitigation measure outside its jurisdiction, and stated: "*Each* public agency is required to comply with CEQA and meet its responsibilities, including evaluating mitigation measures and project alternatives....Upon remand...the City must give this proposal [mitigation measure outside its jurisdiction] due consideration." (*Ibid.* (emphasis in original).) Thus, under *Citizens for Quality Growth*, the DEIR's conclusion that mitigation measures are infeasible because implementation requires coordination with other public agencies is inadequate. 3-12

With this amount of delay additional traffic will divert to County and Atherton roadways, specifically Holbrook Lane. This diversion needs additional study similar to the study for the Encinal School project. 3-13

In conclusion, the traffic analysis is focused too narrowly on Menlo Park streets, and does not adequately consider the impacts to regional roadways, such as Marsh Road and Middlefield Road, and roadways in other jurisdictions, such as Fair Oaks Lane. 3-14

Mitigation

The study needs to consider other approaches to mitigation for the Marsh/ Middlefield intersection impacts. One mitigation already identified by the Town of Atherton is the traffic signal at Encinal Avenue. By reducing the backup along Middlefield Road, the delays at the Marsh Road intersection can be at least partially mitigated. This will be far less costly than adding a second lane on Marsh Road to receive dual left turn lanes (that would require a box culvert for the Atherton Channel, a multi-million dollar proposition). Traffic impact fees should be directed from the project to this solution. 3-15

Other more creative and less costly solutions, perhaps without impacts of their own (such as covering the channel may have), should be developed and considered. 3-16

However, it is noted that widening Middlefield Road and Marsh Road to get traffic more easily out of Town may be far more desirable than widening it into Town. Such a solution would help in the AM peak hour also by reducing the green time required for the movement, freeing green time for the other intersection movements and reducing the delay all around. 3-17

The widening, if extended to the four-lane section in the County north of Jennings Lane, could mitigate for the increased traffic on Marsh Road. Perhaps the report's authors could consider a three lane section, two outbound and one inbound. Alternatively the two outbound lanes at the intersection would merge and the three lane section could continue with a center left-turn lane that would mitigate the impacts to the residents of the street by allowing better and safer access, especially in light of the increased traffic volumes. The turn lane would also provide a turn lane for Fair Oaks Avenue. Bike lanes would provide safer right turns into and out of driveways. Removing these turning movements from the through lanes would improve conditions for the through traffic. 3-18

And what mitigation is proposed for the increased traffic on Middlefield Road between Marsh and Fair Oaks Lane, to the Middlefield/Fair Oaks intersection, to Fair Oaks Lane and to the El Camino Real intersections with Fair Oaks Lane and 5th Avenue? How would residents of Heritage Court access Middlefield Road? Would traffic be diverted to Holbrook Lane to the detriment of that residential neighborhood? 3-19 3-20

The following criteria are suggested for impacts to local streets:

Daily volumes that are in excess of the Atherton General Plan Circulation Element standard of 1,000 vehicles per day for residential streets are considered to be already impacted. Any additional traffic added to these streets would increase this discrepancy. Mitigation would be required as follows:

1. Actions of project will not further degrade the Level of Service or average delay at the public street intersections adjacent to the impacted streets. 3-21
2. If traffic is increased on any already impacted residential street as a result of project actions there needs to be a compensating improvement to average delay at the street's intersections. The compensating improvement to average delay will be in proportion to the increase in traffic on the residential street. 3-22

How this mitigation is accomplished is the purpose of the study. A collaborative effort by the impacted responsible agencies and the traffic and engineering consultants should begin to address the mitigation of these far reaching impacts. 3-23

Bicycles

If Marsh Road were to be widened, bicycle lanes could be added to Marsh Road to provide non-motorized access to the project. This is also an effective mitigation for traffic by helping to get people out of their cars. The bike lanes would need to be extended through the County and Menlo Park (supposedly included in Menlo Park plans already), with adequate treatment through the US 101 interchange by modifying the ramps to create intersections that can more easily be crossed by bicycles, or by creating bicycle lanes between the ramp lanes and the through lanes. A separate bicycle/pedestrian bridge from the project to Bohannan Drive at Scott Drive may be even more desirable and effective in converting drivers to riders. 3-24

A comprehensive bicycle solution may be far more effective than street widening and signal modifications. If it is easy and safe to ride to work, many will do it. If there is one unsafe bottleneck on the route, such as Marsh Road from Middlefield Road to Fair Oaks Avenue, few will ride. Note that Marsh Road is shown as a suggested east-west bicycle route on the San Mateo County Comprehensive Bicycle Route Plan from Fair Oaks Avenue to the Bayfront Expressway. The portion from Middlefield to Fair Oaks Avenue is excluded because there is not room to ride. It would be necessary for the entire length of Marsh Road to have Class 2 bike lanes, so the County and Atherton need to be included in planning these mitigations. 3-25

Implementation

However, the comment regarding the Marsh/Middlefield intersection also states:

"However, the implementation of this mitigation measure is under the jurisdiction of the City of Atherton, and therefore, the impact to this intersection would not be reduced to a less-than-significant level." 3-26

The EIR should include a recommendation that the City of Menlo Park and the developer work with the Town of Atherton to require and facilitate implementation of the mitigation needed within the Atherton jurisdiction. At the very least the report should recommend designating Menlo Park project traffic impact fees go towards mitigation projects on the regional roadways such as Marsh Road, Middlefield Road and El Camino Real. The report should also contain recommendations that Menlo Park apply traffic impact fees to other jurisdictions to mitigate traffic impacts on their local streets. 3-27

Thank you for allowing us to comment on the DEIR.

Very truly yours,

Neal J. Martin, Town Planner

Duncan Jones, Public Works Director/
City Engineer

Cc: City Council
Planning Commission
Transportation Committee
Jerry Gruber, City Manager
Theresa DellaSanta, City Clerk
Wynne Furth, City Attorney
Lisa Costa Sanders, Deputy Town Planner

Letter 3: TOWN OF ATHERTON

Response to Comment 3-0

Please see Responses to Comments 3-1 through 3-27 that address the concerns raised by the Town of Atherton. The letter from the Town of Atherton asks for additional analysis, including the study of additional intersections and roadway segments. To the extent that information and traffic data was readily available and analyzed in the Draft EIR, the responses included below address the comments.

There is a good history of these two jurisdictions working cooperatively and jointly funding transportation improvements that are considered mutually beneficial to each community. There have been recent meetings and coordination efforts between the two communities to address some of the concerns associated with this project. As part of this cooperative effort, the City of Menlo Park has asked DKS Associates to test several possible improvement measures at the Middlefield Road/Marsh Road intersection, as noted in Responses to Comments 3-15 through 3-18.

Response to Comment 3-1

The commentor notes that the proposed project would generate significant and unavoidable air emissions, and no feasible mitigation measures are available to mitigate this impact to a less-than-significant level. The comment confirms information presented in the Draft EIR in Section 3.2, Air Quality.

Response to Comment 3-2

CEQA Guidelines section 15125 requires that an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published. The NOP was published in May 2007, before certain projects mentioned by the commentor were in the development pipeline.

However, it is the policy of the City of Menlo Park to include approved projects as well as pending projects (projects that have filed an application with the City) under the Background Scenario, and in the longer term Cumulative Scenario. Table 3.11-3 on page 3.11-17 in the Draft EIR identifies approved projects that were incorporated into the Background Scenario, including six projects along El Camino Real. For the longer term Cumulative Scenario, the City has included a growth factor to account for future projects that have not yet been approved. This growth factor is defined on page 3.11-43 of the Draft EIR as an increase of one percent per year.

Response to Comment 3-3

The commentor repeats a conclusion from the Draft EIR regarding the significant and unavoidable impact along Marsh Road between Bohannon Drive and Bay Road. The commentor does not question this conclusion, and no further response is warranted.

Response to Comment 3-4

When analyzing impacts on roadways or intersections in other jurisdictions, the City of Menlo Park applies the established criteria of the applicable jurisdiction and does not apply the City of Menlo Park's criteria. The segment on Marsh Road from Bay Road to Middlefield Road was considered as part of the traffic analysis due to the fact that the intersection of Marsh Road and Middlefield Road was analyzed using the applicable Town of Atherton criteria. One-third of the project-related traffic traveling along Marsh Road was assumed to dissipate in the residential neighborhoods surrounding Marsh Road, and the remaining project-generated traffic was presumed to split evenly between the north and south directions of Middlefield Road. Therefore, the study limits would not need to be extended as the commentor suggests.

Response to Comment 3-5

Please see Response to Comment 3-4, above, regarding traffic effects along Middlefield Road north of Marsh Road. Due to the effects of dissipating traffic, the likelihood of impacts at the intersections of El Camino Real/Fifth Avenue and El Camino Real/Fair Oaks Lane is minimal.

Response to Comment 3-6

Holbrook Lane and other streets such as Palmer Lane, Bay Road, and Ringwood Avenue offer possible alternatives to using Marsh Road. The traffic analysis assumed that project-generated traffic would use Marsh Road between Bayfront Expressway and Middlefield Road, as it is the most logical and convenient path of travel. The City of Menlo Park and Town of Atherton have been working cooperatively towards mutually beneficial traffic improvements so that motorists are not tempted to divert from Marsh Road onto other local streets. Traffic calming features already exist along some of these roadways, such as Bay Road (e.g., speed humps) and in the North Fair Oaks neighborhood of unincorporated San Mateo County (e.g., traffic circles).

Response to Comment 3-7

The commentor repeats a conclusion from the Draft EIR regarding the significant and unavoidable impact along US 101 north of Marsh Road. The commentor does not question this conclusion, and no further response is warranted.

Response to Comment 3-8

The commentor repeats a conclusion from the Draft EIR regarding the significant and unavoidable impact at the intersection of Marsh Road/Bohannon Drive under Long Term with Project conditions, since the potential mitigation measures may adversely affect residences in the City of Redwood City and thus may not be feasible, pending further coordination with the City of Redwood City. The commentor does not question this conclusion, and no further response is warranted.

Response to Comment 3-9

The commentor repeats a conclusion from the Draft EIR regarding the significant and unavoidable impact at the intersection of Marsh Road/Middlefield Road in the Town of Atherton under Long Term with Project conditions, since the potential mitigation measures would require approval by the Town of Atherton and there is no assurance that the Town could or would be interested in implementing the identified improvements. The commentor does not question this conclusion, and no further response is warranted in this Responses to Comments document.

Response to Comment 3-10

The significance criteria used in the Draft EIR are based on intersection level of service (see Table 3.11-2, Intersection #16 for the specific criterion applied to the Marsh Road/Middlefield Road intersection). The comment regarding the percent increase in delay is noted, but is not applicable to the impact significance determination which is based on degrading the level of service to E or F, or increasing the delay on the critical worst approach by 4 seconds if the intersection is currently at E or F.

Response to Comment 3-11

The City of Menlo Park is aware of its obligations under Public Resources Code section 21081 and will prepare Findings for each impact identified, as well as a Statement of Overriding Considerations for any impacts that were identified as being significant and unavoidable if the City elects to approve the project. Copies of the project Findings and Statement of Overriding Considerations will be included as part of the City's staff report regarding the Council's possible actions on the project's merits.

Response to Comment 3-12

Citizens for Quality Growth v. City of Mount Shasta (1988) 198 Cal. App. 3d 433,441 states each public agency is required to comply with CEQA and meet its responsibilities, including evaluating mitigation measures and project alternatives. Accordingly, the Draft EIR includes even consideration of some mitigation measures (specifically in Section 3.11, Traffic and Circulation) that are not under the responsibility and jurisdiction of the City of Menlo Park. For example, mitigation measures have been suggested for Bayfront Expressway/University, Marsh Road/US 101 northbound off-ramp, and Marsh Road/Middlefield Road, none of which are within the City of Menlo Park. Because these intersections lie outside the responsibility and jurisdiction of the City, the City is not able to enforce compliance with the mitigation through permit conditions or the Development Agreement. In those instances where the City has no mechanism to force the project applicant/sponsor to comply with the mitigation measures and no other feasible mitigation measures are available to reduce the impact to a less-than-significant level, the impact is determined to be significant and unavoidable. However, the City of Menlo Park pursuant to Public Resources Code section 21081(a)(2) and CEQA Guidelines section 15091(a)(2) can approve a project which has one or more significant environmental effects if it can, as here, make a finding that the proposed mitigation measure is within the responsibility and jurisdiction of another public agency; in this case, the Town of Atherton.

Response to Comment 3-13

Please see Response to Comment 3-6, above, regarding the likelihood of diversion of traffic from Marsh Road.

Response to Comment 3-14

The study area to assess traffic impacts was developed in cooperation with City of Menlo Park staff and considered those facilities that were most likely to be adversely affected by the proposed project. As traffic moves further from a proposed development site, it dissipates throughout the roadway network, making it more difficult to predict which streets or intersections may be significantly impacted.

The Draft EIR and supporting traffic study correctly analyzed intersections and roadway segments consistent with local and regional agency standards. Please see also Responses to Comments 3-4, 3-8, 3-9, and 3-12.

Response to Comment 3-15

As noted in the comment, the Town of Atherton has identified the need for a traffic signal at Middlefield Road and Encinal Avenue. This signal will be jointly funded by the City of Menlo Park, Town of Atherton, and Menlo Park City School District through a Memorandum of Understanding (MOU). It is agreed that traffic delays along Middlefield Road at Marsh Road would be somewhat alleviated by adding a signal improvement at the Middlefield Road/Encinal Avenue intersection. However, it is speculative to estimate at this time the extent to which there would be a reduction in delays, because this would be based on the signal timing plans at this intersection and the ability to achieve coordination in the signal timing plan.

Since receiving the comment letter from the Town of Atherton, City staff has met with staff from the Town of Atherton to discuss how the proposed mitigation measure could be accomplished within the existing right-of-way and without the need for the box culvert. The Draft EIR is being revised to reflect that Atherton may indeed be receptive to implementing the mitigation measure and that the Project would be responsible for its fair share cost of the intersection improvement based on the Project's contribution to long term traffic growth at the intersection.

Nevertheless, the suggested improvement measure is outside of the City of Menlo Park's responsibility and jurisdiction. Because the City of Menlo Park cannot compel the Town of Atherton to make these improvements, the EIR analysis conservatively assumes that mitigation would not occur and the impact would remain significant and unavoidable. However, the City of Menlo Park, pursuant to Public Resources Code section 21081(a)(2) and CEQA Guidelines section 15091(a)(2), can approve a project which has one or more significant environmental effects if it can, as here, make a finding that the proposed mitigation measure is within the responsibility and jurisdiction of another public agency; in this case, the Town of Atherton.

Response to Comment 3-16

Under Cumulative plus Project conditions, there would be an impact to the Marsh Road/Middlefield Road intersection. The Draft EIR analyzed the impacts at this intersection and put forth the mitigation to add a second southbound left turn only lane. In addition to the suggested mitigation measure in the Draft EIR, and the other improvements suggested in the Town of Atherton comment letter, other less costly measures were also considered. However, none of the other measures would reduce the potential project impact to a less-than-significant level.

Response to Comment 3-17

With respect to the suggestion to widen Marsh Road and Middlefield Road, this measure would increase the capacity of the two roadways and would presumably lessen queuing because vehicles would be able to turn more readily onto side streets. As described in the Draft EIR, this widening program would include an additional southbound left turn lane at the intersection of Marsh Road and Middlefield Road. As a result, two southbound left turn lanes would facilitate the movement of traffic from southbound Middlefield Road to eastbound Marsh Road.

Table 1, below, details the effect this additional capacity would have on the delays and levels of service (LOS) at this study intersection. As shown in the table, if the suggested improvement measure were feasible, the additional southbound left capacity would decrease the delay and improve the LOS at the intersection to acceptable levels of service.

Table 1
Marsh Road and Middlefield Road LOS with Additional Southbound Left Turn Lane

Condition	LOS from DEIR Analysis				LOS with Additional SB Left			
	AM		PM		AM		PM	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Existing	27.9	C	34.6	C	23.2	C	25.8	C
Near Term	27.0	C	36.5	D	22.9	C	26.2	C
Near Term plus Project	33.5	D	51.7	D	24.4	C	29.9	C
Long Term	38.6	D	68.1	E	26.5	C	34.8	C
Long Term plus Project	54.0	D	92.0	F	29.2	C	46.7	D
Near Term plus Alt 1	27.5	C	36.8	D	23	C	26.3	C
Long Term plus Alt 1	39.2	D	68.8	E	26.7	C	35.1	D
Near Term plus Alt 2	27.9	C	37.8	D	23.2	C	26.6	C
Long Term plus Alt 2	41.1	D	71.1	E	27	C	36.1	D
Near Term plus Alt 3	29.1	C	42.0	D	23.5	C	27.6	C
Long Term plus Alt 3	44.6	D	79.5	E	27.6	C	39.2	D
Near Term plus Alt 4	30.8	C	45.8	D	24	C	28.6	C
Long Term plus Alt 4	49.0	D	85.4	F	28.3	C	42.6	D
Near Term plus Alt 5	31.3	C	46.8	D	24.1	C	28.9	C
Long Term plus Alt 5	50.2	D	87.0	F	28.5	C	43.4	D

Source: DKS Associates, 2009.

Response to Comment 3-18

Please see Response to Comment 3-17, above, regarding widening of the Marsh Road/Middlefield Road intersection. Marsh Road between Middlefield Road and the County limit is not identified as an impact, and the project would not be required to provide improvements to this section of the roadway. The suggested improvement measure is outside of the City of Menlo Park's responsibility and jurisdiction. Because the City of Menlo Park cannot compel the Town of Atherton to make these improvements, the EIR analysis conservatively assumes that mitigation would not occur and the impact would remain significant and unavoidable. However, the City of Menlo Park, pursuant to Public Resources Code section 21081(a)(2) and CEQA Guidelines section 15091(a)(2), can approve a project which has one or more significant environmental effects if it can, as here, make a finding that the proposed mitigation measure is within the responsibility and jurisdiction of another public agency; in this case, the Town of Atherton.

Response to Comment 3-19

No mitigation is proposed for Middlefield Road beyond Marsh Road at this time. Holbrook Lane and other streets such as Palmer Lane, Bay Road, and Ringwood Avenue offer possible alternatives to using Marsh Road. The traffic analysis assumed that project-generated traffic would use Marsh Road between Bayfront Expressway and Middlefield Road, as it is the most logical and convenient path of travel. It is too speculative to estimate the volume of traffic that may divert to other routes. The City of Menlo Park and Town of Atherton have been working cooperatively towards mutually beneficial traffic improvements so that motorists are not tempted to divert from Marsh Road onto other streets. Please see Responses to Comments 3-6, 3-16 and 3-17, above.

Response to Comment 3-20

Please see Response to Comment 3-19, above.

Response to Comment 3-21

Please see Response to Comment 3-4, above.

Response to Comment 3-22

Please see Response to Comment 3-4, above, regarding the need for mitigation on Atherton's residential streets.

Response to Comment 3-23

Please see Response to Comment 3-4, above, regarding the need for mitigation on Atherton's residential streets.

Response to Comment 3-24

The commentor presents the benefits that could be realized if Marsh Road were to be widened. The Draft EIR does not propose this modification to Marsh Road, although such a measure may be worth pursuing if the Town of Atherton agreed to its implementation. As noted in Response to Comment 3-17, this proposal would be effective at reducing the intersection LOS to less than significant.

Page 3.11-42 of the Draft EIR provides a more detailed discussion of bicycle, pedestrian and transportation demand management (TDM) program elements. The project will provide enhanced bicycle and pedestrian connectivity and measures to reduce vehicle trips, as discussed in the Draft EIR. No modifications to the US 101 interchange at Marsh Road are proposed as part of this project or required as mitigation.

Response to Comment 3-25

The comment notes that a comprehensive bicycle solution may be more effective than street widening to address traffic impacts. As noted on page 3.11-42 of the Draft EIR, the project includes specific bicycle, pedestrian, and transportation demand management (TDM) program elements including providing shuttles to CalTrain, enhanced bicycle and pedestrian connectivity measures, a more complete network of pathways, and amenities to reduce single occupant vehicle trips and encourage the use of non-auto travel. The net effect of the TDM program and enhanced facilities in and around the site would be encouragement of pedestrian and bicycle use and a reduction in total vehicle miles traveled.

The City agrees that consideration should be given to the San Mateo County Comprehensive Bicycle Route Plan as well as coordination with the County of San Mateo and Town of Atherton when planning and implementing bicycle improvements in the study area.

Response to Comment 3-26

The comment is noted, please see Response to Comment 3-15.

Response to Comment 3-27

The City of Menlo Park and Town of Atherton have been working cooperatively towards mutually beneficial traffic improvements so that motorists are not tempted to divert from Marsh Road onto other streets. The City cannot, however, collect traffic impact fees and apply those fees to improvements in another jurisdiction, as suggested by the commentor, without an agreement in place. It should be also noted that the City of Menlo Park and the Town of Atherton staff have met recently to discuss traffic concerns associated with the Menlo Gateway project and to identify ways in which the neighboring jurisdictions can work together. Please see response to Comment 3-15, above.

Letter 4

Menlo Park Fire Protection District

300 Middlefield Road • Menlo Park, CA 94025 • Tel: 650.688.8400 • Fax: 650.323.9129
Website: www.menlofire.org • Email: mpfd@menlofire.org

Fire Chief
Harold Schapelhouma

Board of Directors
Bart Spencer
Rexford F. Ianson
Ollie Brown
Peter Carpenter
Peter Ohtaki

RECEIVED
SEP 21 2009
CITY OF MENLO PARK
BUILDING

September 21, 2009

Response to the Draft Environmental Impact Report
Menlo Gateway Project – SCH#2005062161
Fire and Emergency Services – Impacts and Mitigation Measures - 3.10

As was communicated to Tessa Munekiyo with Bay Area Economics on June 4, 2009, the Fire District believes that the Gateway Project will have a ***negative impact*** on its ability to provide proper emergency services to the project if multi-story structures (high rise) are constructed.

The reason for this impact is the District's ability to adequately respond to high rise structures with an aerial ladder truck. The Fire District's only aerial ladder truck is located at Fire Station 1 (300 Middlefield Road) which is 3.1 miles from the site.

Acceptable standards for urban aerial ladder truck coverage are based upon a maximum distance of 2.5 miles, thus the Fire District has deemed the coverage unacceptable and the impacts of the project as negative.

The Fire District has determined that the Gateway Project would trigger the need to convert an existing Engine Company located at Fire Station 77 (1467 Chilco Street) to a Truck company. For purposes of this report Engines carry hose and water while Trucks carry ladders and special rescue equipment for technical rescues associated with multi-story high rise structures. Engine companies are staffed with three personnel and Truck companies are often staffed with four personnel so three additional firefighters would be needed (one per shift) to staff the truck per the provisions of the Districts labor agreement. 4-1

While the District could move the existing aerial ladder truck closer to the project by locating it at Fire Station 77, such a move would compromise aerial truck service to the other portions of the of the Fire District, such as downtown Menlo Park and Sharon Heights unless the project provided for another aerial ladder truck on the eastern side of the city due to the impacts of this multi-story project.

The District anticipates that the one time cost of an aerial ladder truck is between $1 – 1.5m based upon specifications. Service life of an aerial ladder truck is anticipated at 12 – 15 years. Annual maintenance specific to an aerial ladder truck would cost the District an additional $1000.00 per year and personnel costs for three additional positions (one per shift) based upon each employees actual seniority, skills, pay grade and benefits could cost the Fire District between $165,700.00 – 244,887.03 per year.

The Fire District has communicated on several occasions that the impacts of high rise construction on the eastern edge of the City of Menlo Park and the Fire District will create additional demands on the Fire District. These demands can only be adequately mitigated through apparatus configuration and staffing changes due to the life safety and fire hazard challenges associated with multi-story, high rise, structures. 4-1 (cont.)

If you have any questions, please don't hesitate to contact me.

Thank You

Harold Schapelhouman, Fire Chief
Menlo Park Fire Protection District

Letter 4: MENLO PARK FIRE PROTECTION DISTRICT

Response to Comment 4-1

The Menlo Park Fire Protection District (District) states that the project would have a negative impact on providing proper emergency services because the project includes buildings over three stories in height. According to the District, "acceptable standards" require a ladder truck be located within 2.5 miles of the project site. According to the District, the closest aerial ladder truck is 3.1 miles from the site. Although this truck would have an 8 minute response time, which is in keeping with the applicable National Fire Protection Association's 1710 Standard, the District contends that there is a negative impact due to this distance. The District's letter and subsequent correspondence do not provide any citation to the legal authority supporting its position.

The Bay Area Economics (BAE) Fiscal Impact Analysis referenced in the District's letter states that the requirement for the proximity of an aerial truck (i.e. 2.5 miles) comes from the Insurance Services Organization (ISO) 2004 Public Protection Classification Study. ISO is the leading supplier of statistical, underwriting, and actuarial information for the property/casualty insurance industry. The ISO's 2004 Public Protection Classification Study states their report "is not for purposes of determining compliance with any state or local law, nor is it for making recommendations about loss prevention or life safety." As such, there is no legal basis for the District's assertion that a ladder truck must be located within 2.5 miles of the project site. The District's comment letter, therefore, does not provide the substantial evidence required by CEQA Guidelines section 15384(a) to support its claim as to a "negative impact."

The District's comment letter also does not indicate there is an actual physical impact to the environment. In fact, the majority of the District's letter relates only to the cost of a ladder truck. The District indicates it would need to "convert" an existing engine company into a truck company. Similarly, the BAE Fiscal Impact Analysis states that the existing engine would need to be "replaced" with a ladder truck. The cost of this ladder truck is considered in the BAE Fiscal Impact Analysis and the District's comment letter in the context of this need for conversion/replacement. However, CEQA only is concerned with physical impacts to the environment. Thus, the economic impact alleged, which is not mandated by the development of the project, is not a physical impact and; therefore, no change to the Draft EIR's analysis or conclusion is warranted, per CEQA Guidelines section 15382. In addition, if the District chose to replace the existing engine company with a truck company and that conversion required any modification to or remodel of the existing fire station, it would be an insignificant change that does not result in a substantial adverse physical impact on the environment. Again, as noted on page 3.10-3 of the Draft EIR, the relevant criterion for making a determination about the project's impact is whether it would "result in a substantial adverse physical impact associated with provision of new or physically altered police and/or fire protection and emergency services facilities …." As presented, the District's concerns do not raise issues with the adequacy of the DEIR or the City's implementation of CEQA.

Please see Chapter 2, Revisions to the Draft EIR, for additional clarification on information presented in the Draft EIR.

Letter 5

SAN FRANCISQUITO CREEK
Joint Powers Authority
www.sfcjpa.org

East Palo Alto, Menlo Park, Palo Alto, San Mateo County Flood Control District, and the Santa Clara Valley Water District

September 21, 2009

Mr. Thomas Rogers
Associate Planner
City of Menlo Park
701 Laurel Street
Menlo Park, CA 94025

Re: Menlo Gateway Project Draft Environmental Impact Report

Dear Mr. Rogers:

At the request of the City of Menlo Park and other agencies, the San Francisquito Creek Joint Powers Authority (SFCJPA) is engaged with the U.S. Army Corps of Engineers in a regional Feasibility Study, which takes into account the impact of tidal flooding on areas of the City, including the Menlo Gateway Project area. In this role, the SFCJPA has a responsibility to communicate the potential for and uncertainties around tidal flooding and future Sea Level Rise. 5-1

The Draft EIR lists impact HY-7 relative to the project's potential effect on flood flow and recommends mitigation measure HY-7-1. It also lists impact HY-8 relative to the risk of flooding to people or structures, and finds there is a Less than Significant Impact and thus no required mitigation measure. Subject to the completion of the Corps-SFCJPA study of tidal flooding and Sea Level Rise, any finding of impact or no impact at this location seems premature. 5-2

I would encourage those responsible for planning, designing and constructing the Menlo Gateway Project to remain diligent in regards to this issue, and aware of the progress and findings of the Corps-SFCJPA Study. My staff or I would be pleased to discuss this at any time. 5-3

Sincerely,

Len Materman
Executive Director

650-561-4580 * jpa@sfcjpa.org * 1231 Hoover Street * Menlo Park, CA 94025

Letter 5: SAN FRANCISQUITO CREEK JOINT POWERS AUTHORITY

Response to Comment 5-1

The City appreciates and acknowledges the commentor's role in dealing with the important matters of tidal flooding and future sea level rise. Please refer to Chapter 2 of this document, which contains revisions that have been made to the Draft EIR on these topics. Impact HY-7 and Impact HY-8, in particular, have been greatly expanded and contain new text to address tidal flooding and future sea level rise; this discussion is also described below in Response to Comment 5-2.

Response to Comment 5-2

CEQA requires that an EIR use the best available information. The Corps-SFCJPA study referenced in the comment has not been completed and therefore, any potential outcome of this study is speculative and cannot be considered in this CEQA analysis.

FEMA has already identified areas subject to tidal flooding on the official Flood Insurance Rate Map (FIRM), as noted in Section 3.5, Hydrology and Water Quality, under "Flooding" in the Setting section. Impact HY-8 on page 3.5-29 notes that the rate of existing sea level rise has been measured to be about 3.5 inches per century. Additionally, state and federal regulatory agencies review a range of possible scenarios when evaluating the potential risks and costs of sea level rise for future development projects. For planning purposes, the USACE evaluates three scenarios of sea level rise; low risk, assuming a sea level rise of 19.7 inches (0.5 meters) by 2100; moderate risk, assuming a sea level rise of 39.4 inches (1.0 meters) by 2100; and, high risk, assuming a sea level rise of 59.0 inches (1.5 meters) by 2100.[2] California Executive Order S-13-08 (November 14, 2008) states that all state agencies planning construction projects in areas vulnerable to future sea level rise shall consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability, and, to the extent feasible, reduce expected risks, and increase resiliency to sea level rise. This Executive Order also directs the California Resources Agency, in cooperation with the Department of Water Resources and the California Energy Commission, to prepare a Sea Level Rise Assessment Report by December 1, 2010 to advise how California should plan for future sea level rise. The San Francisco Bay Conservation and Development Commission (BCDC) has prepared maps for areas inundated by 16 inches of sea level rise by 2050 and 55 inches of sea level rise by 2100.[3] The Governor of California's Delta Vision Blue Ribbon Task Force has adopted a sea level rise of 55 inches by 2100 for planning purposes, until issuance of an Executive Order determining otherwise.[4] No numeric requirement for sea level rise assessment has been adopted for use in planning potential impacts

---

[2] US Army Corps of Engineers, July 1, 2009. Water Resource Policies and Authorities Incorporating Sea-Level Change Considerations in Civil Works Programs. Circular No. 1165-2-211, p. B-1 to B-13.

[3] San Francisco Bay Conservation and Development Commission (BCDC), April 7, 2009, *Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline,* Draft Staff Report.

[4] Delta Vision Blue Ribbon Task Force, State of California Resources Agency, March 24, 2008, *Letter to Governor Schwarzenegger,* Agenda Item 2, Attachment 1.

applicable to development within the City of Menlo Park. Therefore, it is reasonable to use BCDC information to estimate potential sea level rise for the proposed project.

Assuming a sea level rise of 16 inches (1.3 feet) by 2050, the sea level rise by 2025 would be expected to be about 0.83 feet as noted on page 3.5-30, second full paragraph, third sentence. The sea level rise by 2040, a 25-year planning horizon following build out of the proposed project, would be expected to be about 1.0 foot. As noted on page 3.5-30, second full paragraph, in the fourth sentence, the proposed project would raise the project site structures about 1.1 feet (to 8.1 feet) above the base flood elevation of 7 feet. As such, the proposed project structures would be above the expected base flood elevation in the event of expected sea level rise through the 25-year planning horizon following project buildout. Text has been added to Chapter 2, Revisions to the Draft EIR, to clarify the sea level rise used for planning purposes in this EIR.

Response to Comment 5-3

The City is working with the San Francisquito Creek JPA on this project and, if the Menlo Gateway project is approved, will ensure that the project responds to appropriate tidal flooding and sea level rise scenarios.

From: Patti L Fry [mailto:pattilfry@gmail.com]
Sent: Friday, September 04, 2009 7:43 AM
To: Rogers, Thomas H
Subject: Comments on Menlo Gateway Project DEIR

Dear City,

Following are some comments about the DEIR "Menlo Gateway Project; Environmental Impact Report" dated July 2009. Unfortunately, I am unable to comment on all portions because the hard copy of the DEIR provided by the city did not include Appendices E-J and am traveling and cannot access the missing information.

As the document acknowledges, there are important policy decisions this project presents to the city, much of which is not part of the EIR analysis. Further, it makes the critical point that the "project" is the proposed General Plan Amendment (GPA) and Zoning Ordinance Amendment (ZOA) as well as the site-specific currently proposed Bohannon Menlo Gateway Project. I mention this as a reminder to reviewers that the GPA and ZOA allow "by right" changes to the site-specific project. For example, any structure could be built to be 140' high even though only one is currently proposed, and buildings could have zero foot front facing setback even though larger setbacks are currently proposed. Hence, the analysis of the DEIR must primarily consider what is possible by the GPA and ZOA, not just what is illustrated by the currently proposed Menlo Gateway project. Indeed, the ZOA limits exceed in several instances what is currently proposed for the site-specific project. 6-1

Generally, the DEIR frequently references ABAG projections of population and employment as if these were base assumptions for Menlo Park's future. Ostensibly, ABAG's housing allocation, at a minimum, however, is limited by the bounds of Menlo Park's current General Plan. Because this project includes a GPA and ZOA to allow nearly 3 times the FAR currently allowed, the analyses need to consider this large incremental made possible by the proposed changes but do not appear to do so.

By section:

Aesthetics - This section references the currently proposed site-specific project, and the siting and forms of the involved buildings. The comments about shading, for example, relate to the specific positions of the buildings. However, 140' tall buildings could cause problematic shading. The ZOA allows uses by right (not conditional) and the city's only remaining mechanism to review would be Architectural Review that does not involve site placement or shading. The Menlo Gateway project currently proposes large setbacks that could enhance aesthetics, but the ZOA allows much narrower setbacks so there is a potentially significant impact. 6-2

Air Quality - this section states that there are not sensitive receptors exposed to substantial toxic air contaminants but the Menlo Gateway project positions an outdoor pool next to Highway 101, a potentially significant impact short term and cumulatively for which there could be no mitigation. 6-3

The DEIR does not measure air quality near the Independence part of the project, which seems 6-4

deficient. 6-4 (cont.)

On page 3.2-10, the DEIR references short term and cumulative growth already being accounted for by the ABAG growth projections, but this project allows development growth beyond what is currently allowed by Menlo Park's General Plan, with commensurate incremental impact on employment, population, and housing not considered by the DEIR. These could be potentially significant or even significant. Without analysis, it is impossible to know if mitigation is possible. 6-5

The discussion on page 3.2-18 references only future development in Menlo Park, and not foreseeable projects in Redwood City, Palo Alto, or Stanford each of which could add to a significant cumulative impact. 6-6

Hydrology and Water Quality -
The discussion of flooding risk is based on FEMA 1999 maps. There have been presentations in Menlo Park, such as part of the Green Ribbon CItizens' Committee process and discussions of Climate Change showing greater long term impacts of likely sea level rise affecting the M-2 area of Menlo Park that includes the proposed M-3 area. The risk is potentially significant. 6-7

Land Use - The General Plan goal of "significant revenue" from the Industrial are is not met by a project that allows by right uses such as professional office of 100% FAR with no requirement for any revenue-producing uses or a process, such as conditional use permit for such non-revenue producing uses. This is a potentially significant impact with no mitigation. To argue that the GPA alters this goal is circular. These uses produce more traffic and other physical impacts than industrial uses because they allow more people and traffic. 6-8

Nose - similar issue as Air Quality regarding outdoor pool next to highway 101 and lack of analysis in that area. 6-9

Population and Housing - the analysis is based on ABAG projections but not the latest that was to be issued late June 2009. The project represents 21% of the employment increase projected. However, ostensibly ABAG projections are bounded by the current Menlo Park GP, but this project allows 3 times the FAR with incremental associated employment and population beyond ABAG's projection. ABAG allocates housing based on the GP (or GPA in this case), not on the percentage of Menlo Park employees currently living in Menlo Park. The logic and conclusion of the DEIR are faulty as a result. The city will be allocated additional residents because of the incremental development allowed by this project. This will affect other conclusions of this DEIR. 6-10

Public Services - in several public meetings, the comment has been made that the MPFD does not have a fire truck with adequate ladder in close enough proximity to the project. This is not mentioned in the DEIR so it is deficient in not explaining this potentially significant physical need, which could be mitigated with a new truck with high enough ladder for the tall buildings. 6-11

Traffic and Circulation - There is an assumption that the ambient growth is only 1% even though there are major development projects proposed by numerous bay area cities, including Redwood 6-12

City and Palo Alto, and Stanford University.

The comments about bike and pedestrian safety seem inadequate. The project in some places touts that it is encouraging these as alternatives to motor vehicles yet the increased traffic would make more dangerous transit by bicycle or walking - includingthe Marsh/highway 101 intersection. 6-12 (cont.)

Utilities and Service Systems - It is clear that the project could exceed water supply even in normal years. This is a serious policy issue for the city, especially when considering a project that could be 3 times the size as currently allowed by zoning. 6-13

Climate Change - The DEIR omits mention of the city's adoption of the Mayor's resolution and its greenhouse gas reduction goals. Any new project that increases greenhouse gases, as this, moves the city in the opposite direction from its goal of attaining levels well below past levels. Again, it is clear that his project raises serious policy issues for the city. Even with admirable intention to include some green building principles, the project does not implement all feasible measures (per DEIR) at the same time it would increase the absolute greenhouse levels. To attain goals, this means the city would accept the burden of an even larger challenge to reduce the absolute levels. 6-14

Growth Inducement - The DEIR states that the proposal is growth accommodating, not growth inducing, even though it allows growth that currently allowed by the city's General Plan and Zoning Ordinance. This is a significant impact. 6-15

Sincerely,
Patti Fry
Menlo Park resident and former Planning Commissioner

Letter 6: PATTI L. FRY

Response to Comment 6-1

Copies of Appendices A through D were included in the back of the Draft EIR. Appendices E through J were included on a CD in a sleeve attached to the back cover of the document. The City also posted the Draft EIR and most of the Appendices on the City's website.

The Draft EIR adequately analyzed potential impacts associated with development under the proposed General Plan Amendment and Zoning Ordinance Amendment, as well as development proposed as part of the Menlo Gateway project.

Please see Response to Comment 8-6 regarding ABAG projections and housing allocations.

Response to Comment 6-2

The City of Menlo Park does not typically require applicants to conduct a shadow analysis nor is such an analysis required by the State CEQA Guidelines. However, because the issue of shadows has been raised, the project sponsor prepared a shadow analysis which is included as Appendix F to this Final EIR.

The shadow analysis shows the shade cast by the Menlo Gateway buildings falling onto existing structures on Independence and Constitution Drives, as well as across Bayfront Expressway. The shadow analysis includes four representative months: March, June, September, and December at 10 a.m., 12 p.m., and 2 p.m.

As shown in the graphics, longer shadows are cast during the winter months due to the lower angle of the sun in the sky. Shadows are shorter during the spring and fall seasons, and are particularly minimal during the summer months when the sun's angle is relatively high.

Shadows cast by the proposed buildings on the Constitution Drive site are mostly on driveways, parking areas, and landscape areas. The shadows would be fairly minimal during the summer months from morning to afternoon. Existing structures on the south side of the campus would not be shaded by the proposed buildings, as shown in the graphics. During the winter months when the angle of the sun is lower, shadows would be cast onto portions of Bayfront Expressway. However, Bedwell Bayfront Park would not be affected by any shadows from project buildings.

Buildings on the Independence site would cast some shadows onto portions of the existing structures on the northeast side, primarily in the afternoon during the winter months. There are no shadow effects on these existing structures for most of the year. These shadows create a less-than-significant impact.

The proposed change in the underlying zoning for the project would permit the construction of buildings as high as 140-feet (which is analyzed in the Draft EIR). The Menlo Gateway project

proposes building setbacks of between zero to ten feet. Under the proposed ZOA, there is no requirement for building setbacks, as discussed on page 3.1-16 in Section 3.1, Aesthetics. The allowance for no setback would not result in an adverse physical change to the environment that would potentially result in an aesthetic impact. In order to be considered a significant aesthetic impact, the proposed project would need to *substantially degrade* the existing visual character or quality of the project area and its surroundings (emphasis added). Under this criterion, a proposed project would need to introduce visual elements that would detract from the existing setting. The proposed Menlo Gateway would undoubtedly alter the visual landscape and character of the area, but it would not be expected to physically degrade existing views, the surrounding built environment, or streetscapes.

Response to Comment 6-3

As noted on page 3.2-4 of the Draft EIR, sensitive receptors are considered schools, hospitals, convalescent homes and residences. Places where people spend long periods of time or are very young, old, or those that may be ill are more susceptible to respiratory problems. The proposed project would construct a hotel and athletic club (ClubSport), with an outdoor pool, adjacent to US 101. Because the proposed use is a hotel/athletic club rather than a residential use, there would be limited risk for chronic exposure, since the typical stay for a hotel guest would be much less than the 70-year exposure rate that is typically used to determine chronic risks. For acute, or non-cancer, risks the California Air Resources Board cites studies for non-cancer health effects of living or attending schools near heavily traveled roadways, which would also be associated with a much longer exposure than would be anticipated at a hotel use. Therefore, the potential for health risks associated with exposure of hotel/athletic club guests to roadways would not be significant.

Response to Comment 6-4

Site-specific ambient air measurements are not required for analysis under CEQA. Instead, the BAAQMD recommends using ambient air quality measurements from the closest monitoring station. Ambient pollutant concentrations that have been measured during the period of 2006 to 2008 at the Redwood City station, the closest monitoring station to the site, were included in Table 3.2-2 in the Draft EIR.

Response to Comment 6-5

The text on page 3.2-10, cited by the commentor, explains that ABAG 2003 forecasts and not Menlo Park's General Plan were used as the basis for the Bay Area 2005 Ozone Strategy. The net increase in jobs in the project area of 1,878 would be well within the growth ABAG-projected for the City through 2025. Thus, the net increase in employment, as a result of the proposed project, would not conflict with the Ozone Strategy or result in a significant air quality impact.

Response to Comment 6-6

For the purposes of assessing cumulative air quality impacts, the cumulative context for regional impacts, such as operational emissions, would be the entire San Francisco Air Basin and future growth

within the region. For localized impacts, such as CO and PM_{10}, these issues would be associated only with construction projects occurring within the immediate vicinity of the project, which would not extend beyond the Menlo Park city limits and traffic on nearby streets. As discussed in Section 3.11, Transportation, of the Draft EIR, cumulative traffic included foreseeable growth within the region, not just Menlo Park.

Response to Comment 6-7

The regulatory flood map is still the 1999 FEMA FIRM. Until detailed studies have been submitted to FEMA and a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR) is obtained, this FIRM establishes regulatory flood hazard areas and base flood elevations. Any other potential delineation is speculative. Please refer to Response to Comment 5-2 regarding potential sea level rise effects. The additional information presented in Response to Comment 5-2 and text added to Impact HY-7 and Impact HY-8 in Chapter 2, Revisions to the Draft EIR, indicate that under recommended scenarios for sea level rise, the project area would not be subject to a significant effect.

Response to Comment 6-8

The comment that a proposed project would not satisfy an economic goal of the General Plan does not represent a significant impact under CEQA. Page 3.7-8 of the Draft EIR explains that a significant impact resulting from an inconsistency with the General Plan occurs when the project conflicts with a plan, policy, or regulation adopted *for the purpose of avoiding or mitigating an environmental effect* (emphasis added). As noted above, how well the proposed project satisfies an economic or fiscal goal is important but is not directly relevant to the EIR. The EIR is an informational document charged with addressing the direct and indirect physical changes to the environment associated with the project (see CEQA Guidelines section 15064). Potential impacts associated with an increase in air emissions and traffic associated with office or R&D, hotel, restaurant, and health club uses proposed as part of the project are evaluated in the Draft EIR. However, as stated in section 15064(e), "[E]conomic and social changes resulting from a project shall not be treated as significant effects on the environment."

Response to Comment 6-9

Sensitive noise receptors are generally identified as places where people sleep (such as a residence or hotel), places where quiet is an essential element of their intended purpose, and institutional land uses where it is important to avoid interference with such activities as speech, meditation and concentration on reading material (such as schools, libraries, theaters, and churches). Sensitive land uses for noise do not generally include outdoor recreational areas such as pools. Nonetheless, it is noted on page 2-9 of the Draft EIR (as amended in Chapter 2 of this document) that a 382-foot long, 12-foot high sound wall would be constructed adjacent to US 101 to provide a visual, as well as sound barrier, for the proposed outdoor pool.

Response to Comment 6-10

ABAG's *Projections 2007* were the latest available adopted regional forecasts at the time the Draft EIR was prepared; *Projections 2009* were released in August 2009 after circulation of the Draft EIR. A comparison of Projections 2009 to Projections 2007 indicates a reduction of approximately 6,000 jobs within the City of Menlo Park between year 2000 and year 2025. It assumes this reduction in jobs is factoring the down turn in the economy that the country has been experiencing for the past few years. The population and number of households within the city would experience only a slight increase under Projections 2009. Overall, the difference between Projections 2007 and 2009 are small relative to the population and spread out over the next twenty-five years and would not significantly change any of the analysis included in the EIR. The Menlo Park General Plan identifies the desired land uses for the City but does not describe the rate at which the City's population and employment may grow. The ABAG forecasts for population and employment consider the City's land use designations, available land supply, local employment, local and regional market conditions, as well as other factors; these forecasts take into account known development projects, but cannot anticipate future development or redevelopment at every site within a given jurisdiction. Thus, it is not possible to explicitly state whether a particular project has been "counted" in ABAG's forecasts. Additionally, because the ABAG forecasts apply econometric models that allocate regional growth to local jurisdictions, the growth projections are not bounded by the local general plans, although these general plans are used in formulating the forecasts.

The potential for an increase in the allocation of housing units to Menlo Park under the Regional Housing Needs Allocation process is discussed in Section 3.9, Population and Housing, on page 3.9-9 and described in more detail in Appendix F Section VI (of the Draft EIR). Appendix F Section VI also provides additional information regarding ABAG's Projections and how they are used in allocating housing units as part of the Regional Housing Need Allocation Process. The methodology used to estimate induced housing demand is a direct estimate of the housing demand stemming from the jobs created under the proposed project; whereas, ABAG's Regional Housing Needs Allocation considers housing and job growth and distribution throughout the entire nine-county Bay Area and seeks to assign the City its fair share of the housing. This housing allocation is not directly related to a specific project, unlike the induced housing demand estimate on page 3.9-9 of the Draft EIR.

Response to Comment 6-11

Please see Response to Comment 4-1 that addresses issues related to the adequacy of fire protection services, equipment, and resources.

Response to Comment 6-12

CEQA Guidelines section 15125 requires that an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published. The NOP was published in May 2007, before certain projects mentioned by the commentor were in the development pipeline.

However, the ambient traffic growth rate of 1 percent per year is appropriate based on the General Plan growth in Menlo Park and nearby communities, which also reflects population and job growth estimates. This growth factor was derived in consultation with City staff and consideration of other projects prepared by the City. The City of Redwood City in its comment letter (see Comment Letter 2) concurred with this assumption.

Page 3.11-42 of the Draft EIR provides a more detailed discussion of bicycle, pedestrian and transportation demand management (TDM) program elements. Although the project would generate more vehicle trips, it would also provide enhanced bicycle and pedestrian connectivity and measures to reduce vehicle trips. In addition, the existing Ringwood Avenue bridge over US 101 provides pedestrian and bicycle access to and from the vicinity to the project as an alternative to the Marsh Road interchange.

Response to Comment 6-13

Water supply is discussed under Impact UT-1 on page 3.12-13 of the Draft EIR. Since the Draft EIR was released the project sponsor has refined the baseline water assumptions and the City has updated the water supply discussion in the Draft EIR (see Chapter 2, Revisions to the Draft EIR, for specific updated information). Based on this updated information, the proposed Menlo Gateway project (with 100 percent office or the Split Option) would not exceed available supplies in normal years. However, if the office flex component of the project is constructed with 100 percent research and development (R&D) uses, the increase in water demand would not necessarily exceed available supplies, but would generate demand above the City of Menlo Park's significance threshold for available supplies; therefore, only this development scenario would result in a potentially significant water supply impact that cannot be mitigated and would remain significant and unavoidable.

The proposed Menlo Gateway project would generate new demand for water supplies and would contribute to cumulative demand within the Menlo Park Municipal Water District's (MPMWD) service area. Specifically, as shown in revised Table 3.12-9 in Chapter 2, Revisions to the Draft EIR, the proposed Menlo Gateway project (with 100 percent office or the Split Option) along with existing and planned future uses would not exceed available supplies in normal years. However, Table 3.12-9 also shows that the proposed Menlo Gateway project along with existing and planned future uses would exceed water supplies in single dry and multiple dry years. This is considered a potentially significant cumulative impact that cannot be mitigated and would remain significant and unavoidable. Under these dry year situations, the MPMWD would institute its water shortage contingency measures outlined in its 2005 Urban Water Management Plan to help balance supply and demand.

Under the No Project Alternative, cumulative demand within MPMWD service area would exceed available water supplies under dry year situations as early as 2010 and extending to 2030. In other words, because of supply curtailments in single dry and multiple dry years to the MPMWD, regardless of the development scenario at the project site, the cumulative demand in the MPMWD service area would exceed available supplies.

Response to Comment 6-14

The CEQA Guidelines do not require that significance of an impact, including a climate change impact, be determined solely on quantitative grounds, but rather recognize that qualitative thresholds may be used as appropriate. As discussed in the Draft EIR, the City was aware of some of the draft numerical thresholds that had been proposed by various agencies, but that none had been adopted or formally approved. Based on its experience in the development of the Menlo Park Climate Action Plan (CAP), the City determined that the goals of reducing greenhouse gas and the resultant impacts on climate change could be met and mitigated if new projects incorporate a full complement of feasible measures that could reduce vehicle trips and enhance energy efficiency. The CAP includes the City's greenhouse gas reduction goals and is an outcome of the Resolution of the Menlo Park City Council Endorsing the U.S. Mayor's Climate Protection Agreement (Resolution #5737) adopted on May 2, 2007. The Resolution includes the City's position to reduce "global warming pollution" by taking steps to practice and promote sustainable building practices and to inventory global warming emissions in city operations, set reduction targets, and create an action plan. The City's CAP is a direct outcome of this resolution. The assertion that any new project "…moves the city in the opposite direction from its goal of attaining levels well below past levels" is taken out of context of the CAP. All projects within the City are required to comply with applicable local, state and federal energy conservation requirements to help minimize project emissions. It is anticipated that conservation requirements will become even more stringent in the future as awareness of the issues continues to grow along with rising energy costs.

Since the Draft EIR was released, the Bay Area Air Quality Management District (BAAQMD) released draft tiered GHG thresholds of significance to use in CEQA documents. To address this new approach, an update of the project analysis has been made that compares project-generated GHG emissions to the draft BAAQMD thresholds and finds that GHG emissions are reduced to below the BAAQMD threshold level and impacts from GHG emissions are less than significant if the project is constructed and operational in 2018 or later. If the project is completed prior to 2018, the impact could be reduced to less than significant with mitigation. The analysis comparing the project to the draft BAAQMD thresholds is presented in Response to Comment 32-9. The project, on a per capita basis, would generate 4.59 MT CO_2e/Service Population (SP)/Year, or less, if completed after 2018. This is less than the 4.6 BAAQMD threshold. Prior to 2018, the project would generate 4.67 MT CO_2e/Service Population (SP)/Year, which is slightly over the 4.6 threshold, but could be reduced to less than significant with mitigation. As the City moves forward, projects like this can demonstrate how the City can reduce its overall GHG emissions through better energy efficiency, more efficient use of water, and innovative ways of extending transit benefits deeper into the community.

Response to Comment 6-15

As discussed in Chapter 4 of the Draft EIR, the project would not result in a direct increase in population or housing resulting in new or unplanned growth. In addition, the project is located in a developed area of the City where existing infrastructure is available to serve the project. No new utility lines or major infrastructure improvements would be required that would enable undeveloped

areas access to infrastructure to hasten development. Therefore, according to CEQA, the project would not be considered growth inducing. Please see also Responses to Comments 8-5, 16-23 and 17-123 that also address growth associated with the project.

From: Elizabeth Lasensky <elasensky@yahoo.com>
Subject: Menlo Gateway project
To: throgers@menlopark.org
Date: Monday, September 14, 2009, 2:51 PM

Thomas Rogers, Menlo Park Planning Department

Although I think that the Menlo Gateway project presents some significant problems to Menlo Park, most notably traffic and housing, I would offer the following positives that help override these concerns:

1) This project is more than green, it defines "green" for any further developments in Menlo Park.

2) Revenue from the hotel would be an important addition to the city's coffers.

3) Being east of 101, its height and density will have less impact on the rest of the city. In fact, driving up/down 101, there are any number of similarly sized buildings along the route. It should be compared to other such facilities, not to commercial density levels for West Menlo Park buildings. 7-1

4) The project will provide many good jobs for Menlo Park residents, including but not limited to, Belle Haven.

5) As future office workers and hotel occupants will hopefully make use of Bedwell Bayfront Park, public benefits should be directed to Bedwell Bayfront Park, as the most immediate and in-need neighbor.

The Menlo Gateway project will create a demand for mixed income housing but the solutions will be found in a broad regional approach. As sections around Willow Road are also under consideration for further commercial development, new housing will need to be incorporated in long range planning for the entire area. A coordinated effort will be needed to meet the housing and other needs of current and future residents and occupants of the Belle Haven neighborhood. 7-2

Thank you,
Elizabeth Lasensky
Fremont Street
Menlo Park

Letter 7: ELIZABETH LASENSKY

Response to Comment 7-1

The comment identifies a number of positive attributes of the proposed project, which speak to the project's merits. Since this comment does not concern the adequacy of the EIR nor the City's compliance with CEQA, it does not warrant further response in this document.

Response to Comment 7-2

The comment does not concern the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's concern regarding the need for a long-range, regional housing solution is noted.

Gail Slocum
205 Pope Street
Menlo Park, CA 94205
gailslocum@comcast.net

September 21, 2009

Re: Comments on Menlo Gateway DEIR

Dear Mr. Rogers:

I would like to submit these comments on the Menlo Gateway Draft Environmental Impact Report (DEIR).

Obviously this is a huge commercial project, with significant implications -- both beneficial and burdensome -- for the City. If passed as proposed, it appears that this project would have a total above ground structural mass of 1.7M square feet,[1] including three 8 story offices, one 11 story hotel, and three 5-6 story parking structures, all located at the east end of Marsh Road (to the "south" side), and stretching from right next to Highway 101 all the way to Bayfront/Bedwell Park.

On the one hand, this project is expected to bring jobs and, over the longer term, revenues to the City - especially from the Hotel's transient Occupancy Taxes -- which would be good. And the developer is certainly to be commended for incorporating many "green building" approaches. Nonetheless, the project as currently proposed would cause 17 near-term and 20 cumulative significant impacts, including some that are significant and unavoidable. I will attempt to briefly discuss the several impacts of particular concern to me: **water, traffic congestion (and related public safety/fire response time impacts), and climate change impacts** (plus climate change-related sea level rise adaptation implications). These impacts are significant, must be better addressed than the DEIR does, with more specific, measurable and real mitigations provided. For the reasons given below, the project would need to be reduced in size, mitigated or conditioned more strongly and provisions would have to be added to the Development Agreement for it to obtain my wholehearted support. 8-0

A. OVERALL CHALLENGE: MAKE THIS PROJECT REALLY WORK FOR US

Before delving into the above-referenced specific types of impacts, I'd like to frame what I see as the overall challenge, namely: **How does our City maximize the benefits of this project while minimizing its negative impacts.** The main benefit to the City is the revenues from the Hotel. To gain that benefit but minimize the traffic, water and climate 8-1

[1] While total "countable" square footage for the buildings in this development is 938,000 square feet, the proposed development also contains three 5 and 6 story parking structures whose size totals up to 825,000 square feet. Thus the total above ground mass for all structures in project as proposed comes to 1.75M square feet.

change impacts points to a smaller overall project in which the office space is significantly reduced (along the lines of Alternative 3). This also makes sense as there is currently a significantly high rate of vacancy in existing Silicon Valley commercial office and research and development office space.[2] Menlo Park has to ask itself, given the limits on our water, our road systems, and our desire to reduce, not increase our greenhouse gas emissions, what kind of development do we want to "spend" these vital assets on? If a project for a highly revenue generating type of commercial or industrial opportunity for development came up later, but, because of the large size of Gateway, we did not have enough water in our Hetch Hetchy allocation to accommodate it, for example, we might have to say "no." Saying no now to too much more professional offices with lawyers or software developers (either of which generally don't afford our City much if any sales tax) may be necessary in order to hold open the possibility of some sort of uses that WOULD bring us significant sales tax revenues. For example it would be a shame to lose a chance at future prototype or light industrial high tech with flex uses, but with no wet labs that some R&D can entail (*see* water shortage section below). Other tried and true examples include something like another warehouse operation like the former Boise Cascade (which used to be Menlo Park's top sales tax generator), or, an auto mall (if GM ever comes back into the black enough or some other entity is interested). <u>The goal is to minimize the water use, traffic impact and reduce the climate change impact while maximizing the net tax revenue benefits to the City</u>. <u>Using this test, the alternatives with much less office here are superior and can substantially reduce impacts as shown in the DEIR</u>. This goal and approach should guide us, to ensure that we are careful to keep the bigger picture in mind (as CEQA helps us do), including how we will deal with impacts as well as what we want Menlo Park's overall "character" and livability to be years from now. 8-1 (cont.)

<u>B. CREATE P.U.D. RATHER THAN BROAD, HIGH DENSITY M-3 DISTRICT</u>:

A related question is: Given that Gateway already causes significant and unavoidable impacts on water and traffic etc, why wouldn't the City do this as a Planned Unit Development (PUD) only for these parcels, rather than creating a new M-3 zoning here which would allow others to propose projects of this magnitude (e.g. up to 11 stories!) on nearby parcels in that area? In fact, shouldn't the EIR here be considering the full 8-2

[2] August 30, 2009 San Jose Mercury News, http://www.mercurynews.com/realestatenews/ci_13237171
"The [Silicon] Valley's 20.5 percent office vacancy rate is the highest since 2003, according to CB Richard Ellis, and has hit 53.4 percent in Sunnyvale. An 18.9 percent vacancy rate for research and development space — the largest commercial real estate category in the valley — is the highest since early 2006. At the moment, there are 29.1 million square feet of vacant research and development space and 12.6 million square feet of empty office space in the valley; that includes 277 completely vacant R&D buildings and 39 completely vacant office buildings, according to CB Richard Ellis, which has an office in San Jose. There are signs of the downturn everywhere. A 12-story office building off Highway 101 has a banner saying "Full Building Available." Sun Microsystems, which is being acquired by Oracle, used to occupy the top seven floors. Nearby, Yahoo is subleasing two buildings on its Mission College campus as part of an effort to consolidate its real estate portfolio….Oracle's acquisition of Sun Microsystems could add more vacant space, as could recent acquisitions of valley companies by Intel, Hewlett-Packard and EMC."

potential impact if ALL eligible parcels developed to the M-3 intensity? I believe the DEIR fails to adequately evaluate the cumulative impacts as well as the growth inducing impacts of the project since part of the applicant's request for project approval includes creating a broader high density M-3 zone. To avoid this problem, it seems sensible for the City to allow a modified more mitigated Gateway project BUT ONLY AS A P.U.D. covering just these affected Gateway parcels, and requiring a Developer Agreement to protect the City's interest in managing the intensity and impacts of this projects and on the overall area. By making this is critical modification, the City could allow Gateway to go forward in the most appropriate form and size, but yet avoid writing a "blank check" by also establish a broadly applicable M-3 growth inducing precedent that would cover significantly more parcels in that area. I believe it is unnecessary to do so, and the DEIR's analysis of just this Project hints at how radically a broad M-3 district would change Menlo Park's future and character, as it would "entitle" other M-2 landowners to propose similar high density 11-story copy-cat projects creating a district with a density far beyond anything we now see at University Circle and Oracle Plaza nearby. Gateway alone, even reduced and mitigated more is already a huge change. 8-2 (cont.) 8-3

The DEIR doesn't adequately evaluate the impacts of **applying the proposed new M-3 zoning code anywhere else in the huge industrial M-2 zone in the greater vicinity**. The new M-3 zoning would allow more than double the amount of development currently allowed, such as more 11 story buildings. And because parking structures don't count toward FAR (countable development), the new zoning code actually allows about *four* times as much development as the existing code. 8-4

Similarly, Section 4 of the DEIR dealing with **induced growth** is also inadequate. It's reasonably foreseeable that the project developer, David Bohannon, will want to use this new zoning on other parcels he owns in the M-2 area. Plus, other large property owners will want to use it as well, including the owners of the commercial buildings that will later be surrounded by these tall buildings from the project; however, the growth section denies any growth inducing impacts. The DEIR doesn't speak to precedents in the growth inducing section. 140 foot height limits; structured parking; M-3 ordinance are all precedents, and the new M-3 ordinance eliminates an obstacle to growth for other land-owners. I believe it is reasonable to conclude that the M-3 the precedent will be used elsewhere in M-2 and will induce further growth which would also have a significant impact. 8-5

C. **The DEIR's Financial Analysis and its Related Housing and Population Assumptions are Inadequate**.

Furthermore, Gateway project severely exacerbates Menlo Park's existing jobs to housing imbalance. The DEIR admits that the 1800+ net new jobs housed in the project will generate a whopping 31% of the new jobs predicted by ABAG for Menlo Park from 2005- 2025 by ABAG but doesn't consider this increment to be "significant." And the DEIR also admits that 1000+ new regional housing units required to house project employees will generate 11% of the projected future 8-6

housing units required by Menlo Park from 2005- 2025 by ABAG but doesn't consider that increment to be "significant." In addition, although the DEIR estimates that the proposed project would generate 1,000 units of housing demand, it then incredibly assumes that only 76 of these would be in Menlo Park. The DEIR's basis for the latter assumption is inadequate, however. For example, recent ABAG and other data show that about 10% of Menlo Park residents currently work in Menlo Park, and many of those residents are lawyers who might use these offices, so the percentage could be over 10%. Since the cost burden on a City is greater from housing, the developer would not be paying an adequate impact fee if the 76 units figure is used. I believe these increments are significant and add to the public perception that the largest commercial project in Menlo Park has significant impacts as judged by the public. 8-6 (cont.)

A good alternative (not studied in the DEIR – another deficiency) would be for Menlo Park to use a P.U.D. here and, as it does so, it can and should include adequate housing *within this very project*, thus reducing in its traffic impacts by allowing some of all of the workers to live on site. 100 units would be appropriate. This is already a mixed-use development in every other way – it has a little retail, a café/restaurant, a hotel, commercial offices, parking, and a gym. Adding housing better fits Menlo Park's general plan's policies similar to the City's now-ongoing El Camino Real visioning process. Rather, if Menlo Park builds 810 units of housing near El Camino as is now envisioned, those people who work at Gateway would have to drive to the office and further congest our key, already impacted arterials with LOS-F intersections, like Willow Road and Ravenswood/Ringwood, with spill-over impacts on all the surrounding neighborhoods east of ECR. 8-7

D. The EIR Failed to Adequately Evaluate the Cumulative Impacts of the Project

In addition to the impacts discussed in of Section B above, the DEIR does not analyze the cumulative impacts of the proposed Cargill Salt Ponds project, with its 12,000 units of housing, just to the Northwest in Redwood City. This will add significant strain on the transportation and other infrastructure systems in that area. Similarly, the DEIR assumes that the Dumbarton Rail line that would go into that immediate corridor near Bayfront Expressway is "too speculative." Rather, the project should be planned to accommodate this important potential addition to our transit options, which could help reduce the traffic impacts of Gateway once it is built. We must not do something here that would in any way harm the viability of the Dumbarton Rail project. One of the unfortunate things about the location of this project is that is it not near enough to transit, so its proximity to Highway 101 means it is mainly an auto-dependent development. Is there anything the developer can do to support more rapid implementation of the Dumbarton Rail project, as it will serve as a mitigation? 8-8

E. The DEIR's Water Supply and Impacts Analysis is Inadequate:

The DEIR utility section admits that the project as proposed presents a significant and unavoidable impact on Menlo Park's water supply. Specifically, the DEIR's cumulative 8-9

impact analysis states that the project's demand could exceed our water supplies available even in normal year conditions, as well as in dry and multiple dry years, to serve the project from existing entitlements" (UT-1CM). And that is true even with the stated conservation measures such as low flow fixtures, appliances and hardware and efficient landscaping. (Table 3.12-23) One of the measures is residential plumbing and conservation like low flow showerheads, but the DEIR notes that such low hanging fruit measures are already almost at full saturation. But the DEIR doesn't say what we would actually have to do or how much each would help by or how much they would cost and who is paying. (It's just like saying "bicycle racks" are a nice way to start to reduce traffic impacts – a veneer, not a significant solution in and of itself.) In addition, retrofits and meters to achieve leak reduction is commendable, high efficiency washer rebates are also commendable (Page 3.12-29), but few details are provided. The analysis also includes alternate supplies and demand offsets (note that the Climate Change section failed to include meaningful discussion of or recommendations for offsets, see below).

8-9 (cont.)

8-10

The Independence site shows a 392% increase over existing water use there, which is significant (Table 3.12-3). The Hotel is less water intensive than the office buildings – it increases water use by 56% over existing. Further the DEIR notes that there are two different types of uses for commercial offices, and those DEIR calls R&D are more significant water users than "office." The DEIR's demand analysis of expected water use looks at three scenarios, a Split Uses scenario assuming 37% R&D uses and 63% office uses (with a 400% over existing on the combined sites),[3] as opposed to the maximum Zoning scenario (GPA/ZOA) could be 100% R&D (and would be a 644% increase over existing). Mitigation measures listed in the DEIR "could" further reduce the maximum Zoning buildout impact on water demand, implementation of measure UT-1.1 would HAVE to successfully reduce this demand by half to reduce the demand to remain below the City's significance threshold. No amount of mitigation of the Zoning scenario would reduce the impact to "less than significant." And although the DEIR asserts that the Split Uses scenario could have enough water from current allocations in normal years (p.3.12-16), the DEIR does not appear to clearly define "R&D" to allow the City to understand what specific types and amounts of uses would ensure that the City did not exceed current allocations in not only normal but also dry and multiple dry years (the latter of which we are now experiencing). The DEIR's reliance on the Split Uses scenario lacks adequate foundation and evidentiary support as discussed in footnote 3 below. Further, the DEIR's use of a "normal year" based on unadjusted 20th Century precipitation and snow pack data to assess a building whose useful life spans the full 21st century is flawed given the DEIR's own statements about climate change's impacts on water supply from the Sierra snowpack. The State of California's own scientific studies (see e.g. CEC reports) project that the precipitation and snow pack patters in the 21st century will not fit

8-11

8-12

8-13

8-14

[3] The DEIR's use of the split option is not adequately founded in evidence as there is no guarantee what the actual mix will be. Without such a guarantee, an assumption that the uses might be *all* R&D would provide a more conservative assessment of potential water impacts. Further the type of R&D matters as some are more water intensive than others. A more precise definition of R&D and how the DEIR estimates assumed R&D water use is needed.

the "normal" levels of the 20th Century, therefore the water available in what the DEIR terms "dry and multiple dry" years data should be used as the basis for determining the significance of Gateway's added demand's impact on Menlo Park's fixed Hetch Hetchy water allocation. 8-14 (cont.)

98% of Menlo Park's potable water comes from the San Francisco PUC's Hetch Hetchy system and though the City has recently signed a new long-term agreement, it is for a specified allocation. During the SFPUC's presentation to City Council on that this year, its expert stated that water rates are expected to double in the next 5 years in recognition that conservation efforts must be significantly stepped up given upcoming supply constraints. Not only is significant population growth expected to increase demand even with strong conservation, but the SFPUC confirmed that climate change impacts will significantly reduce the available snow pack in the Sierras at the same time – requiring cities like Menlo Park to find additional sources.[4] Specifically, under the State of California's (CEC's) analysis of the risks of Climate Change for California, by the end of this century sierra snow pack is expected to be reduced by 60 – 90% depending on how aggressive, rapid and effective our GHG reduction efforts are. (http://www.climatechoices.org/ca/site/our-changing-climate.html). There is no mention of this climate change effect on water supplies anywhere in the DEIR's analysis, either in the utilities section or in the Climate Change section (and the two are clearly and inextricably intertwined). Obviously, people can live without taking as many car trips or facing more congestion, but no one can live or do business without having adequate supplies of potable water. 8-15 8-16

The question we must ask ourselves is: "IS THIS PROJECT AT ITS PROPOSED LARGE SIZE REALLY WHAT MENLO PARK's CITIZENS REALLY WANT TO USE OUR PRECIOUS REMAINING WATER ALLOCATION ON?" If we use up too much of our limited water allocation on *this* proposed development, we are risking not having enough remaining to do other developments that are higher tax generating, or better support the ECR Vision and the General Plan policies overall. In order to be wise stewards of this precious resources as well as good fiduciaries for the City, we should again revise this proposed project to maximize its revenue for the minimum water allocation depletion. Again, the DEIR's data shows that the Hotel looks good, but the Offices do not (especially the R&D office use for water intensity); the logical conclusion is to minimum the office square footage before approving the project. In addition, the Development Agreement should be drafted to limit the specific types of R&D office use that will be allowed. In any event, the project should be conditioned to not only require maximum on-site mitigations, but also some funding for off-site reductions to ensure that the City's *other* businesses have the water they need to do business, and that the City's residents are not burdened with additional costs and undue cut-backs in the water we all 8-17

[4] "Future water supplies identified and analyzed must bear a likelihood of actually proving available; speculative sources and unrealistic allocations, so called 'paper water' are insufficient bases for decision making under CEQA." Vineyard Area Citizens for Responsible Growth Inc., v. City of Rancho Cordova (40 Cal.4th at 432). The DEIR for Gateway does not indicate what water supplies would be used in scenarios in which this project's demand causes City totals to exceed allocations under current usage patterns (including in dry and multiple dry years, which we are currently suffering).

need to live. Otherwise other businesses and all residents for practical purposes would end up subsidizing this development in the future due to its significant impacts on water availability. 8-17 (cont.)

F(1). **<u>The DEIR Fails to Adequately Evaluate Climate Change impacts</u>, and discuss the reasonable range of real, off-site offsetting mitigations consistent with the Climate Action Plan.**

The Climate Change impacts of the project as shown in the DEIR are quite troubling, given what I have learned professionally as well as through my participation as a founder of the Menlo Park Green Ribbon Citizens' Committee. <u>The Gateway project would undoubtedly cause a significant net increase in Menlo Park's greenhouse gas emissions at a time when we need to be *reducing* CO2-e emissions.</u> Specifically, if built as proposed (with 880,000 square feet of new high rise buildings and up to another 825,000 square feet of 5 - 6 story parking structures), City staff estimates the project would add at least 15,000 tons and as much as 24,000 tons of carbon dioxide equivalent (CO2-e) per year, with the bulk of these emissions coming from increased vehicle trips to Menlo Park. The differential between 15,000 and 24,000 metric tons per year of CO2e is dependent upon whether the developer implements all of the Proposed Emission Reduction Strategies vaguely described on pages 3.13-21 to 3.13-23. 8-18

In 2005 the Menlo Park community was responsible for nearly 500,000 metric tons of CO2e annually with a "business as usual" estimate that this will increase by more than 100,000 metric tons of CO2e per year, to more than 600,000 metric tons of CO2e by 2020. (*See* DEIR, page 3.13-7.) This means that Menlo Gateway will increase our community's greenhouse gas emissions by 3%-5% above current levels, or, put another way, will in and of itself comprise 15% to 24% of the previously estimated "business as usual" increase in CO2e within our community. This is a significant negative environmental impact of the project, by any measure. 8-19

The DEIR's discussion of **impacts on climate change** in Section 3-13 is inadequate. Here's an example to put into perspective its significant CO2-e emissions impact. The average home on PG&E's system emits 5.3 tons of CO2-e per year (per PG&E data provided, e.g., in its ClimateSmart program site on <u>www.WeCanDoThis.com</u>). Thus, the Gateway project's net emissions of 24,000 tons per year is the equivalent of adding 4,528 new single family homes to Menlo Park – which, in terms of CO2-e emissions would be like increasing Menlo Park's "SFD population" by 14%. 8-20

Although Menlo Park may not quite yet have a specific numeric standard or goal in place yet by which to judge "significance" here, California has clearly recognized that increased greenhouse gases will have an impact on the State and 8-21

has adopted specific reduction standards for the State as a whole, and the City has acknowledged this in the Climate Action Plan adopted by the Council unanimously last Spring. The DEIR acknowledges this. And we now know from both State and City documents that the Bay Area Air Quality Management District is proposing to adopt a standard of significance for GHG emissions of 1,100 tons/yr for land use projects. This project would emit more than ten times that amount even if the developer agreed to implement all the stated possible on-site mitigations (taking the current project down to 15,000 tons per year). The State is requiring an 80% reduction by 2050. Thus, the record is undisputed that the City of Menlo Park along with the whole State needs to be *reducing* emissions from current levels by at an average of least 2% per year for the next 40 years to achieve Governor Schwarzenegger's 2050 GHG reduction target. This Project's lifetime extends even longer than that horizon, and must be part of the solution, not part of the problem. Also, earlier reductions are critical to achievement of the State's established reduction target, and measures will be cheaper before 2012 when AB 32's overall requirements fully kick in and demand for greenhouse gas reduction projects goes up.

8-21 (cont.)

8-22

8-23

It is indeed very commendable that the developer of Menlo Gateway plans to voluntarily mitigate an estimated nearly 9,000 metric tons of CO2e per year through an array of design and operating sustainability measures. However these measures were not described specifically enough to know for sure that they will consistently deliver that level of reduction. And even if they did, this 9,000 figure is not enough to achieve the State's established goals or even to get below the ABAG 1,100 ton standard for significance, given the project's overall remaining, unmitigated emissions of between 15,000 and 24,000 tons of CO2e per year. Just as with the Water section, there should be both (1) additional on-site mitigations such as requiring EV/PHEV plug-in charger stations for electric vehicles in at least 20% of the parking spaces, and wiring to allow more stalls to do the same (as well as to allow vehicle to grid provision of electricity from the cars' batteries during peak hours); and (2) off-site offset projects that will bring the net GHG impact of the project down to zero (the Climate Action Plan mentions PG&E's ClimateSmart program's CCAR certified offsets now come in at around $15 per ton).

8-24

8-25

8-26

Obviously, if the project were reduced in size, its remaining net emissions would be reduced below its currently estimated net 24,000 CO2e emissions increase level, as well. **How big the ultimate project is, and how much net GHG emissions it causes is something the City must address, with a more usable EIR including much more specific mitigation measure descriptions that are required, real, additional, measurable, enforceable and permanent for the life of the buildings.** Furthermore, anything that cannot or will not be reduced onsite should be offset through off-site mitigations, such as the types of local offset projects listed in the CAP, so that the entire 15,000 – 24,000 net increase does not exacerbate Menlo Park's carbon footprint and take us in the wrong direction.

8-27

In sum, to help address these serious climate change concerns, the following items must be agreed to by the developer and included in the conditions on or Development Agreement for the final project for it to have my wholehearted support:

1) Change the voluntarily compliance with LEED gold/silver and other greenhouse gas mitigations described in the draft EIR into required project conditions or outcomes. 8-28

2) Identify projects within our community for the developer to fund that will offset the greenhouse gas emission increases planned under the current development. Require the developer to fund these projects, assuming that the cost is in line with comparable public benefits for projects of this size. (An alternative will be to require some or all of the additional mitigations described in the draft EIR, and then have the developer fund offsets or GHG reduction projects that neutralize the smaller resulting increase in greenhouse gas emissions either through an up front present value payment to cover a stream of years or through payment for capital projects with one-time costs. Examples include a range of California-based offsets subject to CCAR protocols, such as dairy manure methane capture projects and landfill methane capture projects, since the DEIR points to methane as 21 times more potent a GHG than CO2.) 8-29

3) Address the emergency resources issues so that the City does not face egregious costs from the future Climate Change induced flooding that is very likely to occur at and near this site during the useful life of Menlo Gateway, and explore a developer fee to fund construction of levees in environmentally sensitive ways that would protect the Project area as well as the Belle Haven neighborhood and the rest of the Menlo Park industrial areas near 101 which are key tax generators to support City services but, as the DEIR admits, are **at only about 5 feet above sea level -- a very low elevation that is projected by BCDC to see flooding within this century due to sea level rise caused by climate change** (see below**).** 8-30

F(2). ADAPTATION/FLOODING ISSUES FOR PROJECT AREA DUE TO CLIMATE CHANGE:

As alluded to above, this project's significant emissions are not its only climate change-related problem. The project is also being built on land that, at 5 feet above sea level, is expected, within the lifetime of these buildings, to flood due to sea level rise as projected by the Bay Conservation and Development Commission (BCDC). Thus, this Project brings front and center significant "adaptation to Climate Change" problems for the Project area, as well. Even though a very large quantity of soil is proposed to be brought to the site, no 8-31 8-32

assessment is being made of its efficacy under current Climate Change Sea Level Rise projections, or of the costs to the City of emergency services to deal with flooding either on-site or nearby due to and diversion by virtue of fill at the site. It seems clear that even if worldwide aggressive GHG reduction efforts are undertaken promptly, mitigations like levees will need to be funded at numerous locations around the San Francisco Bay if we are to ensure protection of areas close to sea level, like this important industrial area as well as the nearby low-moderate income Belle Haven neighborhood, and the water treatment plant that serves them all. These important assets and more are at risk of flooding due to sea level rise estimates from overall climate change impacts. (*See* Menlo Park Green Ribbon Citizens' Committee Report received by the Menlo Park City Council in November 2007). For example, if the Greenland ice sheet were to entirely melt (it is already 1/3 melted in the last 15 years and is accelerating), a sea level rise of 23 feet is projected. And scientists warn that this century's sea level rise will not occur "linearly" or steadily but could surge forward at any time. The press reported last week that the northwest passage was open to ships for the first time. The signs are all around us and the science coming in is showing it is all happening faster than previously feared. The green house gas emitted by this project are significant and must be reduced to a "less than significant" level if it is to be approves, and the same must be done for such projects everywhere if we are to turn the tide in time to avert the most catastrophic climate change outcomes projected by IPCC scientists. To do otherwise would not only violate CEQA, but it would be immoral.

8-32 (cont.)

8-33

8-34

G. <u>The Project will cause Significant Unavoidable Traffic Impacts and the DEIR's Analysis of these is Inadequate.</u>

The impacts on Marsh Road and Willow in particular are of great concern, since congestion will significantly increase the response time for emergency vehicles (police and fire) needed to serve both the project and other developments and residents East of 101. The developer is already being asked to buy a very tall hook and ladder fire truck, but perhaps a Belle Haven Fire Station is also needed to ensure it can get there on time. (See also comments above about lack of transit for this site.) Again, reducing the office space to something like Alternative 3 while maintaining a significant Hotel would seem to reduce the traffic impacts to more acceptable levels while ensuring revenues for the City (as discussed above).

8-35

8-36

H. CONCLUSION

If the types of conditions stated above were made to the project, it would receive my wholehearted support. There is sure to be a "sweet spot" that will allow something good to happen at this site that is *truly* sustainable. But the DEIR clearly shows that we haven't yet found that sweet spot and too many significant impacts are not adequately unmitigated. I believe the developer understands this spirit and I am hopeful that he will

8-37

be willing to work to make it truly sustainable through enforceable commitments and conditions. 8-37 (cont.)

Rather, as it now stands, the DEIR shows that -- especially for climate change, water and traffic/public safety response times – the project is not sustainable as currently proposed and needs to be reduced in size and more heavily mitigated to bring its impacts to less than significant levels. 8-38

The DEIR is inadequate. I request that it be revised and recirculated, during which process the project can be rethought to resize it to reduce or eliminate more of its impacts to less than significant levels, through on-site mitigations and meaningful off-site offset projects, so that it becomes more of a net positive for our community. That way Gateway could become something we all will be proud of when our great grandchildren later this Century look back and ask what we did back in 2009/2010 in turning the tide to fight climate change and secure a better future for them and the planet we all depend on. 8-39

Thank you for this opportunity to comment.

Gail Slocum
Former Mayor of Menlo Park
205 Pope Street
Menlo Park, CA 94025
gailslocum@comcast.net
650 325-4367

Letter 8: GAIL SLOCUM

Response to Comment 8-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response. While a response is not required to comply with CEQA, the commentor's opinion regarding a desire to see a smaller project is noted. Please see Responses to Comments 8-1 through 8-39 that address specific comments on the adequacy of the EIR analysis.

Response to Comment 8-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response. While a response is not required to comply with CEQA, the following information is provided for further clarification. The general concerns raised in the comment relating to an increase in traffic, water demand, and greenhouse gas emissions are addressed in more detail in responses provided below. The commentor's support for a project that includes less office space (similar to Alternative 3) is also noted.

Response to Comment 8-2

The City of Menlo Park does not have a PUD zoning designation. The City's Planned Development (P-D) zone only applies to areas around El Camino Real. The proposed M-3 zoning district is necessary because the city does not have an underlying zoning district that would allow both hotel and Research and Development uses or the intensity that is currently being proposed as part of the project. In addition, the M-3 zoning district would require a Development Agreement, which provides the City a mechanism through which to seek public benefit from the proposed project. A Development Agreement is not necessarily required in the P-D zoning district.

The Draft EIR analyzes both the site-specific development proposed under the Menlo Gateway project, as well as the maximum development potential that could occur if only the General Plan Amendment (GPA) and Zoning Ordinance Amendment (ZOA) were approved (see page 2-1 and Table 2-1 in Chapter 2, Project Description, for an explanation of the approach). The technical sections of the EIR include a sentence prior to the impact analysis that indicates if the impact analysis addresses the GPA/ZOA (maximum development) and/or the Menlo Gateway project. Most of the analysis evaluates the project assuming the worst-case scenario (GPA/ZOA), but in some instances the proposed development of the Menlo Gateway project itself is also evaluated. A table is included below that identifies the approach to the impact analysis by section.

Section	Project Analysis
3.1 Aesthetics	Project
3.2 Air Quality	GPA/ZOA and Project
3.3 Biological Resources	GPA/ZOA and Project
3.4 Cultural Resources	GPA/ZOA and Project
3.5 Hydrology and Water Quality	GPA/ZOA and Project
3.6 Hazardous Materials	GPA/ZOA and Project
3.7 Land Use	GPA/ZOA and Project
3.8 Noise	GPA/ZOA and Project
3.9 Population and Housing	Project
3.10 Public Services	GPA/ZOA and Project
3.11 Traffic and Circulation	GPA/ZOA
3.12 Utilities and Service Systems	GPA/ZOA and Project
3.13 Climate Change	Project
Notes: Project = Menlo Gateway project. *Source:* PBS&J, 2009.	

Chapter 4-1 of the Draft EIR addresses the growth inducing aspects of the project while the cumulative impacts are addressed at the end of each technical section.

Response to Comment 8-3

The project sponsor currently seeks to rezone the project site with a new M-3 zone that would permit a higher floor area ratio (FAR) than is currently allowed under the M-2 zoning. Contrary to the commentor's assertion, the new M-3 zone would not entitle other M-2 property owners to higher development intensities. In fact, all M-2 property owners would be required to proceed through the same entitlement process for a General Plan Amendment, Rezoning, and environmental review before a new M-3 zone could be applied to any other property in Menlo Park. So, the proposed M-3 zone would not operate as a "growth inducing precedent" for more parcels in the M-2 area, especially when considering that the City retains full discretion as to all development approvals.

Response to Comment 8-4

The Draft EIR evaluates the impacts associated with developing the Menlo Gateway project, as well as the maximum development permitted under the M-3 zone, as currently proposed. It would be too speculative and outside the scope of this project and CEQA to evaluate impacts associated with applying the M-3 zoning district to other areas in the City currently zoned M-2. While the new M-3 zone would allow a greater FAR, the choice to request this new zone would depend heavily on a project sponsor's ability to assemble parcels, to market for office and commercial uses, to enter into the required development agreement, and to evaluate the environmental impacts where the Rezoning

and General Plan map amendment would be sought. If the City receives an application to rezone an area currently zoned M-2 elsewhere in the City, it will be evaluated at that time. It would not be appropriate or practical to assume all areas currently zoned M-2 would be rezoned to M-3 and include large-scale development projects, as the City maintains full discretion as to any development approvals.

The City does not include, and historically has not included, parking (structure or surface) in a project's Gross Floor Area (GFA) to calculate the project's FAR. Therefore, the project's FAR is based on the GFA of habitable structures. Please also refer to Response to Comment 8-5 for more information about the likelihood that the new M-3 zone is growth inducing.

Response to Comment 8-5

As noted above in Response to Comment 8-4, the City will review each application for future development and any General Plan Amendments or Rezoning requests. To either rezone a parcel or an area from M-2 to M-3 or request a General Plan Amendment to change an underlying land use designation would require discretionary review by the City Council, as well as environmental review. For the purposes of this EIR, it is too speculative to assume that all other property owners within the Limited Industry area would seek a General Plan Amendment and Rezoning to M-3. The potential for redevelopment to occur on those parcels located between the Independence and Constitutions sites, as well as parcels surrounding the project site within the larger M-2 zone, was addressed in the Fiscal Impact Analysis prepared for the City by Bay Area Economics (BAE). Based on their review of the parcel sizes, existing developed uses and property owners, it was BAE's assessment that the need to assemble enough parcels into a coherent series of developable sites would be problematic due to the small size of the parcels and the number of property owners.

Many of the types of land uses included within the proposed Mixed Use Commercial Business Park Land Use Designation could be permitted within the Limited Industry Land Use Designation and M-2 zone with approval of a Conditional Development Permit. The creation of a new land use designation and associated zoning district in and of itself would not be considered removing an obstacle to growth, because this land use designation and zoning is only applied to the project site. Any property owners either in the immediate vicinity or elsewhere in the City seeking the Mixed Use Commercial Business Park Land Use Designation and M-3 zone would be required to submit a formal application to the City seeking a General Plan Amendment and rezone and be subject to a separate environmental review process. Creating this new land use designation and zoning district would potentially enable others to take advantage of the greater FAR and mix of uses, but due to the need to obtain a General Plan Amendment and rezoning this legislative action would not trigger a precedent for increased growth in the City. Consequently, the Draft EIR's Growth Inducement analysis is adequate for purposes of CEQA.

Response to Comment 8-6

As described in Section 3.9, Population and Housing on page 3.9-6, the increase in employment from the proposed project would represent 31 percent of the increase in the City of Menlo Park projected by ABAG for the period from 2010 to 2020. This increase was found to be less than significant because it

would not result in adverse direct impacts to the physical environment (see pages 3.9-6 and 3.9-7). The demand for housing in Menlo Park as a result of the proposed project was estimated at 109 units, as discussed on page 3.9-9. The impacts from this indirect housing demand are identified as less than significant because the number of units is well within the City's Regional Housing Needs Allocation (RHNA) of 993 units for the period from 2007 to 2014.

A separate analysis of the potential increase in the City's allocation of housing units under the Regional Housing Needs Analysis (RHNA) process is included as part of the Housing Needs Analysis (see Appendix F of the Draft EIR, Section VI beginning on page 37) and is referenced in the last paragraph of page 3.9-9. The analysis estimates the potential increase to the City's RHNA to be between zero and 76 units during the next RHNA cycle as a result of the proposed project. Section VI of the Housing Needs Analysis deals only with the regulatory framework of the housing element law and the RHNA process and is separate from the analysis of demand for housing.

The second, third and fourth paragraphs on page 29 of Appendix F of the Draft EIR are revised to provide additional explanation regarding the selection of the ten percent factor applied to estimate the City of Menlo Park's share of housing demand generated by the proposed project and the rationale why a more conservative upper-end estimate of the number of households that would seek and find housing in Menlo Park is appropriate. Please refer to Chapter 2, Revisions to the Draft EIR, for more information.

The comments regarding jobs housing balance and the housing impact fee do not concern the adequacy of the EIR nor the City's compliance with CEQA. Neither the State CEQA Guidelines nor the City requires evaluation of a project's effects on the ratio, or balance, of jobs and housing. While, historically, a jobs-to-housing ratio has been used as in indicator of a community's land use balance and whether it functions as a bedroom community or an employment center, it is not an effective measure of whether future employees can live in their place of employment, because it does not take into account employee salaries, housing availability, and housing affordability. However, the commentor's opinion is noted.

Response to Comment 8-7

For a discussion of the potential for PUD zoning, please see Response to Comment 8-2. With respect to the commentor's suggestion that the Menlo Gateway project include housing, for purposes of CEQA, the Draft EIR must describe a range of reasonable alternatives to the project, which would feasibly attain most of the project objectives of the project, but would avoid or substantially lessen any of the significant effects of the project. Furthermore, an EIR need not consider every conceivable alternative to a project, but rather a reasonable range (CEQA Guidelines section 15126.6).

The Draft EIR analyzes five project alternatives and evaluates their comparative merits in accordance with CEQA's "rule of reason." Not only would a housing alternative not meet the project sponsor's objectives, but the inclusion of housing likely would fail to reduce project-related impacts and more likely would contribute to additional significant impacts (i.e., flooding concerns) or to the significance of existing project-related impacts. Therefore, under CEQA, it is not required that such a housing

alternative be analyzed and disclosed. The commentor's suggestion is, however, noted for consideration by the City's decision-makers.

Response to Comment 8-8

CEQA Guidelines section 15125 requires that an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published. The NOP was published in May 2007, before certain projects mentioned by the commentor were in the development pipeline.

However, consistent with City policy, approved projects are recognized as part of the cumulative scenario, while to account for a longer range perspective, the City also includes a Long Term cumulative scenario that takes into account projects that have not yet been approved. This evaluation is performed by applying a growth factor of one percent per year to background traffic conditions. This growth factor is expected account for future projects that have not yet been approved. It is noted that the City of Redwood City in its Comment Letter (see Comment Letter 2) agreed that the cumulative traffic analysis methodology used in the Draft EIR was acceptable.

With respect to the Dumbarton Rail project, funding for this project is unidentified and the project status is uncertain. CEQA specifically states that an EIR should avoid speculation (CEQA section 15145). While inclusion of this rail project in the cumulative analysis would presumably reduce some of the potential traffic impacts identified for the project and other cumulative development, the cumulative traffic analysis presents a more conservative (higher impact) assessment of impacts on roadways, US 101, and other routes of regional significance, than if the Dumbarton Rail project were included. Moreover, the proposed Menlo Gateway project would not hinder implementation of the Dumbarton Rail project in the future, since it would not affect the tracks, structures, or proposed crossings. The question of whether the project sponsor can support a "more rapid" implementation of the Dumbarton rail project is not a CEQA issue.

Response to Comment 8-9

Water supply is discussed under Impact UT-1 on page 3.12-13 of the Draft EIR. Since the Draft EIR was released the project sponsor has refined the baseline water assumptions and the City has updated the water supply discussion in the Draft EIR (see Chapter 2, Revisions to the Draft EIR, for specific updated information). Based on this updated information, the proposed Menlo Gateway project (with 100 percent office or the Split Option) would not exceed available supplies in normal years. However, if the office flex component of the project is constructed with 100 percent research and development (R&D) uses, the increase in water demand would not necessarily exceed available supplies, but would generate demand above the City of Menlo Park's significance threshold for available supplies; therefore, only this development scenario would result in a potentially significant water supply impact that cannot be mitigated and would remain significant and unavoidable.

The proposed Menlo Gateway project would generate new demand for water supplies and would contribute to cumulative demand within the Menlo Park Municipal Water District's (MPMWD) service

area. Specifically, as shown in revised Table 3.12-9 in Chapter 2, Revisions to the Draft EIR, the proposed Menlo Gateway project (with 100 percent office or the Split Option) along with existing and planned future uses would not exceed available supplies in normal years. However, Table 3.12-9 also shows that the proposed Menlo Gateway project along with existing and planned future uses would exceed water supplies in single dry and multiple dry years. This is considered a potentially significant cumulative impact that cannot be mitigated and would remain significant and unavoidable. Under these dry year situations, the MPMWD would institute its water shortage contingency measures outlined in its 2005 Urban Water Management Plan to help balance supply and demand.

A Water Supply Assessment (WSA) was prepared for the proposed Menlo Gateway project that evaluated the water supply and demand at the project site under various development scenarios (see Appendix H in the Draft EIR). However, since release of the Draft EIR, as mentioned above, the baseline water assumptions were refined. The WSA was not updated to reflect these refined assumptions, but the Utilities section of the Draft EIR was updated and is included in Chapter 2, Revisions to the Draft EIR. The basis of the change in water demand assumptions is provided in a memorandum prepared by KEMA. The memorandum is included as an appendix to the Environ Memorandum (see Appendix D to this Final EIR).

Response to Comment 8-10

The project sponsor has indicated that it would install high efficiency fixtures, appliances, and hardware within the project buildings.

Please see Responses to Comment Letter 32 that address climate change and potential project off-sets.

Response to Comment 8-11

As stated previously, the proposed Menlo Gateway project would generate water demand above the existing demand of 0.025 million gallons per day (mgd) at the project site, regardless of the development option (i.e., 100 percent office, 100 percent R&D, or Split) that would be implemented over the next 20 years. The commentor believes that an increase in demand at the Independence site is significant; however, the existing water demand at the Independence site is currently 0.013 mgd versus the revised 0.068 mgd of new demand generated by the proposed Independence site portion of the Menlo Gateway project. This is a net change in demand of 0.055 mgd or 55,000 gallons per day (gpd); although the percent of change is substantial, the net demand does not exceed the City's significance threshold. This is also the case with the Split Option scenario; however, if the 100 percent R&D is implemented, the change in demand jumps to 0.137 mgd (137,000 gpd), which represents a change in demand, and would exceed the City's significance threshold. The threshold of significance to determine project impacts associated with an increase in water demand is if the project would result in "insufficient water supplies available to serve the project from existing entitlements and resources and would exceed more than 10% of the City's remaining water allotment." Please see Response to Comment 8-9.

Response to Comment 8-12

The comment reiterates information contained in the Draft EIR and does not question that the GPA/ZOA (with 100 percent R&D uses) would result in a significant and unavoidable water supply impact.

Response to Comment 8-13

For the purposes of the WSA and the EIR analysis, R&D uses were assumed to be water intensive wet labs for the most conservative assessment.

Response to Comment 8-14

The City determined that a water demand scenario that considers a split between office and R&D uses that would not exceed the City's significance threshold would be helpful to the reader, because R&D uses could be allowed under the M-3 zoning. Since the Draft EIR was released the project sponsor further refined the baseline water assumptions and revised the water scenarios to reflect these assumptions. Please see Chapter 2, Revisions to the Draft EIR, for the specific changes to the text. All three scenarios assume maximum allowable development under the proposed GPA/ZOA, which provides a more conservative assessment of the increase in water demand.

As stated previously, a WSA was prepared for the proposed Menlo Gateway project (see Appendix H in the Draft EIR) and evaluated the supply and demand at the project site under the various development scenarios. Pages 2-10 and 2-11 of the WSA provide a discussion of the San Francisco Public Utility Commission's (SFPUC) evaluation of Climate Change and its effects on SFPUC's supplies from the Hetch Hetchy Reservoir. That discussion is presented below:

2.5. Climate Change

One potential factor that may affect water supply reliability for Menlo Park is climate change. The term "climate change" refers to the anticipated change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. Historical records have shown that temperature changes have occurred in the past, such as during previous ice ages. A 2007 assessment report for the Intergovernmental Panel on Climate Change indicates that the increase in global average temperature since the mid-20th century is very likely due to an observed increase in anthropogenic greenhouse gas concentrations. California Health and Safety Code Section 38501(a) recognizes that "[climate change] poses a serious threat to the economic well-being, public health, natural resources, and the environment of California," and notes, "the potential adverse impacts of [climate change] include…reduction in the quality and supply of water to the state from the Sierra snowpack." As most of the state depends on surface water supplies originating in the Sierra Nevada, including the San Francisco peninsula area, this water supply reduction is a concern.

SFPUC recognizes that climate change may cause increased uncertainty in precipitation and the Sierra snowpack, and a higher chance of water shortages in the Bay Area. SFPUC's initial steps to address climate change include "engaging national climate change experts to study the potential effects of reduced snowpack, rising seas and hotter temperatures on the SFPUC's water supplies, wastewater collection and energy generation..."[29] SFPUC's current plans to augment and improve reliability for regional water supplies include conjunctive use plans, reservoir improvements, recycled water plans, and investigation of desalination opportunities.[30]

Most of the scientific models addressing the climate change issue show that the primary effect on California's climate would be a reduced snow pack and a shift in stream-flow seasonality. A higher percentage of the winter precipitation in the mountains would likely fall as rain and, as a result, peak runoff would likely come a month or so earlier. The end result of this would be that the state may not have sufficient surface storage to capture the resulting early runoff, and so a portion of the current supplies would be lost to the oceans, rather than be available for use in the state's water delivery systems.

While there are models that indicate a reduced snow pack and a shift in stream-flow seasonality, this potential effect of climate change would be experienced sooner at lower elevations than at higher elevations. This issue was discussed by Dr. Bruce McGurk, Operations Manager at Hetch Hetchy Water and Power, during a November 28, 2006 meeting with the SFPUC (the transcript of the meeting and resume of Dr. McGurk are provided as Appendix B). The SFPUC system is composed of three higher elevation reservoirs (Hetch Hetchy, Cherry Lake, and Eleanor), the Don Pedro reservoir, and five local area reservoirs. The higher elevation reservoirs and the Don Pedro reservoir are dependent on snow melt and the local area reservoirs are dependent on rainfall. About 15 to 30 percent of SFPUC supply is from the local area reservoirs; therefore, most of the SFPUC water supply is from higher elevation reservoirs. For example, the Hetch Hetchy reservoir is a very large and very high elevation water source for the SFPUC; it reaches up to 12,000 feet in elevation and 87 percent of its stored water is above 6,000 feet, which is where the snow line is typically located in January or February. Given this discussion, the Hetch Hetchy reservoir and other higher elevation reservoirs of the SFPUC would be the least and last to be affected by a potential shift in stream-flow seasonality.

As described above, the SFPUC believes the Hetch Hetchy reservoir and its tributaries would not be affected by Climate Change and therefore, its supplies in the Hetch Hetchy system are adequate to meet demand in normal and above-normal hydrologic periods. In dry years, the SFPUC would curtail supplies in its Regional Water System (RWS), in this case demand reductions are necessary to balance demand against the reduced supplies.

---

[29] San Francisco Public Utilities Commission. http://sfwater.org/detail.cfm/MC_ID/18/MSC_ID/114/MTO_ID/342/C_ID/3124/Keyword/climate%20change, Accessed July 2007.

[30] San Francisco Public Utilities Commission. 2005. Draft Water System Improvement Program.

A discussion of how climate change can affect water supply is also addressed in the Draft EIR in Section 3.13, Climate Change on page 3.13-10.

Response to Comment 8-15

Please see Response to Comment 8-14 above regarding the SFPUC's perspective on climate change. Please see also Responses to Comment Letter 32 that address climate change.

The MPMWD is responsible for providing water to users within its service area, which includes the City of Menlo Park. Balancing the future demands of water supply is a delicate situation for all water providers in California, not to mention the western United States. Currently, the SFPUC has developed a long term strategy to accommodate the potential for water shortages in the future. It is anticipated that a mandatory 20 percent conservation for all businesses and residences will be required if and when the City experiences multiple dry years.

Footnote 4 references the court case of *Vineyard Area Citizens for Responsible Growth Inc. v. City of Rancho Cordova* (40 Cal.4th 412, 432). The findings and decision in this court case were based on speculative "paper water" supplies, which relate to facts not applicable to this project. As noted in both the EIR and the WSA, the City has access to adequate water supplies under normal year conditions to serve the project as well as existing demands. Under multiple dry years, the City would be mandated to reduce water demand to accommodate the reduction in supplies regardless of whether or not the Menlo Gateway project is approved. All businesses and residences would be required to comply. In addition, as noted previously, under the No Project Alternative, cumulative demand within MPMWD service area would exceed available water supplies under dry year situations as early as 2010 and extending to 2030. In other words, because of supply curtailments in single dry and multiple dry years to MPMWD, regardless of the development scenario at the project site, the cumulative demand in the MPMWD service area would exceed available supplies.

Response to Comment 8-16

The issue of climate change and its effect on water supplies is discussed in detail both in the WSA, as noted in Response to Comment 8-14, as well as page 3.13-10 of the Climate Change section in the Draft EIR. As discussed on page 3.13-10, most of the scientific models show that a reduced snow pack and an increase in early runoff would more than likely contribute to the state's inability to capture this early runoff resulting in a reduction in supplies. The San Francisco Public Utilities Commission (SFPUC) has stated that the effect of climate change in 2025 would likely be within the range of current annual variations and would not contribute to a measurable decline in water supplies. While the state recognizes that water supplies will be affected by climate change, it is premature to speculate on exactly what water supply impact to the project or project site would occur as a result of climate change. The State Water Resources Control Board and major water purveyors in the State are working on those assessments now, but have not given specific information that can be used in planning or in predicting impacts during the CEQA process. However, it is clear that water conservation must be a part of every development project. The Menlo Gateway project is designed to reduce water consumption. Water supply conservation features of the project are summarized in Table 3.13-6 of the

Draft EIR and have been further refined in Chapter 2, Revisions to the Draft EIR. The table indicates that the project would reduce landscape irrigation by 50 percent through rainwater capture systems, drought tolerant landscaping and smart, water efficient irrigation systems. Indoor water consumption would be reduced through the use of low-flow toilets, lavatories and sinks. These measures help reduce GHG emissions by reducing the amount of energy needed to pump water and wastewater to and from the site, as well as provide measures that adapt to less water supplies being available to serve the project.

Response to Comment 8-17

The commentor poses a policy question and offers opinions that speak to the project's merits. The role of the EIR is to identify the environmental consequences of the proposed project. As discussed in Responses to Comments 8-9 through 8-15, adequate water supplies are available to serve the project under normal conditions, as currently proposed, as well as to serve the City's existing water demand. Under dry and multiple dry years, the City would require mandatory water conservation to address the potential shortfall of available water supplies whether or not the Menlo Gateway project moves forward. All residential and commercial uses would be required to conserve water. As discussed in Section 3.13, Climate Change, and Chapter 2, Project Description, the project is including a number of water conserving elements to assist in minimizing the demand for water. The evaluation in the EIR and WSA of different development scenarios was provided to help the City decision makers understand the water demand ramifications of the possible uses at the project site. The City Council will consider this information regarding water availability and use by the proposed Menlo Gateway project when deliberating on whether to approve, modify, or reject the project.

Response to Comment 8-18

The development of high density projects in urban infill areas that replace outdated and inefficient buildings promotes energy savings by reducing the expansion of infrastructure and replacing inefficiencies with more energy-saving features. Furthermore, the project sponsor is committed to pursue the LEED Certification process, which when combined with the EIR mitigation measures guarantees that the project will be designed to be more efficient than Title 24 energy standards. Also, the provision of a shuttle service linking the project site with rail transit and providing local transit stops at the site, along with other required TDM measures, would reduce vehicle miles traveled and the GHG emissions associated with those vehicle trips. The mitigation measures and GHG reduction features will be implemented through the Mitigation Monitoring and Reporting Program (MMRP) and through conditions of approval.

In regard to reducing CO_2e emissions within the City of Menlo Park, the City's CAP provides the overall plan of how the City of Menlo Park can continue to grow and at the same time reduce emissions citywide. Chapters 4.2 and 4.3 of the CAP outline the Community Strategies of reducing emissions. Reduction measures that focus on existing residential retrofits (i.e., Green @ Home Program, Energy Efficiency Renewable Energy Financing Programs, etc.), pedestrian and bicycle infrastructure improvements, electric and hybrid plug in charging stations, expanding the community

shuttle service, and the zero waste plan all reduce existing emissions. These programs, with reduction measures that focus on new land use approvals such as the Green Building Code, Landscape Ordinance Update, and others, combine to reduce emissions citywide by 15 percent below the current emissions inventory in the City's CAP.

The Menlo Gateway project implements a variety of emissions reductions strategies to reduce emissions, including a robust TDM program. The TDM program (see Chapter 2, Revisions to the Draft EIR, for the enhanced TDM program) includes such things as providing a shuttle service to both the Menlo Park and Redwood City Caltrain stations for project employees. As such, this project exemplifies the type of growth (energy efficient, high density, mix of office and commercial uses that expands transit services) that is needed to help the City of Menlo Park achieve its GHG emissions reduction target by year 2020.

Response to Comment 8-19

Comparing the project to 'business as usual' is one of several useful ways of demonstrating how the GHG reduction features of the project can be used in determining whether or not the project complies with the City's overall goal to reduce GHG emissions. Comparing gross levels of unmitigated emissions to the City's emissions inventory is not as effective in determining the significance of the project's contribution as quantitatively determining significance on a per capita basis. The recent release of the draft BAAQMD GHG thresholds allows such a comparison. A discussion of revisions to the analysis based on this new threshold is included in Chapter 2, Revisions to the Draft EIR. In addition, as discussed in Response to Comment 32-9, project GHG emissions have been compared to the BAAQMD draft thresholds, and it has been determined that the project's GHG emissions are below the draft BAAQMD Criterion 3 threshold level if the project is constructed and operational after 2018. If the project is completed prior to 2018, mitigation would be required to reduce the project's emissions to below the BAAQMD threshold. Adding this analysis provides another quantitative metric in determining the project's GHG emissions and underscores the DEIR's less-than-significant finding.

Response to Comment 8-20

The generation of household GHG emissions has no bearing on the adequacy of the EIR's climate change analysis for a large-scale commercial/office project. Comparing a 'business as usual' allotment of emissions (24,000 MT CO_2e) afforded a project of this size with a theoretical number of residential units does not provide a meaningful analysis of potential impacts. As discussed in Response to Comment 8-19, above, the BAAQMD recently released a new threshold to evaluate a project's contribution to GHG emissions. Since this threshold was released after the Draft EIR was published, this information is included in the Final EIR in Chapter 2, Revisions to the Draft EIR.

Please see Responses to Comments 6-14 and 8-19 above, and Responses to Comment Letter 32 that addresses climate change issue in depth.

Response to Comment 8-21

Please see Responses to Comments 6-14, 8-19 and 32-9. These responses demonstrate quantitatively how the project would reduce GHG emissions to less-than-significant levels, pursuant to the draft BAAQMD Criterion 3 threshold.

Response to Comment 8-22

The BAAQMD has developed a draft set of thresholds for development projects, as described in detail in Response to Comment 32-9. As noted in the comment, the BAAQMD proposed draft tiered thresholds for development projects as follows:

- demonstrate compliance with a qualified Climate Action Plan,

OR

- demonstrate that Project generated emissions are at or below 1,100MT CO_2e/year (used for small projects),

OR

- demonstrate that Project generated emissions are at or below 4.6MT CO_2e/Service Population (SP)/year.

When using the draft BAAQMD's proposed guidance for GHG emissions significance criteria, lead agencies may chose any one of the three criteria appropriate for determining significance. As the City's CAP is not specific to private projects, the first criterion does not apply. The second criterion is a screening level value meant to evaluate small or modest projects. Therefore, Criterion 2 is not an appropriate threshold to use for a project of this size. However, the third criterion is useful to quantitatively evaluate the significance of the project's climate change impacts and is used to evaluate the project in light of these new thresholds. Chapter 2, Revisions to the Draft EIR, includes a section that addresses revisions to the climate change analysis using this new guidance. Please see also Response to Comment 32-9 for more details.

Response to Comment 8-23

The comment is expressing an opinion and does not include specific comments or concerns that address the adequacy of the EIR or the City's compliance with CEQA and thus does not necessitate a response. Nevertheless, the following information is provided for further clarification. To date, it is technologically infeasible to reduce emissions by 80 percent. It is anticipated that, before the year 2050, technology will be developed that will allow that level of reduction. Therefore, now a significance determination has been made based upon implementation of all emission reduction strategies deemed feasible by the City and augmented by the analysis of the emissions as compared to the draft BAAQMD per capita GHG thresholds. These are the most appropriate and timely metrics for determining significance at this time. Please see Response to Comment 32-9.

Response to Comment 8-24

The project sponsor has provided more details on the design and engineering that will be used in reducing GHG emissions. The following is a brief summary of some of the project design features that address GHG:

- Achieve LEED gold for the office buildings and LEED silver for the hotel.
- Incorporate 100% cool roofs for the office and hotel; and orient buildings to maximize passive heating and cooling efficiency and natural ventilation, where appropriate.
- Shade fifty percent of the parking lot and other hard surfaces with tree canopy.
- Collect heat outputs from laundry and cooking machinery for reuse in building HVAC.
- Plant drought tolerant landscaping; minimize evaporative water loss by covering pools, adjusting fountain operating hours.
- Reduce potable water usage by using low-flow restroom toilets, urinals, lavatories, and sinks; final laundry rinse cycle water would be used as the first rinse cycle of the next load.
- Crush and reuse existing paving and concrete as a base material, recycle or salvage construction waste.
- Provide charging stations for electric vehicles.
- Prepare and implement a recycled content purchasing policy (e.g. prohibiting use of plastic water bottles).
- Implement an aggressive TDM program.

The design features will be implemented through conditions of approval imposed upon the project.

Response to Comment 8-25

ABAG does not provide GHG thresholds of significance, but the BAAQMD recently released draft thresholds to analyze GHG emissions for the purposes of CEQA. Please see Response to Comments 32-9, that addresses the new threshold and summarize the project's impact on climate change associated with an increase in GHG emissions.

Response to Comment 8-26

The City of Menlo Park and the project sponsor have developed a set of project design features and mitigation measures that would reduce project-generated GHG emissions to levels of less than significance. The design features would be implemented and enforced through conditions of approval and the mitigation(s) would be enforced through the Mitigation Monitoring and Reporting Program.

Please see Response to Comment 8-24 and 32-21 for a detailed breakdown of the project's design features.

Response to Comment 8-27

The per capita GHG threshold recommended by the BAAQMD currently is the most appropriate way to quantitatively determine the significance of GHG emissions. As noted above, the refined analysis has determined that the project's GHG emission levels are less than significant.

Response to Comment 8-28

As stated in Chapter 2 of the Draft EIR, Project Description, the project sponsor is pursuing a LEED gold rating for the office uses and LEED silver rating for the hotel and health club uses. The conditions of approval will require that the hotel and office buildings obtain LEED gold and silver certification.

Response to Comment 8-29

The City recently adopted a Climate Action Plan (CAP) that includes specific targets for the reduction in City-generated greenhouse gas emissions to meet the requirements set forth in AB 32. The City's CAP is currently focused on City actions and does not include specific requirements or programs for private development projects. However, in the future, the City could expand the CAP to include more programs focused on the reduction of community-wide emissions. The City's CAP provides the overall plan of how the City of Menlo Park can continue to grow and at the same time reduce emissions citywide. Chapters 4.2 and 4.3 of the CAP outline the Community Strategies of reducing emissions. Reduction measures that focus on existing residential retrofits (i.e., Green @ Home Program, Energy Efficiency Renewable Energy Financing Programs, etc.), pedestrian and bicycle infrastructure improvements, electric and hybrid plug in charging stations, expanding the community shuttle service, and the zero waste plan all reduce existing emissions. These programs, in conjunction with reduction measures that focus on new land use approvals (such as the Green Building Code, Landscape Ordinance Update, and others) combine to reduce emissions citywide.

The proposed project includes many GHG emissions reduction strategies, one of which is the expansion of the community shuttle service to the CalTrain rail transit service. As such, the project exemplifies the type of growth (i.e., energy efficient, high density, mix of office and commercial uses that expand transit services) that is needed to keep the City of Menlo Park on track toward achieving its GHG emissions reduction target by year 2020. As noted earlier, if the project is completed and operational in 2018 or later, the impact is less than significant based on the BAAQMD threshold. If the project is completed prior to 2018, additional mitigation is required in order to reduce the project's emissions to below the BAAQMD threshold and such mitigation been included in changes to the Draft EIR, see Chapter 2 of the Final EIR. Consequently, requiring the project sponsor to fund additional emission reduction projects within the community is not necessary, because the project sponsor can otherwise mitigate project emissions to a less-than-significant level.

Response to Comment 8-30

Regarding the potential for flooding, this issue is addressed in the Draft EIR in Section 3.5, Hydrology and Water Quality under Impact HY-7 on pages 3.5-28 and 3.5-29 and Impact HY-8 on pages 3.5-29 through 3.5-31. The project is proposing to import fill to elevate structures above the 100-year flood level in accordance with requirements set forth by FEMA. As discussed under Impact HY-8, there is the potential for sea level rise to occur within the next 15 years that could result in flooding in the areas east of El Camino Real. However, based on the most current information on sea level rise in this area, the project sponsor is proposing to elevate buildings above projected flood levels, including the 0.83-foot sea level rise anticipated to occur by 2025. Because the project has been designed to account for potential flooding and, subject to FEMA regulations and oversight, would not be adversely affected by flooding, the impact was not determined to be significant.

Mitigation costs associated with climate change-induced flooding, including developer fees and protection of areas near the project site, are fiscal and regional considerations that do not concern the adequacy of the EIR nor the City's compliance with CEQA and do not warrant further response in this document. Nevertheless, the Menlo Gateway project would be above the expected base flood elevation in the event of expected sea level rise through the 25-year planning horizon following buildout (2040). Thus, the impacts to people and structures were determined to be less than significant. Refer to Response to Comment 5-2 regarding potential sea level rise effects on flooding.

Response to Comment 8-31

Please see Responses to Comments 5-2 and 8-30 regarding potential sea level rise effects on flooding at the project site.

Response to Comment 8-32

Please see Response to Comment 5-2 regarding potential sea level rise effect on flooding and diversion of flood flows. Please also see Response to Comment 8-30, above, regarding Climate Change costs and Response to Comment 8-35, below, regarding emergency services to areas near the project site.

Response to Comment 8-33

The commentor's suggestions do not address the physical environmental impacts of the proposed project; therefore, no further response is required. For more information, please see Responses to Comments 5-2, 8-30, and 17-76 for additional information regarding the discussion of potential sea level rise flooding impacts on the project site. Additionally, the contention that a sea level rise of 23

feet that could occur at any given time is highly speculative, not supported by current research,[7] and not addressed in this EIR.

Response to Comment 8-34

The Draft EIR reports on page 3.13-21 that the proposed project would result in a potentially significant effect with respect to climate change, requiring specific mitigations to reduce the impact to less than significant. However, since release of the Draft EIR, the project sponsor has included additional project features that further reduce emissions to a less-than-significant level unless the project is completed prior to 2018. Please see Chapter 2, Revisions to the Draft EIR, for a complete overview of changes to the project as well as Response to Comment 8-24 for a list of project design features.

Response to Comment 8-35

With respect to emergency response time, the average changes in delay at study intersections are indicated in the level of service summary table (see Draft EIR Tables 3.11-8 and 3.11-11). As noted in Responses to Comment Letter 4 (Menlo Park Fire Protection District [MPFPD]), according to the District, "acceptable standards" require a ladder truck be located within 2.5 miles of the project site. According to the District, the closest aerial ladder truck within the MPFPD is 3.1 miles from the site. This truck would have an 8 minute response time, which is in keeping with the applicable National Fire Protection Association's 1710 Standard. In addition, the MPFPD has an automatic aid agreement with the cities of Palo Alto and Redwood City. An automatic aid agreement provides assistance dispatched automatically by contractual agreement between two communities or fire districts. This is different from a mutual aid agreement, which is arranged on a call by call basis. The MPFPD ladder truck is housed in Station #1 at 300 Middlefield Road, approximately 3.2 miles from the project site which equates to an 8 minute drive time. The Redwood City Fire Department Station #9, located at 755 Marshall Street, is the closest Redwood City station to the project site with a ladder truck at 3.6 miles with a nine minute drive time.

The ISO is the leading supplier of statistical, underwriting, and actuarial information for the property/casualty insurance industry. The ISO's 2004 Public Protection Classification Study states their report "is not for purposes of determining compliance with any state or local law, nor is it for making recommendations about loss prevention or life safety." As such, there is no legal basis for the District's assertion that a ladder truck must be located within 2.5 miles of the project site. It is anticipated that in an emergency a ladder truck from one of the three stations identified would adequately provide fire response to serve the site.

---

[7] National Center for Atmospheric Research, 2009, Melting Greenland Ice Sheets May Threaten Northeast United States, Canada, May 27, 2009 report on Aixue Hu, Gerald Meehl, Weiqing Han, and Jianjun Yin. Transient Response of the MOC and Climate to Potential Melting of the Greenland Ice Sheet in the 21st Century. *Geophysical Research Letters*, May 29, 2009, www.ucar.edu/news/releases/2009/sealevel.jsp, accessed November 4, 2009.

Response to Comment 8-36

The associated traffic levels and traffic impacts associated with Alternative 3 are addressed on pages 6-22 through 6-29 in the Draft EIR in Chapter 6, Alternatives. As shown in the analysis, the number of impacted intersections for Alternative 3 would be reduced from 9 to 5, compared to the proposed project and likely would not support a "significant hotel" use as indicated in the comment. The choice of a preferred alternative concerns the merits of the project and will be addressed by the City Council when it deliberates on the project.

Response to Comment 8-37

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The comment points to the importance of the decision-making process and the deliberations the City Council must follow. The City Council will weigh all environmental, fiscal, social, economic, and sustainability considerations in deciding the project's merits and whether to approve the project.

Response to Comment 8-38

The comment is expressing an opinion and does not concern the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 8-39

The Draft EIR adequately addresses impacts associated with the proposed project and provides the necessary evidence to support the required findings. Please see Response to Comment 32-1.

18 September 2009

To: Thomas Rogers, Menlo Park Planning Commission

Cc: Menlo Park EQC
Menlo Park City Council

Re: Menlo Gateway Project.

Dear Mr. Rogers:

Thank you for all your assistance in providing information about the 900,000+ ft^2 development proposed by Bohannon Development in the existing light-industrial area to the bayside of US101 and adjacent to Marsh Road. The following summarizes my comments on the project as its current plans declare. The view taken is that this must be considered only as a many-decades project, whose viability and appropriateness must be assessed realistically in relation to unfolding global climate issues and local economic realities, now and decades into the future. It should also be viewed as a means to show that Menlo Park and the developer both understand and attend to the very serious environmental situation we all now face. In other words, the developer should fully cooperate with Menlo Park to require and implement the most environmentally effective design, so to set an example of competence and concern for all to see. 9-0

I: Solar-Electric The plans indicate possible solar-electric **(PV) panels** installed over certain areas atop the proposed parking and other structures. Unfortunately, the drawings suggest use of current flat-panel products. Such products are currently at best 15% efficient (see Appendix) in converting solar flux (insolation) into usable electricity. Film-based products are far less efficient. The remaining 85% or more of unutilized insolation is converted to infrared (thermal) radiation – this is why the cells appear dark. And that conversion directly worsens the effects of greenhouse gasses (GHGs), because they absorb infrared radiation preferentially. <u>This then worsens global warming</u> and climate change <u>to an extent greater than any utility emissions mitigation achieved by the PV power generated</u>. For technical details, refer to publications by the Heat Island Group and the California Energy Commission, such as the 1st "Cool Roofs…" presentation in… 9-1

http://www.energy.ca.gov/commissioners/rosenfeld_docs/index.html

particularly beginning with computations beginning on p10. This will also be referred to in Section III.

The project should be directed to include only concentrating PV systems, some of which also produce hot water, particularly useful for structures such as the proposed

hotels and businesses. The net efficiency target should be set above 30%, for any solar installations at Menlo Gateway. Otherwise, there is no overall environmental benefit. Examples of efficient PV systems are provided by Solyndra and Skyline Solar, both in the bay area. I have no relation to either. 9-1 (cont.)

II: It's unclear from the DEIR the extent to which positive use of daylight is made for **natural illumination** of all interior spaces – it should be required, especially within designated office/R&D structures. **Natural ventilation** should also be specified for such spaces, as well as for individual hotel rooms. This can be coordinated with current HVAC systems. The new NASA building (Sustainability Base) under construction at Ames Research Center should be consulted for good natural illumination & ventilation practices – a consultation with the relevant architects should be required (see Appendix). 9-2

And, the development should be required to use electro-chromic glazing in all sklylights and in all SE-to-SW-facing windows. Standard High-E glazing is acceptable on other exposures. The electro-chromic glazing can be controlled thermostatically, by integration with the basic HVAC system. The benefit to HVAC energy consumption is very large.

III: All roofs and all paving should be required to be designed for **maximum visible-light reflectivity** (albedo). For roofs, this can simply be achieved via CA AB32 Cool Roofs requirements. For paving, including the top parking floors of all parking structures, this can be accomplished with white-sanded concrete. Where ground-level parking and driving lanes are laid, specialized concrete or macadam with high albedo can be selected. The reasoning behind this is conveyed in the CEC reports referred to in section I and in the reports by the Heat-Island Group working with Lawrence-Berkeley Labs, as in… 9-3

http://tinyurl.com/3el8u5

The calculations make clear that roofing & paving together offer as much or more GHG mitigation as do all internal structural energy-saving methods. Albedo of human structures is so important simply because about 3% of land is covered by them – see the CEC reference, the above URL and table on next page.

CO_2-equivalent effects of roof & pavement albedo increases in cooling the globe…

	Solar Reflectivity Increase	CO_2 Offset by 100 m^2 (~120 sq yards)	CO_2 Offset Globally
White Roof	0.40	10 tons (~2 cars)	
Average Roof	0.25	6.3 tons	**24 Gt**
Cool Pavement	0.15	4 tons	20 Gt
Total Potential	--	--	**44 Gt**
Value of 44 Gt CO_2 at $25/t ~ $1 Trillion 100 gallons Gasoline/year => ~1 ton CO_2 **Global CO_2 emissions in 2009 ~24Gt** (Akbari, Menon, Rosenfeld. *Climatic Change*, 2008)			

The table indicates that simply improving existing roof/pavement reflectivity modestly is more than equal in effect to eliminating more than two cars per home.

IV: All ground-level paving should be shaded. The development should be required to plant sufficient foliage and/or install sufficient concentrating solar collectors that parking lanes and areas around all structures will be 80% shaded from direct sunlight throughout the day, within 8 years of project start (see Appendices III & IV). This requirement complements and does not obviate requirement III. For reference, note the very poor degree of pavement shading now at the project site -- beginning of the Appendix.

This requirement is related to the real future of the site, given that a 3ft sea-level rise is quite certain within 50 years (see BCDC.org). The species of trees/shrubs planted, must be selected for some resistance to salt water intrusion below the site at root levels. A requirement for consultation with UC Davis and other arboreal experts should be made, before species selection begins. 9-4

V: If **hot-water solar-collection systems** are installed, they must be required to be **sized to meet daily needs** of all structures when fully occupied, but no larger. This requirement mates with use of any efficient, concentrating solar PV systems, because the requirement is to maintain overall site albedo at the highest level possible. Unused solar-heated water creates a storage problem and an infrared-radiation problem, just as do dark roofs/paving.

VI: A 'gray water' system should be required that will meet as much of the needs of required landscaping as possible, as each structure on the site is occupied.

VII: The specified **health facility** should be required to operate no friction or air-loaded (fan) machines. All such machines that are of treadmill, 'exercycle' or other device types that use rotational loading of users' muscles should use **electrical loading**. The power output of these machines should be required to enter or supplant the facility's electrical grid connection, just as any solar-electric systems do. Electrically-loaded exercise machines are currently in use and available. Note that a trained athlete can sustain ½ hp of physical output for many minutes. This amounts to over 300 Watts. A busy exercise facility can easily generate all its needed power.

VIII: All construction fuel and other energy usage should be recorded to count in the overall environmental mitigation budget for the project. The CEC should be consulted to determine how best to accomplish an accurate measure of overall energy consumption and so the degree of subsequent mitigation to be required of the site beyond the considerations above, and those commented on by others.

9-4 (cont.)

IX: The DEIR should be reviewed and **a new estimate of occupancy rates for all structures/business-purposes on the site should be required**. The current economic state is forecast to change slowly, particularly in Silicon Valley, where hundreds of thousands remain unemployed. There is no indication that this project will have a high occupancy rate for business tenants, given the glut of existing space throughout the Valley. Similarly for the proposed hotel. Final approval of part or all of the project should be contingent on obtaining an up-to-date occupancy estimate from competent sources.

9-5

X: The seriousness of climate change has been apparent for decades to scientists, and was forecast over 100 years ago by S. Arrhenius, the father of industrial chemistry. Finally, hopefully enough lay and governmental individuals around the world understand the dire threat and the need for wise, robust action. The Menlo Gateway site is precariously close to flooding well within its lifetime. There is no reason Menlo Park, California and US citizens should be called upon in the future to cover any losses incurred by the project simply due to its developer's desire to have it exist at this site at this dangerous time in history. Therefore, Menlo Park should require the posting of a bond and/or the establishment of a trust fund by the developer that is sufficiently serviced, yearly, so that even if the site were to be flooded by the maximum sea-level forecast to 2100, 3-50 feet, only the site owners and their insurers would be financially

9-6

impacted. The yearly size of such a reserve can be established with a panel of disinterested financial experts. Their selection should be made in concert with ABAG and other relevant agencies, and be complete before any structure is complete or occupied.

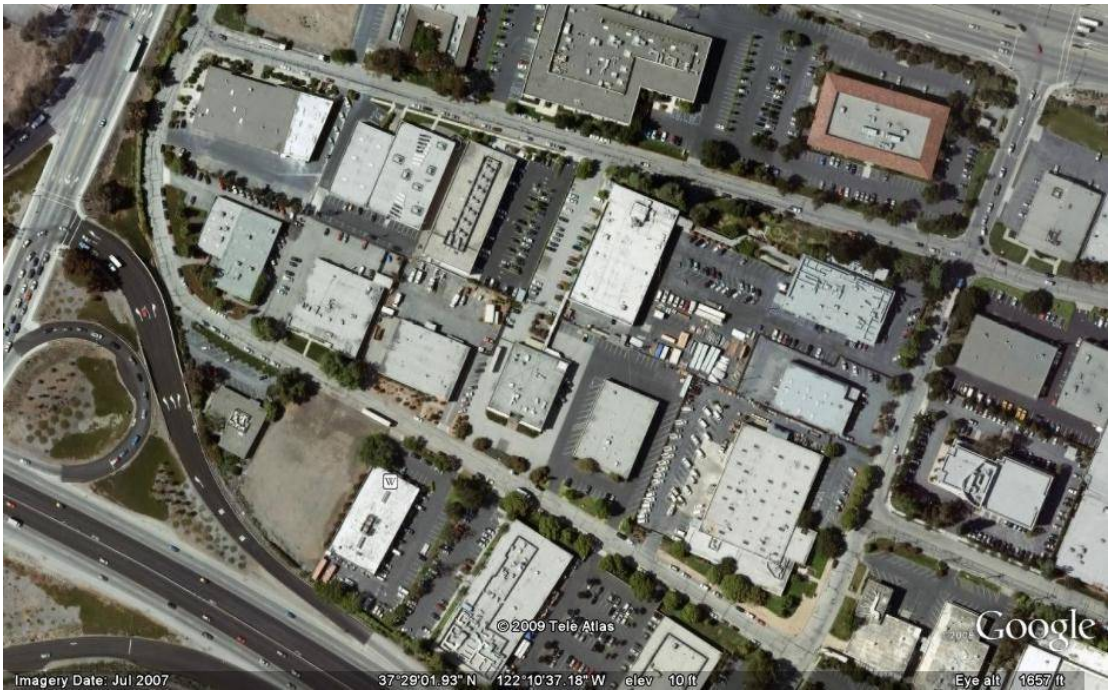
9-6 (cont.)

The last requirement may seem expensive, but the concept of developing such projects for profit in such at-risk locations must be tempered by reality. Other states and municipalities have already done this, often decades ago.

Sincerely,

Dr. Alexander Cannara
2043 Sterling Ave.
Menlo Park, Calif. 94025
650-400-3071

Appendix



Menlo Gateway area ca 2007.

I. Typical solar cell inefficiencies…

Table 1.
Efficiency of Various Photovoltaic Materials

Technology	Energy Conversion Efficiency	Advantages	Disadvantages
Monocrystalline Photovoltaic	14% to 19%	Highly efficient	High cost, crystals cylindrical shape
Multicrystalline Photovoltaic	13% to 17%	Less expensive, less waste	Lower efficiency than single cell
Ribbon Silicon	14% to 16%	Less expensive, less waste	Lower efficiency than single cell
Thin Film	6% to 8%	Much less silicon needed, can be integrated into buildings, can be transparent	Lowest efficiency of all silicon photovoltaic technologies

II. Reference NASA Ames architects: W. McDonough Partners, 434-979-1111.

III. Exemplary roof, paving and parking albedo/shading…

Schlumberger Research, Austin Texas.

IV. Good example of native trees used for parking & driveway shading (above). Shading is also accomplished by some concentrating solar-electric systems, such as by Skyline Solar (Mt. View, CA).

Letter 9: DR. ALEXANDER CANNARA

Response to Comment 9-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. The suggestions and comments regarding the desire of the project sponsor to work with the City to implement an environmentally sensitive project are noted.

Response to Comment 9-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. The suggestions and comments regarding the solar application possibilities for the project are noted.

Response to Comment 9-2

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Nevertheless, the following information is provided for further clarification. The buildings are designed with energy efficient exterior skins, large amounts of north facing glass for daylight harvesting, shading devices on the south facing windows for passive solar efficiency, and lightshelves to reduce dependency on artificial lighting.

Response to Comment 9-3

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. As stated in the Draft EIR, the project is proposing to include energy efficient roofs and building design to minimize energy consumption. Fifty percent of the parking lot areas and other hard surfaces (i.e., sidewalks) would be shaded with new trees as well as paved using a reflective surface and/or grid paving techniques. This would reduce the heat island effect that is created by large areas of blacktop or asphalt (i.e., surface parking lots).

Response to Comment 9-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The project includes extensive landscaping, as discussed on page 2-20 of the Draft EIR. As shown on the site plans the Constitution site includes minimal surface parking that provides trees that will shade over 50 percent of the parking lots. The ultimate palette of plants and trees to be

planted on the site will be coordinated with City landscaping requirements. The comments regarding a hot water solar collection system, the gray water system, the exercise machines and construction fuel are noted. Please see Response to Comment 9-3, above.

Response to Comment 9-5

The employment estimates included in the Draft EIR are summarized in Table 3.9-5 on page 3.9-7. The estimates assume the proposed project would be at or near full occupancy for employment generating uses. If there were a substantial amount of vacant space, actual employment levels would be lower than estimated. This may occur from time to time due to economic cycles, turnover of a major tenant, or other factors. Since the analysis seeks to identify the potential impacts of the project, it is appropriate to use a stabilized / full occupancy employment level in order to capture the 'worst case' or maximum impact of the project. Analyzing the employment level assuming the project is at or near full occupancy produces the greatest impact and is, therefore, the conservative approach appropriate for purposes of the EIR analyses.

Response to Comment 9-6

Regarding climate change, flooding and the issue of greenhouse gas associated with project operation, please see Response to Comment 5-2 and the responses to Comment Letter 32. The Response to Comment 5-2 identifies various sea level rise scenarios and evaluates the effects on the project site. Based on appropriate risk scenarios, as recommended by the San Francisco Bay Conservation Development Commission, the project site would not be expected to flood due to sea level rise even considering conditions 25 years after project buildout. As a result, the potential future effects of a rise in the base flood elevations would be less than significant. The decision to require the project sponsor to post a bond and/or establish a trust fund to protect the City and the site from sea level rise is noted and may be considered during the discussion over the project merits, but is not an issue related to the EIR or the CEQA process.

Sept 13, 2009

To the Menlo Park Planning commission:

RE: Public hearing of Sept. 14th, 2009, on the Menlo Gateway project (known elsewhere as the Bohannon Towers Project)

We live in Menlo Park, not San Francisco. This project is a San Francisco type of project. 140 foot high towers, to be erected on a 15 acre site that will be raised 10 feet with fill. It lies east of 101 in the M2 light industrial area, an area close to sea level in altitude and which may well experience water table problems, if the predicted rise in sea levels indeed occur as related to climate change. So for a start you have, hydrology, and seismology issues. 10-1

These 140 foot high structures will shadow the enclosed 15 acres, which are owned by other interests. We are talking about a project that is around one million sq. feet of office and hotel, and an additional 824,000 sq. feet of above ground structured parking. We are talking about generating over an additional 10,000 trips per day. 10-2

The net jobs created of over 1800 will have a large composition of professionals, who will be well able to live in Menlo Park and will want to live here. They will have families and their children will go to our schools. Yet any school impact fees generated will not go to the Menlo Park School district, because this land in not in our district. 10-3

The income predicted of around 1.6 million revenue inflow from the project will be almost all from the hotel, certainly not from the office buildings. 10-4

Why was no analysis alternative prepared for a hotel only project? Why was this alternative not analyzed? 10-5

When you compare the project to the Rosewood Hotel that just opened, you see an income generating hotel, but only associated with it 100,000 sq. feet of office, not the 700,000 sq. feet this developer is demanding. 10-6

The traffic analysis used a long term 20 years time horizon. Who can possibly predict 20 years in advance. 10-7

Over-riding all of this is the new M3 zoning that is proposed. This zoning thus far is to only apply to these 15 acres that the Bohannon group owns. They own more than 50 additional acres in the M2 area. There is no plan as to how this whole area should be developed. This is really spot zoning --- it should not be approved. Is this new M3 zoning going to be the model for the rest of the M2? 10-8

The traffic analysis used a long term 20 years time horizon. Who can possibly predict 20 years in advance.

I urge members of the Planning commission to vote negatively on this proposed development..

10-9

In Los Altos, there recently was a campaign title that is totally appropriate here. It was called simply TOO BIG.

The Bohannon Towers project being proposed here is WAY TOO BIG.

Morris Brown

Stone Pine Lane

MP

Letter 10: MORRIS BROWN

Response to Comment 10-1

The concerns raised about the project do not address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. As noted in Responses to Comments 5-2 and 8-30, and as discussed in Section 3.5, Hydrology and Water Quality, the project proposes to fill portions of the project site to meet FEMA requirements to ensure buildings are above the base flood elevation. The project proposes to recontour, grade, and level the project site. The most amount of fill would be up to 7.2 feet on the Constitution site and 1.5 feet on the Independence site. In no area of the project site would 10 feet of fill be required.

Please see also Responses to Comment letter 32 that address climate change issues and Responses to Comments 5-2, 8-30 and 17-76 that address flooding and sea level rise, and Response to Comment 6-2 that addresses shadow impacts.

Response to Comment 10-2

The concerns raised about the project do not address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The project will generate approximately 11,113 trips per day, as shown in Table 3.11-5 on page 3.11-25 of the Draft EIR. Please see Response to Comment 6-2 that addresses shadow effects associated with the project.

Response to Comment 10-3

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Nevertheless, the following information is provided for further clarification. The proposed project does not include residential uses that would generate school age children; however, the project would still be required to pay school impact fees. Proposition 1A/Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) implemented significant fee reforms by amending the laws governing developer fees and school mitigation. It establishes the base (statutory) amount (indexed for inflation) of allowable developer fees for residential and commercial construction. The project, if approved, would be required to pay school impact fees.

Based on the *Fiscal Impact Analysis of Proposed Development on the Constitution and Independence Sites*, the project would be required to pay $343,000 in school impact fees; $206,000 to the Redwood

City Elementary School District and $137,000 to the Sequoia Union High School District,[8] which serves residents of the City of Menlo Park.

Response to Comment 10-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. As noted in the Fiscal Impact Analysis prepared by Bay Area Economics for the City, the project will contribute property tax revenue as well as transit occupancy tax (TOT) from the hotel. In addition, sales tax would be generated by some of the on-site retail and restaurant uses as well.

Response to Comment 10-5

The intent of an Alternatives analysis in a CEQA document is to reduce or eliminate impacts identified for the project and to meet the objectives of the project. A hotel only alternative would not meet the objectives identified for the project. The EIR, with its five project alternatives, analyzes a reasonable range as required by CEQA.

Response to Comment 10-6

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The EIR analyzes the Menlo Gateway project which includes a hotel component as part of the project. A comparison to the Rosewood Hotel is outside of the scope of the EIR analysis. However, it should be noted that the Rosewood Hotel relies on existing office uses at Stanford University and along Sand Hill Road for its occupancy base. The Menlo Gateway location does not enjoy similar surroundings and existing office concentrations in the M-2 zone to sustain the hotel, athletic club, and office components. Please see Response to Comment 10-5, above.

Response to Comment 10-7

CEQA requires that the cumulative impacts of a project be analyzed. In the case of traffic, it is a common practice to look 20 years into the future to determine the impacts of the project in combination with development anticipated over the next 20 years. A 20-year forecast is consistent with regional forecasts of population, employment, and travel demand prepared by the Association of Bay Area Governments, the San Mateo County Transportation Authority, and the City/County Association of Governments. It also allows for a common comparison of future forecasted traffic conditions when evaluating or comparing various projects to one another. While it may seem improbable to predict 20

[8] Bay Area Economics, Fiscal Impact Analysis of Proposed Development on the Constitution and Independence Sites, July 1, 2009, page 36.

years into the future, it is standard practice for planning and CEQA documents to offer a long-term perspective.

Response to Comment 10-8

Currently the proposed M-3 zoning is only for the 15 acres that comprise the project site. Please see Responses to Comments 8-4 and 8-5.

Response to Comment 10-9

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the commentor's opinion regarding the appropriateness of the project in Menlo Park and the corresponding recommendation to reject the project is noted.

To: Thomas Rogers
Planning Dept.
City of Menlo Park
Menlo Park CA.

Sent via e-mail to: **throgers@menlopark.org**

Re: Comments to the Menlo Gateway DEIR

As an introduction:

We live in Menlo Park, not San Francisco. This project is a San Francisco type of project. 140 foot high towers, actually to be placed on a 15 acre site that will be raised about an addition 2 feet with fill. It lies east of 101 in the M2 light industrial area, an area close to sea level in altitude and which may well experience water table problems, if the predicted rise in sea levels indeed occur as related to climate change. So for a start you have, hydrology, and seismology issues. 11-1

These 140 foot high structures will shadow the enclosed 15 acres, which are owned by other interests. The EIR did not do a shadow study, with the explanation, that the Menlo Park (MP) General Plan (GP) does not call for such a study. 11-2

This is the first project in MP with anywhere near the height of the towers being proposed for this project. No wonder the GP does not call for a shadow study. It needs to be done.

We are talking about a project that is around one million sq. feet of office and hotel, and an additional 824,000 sq. feet of above ground structured parking. We are talking about generating over an additional 10,000 trips per day. 11-3

The 824,000 sq. feet of structured parking are in separate buildings; these buildings take up open space, they should have been counted in the Gross Floor Area of the project.

The needed parking requirements are not what the default zoning requires, but rather the application of "administrative" parking requirements. In a project this large, the reduced parking requirements need to be justified. In a previous project, the "Derry project", a dedicated parking study was required to justify the use of administrative parking requirements. 11-4

A dedicated parking study needs to be done to justify the use of "administrative parking" requirements. 11-5

The net jobs created of over 1800 will have a large composition of professionals, who will be well able to live in Menlo Park and will want to live here. They will have families and their children will go to our schools. Yet any school impact fees generated will not go to the Menlo Park School district, because this land in not in our district. 11-6

The traffic analysis is flawed in a number of ways.

1. There will be many more homes needed in MP for the jobs created by this project. The housing needs analysis uses an ABAG generated number of only 80 homes in Menlo Park will be needed. This is simply not credible. The professionals who will occupy this space will be well able to afford to live in MP. 11-7

The traffic analysis needs to be re-done to account for perhaps 500 homes in Menlo Park needed to accommodate this project 11-8

The traffic analysis uses a 20 year time horizon on the long term. A 20 year time horizon cannot be justified – it cannot possibly foresee 20 years from now what the conditions will be. 11-9

As an example a major project in Redwood City in the Baylands, is projecting 15,000 new homes. The traffic effect from that development cannot possibly be accounted for 20 years from now.

The traffic analysis needs to be re-done

There is predicted around $1.6 million revenue inflow from the project. Almost all that inflow is from the hotel, certainly not from the office buildings. When you compare the project to the Rosewood Hotel that just opened, you see an income generating hotel, but only associated with it 100,000 sq. feet of office, not the 700,000 sq. feet this developer is demanding. 11-10

An alternative with only Hotel needs to be evaluated.

The density of the project is not consistent in any way with present zoning or previous practices of the City. 11-11

The Sun Micro campus, sits on over 50 acres of land, is at most 2 stories in height, and is about 1 million sq. feet. 11-12

The project is on a site less than 1/3 the size of the Sun campus, has 950,000 sq feet of structure not counting the 825,000 sq. feet of structured parking.

The growth inducing effects of this project have not been studied --- they need to be studied 11-13

Over-riding all of this is the new M3 zoning that is proposed. This zoning thus far is to only apply to these 15 acres that the Bohannon group owns. They own more than 50 additional acres in the M2 area. There is no plan as to how this whole area should be developed. This is really spot zoning --- it should not be approved. Is this new M3 zoning going to be the model for the rest of the M2? 11-14

The project is relatively isolated being separated from West Menlo Park by highway 101. It is not a bicycle friendly or transit, other than by auto friendly site. 11-15

The developer is asking for a Development agreement for this project. It should not be granted. Conditions will change over the perhaps 20 expected time frame of any development agreement. 11-16

Morris Brown
140 Stone Pine Lane
Menlo Park, CA
94025

Morris Brown
Contact person
Menlo Park Tomorrow
661 Live Oak #4
Menlo Park, CA 94025

Letter 11: MORRIS BROWN

Response to Comment 11-1

Please see response to Comment 10-1.

Response to Comment 11-2

Please see Responses to Comment 6-2 and 10-2.

Response to Comment 11-3

The comment does not include specific comments or concerns that address the adequacy of the EIR or the City's compliance with CEQA and thus does not warrant further response in this document. However, with respect to the City's calculations for the Gross Floor Area (GFA) of the project, the City does not include parking in a project's GFA calculation.

Please see Responses to Comments 8-4 and 10-2.

Response to Comment 11-4

Parking requirements for the proposed project are discussed in detail on page 3.11-55 of the Draft EIR, including a summary of the shared parking analysis that was conducted for the proposed project. The shared parking analysis concluded that adequate parking supply would be provided to meet the anticipated peak parking demand (see page 3.11-56 of the Draft EIR). More information on the shared parking is provided in Appendix G of the Draft EIR (the full traffic study prepared by DKS Associates for the proposed project).

Response to Comment 11-5

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Please see also Response to Comment 11-4, above.

Response to Comment 11-6

Please see Response to Comment 10-3.

Response to Comment 11-7

ABAG did not provide the housing demand estimates generated by the project or the potential impact to the City's Regional Housing Needs Allocation (RHNA), although data from ABAG's *Projections* was used to determine housing demand associated with the project. As noted on page 3.9-9 of the Draft EIR, the total regional housing demand generated by the project is estimated to be 1,090 units, ten

percent or 109 units are estimated to be in Menlo Park. Please see Response to Comment 8-6 for a discussion of the rationale for the ten percent factor, provided by the economic consultant Keyser Marston, and the reasons the actual percentage could be less than the estimated 10 percent.

Response to Comment 11-8

The additional housing requirements for this project are addressed in Section 3.9 of the Draft EIR, Population and Housing. With respect to potential traffic impacts of additional housing, it is too speculative to assume where the housing units would be located, either within Menlo Park or elsewhere, whether they are new units or existing units that would be occupied by project employees, and whether the trips are already "on the road" from existing employees who would switch jobs to the project site, or represent new trips. As explained in the traffic analysis, the Long Term with Project conditions scenario seeks to account for future projects, including possible housing developments, by applying a growth factor of one percent per year to background traffic conditions, an appropriate methodology under CEQA.

Response to Comment 11-9

CEQA Guidelines section 15125 requires that an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published. The project's NOP was published in May 2007, before the project mentioned by the commentor was in the development pipeline.

As explained in Response to Comment 11-8, a growth factor has been applied to address future projects that have not yet been approved. The City of Redwood City (see Comment Letter 2) referenced the Saltworks development. The traffic analysis is adequate under CEQA. Please see Response to Comment 10-7.

Response to Comment 11-10

Please see Response to Comment 10-6. Furthermore, as noted in the Fiscal Impact Analysis, the project will contribute property tax revenue as well as transit occupancy tax (TOT) from the hotel. In addition, sales tax would be generated by some of the on-site retail uses as well.

Response to Comment 11-11

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The project is proposing a new M-3 zoning district to permit a wider range of uses than is currently allowed by existing zoning districts. In addition, the new zone would allow a higher FAR than is permitted under the City's M-2 zoning district (see Appendix D of the Draft EIR).

Response to Comment 11-12

The commentor provides development statistics from the Sun Microsystems campus. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 11-13

The potential growth inducing aspects of the project are addressed in Chapter 4 of the Draft EIR. As discussed in Chapter 4, the project is determined to not be growth inducing because it does not include a new residential population or infrastructure that would enable an otherwise undeveloped area access to infrastructure to allow new development. Please see also Responses to Comments 8-3 through 8-5.

Response to Comment 11-14

The comment is expressing an opinion and does not concern the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following may provide further clarification. Please see Responses to Comments 8-3 through 8-5.

Response to Comment 11-15

Bicycle, pedestrian and transit issues are addressed in the Draft EIR on page 3.11-42, Impacts TR-4 and TR-5 and the projects' Transportation Demand Management (TDM) Plan is provided in Appendix J of the Draft EIR. The analysis considers the site location and constraints, as does the TDM Plan. Please see Response to Comment 1-11 for more detail on the project's proposed TDM program.

Response to Comment 11-16

The comment expresses an opinion related to the Development Agreement. The proposed M-3 zoning specifically requires a Development Agreement so that a project applicant or sponsor must provide significant community benefit contributions to the City in exchange for greater building density and height.

A Development Agreement is a contract between the project sponsor and the City that looks at certain "public benefits" that will accrue to the City from a project, while in exchange the applicant gets a vested right to develop the project in accordance with the rules and regulations that are in force at the time of the Development Agreement's adoption. The project sponsor and the City are in the process of negotiating the terms of the Development Agreement, including the timeframe.

The commentor's objection to the Development Agreement is noted.

Letter 12

Rogers, Thomas H

From: Marcia [marcialb@comcast.net]
Sent: Sunday, September 20, 2009 3:35 PM
To: Rogers, Thomas H
Subject: Menlo Gateway Comments

Hi Thomas – I'd like to comment on the Menlo Gateway Project. I think the following changes should be adopted for the project to even be considered for approval. 12-0

1) **Change the voluntarily compliance with LEED gold/silver and other greenhouse gas mitigations described in the draft EIR into required project conditions or outcomes.** 12-1

2) **Identify projects within our community for the developer to fund that will offset the greenhouse gas emission increases planned under the current development. Require the developer to fund these projects, assuming that the cost is in line with comparable public benefits for projects of this size. (An alternative will be to require some or all of the additional mitigations described in the draft EIR, and then have the developer fund projects that neutralize the smaller resulting increase in greenhouse gas emissions.)** 12-2

3) **Address the emergency resources issues so that the City does not face egregious costs from the future flooding that is very likely to occur at this site during the useful life of Menlo Gateway, and explore a developer fee to fully fund construction of levees in environmentally sensitive ways that would also protect the Belle Haven neighborhood and the rest of the Menlo Park industrial areas near 101 which are key tax generators to support City services.** 12-3

Thanks – Marcia Bever
322-8869 h

Letter 12: MARCIA BEVER

Response to Comment 12-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Please see Responses to Comments 12-1 through 12-3 that address the concerns raised in the comment letter.

Response to Comment 12-1

As a condition of approval, the project sponsor will be required by the City to obtain LEED silver and gold certification for the hotel and office buildings, respectively. Please see Response to Comment 8-28 regarding the project sponsor's LEED certification requirements.

Response to Comment 12-2

Please see Response to Comment 8-29 regarding greenhouse gas emission reduction programs to which the project sponsor could contribute to offset the emissions from the proposed project.

Response to Comment 12-3

Please see Response to Comment 8-30 regarding funding of improvements to protect community areas and resources from potential future sea level rise flooding.

Letter 13

Rogers, Thomas H

From: Ceyda Can Aricanli [ceydacan@yahoo.com]
Sent: Friday, September 18, 2009 10:16 PM
To: Rogers, Thomas H
Cc: Kutlu Aricanli; Joan Solari
Subject: Menlo Gateway Project (Bohannon Hotel-Office)

Dear Mr. Rogers,

I'm an Atherton resident leaving on Holbrook Lane for the past 8 years. I received an email regarding the Menlo Gateway Prj from my neighbor, Joan Solari, and had a chance to review the part that deeply interests and concerns me: Traffic & Circulation. 13-0

As with most of the residents in Holbrook Lane, I am very disturbed with the "way" our lane is used by motor vehicles that wants to do one or more of the following road rage or unpleasant act or illegal act:

- cut short of Marsh Road to Redwood City,
- avoid Marsh Road traffic & traffic light, and/or
- just to speed

I want to take this opportunity to relay these concerns to you and to the Menlo Park Planning Committee because Holbrook Lane absorbs quite a bit of Marsh Road traffic. Thus looking at this fantastic report I'm shocked not to see Holbrook Lane listed in the impact analysis. How could a lane that serves as a BACK-UP to Marsh Road whenever it's closed for whatever reason is not mentioned and the whole issue is not taken into account? Wouldn't that make the analysis "incomplete". 13-1

I sadly see yet again our street taking all the traffic, all the burden of being the backup to a major junction but conveniently left out of any impact analysis, planning reports or management concerns. I sure hope this oversight will draw some attention and will be fixed at the earliest possible time.

Best regards,

Ceyda Can Aricanli

52 Holbrook Lane
Atherton, CA 94027, USA
home: +1.650.330.1390
cell: +1.650.430.3903
email: ceydacan@yahoo.com

Letter 13: CEYDA CAN ARICANLI

Response to Comment 13-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Please see Response to Comment 13-1 that address the traffic concerns raised in the comment letter.

Response to Comment 13-1

Holbrook Lane and other streets such as Palmer Lane, Bay Road, and Ringwood Avenue offer possible alternatives to using Marsh Road. The traffic analysis assumed that project-generated traffic would use Marsh Road between Bayfront Expressway and Middlefield Road, as it is the most logical and convenient path of travel, and it would be too speculative to estimate the volume of traffic that may divert to other routes. Therefore, the traffic analysis prepared for the EIR is adequate pursuant to CEQA. The City of Menlo Park and Town of Atherton have been working cooperatively towards mutually beneficial traffic improvements so that motorists are not tempted to divert from Marsh Road onto other local streets. Please see Response to Comment 3-19.

Letter 14

Rogers, Thomas H

From: JRMCoach@aol.com

Sent: Friday, September 18, 2009 4:33 PM

To: Rogers, Thomas H

Subject: Proposed Menlo Gateway Project

Dear Mr. Thomas:

I write to comment on the Draft Environmental Impact Report (DEIR) for the above-described project. As I believe the proposed General Plan Amendment (GPA) and Zoning Ordinance Amendment (ZOA) raise issues distinct from those raised by the site specific project, my comments will address each of these aspects of the proposal separately. 14-0

The DEIR is fundamentally deficient with respect to the GPA and ZOA aspects of the proposal in that it does not address the implications of changes in the site specific project, let alone the implications of induced growth in the M-2 area adjacent to the proposed M-3 zone. No consideration is given, for example, to the potential for building out all of the area encompassed by the proposed M-3 zone to the maximum extent allowed by the proposed zoning, as distinguished from the implications of the site specific project. Similarly, no consideration is given to the induced growth potential for building out the adjacent M-2 area to the maximum extent that would be allowed in the proposed M-3 zone. 14-1

In neither event is any consideration given to the visual implications or to increases in the ABAG quota for housing in Menlo Park that would result. No consideration is given to increases in traffic congestion on the Bayfront Expressway resulting from such full build-out. Nor is any consideration given to increases in greenhouse gas emissions resulting from full build-out. 14-2

Additional deficiencies infect the DEIR with respect to the site specific proposal. For example, Menlo Park is already limited in its ability to provide housing required by ABAG. Even though the increase of 1800 new jobs over those to be expected under the existing M-2 zoning would increase the burden of providing housing significantly, no consideration is given to the environmental impact on Menlo Park of providing such housing. In addition, 14-3
the estimated increase in greenhouse gas emissions (GHG emissions), even with all proposed mitigations, is more than 10 times the increase the Bay Area Air Quality Management District is proposing to establish as significant for a land-use project. The failure to deal with this disparity represents a significant deficiency in the DEIR. There is no reason for the developer not to be required to eliminate this disparity by a combination of compliance with LEED silver/gold or even platinum design criteria and funding other GHG emission reducing projects in the community in trade for the excess to be produced by the project. 14-4

Both the technological feasibility and the full costs of public support required for the project should also be considered. Will an adequate source of potable water be available? Will the Menlo Park Sanitary District be impacted? The proposed building heights of the project buildings will impact the Menlo Park Fire Protection District, much of whose area is within the City of Menlo Park. That the proposed buildings would be built within an area that is projected to fall below sea level during their useful lives also entails a cost that should be considered as a fiscal impact, i.e., the cost of protecting them from flooding. The failure to consider any of these issues is a significant deficiency, because, even though they may not burden the City of Menlo Park per se, 14-5
they will impact those residents of Menlo Park who are also taxpayers in affected Districts.

James R. Madison
1770 Holly Avenue
Menlo Park, CA 94025
650-614-0160

Letter 14: JAMES R. MADISON

Response to Comment 14-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. The responses below address the concerns regarding the proposed GPA/ZOA.

Response to Comment 14-1

The Draft EIR analyzes development of the project site assuming maximum development allowed under the GPA/ZOA, as well as the project sponsor's current land use proposal, Menlo Gateway. Neither the City nor the project sponsor is requesting a GPA and rezone for any other areas currently designated Limited Industry and zoned M-2; therefore, the EIR only needs to analyze the project that is currently being proposed and the maximum development scenario, not other M-2 designated areas. Please see Responses to Comments 8-4 and 8-5 that address growth inducement and the speculation involved in assuming any other M-2 properties would be rezoned to M-3.

Response to Comment 14-2

As stated on page 3.1-3 of the Draft EIR, the visual analysis focuses on the potential impacts of the site-specific Menlo Gateway development. The remainder of the EIR addresses impacts associated with maximum development permitted under the GPA/ZOA, as well as the specific Menlo Gateway proposal. Please see the table in Response to Comment 8-2.

The increase in housing demand associated with the project is addressed in the report prepared by Keyser Marston Associates, Inc., *Housing Needs Analysis Bohannon Office/Hotel Mixed Use Project General Plan Amendment and Rezoning Project*, June 2009. The report is included as Appendix F in the Draft EIR and the findings are included in the Draft EIR on page 3.9-9 as the project's "induced housing demand." ABAG's housing allocation for Menlo Park is a different estimate of housing demand and reflects regional housing demand and not just the demand associated with a single project. The housing allocation reflects ABAG's estimate of a fair share of the housing need, taking into consideration job and housing growth, not only in Menlo Park, but elsewhere throughout the nine-County Bay Area.

Section 3.11, Traffic and Circulation, and Section 3.13, Climate Change, address the impacts associated with project operation at full buildout. Traffic associated with full buildout of the project is evaluated under both near-term and cumulative conditions. Air emissions that contribute to greenhouse gas also are evaluated based on project operation at full buildout of the project.

Response to Comment 14-3

Section 3.9, Population and Housing, in the Draft EIR addresses changes in population and employment associated with the project. Impact PH-1 on page 3.9-6 considers the impact of adding new employees as part of the project. Impact PH-2 on page 3.9-7 and Impact PH-3 on page 3.9-9 of the Draft EIR consider the indirect impact of increased housing demand and population growth associated with the project, in accordance with CEQA.

Response to Comment 14-4

Since the Draft EIR was released the BAAQMD released draft Guidelines to assist lead agencies in developing significance thresholds to use in CEQA documents. The draft BAAQMD tiered threshold for GHG emissions is as follows:

1) demonstrate compliance with a qualified Climate Action Plan,

   OR

2) demonstrate that project-generated emissions are at or below 1,100MT CO_2e/year (used for small projects),

   OR

3) demonstrate that project-generated emissions are at or below 4.6MT CO_2e/Service Population (SP)/year.

When using the draft BAAQMD's proposed guidance for GHG emissions significance criteria, lead agencies may chose any one of the three criteria appropriate for determining significance. As the City's CAP is not specific to private projects, the first criterion does not apply. BAAQMD staff provided insight into the second criterion. Criterion 2 is a screening level value meant to evaluate small or modest projects. Therefore, the BAAQMD Criterion 2 is not an appropriate threshold to use for a project of this size. However, the third criterion is useful to quantitatively evaluate the significance of the project.

In using the BAAQMD Criterion 3 threshold of 4.6MT CO_2e/SP/Year, the Service Population for the project needs to be determined. The service population was obtained from Table 3.9-5 in Section 3.9, Population and Housing, of the Draft EIR which shows total employment within the project to be 2,566 employees.[9] To get the per capita emissions, the total project generated emissions are divided by the service population. Without factoring in mitigation or project design features that would reduce GHG emissions, total project generated emissions is 16,588MT CO_2e per year or 6.46MT CO_2e/SP/Year. Therefore, without mitigation the project is above the BAAQMD Criterion 3 Threshold of 4.6MT CO_2e/SP/Year.

Since publication of the Draft EIR the project sponsor has incorporated all of the mitigation measures included in Mitigation Measure CC-1.1 into the project, with the exception of the solar component that

[9] Environ Memorandum to Justin Murphy, City of Menlo Park, March 3, 2010. Page 12.

the City determined was not feasible. Table 3.13-6 included on page 3.13.22 in the Draft EIR has been revised to include the new project features, as shown in Chapter 2, Revisions to the Draft EIR. Based on the new project design features, total emissions from the project would be 11,777MT CO_2e/year if the project is completed and operational after 2018 or 4.59MT CO_2e/SP/year. If the project were completed prior to 2018, which is not very likely, total emissions would be 11,988MT CO_2e/year or 4.67MT CO_2e/SP/year. The analysis shows that if the project is completed in 2018 or later it would be below the BAAQMD Criterion 3 Threshold of 4.6MT CO_2e/SP/Year. However, if the project were to be completed prior to 2018, then it would exceed the BAAQMD threshold. Given this information, additional mitigation is required if the project were to be completed prior to 2018, in order to reduce the project's emissions to below the BAAQMD threshold.

Please see Appendix D for more detailed information pertaining to climate change, as well as Response to Comment 32-9, that also addresses this issue.

Response to Comment 14-5

Please see Response to Comment 6-13 regarding water supply.

The increase in demand for wastewater conveyance and treatment is addressed on pages 3.12-19 through 3.12-20 of the Draft EIR and further updated in Chapter 2, Revisions to the Draft EIR. As discussed under Impact UT-3, it was conservatively assumed that 100 percent of all water consumed within the project (as well as under the GPA/ZOA) would become wastewater requiring conveyance and treatment at the SBSA regional plant. The Draft EIR establishes that the regional plant has adequate capacity to treat the increase in wastewater associated with the project.

Potential impacts to the City's fire protection district are addressed in the responses to Comment Letter 4. Please see responses to Comment Letter 4, as well as Responses to Comments 6-7 and 8-35.

Please see Response to Comment 12-3 regarding the potential for flooding, this issue is also addressed in the Draft EIR in Section 3.5, Hydrology and Water Quality.

Letter 15

Rogers, Thomas H

From: Paul Collacchi [collacch@cwnet.com]
Sent: Monday, September 21, 2009 2:40 PM
To: Rogers, Thomas H
Cc: Roberts, Margaret S
Subject: Menlo Gateway DEIR Section 3-10 Comments

Thomas,

Here are questions and comments about DEIR Section 3-10 -- Public Services.

Paul Collacchi
1 Lake Ct
Redwood City, CA 94062

****

The Section of the Menlo Gateway Project DEIR is here:
http://www.menlopark.org/departments/pln/bohannon/DEIR/3-10-Public-Services.pdf

The DEIR concludes, " *Impact PS-2: The proposed project would not result in the need for new or physically altered fire and emergency service facilities. Therefore, there would be no impact on fire or emergency services or facilities. (NI)"*

It's well known the MPFD needs a special facility, a truck, to address potential fires and other hazards in 140 foot tall buildings, without which would significantly impact the MPFD's ability to provide service to a fire in the proposed project. There is no other need for the truck, it is unique to the project. There are other service and facility related questions associated with the truck. 15-1

- Where will MPFD park this truck?
- Can it be currently parked in a site East of 101.
- Will MPFD need to make physical alterations to site the truck?
- Are there special personnel with special skill requirements that need to be trained to use this equipment, that would not otherwise be required?

Impact PS-1CM: The proposed project, in combination with other development within the City or the fire district, would not result in the need for new or physically altered police, fire or emergency service facilities. Therefore, there would be no impact to public services or utilities. (NI)"

- The Menlo Gateway project requires a re-zoning that would raise permissable height limits throughout the M-2 area (Industrial areas East of 101) to 140 feet. I believe that it is reasonably foreseeable that other large commercial developments including Tyco, Willow Park, etc would eventually ask to be re-zoned and add taller buildings with structured parking lots. 15-2
- The DEIR should compute the effective service capacity of the special equipment required for the Menlo Gateway project. Would this be enough to provide services to other tall structures in the area, to handle the cumulative effects of development in the area?

DUMBARTON EXPRESS

Letter 15

For many years, the Dumbarton Express rail service has been planned. It is at least partially and perhaps completely funded. Menlo Park has insisted that the railway line be grade-separated where it crosses major arterials such as Willow. Such grade separations might require Willow road or other arterials to be depressed underneath the tracks. Were Willow road grade-separated from the railway lines in a such a way that it would go underneath the tracks, would this impede access of special equipment to other areas in the M-2 which might also have tall buildings and require access? 15-3

SERVICE DELAYS

According to the DEIR, the Menlo Gateway project will have significant delays on traffic LOS on multiple intersections on Marsh Road, therefore adding significantly to wait times and delays during peak hours. 15-4

The MPFD should evaluate the possible impact on service response times to reach the Belle Haven area with these delays, in cases where response must come from areas West of 101. It should determine how many such responses occur, the kind of response needed, and the destination.

My experience is that the district maintains thorough and detailed dispatch records that allow it to determine how many calls were made, the destination, the response time etc. The DEIR should use that data as the basis for its analysis. 15-5

SERVICE ACCESS

If the special equipment purchased for tall buildings needs public roads and interior project access roads to be built to certain specifications to allow access the DEIR should say so. Please keep in mind that under the "Cumulative Scenario" this equipment might need access throughout the M-2 area east of 101. The DEIR should visit other locations in the M-2 area East of 101 to determine whether or not there are access issues. 15-6

Evidence

The source and documentation for this section are unusually poor. Technical facts and figures are attributed to "personal communications" with an "Interim Human Resource Manager." The DEIR should use live MPFD data along with documents and policy manuals. The city should make all references cited available for inspection according to its CEQA preparation guidelines. 15-7

Letter 15: PAUL COLLACCHI (VIA EMAIL SEPTEMBER 21, 2009)

Response to Comment 15-1

Please see responses to Comment Letter 4 regarding the need for a new fire truck to serve the project. As noted in the response to Comment Letter 4, CEQA is only concerned with physical impacts to the environment. If the District chose to replace the existing engine company with a truck company and that conversion required any modification to or remodel of the existing fire station, it would be an insignificant change that does not result in a substantial adverse physical impact on the environment. Again, as noted on page 3.10-3 of the Draft EIR, the relevant criterion for making a determination about the project's impact is whether it would "result in a substantial adverse physical impact associated with provision of new or physically altered police and/or fire protection and emergency services facilities …."

Response to Comment 15-2

The project is requesting a new M-3 zoning district that would permit buildings up to 140 feet tall. This height limit would only apply to the project area, not throughout the M-2 area. Currently, under the M-2 zoning, building heights are limited to 35-feet without a Conditional Development Permit. There is the potential that, if the new zoning district is approved, future development projects may request a rezone to the M-3 zoning district. However, at this time the City has not received any requests (with the exception of the project) to rezone M-2 to permit higher FARs.

Responses to Comments 8-4 and 8-5 also address the feasibility of other projects requesting a rezone to raise building heights. See also responses to Comment Letter 4 and Response to Comment 15-1, above regarding the need for additional fire equipment to serve the project site.

Response to Comment 15-3

To ensure safe passage across major arterials, if and when the Dumbarton Express is developed, it would require either grade separated overhead connections or a depressed below-grade connection under the tracks. Either an above grade or a below grade connection would be designed to meet all state and local roadway standards to ensure access would be provided for all vehicles, including all safety and emergency vehicles.

Response to Comment 15-4

Traffic impacts associated with the project are addressed in detail in Section 3.11, Traffic and Circulation of the Draft EIR. As shown in Table 3.11-6 on page 3.11-28, during the most congested times, AM and PM peak hours, under the Near Term plus Project conditions the LOS at the Marsh Road intersections are all predicted to operate at acceptable levels. Under Long Term plus Project conditions, there would be a number of intersections that would be impacted by the additional traffic,

including the Marsh Road intersections. Based on the updated mitigation measures described in Chapter 2, Revisions to the Draft EIR, the three impacted intersections along Marsh Road between Independence Drive and Middlefield Road (i.e., the Marsh Road/US 101 northbound off ramp, the Marsh Road/Bohannon Drive, and the Marsh Road/Middlefield Road intersections) can be mitigated to a less-than-significant level.

Response to Comment 15-5

The Draft EIR addressed impacts to the Menlo Park Fire Protection District (MPFPD) associated with the proposed project. As noted in the Public Services section of the Draft EIR, commute hour traffic occasionally poses a problem; however, traffic delays would not be considered significant and the MPFPD did not indicate that the project would impede access or affect response times for the MPFPD to adequately serve the Belle Haven neighborhood or the project site. Therefore, no significant impact was identified.

Information pertaining to the number of calls for service, issues with traffic congestion and average response times are noted in the Draft EIR on pages 3.10-2 and 3.10-3.

Response to Comment 15-6

The project sponsor is coordinating with the Menlo Park Fire Protection District (MPFPD) to ensure project driveways, roadways and other access points into and throughout the project site are designed to meet current fire code standards and requirements. In the future, if special equipment is needed to respond to calls for service at taller buildings, the MPFPD would be involved in the review of the project, as the district has participated in the review of the Menlo Gateway project, and would identify special needs access. All the project plans require final plan check and approval by the MPFPD, as would any other development proposal. To clarify that emergency vehicle access will be designed to meet MPFPD criteria, the text on page 3.10-4 has been revised. Please see Chapter 2, Revisions to the Draft EIR, for the revised language.

Response to Comment 15-7

Information to prepare the section was obtained from conversations with fire department personnel as well as the MPFPD 2004 Annual Report and information provided on the District's web site. The sources of the information used in the section and names and dates of personal communications with the EIR preparers are cited. Documentation of these communications is available as part of the administrative record and is considered sufficient and adequate for the purposes of CEQA.

Letter 16

Rogers, Thomas H

From: Paul Collacchi [collacch@cwnet.com]
Sent: Monday, September 21, 2009 10:10 AM
To: Rogers, Thomas H
Cc: Roberts, Margaret S
Subject: Comments on Menlo Gateway DEIR section 2 -- Project Description

Thomas,

Here are questions and comments about DEIR Section 2 -- Project Description

Please acknowledge receipt of this email and confirm its adequacy as a valid method of comment.

Paul Collacchi
1 Lake Ct
Redwood City, CA 94062

****

"Thus, while this is a project-level DEIR, this document also discusses the effects of the GPA/ZOA at a program level, assuming future development proposals could seek consideration from the City under the proposed new General Plan land use designation and M-3 zoning regulations." [p 2-1]

Q1: The DEIR does not discuss the effect of the GPA/ZOA at a program level in other locations where future development proposals might be rezoned M-3. Nor does it discuss where it might be sought, presumably most or all of M-2. Was it the intention of the DEIR to do so. 16-1

C1: The project description describes the build out of the project taking about 5 years, while the developer is asking for a twenty year Developer Agreement, presumably to preserve a development entitlement in the face of soft market conditions for office, hotel, and commercial construction financing. Mis-describing the project construction timeline provides certain advantages to the developer that might permit "significant impacts" that would not be permitted were the project timeline accurately described. The DEIR should confirm the construction timeline and provide an approximate date by which construction will be complete. The construction timeline in the DEIR and the Development Agreement should be harmonized. 16-2

Q2: The DEIR provides a maximum build out for the project site under the M-2 zoning. [Table 2-2.] Please clarify the assumptions used to make the calculation of 382,068 sf. Does that presume 55% FAR and an industrial use? What parking requirements does it assume? How many parking spaces per 1000 sf of development? Does it assume at grade-parking? What would the maximum build-out be if the use were professional office and not industrial? 16-3

Q3: The DEIR says, " In addition, up to 3,000 s.f. of retail/community facilities **could** be located in the ground floor of the office building on the Independence site provided there was a corresponding decrease in the amount of office area." Is the retail being assumed for the purpose of the DEIR analysis? 16-4

The Menlo Park CEQA guidelines (Resolution3601) says,

"The information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams and

Letter 16

similar relevant information ***sufficient to permit full assessment*** of significant environmental impacts by reviewing agencies and members of the public." [9.6 (h)]

In that spirit, I ask these questions, and make these comments:

Q4: Please explain the parking figures from table 2-3 in more detail. For the Independence site, 313k sf assumes a five story structure and 373k assumes a 6 story structure, is that correct? What is the footprint, width by length of the structure in feet or yards? Approximately how many parking spaces are on each level of the structure? 205? 16-5

Q5: Please describe whether or not the parking structure footprint counts against lot coverage, and please document the formula by which parking is "shared" between facilities. 16-6

C2: The fiscal impact analysis indicates the applicant's intent to transfer certain sites. The DEIR notes the applicant's request for parcel map adjustment. Taken as a whole both operations indicate the developer intends to subdivide and sell "portions" of the project after approval. The DEIR does not describe the specific parcel map adjustments requested by the developer. 16-7

Q5: Is it the preparer's/city's understanding that the applicant intends to sub-divide the land in anticipation of selling off that parcel which contains the hotel/sports club, presumably to the owner/operator of the hotel/sports club? 16-8

Q5a: The Fiscal Impact Analysis also indicates an intent to transfer the Independence site. Are any parcel map adjustments proposed for this site? Please explain the anticipated transfer. 16-9

Q6: Is it the case that after parcel map adjustments that each parcel would be separately zoned M-3? Must the development on each separately zoned parcel independently conform to the M-3 zoning regulation? 16-10

Q7: Would the development on separate parcels owned by separate owners each conform to the M-3 zoning requirements and parking requirements? Does "shared" parking allow for parking requirements of one parcel to be met with parking on a separate parcel owned by a separate owner? In other words, would the "shared" parking still conform to the administrative guidelines if a parcel map adjustment is made and transferred as describe above and in the FIA? Does "shared" parking enable FAR on own site with no onsite parking at all, and whose "shared" parking is on a different site located on a different parcel owned by a different owner? 16-11 16-12

Q8: If the "land-use" parcel is distinct from the parcel that contains the shared parking, must it contain a permanent easement or other mechanism to allow continued use of the shared structure by the separate hotel/sport club owner operator? 16-13

Q9: Would such a sharing be a precedent for Menlo Park? Could it be applied similarly elsewhere in the city? Could any owner build an elevated parking structure in one location of the city and "share" it with a location owned by a separate owner elsewhere in the city to meet the parking requirement? Why not. What guidelines are in place to regulate the degree of separation between the parking parcel and the development parcel. 16-14 16-15 16-16

Q10: Similarly with the Constitution site. On the Independence site, Garage "a" is 207K sf and Garage "b" is approximately 230k sf? Is that correct? What is the size of the footprint of each structure, length by width in feet or yards, and approximately how many spaces are on each level of each structure. 16-17

Q11: Please describe whether or not parking structures count towards lot coverage, and site the relevant 16-18

Letter 16

zoning regulation that justifies it. 16-18 (cont.)

Q12: Please describe how the parking calculation was made for the required number of spaces. (Note that the alternatives section does make reference to ITE specifications, but not does not cite the specific ITE reference, show which categories were selected, from what page, include a calculation, and it does not make a copy of the ITE reference pages available for inspection [CEQA guidelines 9.6(i),(j)] 16-19 16-20

C3: Q2-Q12 are relevant to the DEIR inasmuch as they outline one or more parking precedents that are being set by the proposed project, or precedents that may be set because the true configuration of the final parcel map is being obscured. Precedents are relevant to "induced growth" and help the public comment meaningfully on the analysis in that section. 16-21

C4: The DEIR does not explicitly describe all of the parking precedents that are or may be being set for this project. Structured parking is directly relevant to induced growth, since much of the commercial area in M-2 lies in or near parts of the flood plain where underground parking is infeasible. Including or excluding structured parking in calculations of FAR and lot coverage, particularly in combination with shared parking and administrative parking are relevant to determining which parcels might be candidates for rezoning under M-3 with or without structured parking and with or without shared or administrative parking. Again, this impacts the induced growth section of the DEIR and may conceal significant impacts. Currently, the Induced growth section of the DEIR provides no analysis of induced growth that may arise from precedents or elimination of regulatory obstacles. 16-22 16-23

Letter 16: PAUL COLLACCHI (VIA EMAIL SEPTEMBER 21, 2009)

Response to Comment 16-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 16-1

The Draft EIR is required to analyze the project that is seeking discretionary project approval. In this instance, the project sponsor is seeking a GPA/ZOA, as well as a number of other project approvals, and is also requesting approval of a specific development application for the Menlo Gateway project. The project evaluated in the EIR is for the approximately 16-acre project site. The other areas adjacent to the project site currently designated Limited Industry and zoned M-2 are not part of this project; therefore, not analyzed in the EIR. Investigating other locations where the new M-3 could be applied is highly speculative and, therefore, inappropriate under CEQA (see CEQA Guidelines section 15145). The M-3 zone could conceivably be sought elsewhere in existing M-2 zoned areas, but could also be requested elsewhere in other zoned districts. There is nothing that would preclude a land owner in an M-1 zoned area from seeking the new M-3 zone. The decision to seek a GPA/ZOA depends on many factors, including land availability, condition and value of the existing building and uses, interest and ability to negotiate a long-term Development Agreement, environmental considerations, and specific conditions surrounding the proposed site. Because of these highly variable conditions, it is not practicable to anticipate where such applications might be proposed. The particular impacts of any new M-3 zone are also highly site specific, which will influence the City's deliberations on the individual merits of each proposal. If, in the future, the City receives an application requesting a GPA/ZOA for property located within the M-2 zone or elsewhere, that project will be required to prepare its own environmental document. Please see also Response to Comment 8-5.

Response to Comment 16-2

The Draft EIR states that the "overall project schedule is anticipated to take five years from the beginning of construction." The Draft EIR further states that the build out of the project will happen in phases, which presupposes that the phase 2 development of the Constitution site may not immediately follow the completion of phase 1 on the Independence site. As such, the Draft EIR does not "mis-describe" the construction timeline for the project.

As for the Development Agreement, the project sponsor and the City are currently negotiating the terms so the 'life" of the Development Agreement has yet to be established. Although a concept unrelated to CEQA, it should be noted that the construction timeline of the project need not harmonize with the terms of the Development Agreement. The timeline for constructing the project is not linked to the timeline included in the Development Agreement. The EIR provides the timeline for project

construction in order to address construction-related impacts. Please see Response to Comment 11-16 for more detail on the specifics of a Development Agreement.

Response to Comment 16-3

In the Draft EIR, Chapter 2, Project Description, includes Table 2-2 on page 2-7 that provides a comparison between the maximum allowable development under the current M-2 zoning versus the proposed M-3 zoning. The maximum development potentials of 382,068 sf and 312,601 sf under the M-2 zoning are based on a FAR of 55 percent for industrial uses and 45 percent for office uses, respectively. The number of parking spaces is based on the City's standard of one parking space for 300 sf of building space.

Response to Comment 16-4

The Draft EIR assumes 3,000 sf of retail uses would be included as part of the project and the analysis addresses the retail component. The technical issue areas, including Aesthetics, Biological Resources, Cultural Resources, and Hydrology and Water Quality, evaluated impacts associated with the building footprint and not the specific building uses. Air Quality, Hazardous Materials, Land Use, Noise, Population and Housing, Traffic and Circulation, Public Services, Utilities and Service Systems and Climate Change all evaluated the increase in demand associated with the various building uses, including the retail component.

Response to Comment 16-5

As discussed in the Draft EIR, Chapter 2, Project Description, the Independence site includes either a five-story, 313,220 sf parking structure with a total of 1,017 spaces, or a six-story, 377,840 sf parking structure with a total of 1,230 parking spaces. Approximately 205 parking spaces would be provided per level. The width of the structure would be 228 feet by 288 feet long.

Response to Comment 16-6

The parking structure footprint does count towards the overall lot coverage, but not the overall FAR for the project.

The Traffic Impact Analysis prepared for the project (see Appendix G of the Draft EIR) included a shared parking analysis for the Independence site consistent with the Institute of Transportation Engineers (ITE) *Parking Generation* (3rd Edition, 2004) and the Urban Land Institute (ULI) *Shared Parking* methodologies (2nd Edition, 2005). The ITE parking standards assume that all of the proposed uses experience peak parking demand at the same time during the day. The Shared Parking Guidebook, prepared by ULI gives transportation and parking practitioners tools and analysis techniques to conduct shared parking analyses. Under the ULI methodology, the percentage of parking that each land use requires at any given hour of the day is applied to the maximum demand for that land use. Under this method, the actual overlapping demands of parking throughout the day can be analyzed.

As shown in Table 45 on page 127 of the Traffic Impact Analysis, the peak weekday shared parking demand would be 1,002 parking spaces at 11:00 a.m. for the Independence site. The Independence site would provide 1,017 parking spaces and, therefore, would provide adequate parking during the peak parking demand. Please see the parking discussion in the Traffic Impact Analysis for more detail regarding the concept of shared parking and Appendix E.

Response to Comment 16-7

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The project sponsor is proposing to record Tentative Parcel Maps (one on the Independence site and one on the Constitution site), in order to merge lots, adjust lot lines, and establish easements. On the Independence site, the five existing parcels would be merged into two parcels: one with the parking structure and the office building and the other with the hotel and health club. On the Constitution site, the four existing parcels would be merged into either one parcel or two parcels with one office building and one parking structure on each parcel. The consolidation of the parcels would be accomplished through parcel maps on the respective sites. In addition, the parcel maps would be used to establish and modify easements.

Response to Comment 16-8

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Please see Response to Comment 16-7 regarding the proposed parcel split(s).

Response to Comment 16-9

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While not response is required to comply with CEQA, the following clarification is provided. Please see Response to Comment 16-7 regarding the proposed parcel split(s).

Response to Comment 16-10

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The M-3 zoning will apply to the entire project site and, as such, zoning conformity in the proposed M-3 district is measured by all parcels covered by the Development Agreement, not by each parcel.

Response to Comment 16-11

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. Future development of the site under the M-3 zoning would require that each parcel, or site, provide its own parking independent of other parcels. The shared parking principles only apply to the Independence site. Since the parking structure would be located on the office parcel of the Independence site, there would need to be a parking agreement between the two parcels as a condition of approval. Please see Response to Comment 16-6 regarding the ITE parking standards and the ULI shared parking guidelines.

Response to Comment 16-12

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, please see Responses to Comments 16-6 and 16-11 for additional information.

Response to Comment 16-13

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. Reciprocal access easements will be created to facilitate the shared parking between uses on the Independence site.

Response to Comment 16-14

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The parking study that was done for the 1300 El Camino Real project used a similar methodology to address the concept of shared parking. Please see Responses to Comments 16-6 and 16-11 for additional information.

Response to Comment 16-15

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. In the downtown area of Menlo Park, parcels "share" parking spaces in city lots. This is common practice in many downtown areas. Please see Responses to Comments 16-6 and 16-11.

Response to Comment 16-16

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. Because each parcel or site provides parking independent of other parcels, guidelines are not required and parking needs are evaluated on a case-by-case basis with recognized industry standards. Please see Response to Comment 16-6.

Response to Comment 16-17

On the Constitution site there would be two parking structures – a four-story and a five and one-half story. The four-story structure would be 207,814 sf and would include a total of 701 spaces or approximately 175 spaces per level. The building dimensions would be 118 feet wide by 285 long. The five and one-half story parking structure would be 238,418 sf and would include a total of 803 parking spaces or approximately 146 spaces per level. The building dimensions would be 177 feet wide by 286 feet long.

Response to Comment 16-18

Please see Response to Comment 16-6.

Response to Comment 16-19

Please refer to pages 126-129 of the Transportation Impact Study included in Appendix G of the Draft EIR for a detailed description of the parking analysis methodology, parking analysis, and conclusions. Please also see Response to Comment 16-6.

Response to Comment 16-20

Please refer to Appendix E of this document for copies of the requested transportation documents.

Response to Comment 16-21

The commentor provides an explanation for the preceding comments and their relevance to the EIR. Since this comment does not raise concerns that address the adequacy of the EIR nor the City's compliance with CEQA, it does not warrant further response in this document.

Response to Comment 16-22

The "parking precedents" referenced by the commentor are not relevant to the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. The commentor's opinion regarding structured parking is noted.

Response to Comment 16-23

The new Mixed-Use Commercial Business Park land use designation and M-3 zone would not eliminate an obstacle to growth because any subsequent development applications within the M-2 zone (or, for that matter, any area of the City) would be required to go through the process of seeking a general plan amendment and rezone to change the underlying land use designation and zoning to this new land use designation and zoning district. As mentioned previously, many of the land uses currently proposed under the Mixed Use Commercial Business Park land use designation would be allowed under a Conditional Development Permit without changing the Limited Industrial land use designation or M-2 zoning. Therefore, there is no obstacle in place currently that would limit the ability of a project applicant within the M-2 zone to develop their land at a higher intensity use. The project would not be eliminating an obstacle, such as constructing a road through an undeveloped area that now enables access where it did not exist previously. Essentially, the project is creating a new land use designation that allows business-related services that support office, industrial, or light manufacturing uses to coexist within the same area without requiring a conditional use permit. However, as discussed in Responses to Comments 8-4 and 8-5, it would be too speculative to assume that all other property owners within the Limited Industry area would seek a General Plan Amendment and rezone to M-3. The potential for redevelopment to occur on those parcels located between the Independence and Constitutions sites, as well as parcels surrounding the project site within the larger M-2 zone was addressed in the Fiscal Impact Analysis (July 2009) prepared for the City by Bay Area Economics (BAE). Based on a review of the parcel sizes, existing developed uses and property owners, BAE concluded that the need to assemble enough parcels into a coherent series of developable sites would be problematic due to the small size of the parcels and the number of property owners.

Comment on the Menlo Gateway DEIR

Author(s): Paul Collacchi

1 Lake Ct

Redwood City, CA 94062

RECEIVED
SEP 21 2009
CITY OF MENLO PARK
BUILDING

Version Control

Table Of Contents

1.0 Purpose *5*

1.1 About the Author 5

1.2 References 5

1.3 Glossary 5

1.4 Limited Industrial Zoning District Overview 6

1.4.1 There is currently no market for professional offices uses 6

1.4.2 The applicant proposes a similar project in Belmont, with the office components being deferred. 6

1.4.3 Professional office uses in M-2 not consistent with General Plan goals 6

1.4.4 Professional Office *Services* Generates "Little of No" Sales Tax 7

1.5 The Menlo Park General Plan 7

1.5.1 The DEIR mis-states facts about the General Plan 7

1.5.2 Proposed Project not in the General Plan EIR project baseline 7

1.5.3 General Plan EIR Project Development Exceeded by 1997 7

1.5.4 General Plan Circulation Element LOS levels exceeded in 1997 8

1.5.5 The DEIR suppresses City M-2 planning history and findings 8

1.5.6 General Plan Update Project reasonably foreseeable 9

1.5.7 Inconsistent assumptions for cumulative impact analysis. 10

1.5.8 ABAG planning methodology not disclosed 10

2.0 DEIR Comments *12*

2.1 DEIR Comments about the dual nature of "the project" 12

2.2 Comments about the Menlo Gateway project definition 12

2.2.1 Flawed project description 12

2.2.2 The DEIR does not adequately describe the developer's agreement 12

2.2.3 The DEIR alternatives 12

2.2.4 The GPA/ZOA program EIR study area is incorrect 12

3.0 Comments on Impact Analysis *14*

3.1 Comments on Aesthetics Impact Analysis 14

3.1.1 Standards of significance: 14

3.1.2 Serious Public Controversy 14

3.1.3 Comments about degrading the existing visual character or quality of the project area. 15

3.1.3.1 The DEIR did not perform a shadow study. 15

3.1.3.2 Future rooftop solar is jeopardized for nearby commercial buildings 15

3.1.3.3 The DEIR does not perform a shadow study for the GPA/ZOA project. 15

3.1.3.4 The Menlo Gateway DEIR does not analyze impact on commercial views. 15

3.1.3.5 The GPA/ZOA EIR does not analyze impacts on views. 16

3.2 Comments on Air Quality Impact Analysis 16

3.3 Comments on Biological Resources Analysis 16

3.4 Comments on Cultural Resources Analysis 16

3.5 Comments on Hydrology and Water Analysis 17

3.5.1 Hydrology Impacts Generally 17

3.5.2 Water Quality Impacts 17

3.5.3 New sources of pollutants 18
3.5.4 Flooding 18

3.6 Comments on Hazardous Materials Analysis 20

3.7 Comments on Land Use Analysis 21
3.7.1 Compatibility 21
3.7.2 Regulatory Environment 22
3.7.2.1 Ordinance 16.56.010 22
3.7.3 General Plan Consistency 23
3.7.4 "Commercial" goals not applicable to industrial designation. 23
3.7.5 Impact LU-1 25
3.7.6 The DEIR manufactures fictitious policies 25

3.8 Comments on Noise Analysis 26

3.9 Comments on Population and Housing Analysis 26

3.10 Comments on Public Services Analysis 26

3.11 Comments on Traffic And Circulation Analysis 26

3.12 Comments on Utilities Analysis 26

3.13 Comments on Climate Change 26

4.0 Comments on Growth Inducement 27

5.0 Comments on Unavoidable impacts 28

6.0 Comments on Irreversible Environmental Changes 28

7.0 Appendix A 29

7.1 Menlo Park General Plan Part II: Land Use/Circulation Diagrams and Standards 29

7.2 Menlo Park General Plan Part I Section 1: Land Use 29

7.3 1994 General Plan Land Use Map 29

1.0 Purpose

This document contains questions and comments about the Menlo Gateway project DEIR.

1.1 About the Author

I was a Menlo Park city council member from 1996 – 2004 and Mayor in 1999. I represented Menlo Park on regional bodies often and usually regarding transportation and land use.

Along with fellow council members I was a co-author of the most extensive circulation and land –use studies conducted in Menlo Park, including "Smart Growth, which include land-use and mobility studies, the Land-Use and Circulation Study (LUCS), the M-2 rezoning, and the M-2 build out studies, and Menlo Park's extensive circulation and land use analysis of large regional projects including Stanford Sand Hill Road Projects, the Stanford General Use Plan, and others. 17-1

I am familiar with the Menlo Park record, as least my version of it, particularly those years 1997-2002 no longer publicly available on the city's web site.

1.2 References

[1] Menlo Gateway Project DEIR:
http://www.menlopark.org/projects/comdev_iac_EIR.htm
[2] Staff Report 02-154 June 25, 2002 Agenda Item F1, "Direction on Uses and Intensities Related to the M-2 Zoning District Study."
[3] Belmont Redevelopment Agency, Aug 11 Staff Report
http://www.belmont.gov/Upload/Document/D240005038/RDA-5B-08112009.pdf
[4] City of Menlo Park General Plan
[5] Staff Report 03-180 October 14, 2003 Item F-2
[6] Menlo Park CEQA Guidelines (Resolution 3601)

1.3 Glossary

Acronym	Description
DA	Developer('s) Agreement.
DEIR	Draft Environmental Impact Report
GPA	General Plan Amendment
ZOA	Zoning Ordinance Amendment

1.4 Limited Industrial Zoning District Overview

The M-2 General Industrial [Zoning] District of Menlo Park, is an area largely East of Highway 101 in Menlo Park. It is the principal zoning designation for all parcels in an area designated by the General Plan for "Limited Industry." The over arching General Plan directives for this area of the city appears in [1] on pp I-3&4, Section 1: Land Use; Goals and Policies under the sub-heading "Industrial". 17-2

> Goal 1-F To promote the retention, development, and expansion of ***industrial*** uses which provide significant revenue to the City, are well designed, and have low environmental impacts.

1.4.1 There is currently no market for professional offices uses

A long-term Developer agreement is required because at the time of this writing, there is no market for additional Class A office space in the Mid-peninsula, particularly after the tech bust and recession in 2002 and the housing bust and financial collapse of 2008 which precipitated a collapse in construction financing and commercial real estate market. 17-3

1.4.2 The applicant proposes a similar project in Belmont, with the office components being deferred.

Reference [3] represents a hotel office complex proposed by City of Belmont in which the applicant is a land owner and has been selected to be the project developer. The project is candid in saying that project implementation would be "phased" with office construction being deferred. 17-4

> "Bohannon has proposed developing the Site with the hotel, office, restaurant and commercial uses as well as joint use parking structures including up to two hotels, ...and approximately 300,000 square feet of buildings for office use. Bohannon and Agency expect the Shoreway Place Project to be developed and constructed in phases with the first phase consisting of an ACCOR "Phoenix" concept focused service hotel of at least 90 rooms with surface parking, and the second phase including 300,000 square feet of office development combined with, in order of priority, either (i) a full service hotel, (ii) a second focused service hotel, or (iii) other commercial use and structured parking to serve all the uses on the Site.

1.4.3 Professional office uses in M-2 not consistent with General Plan goals

Since 1997, there has been open public debate in Menlo Park about whether professional office uses are consistent with General Plan goals for M-2. There is and has been legitimate disagreement among experts and policymakers within the community. I simply introduce "some evidence" below from the record here to be used later in comments. 17-5

A June 25, 2002 staff report says,

> "Based on the discussion by the Council, professional office is considered a high impact use that has little potential for revenue to the City. Prohibiting professional office use would be consistent

with the following General Plan goals that encourage uses that have low environmental impacts, but generate significant revenue or need goods or services.

Goal I-F To promote the retention, development, and expansion of industrial uses which provide significant revenue to the City, are well designed, and have a low environmental and traffic impacts.

Goal 1-E To promote the development and retention of commercial uses which provide significant revenue to the City and/or goods or services needed by the community and which have low environmental and traffic impacts."

17-5 (cont.)

1.4.4 Professional Office *Services* Generates "Little of No" Sales Tax

The Fiscal Impact Analysis makes this point clear,

> Certain types of office tenants tend to generate substantial sales tax revenues, including high technology corporate sales offices, while ***professional and financial services firms tend to generate little or no sales tax revenues***. [Fiscal Impact Analysis p.19]

1.5 The Menlo Park General Plan

17-6

Menlo Park has a General Plan whose Land-use Element was last updated in 1994 when an EIR was done for projected housing and commercial growth through 2010.

1.5.1 The DEIR mis-states facts about the General Plan

17-7

Because the Menlo Gateway project would be built after 2010, none of its forward looking analysis can rely on Menlo Park General Plan Land-use element planning data and so the DEIR either ignores the existence of the Menlo Park General Plan, or asserts wrong facts about the Menlo Park General Plan, or fabricates future-looking planning data using regional sources such as ABAG, even when the city has some internal data that speaks to the long term planning issues in question.

1.5.2 Proposed Project not in the General Plan EIR project baseline

17-8

The proposed project is not part of the baseline of the General Plan EIR project. The General Plan EIR project did not include a full build-out of the M-2 zoning code, and the current project would not be included in such a build-out.

> "The impacts of development at build out were not evaluated since the theoretical build-out figures are highly speculative and impractical in that they assume uses not currently developed to the maximum allowable levels we be redeveloped to those levels. It is not possible to establish a time frame within which this unlikely scenario would occur." FEIR III-37

1.5.3 General Plan EIR Project Development Exceeded by 1997

17-9

Nevertheless, during the tech boom of the 90's Menlo Park exceeded the figure sometime between 1997 and 1999. The table below is extracted from the LUCS study[5]. By 1997 Menlo Park had barely exceeded and by 1999 Menlo Park had significantly exceeded the

amount of commercial square footage and growth planned for in the 1994 General Plan EIR.

	Gross Commercial Developmen t	Office Development	Retail Development	Industrial Development	Warehouse Development	Single Family	Multiple Family
1988	12,570,938	6,103,703	1,232,598	2,044,218	2,816,266	6,508	5,505
1997	14,635,936	7,812,021	1,244,733	2,246,574	2,869,197	6,698	5,608
1999	15,139,846	8,321,538	1,244,480	2,100,929	3,018,860	6,703	5,626

17-9 (cont.)

Since 1997 there have been three kinds of commercial/industrial development in Menlo Park.

1.) Development included in the 1994 General Plan EIR base or project.
2.) Development not included in the 1994 General Plan EIR base and project.
3.) Development that would exceed the zoning code build out.

1.5.4 General Plan Circulation Element LOS levels exceeded in 1997

By 1997, intersection delays, also called "Level of Service" (LOS) at certain city intersections had degraded below levels specified in the policies II-A-1 through II-A-3 in the General Plan. The city considered restricting development as required by II-A-4 of the General Plan, but instead initiated new CEQA review procedures the require a mandatory find of significance for development projects whose traffic further impacted the designated intersections. In 2003 the review policy was reversed. In all cases, development continued.

17-10

Comment: The DEIR should list those intersections designated as impacted under the 1997 policy change, and include the policy change adopted at that time. It should also note which of the so-called "impacted" intersections would be further impacted by the proposed project.

17-11

1.5.5 The DEIR suppresses City M-2 planning history and findings

Of course future city councils are free to make findings of their own about this project, but it's important for the public and decision makers to know that the City Council of Menlo Park spent considerable amounts of time over the period from 1997 – 2002 rezoning and gathering long-term planning data for the M-2 area, including build-out analysis of the entire M-2 Limited Industrial area, much of what contradicts and otherwise informs findings in this DEIR.

17-12

Those studies looked a potential build-outs under the current M-2 zoning and their impacts on future revenue, traffic, and employment.

The 2002 studies "built out" the Menlo Park General Industrial District as allowed under the current M-2 zoning code under eighteen (18) different scenarios to determine employment density, revenue, and traffic impacts for alternate future build outs of M-2 in

which permitted different intensities of different uses, industrial, professional services, R&D.

This constitutes evidence from Menlo Park's own record and is arguably more relevant to the DEIR analysis, particularly post-2010 M-2 planning horizons, than ABAG planning data that is used instead. 17-12 (cont.)

The Menlo Park 2002 M-2 build out studies are arguably the city's own expert data which can inform the DEIR evaluation process when General Plan Planning horizons no long apply, particularly the cumulative traffic impact scenarios that extend for twenty year horizons. 17-13

Not a single word of that process is mentioned in any portion of this DEIR, nor are any of the legitimate differences in community opinion among community experts faithfully reported in this document. According to the Menlo Park CEQA procedure [6] disagreements among experts are to be faithfully summarized. 17-14

The public and decision-makers have a right to know that post 2010 land-use projections in Menlo Park were not analyzed in the General Plan EIR and therefore baseline planning facts used in the current DEIR analysis are not derived from the General Plan. The DEIR makes planning projections and assumptions some of which have not been created by the city and which may conflict with other relevant evidence generated by and known to the city. 17-15

Since 2002 no redevelopment planning effort in M-2 has attempted to pursue the specific uses introduced by this project, and no planning effort in M-2 on the record has ever considered intensification of professional office to increase revenues from the M-2 zone. 17-16

1.5.6 General Plan Update Project reasonably foreseeable

Evidence in Menlo Park planning and budgeting documents show that staff has been allocating resources for and pushing to update the General Plan whose Land-Use Element expires in 2010. The Menlo Park General Update, were it complete, would be included in the "cumulative" scenario for the Menlo Gateway project and would be made by the same lead agency. 17-17

By leapfrogging the actual General Plan Update process the Menlo Gateway project DEIR gains a less crowded and therefore favorable cumulative land-base scenario that does not include a reasonably foreseeable amount of future growth that would be predicted by and planned for in a General Plan update. This impacts all cumulative scenarios. 17-18

Ask yourself these questions:

Q1: If Menlo Park were to update its General Plan Land-use element for years 2010-2025 would it include additional commercial build out in the General Industrial area for the 2010-2025 planning horizon. (A: Yes.) 17-19

Q2: Is any of that growth included in the cumulative scenario for the Menlo Gateway project? (A: No, or very little.) 17-20

So even though the Menlo Park General Plan update will forecast by speculation, growth for Menlo Park between the years 2010 and 2025, little or none of that projected growth 17-21

will appear in the cumulative impacts analysis for the Menlo Gateway project whose construction and implementation will also take place between 2015 and 2025. 17-21 (cont.)

The current project timeline rushes a project approval while seeking a long-term development agreement after a world wide financial collapse in which there is clearly no market demand for the proposed product. Couldn't Menlo Park just wait until after it complete its M-2 plan, Housing Element, and General Plan updates? 17-22

Clearly the applicant is seeking the most favorable analytical conditions for his project EIR and staff does a dis-service to the public by not making it clear that the time and order of the EIR in relationship to the other planning efforts mentioned above would likely reduce the number of cumulative impacts found to be significant about the project. 17-23

1.5.7 Inconsistent assumptions for cumulative impact analysis.

For traffic analysis the DEIR appears to use a different land base consisting of known projects plus a constant factor, but the known land base differs from the ABAG land base used to determine impacts for population and housing. 17-24

It's not clear what the presumed land base is used for cumulative future projections of impact on services such as water supply, but it seems unlikely that 2015-2025 cumulative water supply analysis uses ABAG land use assumptions or population or employment assumptions, or even Menlo Park General Plan land base assumptions since the latter don't exist. 17-25

The preparer is literally cherry picking among different sources of speculative future planning data as needed. 17-26

For each cumulative future scenario for which there is an assumed land-base, population, and employment data the DEIR needs to delineate the assumptions explicitly so readers of the DEIR can compare whether or not they represent the same cumulative scenario assumptions. 17-27

The issue is relevant because using inconsistent assumptions can conceal significant impacts.

1.5.8 ABAG planning methodology not disclosed

Where post-2010 General Plan Planning land-use data is lacking, as in DEIR Section 3-9, "Population and Housing, the DEIR relies upon ABAG land-use planning data, but does not disclose the ABAG methodology. The General Plan includes population and housing projections through 2010, but the Housing Element of the General Plan was last updated in 1992. 17-28

Arguably the land-use, housing, and transportation elements of the DEIR are not correlated. 17-29

Astonishingly, footnote 1 says,

> "ABAG data presented in Projections 2007 is a function of the following four elements: (1) ABAG Executive Board policies, which are based on the Smart Growth Vision; (2) General Plan policies for each particular jurisdiction; (3) economic trends; and (4) available land and prevailing land use pattern data, which are based on discussions between ABAG staff and planning staff in each particular jurisdiction. [DEIR 3.9 footnote 1] 17-30

Basically, for year 2010-2025 planning projections the DEIR relied upon ABAG speculation about Menlo based on Menlo Park's General Plan, whose Land-use Element expires in 2010, and based on "discussions with Menlo Park staff." Basically, the EIR relies on ABAG speculation based on past Menlo Park speculation, but it does not incorporate Menlo Park speculation directly or the extensive planning data generated for M-2 as part of the M-2 build out process in 2002. 17-31

In particular Section 3.9 does not describe the assumed ABAG 2005 – 2025 ABAG land base, or how that land base was computed, and it does not specifically disclose whether or not the Menlo Gateway project was assumed in that land base. 17-32

This is relevant. To gauge "significance" the EIR relates the project impacts to the ABAG projection and quietly assumes the Menlo Gateway project is already part of the ABAG projection rather than new development. 17-33

The DEIR needs to enumerate the land base used in the ABAG calculations, and it needs to produce a written statement from ABAG saying whether or not the Menlo Gateway project was included in its "Projections 2007" projection for Menlo Park. 17-34

The DEIR also needs to compare that "Projections 2007" land base with the assumed land base for the twenty year traffic horizon. If those are not ***correlated*** then the DEIR is invalid, and either the traffic analysis is invalid, or the Population and Housing analysis is invalid. 17-35

Finally, the city needs to make Projections 2007 and its underlying working papers available for public inspection consistent with 9.6(i)(j) of [6] 17-36

2.0 DEIR Comments

2.1 DEIR Comments about the dual nature of "the project"

For the purposes of comments, I will use "Menlo Gateway" to refer to the "site specific development" project, and "GPA/ZOA" to refer to the CEQA project associated with the rezoning. 17-37

2.2 Comments about the Menlo Gateway project definition

2.2.1 Flawed project description

The DEIR assumes the project construction timeline is five years [DEIR Section 2-7], but the term of the developer agreement is 15 years now being considered for 20 years CEQA requires the project definition to be "consistent and stable". The nature of the project should not change over the course of the CEQA process or within the EIR. A DA that gives the developer 15 or 20 years to build the project rather than five redefines the project. This will impact the validity of the cumulative impacts analysis. 17-38

The DEIR also evaluates impacts (e.g water) using "use" scenarios, the so-called "split option" which are not enforced through the GPA/ZOA and therefore would have to be a condition of approval in the Developer Agreement. 17-39

2.2.2 The DEIR does not adequately describe the developer's agreement

The developer is requesting a Developer Agreement that could redefine the project timeline and other parameters of the project, yet the DA has not been included or described in the DEIR. The DEIR must describe the DA as completely as possible. 17-40

2.2.3 The DEIR alternatives

2.2.4 The GPA/ZOA program EIR study area is incorrect

The DEIR states,

"Thus, while this is a project-level EIR, this document also discusses the effects of the GPA/ZOA at a program level, assuming future development proposals could seek consideration from the City under the proposed new General Plan land use designation and M-3 zoning regulations." [DEIR 1-2.] 17-41

This would be a good practice, but the DEIR doesn't do it for any location besides the project site. It doesn't even extend the GPA/ZOA analysis to the twelve parcels sandwiched in between the project parcels, and doesn't consider possible land aggregations or intermediate or full rezonings of the commercial parcels sandwiched between project parcels.

Aggregation of parcels is not speculative, the current project was made through aggregations described in the Fiscal Impact Analysis. 17-42

Future development proposals will seek to be so rezoned, but the EIR doesn't explain why only parcels located within the Menlo Gateway project area would seek such a rezoning. The correct study area for the impacts of the M-3 ZOA is the entire M-2 zone, particularly large sites, currently zoned M-2 and those sites whose current development is planned under a Conditional Development Permit, this includes but is not limited to Sun Microsystems, Tyco, AMD (Willow Business Park), Menlo Business Park, Haven, and parcels in Bohannon West. The currently applicant owns many parcels in the M-2, it seems likely that the applicant might request the M-3 designation for some of those parcels as well. 17-43

The M-3 zoning may also apply to smaller parcels by allowing some modestly higher buildings with at-grade parking requirements that are reduced through the administrative parking permit. 17-44

3.0 Comments on Impact Analysis

3.1 Comments on Aesthetics Impact Analysis

3.1.1 Standards of significance:

The is section lists two express standards of significance:

The project would result in a significant impact if it would:
• **Impact Criterion #1:** Substantially degrade the existing visual character or quality of the project area and its surroundings.
• **Impact Criterion #2:** Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. 17-45

These seem not to be adopted standards of significance, rather they seem to be re-used Appendix G CEQA guidelines. This seems to be a practice used throughout the DEIR. If Menlo Park has adopted specific significance standards that implement Section G CEQA guidelines, the DEIR should cite them, and if Menlo Park has not adopted specific significance standards, the DEIR should say so as well.

The DEIR should discuss whether lack of a standard in addition to the "Appendix G" guidelines empowers or precludes policy makers from exercising discretion to make a finding of significance.

3.1.2 Serious Public Controversy

Section 7.3 (f)(1) of the City of Menlo Park Environmental Review and Implementing Procedures ("CEQA Guidelines") appears to suggest that "serious public controversy" is a basis for making a finding of significance. 17-46

My own opinion as a former Menlo Park public official is that the impact on views seems to be one of the most significant and unfortunate impacts of the proposal. Were I a decision-maker on this project, I would certainly want to know the limits of my discretion in being able to make such a finding, and, I would feel slightly annoyed if staff , or the preparer , or the applicants lawyer who is reading the administrative draft of the future answer to this question, made it appear that significance standards exist when they do not, or made it appear that council members had no discretionary basis upon which to make the finding of significance different than the subject ones made by the preparer. 17-47

Therefore in cases where the thresholds of significance are clearly spelled out by adopted Menlo Park standards, the DEIR should note the thresholds and the source, and where there are no adopted thresholds of significance the DEIR should note that the finding of significance is that of the preparer, about which council members are free to make a different finding. 17-48

3.1.3 Comments about degrading the existing visual character or quality of the project area.

3.1.3.1 The DEIR did not perform a shadow study.

The DEIR readily admits it did not do a shadow study. P 3.1-1. Rather it gives a number of excuses for not doing one, and makes a poor effort to describe generically the pattern of shadows that emerge as the sun progresses in the sky.

It's basic argument is that there are no significant impacts from shadowing, because Menlo Park never required shadow studies in the past, (when the zoning code allowed 35 foot rather than 140 foot tall buildings), and because it feels that commercial properties impacted are not "sensitive" receptors. 17-49

It readily admits that the Menlo Gateway project will cast shadows on nearby commercial properties but does not identify which ones, or for how long. It does not say which standards Menlo Park used to determine the shadows cast were not significant.

The shadowing impacts may be found to be significant, once they are known.

3.1.3.2 Future rooftop solar is jeopardized for nearby commercial buildings

Given that "climate change" is significant enough to warrant its own section in CEQA, its notable that the applicant is teasing the community about considering rooftop solar while blocking this ability for nearby commercial neighbors, and the DEIR is turning a blind eye to current and future impacts of shadowing on the ability of nearby commercial buildings to deploy solar on their rooftops. 17-50

At the very least a shadow study ought to be conducted to determine these impacts, and standards of "significance" could be developed based, in part, on this shadow study.

3.1.3.3 The DEIR does not perform a shadow study for the GPA/ZOA project.

M-3 would juxtapose 140 foot buildings in an area where 35 is the current height limit. M-3 allows building height four times higher than are currently allowed. 17-51

The DEIR does not establish that a 140 foot tall building, at the given sun angle in or around the M-2 area cannot throw off a shadow that would impact nearby parcels. The DEIR should do general shadow analysis for M-3 envelopes to determine whether or not M-3 conforming development can cast shadows on neighboring parcels.

3.1.3.4 The Menlo Gateway DEIR does not analyze impact on commercial views.

The tall buildings on Independence and Constitution would impede existing views of existing one and two story commercial properties between them. One picture shows a view that includes Bayfront Park [figure 3.1-2], another [Figure 3.1-1] shows the skyline view. 17-52

The DEIR doesn't indicate whether existing commercial buildings have view of the San Francisco Bay, or of Bayfront Park, or of the skyline vista from second story windows.

The DEIR does not describe how these views might be blocked either by tall office buildings or tall parking structures, nor does it discuss the "canyon" effect of being surrounded by tall buildings.

17-53

The DEIR does not describe how views from either tall building might impact each other, were the GPA/ZOA applied to either parcel without approving the project and the parcels were sold, would either party be so tolerant to losing views of the Bay or Skyline?

At the very least a study ought to be conducted to determine these impacts, and standards of "significance" could be developed based, in part, on them.

3.1.3.5 The GPA/ZOA EIR does not analyze impacts on views.

This comment expands upon the comment in 3.1.2.6 when considering how the GPA/ZOA might impact views on the site when no private project is approved, and how the GPA ZOA might impact views in other locations were the M-2 zoning is applied to other parcels.

17-54

It also doesn't consider how view impacts are partially or fully mitigated by project alternatives.

3.2 Comments on Air Quality Impact Analysis

3.3 Comments on Biological Resources Analysis

3.4 Comments on Cultural Resources Analysis

3.5 Comments on Hydrology and Water Analysis

3.5.1 Hydrology Impacts Generally

C: In this and subsequent hydrology impact evaluations the DEIR argues basically for a classification of "LTS" attributable to a standing regulatory scheme, rather than "PS" which would be mitigated by proper enforcement of the scheme. Explain why? 17-55

C: The DEIR should also provide a discussion of whether or not there could possibly be a finding of "PS" or "S" that would ***not*** be mitigated by the standing regulatory schemes. If the logic of the analysis is that there cannot be significant impacts, essentially, because "the law" prohibits it, then the DEIR should say so. If not, the DEIR should give an example of a how a "significant" impact could arise that would not be automatically mitigated under the existing regulatory scheme. 17-56

C: The DEIR should discuss the costs of the city portion of the regulatory scheme, the city's ability to recover these costs by imposing them on the developer as a condition of approval, and finally, if the city cannot impose mitigation monitoring costs on the developer, the DEIR should evaluate the city's capacity to enforce and monitor the BMPs. These could be recovered under the Developer Agreement. 17-57

3.5.2 Water Quality Impacts

C: The DEIR admits that pollutants from the project reach surface water bodies and groundwater, which drains into the Bay, but it doesn't provide estimates for pre-project "levels", new pollutant "levels" created by the project, before and after BMP's are applied. 17-58

C: The DEIR should provide relative estimates for the amount of new source pollutant discharge that the project is expected to create relative to the existing conditions and the alternatives. This would give decision-makers who wish to mitigate or limit potential ground level pollution at the source the information they need to know which project alternative generate fewer total pollutants. 17-59

Q: In general terms, what are the primary generators of pollutant discharge and general drivers for calculating pollutant levels? Impervious surfaces, automobile counts, parking garage floors, roof tops? Are there other major components of projects that generate pollutant discharge? 17-60 The DEIR needs to discuss whether the intensity (size and configuration) of the replacement use is relevant to determining the pollutant profile, and why the assumption of a prior industrial profile is valid. The DEIR should discuss the possible additions and changes to pollutants because of structured parking, the increase in the total number of cars, and the potential for auto discharge to drain out of the structure. 17-61

In 3.5-25, the DEIR states

"Development in accordance with the Menlo Gateway project would increase the amount of stormwater runoff from the project area."

C: Explain the apparent contradiction between an increase in stormwater runoff and a decrease in impervious surfaces. If that increase comes from some level other than an at-grade impervious surface (e.g. parking structure) then the DEIR should explain and provide an approximation to explain what percentage of pollutant discharge comes from various sources including at-grade sources, parking grades, and rooftop grades. 17-62

C: The DEIR analyzes the impacts of the GPA/ZOA in three paragraphs, claiming basically that the regulatory scheme, BMP's etc would be expected to "reduce the amount of pollutants in stormwater runoff compared to existing conditions," but increasing the M-3 intensity does so for permitted industrial uses as well as professional office uses. The DEIR needs to explain why no industrial use permitted under the M-3 zone and build out to the maximum intensity has the potential to generate significantly more amounts of industrial pollution under the GPA/ZOA than under the current zoning? 17-63

3.5.3 New sources of pollutants

C: The DEIR should provide relative estimates for the amount of new source pollutant discharge that the project is expected to create relative to the existing conditions and the alternatives. This would give decision-makers who wish to mitigate or limit potential ground level pollution at the source the information they need to know which project alternative generate fewer total pollutants, and to determine whether or not new pollutant levels are considered significant. 17-64

Q: In general terms, what are the primary generators of pollutant discharge and general drivers for calculating pollutant levels? Impervious surfaces, automobile counts, parking garage floors, roof tops? Are there other major components of projects that generate pollutant discharge? 17-65 The DEIR needs to discuss whether the intensity (size and configuration) of the replacement use is relevant to determining the pollutant profile, and why the assumption of a prior industrial profile is valid. The DEIR should discuss the possible additions and changes to pollutants because of structured parking, the increase in the total number of cars, and the potential for auto discharge to drain out of the structure. 17-66

3.5.4 Flooding

C: In regard to hydrology impacts regarding flooding and alteration of drainage patterns of the site or area, its important to note that the project as proposed occupies two separate parcels between which are more than a dozen other commercial neighbors whose structure are currently at-grade, in the flood zone, and who could be potentially impacted. 17-67

Q: Do the non-project commercial parcels and uses in the study area share storm drain resources with the project? 17-68

C: The DEIR notes that the project could increase the amount of storm runoff water .. "contributing to … off-site flooding" but then asserts something that seems true but irrelevant, that the project would not significantly increase impervious surfaces. Which nearby parcels would be subjected to what new flooding patterns? 17-69

C: The site with the Hotel will construct will construct a rather enormous and long sound wall to reduce noise at an outdoor swimming pool. The hotel occupies the site where increase flows of 56% are projected, and, where possibly the site will be elevate by 10 feet. It's hard to believe the sound wall won't change runoff flow patterns or flooding patterns. The EIR provides no analysis about the effects or design of the sound barrier and its impact on flow directions, and in combination with elevating the site. 17-70

Q: The DEIR does show flow paths for the proposed project, but not for existing conditions or alternatives It gives increase flow rates of 8% for Constitution and 56% for Independence, but doesn't indicate whether these flows are for the 10-year or 100-year event. Specifically what are the projected increases in flows for both sites for 10 and 100 year events? 17-71

C: The DEIR should provide flow paths for 10 and 100 year events at projected flow rates and analyze their impacts on nearby properties. 17-72

C: The DEIR should provide flow paths for 10 and 100 year eventa at projected flow rates for project alternatives and analyze their impacts on nearby properties. A general discussion should be provide of relative degree of negative impact provide by alternatives so that decision makers had an informed opinion about which alternative were relatively more or less impactful. 17-73

C: The DEIR should provide flow paths for 10 and 100 year events at projected flow rates for different but representative configurations allowed under the GPA/ZOA. 17-74

C: In response to climate change the San Francisco Bay Conservation and Development Commission ("BCDC") is considering new language and findings for its Bay plan. With regard to flooding it says,

"Most shoreline impacts will occur from flooding caused by the combined effects of storm activity and higher water level due to sea level rise. During a storm, low air pressure causes a rapid rise in sea level, called storm surge. Water levels are also elevated by rain runoff and extreme high tides, which occur more often in the winter when storms are more frequent. The coincidence of these events is also more likely to occur during El Niño years, which are becoming more frequent. High winds produce waves, which when generated on elevated water, run further up on the land surface causing more damage than they otherwise would. The combination of higher global sea level and runoff from early Sierra Nevada snowmelt can prolong the duration of higher water levels from storm surge. The combined effects of sea level rise, storm surge, tributary flooding, high tides, high winds, and El Niño events will likely cause severe flooding and erosion long before shoreline areas are permanently inundated by sea level rise alone. 17-75

C: An event similar to this occurred in Menlo Park and Palo Alto in 1998. Clearly these inter-related factors are complicated, but the DEIR should try to discuss impacts of a second 100 year flood scenario in which for some reason storm surge, high-tide and other factors contribute to unusually high sea levels that back-up into the Slough and Channel, thereby limited or preventing storm water from draining from the project site, create a local pooling effect, that might also overwhelm the capacity of a local detention basis. Similar kinds of pooling resulted in many negative effects during the 1998 Flooding event. If catch basis overflow in the vicinity of major public thoroughfares then the impacts could be significant. 17-76

C: I find it difficult to believe that the impacts that might result from the analysis in the previous paragraph might not be considered "potentially significant", particular on the remaining at-grade commercial locations in the project area. 17-77

HY-7

"If substantial additional fill is used to elevate the project area or structures to above the base flood elevation, this additional fill material could have a substantial effect on local flooding; water displaced from the study area could increase flood depths on adjacent properties or redirect flood flows to adjacent properties, which would be a potentially significant impact. 17-78

C: The DEIR is not clear on how and why the proposed mitigation reduces the actual impact. 17-79

C: The DEIR does not attempt to describe the impacts and determine which properties might be affected. 17-80

Impact HY-1CM:

C: Menlo Park development constraints in the General Plan, obviously do not constrain this project, hence there is no reason to believe the Woodside constraints would be any more effective. As this project represents a significant intensification of an existing infill development, it is reasonably foreseeable that all non-conserved, non single family residential zones will be subject to similar intensification, including other M-2 zones in the Atherton Channel watershed, most specifically properties owned by the current developer, multi-family residential zones, and other non M-2 commercial zones. It's even reasonably foreseeable that existing "rural" residential zones may intensify through subdivision. The analysis here also confirms that intensification of the site contributes sizeable changes to 10 and 100 year runoff flows. Clearly impervious surfaces are not the only contributor to project runoff flows. The DEIR should analyze full build out impacts of development on the Channel and to briefly determined which intensifications beyond build-out would most impact the Channel's capacity. 17-81 17-82

3.6 Comments on Hazardous Materials Analysis

3.7 Comments on Land Use Analysis

3.7.1 Compatibility

C: The discussion about compatibility is inadequate. The discussion of "compatibility" is limited to the introductory paragraph which contains two sentences, and it reduces the discussion of compatibility between uses to a simple discussion of impacts of the project evaluated elsewhere in the DEIR. 17-83

C: The DEIR fails to discuss other ways in which the existing area may produce "impacts" on the proposed project whicha are not evaluated elsewhere in the DEIR, and it doesn't include a discussion that analyzes co-variance of both existing and new project uses in a common scene. 17-84

C: The DEIR does not address potential spatial incompatibilities, scale incompatibilities, visual incompatibilities, use incompatibilities, and it doesn't address potential incompatibilities that arise from the existing environment on the proposed project, even when they are obvious e.g. freeway and outdoor swimming pool, elevated freeway and "campus" environment; expressway and campus environment; vacant, exposed industrial lot on campus environment; very tall buildings looming over very short ones, professional office architectural style juxtaposed against industrial style. 17-85

C: Clearly, the freeway is incompatible with the outdoor swimming pool, and the incompatibility may or may not be mitigated to less than significance by the sound wall. The DEIR says nothing about this and other similar significant incompatibilities. 17-86

C: The Menlo Park record has several examples in its land-use district where industrial contamination is known to have occurred. The possibility for conflict from exposed airborne pollutants from industrial lots on an increased intensity outdoor campus environment is not discussed. 17-87

C: The DEIR does not discuss the juxtaposition of a campus environment at the junction of two major throughways, facing Bayfront expressway and within earshot of US 101, a location that may be better suited for some other kind of use than an outdoor campus. 17-88

C: The DEIR does not discuss potential compatibilities that may arise from the piecemeal application of the GPA/ZOA to non-adjacent "commercial" parcels that surround "industrial" parcels and which create a regulatory distinction among parcels that have always been regulated similarly. 17-89

C: A Staff Report document states that both the Menlo Gateway and Tyco proposals have the power to "define" the M-2 area, but the DEIR says nothing about what that might mean, particularly in light of the M-2 rezoning work done in 2002. 17-90

C: There's also no discussion of whether the GPA/ZOA when used elsewhere in an area currently zoned M-2, practically and permanently "crowds-out" other uses the city may want to consider, such as retail, auto, industrial, or housing. If so, then potential viral spread of GPA/ZOA throughout what is currently M-2 may both change the social character of the area, and permanently prevent future uses, such as housing or retail. The public and decision makers have a right to know that. 17-91

C: I think there are numerous significant and potentially significant impacts about land-use compatibility of the proposed project and the remaining project area arising from each of these incompatibilities which have not been identified in the DEIR. 17-92

C: Menlo Park has other areas in M-2 that are arguably more transitional. In these industrial areas, a form of manufacturing sometimes called "high-tech flex" predominates. These uses occupy newer buildings, some of which are class-A office buildings, and which create something of an "Industrial Park Campus". Making the step from an existing high-tech flex campus to the proposed professional office campus presents far fewer land-use conflicts than the current step. So the DEIR could also discuss the level of "severity" of the contrast in proposed uses with the existing use. 17-93

3.7.2 Regulatory Environment

C: 3.7-2 (Land Use Designations) The DEIR says, "Under the Limited Industry designation, hotel and other commercial users are not allowed, but then fails to consider how a decision-maker might find that allowing "not allowed" uses might be found to be inconsistent with the existing regulatory environment. 17-94

3.7.2.1 Ordinance 16.56.010

C: As background to the discussion of "consistency" with the regulatory environment and the General Plan, the DEIR fails to note Ordinance 16.46.010 which sought to limit both intensification and conversions from industrial uses to professional office uses and the voluminous amount of planning work done in 2001-2002 which sought essentially to limit the encroachment of professional office uses in the industrial zone. In particular, Ordinance 16.46.010 sought to review and condition "use changes" and "intensifications" in the General lan Industrial designations through the M-2 zoning code. The rezoning effort in M-2 sought to limit professional office uses in M-2, and not allow them at all in the current project site. Clearly the proposed project triggers a use change and intensification previously controlled by 16.46.010. Saying that 16.46.010 applies to M-2 but not M-3 misses the fundamental point that the regulatory environment applies to the General Plan Industrial land use designation as applied through the M-2 zoning code, since that code blankets the Industrial designation. 17-95

C: Since 1997 there has been considerable controversy in Menlo Park over precisely whether or not professional office uses are consistent with the General Industrial area. An extensive amount of evidence on the record shows that from 1997-2002 these uses were clearly not found to be consistent and were regulated and considered for prohibition. Though the definition of "intensification" was changed in 2005, no subsequent process of the city council ever considered eliminating the prohibition of converting industrial uses to professional office in M-2. Hence it is the prevailing regulatory environment. 17-96

3.7.3 General Plan Consistency

C: The DEIR fails to note prior findings in the M-2 rezoning documents applies to uses and intensities in the proposed project suggesting they are inconsistent with the two major goals alleged to be applicable to M-2.

"Based on the discussion by the Council, professional office is considered a high impact use that has little potential for revenue to the City. Prohibiting professional office use would be consistent with the following General Plan goals that encourage uses that have low environmental impacts, but generate significant revenue or need goods or services. 17-97

> Goal I-F To promote the retention, development, and expansion of industrial uses which provide significant revenue to the City, are well designed, and have a low environmental and traffic impacts.
>
> Goal 1-E To promote the development and retention of commercial uses which provide significant revenue to the City and/or goods or services needed by the community and which have low environmental and traffic impacts."[2]

C: Menlo Park Policies obligate fair disclosure when there is disagreement among experts. The City's own prior staff report should constitute expert testimony that needs to be fairly disclosed to the public and to decision-makers. 17-98

C: As far as consistency with the General Plan, this discussion is also inadequate. In particular, the DEIR does not try to determine whether the project is consistent with goals I-E itself, it tries to find the project to be consistent with policies subordinate to I-E, and it suppresses some of those, particular this one: 17-99

> I-F-2 Establishment and expansion of industrial uses that general sales and use tax to the City shall be encouraged.

C: Clearly the proposed project is not consistent with this policy. This policy was at the core of the 1997-2002 debate. The DEIR deals with the clear inconsistency by suppressing the existence of the policy and the debate. 17-100

3.7.4 "Commercial" goals not applicable to industrial designation.

C: Menlo Park General Plan "commercial" goals and policies (GP pp II-3) do not apply to "industrial" areas. 17-101

C: Menlo Park land use goals and policies are described fully in "Part I Section 1: Land Use Goals and Policies of the Menlo Park General Plan Policy document pages I-1 through I-6. Land use diagrams and standards are defined in section II. (Land use designations, goals and polices, and the 1994 land use map referenced here appear in the appendix of this document.) 17-102

C: There is no relationship between the land-used designation "commercial" defined in the General Plan (pp II-2,3) and the land-used designation "industrial" or "Limited Industry" defined in the General Plan (pp II-3) nor is there any relationship between the land-use designation "commercial" (pp II-6) and the zoning districts M-1, M-2, (or M-3) (pp II-7) , nor is there any relationship between land-use designation "commercial" and the area on the land-use diagram, either the 1994 version or the more modern version: http://www.menlopark.org/departments/pln/zmap/zmapi.pdf. 17-103

C: The 1994 Land-Use diagram legend is particularly persuasive in this matter, since for each land use "designation" that appears in Part II there is a unique and corresponding entry on the Land Use Map, and a unique and corresponding set of goals and policies in Part I. The goals & policies, land-use designations, and map are co-ordinated through a consistent set of terminology. 17-104

C: Three of the four goals in the "commercial" section make unambiguous geographic references to areas of the city, on the land use map, that clearly do not include the Industrial area designation on the land use map. 17-105

C: Additionally, where the city sought to extend a "commercial" policy to "industrial" designations, the goal or policy includes specific language which so indicates. 17-106

> I-E-2 Hotel uses may be considered at suitable locations within the commercial and ***industrial zoning districts*** of the city. [GP Part I I-3]

C: Therefore the goals and policies (pp I-2) for "commercial" land-use designations do not apply to "industrial" land-use designations (pp II-3 and pp II-7) areas on the zoning map including the project area, and zoning districts applicable in the project area. 17-107

C: Specifically, the General Plan land use designation "Commercial" applies to zoning districts C1, C1X, C1A, C1B, C1C, C1CX, C2, C2A, C2B, C2S, C3, C4, C4ECR, and C(4)X, and the General Plan land use designation, "Industrial," applies to zoning districts, M1, M2, and M2X. 17-108

C: The DEIR mistakenly rips the General Plan goals out of context, removes the land-use designation headers, suppresses the definitions provide in section II, and then applies General Plan "commercial" goals to an industrial zoning district, M-3 that does not appear within the area mapped "Commercial" on the General plan map. 17-109

C: This "mistake" is one made by Menlo Park planning staff, from time to time, particularly in eras where council members are not particularly vigilant. It has created an on-again, off-again as-applied administrative policy that has never been formally ratified as council policy, is not supported by the General Plan, and was another piece of core of the debate that erupted between 1997 and 2002. 17-110

C: Although surely the current council is free to find as it will, the preparers of the DEIR, are bound by Menlo Park's CEQA preparation policy, "the EIR should summarize the main points of disagreement among experts." [6] p47. 17-111

C: There is disagreement over whether goals and policies in the General Plan labeled "commercial" and which map to zoning districts along El Camino, Middlefield, and Sand Hill road apply to parcels in the Industrial area zoned M-2, and now M-2. This is relevant because if one believes those goals don't apply to that area, then it's hard to find the current project "consistent" with the Industrial goals and policies that *do* map to the project area. 17-112

C: The re-designation of the a formerly industrial area as being commercial is relevant because it "redefines" the area. The DEIR does not indicate whether the redefinition at the M-3 intensity precludes other future redefinitions of the remaining parcels, i.e residential, big box retail, auto residential. Public decision-makers may be misled into believing they are making a one-time, short term decision to approve a project whose intensity and zoning designation may practically exclude other important uses, and if re-used elsewhere may induce a global redefinition of the industrial area that would have even more significant impacts. The DEIR needs to discuss this, it is significant. 17-113

3.7.5 Impact LU-1

The DEIR finding for LU-1 is incorrect. It says,

> Impact LU-1: The proposed project would not conflict with the current General Plan designation and zoning district for the project area because the project is creating a new land use designation and zoning district. Therefore, there would be no impact under Criterion #1. (NI)

This impact should be Significant unavoidable because of the intensity of the zoning (137.5% FAR) relative to the existing intensity, and because of the use change from low traffic generating industrial to high traffic generating professional office. 17-114

The "logic" used here conflicts with actual and previously city generated evidence described in comment 1.3.3 and more generally in the suppressed city record described in comment 1.4.5, the suppressed compatibility analysis described in comments 3.7.1 and 3.7.2, and the suppressed regulator environment describe in comment 3.7.2.1.

3.7.6 The DEIR manufactures fictitious policies

The DEIR describes the project as being "consistent" with four "future" Seismic Safety and Safety Element policies described in 3.7-6 and in Table 3.7-1. Clearly this partially mis-informs the discussion of "consistency" and exhibits a patent bias in the analysis. 17-115

3.8 Comments on Noise Analysis

3.9 Comments on Population and Housing Analysis

3.10 Comments on Public Services Analysis

3.11 Comments on Traffic And Circulation Analysis

Generally the traffic analysis uses an incorrect study area. It's well known that the Dumbarton bridge (route 84) is a main east/west commute corridor and the "interchange" between 84 and US 101 consists of three arterials including the Bayfront Expressway/Marsh Rd, Willow Road, and University Avenue in East Palo Alto. During am and pm commute traffic, source congestion on cross bay traffic will impact each branch of the "interchange". It's also well known that pm peak (eastbound) congestion over the bridge will cause local congestion on Marsh, Willow, and University, and the local congestion extends to location West of US 101. 17-116 17-117

The study area should include University Avenue in East Palo Alto, and in Menlo Park the study area should extend to Willow and Middlefield as well as Marsh and Middlefield. 17-118

This means there are potential impacts on residential neighborhoods West of US 101, particularly along Willow, Marsh, Bay, and Ringwood. Bay and Ringwood serve as cut-throughs between Marsh and Willow and Ringwood serves as a cut-through between Bay and Middlefied. 17-119

Menlo Park has done extensive studies of these effects in traffic studies associate with the LUCS planning project, and has concluded that congestion on east west arterials in Menlo Park, and the Middlefield corridor is highly sensitive to local changes in local land use. 17-120

Further, the DEIR does not study the intersection of Chilco and Hamilton, which is a notoriously bad cut-through route taken by commercial traffic to avoid congestion on the Bayfront Expressway, that goes through the Belle Haven residential neighborhood. 17-121

In the past Menlo Park has used dynamic traffic modeling, as this type of modeling is extremely sensitive and useful in situations where traffic seeks alternate routes in response to congestion. 17-122

Q: Did the traffic use dynamic modeling or was traffic assignment done manually using assumed static routes and using assumed static percentages?

3.12 Comments on Utilities Analysis

3.13 Comments on Climate Change

4.0 Comments on Growth Inducement

C: In general terms, a project may induce spatial, economic or population growth in a geographic area if it meets any one of the four criteria identified below:

1. Removal of an impediment to growth (e.g., establishment of an essential public service or the provisions of new access to an area).
2. Economic expansion or growth (e.g., changes in revenue base, employment expansion, etc.).
3. Establishment of a precedent setting action (e.g., an innovation, a change in zoning or general plan amendment approval).
4. Development or encroachment in an isolated area or one adjacent to open space (being different from an "infill" type of project).

17-123

C: The Menlo Gateway project is clearly growth-inducing in many ways. It causes a singular large economic expansion including a large expansion of employment, and it contains a number of precedents including parking precedents, and the GPA/ZOA also removes a regulatory obstacle to growth, sets precedents, and in combination with parking ordinances sets even more precedents.

17-124

None of these are discussed adequately in the DEIR. Growth inducing changes proposed both by the project and the GPA/ZOA in combination with administrative parking ordinance and "clarified" definition of FAR are significant, particularly since they would propagate the inconsistencies documented in section 3.7 virally throughout M-2 thereby changing the social and economic fabric of the area and the community.

Further it's reasonably foreseeable in Menlo Park that other development projects will seek the M-3 zoning designation. This happened almost immediately in downtown Menlo Park when the height and housing density limit was lifted for the Derry project. Instantly, two nearby parcels sought similar zoning approvals.

In General, Menlo Park land prices are among the highest in the country, and existing development entitlements are modest. Hence when entitlements are expanded one can literally hear the rush of air move in to fill the space. This can still happen, as with this current project, regardless of whether there is an actual market or not, since developers will simply negotiate for entitlements, as this one is doing, and then either seek extensions for those approvals until the market emerges or will seek to lock in the entitlements through mechanisms like a Developer's Agreement.

17-125

In particularly, it's reasonable foreseeable that property owner of the 12 parcels surrounded by the project site will seek the M-3 zoning designation or sell to aggregators, including the current applicant who will seek the M-3 zoning designation. It's reasonably foreseeable that other large parcel owners, particularly those such as AMD, or Tarleton, and in Bohannon West, whose large parcels are currently governed under a Conditional Development Permit will seek the M-2 rezoning, and its reasonably foreseeable that smaller parcel owners may use the M-3 zone to incrementally expand beyond the current

17-126

M-2 height limits while using ground level parking whose requirements have been reduced through the administrative parking ordinance. 17-126 (cont.)

Precedents set by the project are height limit, uses, structured parking, total mass, FAR, parking requirements, and shared parking, that may be shared among distinct parcels owned by distinct owners.

Precedents set by the GPA/Zoning are height limit, FAR, fragmented designations in the General Plan where adjacent parcels in a formerly unified area have dissimilar zoning and General Plan designations, and the first officially sanction conflation between a commercial "use" in an industrial zone. 17-127

Both the intensity increases allowed and the use-change ramifications are profound and the DEIR says nothing about any of it.

Finally, the DEIR is silent about how the GPA/ZOA in combination with the administrative parking ordinance, and the newly "clarified" definition of FAR that does not count parking structure, combine to remove obstacles to growth throughout the Limited Industrial land designation.

Relative to economic and social impacts the 2002 M-2 financial analysis conducted by staff using sophisticated modeling and actual sales tax data shows that if large, high-density offices continue to replace industrial uses in M-2, (***at the existing M-2 intensity***) current revenues will decline and city costs will increase. The net loss would reach nearly $2 million per year. If current industrial uses are expanded, Menlo Park could eventually increase its revenue stream by more than $6.2 million per year. 17-128

Large scale conversion to high-density offices (***at the existing M-2 density***) will also double the number of employees in M-2 to a whopping 50,000, creating more traffic and increasing housing demand.

The M-3 intensity potentially accelerates this finding.

5.0 Comments on Unavoidable impacts

6.0 Comments on Irreversible Environmental Changes

7.0 Appendix A

7.1 Menlo Park General Plan Part II: Land Use/Circulation Diagrams and Standards

7.2 Menlo Park General Plan Part I Section 1: Land Use

7.3 1994 General Plan Land Use Map

PART II

LAND USE/CIRCULATION DIAGRAMS AND STANDARDS

Part II first describes the *General Plan Land Use Diagram* and the allowable uses and standards for each of the designations shown on the diagram. Second, it describes the street and highway classification system appearing on the *Circulation Plan Diagram.* Finally, it describes bikeway standards and proposed improvements.

LAND USE DIAGRAM AND STANDARDS

The *Land Use Diagram* (inserted separately) depicts the land use pattern for future development in Menlo Park. The boundaries of the land use designations appearing on the *Land Use Diagram* are depicted generally. A parcel specific delineation and interpretation of these boundaries is contained in Menlo Park's Zoning Ordinance and Zoning Map.

The following sections describe the land use designations appearing on the *Land Use Diagram* and standards of building intensity and population density for the various land use designations.

Standards of building intensity for residential uses are expressed as intensity ranges, with the top of the range representing the maximum allowable number of dwelling units per net acre. For each residential designation there are one or more consistent zoning districts that more precisely specify maximum building intensity, including floor area limits or ratios, within the broader range set out in the General Plan. Maximum intensity and floor area standards may be exceeded by up to 15 percent in the case of a Below Market Rate density bonus. Maximum intensity standards may be exceeded with the development of a "secondary residential unit," pursuant to the requirements of State law.

Standards of population density for residential uses can be derived by multiplying the allowable dwelling units per net acre by the estimated average number of persons per household. In 1993, the California Department of Finance estimated average household size in Menlo Park at 2.36. It is assumed that average population per household in Menlo Park will not change significantly through the year 2010. Because the City cannot directly control the number of persons living in a household, these population density standards are intended for analytical purposes and are not to be used to limit residential density.

Standards of building intensity for non-residential uses are stated as maximum allowable floor area ratios. "Floor area ratio" (FAR) is defined as the ratio of the gross building square footage (excluding shafts, courts, covered parking, and other structured parking) on a lot to the net square footage of the lot. For example, on a site with 10,000 net square feet of land area, an FAR of 100 percent would allow 10,000 gross square feet of building floor area to be built. On the same site, an FAR of 50 percent would allow 5,000 gross square feet of building floor area. For non-residential designations, the Plan does not specify a day-time population density. For each non-residential designation there are one or more consistent zoning districts that more precisely specify maximum allowable building intensity within the broader intensity range set out in the General Plan.

Tables II-1, II-2, and II-3 show the zoning districts that implement the various residential, commercial, and industrial land use designations and more detailed building intensity standards.

RESIDENTIAL DESIGNATIONS

Very Low Density Residential

This designation provides for single family detached homes, secondary residential units, public and quasi-public uses, and similar compatible uses. Residential intensity shall be in the range of 0 to 3.5 units per net acre.

Low Density Residential

This designation provides for single family detached homes, secondary residential units, public and quasi-public uses, and similar and compatible uses. Residential intensity shall be in the range of 3.6 to 5.0 units per net acre.

Medium Density Residential

This designation provides for single family detached and attached homes, duplexes, multi-family units, garden apartments, condominiums, public and quasi-public uses, and similar and compatible uses. Residential senior rental shall be in the range of 5.1 to 18.5 units per net acre.

High Density Residential

This designation provides for single family detached and attached homes, duplexes, multi-family units, garden apartments, condominiums, senior rental housing operated by a non-profit agency and designed to be occupied by persons age 60 and older, public and quasi-public uses, and similar and compatible uses. Residential intensity shall be in the range of 18.6 to 40.0 units per net acre, provided, however, that the residential intensity of senior rental housing may be in the range of 54 to 97 units per net acre.

COMMERCIAL DESIGNATIONS

Retail/Commercial

This designation provides for retail services, personal services, professional offices, banks, savings and loans, restaurants, cafes, theaters, social and fraternal clubs, residential uses, public and quasi-public uses, and similar and compatible uses. The maximum FAR for non-residential uses shall be in the range of 40 percent to 200 percent. Residential intensity shall not exceed 18.5 units per net acre.

Professional and Administrative Offices

This designation provides for professional offices, executive, general, and administrative offices, research and development facilities, banks, savings and loans, convalescent homes, research and development facilities, residential uses, public and quasi-public uses, and similar and compatible uses. The maximum FAR for non-residential uses shall be in the range of 25 percent to 40 percent. Residential intensity shall not exceed 18.5 units per net acre.

El Camino Real Professional/Retail Commercial

This designation provides for retail services, personal services, professional offices, executive, general and administrative offices, research and development facilities, banks, savings and loans, convalescent homes, restaurants, cafes, theaters, residential uses, public and quasi-public uses, and similar and compatible uses. The maximum FAR for non-residential uses shall be in the range of 40 percent to 75 percent. Residential intensity shall not exceed 18.5 units per net acre.

INDUSTRIAL DESIGNATIONS

Limited Industry

This designation provides for light manufacturing and assembly, distribution of manufactured products, research and development facilities, industrial supply, incidental warehousing, offices, limited retail sales (such as sales to serve businesses in the area), public and quasi-public uses, and similar and compatible uses. The maximum FAR shall be in the range of 45 percent to 55 percent.

NON-URBAN DESIGNATIONS

Marshes

This designation provides for the preservation and protection of wildlife habitat and ecological values associated with the marshlands bordering San Francisco Bay and similar and compatible uses. The maximum amount of development allowed under this designation shall be 5,000 square feet of building floor area per parcel.

Salt Ponds

This designation provides for the commercial production of salt and other minerals on the lands bordering San Francisco Bay and similar and compatible uses. The maximum amount of development allowed under this designation shall be 5,000 square feet of building floor area per parcel.

Preserve

This designation provides for the preservation and protection of wildlife habitat and ecological values associated with the foothill areas bordering I-280 and similar and compatible uses.

PUBLIC AND QUASI-PUBLIC DESIGNATIONS

Parks and Recreation

This designation provides for public and private golf courses, passive and active recreation uses, educational facilities, and similar and compatible uses. The letter "P" overlaid on this designation denotes a park. The maximum FAR shall be in the range of 2.5 percent to 30 percent.

Landscaped Greenways, Buffers, and Parkways

This designation provides for public and private open space uses, linear buffers and parkways along roads, and similar and compatible uses.

Public Facilities

This designation provides for public and quasi-public uses such as government offices, fire stations, schools, churches, hospitals, public utility facilities, airports, sewage treatment facilities, reservoirs, and similar and compatible uses. Many of the specific uses within this designation are denoted by symbols on the *Land Use Diagram*. The maximum FAR shall not exceed 30 percent generally, although specific zoning may allow for a higher FAR. The City recognizes that it does not have the authority to regulate development by Federal, State, or other governmental agencies, but the City will work cooperatively with these agencies in an effort to ensure their development is consistent with City goals, plans, and regulations and mitigates any impacts.

Other

This designation is applied only to the Stanford Linear Accelerator Center.

TABLE II-1
RESIDENTIAL USE INTENSITY[1]

Land Use Designation	Use Intensity (units per net acre)	Floor Area Limit/Ratio[2]	Applicable Zoning Districts[3]
Very Low Density	0-3.5	2,800 sq. ft. +25% of lot area over 7,000 sq. ft.	R-E, R-E-S, R-1-S
Low Density	3.6-5.0	2,800 sq. ft. +25% of lot area over 7,000 sq. ft.	R-1-U, R-1-S
Medium Density	5.1-18.5	40-45%	R-2, R-3, R-3-A, R-3-C, R-C
High Density	18.6-40.0[4]	100%[4]	R-4, R-L-U[4]

[1]Residential uses are also allowed in the Professional and Administrative Offices, the Retail/Commercial, and the El Camino Real Professional/Retail Commercial designations, subject to a maximum intensity limit of 18.5 units per net acre.

Mixed-use (residential and commercial) is subject to the following zoning ordinance limitations:

R-C zoning district: residential intensity up to 18.5 DU/net acre and FAR of up to 45%. In a mixed use project, the maximum total FAR is 45% for residential plus 40% for commercial for a total maximum 85% FAR.

C-3 zoning district: residential intensity up to 18.5 DU/net acre and FAR of up to 100%. Any FAR used for residential use would be subtracted from that otherwise allowed for commercial use.

C-4 El Camino Real zoning district: residential intensity up to 18.5 DU/net acre and FAR of up to 75%. Any FAR used for residential use would be subtracted from that otherwise allowed for commercial use.

[2]The BMR density bonus can result in the density, number of units, and floor area being increased up to a maximum of 15%. The floor area limit for lots under 5,000 square feet shall be determined by use permit.

[3]Residential uses are also allowed in the P-D zoning district. This district allows residential and other uses at a density or intensity that does not exceed the density or intensity allowed by the pre-existing zoning for the P-D-zoned property.

[4]The R-L-U zoning district allows senior rental housing with residential intensity of 54-97 DU/net acre and FAR of up to 150%. Any new R-L-U project will require a general plan amendment and rezoning.

TABLE II-2

COMMERCIAL USE INTENSITY

Land Use Designation/Type	Use Intensity (Floor Area Ratio)	Applicable Zoning Districts[1]
Retail/Commercial		
Neighborhood Shopping	40%	C-2
Neighborhood Shopping, Restrictive	40%	C-2-A
Neighborhood Commercial, Restrictive	40% without use permit or up to 50% with use permit	C-2-B
Central Commercial	100% retail without use permit, and up to 100% more with use permit, but office use may not exceed 50%	C-3
General Commercial	40%	C-4 non-El Camino Real
Professional and Administrative Offices		
Administrative and Professional Restrictive	30%	C-1
Administrative, Professional	40%	C-1-A, R-C, R-3-C
Administrative, Professional, and Research Restrictive	25%	C-1-C
El Camino Real Professional/Retail Commercial		
General Commercial	55% without use permit or up to 75% with use permit; provided office use may not exceed 40% and up to 100% for auto storage for auto retailers with a use permit	C-4 El Camino Real, P-D
Administrative and Professional	40%	C-1-A, C-4 El Camino Real, P-D

[1] Commercial uses are also allowed in the P-D zoning district. This district allows commercial and other uses at a density or intensity that does not exceed the density or intensity allowed by the pre-existing zoning for the P-D-zoned property.

TABLE II-3

INDUSTRIAL USE INTENSITY

Land Use Designation/Type	Use Intensity (Floor Area Ratio)	Applicable Zoning Districts
Limited Industrial		
Industrial	55%	M-2
Offices	45%	M-2

PART I

SECTION I: LAND USE

GOALS AND POLICIES

RESIDENTIAL

Goal I-A **To maintain and improve the character and stability of Menlo Park's existing residential neighborhoods while providing for the development of a variety of housing types. The preservation of open space shall be encouraged.**

Policies

I-A-1 New construction in existing neighborhoods shall be designed to emphasize the preservation and improvement of the stability and character of the individual neighborhood.

I-A-2 New residential developments shall be designed to be compatible with Menlo Park's residential character.

I-A-3 Quality design and usable open space shall be encouraged in the design of all new residential developments.

I-A-4 Residential uses may be combined with commercial uses in a mixed use project, if the project is designed to avoid conflicts between the uses, such as traffic, parking, noise, dust, and odors.

I-A-5 Development of housing, including housing for smaller households, is encouraged in commercially-zoned areas in and near Downtown. (Downtown is defined as the area bounded by Alma Street, Ravenswood Avenue/Menlo Avenue, University Drive and Oak Grove Avenue.) Provisions for adequate off-street parking must be assured.

I-A-6 Development of residential uses on the north side of Oak Grove Avenue and on the south side of Menlo Avenue adjacent to the Downtown commercial area is encouraged.

I-A-7 Development of secondary residential units on existing developed residential lots shall be encouraged consistent with adopted City standards.

I-A-8 Residential developments of ten or more units shall comply with the requirements of the City's Below-Market Rate (BMR) Housing Program.

I-A-9 Residential developments subject to requirements of the BMR Housing Program may be permitted to increase the total density, number of units and floor area of residential projects up to a maximum of 15 percent above that otherwise permitted by the applicable zoning. The increases in the total density, number of units and floor area shall be in compliance with the BMR Housing Program.

I-A-10 All utilities installed in conjunction with new residential development shall be placed underground.

I-A-11 No housing may be removed by new development without prior City approval, and replacement housing will be required for any housing removed.

COMMERCIAL

Goal I-B To strengthen Downtown as a vital and competitive shopping area while encouraging the preservation and enhancement of Downtown's historic atmosphere and character.

Policies

I-B-1 The Downtown should include a complementary mix of stores and services in a quality design, adding natural amenities into the development pattern.

I-B-2 Parking which is sufficient to serve the retail needs of the Downtown area and which is attractively designed to encourage retail patronage shall be provided.

I-B-3 New development shall not reduce the number of existing parking spaces in the Assessment District, on P-zoned parcels, or on private property where parking is provided in lieu of Assessment District participation.

I-B-4 Uses and activities shall be encouraged which will strengthen and complement the relationship between the Transportation Center and the Downtown area and nearby El Camino Real corridor.

I-B-5 New development with offices as the sole use that is located outside of the boundary of the Downtown area along the south side of Menlo Avenue and the north side of Oak Grove Avenue shall not create a traffic impact that would exceed that of a housing project on the same site.

Goal I-C To encourage creativity in development of the El Camino Real Corridor.

Policies

I-C-1 New and upgraded retail development shall be encouraged along El Camino Real near Downtown, especially stores that will complement the retailing mix of Downtown. Adequate parking must be provided and the density, location, and site design must not aggravate traffic at congested intersections. The livability of adjacent residential areas east and west of El Camino Real and north and south of Downtown must be protected.

I-C-2 Small-scale offices shall be allowed along most of El Camino Real in a balanced pattern with residential or retail development.

Goal I-D To encourage the rehabilitation and continued use of viable and appropriate neighborhood commercial uses or collections of stores servicing surrounding residential neighborhoods.

Policies

I-D-1 Special attention should be given to strengthen the neighborhood shopping centers throughout the city. This can be done by continuing the existing policy of removing marginal uses or vacant commercially-zoned properties from the present commercial zoning and placing them in a residential land use category or rezoning to the P District.

I-D-2 Expansion of operations in neighborhood shopping centers shall be prohibited if they disrupt adjacent residential areas. Subject to obtaining a use permit or rezoning to a P district, development of additional parking may be permitted to alleviate parking problems on residential streets caused by existing businesses which lack the required number of parking spaces.

Goal I-E **To promote the development and retention of commercial uses which provide significant revenue to the City and/or goods or services needed by the community and which have low environmental and traffic impacts.**

Policies

I-E-1 All proposed commercial development shall be evaluated for its fiscal impact on the City as well as its potential to provide goods or services needed by the community.

I-E-2 Hotel uses may be considered at suitable locations within the commercial and industrial zoning districts of the city.

I-E-3 Retention and expansion of auto dealerships in the city shall be encouraged. Development of new auto dealerships or combined dealerships in an auto center shall be encouraged at suitable locations in the city.

I-E-4 Any new or expanded office use must include provisions for adequate off-street parking, mitigating traffic impacts, and developing effective alternatives to auto commuting, must adhere to acceptable architectural standards, and must protect adjacent residential uses from adverse impacts.

I-E-5 The City shall consider attaching performance standards to projects requiring conditional use permits.

I-E-6 Public-private cooperation in the provision of job training, child care, housing and transportation programs for Menlo Park residents shall be supported.

INDUSTRIAL

Goal I-F **To promote the retention, development, and expansion of industrial uses which provide significant revenue to the City, are well designed, and have low environmental and traffic impacts.**

Policies

I-F-1 Industrial development shall be allowed only in already established industrial areas and shall not encroach upon Bay wetlands.

I-F-2 Establishment and expansion of industrial uses that generate sales and use tax revenues to the City shall be encouraged.

I-F-3 Modifications in industrial operations required to keep firms competitive should be accommodated, so long as any negative impacts on the environment and adjacent areas are satisfactorily mitigated.

I-F-4 The City shall consider attaching performance standards to projects requiring conditional use permits.

I-F-5 Convenience stores and personal service uses may be permitted in industrial areas to minimize traffic impacts.

I-F-6 Public-private cooperation in the provision of job training, child care, housing and transportation programs for Menlo Park residents shall be supported.

I-F-7 All new industrial development shall be evaluated for its fiscal impact on the City.

OPEN SPACE

Goal I-G To promote the preservation of open-space lands for recreation, protection of natural resources, the production of managed resources, protection of health and safety, and/or the enhancement of scenic qualities.

Policies

I-G-1 The City shall develop and maintain a parks and recreation system that provides areas and facilities conveniently located and properly designed to serve the recreation needs of all Menlo Park residents.

I-G-2 The community should contain an ample supply of specialized open space in the form of squares, greens, and parks whose frequent use is encouraged through placement and design.

I-G-3 Public spaces should be designed to encourage the attention and presence of people at all hours of the day and appropriate hours of the night.

I-G-4 Dedication of land, or payment of fees in lieu thereof, for park and recreation purposes shall be required of all new residential development.

I-G-5 The City shall encourage the retention of at least 10 acres of open space on the St. Patrick's property through consideration of various alternatives to future development including rezoning consistent with existing uses, cluster development, acquisition of a permanent open space easement, and/or transfer of development rights.

I-G-6 The City shall encourage the retention of open space on large tracts of land through consideration of various alternatives to future development including rezoning consistent with existing uses, cluster development, acquisition of a permanent open space easement, and/or transfer of development rights.

I-G-7 Public access to the Bay for the scenic enjoyment of the open water, sloughs, and marshes shall be protected.

I-G-8 The Bay, its shoreline, San Francisquito Creek, and other wildlife habitat and ecologically fragile areas shall be maintained and preserved to the maximum extent possible. The City shall work in cooperation with other jurisdictions to implement this policy.

I-G-9 The salt ponds shall be allowed to continue in mineral production. In the event these uses are discontinued, these areas should be used for recreation and/or conservation uses.

I-G-10 Extensive landscaping should be included in public and private development, including greater landscaping in large parking areas. Where appropriate, the City shall encourage placement of a portion of the required parking in landscape reserve until such time as the parking is needed. Plant material selection and landscape and irrigation design shall adhere to the City's Water Efficient Landscaping Ordinance.

I-G-11 Well-designed pedestrian facilities should be included in areas of intensive pedestrian activity.

I-G-12 The maintenance of open space on Stanford lands within Menlo Park's unincorporated sphere of influence shall be encouraged.

I-G-13 Regional and sub-regional efforts to acquire, develop, and/or maintain appropriate open space and conservation lands shall be supported.

PUBLIC AND QUASI-PUBLIC FACILITIES AND SERVICES

Goal I-H To promote the development and maintenance of adequate public and quasi-public facilities and services to meet the needs of Menlo Park's residents, businesses, workers, and visitors.

Policies

I-H-1 The community design should help conserve resources and minimize waste.

I-H-2 The use of water-conserving plumbing fixtures in all new public and private development shall be required.

I-H-3 Plant material selection and landscape and irrigation design for City parks and other public facilities and in private developments shall adhere to the City's Water Efficient Landscaping Ordinance.

I-H-4 The efforts of the Bay Area Water Users Association to secure adequate water supplies for the Peninsula shall be supported to the extent that these efforts are in conformance with other City policies.

I-H-5 New wells and reservoirs may be developed by the City to supplement existing water supplies for Menlo Park during emergency and drought periods. Other sources, such as interconnections and purchase agreements with water purveyors, shall be explored and developed.

I-H-6 The City shall work with other regional and subregional jurisdictions and agencies responsible for ground water extraction to attempt to develop a comprehensive underground water protection program which includes the monitoring of all wells in the basin to evaluate the long term effects of water extraction. In addition, the City shall consider instituting appropriate controls within Menlo Park on the installation of new wells and on the pumping from both existing and new wells so as to prevent: ground subsidence, further salinity intrusion into the shallow aquifers, particularly in the bayfront area, and contamination of the deeper aquifers that may result from changes in the ground water level.

I-H-7 The use of reclaimed water for landscaping and any other feasible uses shall be encouraged.

I-H-8 The expansion and improvement of sewage treatment facilities to meet the needs of Menlo Park and to meet regional water quality standards shall be supported to the extent that such expansion and improvement are in conformance with other City policies.

I-H-9 Urban development in areas with geological and earthquake hazards, flood hazards, and fire hazards shall be regulated in an attempt to prevent loss of life, injury, and property damage.

I-H-10 The City shall continue to participate in the National Flood Insurance Program. To this end, the City shall work to keep its regulations in full compliance with standards established by the Federal Emergency Management Agency.

I-H-11 Buildings, objects, and sites of historic and/or cultural significance should be preserved.

I-H-12 Street orientation, placement of buildings, and use of shading should contribute to the energy efficiency of the community.

ANNEXATION AND INTERGOVERNMENTAL COORDINATION

Goal I-I To promote the orderly development of Menlo Park and its surrounding area.

Policies

I-I-1 The City shall cooperate with the appropriate agencies to help assure a coordinated land use pattern in Menlo Park and the surrounding area.

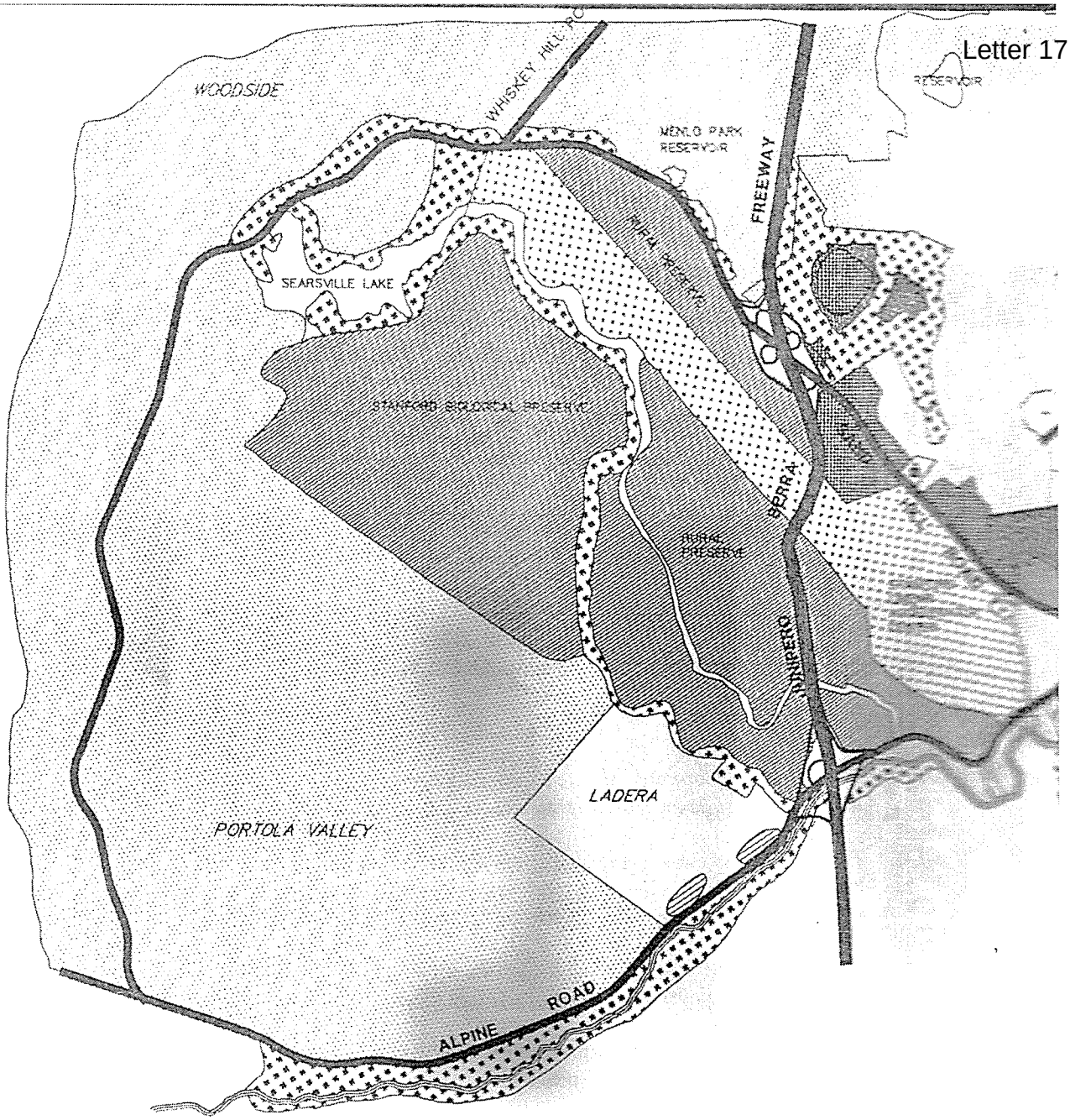
I-I-2 The regional land use planning structure should be integrated within a larger transportation network built around transit rather than freeways and the City shall influence transit development so that it coordinates with Menlo Park's land use planning structure.

I-I-3 A program should be developed in cooperation with interested neighborhood groups outlining under what conditions unincorporated lands within the City's sphere of influence may be annexed.

I-I-4 The City shall request San Mateo County to follow Menlo Park's General Plan policies and land use regulations in reviewing and approving new developments in unincorporated areas in Menlo Park's sphere of influence.

I-I-5 The City shall carefully monitor any significant development proposals which are outside of Menlo Park's jurisdiction, including any development proposals along the Sand Hill Road corridor which are within the jurisdiction of the City of Palo Alto, to evaluate their potential impacts on the City of Menlo Park. It shall be the policy of the City to oppose any such development proposal(s) unless the City Council makes findings that the benefits of such proposal(s) outweigh all of the impacts to the City of Menlo Park. The City Council shall consider holding an advisory election on any such development proposal(s).

Letter 17



MENLO PARK GENERAL PL

MENLO PARK, CALIFORNIA

LEGEND

Residential

- VERY LOW DENSITY
- HIGH DENSITY
- LOW DENSITY
- MEDIUM DENSITY

Commercial

- PROFESSIONAL & ADMINISTRATIVE OFFICES
- RETAIL/COMMERCIAL
- EL CAMINO REAL PROFESSIONAL/RETAIL COMMERCIAL

Industrial

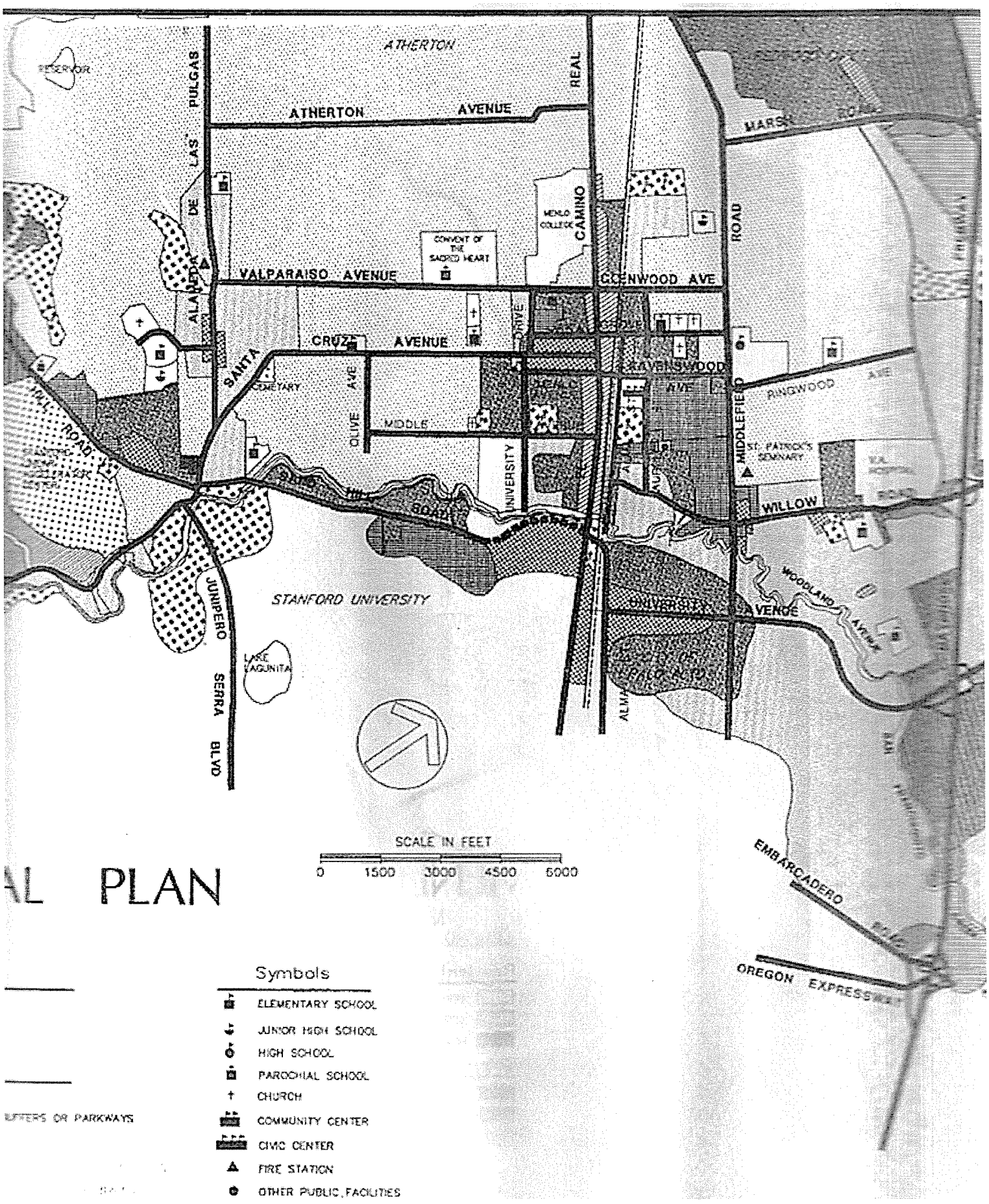
- LIMITED INDUSTRY

Non Urban

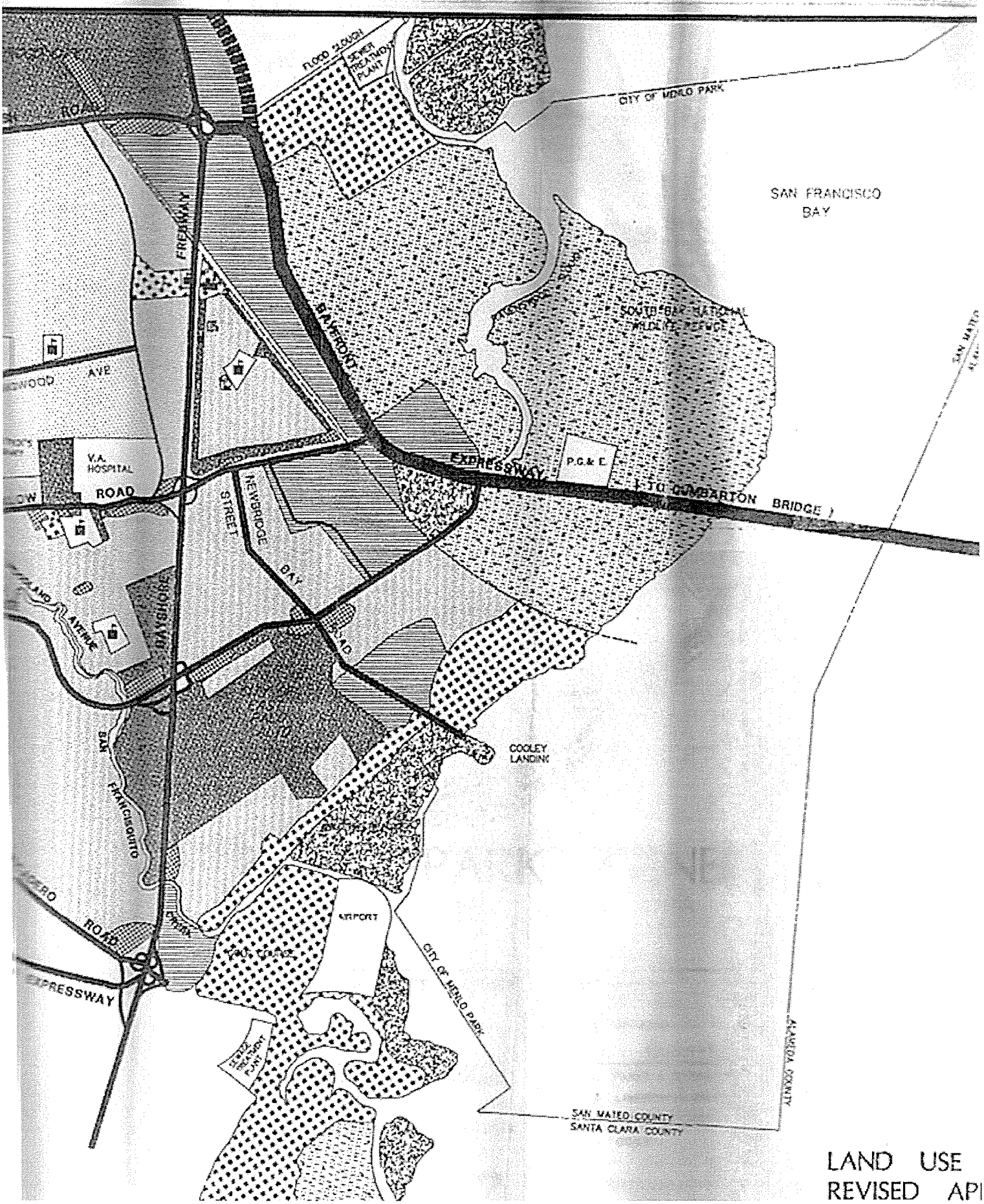
- MARSHES
- SALT PONDS
- PRESERVE

Public – Quasi-Public

- PARKS & RECREATION
- LANDSCAPED GREENWAYS, BUFFERS
- PUBLIC FACILITIES
- OTHER


ATHERTON
ATHERTON AVENUE
LAS PULGAS
DE ALAMEDA
REAL
CAMINO
MARSH ROAD
MENLO COLLEGE
CONVENT OF THE SACRED HEART
VALPARAISO AVENUE
GLENWOOD AVE
CRUZ AVENUE
SANTA
CEMETARY
OLIVE AVE
MIDDLE
DRIVE
RAVENSWOOD AVE
RINGWOOD AVE
MIDDLEFIELD ROAD
ST. PATRICK'S SEMINARY
HILL ROAD
SAND HILL ROAD
UNIVERSITY
WILLOW
WOODLAND AVENUE
STANFORD UNIVERSITY
UNIVERSITY AVENUE
JUNIPERO SERRA BLVD
LAKE LAGUNITA
ALMA
EMBARCADERO
OREGON EXPRESSWAY
SCALE IN FEET
0 1500 3000 4500 6000
AL PLAN
Symbols
ELEMENTARY SCHOOL
JUNIOR HIGH SCHOOL
HIGH SCHOOL
PAROCHIAL SCHOOL
CHURCH
COMMUNITY CENTER
CIVIC CENTER
FIRE STATION
OTHER PUBLIC FACILITIES
UFFERS OR PARKWAYS

Letter 17



LAND USE
REVISED AP

Letter 17: PAUL COLLACCHI

Response to Comment 17-1

The commentor describes his background and knowledge of Menlo Park and particularly the M-2 areas of the City. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response.

Response to Comment 17-2

The commentor describes the M-2 General Industrial zoning district as the principal means of implementing the General Plan Limited Industry land use designation. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document.

Response to Comment 17-3

The comment expresses an opinion why a longer term Development Agreement is required. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. As noted on page 2-22 of the Draft EIR in Chapter 2, Project Description, one of the project approvals for this project is a Development Agreement, which is currently being negotiated between the City and the project sponsor.

Response to Comment 17-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document.

Response to Comment 17-5

The comment addresses the fiscal merits of portions of the proposed project and does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The comment introduces information indicating that professional office uses would not be considered consistent with the City's M-2 goals and would yield little sales tax revenue. Office uses are permitted within the M-2 district so this use would not be inconsistent with the City's goals.

Response to Comment 17-6

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document.

Response to Comment 17-7

The Draft EIR for the proposed project references the currently adopted City General Plan for goals and policies that relate to land uses for the project site and vicinity. For each of the technical sections of the EIR, applicable general plan goals and policies are identified in the Regulatory Setting. Thus, the Menlo Gateway project EIR acknowledges the Menlo Park General Plan and its relevant policies and does not rely on its land use planning data or growth forecasts for assessment of the proposed project. To assess future population and employment effects of the project, regionally approved growth forecasts by ABAG are used to provide background information about the amount and the rate of future growth in the City.

Response to Comment 17-8

The Draft EIR for the proposed project does not "tier off" the General Plan EIR and does not assume that the project was included in buildout of the City's M-2 zoning district. The General Plan EIR was a programmatic EIR prepared in 1994 and evaluated the reasonably foreseeable development at that time. CEQA does not require programmatic EIRs to contemplate any and all foreseeable growth in the City or in one particular area. The proposed project involves an amendment to the General Plan requiring its own environmental review. Consequently, the analysis of the proposed project does not assume that it was included as part of the General Plan EIR baseline or analysis.

Response to Comment 17-9

The comment explains that development in Menlo Park has already exceeded the growth forecast assumed in the General Plan EIR. As noted in Response to Comment 17-8, the Menlo Gateway EIR does not rely on assumptions or analyses performed for the General Plan EIR. As a result, the information offered by the commentor has no bearing on the environmental assessment of the proposed project.

Response to Comment 17-10

The comment regarding the City's level of service policies and their application does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document.

Response to Comment 17-11

The applicable level of service standards for the intersections studied in the Draft EIR are reported in Table 3.11-2, beginning on page 3.11-12. Based on these standards, the Draft EIR identifies those

intersections that would operate at unacceptable levels of congestion without the proposed project (see Table 3.11-4 on page 3.11-20). Providing information about which intersections would be considered to operate at unacceptable levels of congestion under past City policies would perhaps offer some historical perspective about how City policies have changed but would not be relevant to defining project impacts.

Response to Comment 17-12

The comment cites the City's history of studying growth in the M-2 areas and the implications of its potential "build out." The commentor suggests that the data gathered between 1997 and 2002 relative to the M-2 is more relevant than the ABAG data relied upon in the EIR. As noted in Response to Comment 17-11, consideration of the City's M-2 zoning analysis might perhaps offer some historical perspective as to the City's analysis of the M-2 zone, but the current ABAG projections are more appropriate for the EIR's consideration of the longer-term planning horizon under CEQA. Please also see Responses to Comments 17-21, 17-26 and 17-27.

Response to Comment 17-13

The cumulative traffic analysis is based on the traffic model that is updated with current City development assumptions as well as any other relevant regional traffic assumptions. The model is continually refined and updated based on input from City staff to ensure it presents as accurate a picture as possible for doing cumulative assessments as well as other long-range planning projects. This is the appropriate and most accurate methodology for analyzing traffic impacts, pursuant to CEQA.

Response to Comment 17-14

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. CEQA cannot and does not require a lead agency to explain and/or resurrect past planning studies, nor does CEQA require a lead agency to report or disclose past political or community discussions about planning policies. With respect to the commentor's assertion about "disagreements among experts," CEQA requires that experts' differences be noted relative to opinions about the project in question, not past planning exercises, especially those that were not adopted (CEQA Guidelines section 15064 (g)(1)).

Response to Comment 17-15

Please see Response to Comment 17-8 regarding baseline assumptions for the project. Further, the EIR discloses when it uses ABAG forecasts to describe future citywide growth in population and housing. Please see Responses to Comments 17-12 and 17-14 regarding the irrelevance of past planning exercises to the environmental analysis of a current proposal under CEQA.

Response to Comment 17-16

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The comment claims that no redevelopment planning effort in the M-2 zoned areas has attempted to pursue the uses introduced by the proposed project and no planning effort in the M-2 zoned area has considered intensification of professional offices to increase revenues from the M-2 zone. Whether these observations by the commentor are accurate or not is irrelevant. A project sponsor has proposed a hotel office complex and the City is undertaking a development and environmental review to evaluate the merits of this particular project, along with a financial impact study. Further, the project objectives on pages 2-4 and 2-5 of the Draft EIR do not indicate that the project sponsor is seeking to intensify professional offices at the project site in order to increase revenues from the M-2 zone. Rather, the project objective is to, "generate new revenue for the City and other public entities, over and above existing or allowable development." This objective does not intimate that increased revenues would be attributable solely to intensified office space.

Response to Comment 17-17

The project EIR would use the updated General Plan for much of its cumulative assessment *if* an updated General Plan were available. However, since the City has not updated its General Plan, it is irrelevant to explain how the cumulative analysis could be performed. The cumulative assessment for the Menlo Gateway project has been completed in accordance with the State CEQA Guidelines and professional practice.

Response to Comment 17-18

The City has not yet initiated the process to update its General Plan. The commentor expresses the opinion that the project has been advanced, prior to the General Plan update, in order to provide a more favorable cumulative land use scenario for this project. It is not the role of the EIR preparers to speculate on the motives or timing decisions by the project sponsor. A project application has been submitted, and the City has determined that it warrants CEQA review at this time and the City has a responsibility to process development applications as they are received. The cumulative analysis for the EIR has been based on the most current information available, considering other development projects (e.g., see Table 3.11-3) and growth projections (e.g., ABAG growth projections). Please see also Response to Comment 17-22 that addresses the status of the City's General Plan update.

Response to Comment 17-19

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. When the City updates its General Plan, new land use forecasts would be made which could include land designated for commercial uses in the General Industrial area.

Response to Comment 17-20

For the cumulative traffic analysis, which also informs the air quality and noise cumulative analyses, a growth factor of one percent per year has been assumed. For the cumulative public service, utility, and population and housing analyses, ABAG growth forecasts have been used. Some of the cumulative traffic/travel demand and some of the cumulative employment from these assumptions could be attributable to future buildout of the General Industrial area.

Response to Comment 17-21

The Draft EIR relies on the data in *Projections 2007* prepared by ABAG for the population-based cumulative analysis. The ABAG projections are the most current, regionally reviewed and accepted data for projecting growth in the various jurisdictions within the Bay Area. The ABAG projections are based, in part, on economic trends, General Plan policies from the various jurisdictions, and land use development patterns provided through discussions with planning staff from the various jurisdictions. These projections are updated every two years. The cumulative context for the resource based issue areas (e.g., biological resources, hydrology and water quality, cultural resources) is derived from the applicable resource area (i.e., a specific drainage shed, City boundaries, etc.). The traffic model uses regional land use data provided from the City/County Association of Governments of San Mateo County (C/CAG) for the cumulative analysis which is based on the ABAG projections. An EIR relies on the most current, widely accepted data for future growth projections knowing that these projections are not static and do fluctuate.

In light of the above, there are reasonable bases for examining the cumulative effects of foreseeable development with the Menlo Gateway project, and the concern expressed by the commentor that there would be little foreseeable cumulative development included in the assessment is unfounded.

Response to Comment 17-22

The project is currently in the environmental review process and is progressing according to all statutory timelines. The project sponsor first submitted a development application to the City in 2004. When an application is submitted City staff is obligated to process the application and prepare the necessary studies and environmental analysis. Since the initial application was submitted, the project sponsor made some revisions and refinements to the project based on input from various City departments, as well as input from public workshops, and submitted a revised project application. The City has not yet determined when the General Plan update process is slated to commence, or if an M-2 plan will even be undertaken. It is anticipated that this process could take two years or more to prepare an updated General Plan and associated EIR. There is no requirement that a project be delayed in order to be evaluated under the City's new general plan.

Response to Comment 17-23

In accordance with CEQA, the City is required to assure the environmental document was objectively prepared and accurately identifies potential impacts of the project and includes all feasible mitigation measures, as the EIR does.

Response to Comment 17-24

The Draft EIR traffic analysis was based on known projects for the near-term analysis, and a growth factor for the longer term cumulative analysis. This is consistent with City policy for evaluation of transportation impacts and is the approach used in EIRs prepared for the City.

Response to Comment 17-25

The cumulative analysis for an increase in water demand is based on the ABAG growth projections as noted on page 3.12-24 of the Draft EIR.

Response to Comment 17-26

The information used to assess the population-related cumulative impacts of the project (i.e., population and housing, public services, and utilities) is based on the most current information available (i.e., ABAG *Projections 2007*), traffic counts, and the relevant cumulative context for the issue being analyzed. The information used to assess the traffic-related cumulative impacts (i.e., traffic, air quality, and noise) is based on approved projects and a growth factor for development that could occur later in the planning horizon. Both approaches are appropriate and commonly used in performing cumulative analyses for EIRs. Had the EIR based all cumulative impacts on the methodology applied for traffic-related impacts, the annual compound growth factor used to derive future trips would have yielded a year 2025 population forecast greater than projected by ABAG. As a result, the effects of the proposed Menlo Gateway project in the cumulative context would have been less than reported now in the EIR.

Response to Comment 17-27

As explained in previous responses, the cumulative analysis for population-based issues relies on the ABAG *Projections 2007* forecasts. The ABAG data incorporates information from the various jurisdictions that are included within the nine-County Bay Area and economic trends. Information on the methodologies used by ABAG in making its demographic forecasts is available on its website, see www.abag.ca.gov/planning/research. Notably, in the near term, the ABAG growth forecasts are very much shaped by local General Plans, specific plans, and information collected from each jurisdiction, such as land availability, known projects, and redevelopment activities. On the other hand, in the later years, after 2020, the projections are influenced by policies and regional, state, and national economic conditions. The long-term land use forecast represents an assessment of what will be the built environment by the end of the forecast period. This assessment is determined not only from the economic and demographic models and local land use plans, but also from on-going discussions with

local governments, regarding the feasibility of development, mostly due to the local political and fiscal environment. The forecast also reflects a larger global, national, state or regional context, such as climate change, high energy costs, and the aging of the population.

ABAG is the official comprehensive planning agency for the San Francisco Bay region and is charged with researching regional planning issues that challenge the 101 cities and nine counties that comprise the Bay Area. The primary reason that ABAG produces such forecasts is so that other regional agencies, including the Metropolitan Transportation Commission and the Bay Area Air Quality Management District, can use the forecast in their modeling and planning work. The use of ABAG's forecasts as a basis for the cumulative assessment, thus, does not reflect some ad hoc collection of assumptions that have been invoked to influence the cumulative analysis for the EIR, but, rather, an accepted and reasonable depiction of future conditions.

Response to Comment 17-28

Please see Responses to Comment 17-27, above, regarding the use of ABAG data and the methodology followed by ABAG in making its forecasts.

Response to Comment 17-29

The Population and Housing section (Section 3.9) and the Traffic and Circulation section (Section 3.11) of the Draft EIR rely on the ABAG data provided in *Projections 2007*. To determine what the cumulative increase in traffic would be attributed to the project, the traffic analysis relies on traffic models. The traffic models are periodically updated with development projections provided by ABAG and C/CAG. Since ABAG is the regional entity that develops these growth projections, it is a primary source of population, housing, and employment data used by jurisdictions to prepare environmental documents within the Bay Area.

Please see also Responses to Comments 17-26 and 17-27.

Response to Comment 17-30

The comment is referencing footnote 1 included on page 3.9-1 of the Draft EIR and is quoted correctly. This footnote clarifies the data used by ABAG to prepare their growth projections.

Response to Comment 17-31

The analysis contained in Section 3.9, Population and Housing, references growth projections provided by ABAG. As noted earlier, ABAG is the official comprehensive planning agency for the San Francisco Bay region and is charged with researching regional planning issues that challenge the 101 cities and nine counties that comprise the Bay Area.

Typically, econometric and demographic forecasting tools use regional control totals for population, housing, and employment and then go through an allocation process to assign these parameters to the

census blocks. ABAG's methodology considers land uses as a basis for allocating growth at the subcounty level, but not as the basis for the growth.

Response to Comment 17-32

Please see Response to Comment 17-31, above.

Response to Comment 17-33

Please see Response to Comment 17-31, above.

Response to Comment 17-34

Please see Responses to Comments 17-27 and 17-31.

Response to Comment 17-35

Please see Response to Comment 17-29.

Response to Comment 17-36

Please see Response to Comment 17-27.

Response to Comment 17-37

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document.

Response to Comment 17-38

A Development Agreement (DA) is a legal contract between the project sponsor and the City that clarifies each party's responsibilities associated with implementation of a project. It is common for the timeline of a DA to exceed the estimated buildout period for a project. The DA is based on the specifics of the project and essentially details the implementation, timing, payment of fees, etc. for the project. The length of the timeline for the DA does not necessarily change the buildout schedule for the project. For example, payment of some fees, provision of off-site improvements, or mitigation/improvements tied to future impact triggers may be appropriate after the project is builtout. The DA is reflective of the project and does not redefine the project or impact the validity of the cumulative impacts analysis included in the Draft EIR.

Response to Comment 17-39

The comment refers to the "split-option" scenario that was analyzed in the water supply analysis (see Section 3.12, Utilities and Service Systems). The "split-option" water supply scenario was analyzed to provide the decision-makers and the public with more information about how much water is consumed

by research and development (R&D) uses and what proportion of the project's floor area could be developed with R&D before it triggered a significant impact. Wet lab R&D uses can consume a great deal of water, thus it provided the greatest water demand usage. Since release of the Draft EIR the project sponsor has further refined the baseline water assumptions which necessitated updating the text included in the Draft EIR that addresses water supply, please see Chapter 2, Revisions to the Draft EIR, for more specific detail. Based on this analysis, the City has information to condition the project so that water demand impacts identified for the proposed project could be avoided.

Response to Comment 17-40

As discussed above in Response to Comment 17-38, the Development Agreement is a legal document that spells out how a project will be implemented, timing of specific improvements, and payment of specific fees, as well as the development regulations that will be applied to the project. The Development Agreement does not redefine the estimated construction schedule of the project or any other parameters of the project. The specifics of a Development Agreement are not evaluated in an EIR because it is strictly an implementation tool and would not result in any physical changes to the existing environment.

Response to Comment 17-41

The analysis of the proposed GPA/ZOA only applies to those parcels included within the project boundaries seeking a GPA and rezone. If approved, the new M-3 zoning district would only apply to the parcels within the project boundary and not other parcels within the larger M-2 zoning district. The reference in the EIR to a program analysis applies to the project site, and this analysis was included because it is possible that the City could elect to approve the land use designation and rezoning for the site, but not the specific development application submitted by the project sponsor. If the project were rejected, but the land use changes were desired, then the analysis in the EIR would be sufficient to environmentally clear the GPA/ZOA. Any future development applications for parcels outside of the project boundary seeking a GPA and rezone would be evaluated on their own merits, separate from this project. See Response to Comments 8-4 and 8-5.

Response to Comment 17-42

The aggregation of parcels is speculative when parcels are owned by unrelated entities, which is not the case for the proposed project as the project area land is owned by Bohannon-related entities. Please see Response to Comment 17-41.

Response to Comment 17-43

The comment expresses an opinion about the study area for the GPA/ZOA, but does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant a response in this document. However, please refer to Responses to Comments 8-4, 8-5, and 8-6 for a discussion as to the potential for rezoning of the "entire M-2 zone."

Response to Comment 17-44

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, please see Response to Comment 17-41 for additional information.

Response to Comment 17-45

The standards of significance or thresholds of significance used in this EIR were obtained, in part, from Appendix G of the State CEQA Guidelines, as well as from information provided by the City of Menlo Park. In February 1984, the City adopted Environmental Review and Implementing Procedures (Resolution No. 3601), which essentially duplicated information from the State CEQA Guidelines. Since 1984, the CEQA Guidelines have been updated numerous times and the City generally now relies on the Guidelines for procedures and standards. The only changes to the CEQA thresholds are associated with standards used to evaluate traffic impacts. In 2006, the City adopted new standards or thresholds to analyze traffic impacts. The CEQA Guidelines encourage lead agencies to adopt their own standards of significance, but it is not a requirement. In the absence of formal adoption of its own standards, it is typical practice to defer to the standards presented in Appendix G of the CEQA Guidelines. Page 3.0-1 of the Draft EIR explicitly clarifies that "… the City of Menlo Park uses the significance criteria designated by CEQA and the State CEQA Guidelines (see Appendix G of the Guidelines), which are used to evaluate project impacts throughout this document."

Response to Comment 17-46

The comment does not include specific comments or concerns that address the adequacy of the EIR or the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The phrase "serious public controversy" appears in two instances within the State CEQA Guidelines:

- Public Resources Code section 21082.2(a): existence of public controversy over environmental effects of project shall not require preparation of an EIR if there is no substantial evidence before the agency that the project may have a significant effect on the environment.
- Guidelines section 15064(g): in marginal cases where it is not clear whether there is substantial evidence that a project will have a significant effect, lead agency shall be guided by following factors:
  - Presence of serious public controversy
  - Presence of disagreement between experts

The first instance allows consideration of serious public controversy to make a significance determination, as the commentor notes. The second instance is not applicable, because the City has prepared an EIR.

Response to Comment 17-47

The determination of significance is shaped by the State CEQA Guidelines, legal precedents, professional judgment, and local practice. The ultimate determination regarding a significant impact lies with the lead agency, the Menlo Park City Council. The EIR authors/preparers reach conclusions in the Draft EIR that are subject to public review and comment.

Response to Comment 17-48

Please see Response to Comment 17-45, above, regarding the applicable standards of significance.

Response to Comment 17-49

As indicated in the Shadow Study prepared by the project sponsor and independently reviewed by the EIR preparers (see Appendix F of this Final EIR), the project would not result in shadows that would adversely affect any sensitive receptors (i.e., school play areas, residences, parks). Therefore, as indicated in the Draft EIR, shadows would not be a factor for this project. Therefore, the Draft EIR's conclusion, as to less-than-significant aesthetic impacts relative to shadows, is accurate and supported by substantial evidence. Please see Response to Comment 6-2.

Response to Comment 17-50

As shown in the Shadow Study, one building north of the Independence site would be affected by shadows during a short period during the winter months when the angle of the sun is low in the sky. The presence of shadows during this short time period would not preclude adjacent buildings from using solar panels. Please see Response to Comment 6-2.

Response to Comment 17-51

Please see Response to Comment 6-2 for a discussion of shadows associated with the proposed M-3 buildings, as well as Appendix F in this Final EIR.

Response to Comment 17-52

The buildings located on Constitution Drive and Independence Drive, between the two parcels that comprise the project site, currently have views of the freeway to the south and Bedwell Bayfront Park and the bay to the north. Construction of the project would block these existing views. The change in visual quality of the site is addressed under Impact AE-1 in Section 3.1, Aesthetics. As discussed on pages 3.1-20 and 3.1-21 of the Draft EIR, the project would change the existing visual character of the area, but the change would not degrade the visual unity of the older, developed business park adjacent to the project site. The new buildings would be a contrast to the existing developed environment, but they would not degrade the visual character which is of an older, developed business park. The project would also be required to go through the City's architectural control process and landscaping standards review to determine if the project is visually compatible with the surrounding area and with the City's

vision for this area. Notably, alteration of views under CEQA is typically based on obstruction or blockage of public views, such as those available from public trails, roads, scenic vistas, and recreational areas. Thus, substantial loss of views for private entities, such as the commercial/industrial businesses, is worth noting but is not considered a significant impact under CEQA.

Response to Comment 17-53

As noted in Response to Comment 17-45, the EIR uses the State CEQA Guidelines, Appendix G, as the basis for making significance determinations. The thresholds articulated in Appendix G are presented on page 3.1-13 and are preceded by a methodological approach that seeks to clarify how the analysis is conducted. In addition to the analysis found in Section 3.1, Aesthetics, of the Draft EIR, the Initial Study is attached as Appendix B to the Draft EIR. The Initial Study addresses other dimensions of aesthetics/visual quality, including effects on scenic vistas and substantial damage to scenic resources.

Response to Comment 17-54

As to the commentor's suggestion that the EIR should consider how view impacts are partially or fully mitigated by project alternatives, such consideration is unnecessary under CEQA because the EIR determined no significant aesthetic impacts; therefore, mitigation is unnecessary and thus not relevant to the alternatives analysis. Please see Response to Comment 17-52 regarding views.

The potential effect of approving a GPA/ZOA in other areas of the city zoned M-2 is speculative and is not the project being evaluated in this EIR. If the City decided to change areas currently zoned M-2 to M-3 that would be the subject of a separate environmental review process.

Response to Comment 17-55

The EIR analysis assumes the project sponsor and/or developer would comply with applicable state or local laws or other City requirements, as indicated on page 3.0-2 of the Draft EIR. The EIR impact analysis identifies laws relevant to a specific issue being analyzed but does not re-impose compliance with a legal requirement as mitigation. The rationale is that project sponsors, applicants, developers, etc. must comply with applicable regulations - there is no discretion, and there are clear procedures and standards that must be followed in complying with the regulations. Since compliance with these regulations is an obligation of the project sponsor, they are not regarded as mitigation measures.

For example, City review of the SMCWPP checklist, site plans, and erosion and sediment control plans assure compliance with the NPDES Permits, site drainage requirements, and floodplain development requirements. Specific legal requirements are noted throughout the EIR analysis, including page 3.5-18, following the bullet list, it is noted that a SWPPP and Grading and Drainage Plan are required during the permit review process. On page 3.5-19, first full paragraph, the first sentence also specifies that the City requires preparation of a SWPPP and Grading as Drainage plan. On page 3.5-19, fourth full paragraph, first sentence it has been noted that the SMCWPPP checklist

would be required to show compliance with the NPDES Permit requirements. On page 3.5-21, the paragraph following the bullet list notes that site designs and plans are reviewed by the City engineering staff to assure appropriateness and adequate design regarding NPDES permit requirements, as well as other regulatory requirements, such as floodplain development requirements, prior to issuance of a permit. On page 3.5-26, after the impact statement, the second paragraph, second sentence and the fourth paragraph, first sentence state the City requirements for no-net increase in runoff. Therefore, there is adequate assurance of compliance with regulatory requirements in the Draft EIR.

Based on recently adopted regulatory requirements, this section has been updated with the new Regional Stormwater NPDES Permit requirements (see Chapter 2, Revisions to the Draft EIR). The new Regional Permit includes additional requirements that have been incorporated into the impact discussion as well. As noted in the revised impact discussion, the Regional Stormwater NPDES Permit includes requirements for the permittees, including the City of Menlo Park, to inspect and enforce compliance with the construction site SWPPP, post-construction BMPs, and industrial facilities controls, where applicable.

Response to Comment 17-56

There are instances where the regulatory framework and compliance steps are not as well evolved as they are for water quality and geoseismic hazards protection. For example, there are air quality standards and noise standards, but the size of a project, its location, and other site-specific considerations may result in significant effects despite implementation of best management practices to reduce these effects. The impacts of a project are evaluated based on numerous factors and, in most instances, the existing regulatory environment would address the impact. However, depending upon the various site-specific factors, there are instances when additional mitigation may be required and would be identified and developed through the site design process governed under the NPDES permit. There is not a CEQA requirement that the Draft EIR provide an example of those instances. An EIR is required to evaluate the impacts unique to that specific project. Moreover, all mitigation measures, whether associated with a regulatory scheme or specifically designed, will become binding conditions of approval, subject to approval by the City of Menlo Park. All mitigation measures related to hydrology impacts are clearly defined, measurable, and tied to specific timing for compliance, which constitute performance standards that will ensure any resulting impact is less than significant.

Response to Comment 17-57

CEQA requires an EIR to describe feasible mitigation measures, and the definition of “feasible” is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. The City can impose fees on a project to recover the costs associated with implementing mitigation.

Response to Comment 17-58

As indicated in the Draft EIR on page 3.5-19, second full paragraph, the first sentence identifies that the Menlo Gateway project would change land uses from light industrial to more commercial activities. The Hydrology Report (see Appendix C of the Final EIR) states that the project site currently consists of professional offices and light industrial facilities. Table 3.5-1 on page 3.5-20 shows the potential pollutant concentrations in stormwater runoff, without BMPs, based on best available information, from both industrial and commercial land uses. Based on Table 3.5-1, concentrations by land use, on page 3.5-19 third full paragraph, the last sentence notes that concentrations in runoff would be generally similar to existing conditions or less. This table shows potential pollutant concentrations without incorporation of BMPs. Specific design details, such as exact location, size, type, and function of BMPs are not available for the GPA/ZOA. There is no final or preliminary post-construction water quality management plan on which to base an analysis. Even so, pollutant concentrations in stormwater runoff would be similar for existing and post-project conditions without BMPs. Also, as noted in Response to Comment 17-55, the final site design would be reviewed by the City to ensure compliance with NPDES permit requirements, including implementation of stormwater quality BMPs. Implementation of stormwater quality BMPs to treat the design storm runoff from the entire project site, as specified in the NPDES permit, and incorporated in the design as noted in the Final Hydrology Report, would reduce the concentrations of pollutants in stormwater runoff compared to existing conditions. To address the comment, the Draft EIR text has been amended to explicitly state similarities are only for conditions without BMPs and to include information from the Final Hydrology Report. Please see Chapter 2, Revisions to the Draft EIR, for the revised language, as well as Response to Comment 17-61 for additional information.

Response to Comment 17-59

Please see Response to Comment 17-58. Moreover, all mitigation measures, whether associated with a regulatory scheme or specifically designed, will become conditions of approval, subject to approval by the City of Menlo Park. All mitigation measures related to water quality, whether SWPPP, BMPs, C.3 requirements, etc., are clearly defined, measurable, and tied to specific timing for compliance, which constitute performance standards that will ensure any resulting impact is less than significant in full conformity with CEQA. Therefore, since the project itself is required to mitigate new source pollutant discharge to that of existing conditions, no alternative would technically "generate fewer total pollutants." Thus, such analysis is not required in an EIR pursuant to CEQA.

Response to Comment 17-60

As noted on page 3.5-7 of the Draft EIR, pollutants in stormwater runoff are affected by the type of land use, the amount of impervious surfaces where pollutants can build up and wash off, surface runoff characteristics, and the amount, timing, and frequency of rainfall. Studies identifying pollutants in stormwater runoff are based on aggregated land uses, e.g., residential, commercial, mixed-use residential, and others; runoff concentrations from specific land use components are not identified and any assessment of such would be speculative. The aggregated land uses where pollutants in stormwater

runoff have been measured include all the relevant components such as driveways, rooftops, parking lots, landscaped areas, and others. While changes in automobile counts or development intensity may affect pollutants in stormwater runoff, there are no relevant studies on the effect of these conditions (e.g., a high-rise commercial building compared to a commercial building with the same footprint, but a lower profile). Furthermore because, as previously noted on page 3.5-7, rainfall patterns affect the concentrations of pollutants in stormwater runoff, regional variations on pollutants in stormwater runoff for the same land use and impervious surface area will occur because of climatic differences and pollutant transport study data are not readily transferred from one location to another. Consequently, potential effects on stormwater pollutants are addressed qualitatively in this analysis. Moreover, all mitigation measures, whether associated with a regulatory scheme or specifically designed, will become conditions of approval, subject to approval by the City of Menlo Park. All mitigation measures related to water quality, whether SWPPP, BMPs, C.3 requirements, etc., are clearly defined, measurable, and tied to specific timing for compliance, which constitute performance standards that will ensure any resulting impact is less than significant in full conformity with CEQA.

However, it is agreed that an introductory paragraph describing pollutant sources in stormwater runoff following construction should be provided. Please see the text changes proposed on page 3.5-19 in Chapter 2, Revisions to the Draft EIR.

Response to Comment 17-61

As noted above in Response to Comment 17-60, there is no separate category for "office" or "R&D" land use in reported monitoring studies in order to identify potential pollutants in stormwater runoff from these specific land use categories; the most similar land use category with stormwater pollution data is 'commercial' or 'industrial'. Regardless, it is appropriate to use an industrial land use category for existing conditions; the existing condition was assumed to be industrial because it is currently office/R&D and certain types of R&D are classified as industrial land uses, and the Preliminary Hydrology Study identified the existing land use as office and light industrial. Additionally, historically, the site has been industrial land uses and the current zoning is industrial. Using a commercial classification for both existing and proposed conditions would not substantially change the impacts analysis; impacts would remain less than significant because the impact is based on the difference between existing and proposed conditions. Furthermore, as noted on page 3.5-19 of the Draft EIR, third full paragraph, the last sentence acknowledges that pollutants in stormwater runoff could be similar to existing conditions without implementation of BMPs. However, as noted in Response to Comment 17-58, water quality BMPs would be required under existing regulatory requirements and are included in the site design (refer to Final Hydrology Report, Appendix C of this Final EIR). These BMPs would reduce the concentration of pollutants in stormwater runoff from the project.

Structured parking would not substantially affect pollutants in stormwater runoff. All stormwater runoff from the garage structures will be treated on-site. Additionally, as identified in the revised Impact HY-7, the NPDES Permit also includes requirements for treating stormwater runoff. Furthermore, as

required by Municipal Code Chapter 7.42, no non-stormwater discharges are allowed to the storm drain system, except as allowed under an NPDES permit.

In addition, Municipal Code Section 7.42.120 (Reduction of pollutants in storm water), as part of Municipal Code Chapter 7.42 identified on page 3.5-24, requires that any person engaged in activities which will or may result in pollutants entering the city storm sewer system shall undertake all practicable measures to reduce such pollutants. Examples of such activities include ownership and use of facilities which may be a source of pollutants such as parking lots, gasoline stations, industrial facilities, commercial facilities (restaurants), store fronting city streets, etc. The minimal requirements for Parking Lots and Similar Structures require that persons owning or operating a parking lot, gas station pavement or similar structure shall clean those structures as frequently and thoroughly as practicable in a manner that does not result in discharge of pollutants to the city storm sewer system.

Response to Comment 17-62

To address the concern raised in the comment, the text on page 3.5-25 of the Draft EIR has been revised. Please see Chapter 2, Revisions to the Draft EIR, for this new information. Note that on page 3.5-25, of the Draft EIR the first full paragraph, fourth sentence, already states that sufficient detention is required such that post-project runoff matches that of existing conditions. Additionally, the Final Hydrology Report incorporates site design measures to provide sufficient detention such that post-project 10-year and 100-year storm event runoff does not exceed existing condition levels.

Response to Comment 17-63

The intensity of industrial land uses would only affect the potential pollutants in stormwater runoff if that intensity had an associated increase in impervious surfaces where pollutants could build up and be subjected to stormwater runoff. As noted on pages 3.5-23, and 3.5-24 of the Draft EIR, under the Menlo Gateway project impervious surface area would not increase. Additionally, redevelopment would also be subject to the Regional Stormwater NPDES Permit requiring minimum BMPs, for projects completed after December 1, 2011, and the Municipal NPDES Permit (Water Quality Order Number R2-2003-0023) for projects completed before December 1, 2011. Potential effects on water quality could also occur if non-stormwater discharges were allowed to the storm drain system or land surface. Additionally, existing conditions do not currently treat the design runoff that would be required under the Regional Stormwater NPDES Permit for redevelopment. Therefore, the proposed project would actually increase the amount of stormwater runoff being treated and likely reduce the amount of pollutants in stormwater runoff compared to existing conditions. Furthermore, under the Regional Stormwater NPDES Permit, Commercial and Industrial Site Controls would be required, and under the existing Industrial General Permit, a SWPPP would be required which would further reduce the potential for pollutants reaching receiving waters. Please see also Responses to Comments 17-60 and 17-61.

It has been noted that industrial uses could be allowed under the GPA/ZOA and certain types of R&D are classified as industrial uses. As such, text has been added to page 3.5-13 as a new bullet item to

include the Industrial General Permit regulatory requirements. Please see Chapter 2, Revisions to the Draft EIR, for this information.

Response to Comment 17-64

The Menlo Gateway project, as well as any of the project alternatives, would be required to comply with the NPDES requirements. As noted in the Alternatives chapter, the only difference among the alternatives is the FAR, which would most likely result in smaller building footprints. Thus, the change in FAR would not change the hydrology conditions of the site, including the amount of stormwater runoff or the types of pollutants. The only exception would be the No Project Alternative. Under all the alternatives, compliance with NPDES requirements would mitigate the stormwater impacts to less than significant. CEQA does not require that the alternatives analysis include the same level of detail as the project; therefore, the change in pre- and post-project conditions is not quantified.

Please see Response to Comment 17-58, above.

Response to Comment 17-65

Please see Response to Comment 17-60, above.

Response to Comment 17-66

Please see Response to Comment 17-61, above.

Response to Comment 17-67

In the Draft EIR, Chapter 2, Project Description, adequately describes the nature of the two sites and the adjacent commercial uses. Figure 2-2 adequately depicts the split nature of the project site. Please see Response to Comment 5-2 regarding potential effects on the flood zone.

Response to Comment 17-68

Other sites within the Atherton Channel drainage area are served by portions of the storm drain system to which the project site discharges. Near the project site, these would include portions of the US 101, Marsh Road, and the area between US 101 and Bayfront Expressway west of Chilco Street. Some of these areas discharge to the same City storm drain system as the project site, including the existing 54-inch and 48-inch pipes in Chrysler Drive, an 18-inch pipe in Constitution Drive and an 18-inch pipe in Independence Drive, a drainage ditch, a 42-inch storm drain located along the southern edge of the Independence site, and the Atherton Channel.

Response to Comment 17-69

To address the commentor's concern, the text on pages 3.5-26 and 3.5-29 has been revised. Please see Chapter 2, Revisions to the Draft EIR, for this information.

Response to Comment 17-70

As indicated in the Draft EIR in Chapter 2, Project Description, the project is proposing a sound wall along US 101 for the swimming pool area of the hotel. The sound wall would be located along an area of the Menlo Gateway site with the highest elevation, which it should be noted, would not be elevated 10 feet as the comment suggests. As such, it could only serve to block flow from US 101 on to the project site. Runoff from US 101 currently drains to an adjacent ditch and does not flow to the project site. The sound wall would not have any drainage impacts to adjacent parcels. Therefore, potential effects of a sound wall on project site drainage would be minimal.

Response to Comment 17-71

Figures 3.5-1 and 3.5-2 in the Draft EIR show flow paths under existing conditions and have been updated with the Final Hydrology Report flow figures. Figures 3.5-4 and 3.5-5 have been added to show flow paths for the proposed project and are included in Chapter 2, Revisions to the Draft EIR. As noted on page 3.5-26, the flow rates are reported as maximum percentage increases. Individual storm event rates are not identified because the percentages reported are the maximum of both storm events. Exact flow rates are reported under Impact HY-3 on page 3.5-25.

Response to Comment 17-72

Please see Figures 3.5-4 and 3.5-5 included after the hydrology section in Chapter 2, Revisions to the Draft EIR, which are added to the Draft EIR and show flow paths for the proposed project. As noted in Impact HY-3 on page 3.5-25 of the Draft EIR, all project site runoff for the 10-year storm event would be routed to the storm drain system and there would be no net increase in flow rates. Therefore, there would be no effect on nearby properties. Also, the revisions included in Chapter 2, Revisions to the Draft EIR, list the latest calculations from the Final Hydrology Report (included as Appendix C in the Final EIR) and show no net increase in peak flows or flow volume for the 10-year or 100-year storm event.[10] Please see Response to Comment 17-69 for effects on 100-year storm event flows.

Response to Comment 17-73

The specific flow paths for project alternatives have not been identified. CEQA does not require that the project alternatives be analyzed at the same level of detail as the project. The alternatives analysis included in Chapter 6, Alternatives, addresses those impacts that were identified as being significant and unavoidable. All of the impacts associated with changes in hydrology were either less than significant or mitigated to a less-than-significant level. It is assumed that all of the project alternatives would further reduce the severity of any of the hydrology impacts that were identified as being potentially significant because the footprints would be smaller than that of the proposed project. Please see also Response to Comment 17-64.

---

[10] Philip Williams and Associates, *Final Hydrology Report*, 2009.

Response to Comment 17-74

Potential design configurations under the GPA/ZOA are speculative and cannot be determined at this time. Therefore, flow paths for potential design configurations beyond the proposed project cannot be determined. Regardless, water would be required to leave the site at flow rates no great than the pre-development flow rates. Please see Response to Comment 17-73.

Response to Comment 17-75

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The BCDC assumptions have been incorporated into the expanded sea level rise discussion that has been added to Impacts HY-7 and HY-8, provided in Chapter 2, Revisions to the Draft EIR.

Response to Comment 17-76

The potential combination of extreme events (e.g., high tide and storm surges) is remote and speculative and is therefore not addressed in the Draft EIR. The FEMA FIRM map identifies the area inundated during a 100-year flood event. Determination of the 100-year flood elevation is based on historical records of sea level with a one percent chance of occurring in any given year and its effects on landside flooding. Therefore, the FIRM takes into account the measured frequency of sea levels affected by tides, storms, and other phenomena. Otherwise, there is insufficient information on the magnitude, timing, and frequency of the occurrence of other substantial events to prepare a credible assessment of additional flood hazards.

Response to Comment 17-77

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Please see Response to Comment 17-76, above.

Response to Comment 17-78

The comment restates a portion of the discussion under Impact HY-7 in the draft EIR. No further comment is warranted. Please see Responses to Comments 5-2, 17-69, 17-71, and 17-75, regarding the flood hazards resulting from introducing fill at the project site.

Response to Comment 17-79

As clarified in Response to Comment 17-69 and associated text changes, an approved CLOMR ensures that site development is in accordance with FEMA floodplain development standards and does not substantially alter flood elevations that could affect off-site flooding.

Please see Responses to Comments 5-2, 17-69, 17-71, and 17-75.

Response to Comment 17-80

Impact HY-7 on page 3.5-28 of the Draft EIR addresses impacts associated with flooding. Also, revisions to this impact included in Chapter 2, Revisions to the Draft EIR, address the regulatory framework in place to ensure projects in a floodplain are designed to minimize damage to property and risks to human life. Please see also Response to Comment 5-2.

Response to Comment 17-81

As noted in the Draft EIR on page 3.5-32, last partial paragraph, the Town of Woodside and unincorporated San Mateo County Code are also identified as mechanisms to ensure compliance with the NPDES permits and stormwater runoff pollution prevention. The following paragraph also notes that development projects would have to undergo the environmental review process during which any project-specific impacts would be identified. Additionally, as acknowledged by the Municipal Regional Stormwater NPDES Permit and associated Hydrograph Modification Requirements, infill development in primarily built out watersheds would not contribute substantially to additional stormwater runoff. Furthermore, as identified in Impact HY-1 and Responses to Comments 17-60 and 17-62, increased land use intensity (as opposed to increased impervious footprint intensity) would not be expected to contribute substantially to additional sources of polluted runoff and information regarding potential effects of increased use intensity for future development, including traffic counts, is unknown and speculative.

Please see also Responses to Comments 8-4, 8-5, 8-6, 16-1 and 16-23 that address potential conversion of other M-2 parcels.

Response to Comment 17-82

As noted in the Draft EIR in the Regulatory Setting discussion of Section 3.5, Hydrology and Water Quality, page 3.5-11, second full paragraph, areas draining to hydrograph modification susceptible creeks or channels are subject to the Hydrograph Modification Plan requirements. The new Municipal Regional Stormwater NPDES Permit identified portions of the Town of Woodside as being susceptible to hydrograph modification that would require HM Controls to limit runoff to existing conditions for up to the 10-year storm event, and therefore, there would be no increase in runoff above existing conditions associated with development within the Town of Woodside or other areas in identified HM susceptible areas. The new Municipal Regional Stormwater NPDES Permit also acknowledges that stormwater runoff for greater storm events (greater than the 10-year storm event) is not substantially affected by impervious surfaces because permeable soils are quickly saturated by the initial rainfall (up to the 10-year storm event rainfall amount) and then act similar to impervious surfaces for the duration.

Response to Comment 17-83

The CEQA Guidelines state that an EIR shall identify and focus on the significant environmental effects of the project. As stated in Section 15126.2 of the Guidelines, "In assessing the impact of a proposed project on the environment, the Lead Agency should normally limit its examination to changes in the existing physical conditions of the affected area..." Section 15064(d) of the Guidelines states, "the Lead agency shall consider direct physical changes in the environment which may be caused by the project....a direct physical change in the environment is a physical change in environment which is caused by and immediately related to the project." The Guidelines specifically state that an 'EIR discuss any inconsistencies between the proposed project and applicable general plans and regional plans" (CEQA Guidelines section 15125).

As discussed in Section 3.7-1, Land Use, of the Draft EIR, the reader is referred to the respective technical sections for a discussion of any potential physical/environmental effects and potential incompatibilities that may be considered in the determination of physical environmental impacts. For example, land uses that produce excessive noise, light, dust, odors, traffic, or hazardous emissions may be undesirable when they intrude on places where people sleep and recreate (residences and parks). Therefore, some industrial or agricultural uses (which can produce noise, odor, and so on) would not be considered compatible with residential uses, unless buffers, landscaping, or screening can be used to protect residents from health hazards or nuisances. Potential physical/environmental effects or land use incompatibilities are thus appropriately addressed in the applicable technical sections of the Draft EIR.

Response to Comment 17-84

The Draft EIR addresses changes to the existing environment resulting from the proposed project and then considers how substantial those changes are based on the State CEQA Guidelines, Appendix G, as well as within a cumulative context.

The Draft EIR addresses the change in the existing physical condition of the project site attributed to the project. The change in visual character of the project site is addressed in Section 3.1, Aesthetics. This includes a discussion of the proposed mass, height, and scale of the new buildings. The potential "use" incompatibilities, which include such things as noise from project construction and operation, traffic, dust from construction and other emissions, and hazardous materials use and disposal, are addressed in the respective technical sections of the Draft EIR. Potential "spatial" incompatibilities, which include impacts related to the siting and placement of buildings, may include proximity to vehicular traffic noise, location in an area of recognized environmental conditions, or disturbance to biological and/or cultural resources. Potential impacts from exposure to toxic air contaminants due to proximity to the freeway is addressed in Impact AQ-5 on page 3.2-15 and 3.2-16. Noise associated with proximity to the freeway is addressed in Impact NO-1 on page 3.8-9. The sound wall is included as part of the Independence site plan to shield the outdoor pool from noise from the adjacent freeway. As indicated in the analysis, the project would be required to meet the City's exterior noise standards for outdoor recreation areas. Other spatial incompatibilities are thus appropriately addressed in the respective technical sections of the Draft EIR.

Response to Comment 17-85

Please see Response to Comment 17-84, above.

Response to Comment 17-86

The pool would be used by hotel and health club users on an intermittent basis. Such uses adjacent to freeways or other heavily traveled roads are not considered incompatible uses and, in fact, it is common to locate outdoor pools or parks (associated with motels, hotels, or city parks) adjacent to freeways. Impact NO-1 in Section 3.8, Noise, addresses noise impacts associated with the proposed outdoor pool. Please see Responses to Comments 6-8 and 17-85.

Response to Comment 17-87

Potential impacts associated with prior hazardous materials usage is addressed in Section 3.6, Hazardous Materials. A Phase I Environmental Site Assessment (ESA) was prepared for both project sites that address existing on-site contamination. Federal and state laws oversee and govern the remediation of contaminated land and numerous other regulations oversee the management, use, transport, handling and storage of any potentially hazardous materials. Impact HM-1 addresses potential impacts to construction workers associated with any airborne contaminants released during building demolition and project construction and requires preparation of a Phase II ESA. As discussed on page 3.6-11, the California Health and Safety Code establishes specific precautions and safe work practices to minimize exposure to any air borne contaminants, specifically asbestos. During project operation, it is not anticipated that there would be any potential hazards to employees or hotel guests associated with airborne pollutants because the project, as well as the surrounding area, would not include heavy manufacturing or industrial uses that could potentially result in airborne emissions (e.g., from smoke stacks). Potential pollutants from air emissions associated with the project location and proposed operation of the project is addressed in Section 3.2, Air Quality. Project employees, visitors, hotel guests, and athletic club members would not be exposed to long-term exposure of toxic air contaminants, in part, because modern buildings are designed with sophisticated HVAC and filter systems that minimize exposure to unhealthy air.

Response to Comment 17-88

The Draft EIR analyzes the project, which encompasses a 'campus environment' associated with clustering similar or complementary uses in close proximity. The term 'campus' is used to characterize a clustering of buildings and is often defined as a grouping of medical buildings or a business park, for example. The Draft EIR analyzes the potential impacts associated with developing the project near the freeway and evaluates an increase in noise (Section 3.8), air emissions (Section 3.2), and other technical issue areas due to the project's location, adjacent to a freeway (e.g., Section 3.1, Aesthetics).

Response to Comment 17-89

Please see Responses to Comments 8-4 through 8-6 as well as 17-83.

Response to Comment 17-90

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 17-91

The Draft EIR analyzed potential impacts associated with the uses proposed as part of the project. The project does not include rezoning other areas outside of the project site from M-2 to M-3; therefore, the change in zoning and potential land use designation for other areas zoned M-2 was not analyzed in this EIR, nor is such a response required under CEQA. Please see Responses to Comments 8-4 through 8-6.

Response to Comment 17-92

The comment expresses an opinion regarding the EIR's analysis of land use compatibility. Please see Responses to Comments 17-83 through 17-91, regarding land use compatibility effects.

Response to Comment 17-93

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and no further response is provided in this document. While a response is not required to comply with CEQA, please see Responses to Comments 17-83 through 17-91, regarding land use compatibility effects.

Response to Comment 17-94

Under the City's General Plan, the existing land use designation for the project site is Limited Industry. Under this land use designation, hotel and other commercial uses are not allowed, as stated on page 3.7-2 of the Draft EIR. As a result, the proposed project could not occur at the project site without a change to the General Plan. The project proposes a General Plan Amendment to change the project site from Limited Industry to Mixed-Use Commercial Business Park that would allow for all of the same land uses under Limited Industry, but also permit hotel, restaurant and other commercial uses. The Draft EIR analyzes this new land use designation and evaluates the uses proposed under Mixed-Use Commercial Business Park, in accordance with CEQA.

Response to Comment 17-95

As noted in a prior response, the M-2 zoning district permits office uses. The Draft EIR has no obligation under CEQA to consider unapproved rezoning measures. The commentor's opinion is noted for the decision-makers.

Response to Comment 17-96

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. As indicated in the comment, "the prevailing regulatory environment" is only that of the existing regulatory environment as established in the City's Zoning Ordinance. The comment's reliance on past rezoning attempts is irrelevant to and has no bearing on the Draft EIR's analysis of the project under CEQA. Please see Response to Comment 17-95, above.

Response to Comment 17-97

As noted previously, the project is requesting a General Plan Amendment and a rezone to create both a new land use designation, Mixed Use Commercial Business Park, and a new zoning district, M-3. Since the project is requesting to change the current M-2 zoning district, the EIR is evaluating the new M-3 zoning district and not development under the current M-2 district. "Prior findings in the M-2 rezoning documents" have no bearing on the Menlo Gateway EIR under CEQA, but merely offer an historical perspective as to prior City Council's efforts to rezone the M-2. It should be noted that, while the City does encourage the "retention, development and expansion" of industrial uses, per Goal I-F, the City also supports the development of a mix of uses, including office and hotel in Policy I-E-2. The project currently is proposing a hotel that will provide transient occupancy tax, or TOT, revenue to the City.

Please see Responses to Comments 17-95 and 17-96.

Response to Comment 17-98

The comment suggests that the City has a fair disclosure obligation relative to the M-2 rezoning documents under the auspices of a "disagreement among experts." The commentor is directed to CEQA Guidelines section 15064(g), which links this "disagreement among expert opinion" concept to the determination of a project's significant effect on the environment. It is unclear how a prior City Council's rezoning effort dating back over 5 years rises to the level of "expert opinion" as the comment suggests.

While there may have been a disagreement as to the merits of a rezone and the use of land in the M-2, such disagreement is not relevant to the Menlo Gateway CEQA inquiry per se, but may be debated by the City decision makers when the merits of the project are considered.

Response to Comment 17-99

CEQA takes a narrow view and addresses those plans/policies that were adopted for the purpose of mitigating a physical effect; this is distinct from plans/policies that were adopted for design, good planning principles, etc. Further, the City's goals are broad policy statements; the underlying policies are typically more detailed and provide a better appreciation of the intent and spirit of the goal. As a

result, the assessment of plan consistency is more meaningful when considering the more specific policies that help define the more all-encompassing goal.

Response to Comment 17-100

Please see Responses to Comments 17-95 through 17-99, above.

Response to Comment 17-101

Section 3.7, Land Use, includes Goal I-E and Policies I-E-1, I-E-2, and I-E-4, that pertain to commercial uses. These goals and policies are applicable to the project because the project is proposing office and limited commercial uses, as well as a hotel. Even though the project is currently located in an area designated for industrial uses, the policies for commercial uses are evaluated because the project includes commercial uses. The intent is to provide a review of the applicable City policies regardless of the underlying land use designation. Currently, certain types of commercial uses can be permitted within an industrial zone through a conditional use permit. Because the project is proposing to allow commercial uses, including cafes/restaurants, hotel/motel, health/fitness centers, and neighborhood-serving retail by right under the M-3 zoning district, it is appropriate to consider all relevant General Plan policies to the project.

Response to Comment 17-102

The comment offers information about where the Menlo Park land use goals, policies, diagrams, and standards can be found. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and no further response is provided in this document.

Response to Comment 17-103

Please see Responses to Comments 8-3 and 17-101.

Response to Comment 17-104

Please see Responses to Comments 8-3 and 17-101.

Response to Comment 17-105

The comment makes an observation about the commercial goals of the Menlo Park General Plan. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and no further response is provided in this document.

Response to Comment 17-106

The comment notes that the commercial policies of the Menlo Park General Plan allow consideration of hotels in commercial and industrial zoning districts. The comment does not include specific comments

or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and no further response is provided in this document.

Response to Comment 17-107

Please see Response to Comment 17-101.

Response to Comment 17-108

The comment identifies the commercial and industrial zoning districts used in the City. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and no further response is provided in this document.

Response to Comment 17-109

Please see Response to Comment 17-101.

Response to Comment 17-110

The commentor's opinion that City staff and council members occasionally take the General Plan commercial goals out of context is noted. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and no further response is provided in this document.

Response to Comment 17-111

Please see Responses to Comments 17-14 and 17-98.

Response to Comment 17-112

The commentor offers his opinion as to the "disagreement" between goals and policies in the General Plan and zoning district maps. The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and no further response is provided in this document. Otherwise, the comment expresses an opinion as to a "global redefinition" of the M-2 area, which requires no further response under CEQA.

Response to Comment 17-113

It is not clear from the comment what is meant by "the remaining parcels." The GPA/ZOA is being sought for a specific set of parcels; there are no remaining parcels. The uses that are allowed are identified in the proposed ZOA; presumably those other uses that are not being considered have not been listed as they are not contemplated for the M-3 zone.

Response to Comment 17-114

The potential impacts associated with increasing the intensity of the allowable land use is addressed in the applicable sections of the Draft EIR. The proposed project includes a new General Plan land use designation; without this GPA, the project could not be advanced. This change to the existing land use designation allows the proposed uses to be considered. As such, the project would modify the General Plan so that the development application would be consistent with the new land use designation. The EIR analyzes impacts associated with this new land use designation and zoning which changes the allowable intensity of uses and, in some instances, results in significant impacts.

The commentor makes note of the "suppression" of documents relative to the 1997-2002 M-2 rezoning effort. The comment is noted; however, these documents were not "suppressed". They simply are not relevant to this EIR's analysis under CEQA. Please see Responses to Comments 17-94 through 17-99.

Response to Comment 17-115

The project is consistent with the intent of policies 11, 13, 15, and 16 from the Seismic Safety and Safety Element. The policies require specific actions be taken by a project applicant to ensure the project is designed to maintain all aspects of public safety. As discussed in Table 3.7-1 on pages 3.7-13 and 3.7-14, the project is consistent with the intent of these policies.

Response to Comment 17-116

The study area for the traffic analysis was developed in cooperation with City staff, and includes transportation facilities that are likely to be impacted by the proposed project. The intersections and roadways chosen for the analysis were based on many factors, including the projected travel paths of project-generated vehicles, the fact that traffic dissipates as it moves further from the source (thus making it unlikely that motorists would potentially use routes further away), and the nature of the trip makers (the project would have many commuters that are not local residents).

It should be noted that the Draft EIR traffic analysis included the intersections of Bayfront Expressway with Marsh Road, Chrysler Drive, Chilco Street, Willow Road, and University Avenue. Also, several intersections along Marsh Road and Willow Avenue were evaluated, as well as roadway segments along Marsh Road.

Response to Comment 17-117

Please see Response to Comment 17-116, above.

Response to Comment 17-118

Please see Response to Comment 17-116, above.

Response to Comment 17-119

It is recognized that there are other streets that offer possible alternatives to using Bayfront Expressway or Marsh Road. The traffic analysis assumed that project-generated traffic would use the most logical and convenient paths of travel, and it is too speculative to estimate the volume of traffic that may divert to other routes. Moreover, it is anticipated that project generated traffic will dissipate before reaching the Willow/Middlefield Road intersection; thus, it was not included in the study area. Please see Response to Comment 3-19.

Response to Comment 17-120

Please see Response to Comment 17-119, above.

Response to Comment 17-121

Although the Draft EIR traffic analysis did not include the intersection of Chilco Street and Hamilton Avenue as one of the studied intersections, the potential amount of project-generated traffic that would be added to Chilco Street was identified as part of the Roadway Segment analysis of Chilco Street between Constitution Drive and Hamilton Avenue. Also, the two primary intersections on either side of the Chilco/Hamilton intersection, Chilco Street and Constitution Drive and Hamilton Avenue and Willow Road, were analyzed. The Draft EIR addressed potential cut-through traffic on page 3.11-36. Please see also Response to Comment 17-119.

Response to Comment 17-122

The Draft EIR traffic analysis did not use dynamic traffic modeling. Generally, dynamic traffic modeling is not conducted for individual development projects, but rather for citywide land use plans or regional infrastructure projects, since the regional models that perform dynamic modeling often do not have the sensitivity to analyze local streets and potential cut-through traffic in individual neighborhoods. The traffic analysis used the Traffix traffic model which is more applicable to an individual development project.

Response to Comment 17-123

As required by section 15126.2(d) of the CEQA Guidelines, an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Also, the EIR must discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or other precedents that directly or indirectly encourage additional growth. Under CEQA, this growth is not to be considered necessarily detrimental, beneficial, or of significant consequence. In general, a project may foster spatial, economic, or population growth in a geographic area if the project removes an impediment to growth

(e.g., the establishment of an essential public service, the provision of the new access to an area; a change in zoning or general plan amendment approval); or economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc).

Response to Comment 17-124

Please see Responses to Comments 6-5, and 8-4 through 8-6.

Response to Comment 17-125

The comment is expressing an opinion and does not include specific comments or concerns that address the adequacy of the EIR or the City's compliance with CEQA and no further response is provided in this document. For additional information, please see Responses to Comments 8-4 through 8-6.

Response to Comment 17-126

Please see Responses to Comments 8-4 through 8-6, 16-1 and 16-23.

Response to Comment 17-127

The Draft EIR analyzes the change in height, mass and FAR of the buildings as well as the parking to be included as part of the project. These aspects of the project are evaluated in the applicable technical sections of the Draft EIR, aesthetics, air quality, hydrology, land use, noise, population and housing, public services, traffic, utilities, and climate change. Please see Responses to Comments 8-4 through 8-6, 16-1 and 16-23.

Response to Comment 17-128

Consistent with the City's definition for gross floor area, the FAR (which is calculated by dividing the gross floor area of buildings by the land area) for the project has never factored in the parking components. CEQA cannot and should not allow earlier, unrelated planning efforts and data to inform this EIR's analysis of the proposed Menlo Gateway project and GPA/ZOA environmental impacts. Moreover, CEQA is only concerned with the physical impacts to the environment, not the economic or social effects, especially based on data that dates back to 1997. Consequently, the comment is noted and no further response is required. Please see Response to Comments 8-4.

September 17, 2009

Mr. Thomas Rogers
Associate Planner, City of Menlo Park
701 Laurel Street
Menlo Park, CA 94025

To Whom It May Concern:

I support the idea of the Menlo Gateway Project proposal presented by Bohannon Development Company. I applaud Bohannon Development for the innovative design of this project and for the company's stated willingness to create positive relationships with the community surrounding the proposed project site. I grew up in the Belle Haven community and I have witnessed the transformation of the community from the 80's to today. I am now raising my sons within this community. The Menlo Gateway project can continue to provide mature growth for my community and it can also hinder mature growth for my community if implemented without sincerity and thought for all involved. 18-1

I attended the Planning Commission meeting at the City of Menlo Park City Council Chambers on Tuesday September 14, 2009. I was not able to stay until the end but I was there for the first two hours. There is a great deal of support for the project and there is a great deal of non-support. Some of the issues outlined by the non-supporters included parking availability and size of the parking structures, traffic congestion, environmental disruption to the surrounding areas and housing needs. It was also apparent that some of the non-supporters are simply 100% against the entire project. While I do support the idea of the proposed Menlo Gateway project I too share some of the concerns brought forth. 18-2

I believe the parking situation will be efficiently analyzed and implemented as the process continues. Traffic congestion is a big concern. Being a long time resident of the Belle Haven community I have seen the change in traffic over the years as more commercial development has occurred in the area especially on the streets of Hamilton and Constitution. Naturally some of this traffic has trickled into the neighborhood over the years. I live on Ivy Drive and based off of the EIR report there is not a significant change in traffic expected for the Ivy Drive/Willow road intersection and there was minimal mention of the significance of traffic flowing from the project site through the neighborhood. The elimination of a more in depth look at this added traffic to the community is disconcerting. People look for short-cuts and with the massive onslaught of consumers that will be heading to and from Menlo Gateway it is a fact that a good portion of those consumers will find "their" shortcut through the Belle Haven community. I would ask the project team to thoroughly evaluate their findings and ensure that every possible measure of keeping the flow of traffic through the neighborhood as minimal as possible is taken. 18-3

I would also request the addition of no through traffic sings at the intersections of Chilco and Constitution and Chilco and Hamilton. There is a sign on the intersection of Chilco and Hamilton that does not allow left turns during a certain time of day (I believe its 3:00 pm – 7:00 pm) which sends the traffic trying to get to get Willow Road to Ivy Drive. Please keep in mind that we have two elementary schools, a pre-school, and a number of private daycare centers within this area. An additional onslaught of daytime and morning traffic in the area will have an impact on accessibility to and from these locations for parents and children. In addition to the Menlo Gateway project there are a number of other projects that will be occurring within the Belle Haven community within the next few years; water pipe replacements, Kelly Park renovations, building of the long awaited police substation and possible housing projects. 18-4

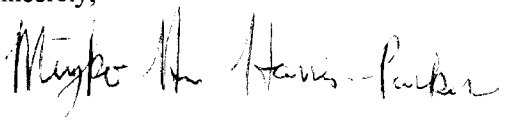
The environmental and housing issues related to this project are definitely the more complex issues to deal with. There is going to be environmental impact and there is no way of escaping that fact. Therefore it is imperative that Bohannon Development provide the highest level of mitigation as 18-5

possible. Yes the project is expected to be a success when all is said and done. But let's be real, the money will flow directly to Bohannon Development. This project when approved for rezoning will affect each and every other business and building within the area. Any future commercial renovations will have to meet the same level of innovation as the Menlo Gateway project. The traffic flow will impact all surrounding neighborhoods and businesses. We do not want our community to be lost in the shuffle of commercial expansion. There have been a great many ideas given in regards to mitigation for this project and some others that are not so great. The mitigation efforts need to be sincere and real. Donating money to the local elementary schools (strictly the schools in the Belle Haven community) for classroom upgrades and donating money for the purchase of the MPFD's new truck; these are real mitigation efforts that are needed for the community. 18-5 (cont.)

The housing issue is as complex as can be. Housing is not only needed but is also federally mandated. Cities are required to build a certain number of homes within a certain time period but the problems are where to build and that not a whole a lot of people can afford to buy in Menlo Park. The City officials and Bohannon Development will have to work together and come to a solution regarding the housing impact from this project. Single-mindedness from anyone will not help solve the situation. 18-6

Thank you for the opportunity to share my opinion/concerns. The Menlo Gateway project is a vast undertaking and there is no doubt in my mind that the Bohannon Group will have success, I just hope that their success is a success for the entire community and not just their bank accounts.

Sincerely,



Miyko A. Harris-Parker
Resident of the Belle Haven Community
Menlo Park, CA 94025

Letter 18: MIYKO A. HARRIS-PARKER

Response to Comment 18-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the project is noted.

Response to Comment 18-2

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 18-3

Please refer to page 3.11-36 of the Draft EIR and Response to Comment 17-119 regarding cut-through traffic issues.

Response to Comment 18-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the comments regarding suggested signage and other projects are noted.

Response to Comment 18-5

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's concern and desire to see feasible mitigation included as part of the project is noted.

Response to Comment 18-6

It should be noted that the Draft EIR concluded that the project will not have a significant impact relative to housing. The City's most recent Housing Element is from 1992. Every City and County in California is required to ensure a sufficient amount of land is zoned for residential development to provide a balance between land zoned for non-residential uses. In addition, every City and County must provide their fair-share of affordable housing based on a regional housing needs allocation (if applicable). The City is responsible for meeting any mandated state or federal housing requirements and, therefore, it is not the responsibility of the project sponsor for this project to resolve any of the City's housing issues.

Letter 19

Rogers, Thomas H

From: Mitch Slomiak [mslomiak@comcast.net]
Sent: Wednesday, September 16, 2009 9:52 AM
To: Rogers, Thomas H
Subject: Comments on Menlo Gateway Project draft EIR

From: Mitchel J. Slomiak, Chairman
Menlo Park Environmental Quality Commission

To: Thomas Rogers, Associate Planner
Menlo Park Community Development Department

Re: Menlo Gateway Project
Comments on Draft Environmental Impact Report (EIR)

Date: September 16, 2009

Dear Thomas,

Thank you for providing an excellent forum on August 19 for myself and other Menlo Park Commissioners to learn about the draft EIR and financial analysis of the proposed Menlo Gateway project. I have given a good deal of thought to your request for written comments, particularly in regards to potential public benefits that the City could negotiate with the developer. My comments are offered as Chairman of the Menlo Park Environmental Quality Commission (EQC), as Co-Chair of the Menlo Park Green Ribbon Citizens' Committee (GRCC), and as an interested citizen. And, please note that I am offering my own comments and not writing on behalf of either the EQC or the GRCC. 19-1

The EQC advises City Council on environmental sustainability. This draft EIR touches upon many issues within our purview, including air quality, water quality, waste disposal, the CIty's urban forest, and climate change. My most significant concern from within all three "hats" that I described above is climate change and my remarks will focus on this area. 19-2

I greatly appreciate the developer's commitment to environmental sustainability, as evidenced by the stated intent to voluntarily comply with both LEED silver and gold requirements, which are, in large parts, also described as partial mitigations of the project's negative impact on greenhouse gas emissions. This is a great precedent for future large developments in Menlo Park, albeit voluntary, and my fervent hope is that the Menlo Gateway precedent of LEED compliance will be imitated regularly for new projects in our city. Also, from my superficial review, it does appear that this project will present significant financial benefits to the CIty of Menlo Park. 19-3

As much as I favor and support the LEED-compliant elements of this project, I find myself troubled by the Climate Change impacts described in the draft EIR. Per staff's estimate, Menlo Gateway will increase greenhouse gas emissions by at least 15,000 and as much as 24,000 metric tons of CO_2 equivalent (CO_2e) per year, with the bulk of the emissions resulting from increased vehicular usage. The differential between 15,000 and 24,000 metric tons of CO_2e is dependent upon whether the developer follows through on implementing all of the Proposed Emission Reduction Strategies described on pages 3.13-21 to 3.13-23. 19-4

In 2005 the Menlo Park community was responsible for nearly 500,000 metric tons of CO_2e 19-5

Letter 19

annually with a "business as usual" estimate that this will increase by more than 100,000 metric tons of CO2e per year, to more than 600,000 metric tons of CO2e by 2020. [see *draft EIR*, page 3.13-7] This means that Menlo Gateway will increase our community's greenhouse gas emissions by 3%-5% above current levels, or, put another way, will in and of itself comprise 15% to 24% of the previously estimated "business as usual" increase in CO2e within our community. This is a significantly negative environmental impact of the project, by any measure. 19-5 (cont.)

If global warming and resultant climate change were not such urgent issues, I might not be so troubled by this change in Menlo Park's CO2 footprint resulting from Menlo Gateway. Yet, the world scientific community, through the Intergovernmental Panel on Climate Change (IPCC) has called for an 80% reduction in global greenhouse gas emissions by 2050 in order to avert the most catastrophic consequences of climate change. The federal government and state of California have both validated this goal and California is in the process of implementing AB-32 regulations across many dimensions of activity to significantly reduce greenhouse gas emissions within the state. 19-6

Menlo Park has taken some important initial steps toward aligning itself with these goals, by signing the U.S. Mayors' Climate Protection Agreement in 2007, and particularly with the adoption of a Climate Action Plan earlier this year. However, City Council has not yet adopted goals for greenhouse gas emissions, nor are there any local requirements in this regard regulating the greenhouse gas impacts of development within our community. 19-7

My understanding is that in the absence of federal, state, county, and city guidelines, the developer is not legally restricted from increasing greenhouse gas emissions at any level. So, there is an aspect to Menlo Gateway that is quite commendable, since the developer plans to voluntarily mitigate nearly 9,000 metric tons of CO2e per year through an array of design and operating sustainability measures. 19-8

Yet, it disappoints me to consider that this may be the best we can do as a community, a City, and a society. The sobering scientific conclusions and nearly implemented state greenhouse gas emission goals lead me to conclude that we no longer have the luxury to simply approve developments in our community that will increase our greenhouse gas emissions so significantly. Instead, we must require developers to either modify their plans to eliminate these emission increases, or fund offsets of some sort that legitimately neutralize the increase. 19-9

I urge City staff, the developer, and City Council to work together to find a way to effectively eliminate the increase in greenhouse gas emissions that are likely to result from Menlo Gateway as currently proposed. Even better would be an effort to not only eliminate or neutralize these emissions, but also plan to reduce the current level of nearly 5,000 metric tons of CO2e from the existing property by at least 80% before 2050 (eliminating an additional 4,000 metric tons of CO2e annually). 19-10

The California Governor's Office of Planning and Research (OPR) is in the process of amending state CEQA guidelines for environmental impact reports related to greenhouse gas emissions, and in April 2009 published a series of proposed amendments. These amendments indicate that one type of acceptable measure to minimize significant greenhouse gas emissions from new developments can include: "Off-site measures, including offsets, to mitigate a project's emissions." [*OPR Proposed CEQA Guidelines Amendments*, page 13] 19-11

Speaking as a concerned citizen, as Co-Chair of the GRCC, and, particularly, as Chairman of the EQC, I would like our City to work with the developer to identify projects within our community that would, upon successful implementation, result in the reduction of greenhouse gas emissions by at least 15,000 metric tons CO2e per year, growing to as much as 19,000 metric tons CO2e per year over time. This would both neutralize the impact of the new development and eventually reduce the existing impacts by 19-12

Letter 19

80%. 19-12 (cont.)

Menlo Park's Climate Action Plan provides examples of a number of Community projects whose combined benefits would result in a reduction of more than 15,000 metric tons of CO2e per year. As examples, by funding "Electric & Plug-In Hybrid Vehicle Recharging Stations" and "Implement Bike Improvements" the developer would provide public benefits resulting in greenhouse gas emission reductions estimated as 7,000 metric tons of CO2e and 9,000 metric tons of CO2e respectively. This total of 16,000 metric tons of CO2e per year would offset the estimated negative impacts from the project as described in the Draft EIR.

I state this position knowing that we will all be breaking new ground by negotiating and creating such a public benefit with the developer. This would be a much less awkward position if the City had already established greenhouse gas emission reduction goals and guidelines and/or requirements for developers, or if this were already mandated by state or federal regulations. Yet, I believe that we no longer have the luxury to wait to get it all perfect and must do our best to improvise wisely (and, yes, lead and innovate, as Silicon Valley is known for doing). I will be happy to meet with staff, the developer, and/or Council to attempt to create such a protocol both for Menlo Gateway and future developments so that we are able to act responsibly as a community with regard to our impact on the entire planet. 19-13

There is an additional climate change related concern that is troubling to me. My understanding is that Menlo Gateway will be built approximately 5-6 feet, or 60-72 inches above sea level, in close proximity to the west of Bayfront Expressway and Highway 101. In April 2009 the San Francisco Bay Conservation and Development Commission (BCDC) updated their continuing study regarding the potential impact of climate change along San Francisco Bay. The Draft Staff Report, entitled "Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on its Shoreline, leads me to a significant concern. 19-14

The report describes the impact of a midrange scenario involving sea level rise in San Francisco Bay of 16 inches by mid-century and 55 inches by 2100. While Menlo Gateway would remain above sea level (by 44-56 inches in 2050 and by 5-17 inches in 2100), the report discusses the significant risk of flooding for properties in such proximity to the Bay. There appears to be an increasingly high likelihood of seasonal flooding of the Menlo Gateway property, as clearly illustrated on BCDC maps that denote areas at high risk of flooding with a 16-inch rise in sea level in the Bay. 19-15

This leads me to a specific financial concern for the CIty of Menlo Park. When some or all of the buildings and grounds of this property become flooded, will City emergency resources potentially be used to ensure public safety during such a crisis? And, if this does occur, who would pay for these emergency resources and assume any resulting liability? 19-16

I would like to see staff and City Council address this contingency with the developer. While this may have seemed like a far-fetched scenario when Menlo Gateway was first conceived, my reading of the BCDC report indicates that this is a likely scenario.

In sum, I recommend that the following items be addressing by staff and City Council:

1) Change the voluntarily compliance with LEED gold/silver and other greenhouse gas mitigations described in the draft EIR into required project conditions or outcomes. 19-17
2) Identify projects within our community for the developer to fund that will offset the greenhouse gas emission increases planned under the current development. Require the developer to fund these projects, assuming that the cost is in line with comparable public benefits for projects of this size. (An alternative will be to require some or all of the additional mitigations described in the draft EIR, and then have the 19-18

Letter 19

developer fund projects that neutralize the smaller resulting increase in greenhouse gas emissions.)
3) Address the emergency resources issues so that the City does not face egregious costs from the future flooding that is very likely to occur at this site during the useful life of Menlo Gateway. 19-18 (cont.)

Assuming these issues are adequately addressed, I will be supportive of Menlo Gateway without reservation. 19-19

Mitch Slomiak

Letter 19: MITCH SLOMIAK

Response to Comment 19-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 19-2

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 19-3

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 19-4

Since release of the Draft EIR the project sponsor has included additional design features that have reduced the project's contribution to greenhouse gas emissions. In addition, the Bay Area Air Quality Management District (BAAQMD) recently published (November 2009 - after release of the Draft EIR). draft thresholds to use in determining impacts under CEQA. To address these changes, the Climate Change section included in the Draft EIR has been updated and is reprinted with all the updated information in Appendix D. Based on this refined analysis, Table 3.13-5 (on page 3.13-20 of the Draft EIR) has been revised and is included in Chapter 2, Revisions to the Draft EIR. Based on this updated information, project generated emissions are estimated to be 16,588 metric tons (MT) carbon dioxide equivalents (CO_2e) per year. Existing on-site emissions are estimated at 4,783 MT CO_2e/year. Because the existing on-site uses would be replaced by the project, the "net future emissions" would be 11,805 MT CO_2e/year. Please see Chapter 2, Revisions to the Draft EIR, for the corrected information.

Table 3.13-7 (page 3.13-23) in the Draft EIR summarizes the reduction in emissions assuming all the project reduction emissions strategies are implemented. Based on the new project design features Table 3.13-7 was updated to more accurately reflect the project's proposed reductions. The refined analysis indicates that vehicular emissions would be reduced by 2,311MT CO_2e. When vehicular emission reductions are combined with direct and indirect emission reductions, the total reduction is 3,005MT CO_2e. Corrections to Table 3.13-7 are included in Chapter 2, Revisions to the Draft EIR. GHG emissions generated by the project are reduced to 13,583 MT CO_2e/year. Please see Response to Comment 32-9 for more information.

Response to Comment 19-5

Please see Response to Comment 32-9.

Response to Comment 19-6

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 19-7

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following clarification is provided. The City has not adopted specific goals, other than the CAP, to address the issue of greenhouse gas emissions.

Response to Comment 19-8

There is no law that specifically restricts GHG emissions from this project; however, CEQA does require an analysis of the impacts of the project and has the responsibility of informing the decision makers and the public of the impacts associated with the construction and operation of this project. The analysis in the Draft EIR quantifies the GHG emissions and informs the public of the significance of GHG emissions generated by the project. The analysis of GHG emissions in comparison to the draft BAAQMD per capita threshold further provides a quantitative evaluation of the significance of the project's impacts. Please see Chapter 2, Revisions to the Draft EIR, for a summary of the changes to the Climate Change section, as well as Response to Comment 32-9.

Response to Comment 19-9

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, please see Response to Comment 19-8 for more information.

Response to Comment 19-10

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 19-11

On April 13, 2009, the Office of Planning and Research (OPR) submitted to the Secretary for Natural Resources its proposed amendments to the state CEQA Guidelines for greenhouse gas emissions, as required by Senate Bill 97. These proposed CEQA Guideline amendments would provide guidance to public agencies regarding the analysis and mitigation of the effects of greenhouse gas emissions in draft

CEQA documents. The amended CEQA Guidelines that address greenhouse gas went into effect on March 18, 2010.

Response to Comment 19-12

The City currently does not have a program to provide credits or an off-set for developers to reduce their greenhouse gas emissions by contributing fees that will enable the City, for example, to fund more efficient equipment and/or programs that aid in reducing greenhouse gas emissions. As noted in the comment, the City recently adopted a Climate Action Plan that focuses on ways the City can help reduce its own contribution of greenhouse gas.

The Bay Area Governments, Bay Area Air Quality Management District, and Metropolitan Transportation Commission approved the Bay Area Regional Agency Climate Protection Program on May 4, 2007 to reduce potential effects of climate change. However, this program does not require payment of any fees by developers to help offset their contribution of greenhouse gas emissions.

The project sponsor is committed to working with the City to evaluate potential opportunities for off-sets under the auspices of the Development Agreement, such as PG&E's ClimateSmart Program. Please see Response to Comment 19-14.

Response to Comment 19-13

The comment does not raise specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA; and thus does not warrant further comment. Please see Responses to Comments 5-2, 8-30, and 17-76, and Chapter 2, Revisions to the Draft EIR.

Response to Comment 19-14

The comment does not raise specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA; and thus does not warrant further comment. Please see Response to Comment 5-2, 8-30, and 17-76 and Chapter 2, Revisions to the Draft EIR.

Response to Comment 19-15

Please see Response to Comment 8-30 and Chapter 2, Revisions to the Draft EIR.

Response to Comment 19-16

In the event of a large-scale flood, a combination of federal, state, and local resources would be available to assist in any rescue effort. It is anticipated that any resulting property damage would be reimbursed by mandatory building insurance. The ultimate costs associated with any large-scale flood event are not known at this time and are beyond the scope of this EIR. The City has no legal obligation to construct levees for a single project. If levees were constructed it would be to provide flood protection for a larger area of the city. Please see Response to Comment 8-30.

Response to Comment 19-17

The City is planning to require that the project obtain LEED gold and silver certification as a condition of approval. Please see Response to Comment 8-28 and Chapter 2, Revisions to the Draft EIR.

Response to Comment 19-18

Please see Response to Comment 8-29.

Response to Comment 19-19

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

9/13/09

TO: Thomas Rogers, Associate Planner
Menlo Park Community Development Dept.

Please copy: City Council
Planning Commission

FM: Clem Molony, 35-year resident of the Willows neighborhood

SUB: **EIR Feedback re. the Menlo Gateway Project**

I have been following this project's movement through the city planning process for about two years, attending numerous Planning Commission and 'Gateway'-subcommittee meetings. I have reviewed relevant parts of this Draft EIR, which I find as thoroughly prepared as the other dozen EIR's which I have reviewed as part of my career as an Environment & Safety Manager over the past 25 years. I hope these comments are helpful to the Planning Commission, City Council and city staff. 20-0

Overview

General Plan Amendment: I believe it is a good idea for Menlo Park to modernize the land use designations in the General Plan when there is justification. In this case and in this commercial neighborhood, creating the requested designation makes a lot of sense. 20-1

Zoning Ordinance Amendment: The new M-3 zoning district (with specific parking requirements) which will result is also good for Menlo Park's future, not only economically but also in numerous other ways explained below. 20-2

Architectural Control: The high Floor Area Ratio requested for this hotel-office mixed-use project is appropriate because the resulting commercial activities are immediately accessible to two state highways, and they are relatively far away from residential neighborhoods. The city already has a zoning district (Central Commercial) which allows a high FAR if use-related parking is provided. This proposed district is clearly a similar case where the high FAR is fully justified. The tall hotel next to Highway 101 will be in keeping with other Peninsula cities' current and planned hotels next to the freeway. 20-3

City budget: The revenue flow to the city from this project (and other environmentally-positive economic development) is needed to keep our city services sustainable over the long-term. The 8/19/09 Almanac newspaper noted that "several council members have said they view economic development as the city's main tool in stabilizing its finances." The modern economy has been re-set; the use of city reserves is not the answer to our budget challenges. The project's creation of approximately $8M in public-benefit money will help sustain our city services and neighborhood improvements. I am pleased that the city hired an independent firm to quantify the fiscal impacts of the project, rather than depend on the developer's consultants. 20-4

Other comments: Before looking at specific impacts, a few comments noted at various meetings: The Belle Haven community's leaders appear to be strongly supportive of the proposal. The city's development agreement will no doubt include that the hotel component will occur prior to office construction. The creation of 1900 jobs to build this, and the addition of modernized office space in Menlo Park for 2300 high-tech jobs, is a real plus for our Peninsula economy. There will be a local-workers first source agreement between the project and JobTrain, the highly successful worker-training non-profit who boost the careers (and lives) of our less-advantaged neighbors. 20-5

Evaluation of Impacts

Land Use

As stated above, it makes common sense to modernize our city's land use designations and zoning when the city has an appropriate opportunity. In this case a local-family company, which is run by a long-term Menlo Park resident who loves this city, and which company has in-depth understanding of the Peninsula's future commercial-buildings market is making a zoning-change proposal which will position Menlo Park for future economic stability. These modern, sensible changes are good for our city, regardless of what the nay-sayers will argue. 20-6

Population and Housing

Local housing values is one of the most vexing problems which comes with the success of the Bay Area economy. The city's Below Market Rate Housing Program is one excellent tool to help address affordable housing issues for teachers, emergency-responders, service-workers, those in health care, etc. This project's payment of in-lieu fees into that program (reported to be $8.5M) will be a big plus for our city's housing efforts. 20-7

Public Services

The project's development agreement will tie together the requested entitlements for the project with needed public benefits. Direct city service costs will be borne by the project. Permanent revenue flows will accrue to the city services budget from increased property tax, ongoing sales tax, and the hotel's transit occupancy tax. 20-8

The Bohannon organization is negotiating with the local fire district to cover the cost of a needed ladder truck and the cost of project related services. Local schools will gain a windfall in annual property taxes without having to take on many extra students. The Belle Haven neighborhood and community, because of its nexus to the project, appears to be an appropriate place to invest a fair share of resulting community benefits. 20-9

Traffic and Circulation

This set of impacts is the most difficult challenge of the project. Therefore I reviewed this section in depth, and provide both general and specific comments.

I am quite familiar with traffic patterns on the east side of town because I live adjacent, and my kids growing up had numerous friends who lived east of Hwy 101. The 21 study intersections which were identified all make sense for review, and it was valuable to compare the Level of Service status (LOS data) at all locations before ('Near Term') and after the project is built.

Table 3.11-6 compares before and after. It is interesting to note that when you combine the AM and PM data on LOS after the project is built, and <u>before</u> doing any mitigations, the total of intersections LOS situations is 20-10

LOS:	A	5	\	
	B	19	\	46 acceptable intersection situations
	C	9	/	
	D	13	/	
	E	6	\	11 unacceptable intersection situations
	F	5	/	

Traffic and Circulation, cont.

The "Increase-in-delay" data provide additional insight. In the AM, only one intersection has a delay of greater than ten seconds (Independence at Constitution), and the average delay at the 21 intersections appears to be 3-4 seconds. In the PM, only two intersections show a significant increase in delay (Constitution at Chrysler, and Chrysler at Bayfront). As I understand it, the project will fully mitigate all three of these problem intersections with roadwork upgrades and signalization.

Other mitigations (~$2M in investment for city roads, transit, etc.) which will be required of the project will address the remaining problem intersections (various intersections at Bayfront Expressway, and Marsh at Middlefield). Of note is one conclusion of the data-analysis that, given the project's location by Highway 101 and Bayfront Expressway, only about 10% of the traffic from the project is estimated to enter the city. It appears that there will be negligible changes to our city's existing traffic patterns. 20-11

It's important to note that an additional review of the project's traffic impacts will be done by the San Mateo County Congestion Management Program (hooray for Measure A) with resulting suggestions for mitigation. Finally, I was also encouraged to see that the DEIR states that the proposed design will provide adequate parking for the project.

Utilities

The other significant impact of the project is utilities, especially water supply. The fact that the Bohannon organization is so dedicated to green building principles is heartening for our city. They will design for LEED certification throughout the project. This will provide significant reduction in the use of our planet's natural resources. The resulting project here in Silicon Valley will be a model for similar projects worldwide. I was encouraged that the DEIR stated that there is sufficient water supply in the city for this project. 20-12

Thank you for all the work that city staff (and your consultants) have done so far to evaluate this important project. Even though there may be excess office capacity on the Peninsula currently, the replacement of obsolete buildings at the current site with modern highly-valuable buildings (to meet returning demand in the future) make sense. 20-13

I encourage approval of this project as proposed.

Letter 20: CLEM MALONY

Response to Comment 20-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Please see below for responses to specific comments.

Response to Comment 20-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 20-2

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 20-3

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 20-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 20-5

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 20-6

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 20-7

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further

clarification. The project sponsor is required to pay their fair share of in-lieu fees, per City requirements.

Response to Comment 20-8

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, the following information is provided for further clarification. The project sponsor and the City will enter into a Development Agreement if the project is approved.

Response to Comment 20-9

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. See Response to Comment 20-10.

Response to Comment 20-10

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 20-11

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 20-12

The Draft EIR addresses water supply and water demand associated with the project in Section 3.12, Utilities and Service Systems as well as updated information provided in Chapter 2, Revisions to the Draft EIR. Under normal conditions adequate water is available to serve the project and the impact was determined to be less than significant.

Response to Comment 20-13

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the project is noted.

Letter 21: SUSAN MASETTI

Response to Comment 21-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 21-2

Please see Responses to Comments 3-19 and 13-1.

Letter 21

Rogers, Thomas H

From: Susan Masetti [smasetti@gmail.com]
Sent: Tuesday, September 15, 2009 7:37 PM
To: Rogers, Thomas H
Subject: Menlo Park Draft EIR - Objections from Atherton Resident.

Dear Mr. Rogers,

I am a resident of Atherton, living on one of the streets (Holbrook Lane) that will horribly impacted by the traffic resulting from this project, specifically near intersection #16. I only learned of this project's impact on my neighborhood at the September 8, 2009, Traffic Commission meeting, during which Chip Taylor presented a few key points of the EIR draft. 21-1

I want to go on record as saying, "I object!" to this project and the traffic/environmental impact to my neighborhood. Our neighborhood street was not designed to handle the significant amount of increased traffic this project will cause. Commuters will use our street as a "bypass" when Marsh Road become congested -- which it inevitably will. There are no other feasible alternative routes around a Marsh Road closure aside from our neighborhood street. We live in a quiet neighborhood which does not want to see this project go forward or the negative impacts the project will cause on our street. 21-2

If you have any questions or concerns about my comments, please contact me.

Thank you,

Susan Masetti
324-9180

MT. OLIVE
APOSTOLIC ORIGINAL HOLY CHURCH OF GOD

605 Hamilton Avenue, Menlo Park, CA 94025
P.O. Box 2604 Tel: (650) 853-0355
Fax: (650) 853-1949

Dr. H.L. Bostic ThB., D.D.
(Pastor)

Shaneka Julian
(Church Secretary)

Radio Broadcast
KFAX San Francisco
WGOK Mobile, Alabama
Web: www.mtolive.org

September 14, 2009

City of Menlo Park Planning Commission
701 Laurel Street
Menlo Park, CA 94025

Re: Menlo Gateway

Ladies and Gentlemen:

We, the undersigned, are writing to express our support of the Menlo Gateway project proposed by the David D. Bohannon Organization. We are members of the Mt. Olive Apostolic Original Holy Church of God and/or residents of the Belle Haven neighborhood in Menlo Park.

We believe that the Menlo Gateway project will be a major benefit to our community financially, aesthetically and by providing services and resources that will enhance the Menlo Park area east of Highway 101. 22-1

From a financial perspective, the project will bring in much needed revenue for the city in the form of taxes and fees. In tough economic times like these, a major revenue producing project like Menlo Gateway can provide significant assistance to the City in balancing its budget. And, indirectly, it benefits the residents of Menlo Park because the more income the City has from projects like this, the less the City will have to raise taxes and fees and cut services. For the residents of Belle Haven, many of whom are lower income and, therefore, less able to afford higher taxes and fees and more dependent upon city services, this is of particular importance. 22-2

The Menlo Gateway project will also have a more direct impact upon the residents of Menlo Park in the form of approximately 2,100 jobs that will be created (on top of the approximately 1,900 construction jobs that the project is expected to generate). David Bohannon has demonstrated his commitment to the City by entering into a Letter of

Intent with JobTrain, insuring that Menlo Park residents will be given first priority for any available jobs. With an unemployment rate of 11.8% in the Silicon Valley, this is a major benefit, particularly for Belle Haven residents. 22-2 (cont.)

Aesthetically, the project will provide a much-needed "face lift" to the industrial area near Marsh Road and Highway 101. Everyone in the area is familiar with the transformation taking place in East Palo Alto at University Avenue and 101. The office buildings, Four Seasons Hotel and the surrounding retail areas have been a significant enhancement to that area. Menlo Gateway will do the same for the eastern section of Menlo Park. It will provide a beautiful hotel, office buildings, a café, retail space and a health club. We also believe the completion of this project will entice other businesses to the area, thus continuing the trend of improvement. 22-3

Speaking on behalf of the church, it will be wonderful to have a hotel so close by. We host several events each year, including our annual Pentecost convention which draws delegates from across the United States. The hotel will give our delegates a beautiful, convenient place to stay. We are also looking forward to the opportunity to host events such as banquets, meetings, etc. at the hotel that are too large for us to host at the church. 22-4

Retail services and community facility space are extremely limited in Belle Haven and the fact that the Menlo Gateway project will contain both is an added benefit.

In summary, we have long desired major improvements to the eastern section of Menlo Park. The City has made progress in the form of the new housing development and the streetscape design on Hamilton Avenue, along with the retail area on the corner of Willow Road and Hamilton Avenue. The Menlo Gateway project will be another major step toward the redevelopment and beautification of our neighborhood. This, along with David Bohannon's commitment to providing much needed jobs for the residents of Menlo Park and the financial benefits to the City, make this project a win-win for everyone and we strongly encourage you to make a positive recommendation of the project to the City Council. 22-5

Thank you for your time and consideration.

Sincerely,

Dr. H.L. Bostic
Pastor/Founder
and Menlo Park Resident

SIGNATURE	PRINTED NAME	ADDRESS
Adonis Butler Rosie Butler	Adonis Butler Rosie Butler	1340 Henderson 1340 Henderson
Richard Stamper KENNETH HICKS	RICHARD STAMPER Kenneth Hicks	1155 BIEBER AVENUE 2527 GUERTA Way PALO ALTO, CA. 94303
CLARENCE RHODES 34818 LILAC ST UNION CITY CA 94587		
Betty Howard	Betty Howard	1421 Plumas Menlo Park Calif
Maria Centeno	Maria Centeno	2250 Clarke Ave, East Palo Alto, CA
TERENCE ROBY	Terence Roby	1421 Plumas Dr, Menlo Park, CA
Pam Timmons	Pamela Timmons	East Palo Alto ca 2301 Cooley #104 94303
Rach McScott	RACHEL SCOTT	605 Hamilton
Shanequa Williams		38007 Dover Common Fremont, CA 94536
Ns M	Nancy Cash	34711 Lilac St. Union City, CA 94587

SIGNATURE	PRINTED NAME	ADDRESS
	Marie Watkins	631 Hamilton Ave #4 Menlo Park, CA
	Betty Hogan	1845 Washington
	LAURITA WHEELER	2578 EMMETT WAY E. PALO ALTO, CA
	Helen Chilton	1457 Hudson SF Ca
	FAY U. HINTZEN	~~605 Hamilton Ave.~~ 69 E. Hillsdale Blvd San Mateo, CA 94403
	Kimberly Guess	1059 Reed Ave. #28 Sunnyvale, CA 94086
	Joseph Julian	1059 Reed Ave. #28 Sunnyvale, CA 94086
	Kevin Julian	1059 Reed Ave. #28 Sunnyvale, CA 94086
	Linda Guess Joseph Guess	1135 Bieber Ave Menlo Park, CA 94025
	Julie Guess	1135 Bieber Ave Menlo Park, CA 94025

SIGNATURE	PRINTED NAME	ADDRESS
Jenell Armstrong	JENELL Armstrong	1734 Longbarnley Stockton Ca. 95207
Ora Augmon	Ora Augmon	634 Mac Duff Ave Stockton CA 95210
Emy Walton	EMY WALTON	1109 Windermere Menlo PARK CA
Andrea Williams	Andrea Williams	895 Donohue St E. Palo Alto, Ca 94303
Chris -	Christopher Stewart	2482 Cabrillo Dr Hayward, CA
Derick Irving	Derick Irving	6187 Prospect Rd San Jose CA, 95129
Stephenie Moore	Stephenie Moore	631 Hamilton Ave #6 menlo Park CA 94025
Gayle Haywood	GAYLE HAYWOOD	4434 ALAMO ST. UNION CITY, 94587
Alexandria Moore	Alexandria moore	631 Hamilton Ave #6 menlo Park Ca 94025

Loretta Watts	MT Olive Member 1845 Washington BL FM
Lillian Pledger	mt Olive member 69 E. Hillsdale Blvd SM CA
Wanda Haynes	Mt. Olive member
Opheli Wray	Mt. Olive member
OPHIA Wray	MT Olive A.O.H. Church of G
Janet Richards	Mt. Olive A.O.H Church of Ga
Wilma A. Jackson	Mt. olive AOH church of Ga
Michelle Jackson	Mt. Olive Member
Ronisha Attaway Parkinson	320 Harris Rd # 24 Hayward Ca
Naslicia Attaway	
Tanaia Attaway	
Angie Ware	Angella Martin
Shirelle Reese	2478 Gloria Way E. Palo Alto
Shaina Washington	4344 Bel Estos Way, Union City
Bonnie M'Jan	Stockton, Ca.
Jah Bracey	MT. Olive Member
Bertha McLain	2748, Calero Hills Ln, Stockton, C

Letter 22: MT. OLIVE APOSTOLIC ORIGINAL HOLY CHURCH OF GOD

Response to Comment 22-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the project is noted.

Response to Comment 22-2

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the additional jobs and revenue that project will provide is noted.

Response to Comment 22-3

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's desire to see new development in this area to help improve the aesthetics is noted.

Response to Comment 22-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's desire to see a hotel and other retail amenities in the area is noted.

Response to Comment 22-5

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the project and all the associated improvements to the area is noted.

Rogers, Thomas H

From: Nina G Wouk [nwouk@ix.netcom.com]
Sent: Thursday, September 03, 2009 9:25 AM
To: Rogers, Thomas H
Subject: Re: Menlo Gateway - an offshoot its attendant traffic considerations

I don't know whether Menlo Gateway is a realistic idea or not.
However if it were built, it would be important to keep cut-through traffic out of Belle Haven. Discussion of this has led to one good
idea: At the intersection of Newbridge and Willow, where cars turn right from Newbridge onto Willow to get to Highway 101, there is room 23-1
for a second right turn lane. Regardless of what happens with Menlo
Gateway, creating a double right turn lane would ease traffic congestion getting out of Belle Haven, without inviting cut-through traffic into Belle Haven. Please forward as appropriate.

Nina Wouk
1259 El Camino Real #215 (mailing address)
Menlo Park CA 94025
650-329-9083

LETTER 23: NINA G. WOUK

Response to Comment 23-1

Please see Response to Comment 17-119 for a discussion of cut-through traffic issues. The comment regarding a suggested second right turn lane from Newbridge Street onto Willow Road is noted, please refer to page 3.11-33 of the Draft EIR, which discusses the proposed mitigation for the Willow Road/Newbridge Street intersection.

Letter 24

Rogers, Thomas H

From: Joan Solari [mrssolari@yahoo.com]
Sent: Tuesday, September 15, 2009 6:51 PM
To: Rogers, Thomas H
Subject: Menlo Gateway Project EIR draft

Dear Mr. Rogers,

I am a resident of Atherton, living on one of the streets that will horribly impacted by the traffic resulting from this project, specifically near intersection #16. I only learned of this project's impact on my neighborhood at the September 8, 2009, TC meeting, during which Chip Taylor presented a few key points of the EIR draft. 24-1

I want to go on record as saying, "I object!" If you have any questions or concerns about my comments, please contact me.

Thank you,

Joan Collins Solari
(650) 322-3517

Letter 24: JOAN SOLARI

Response to Comment 24-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's objection to the project is noted. Please see also Response to Comment 13-1.

Charles P. Bourne
1619 Santa Cruz Ave.
Menlo Park, CA 94025

19Sep09

Mr. Thomas Rogers, Assoc. Planner
City of Menlo Park
701 Laurel St.
Menlo Park, CA 94025

RECEIVED
SEP 21 2009
CITY OF MENLO PARK
BUILDING

Dear Mr. Rogers

This letter contains my comments on parking issues in response to the Draft EIR prepared for the Menlo Gateway Project proposed by the Bohannon organization. 25-0

1. **The required number of parking spaces is unrealistically low.**

The DEIR statements of the required number of parking spaces (e.g., 1 space/350 sq. ft. of office space) for each type of land use do not cite any authority for, or evidence of, the validity of those figures for this location and instead substitutes its own rates, which work to the advantage of the developer. The DEIR does not use Menlo Park's established parking rate standards (Ref. pg. 3.11-55) and thus may have no validity for use in this DEIR. 25-1

There is no basis for a belief that these proposed rates are credible for this location. The DEIR says, in effect,"Just trust us", with no further justification. The DEIR dismisses this issue by saying that the developer knows what's best for the city, ***"While the use based rates and the M-2 rates are used by the City, the proposed M-3 rates provide an update to the City of Menlo Park parking standards that is more appropriate for the proposed project site."*** (Ref. pg.3.11-55) 25-2

Note also that as stated earlier, the factors proposed for each of the DEIR land uses are very easy on the developer when considered in the context of what is required in many other California communities. This is apparent when viewing these requirements in Tables 1 – 5 where the developer's parking ratios are listed with those of other communities in the context of a rank order of cost and difficulty of implementation for each of the proposed land uses. 25-3

It is critical to ensure that there will be a sufficient number of parking spaces for this large project because: 1) there is no indication that there will be enough public transit capability at this location to permit people to come by means other than their cars; 2) there is likely to be insufficient parking capacity in the neighboring blocks to accommodate the overflow parking in the event that there turns out to be insufficient parking in the project area (This is 25-4

acknowledged in the DEIR when discussing the parking standards, *"These proposed rates must adequately accommodate the project's entire parking demand since there is no potential for overflow parking into adjacent neighborhoods."(Ref. pg. 3.11-55)* ; and 3) if it turns out that the developer has in fact provided insufficient parking space using its parking demand models, then future developers in the adjacent parcels will probably have to (unfairly) make up the shortfall as part of the requirements for their proposed projects. 25-4 (cont.)

Unfortunately, as explained in the following sections, this project appears to require more than 800 – 1,500 more parking spaces than has been proposed in the DEIR.

Office/R&D

For Office/R&D use, the DEIR uses a Parking Ratio Requirement of 1 parking space/350 gross sq. ft. However, the experience of many other California jurisdictions is to require a larger amount of parking space for office activities. Furthermore, based on their experience, other communities have imposed a considerable difference in space requirements depending on the type of office. 25-5

Palo Alto was recently surprised to find a major commercial company's move to a more employee-dense workplace model. Facebook's recent move of 700 workers to new quarters in Palo Alto, with staff working around conference tables with laptops instead of the more traditional practice of using offices and cubicles, caught city planners by surprise because the buildings ended up with more workers than had been predicted by the city's parking space model, and was causing parking problems in the adjacent neighborhood. The city's Planning Director noted that, *"...the 1 parking space/300 sq. ft. for the research park may have to become 250 sq. ft.* "(Ref. Palo Alto Weekly. 9/3/09) 25-6

Because the developer for this DEIR has not indicated what type of office activity is likely to be established here, there is no guidance to suggest what the expected parking requirement should be. Consequently, the city should be planning for the worst case. If, for example, the office space is to be used for medical and dental offices, then that activity (based on the requirements required by many other California communities as shown in Table 1) would require more parking space than the amount of parking space that the developer has proposed for office land use. This is an important consideration because so much office space has been proposed. In fact, if a 200 – 250 sq. ft. figure is used (common for medical offices as seen in Table 1), then this amount of office use would require 794 – 1489 more spaces than proposed by the DEIR. If the developer expects the office space to be used primarily for Class A office space for large law firms, then it should be examining the experience of other law firms such as 25-7

Heller-Ehrman in Menlo Park, or the experience of other law firms presently installed in new high-rise buildings in Menlo Park's Whiskey Gulch/University Circle development. 25-7 (cont.)

Health Club

For the health club land use, the DEIR uses a Parking Ratio Requirement of 1 parking space/190 square feet. As shown in Table 2, this is in the neighborhood of what seems to be regular practice in other communities. 25-8

Café/restaurant

For the Café/restaurant land use, the DEIR uses a Parking Ratio Requirement of 1 space/65 sq. ft. The DEIR is not specific with regard to whether this is gross area, or just the area devoted to the proposed dining or seating area (as done by some other jurisdictions). This ambiguity should be resolved. The DEIR also does not note the square footage area of the dining or dancing areas, or number of seats in the dining area, as sometimes used in other communities as the basis for determining parking spaces. Such information should be provided because it would help determine the extent to which the requirement stated in the DEIR is a reasonable match with the ratios used by other communities. As shown in Table 3, the required number of parking spaces for restaurants is based on several different metrics (e.g., gross area, number of seats, and number of employees). Consequently, it is difficult to determine whether the proposed Ratio Requirement is reasonable. 25-9

Hotel

For the hotel land use, the DEIR uses a Parking Ratio Requirement of 0.91 space/guest room. As shown in Table 4, when considering only the number of guest rooms, the DEIR is slightly easier on the developer than many other communities (e.g., 0.91 versus 1.0 space/guest room), and may represent a slight undercount of the likely need. If the more commonly accepted ratio of 1 space/room was to be used, then the project, just for this consideration, would be short by 20 rooms for this hotel land use. 25-10

The DEIR is silent regarding any plans for conference rooms or banquet facilities associated with the hotel. It is general practice for Marriott Hotels to provide such facilities. Examples of some Marriott California hotels with about the same number of guest rooms as the proposed facility (230 rooms) are shown below. 25-11

Marriott Hotel	No. Rooms	No. Meeting Rooms	Meeting Room Area (sq. ft.)
Burbank	395 + 93 suites	22	46,000
San Jose	478 + 28 suites	19	21,000

Walnut Creek	326	13	17,500
Coronado	273 + 27 suites	23	14,000
Santa Ynez	122	12	12,000
San Francisco (JWM)	329 + 8 suites	19	11,820
Bakersfield	250 + 9 suites	10	9,136
San Diego(downtown)	230	6	4,500

Attendees to events in the meeting rooms who are not hotel guests (e.g., for banquets or 1-day technical conferences) will need parking space above and beyond that needed for hotel overnight-guest parking. That need is recognized in some communities by requiring additional space for meeting room areas, in addition to the amount of space dictated by the number of guest rooms. South Pasadena requires an additional 1 space/100 sq. ft. of conference meeting room area, and Oceanside requires an additional 1 space/50 sq. ft. of banquet seating area. If this consideration were to be added to the hotel Parking Ratio Requirement (a not unreasonable action), then additional parking space would be required for this type of hotel land use. But because the DEIR is silent on the amount of meeting room space, no estimate can be made of the amount of undercount of parking spaces for this factor. This issue needs to be addressed in the Final EIR. 25-11 (cont.)

Hotels require a sizeable staff for their maintenance and operation. Some sources cite an experience of one employee/10 guest rooms for medium-size, medium-class hotels. For this proposed hotel with its 230 rooms, this suggests a staff of 23 employees would be working at the hotel. It is not clear how this has been included in the DEIR parking analysis. As shown in Table 4, many communities add an additional hotel parking space requirement based on the number of employees (e.g., 1 space/ 1 – 2 employees). This DEIR is silent on the number of employees associated with this hotel, and how their parking needs are factored into the DEIR. This issue should be addressed in the Final EIR. 25-12

Given the points noted above, it appears that the number of parking spaces required for the hotel land use has been significantly under-stated by at least 20 spaces. 25-13

Retail/community facilities

The DEIR states that: 1) for the Independence site, *"...up to 3,000 sq. ft. of retail/community facilities could be located in the ground floor of the office building on the Independence site provided there was a corresponding decrease in the amount of the office area."* (Ref. pg. 2-7); and 2) for the Constitution site, *"The neighborhood-serving convenience retail/community* 25-14

facilities would occupy 7,420 sq. ft. and take the form of storefronts lining some of the street frontages of the buildings provided there was a corresponding decrease in the amount of office area." (Ref. pg. 2-9) This is a total of a possible 10,420 sq. ft. of retail space.

For retail/community facilities land use, the DEIR does not give a specific Parking Ratio Requirement. Furthermore, it does not identify specifically what kind of retail activity will be accommodated, although some general uses are identified as part of the description of the new M-3 Zoning status. The DEIR does not specify how many parking spaces will be provided for this retail activity. 25-14 (cont.)

If the retail space is to replace office space, then there will be a need to upgrade the number of parking spaces needed for this 10,420 sq. ft. because retail space generally requires more parking space than office space does.

Table 5 lists the parking ratios used by various communities for retail land use, and shows a wide range (1 space/20 sq. ft. – 1 space/500 sq. ft.) of ratios in use; most of the examples are around 1 space/250 square feet. If that figure were used instead of the 350 sq. ft. for office use, then <u>an additional 12 parking spaces would need to be added to the plan.</u>

<u>Amphitheater</u>

The DEIR describes an amphitheater *that "...is designed to serve the project as a space for employees to use as a small park/green space and as an informal gathering area."* If the amphitheater is ever to be used for any kind of audience for presentations or performances, then that should be addressed in the Final EIR, along with the associated parking issues for outside participants and attendees. 25-15

<u>Other Considerations</u>

There is no indication of the location and amount of loading space on-street and on-site that will be provided for service vehicles for this project.

There is no indication of the distance from the hotel entrance to the parking structure entrance. 25-16 There could be concerns regarding the requirement for hotel guests to carry their bags to and from their cars over that distance. This may not be a DEIR issue, but it does raise an issue about the siting of the parking resources.

2. **The assumed amount of benefit of shared parking is unsupported and overly optimistic.**

The DEIR states that, *"On the Independence site, the proposed office/R&D building, hotel, health club, and café/restaurant would share parking. This shared parking configuration reduces the* 25-17

total amount of parking that would otherwise be necessary, because it takes advantage of the different parking demands at different peak hours for each use." (Ref. pg. 2-19)

The DEIR claims that for the Independence site, shared parking will reduce their estimate of the number of required parking spaces (1,198) to a total (1,002) that is less than the 1,017 parking spaces planned to be built at that site in a 5-story parking structure. That is a margin of only 15 spaces over their estimated requirement. (Ref. pg. 3.11-56) 25-17 (cont.)

The DEIR claims that the Constitution site will require a total of 1,405 spaces. But it also states that,"*A shared parking analysis was also conducted for the Constitution site. According to the analysis the peak weekday shared parking demand would be 1,405 parking spaces ... for the Constitution site*". This may be an error in the DEIR where the 1,405 number was given for shared parking estimate instead of some reduced number. That issue needs to be resolved. The required number (1,405) is less than the space that would be built (1,649). (Ref. pg. 3.11-56) 25-18

No justification is given in the DEIR for any amount of space reduction other than the general statement of, *"...different parking demands at different peak hours for each use."* No data is given to show the time frequency distribution of space needed for each land use and for the total by hour of each of those uses as shown by the attached example from another source for a different project. How broad or how sharp are the assumed peaks for each land use, and how valid are these assumptions? Such data needs to be provided to support a claim for a specific space reduction due to this effect. If this postulated non-overlapping parking demand activity cannot be supported, then this amounts to another under-estimate of the demand for parking space. 25-19

Furthermore, the time distributions of the assumed parking demand for each type of land use has made some assumptions, not stated in the DEIR, about the type of use to be made of the office space at each site. Different types of use (e.g., medical/dental, major law firms, corporate headquarters, 24-hour call centers, theaters) will require different patterns of parking throughout the day. We are being asked to accept, without question, and without seeing, any supporting data from this cookbook recommendation. 25-20

For both sites, the DEIR takes a computed requirement that is artificially low because of the parking ratios that have been chosen, and then lowered that figure by about 200 more spaces by using a 2005 edition of a cookbook by the Urban Land Institute that may be obsolete for this site and for current notions about the use of office space. 25-21

Type of Office	Location	Rule	Reference	
Medical	El Dorado County	1 space/150 sq. ft.	County Zoning Ord. Chapt. 17.18	
Medical	Sacramento County	1 space/154 sq. ft.	Zoning Code of Sacramento County	
Medical and dental	Oceanside	1 space/200 sq. ft.	Article 31. "Off-Street Parking & Loading Regulations"	
Medical	Mt. View	1 space/200 sq. ft.	Mt. View Planning Commission minutes. Nov. 24,2008	
Medical and dental, clinics & labs	Hayward	1 space/200 sq. ft.	Hayward Article 2. "Off-Street Parking Regulations"	
Medical	Santa Cruz	1 space/200 sq. ft.	Santa Cruz. "Downtown Parking District: Parking Deficiency Fees"	
Medical and dental	Yuba City	1 space/200 sq. ft.	Yuba City Zoning Regulations. Article 61	
Medical and dental	Healdsburg	1 space/200 sq. ft.	Healdsburg. Zoning Ordinance Article 19	
Medical and dental	Newport Beach	1 space/200 sq. ft.	Chapt. 20.52 "Off-Street Parking & Loading Standards"	
Professional	Sacramento County	1 space/ 222 sq. ft.	Zoning Code of Sacramento County	
Administrative, corporate	So. Pasadena	1 space/250 sq. ft.	So. Pasadena Municipal Code. 36.310.040	
R&D, laboratories	So. Pasadena	1 space/2S0 sq. ft. + 1 space for each company vehicle	So. Pasadena Municipal Code. 36.310.040	
Clinics, medical/dental offices	So. Pasadena	1 space/250 sq. ft.	So. Pasadena Municipal Code. 36.310.040	
Medical, dental	San Jose	1 space/250 sq. ft.	San Jose. "Parking Analysis Application"	
Medical and dental	Commerce	1 space/250 sq. ft.	Zoning Ord. Chapt. 19.21	
Medical, clinics	Yolo County	1 space/250 sq. ft.	Yolo County Code. Title 8. Chapter 2. Article 25	
Business	San Jose	1 space/250 sq. ft.	San Jose. "Parking Analysis Application"	
General	El Dorado County	1 space/250 sq. ft.	County Zoning Ord. Chapt. 17.18	
General	Hayward	1 space/250 sq. ft.	Hayward. Article 2. "Off-Street Parking Regulations"	
General	Livermore	1 space/250 sq. ft.	Livermore Code. Chapter 3-20 "Off-Street Parking"	
General, financial, business, professional	Yolo County	1 space/250 sq. ft.	Yolo County Code. Title 8. Chapter 2. Article 25	
Business, corporate, general	Newport Beach	1 space/250 sq. ft.	Chapt. 20.52 "Off-Street Parking & Loading Standards"	
Medical offices & clinics	Shasta	1 space/250 sq. ft.	Shasta Code Chapt. 17.86 "Off-Street Parking & Loading Regulations"	
Medical Practitioner	West Berkeley	1 space/300 sq. ft.	West Berkeley. Sect.23E.64.080 "Off-Street Parking & Loading Requirements"	
Business and professional	Oceanside	1 space/300 sq. ft.	Article 31. "Off-Street Parking & Loading Regulations"	
Business	Yuba City	1 space/300 sq. ft.	Yuba City Zoning Regulations. Article 61	
Administrative,business, professional	Healdsburg	1 space/300 sq. ft.	Healdsburg Zoning Ordinance. Article 19	
Business/service,govt.banks, professional, financial services	Petaluma	1 space/ 300 sq. ft.	Chapt. 11 "Parking and Loading Facilities, Off-Street"	
Professional, other than medical	Commerce	1 space/300 sq. ft.	Zoning Ord. Chapt. 19.21	
Bohannon Project DEIR	**Menlo Park**	**1 space/350 sq. ft.**	**Draft EIR**	
General	Santa Cruz	1 space/400 sq. ft.	Santa Cruz City. "Downtown Parking District: Parking Deficiency Fees"	

Table 1 Sample Parking Ratio Requirements in California for Office Space

Letter 25

Type of Office	Location	Rule	Reference
Health club, gym	San Jose	1 space/80 sq. ft.	"Parking Analysis Information & Instructions"
Physical fitness facility	Costa Mesa	1 space/100 sq. ft.	Resolution PC-06-
Project DEIR	**Menlo Park**	**1 space/190 sq. ft.**	**Draft EIR**
Health/fitness facilities (over 2000 sq. ft.)	Newport Beach	1 space/200 sq. ft.	Zoning Code. Title 20
Athletic clubs, gyms, health clubs	Hayward	1 space/200 sq. ft.	Zoning. Article 2."Off-Street Parking Regulations"
Health/fitness clubs	So. Pasadena	1 space/250 sq. ft. + 1 space for each employee	Muni. Code. Chapt. 36. Article 3
Health clubs and spas	Healdsburg	1 space/300 sq. ft.	Zoning Ord. Article 19
Health spas, gym	El Dorado County	1 space/300 sq. ft.	Zoning Ord. Chapt. 17.18 "Off-Street Parking & Loading"
Tennis, raquetball/health clubs	Yuba City	1 space/400 sq. ft. + 1.5 spaces/tennis court	Yuba City Zoning Regs. Article 61. "Off-Street Parking & Loading"
Physical fitness centers	Sacramento County	1 space/every 2 occupants based on Max. allowed occupant load	Sacramento County Zoning Code Chapt. 30

Table 2 Sample Parking Ratio Requirements in California for Health Club Space

Letter 25

Type of Facility	Location	Rule	Reference
Bars, nightclubs, dancing establishments	So. Pasadena	1 space/30 sq. ft. of dance floor area	Muni. Code 36.310.040
Bars, nightclubs, dancing establishments	So. Pasadena	1 space/100 sq. ft. of bar/nightclub area	Muni. Code 36.310.040
Public eating establishments	San Jose	1 space/ 40 sq. ft. of dining area	"Parking Analysis Information & Instructions"
Eating & drinking	Oceanside	1 space/50 sq. ft. of seating area	Zoning. Article 31
Bohannon Project DEIR	**Menlo Park**	**1 space/65 sq. ft.**	**Draft EIR**
Eating & drinking	Newport Beach	1 space / 75 sq. ft.	Muni. Code Chapt. 20.52
Bars & nightclubs	Commerce	1 space/75 sq. ft. + 1 space/ 2 employees on largest shift	Zoning Chapt. 19.21
Restaurant (new space more than 1,000 sq. ft.)	So. Pasadena	1 space/100 sq. ft.	Muni Code 36.310.040
Restaurants, cafes, nightclubs	Yolo County	1 space/100 sq. ft.	County Code Title 8. Chapt. 2. Article 25
Restaurant (standard)	Shasta	1 space/250 sq. ft.	Zoning. Chapt. 17.86 "Off-Street Parking & Loading Regulations"
Quick or full-service restaurants	West Berkeley	1 space /300 sq.ft.	Zoning Section 23E.64.080
Bars, taverns, nightclubs and restaurants, coffee shop, cafe	Petaluma	1 space/2.5 seats	Zoning Ord. Chapt. 11
Restaurants and bars	Sacramento County	1 space/3 seats	Zoning. Chapt. 30. "Off-Street Parking"
Restaurants, taverns, bars, nightclubs	Hayward	1 space/3 seats + 1 space/200 sq. ft. for other areas	Zoning. Article 2. "Off-Street Parking Regulations"
Restaurants and cocktail	Yuba City	1 space/3 seats + 1 space/50 sq. ft. of dance floor	Zoning Reg. Article 61."Off-Street Parking and Loading"
Restaurants, bars, cocktail lounge	El Dorado County	1 space/3 seats	Zoning. Chapt. 17.18
Restaurants	Livermore	1 space/3 seats	Zoning. Chapt. 3-20
Restaurants	Healdsburg	1 space/3 seats	Zoning. Article 19
Restaurants, sit-down and cafes	Commerce	1 space/4 seats + 1 space/2 employees on largest shift	Zoning Chapt. 19.21

Table 3 Sample Parking Ratio Requirements in California for Cafe/Restaurant Space

Letter 25

Type of Facility	Location	Rule	Reference
Hotels and motels	So. Pasadena	1 space/guest room, and 1.5 spaces for each multi-room suite; plus 1 space for each 20 guest rooms and 10 spaces for each 1,000 sq. ft. of conference meeting room area	Muni. Code 36.310.040
Hotels, motels, and time-share facilities	Oceanside	1.2 spaces/guest room + 1 space/50 sq. ft. of banquet seating area	Zoning Regs. Article 31
Hotels and motels	Yolo County	1 space/unit or room + 1 space/ each employee on duty	Zoning. Title 8. Chapt. 2. Article 25
Hotels, motels, extended stay hotels, +...	Healdsburg	1 space/guest room or 2 beds, whichever is greater, + 1 space/2 employees or owner/occupants	Zoning Ord. Article 19
Hotel, motel, boarding house, or bed and breakfast guest facility	Shasta	1 space/guest room + 1 space/ 2 employees	Zoning. Chapt. 17.86
Hotel/motel	El Dorado County	1 space/room + 1 recreational vehicle space for every 10 units	Zoning Chapt. 17.18. "Off-Street Parking and Loading"
Hotels and motels	Petaluma	1 space/living or sleeping unit + 1 space for owner or manager	Zoning Regs. Chapt. 11
Hotels and motels	Hayward	1 space/room + 1 space/2 employees on largest shift	Zoning. Article 2. "Off-Street Parking Regulations"
Hotels and motels	Yuba City	1 space/unit + 1 space/2 employees	Zoning Regs. Article 61
Hotels, motels, and motor hotels	Livermore	1 space/living or sleeping unit +...	Zoning Reg. Chapt. 3-20
Motels	Newport Beach	1 space/guest room or unit	Zoning. Chapt. 20.52
Hotels, motels, auto courts	Sacramento County	1 space/sleeping room, suite of rooms, or housekeeping unit	Zoning Code. Chapt. 30. "Off-Street Parking"
Hotels and motels	Commerce	1 space/guest room or unit	Zoning Reg. Chapt. 19.21
Bohannon Project DEIR	**Menlo Park**	**0.91 space/guest room**	**Draft EIR**
Hotels	Newport Beach	1 space/2 guest rooms	Zoning. Chapt. 20.52
Hotels	West Berkeley	1 space/3 guest/sleeping rooms or suites + 1 space/3 employees	Zoning Regs. Section 23E.64.080

Table 4 Sample Parking Ratio Requirements in California for Hotel Space

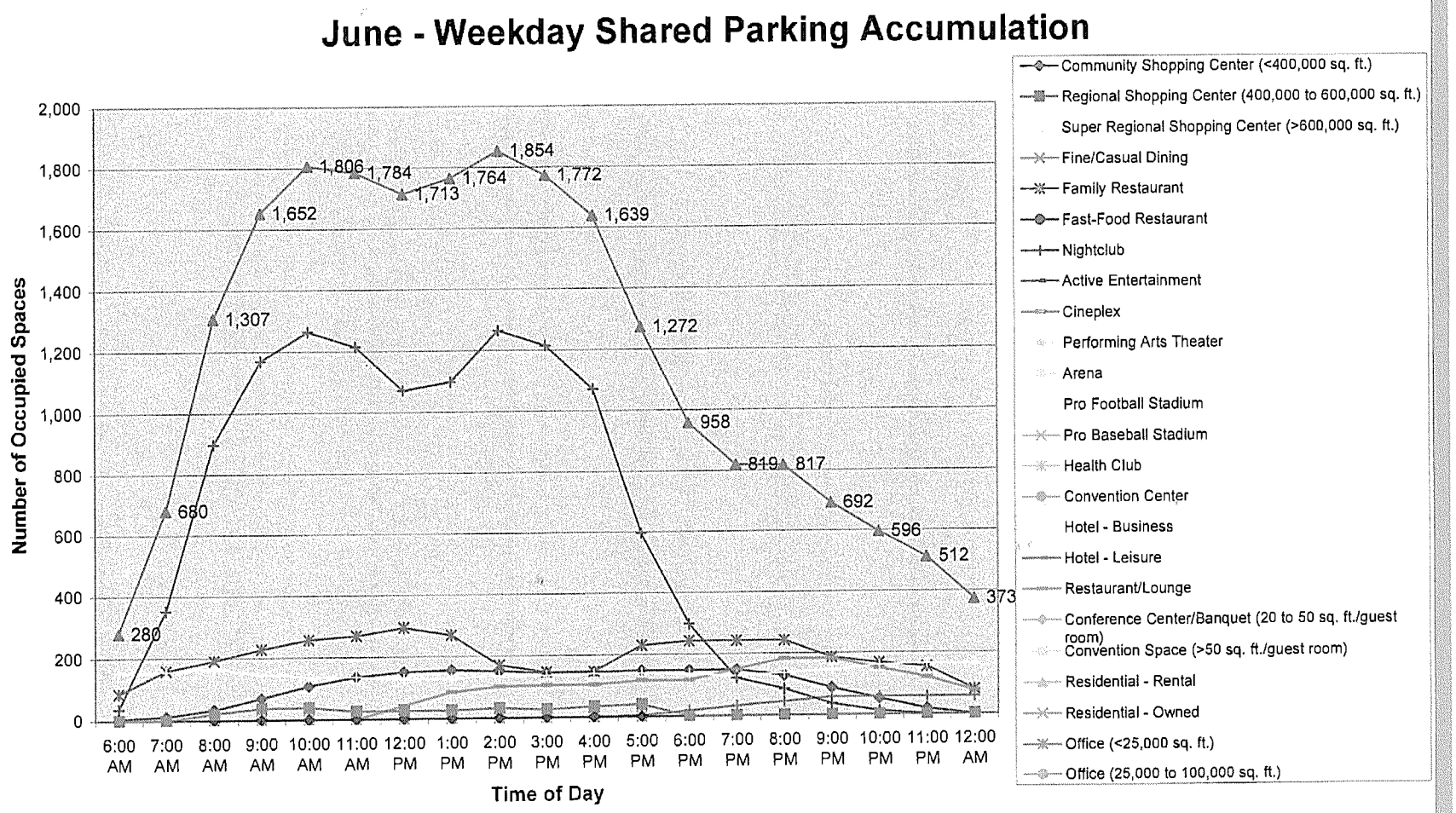
Letter 25

Type of Retail Space	Location	Rule	Reference
Convenience store	Commerce	1 space/20 sq. ft.	Zoning Ord. Chapt. 19.21
Neighborhood convenience retail stores	Healdsburg	1 space/150 sq. Ft.	Zoning Ord. Article 19
Convenience market, food stores	Livermore	1 space/200 sq. ft.	Zoning Regs. Chapt. 3-20
Retail sales	Oceanside	1 space/200 sq. ft. (for less than 5,000 sq. ft.)	Zoning Ord. Article 31
Banks, credit unions, savings & loans	Sacramento County	1 space/200 sq. ft.	Zoning Code. Chapt. 30
Retail sales, goods	San Jose	1 space/200 sq. ft.	"Parking Analysis Information & Instructions"
Retail	Hayward	1 space/215 sq. ft.	Zoning. Article 2
Retail stores and shopping centers	Sacramento County	1 space/222 sq. ft.	Zoning Code. Chapt. 30
General retail/services	Commerce	1 space/250 sq. ft. + 1 space/ 2 employees on the largest shift	Zoning Ord. Chapt. 19.21
Multi-tenant retail site or building (2 or more uses)	So. Pasadena	1 space/250 sq. ft.	Muni. Code 36.310.040
Retail stores & shopping	Yuba City	1 space/250 sq. ft.	Zoning Reg. Article 61
Retail stores (over 500 sq. ft.)	Yolo County	1 space/250 sq. ft.	Zoning. Title 8. Chapt. 2. Article 25
Retail sales	Newport Beach	1 space/250 sq. Ft.	Zoning Code. Chapt. 20.52
Retail sales	Oceanside	1 space/250 sq. ft. (for over 5,000 sq. ft.)	Zoning Ord. Article 31
Shopping center	Shasta	1 space/275 sq. ft.	Muni Code. Chapt. 17.86
General retail	Petaluma	1 space/300 sq. ft.	Zoning Ord. Chapt. 11
Retail (general merchandising not in a shopping center)	El Dorado County	1 space/300 sq. ft.	Zoning Ord. Chapt. 17.18
Retail	Santa Cruz	1 space/400 sq. ft.	"Downtown Parking District: Parking Deficiency Fees"
Commercial	West Berkeley	1 space/500 sq. ft.	Zoning. Section 23E.64.080
Bohannon Project DEIR	**Menlo Park**	**not specified for the 10,420 sq. ft. identified as "retail/community facilities"**	**Draft EIR**

Table 5 Sample Parking Ratio Requirements in California for Retail Space

Letter 25

Shared Parking



Letter 25: CHARLES P. BOURNE

Response to Comment 25-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 25-1

The proposed parking rates and analysis methodology are summarized in the Draft EIR on pages 3.11-55 and 3.11-56, and are discussed in detail in the traffic study, included as Appendix G in the Draft EIR (see pages 126-129). Included in the detailed discussion is the basis for the proposed M-3 parking requirements, which would be based on nationally recognized parking standards published by the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI). Please see Response to Comment 16-6.

Response to Comment 25-2

Please see Response to Comment 25-1, above.

Response to Comment 25-3

It is recognized that different communities have established different parking requirements for various land uses. Please see Response to Comment 25-1, above.

Response to Comment 25-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's opinion as to the adequacy of the proposed parking facilities is noted. Please see Response to Comment 25-1, above.

Response to Comment 25-5

It is recognized that different communities have established different parking requirements for various land uses. Please see Response to Comment 25-3, above.

Response to Comment 25-6

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the comment regarding Facebook in Palo Alto is noted.

Response to Comment 25-7

The specific tenant mix is not yet determined, but medical/dental offices were not analyzed, and would not be permitted uses. It should be noted that office tenants will vary over time. The traffic consultant analyzed the parking demand based on industry standards for retail, commercial and office space uses, which takes into account various factors. This is the standard approach to analyze parking demand for a project.

Response to Comment 25-8

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the comment is noted regarding health club parking ratios.

Response to Comment 25-9

The gross square footage of the restaurant was used in the analysis, and to be conservative, it was assumed that the restaurant would attract patrons from the surrounding businesses and community, rather than just the hotel itself. The proposed M-3 parking ratio of one parking space per 65 square feet is reasonable and has been used by the City to evaluate parking demand for other restaurant uses.

Response to Comment 25-10

The parking ratio for this type of hotel is consistent with the industry standard recommended practice, and thus is considered appropriate for the Draft EIR analysis. Please see Response to Comment 25-1, above.

Response to Comment 25-11

The Draft EIR assumed that any parking associated with banquet or meeting spaces would be accommodated through the shared parking facilities. The traffic analysis did not indicate that additional parking would be required for any banquet events or meetings. It is anticipated that parking for any banquet events and/or meetings could be accommodated in the parking structures. Based on industry standards, hotels that serve primarily business clientele often have excess parking demand during the day and on weekends, which coincides with the primary times of meetings or banquet functions.

Response to Comment 25-12

The parking requirements for the hotel include all hotel activity and staff, including employees, deliveries, guests and visitors.

Response to Comment 25-13

The number of parking spaces required was appropriately estimated using industry recognized standards and methodology. Please see Responses to Comments 16-6 and 25-1.

Response to Comment 25-14

The parking requirements associated with the proposed retail land use were included in the parking analysis (see pages 126-129 of the traffic study in Appendix G of the Draft EIR).

Response to Comment 25-15

Since publication of the Draft EIR, the project sponsor has modified the amphitheater to include small public gatherings. Please see Chapter 2, Revisions to the Draft EIR, for the new language. It is anticipated that these public gatherings would be small due to the size of the space and would not adversely affect parking. The parking structures on the Constitution site would be available to accommodate parking for events at the amphitheater, if necessary.

Response to Comment 25-16

The project will be designed to meet all the City requirements regarding loading docks and loading areas. A circular driveway is proposed to provide vehicular access to the hotel. Hotel guests will be able to safely unload bags and passengers in front of the hotel and then park their vehicle in the adjacent parking garage or utilize valet parking.

Response to Comment 25-17

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Please see Response to Comment 25-1, above.

Response to Comment 25-18

The numbers stated in the comment are correct, as reported in the Draft EIR.

Response to Comment 25-19

Included in the detailed discussion of the traffic study (see pages 126-129 of Appendix G in the Draft EIR) is the analysis and time frequency distribution. This analysis was based on industry recognized standards published by the Urban Land Institute in the Shared Parking Guidebook.

Response to Comment 25-20

Please see Responses to Comments 25-7 and 25-19.

Response to Comment 25-21

The most recent published standards have been applied to the parking analysis and are considered appropriate for use in the Draft EIR for the proposed project. The commentor's opinion is noted.

Letter 26

Rogers, Thomas H

From: Carole Grace [CaroleGrace@isp.com]
Sent: Monday, September 21, 2009 2:07 PM
To: Rogers, Thomas H
Subject: Bohannan project

Hi Thomas,

As I mentioned to you at last Thursday's visioning meeting, my first reaction to the Bohannan office park plans is: VERTIGO! Words can hardly convey how opposed I am to buildings with floor to ceiling glass. Because I am prone to vertigo, I truthfully would not be able to set foot into those buildings, and I know I'm not the only person with this issue. 26-1

But that aside, the other thought that occurred to me as I reviewed the plans is that this essentially is a 20th century concept with a few tweaks (LEED Design!) to make it do for the 21st century. It's a good, old fashioned one worker/ one car suburban office complex with high rise Manhattan aspirations. I have no objection to development, but I think this one doesn't meet many of the criteria that have been discussed not only at the recent Downtown Visioning meetings, but in meetings throughout the bay area regarding transit oriented development, housing, and reduced sprawl, not to mention that much touted "village feel" that residents in Menlo Park have expressed. 26-2

I also find it very offensive that the promotional materials by Bohannan stress the terrific views, while ignoring the obvious fact that the large, tall buildings will completely block the views of the East Bay for the rest of us, leaving us with an imposing view of some very massive glass façade buildings. However, it really is difficult to tell from the small drawings just what the impact would be for the surrounding area. What would these buildings look like from the Marsh road Baylands park, or from homes in Suburban Park? 26-3

Although the plans call for "non reflective" glass, I have no idea whether that means that those of us driving by won't be blinded by the sun reflecting off the building exterior as is the case with other glass façade buildings. There are examples of very tall, large office complexes on that side of 101, for instance, the Oracle buildings, and some other buildings farther towards San Jose. I've always regretted that those buildings were allowed, since they do block the views, create glare, and leave an impression of Manhattan rather than the peninsula. On the other hand, the squat, boxy industrial buildings that currently occupy that site are downright eyesores. 26-4

I'd like to see the plans include more shade trees, few (or no!) palm trees, and parking structures that are integrated into buildings, so that parked cars are not visible from the streets or the buildings. Avoid the IKEA look (their parking garage gets the prize for ugliest ever built), and avoid the old style expanse of open parking lot. The fronds from palm trees are not recyclable, and the trees offer little shade. Besides, our city logo has a native oak, not a non native palm, so please stop approving plans full of palm trees! 26-5

I'm also wondering what the plan is for all the buildings in the middle. The Bohannon project has two distinct, disconnected complexes: the office complex facing Bayfront, and the Marriott hotel along 101. Between the two is a large block full of older, single story industrial buildings. Is there a plan for replacing those? Does Bohannan own those properties as well? Might that be a place to put high density housing in the future, and could the Bohannan project be required to set aside funds for housing development if not include it in these current plans? 26-6

Properly done, this project could be a real boon to Belle Haven and an asset to Menlo Park. As currently proposed, it misses the mark. I would ask for better connection to the local Belle Haven community as well as to Menlo Park as a whole, in services offered (café's? shops? athletic club?), traffic mitigation (shuttle service to caltrain, dedicated bike paths), and less high tech glass architectural design (something that looks less Manhattan, more Menlo). Ideally, such new development should also have a housing component. Traffic is going to be a concern, but as Mr. Bohannon has pointed out- and those of us who've lived here for decades are well aware- traffic has ALWAYS been a huge concern. I think it's time to move beyond adding another lane to the freeway. A shuttle service to Caltrain and downtown during commute and noontime hours could work; having a bus stop for the east bay shuttle would be another 26-7

Letter 26

suggestion. Currently there is no easy way to bike across 101, but if you start requiring new developments to include dedicated bike paths, eventually we will have a network of 'bike streets' akin to the Netherlands. 26-7 (cont.)

And one last time: I really, really hate the floor to ceiling glass. Just for the record.

Carole Grace
100 Garland Drive
Menlo Park, CA

Letter 26: CAROLE GRACE

Response to Comment 26-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 26-2

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 26-3

Section 3.1, Aesthetics, in the Draft EIR addressed the change in visual character that would result if the project were approved and constructed. Visual simulations are provided in the Draft EIR looking south from the Haven Avenue/Bayfront Expressway intersection as well as southbound along Highway 101 right before the Marsh Road exit and eastbound over the Marsh Road overpass. In addition, a view of the project from Bedwell Bayfront Park was also included. As discussed in the section, the project would not degrade the visual character of the site, which currently is of an older, developed business park.

Response to Comment 26-4

As noted on page 3.1-24 of the Draft EIR, the buildings do not propose highly reflective mirrored glass walls. The windows or glass used on the building exteriors would be Low-E glass which reduces glare and reflectivity when the sun hits the building at just the right angle. In addition, horizontal sunshades would be included on the east and south sides of the buildings. As shown in the building elevations and as discussed in the Draft EIR in Chapter 2, Project Description, the buildings have been designed with an articulated façade to break up the flat plane of the building, further reduces the potential for glare.

Response to Comment 26-5

The project includes a landscaping plan that proposes new trees, shrubs and other landscaping plants, as well as attempt to retain as many existing trees on-site. The landscaping plan will be reviewed for consistency with the City's standards for new development, as well as the City's architectural/design review process.

As shown in the Draft EIR in Chapter 2, Project Description, the parking garages have been designed with metal trellises and landscaping to block views of the cars from street level. Proposed building designs would be required to go through the City's architectural/design review process to ensure compliance with applicable standards.

Response to Comment 26-6

The City has not received an application for the redevelopment of the parcels located between the project site. The parcels located between the Constitution and Independence sites are currently designated and zoned for industrial uses. The Bohannon organization does not own any of the properties located in this area. Any future plans for these parcels will be up to the individual property owners. The City does not anticipate rezoning this area to allow residential uses given its location. The project sponsor is required to pay a below market rate in lieu fee to the City in the amount of approximately $8 million dollars for the construction of housing elsewhere in the city.

Response to Comment 26-7

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the suggestions included in the comment are noted.

Please see Response to Comment 1-11 for more detailed information on pedestrian and bike routes within and around the project site.

Comments on Draft Environmental Report for the Menlo Gateway, aka Bohannon, Project

While there is much to commend regarding this project, these reviews are necessarily of a critical nature, and I will focus my attention on two aspects: reducing the negative effects of concrete and asphalt and traffic and circulation impacts. 27-1

I urge the adoption of measures to mitigate the negative effects of the use of concrete and asphalt in construction projects by considering the use of living rooftops, especially for the garages. Turning the top level of the garages into verdant oases would have many benefits that are sufficiently well known that I need not detail them here. 27-2

To access the location of the project east of highway 101 effectively requires the use of a car. I recognize the limits of the city to address transportation issues, but I cannot condone the absence of mitigation measures including improved bike and pedestrian access across 101 (specifically the Class II Bike Lanes on Marsh Road between Bay Road and Bayfront Expressway, although I would argue that Willow Road might be a more effective crossing point from the perspective of bicyclists). To state "less than significant impacts" for pedestrians and bicyclist belies the fact that current safe passage is virtually non-existent, and therefore, few people cross 101 on foot or by bike. I understand that it's not the responsibility of the developer to compensate for existing conditions, but the current lack of adequate paths does not preclude the city from requiring the developer to facilitate bike and pedestrian access. The developer is increasing the demand to access the property across 101; it does not seem unreasonable to expect the developer to shoulder some of this responsibility. Likewise, the necessity of cooperation with Caltrans to develop safe bike and pedestrian access across 101 should not be used as an excuse to ignore the challenge. 27-3

Lastly, I fully endorse the comments and recommendations made by Mitch Slomiak.

Sincerely,
Kristin Kuntz-Duriseti

p.s. By way of disclosure, I am an Environmental Quality Commissioner and a member of the Menlo Park Green Ribbon Citizens' Committee, although these comments solely reflect my own personal opinions.

Letter 27: KIRSTEN KUNTZ-DURISETI

Response to Comment 27-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 27-2

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the suggestion included in the comment is noted.

Response to Comment 27-3

Please see page 3.11-42 of the Draft EIR, as well as Response to Comment 1-11. The suggestions regarding developer responsibility are noted.

September 18, 2009

City of Menlo Park
Community Development Planning Division
701 Laurel Street
Menlo Park, CA 94025

SUBJECT: ADDITIONAL COMMENTS TO DRAFT ENVIRONMENTAL IMPACT REPORT FOR MENLO GATEWAY AT 100-190 INDEPENDENCE AND 105-155 CONSTITUTION DRIVES, MENLO PARK, CALIFORNIA

Dear City of Menlo Park:

A Draft Environmental Impact Report (Draft EIR) was sent to San Mateo County Health System Groundwater Protection Program (GPP) for the Menlo Gateway project at 100-190 Independence and 105-155 Constitution Drives in Menlo Park, California. The following comments are based on the review of the Draft EIR dated July 2009 prepared by PBS&J and the May 20, 2005 *Phase I Environmental Site Assessment (ESA) for 100, 110, 120, 150, & 190 Independence Drive* and the May 20, 2005 *Phase I Environmental Site Assessment for 105, 115, 125, & 135 Constitution Drive* prepared by EFI Global and the January 5, 2007 *Phase I Environmental Site Assessment Report 155 Constitution Drive* prepared by Secor. 28-0

The Draft EIR summarizes the Phase I ESAs as saying "all of the parcels on the Independence (and Constitution) site were deemed to be free of recognized environmental conditions (REC)." This is in direct contradiction to the statements actually made in the two May 20, 2005 Phase I ESAs which clearly state "no recognized environmental conditions were noted at this property (105, 115, 125, and 135 Constitution and 100, 110, 120, 150, and 190 Independence), **except** (bold for emphasis) that the groundwater below the property may be adversely affected by a regional groundwater contamination solvent plume from nearby properties in the area." In addition, for the properties at 150 Independence and 115, 125, and 135 Constitution Drive the Phase I ESAs state "although there is no evidence or report of releases to the subsurface, based on chemical uses history of the property, there exists the potential that the subsurface has been adversely affected by the historical activities at the property. 28-1

These statements in the Phase I ESAs seem to clearly identify a REC as being the regional groundwater contamination solvent plume for all of the properties covered by the Draft EIR except 155 Constitution Drive and a potential of another REC at four of the properties based on the chemical use histories at the properties. In GPP's opinion, these kinds of statements regarding RECs in Phase I ESAs usually leads to recommendations to perform Phase II ESAs in which actual groundwater (and perhaps soil and soil vapor) samples are collected at the properties. 28-2

The Draft EIR also seems to interpret the concentrations of residual contaminants (solvents trichloroethene (TCE) and tetracholorethene (PCE)) in groundwater at three properties off-site (115 and 119 Independence Drive and 120 Constitution Drive) referenced as part of a regional plume as being low levels. The concentrations, or levels, of solvents stated in the Phase I ESAs came from a review of GPP's files for these sites. GPP is not the lead regulatory agency for these three sites and therefore is not required to maintain the complete official record for these sites. The lead agency for each of these sites is the Regional Water Quality Control Board (RWQCB). The two May 20, 2005 Phase I ESAs did not appear to be based on a review of the RWQCB's files for these sites which would seem to have been readily available under a file review (Freedom of Information Act) request. Therefore, it appears the statement in the Draft EIR may not have been based on all of the readily available information, does not identify against what standard the concentrations were compared to to determine the relative term low as an appropriate description, or that an appropriately registered professional (professional geologist or civil engineer) in the State of California made the interpretation. 28-3

The Draft EIR also states direct exposure to groundwater at the project area and, hence, the elevated levels of contaminants, is not likely because groundwater is not used for domestic purposes. While this statement is true, it does not completely encompass all of the potential exposure pathways the receptors could come in contact with the solvents, most notably the vapor intrusion pathway. 28-4

GPP recommends the project proponent work with the lead regulatory agency (RWQCB) for the three sites which reference the regional contaminants in groundwater in determining the potential impact of the regional contaminants in groundwater on each of the properties identified as having this REC in The Phase I ESAs. GPP has already commented on the need for a Soil and Groundwater Management Plan in case the regional groundwater contamination solvent plume is encountered in soil or groundwater during the construction activities. 28-5

Please call me at (650) 372-6295 if you have any questions.

Sincerely,

Charles Ice
Hazardous Materials Specialist
Groundwater Protection Program

Letter 28: CHARLES ICE, SAN MATEO COUNTY HEALTH SYSTEM

Note: The original letter received from the San Mateo County Health System did not include the county letterhead; therefore, it was included as a public comment instead of an agency comment. In addition, the July 28, 2009 letter from the County, was lost and not received by the City until February, 2010. Therefore, this letter is included as Letter 28.1.

Response to Comment 28-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 28-1

The statement in the Draft EIR that there were no recognized environmental conditions (REC) accurately represents the conclusions as stated by the Phase 1 ESAs preparers for the identified properties. The Phase 1 ESAs did not identify potentially contaminated groundwater as a specific REC. Even though the Phase 1 ESAs did not report a groundwater plume REC, the Phase 1 ESA report preparers concluded groundwater below the properties could be impacted by solvent plumes, and such information was provided in the Phase 1 ESA. These conclusions, as stated in the Phase 1 ESAs, are accurately represented in the Draft EIR, and the sources for those conclusions are cited as footnoted references. While the commentor appears to be questioning why the Phase 1 ESA report preparers did not consider contaminated groundwater a REC, City staff does not believe there is any "direct contradiction" between the information included in the Phase 1 ESAs and its representation in the Draft EIR.

To further clarify and expand upon the information presented in the Draft EIR, Section 3.6, Hazards, of the Draft EIR has been revised to include additional information presented in the referenced Phase 1 ESAs pertaining to the potential for contaminated groundwater to be present under the project site. Please see Chapter 2, Revisions to the Draft EIR. The addition of this information does not change the conclusions of impact significance in the Draft EIR.

Response to Comment 28-2

As noted in Response to Comment 28-1, the commentor is of the opinion the contaminated groundwater plume under the project site should have been identified as a REC in the Phase 1 ESAs. The commentor is correct that statements such as those in the Phase 1 ESAs suggesting the potential for groundwater contamination should be further investigated. Regardless of whether the groundwater contamination is a REC, City staff concurs with the commentor that a Phase 2 investigation is warranted, even though the Phase 1 ESA report preparers did not recommend preparation of follow up studies, such as Phase 2 ESAs. Mitigation measure HM-2.1 has been revised to include a requirement for a Phase 2 ESA to investigate the lateral and vertical extent of groundwater contamination at the site

(new mitigation number HM-2.1), and a soil vapor intrusion study and soil vapor risk management plan (new mitigation number HM-2.5), and the health and safety plan requirement is re-numbered to HM-2.3. Please see Chapter 2, Revisions to the Draft EIR, for the revised language.

Response to Comment 28-3

The Draft EIR presented the information as reported in the Phase 1 ESAs. Phrases such as "low levels" are the interpretation of the Phase I ESA preparers, not the Draft EIR authors. A review of the 2007 Phase 1 ESA for 155 Constitution Drive (prepared by Secor and referenced in the Draft EIR) indicates that RWQCB files were reviewed. The text on page 3.6-6 has been revised to include this information and a footnote reference.

In addition, a review of current DTSC Envirostor and SWRCB Geotracker online databases (http://www.envirostor.dtsc.ca.gov, and http://geotracker.swrcb.ca.gov, respectively) shows that none of the Independence Drive and Constitution Drive properties that would be affected directly by project development are included in the DTSC Envirostor or SWRCB Geotracker online databases. Two off-site properties identified in the Phase 1 ESAs (115 Independence Drive and 120 Constitution Drive) are listed in the Geotracker database. The 115 Independence Drive site is listed as "open-inactive", and the 120 Constitution Drive site is listed as "completed-case closed." The text on page 3.6-6 has been revised to include this updated information. Please see Chapter 2, Revisions to the Draft EIR. This information clarifies and expands upon information presented in the Draft EIR, but it does not change the impact conclusion.

Response to Comment 28-4

Pages 3.6-2 and 3.6-3 in the Draft EIR have been revised. The sentence regarding the use of groundwater for domestic purposes has been removed to clarify that groundwater will not be used for the project. Please see Chapter 2, Revisions to the Draft EIR. As noted in Response to Comment 28-2, a mitigation measure has been added to address soil vapor (see new Mitigation Measure HM-2.5).

Response to Comment 28-5

Please see Responses to Comments 28-1 through 28-4. The Responses to Comments for Letter 28.1, below, responds to the letter noted in the comment.

Letter 28.1

SAN MATEO COUNTY
HEALTH SYSTEM

July 28, 2009

City of Menlo Park
Community Development Planning Division
701 Laurel Street
Menlo Park, CA 94025

SUBJECT: COMMENTS TO DRAFT ENVIRONMENTAL IMPACT REPORT FOR MENLO GATEWAY AT 100-190 INDEPENDENCE AND 105-155 CONSTITUTION DRIVES, MENLO PARK, CALIFORNIA

Dear City of Menlo Park:

A Draft Environmental Impact Report (Draft EIR) was sent to San Mateo County Health System Groundwater Protection Program (GPP) for the Menlo Gateway project at 100-190 Independence and 105-155 Constitution Drives in Menlo Park, California. The following comment is based on the review of the Draft EIR dated July 2009 prepared by PBS&J. 28.1-1

The Draft EIR identified residual contaminants (volatile organic compounds) in groundwater at three properties off-site (115 and 119 Independence Drive and 120 Constitution Drive) referenced as part of a regional plume and therefore may be present on-site. Proposed mitigation measure HM-2 addresses the potential exposure to workers and the public during construction; however, it does not address the handling, storage, testing, profiling, and final disposition of the contaminated soil and groundwater which may be encountered. San Mateo County request a Soil and Groundwater Management Plan be submitted and approved prior to any dewatering or excavation activities deeper than 5 feet at the site. 28.1-2

I appreciate your cooperation. Please call me at (650) 372-6295 if you have any questions.

Sincerely,

Charles Ice
Hazardous Materials Specialist
Groundwater Protection Program

Letter 28.1: CHARLES ICE, SAN MATEO COUNTY HEALTH SYSTEM

Response to Comment 28.1-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 28.1-2

Please see revisions to the text that include a new mitigation measure requiring the project applicant to prepare and implement a soil and groundwater management plan. Please see Chapter 2, Revisions to the Draft EIR, specifically Mitigation Measure HM 2.1.

September 19, 2009

City of Menlo Park
Planning Division
Thomas Rogers, Associate Planner
Justin Murphy, Development Services Manager
701 Laurel Street
Menlo Park, CA 94025

RE: Comments to Draft EIR for Bohannon Towers (100-190 Independence Drive and 101-155 Constitution Drive) dated July 2009, SCH #2005062161

Dear Mr. Rogers and Mr. Murphy:

This proposed project is the largest commercial project proposed in Menlo Park and has significant impacts. To reduce many of these I recommend that our council only approve Alternative 3, thus keeping the Zoning in the area known as M-2 the same as it currently is zoned, but allowing for the hotel to be constructed. 29-0

The draft environmental impact report (DEIR) referenced above contains significant flaws and errors in many areas of the report.

1. The traffic planning does not consider the proposed large new development in the salt marsh area of Redwood City. What about other large projects in the planning and draft environmental review phases at Stanford, in Redwood City, Palo Alto, and other nearby communities? 29-1

2. The traffic study showing (Table 3.11-5) a net of only 937 net new AP Peak hour(s) trips is unrealistic given that there could be 1,878 net new employees. Same is true for PM peak hour(s) trips. 29-2

3. There will be significant unavoidable traffic impacts. According to CEQA approving the project will require a finding of over-riding considerations, but this can be done only if Menlo Park cannot accomplish its goals using an environmentally superior method. (According to the Fiscal Impact Analysis, the net revenue from the project will be about $1.7 million yearly, with the lion's share coming from the hotel component. I understand this is not part of the DEIR process, but wanted my comments about this on the record.) 29-3

   This project's costs in Environmental Degradation, Induced Growth, and unavoidable traffic impacts are not worth the benefits. Menlo Park is certainly creative enough to come up with and evaluate alternative ways or projects to fund its services. 29-4

4. Impact PH-2 is wrong and misleading. The DEIR indicates (page 3.9-8) that 1,221 "indirect" and induced jobs would be created throughout the Bay Region. However, if the project were to move forward, there should be some considering that the majority (50 to 90%) of these "induced" jobs would be in and near Menlo Park. If one assumes that these jobs, serving those people in this proposed project, are within "commuting" distance, then really there new number of jobs in the area ranges from 2,488 to 2,977 net new employees. This is the number that should be used for the Housing Needs Analysis. 29-5

5. From the discussion in #3 above, then the section on "Induced Housing Demand" on page 3.9-98 is completely wrong and misleading. 29-6

6. Impact PH-3 on page 3.9-9 is flatly wrong and misleading. As I stated in my comments at the Planning Commission hearing, and was stated by others, the assumption used in the Housing Needs Analysis, that was an input to this, showing that only ten percent (10%) of the new household demand should be from Menlo Park is not sustainable assumption. This assumption is on page 2 of the Keyser Marston study. This study shows that 408 of the 1,090 households would be from the Upper income tier. Those people do not want to spend hours commuting (nor do the lower income tiers, I am sure). The fact of the matter is that 80 to 90 % of these almost 3,000 net new jobs would need to be housed nearby. 29-7

   If every city jurisdiction considering projects made the assumptions shown in the Housing Needs Analysis and discussed on page 3.9-9, then every jurisdiction could "assume away" the real growth inducement that the projects really create. This assumption makes project allocations of household a true "shell game". 29-8

7. The Regional Housing Needs Allocation discussion in the Keyser Marston report, and then also discussed on page 3.9-9 of the DEIR, is seriously flawed from a logic standpoint.
   a. Using 2,977 new jobs and 1.72 workers per household, then 1,731 new household units would have to be created – in this area, not in the Central Valley. 29-9
   b. The existing allocation from ABAG for 2007 to 2014 of 993 units only accounts for the existing Menlo Park General Plan, not including a project that increases net new employment by almost 3,000. 29-10
   c. ABAG will have to increase the RHNA allocations significantly in the future once they start hearing about these flawed assumptions. 29-11

d. This is really going to impact school districts, and the number of new children. Menlo Park's excellent schools will be severely strained by all this new induced growth as all those new 3,000 employees with children will want to attend. As is pointed out, Menlo Park schools will receive no fees or funds from the proposed project. 29-12

8. Other Public Services and the impacts on them will need to be adjusted to see the real impacts of adding 1,731 new households. 29-13

Items # 1-8 above all create significant impacts, which data really need to be included in the study for the elected officials and the community to understand how this project will impact Menlo Park and the Peninsula now and into the future. 29-14

In addition, I want to make sure these following comments are added and for the record if the proposed project were approved: 29-5

9.) Section 3-01 of the DEIR evaluates aesthetic (visual) impacts:

- The DEIR does not do shadow study on commercial neighbors or assess either the shadowing or visual impacts of the 8-story 140 foot buildings on the existing two-story commercial structures in between. 29-15
- The DEIR does not find blocked views of the bay from the existing commercial buildings or the impact of the views on the skyline from Bayfront Park to be significant. 29-16
- The DEIR does not evaluate the visual impacts that come from the sheer size of the 140 foot tall buildings next to 2-story buildings or the massing of approximately 1.7M square feet of buildings and structured parking. 29-17

These visual impacts are "significant".

10.) The DEIR doesn't evaluate the possible impacts of applying the proposed new M-3 zoning code anywhere else in the huge industrial M-2 zone in the greater vicinity there. The new M-3 zoning would allow more than double the amount of development currently allowed, such as more 11 story buildings. And because parking structures don't count toward FAR (countable development), the new zoning code actually allows about four times as much development as the existing code. 29-18

This is way too much development for this area and a significant impact.

11.) Section 4 of the DEIR deals with induced growth:

- Its reasonably foreseeable that the project developer, The Bohannon Development Company, will want to use this new zoning on other parcels owned 29-19

by the applicant or its related businesses in the M-2 area. 29-19 (cont.)

- Other large property owners will want it as well, including the owners of the commercial buildings surrounded by the project, but the growth section denies any growth inducing impacts. 29-20
- The DEIR doesn't speak to precedents in the growth inducing section. These precedents include the 140 foot height limit; structured parking; M-3 ordinance are all precedents, and the new M-3 ordinance eliminates an obstacle to growth for other land-owners of other parcels. 29-21

These precedents will be used elsewhere in M-2 and induce further growth. These are tremendously significant impacts. 29-22

12.) Impacts on climate change.

- The proposed project will increase greenhouse gas emissions by at least 15,000 and as much as 24,000 metric tons of CO2 equivalents (CO2) per year, with the bulk of the emissions resulting from increased vehicular usage. The differential between 15,000 and 24,000 metric tons per year of CO2 is dependent upon whether the developer implements all of the Proposed Emission Reduction Strategies described on pages 3.13-21 to 3.13-23. 29-23
- Its equivalent to adding 14,000 new homes' emissions. 29-24
- Menlo Park has no standards in place yet by which to judge "significance". 29-25
- The Bay Area Air Quality Management District is proposing to adopt a standard of significance for GHG emissions of 1,100 tons/yr for land use projects. This proposed project would emit more than ten times that amount even if the developer follows through with all mitigations. 29-26

The green house gas emitted by this proposed project is significant, and Menlo Park should have an adopted standard. 29-27

13.) The proposed project is also being built on land that, at 5 feet above sea level, is expected, within the lifetime of these buildings, to flood due to sea level rise as projected by the Bay Conservation and Development Commission (BCDC). Yet no assessment is being made of the costs to the City of emergency services to deal with such flooding this, nor are mitigations like levees being funded to ensure protection of this important industrial area and the nearby moderate income Belle Haven neighborhood all of which are at risk of flooding due to sea level rise estimates from overall climate change impacts. 29-28

Comments
The Climate Change impacts described in the draft EIR are quite disturbing. If built as proposed, it would add a net of 24,000 metric tons of CO2 per year, and even if the City requires all of the potential Emission Reduction Strategies described on pages 3.13-21 to 3.13-23 of the EIR it would add 15,000 tons per 29-29

year. This project as proposed would increase our community's GHG emissions by a 3 - 5% above current levels at a time when we need to be reducing emissions from current levels by at least 2% per year for the next 40 years to meet our Governor Schwarzenegger's GHG reduction targets. 29-29 (cont.)

In 2005 the Menlo Park community was responsible for nearly 500,000 metric tons of CO2 annually with a "business as usual" estimate that this will increase by more than 100,000 metric tons of CO2 per year, to more than 600,000 metric tons of CO2 by 2020. [see draft EIR, page 3.13-7] This means that this project will increase our community's greenhouse gas emissions by 3%-5% above current levels, or, put another way, will in and of itself comprise 15% to 24% of the previously estimated "business as usual" increase in CO2 within our community. This is a significantly negative environmental impact of the proposed project. 29-30

To address these concerns, respected local climate action leaders recommend that following items must be addressed by staff and City Council (or agreed to by the developer up front as part of the proposed project):

1) Change the voluntarily compliance to required with LEED gold or platinum and other greenhouse gas mitigations described in the draft EIR into required project conditions or outcomes. 29-31

2) Require some or all of the additional mitigations described in the draft EIR, and then have the developer fund projects that neutralize the smaller resulting increase in greenhouse gas emissions. 29-32

3) Address the emergency resources issues so that the City does not face egregious costs from the future flooding that is very likely to occur at this site during the useful life of this proposed project, if approved, and explore a developer fee to fully fund construction of levees in environmentally sensitive ways that would also protect the Belle Haven neighborhood and the rest of the Menlo Park industrial areas near 101 which are key tax generators to support City services. 29-33

I specifically request that these three types of conditions be added to mitigate the GHG emissions from and climate change impacts relating to this project, if approved. 29-34

Sincerely,
David Speer
1302 Orange Avenue
Menlo Park, 94025

Letter 29: DAVID SPEER

Response to Comment 29-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. The opinion expressed by the commentor to approve Alternative 3 is noted.

Response to Comment 29-1

CEQA Guidelines section 15125 requires that an EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published. The NOP was published in May 2007, before the Cargill Salt Ponds project was in the development pipeline. The City of Redwood City received a formal application for this project on May 19, 2009, two years after the NOP was released; thus, the Cargill project need not be considered in this EIR's baseline under CEQA. Furthermore, there is a growth factor built into the cumulative traffic analysis to account for additional traffic associated with projects that are not yet approved or not yet envisioned (in Redwood City, Palo Alto, Menlo Park and elsewhere).

Response to Comment 29-2

The projected number of peak hour trips typically does not correlate to the number of new employees. The peak hour of traffic analysis is the highest hour during the AM or PM peak period, which extends over several hours. Not all employees will arrive during the same hour, or leave during the same hour. Many will arrive or depart in the hour before or after the peak hour, thus spreading out the traffic across the peak periods.

Response to Comment 29-3

The comment does not include specific comments or concerns that address the adequacy of the EIR or the City's compliance with CEQA and thus does not warrant further response in this document. While a response is not required to comply with CEQA, please see Response to Comment 3-11 that addresses the City's obligation to prepare project findings.

Response to Comment 29-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's concerns are noted.

Response to Comment 29-5

As described in Appendix F of the Draft EIR (see page 35), the Housing Needs Analysis evaluates housing demand associated with direct employment, or 1,878 net new employees generated by the project. The multiplier effects are not included, which is a standard approach for an analysis of this nature. Direct jobs have the clearest connection to the development of the project, because the location of the jobs is known, and the types of jobs and pay levels can be readily estimated. Multiplier effects can be viewed as more speculative particularly with respect to the location of the jobs. Similar to the way in which the traffic analysis must identify intersections to analyze based on those most likely to be impacted, the Housing Needs Analysis is required to have a reasonable and defined scope of analysis. The scope for the Housing Needs Analysis was defined to address housing needs associated with the number of net new or direct jobs associated with the project, given that these jobs have the clearest nexus with the project. As indicated on page 3.9-9 of the Draft EIR, the indirect and induced employment that could potentially be generated by the project would be distributed throughout the region and is not concentrated in any one geographic area; therefore, the related physical environmental effects were expected to be less than significant. The same could be said with respect to the induced housing demand associated with this indirect employment growth. The statement that the majority of indirect and induced jobs would be in or near Menlo Park is not likely to be the case because most new worker households will be commuting. Census data indicates that 10 percent of those individuals that work in Menlo Park also reside in Menlo Park with the balance residing throughout the Bay Area. A primary driver of indirect and induced employment is the household expenditures of direct employees. Given that direct employees are anticipated to be dispersed throughout the Bay Area, their household expenditures and the jobs generated by those expenditures would also be dispersed. The residential location for indirect and induced employment can be expected to be even further dispersed than direct employment. Please see also Responses to Comments 6-15 and 8-6.

Response to Comment 29-6

The second, third and fourth paragraphs on page 29 of Appendix F of the Draft EIR are revised to provide additional explanation regarding the selection of the ten percent factor applied to estimate the City of Menlo Park's share of housing demand generated by the proposed project and the rationale why a more conservative upper-end estimate of the number of households that would seek and find housing in Menlo Park is appropriate. Please see Chapter 2, Revisions to the Draft EIR, for the revised language.

The reference to 3,000 jobs appears to be inclusive of multiplier effects and is therefore an overstatement. Please see to Response to Comment 29-5 regarding multiplier effects.

Please see Response to Comment 29-5.

Response to Comment 29-7

Please see Response to Comment 29-6, above.

Response to Comment 29-8

The Housing Needs Analysis contained in Appendix F of the Draft EIR does not "assume away" any of the housing need. It provides an estimate of the total housing demand that could occur somewhere within the region (see Appendix F, page 2) and also provides an estimate of the share of the regional housing demand that would be met in the City of Menlo Park based on the existing commute relationship between the adjacent jurisdictions (see Appendix F, page 30). Please see also Responses to Comments 29-5 and 29-6.

Response to Comment 29-9

Appendix F in the Draft EIR Section VI addresses the potential for an increase in the City's Regional Housing Needs Allocation (RHNA). This section relates only to the regulatory framework of housing element law and the RHNA process and is separate from the analysis of demand for housing associated with the project. An estimate of total demand for housing within the region as a result of the project is provided in Appendix F on page 2. Please see also Response to Comment 29-5 which provides an explanation of why the analysis is appropriately based on the 1,878 net new direct jobs and 1,090 households rather than 2,977 jobs and 1,731 households referenced in the comment.

Response to Comment 29-10

There is not a direct relationship between ABAG's Projections and the City's General Plan. As noted in Appendix F (in the Draft EIR) on page 38, "ABAG's Projections assume local governments will adopt land use policies and plans that support regional objectives." Please see also Response to Comment 29-5, which provides an explanation of why the analysis is appropriately based on 1,878 net new direct jobs rather than 3,000 jobs as referenced above.

Response to Comment 29-11

Appendix F (Housing Needs Analysis, in the Draft EIR), Section VI, beginning on page 37 addresses the potential for an increase to the City's RHNA allocation. The analysis included in Appendix F is then referenced on page 3.9-9 of the Draft EIR. Please see also Responses to Comments 29-5 through 29-10.

Response to Comment 29-12

As indicated on page 3.10-1 of the Draft EIR and in the Initial Study (see Appendix B of the Draft EIR) it was determined that there would be no project-related impacts to schools because the proposed uses are business-related and would not generate a permanent new residential population. Please see Response to Comment 29-5 which provides an explanation of why the analysis is appropriately based on the 1,878 net new direct jobs rather than 3,000 jobs referenced in the comment. The 1,878 jobs translates into 1,090 households, of which approximately 10 percent or 109 are estimated to seek and find housing in the City of Menlo Park (please see Response to Comment 29-6 for additional discussion of the 10 percent factor). The 109 households estimated to seek and find housing in Menlo Park is the

figure that is relevant regarding potential impacts to Menlo Park schools as a result of induced housing demand (not 3,000). As noted on page 3.9-9 of the Draft EIR, while induced housing demand of 109 units is anticipated in Menlo Park, this demand is well within the 993 units included within the City's RHNA allocation for 2007-2014.

The comments regarding school fees and finance do not concern the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 29-13

As indicated on page 3.10-1 of the Draft EIR and in the Initial Study (see Appendix B of the Draft EIR), it was determined that there would be no project-related impacts to schools, parks, and other public facilities because the proposed uses are business-related and would not generate a permanent new residential population. As noted on page 3.9-9 of the Draft EIR, while induced housing demand of 109 units is anticipated in Menlo Park, this demand is well within the 993 units the City's RHNA allocation for 2007-2014. Please see Response to Comment 29-5 which provides an explanation of why the analysis is appropriately based on the 1,878 net new direct jobs, which translates into 1,090 households (rather than 1,731 as referenced above), of which approximately 10 percent or 109 are estimated to seek and find housing in Menlo Park.

Please see Response to Comment 29-5 for additional discussion of the 10 percent factor.

Response to Comment 29-14

Impacts associated with an increase in employees are addressed in the Draft EIR based on the Housing Needs Analysis (see Appendix F of the Draft EIR) prepared by KMA.

Response to Comment 29-15

Please see Response to Comment 6-2.

Response to Comment 29-16

Section 3.1, Aesthetics, addresses the change in visual character associated with implementation of the Menlo Gateway project. The standards of significance, listed on page 3.1-13, identifies a significant impact if the project would substantially degrade the existing visual character or quality of the area or create a substantial new source of light or glare. The standards do not address impacts solely associated with a change in views. The positive or negative value attached to changes in visual character is largely subjective. Rather than placing a judgment that the change is positive or negative, the analysis focuses on the extent to which change would occur, and whether the resulting visual character would be substantially different from the visual character that exists today. As noted in the section, development of the site with more intense uses would change the existing visual character of the immediate project site, but the change would not be out of character with existing development in the project vicinity. Please see Responses to Comments 17-52 and 17-53.

Response to Comment 29-17

As noted above, the positive or negative value attached to changes in visual character is largely subjective. Rather than placing a judgment that the change is positive or negative, the analysis focuses on the extent to which change would occur, and whether the resulting visual character would be substantially different from the visual character that exists today. The project is located in a developed area of the City in an existing suburban-style business park. The new buildings would contrast visually with the surrounding area; however, the surrounding area is a developed, urban environment (with the exception of Bedwell Bayfront Park to the north) and the taller, larger buildings would not degrade the existing developed visual character of the area. In addition, the project would go through the City's architectural control process to review building design and landscaping plans relative to the City's guidelines and standards.

Response to Comment 29-18

Please see Responses to Comments 8-4 and 8-5.

Response to Comment 29-19

At this time it is unknown if the M-3 zoning district would be expanded to include any other parcels in the M-2 district. The City will review each development application that is received and will conduct the necessary environmental review for any projects requesting a General Plan Amendment, Rezoning, or other discretionary approval.

Response to Comment 29-20

Under the existing M-2 zoning district and Limited Industrial land use designation some of the uses currently proposed under the new Mixed-Use Commercial Business Park designation and M-3 zone could be allowed through a Conditional Development Permit. Please see Response to Comment 8-5 for more information.

Response to Comment 29-21

The new Mixed-Use Commercial Business Park land use designation and M-3 zone would not eliminate an obstacle to growth because any subsequent development applicants within the M-2 zone (or, for that matter, any area of the City) would be required to go through the process of seeking a General Plan Amendment and Rezone to this new land use designation and zoning district. Therefore, there is no obstacle in place currently that would limit the ability of a project applicant to develop their land with a higher intensity use. Moreover, the project would not be eliminating an obstacle, such as constructing a road through an undeveloped area that now enables access where it didn't exist previously. The project is creating a new land use designation that allows many neighborhood or community related services that support office, industrial, or light manufacturing uses. Please see also Responses to Comments 8-4 and 8-5.

Response to Comment 29-22

Please see Responses above to Comments 29-20 and 29-21.

Response to Comment 29-23

Please see Response to Comment 8-18 and 32-9.

Response to Comment 29-24

Comparing the project to an arbitrary and unsupported claim that it is "equivalent to adding 14,000 new homes' emissions," is not relevant to the environmental analysis of GHG emissions associated with the project or any significance determination required by CEQA. The project is a mix of commercial/office space that includes building design features that reduce GHG emissions. Additional mitigation further reduces project generated emissions below the BAAQMD Threshold criteria, which is the basis for a less-than-significant finding.

Response to Comment 29-25

The standards, or thresholds, used by the City of Menlo Park to address the significance of climate change are discussed in Chapter 2, Revisions to the Draft EIR. The BAAQMD recently released draft thresholds that are not yet adopted, but are anticipated to be adopted at the end of this year. Based on this new guidance, the project was evaluated using these new thresholds. Please see Responses to Comments 8-21 and 32-9 as well as Chapter 2, Revisions to the Draft EIR, for more details.

Response to Comment 29-26

Please see Responses to Comments 8-22 and 32-9 for more information pertaining to the BAAQMD's draft thresholds.

Response to Comment 29-27

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's opinion is noted.

Please see also Responses to Comments 29-15 through 29-27, as well as responses to Comment Letter 32.

Response to Comment 29-28

Please see Responses to Comments 5-2 and 8-30.

Response to Comment 29-29

Please see Response to Comment 8-20, 8-23 and Comment Letter 32 for responses that address climate change generally. Specifically, see Responses to Comments 32-2, 32-6, and 32-9. In addition, please see Chapter 2, Revisions to the Draft EIR.

Response to Comment 29-30

Please see Response to Comment 8-19 and Comment Letter 32 for responses that address climate change generally. Specifically, see Responses to Comments 32-2, 32-6, and 32-9.

Response to Comment 29-31

Please see Response to Comment 8-28.

Response to Comment 29-32

Please see Response to Comment 8-29.

Response to Comment 29-33

Please see Responses to Comments 8-30 and 19-16.

Response to Comment 29-34

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's request is noted.

Letter 30

Rogers, Thomas H

From: Jack Morris [jhmsvcs@sbcglobal.net]
Sent: Monday, September 21, 2009 4:31 PM
To: Rogers, Thomas H
Subject: Comments on Menlo Gateway Project DEIR

1. The project description includes:

"The proposed project would create a new General Plan land use designation ... called Mixed-Use Commercial Business Park."
...

"The proposed project would also amend the City's Municipal Code zoning ordinance to include a new Mixed-Use Commercial Business Park (M-3) district ..." 30-1

It is one thing for a project to propose amending the General Plan and/or the zoning ordinance to extend existing land use designations or/and zoning designations to the include the proposed project. It is quite another thing for a development project to propose NEW General Plan land use designations and NEW zoning ordinance designations to accommodate the project.

The proposed changes to the General Plan and zoning ordinance should be considered by the City as projects separate from the property development proposed by the Gateway Project. The changes proposed for the General Plan and zoning ordinance should should be separated from the Menlo Gateway Project and should undergo thorough CEQA environmental review and City fiscal impact review on their own merits, not as incidental pieces of the property development project. 30-2

2. The Traffic and Circulation analysis is deficient by failing to discuss impacts on Middlefield Road traffic and circulation that result from the project impact at the Marsh/Middlefield intersection. 30-3

3. The Traffic and Circulation analysis is deficient by failing to analyze traffic and circulation impacts resulting from trips to/from schools in Menlo Park resulting from (even the understated number) of project employees working in the proposed project. 30-4

Thank you for considering these comments.

Jack Morris
(Former member of City Council and Planning Commission; former Mayor)
140 Baywood Avenue
Menlo Park

650-325-1886

Letter 30: JACK MORRIS

Response to Comment 30-1

The project is proposing to create a new land use designation and zoning district to allow neighborhood-serving commercial, café/restaurants, hotel, and health club uses within an area that is currently designated and zoned for industrial uses. The potential impacts associated with this change in land use and zoning have been evaluated in the Draft EIR. Under California's Planning and Zoning laws, it is often necessary for an applicant to seek both new land use designations and zoning districts as part of a development application.

Response to Comment 30-2

It is common for development projects to require a general plan amendment and/or a rezone to accommodate the project being proposed. In this instance, the project sponsor is seeking both a general plan amendment, zoning ordinance amendment, and a rezone to accommodate the project. The Draft EIR evaluated the potential for the GPA/ZOA to be approved, as well as the specific Menlo Gateway project. Therefore, impacts associated with the maximum allowable development under the GPA/ZOA were evaluated in the Draft EIR on a program level separate from the Menlo Gateway project.

Response to Comment 30-3

The traffic analysis followed the City of Menlo Park's Traffic Impact Analysis Guidelines, as well as those of the San Mateo County Congestion Management Agency. The traffic analysis in the Draft EIR evaluates impacts to the Marsh Road/Middlefield Road intersection. Please see Responses to Comments in Letter 3.

Response to Comment 30-4

School trips of project employees would potentially be at any number of schools throughout the Bay Area, depending on where the employees live. It is too speculative to assume where the additional school trips would occur for the purposes of the EIR analysis.

Letter 31

Rogers, Thomas H

From: andrea ralston [agkrieger@yahoo.com]

Sent: Monday, September 21, 2009 10:44 AM

To: Rogers, Thomas H

Subject: Bohannan Development Feedback

Hello Planning Commission,
While I'm sure this project has been in the works for years, it seems unconscionable for the Planning Commission to be considering a project of this magnitude during such a difficult economic time. We have many large **empty** buildings in Menlo Park, why would you even consider spending the money to develop a wetlands area? It seems like a lose-lose proposition. The community would lose a beloved wetlands area to a very much unneeded office park. Please redirect the developers to the many car dealership spaces along El Camino. Wouldn't our money be better spent redeveloping this area along the train tracks than to take a way a unique wetlands area from the city? 31-1

Thanks for your time,
Andrea Ralston

LETTER 31: ANDREA RALSTON

Response to Comment 31-1

The project site is located in an existing developed business park. The project site is not located in a wetlands area. Bedwell Bayfront Park is located across Bayfront Expressway to the north of the project site.

SHUTE, MIHALY & WEINBERGER LLP
ATTORNEYS AT LAW

E. CLEMENT SHUTE, JR.*
MARK I. WEINBERGER (1946-2005)
FRAN M. LAYTON
RACHEL B. HOOPER
ELLEN J. GARBER
TAMARA S. GALANTER
ANDREW W. SCHWARTZ
ELLISON FOLK
RICHARD S. TAYLOR
WILLIAM J. WHITE
ROBERT S. PERLMUTTER
OSA L. WOLFF
MATTHEW D. ZINN
CATHERINE C. ENGBERG
AMY J. BRICKER
GABRIEL M.B. ROSS
DEBORAH L. KEETH
WINTER KING
KEVIN P. BUNDY
*SENIOR COUNSEL

396 HAYES STREET
SAN FRANCISCO, CALIFORNIA 94102
TELEPHONE: (415) 552-7272
FACSIMILE: (415) 552-5816
WWW.SMWLAW.COM

AMANDA R. GARCIA
JEANNETTE M. MACMILLAN
ISAAC N. BOWERS
HEATHER M. MINNER
ERIN B. CHALMERS
KRISTIN B. BURFORD

LAUREL L. IMPETT, AICP
CARMEN J. BORG, AICP
URBAN PLANNERS

MATTHEW D. ZINN
ZINN@SMWLAW.COM
(415) 552-7272 EXT. 253

September 21, 2009

Via E-Mail and FedEx

Mr. Thomas Rogers
Associate Planner
City of Menlo Park
701 Laurel St.
Menlo Park, CA 94025
E-Mail: throgers@menlopark.org

Re: Comments on the Draft Environmental Impact Report for the Menlo Gateway Project

Dear Mr. Rogers:

This firm represents Paul Collacchi, former mayor and member of the City Council of Menlo Park. Mr. Collacchi has asked us to provide comments on the legal adequacy of portions of the Draft Environmental Impact Report for the Menlo Gateway Project ("DEIR"). Specifically, he has asked us to review the document's discussion of the project's impacts on climate change. As we describe in this letter, that discussion does not live up to the standard established by the California Environmental Quality Act ("CEQA"). 32-0

SUMMARY

As described in detail below, the DEIR for the Menlo Gateway project is fatally flawed. Without making substantial modifications to the document and recirculating it for further public comment, approval of the project would violate CEQA in several respects and would set a dangerous precedent for local governments' CEQA analysis of greenhouse gas emissions. 32-1

But most importantly, it would allow the Menlo Gateway project to proceed without adequately reducing the project's significant contribution to the acute problem of climate change. The State of California has recognized the enormity of the problem of climate change and has determined that we must reduce emissions of greenhouse gases ("GHGs") to their 1990 levels or below. AB 32 and other state legislation has set the state on the path toward those reductions. Nevertheless, we will not achieve those necessary reductions if we continue to approve *new* sources of emissions without dramatically reducing or offsetting those emissions. 32-2

By requiring analysis of the GHG emissions attributable to each new development project, CEQA provides the best opportunity to ensure that such new development does not undermine our efforts to *reduce* our existing level of GHG emissions. The Menlo Gateway DEIR does not fulfill this important role. Briefly, the major flaws in the DEIR's analysis of the project's climate impacts are as follows:

1. The DEIR fails to acknowledge that the Menlo Gateway project would generate substantial GHG emissions that would constitute a significant environmental impact by any reasonable standard. The project would generate between 15,000 and 30,000 tons per year of greenhouse gases. By contrast, the Bay Area Air Quality Management District has proposed 1,100 tons per year as the threshold for a significant impact. 32-3

2. The DEIR does not provide evidence to demonstrate that the proposed mitigation will reduce the project's impacts on climate to a less-than-significant level. The DEIR provides virtually no support for its claims about the effectiveness of the project's emission-reduction measures. 32-4

3. The DEIR ignores project alternatives and recognized mitigation measures that could reduce the severity of the project's climate impacts. The DEIR does not evaluate potential alternative locations that could reduce the volume of GHGs generated by vehicle trips to the project site. It also fails to impose numerous emission-reduction measures that have been identified by other agencies and CEQA practitioners as feasible mitigation. 32-5

4. The DEIR clearly violates CEQA by concluding that the project would not have a significant impact on climate as long as the project incorporates all feasible mitigation (which it does not). The significance of a project's climate impact must be measured by the volume of its actual GHG emissions, i.e., its contribution to climate change. 32-6

Accordingly, before it approves the Menlo Gateway project, the City must substantially modify the DEIR's climate impact analysis and recirculate the document for further public review and comment.

ANALYSIS

An EIR is "the heart of CEQA." *Laurel Heights Improvement Ass'n v. Regents of University of California*, 47 Cal. 3d 376, 392 (1988) (*Laurel Heights I*). "The purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect that a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project." Pub. Res. Code § 21061. The EIR

> is an environmental "alarm bell" whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return. The EIR is also intended "to demonstrate to an apprehensive citizenry that the agency has, in fact, analyzed and considered the ecological implications of its action." Because the EIR must be certified or rejected by public officials, it is a document of accountability.

Laurel Heights I, 47 Cal. 3d at 392 (citations omitted). The DEIR for the Menlo Gateway project does not comply with these standards. 32-7

I. THE PROJECT WOULD HAVE SIGNIFICANT CLIMATE IMPACTS.

As described below in Section IV, the DEIR uses an unlawful standard of significance that ignores the quantity of the project's actual GHG emissions and thus ignores the severity of its contribution to climate change. When considered under an appropriate standard of significance, the project clearly has significant climate impacts.

A. The Project's GHG Emissions Represent a Significant Impact by Any Reasonable Standard.

The project is estimated to generate over 23,000 tons per year CO2e (carbon dioxide equivalent). DEIR at 3.13-20. Even after projected (and likely inflated; see below) emission reductions due to project "emission reduction strategies," the project would still contribute over 15,000 tons per year of climate-forcing GHG emissions. *Id.* at 3.13-23. Comparison of these emission levels to legitimate significance thresholds—as opposed to the City's arbitrary and unlawful "do your best" standard (see below)—demonstrates that the project would plainly have an unmitigated significant climate 32-8

impact. For context, according to estimates generated by the California Air Pollution Control Officers' Association ("CAPCOA"), the volume of estimated project emissions is comparable to a residential development of over 1,000 homes. CAPCOA, *CEQA and Climate Change* (2008) at 49, excerpts attached as Exhibit A. 32-8 (cont.)

A variety of agencies and organizations have proposed standards of significance for project GHG emissions, and those standards indicate that the project will have a significant climate impact. Most importantly, on September 8, 2009, the Bay Area Air Quality Management District ("BAAQMD"), the jurisdiction of which includes the City, proposed adoption of CEQA significance thresholds for GHG emissions. *See* BAAQMD, *California Environmental Quality Act Thresholds of Significance*, *available at* <http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/Workshop%20Draft%20-%20CEQA%20Thresholds%20Options%20Report%204-28-2009.ashx>, attached hereto as Exhibit B. For land use projects such as the instant project, BAAQMD has proposed a significance threshold of *1,100 tons* per year CO2e. *See* BAAQMD, *Staff-Recommended California Environmental Quality Act (CEQA)Thresholds of Significance* (Sept. 2009), at 8, *available at* <http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/CEQA%20Guidelines%20Update%20Workshop%20Sept_09.ashx>, attached as Exhibit C. This project would involve nearly *13 times* the threshold of significance proposed by BAAQMD, the regulatory agency with the greatest experience in air pollution control in the Bay Area. 32-9

Similarly, in 2008, CAPCOA published what has become a leading report on addressing GHG emissions in CEQA documents. *See* Exhibit A. The CAPCOA report proposes a variety of potential thresholds of significance. Under CAPCOA's analysis, the only two thresholds that were determined to be highly effective at reducing emissions and consistent with the state policies that dictate reducing GHG emissions (AB 32 and Executive Order S-3-05) are a zero-emission threshold or a threshold of 900 tons per year CO2e. Under either threshold, the Menlo Gateway project's emissions are plainly significant. 32-10

B. The DEIR Underestimates Project GHG Emissions by Ignoring Black Carbon.

The DEIR also underestimates project GHG emissions because it fails to account for the project's black carbon emissions. Black carbon, which is a component of soot, is produced by incomplete combustion and is a significant contributor to global warming. Although combustion produces a mixture of black carbon and organic carbon, the proportion of black carbon produced by burning fossil fuels, such as diesel, is much 32-11

greater than that produced by burning biomass. *See* Global and Regional Climate Changes Due to Black Carbon, Ramanathan and Carmichael, Scripps Institution of Oceanography, March 2008, attached as Exhibit D.

Black carbon heats the atmosphere in a variety of ways. First, it is highly efficient at absorbing solar radiation and in turn heating the surrounding atmosphere. Second, atmospheric black carbon absorbs reflected radiation from the surface. Third, when black carbon lands on snow and ice, it reduces the reflectivity of the white surface which causes increased atmospheric warming as well as accelerates the rate of snow and ice melt. Fourth, it evaporates low clouds. Notably, black carbon is often associated with other aerosols such as sulfates, which greatly increases its heating potential. *Id.*

Due to black carbon's short atmospheric life span and high global warming potential, reducing black carbon emissions offers an opportunity to mitigate the effects of global warming trends in the short term. *Id*. It is estimated that black carbon is the second greatest contributor to global warming behind carbon dioxide. *See Id*. In developed countries, diesel combustion is the main source of black carbon. Diesel emissions include a number of compounds such as sulfur oxides, nitrogen oxides, hydrocarbons, carbon monoxide, and particulate matter. Diesel particulate matter is approximately 75 percent elemental carbon. *See* EPA, *2002 Diesel Health Assessment, available at* <http://www.scribd.com/doc/1011457/Health-Assessment-Document-for-Diesel-Engine-Exhaust-EPA-May-2002>. Project construction will require the use of diesel powered heavy duty trucks and construction equipment, and project operations will also undoubtedly entail diesel emissions generated by trucks making deliveries to businesses in the project area. Thus, it is important that black carbon emissions be addressed as part of a new DEIR for the project. 32-11 (cont.)

II. THE DEIR DOES NOT PROVIDE SUBSTANTIAL EVIDENCE TO DEMONSTRATE THAT PROJECT FEATURES AND PROPOSED MITIGATION WILL REDUCE THE PROJECT'S CLIMATE IMPACTS TO A LESS-THAN-SIGNIFICANT LEVEL.

CEQA's central mandate is that "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." *Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Comm'rs*, 91 Cal. App. 4th 1344, 1354 (2001) (quoting Pub. Res. Code § 21002). CEQA requires lead agencies to identify and analyze all feasible mitigation, even if this mitigation will not reduce the impact to a level of insignificance. Cal. Code Regs., tit. 14 ("CEQA Guidelines"), § 15126.4(a)(1)(A) (discussion of mitigation measure "shall identify mitigation measures 32-12

for each significant environmental effect identified in the EIR"). Mitigation under CEQA can include:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments.

CEQA Guidelines § 15370.

32-12 (cont.)

A. The City Cannot Rely on Many of the Project "Emissions Reductions Strategies" to Reduce GHG Emissions.

The "Proposed Project Emissions Reduction Strategies" listed in Table 3.3-7 (DEIR at 3-13.22) are vague, insubstantial, and non-binding, and thus cannot be relied on to mitigate project impacts. First, the document does not provide a sufficient description of these "strategies" to allow the decision maker and the public to evaluate their likelihood of success in reducing emissions. For example, under "Alternative Transportation," the document merely provides a list of generic measures such as "bicycle lockers and racks" and "shuttle service." *Id.* This bare-bones description does not allow the public or the decision maker to determine whether the measures would in fact reduce GHG emissions, let alone to determine what quantity of emissions they would eliminate. A conclusion that a measure will be effective in mitigating an impact must be supported by substantial evidence. *Gray v. County of Madera*, 167 Cal. App. 4th 1099, 1115-18 (2008); *see also San Franciscans for Reasonable Growth v. City & County of San Francisco*, 151 Cal. App. 3d 61, 79 (1984) (measures must not be so vague that it is impossible to gauge their effectiveness).

32-13

Second, some of the strategies are merely hortatory or potential rather than binding commitments. Measures relied upon to mitigate impacts must be "fully enforceable" through permit conditions, agreements, or other legally binding instruments. Pub. Res. Code § 21081.6(b); CEQA Guidelines § 15126.4(a)(2). Similarly, they must

32-14

be actually be implemented, not merely adopted and then disregarded, and thus the mitigation must provide assurance that such implementation will in fact occur. *Anderson First Coalition v. City of Anderson*, 130 Cal. App. 4th 1173, 1186-87 (2005); *Fed'n of Hillside & Canyon Ass'ns v. City of Los Angeles*, 83 Cal. App. 4th 1252, 1261 (2000).

The "strategies" do not meet this standard. For example, although "the project sponsor would *seek* LEED certification," DEIR 3.13-22 (emphasis added), the DEIR does not indicate either (1) what level of LEED certification the developer would "seek," or that the developer will make any binding commitment to fully comply with LEED requirements. *See also id.* ("A key objective of the project is to *approach* a minimum of 5 to 15 percent energy savings [as compared to code.]"). Similarly, the DEIR states that "between 66 and 75 percent of the roof area of proposed structures *could* be usable for photovoltaic panels, which *could* provide a portion of the project's power." *Id.* (emphasis added). These statements of mere possibility or potential do not qualify as binding commitments to reduce the project's GHG emissions. Moreover, the DEIR does not describe how the City would ensure that the project in fact incorporates all of the proposed "strategies." 32-14 (cont.)

B. The DEIR Does Not Adequately Support the Estimate of Emission Reductions Allegedly Achieved by Project "Emission Reduction Strategies."

As noted above, the effectiveness of mitigation must be established based on substantial evidence. *Gray*, 167 Cal. App. 4th at 1115-18. The document provides quantitative estimates of emission reductions ostensibly achieved by the project "emission reduction strategies." DEIR at 3.13-23 (Table 3.13-7). It estimates reductions of 8,662 tons per year CO2e in direct, indirect, and vehicular emissions of GHGs. *Id.* Yet neither the text of the DEIR nor Appendix I (which Table 3.13-7 claims provides "calculations" to support the projections in the Table) provides any support, let alone substantial evidence, for this estimate. The text fails to mention how emission reductions were estimated. Appendix I includes a table entitled "Emissions Reductions Features," which summarily asserts a 15 percent reduction in direct and indirect emissions and an unstated amount of reduction in vehicular emissions but it too fails to explain why 15 percent is an appropriate estimate. 32-15

"Such a bare conclusion without an explanation of its factual and analytical basis is insufficient." *San Joaquin Raptor/Wildlife Rescue Ctr. v. County of Stanislaus*, 27 Cal. App. 4th 713, 736 (1994); *accord Laurel Heights I*, 47 Cal. 3d at 404 ("[T]he EIR must contain facts and analysis, not just the bare conclusions of a public agency."). "This requirement enables the decision-makers and the public to make an 'independent, reasoned judgment' about a proposed project." *Concerned Citizens of Costa Mesa v.*

32nd Dist. Agric. Ass'n, 42 Cal. 3d 929, 935 (1986). The DEIR's conclusory analysis does not provide that supporting evidence for the project "strategies" relied on to mitigate the project's climate impacts.

Although unstated, it may be that the 15-percent estimate is based on the dual assumptions that (1) the project would qualify for some kind of LEED certification and (2) that the measures necessary to qualify would generate emission reductions of 15 percent. DEIR at 3.3-22. These assumptions, and thus the resulting estimate, are unwarranted.

32-15 (cont.)

First, as discussed above, the DEIR does not indicate that the developer is making any binding commitment to ensure that the project qualifies for LEED certification, or which LEED standard the developer will seek. Second, the DEIR estimates that the certification would "approach a minimum of *5 to 15 percent* energy savings" as compared to a building built merely to code. DEIR at 3.3-22 (emphasis added). The difference between five and 15 percent is significant. Using the 15 percent estimate, the DEIR estimates direct and indirect emissions reductions of 808 tons per year CO2e. *Id.*, app. I. By contrast, using the five percent estimate would generate reductions of only 271 tons per year CO2e, a difference of 537 tons per year.

C. The DEIR Improperly Refuses to Quantify the Emission Reductions to Be Achieved by Proposed Mitigation Measure CC-1.1.

The DEIR does not attempt estimate the emission reductions to be achieved by mitigation measure CC-1.1. DEIR 3.13-24. It must either generate that estimate or explain, based on substantial evidence, why doing so would be infeasible. *See Berkeley Keep Jets Over the Bay*, 91 Cal. App. 4th at 1370-71; *Citizens to Preserve the Ojai v. County of Ventura*, 176 Cal. App. 3d 421, 430 (1985). Without that estimate, the public and decision maker cannot determine the extent to which the proposed measure in fact would reduce emissions.

32-16

It is plainly feasible to estimate the emission reductions to be achieved by the mitigation measure, because the document elsewhere provides exactly such quantitative estimates of GHG emissions and emission reductions: it quantifies total project emissions (Table 3.13-5) and emission reductions ostensibly achieved by project "emission reduction strategies" (Table 3.13-7). DEIR at 3.13-20, -23. The document

does not explain, however, why it cannot also estimate the emission reductions associated with the proposed mitigation measure.[1]

In any event, the mitigation could achieve, at the absolute most, reductions of about 7,000 tons per year CO2e because the measure does virtually nothing to reduce the project's largest source of emissions: vehicular emissions. The proposed mitigation includes almost exclusively measures designed to reduce non-transportation energy use. DEIR at 3.13-24. The maximum reduction that these measures could achieve would be 6,857 tons per year CO2e, i.e., the total of direct, indirect, solid waste, and water-related emissions estimated to be generated by the project. And this assumes that the measure would completely eliminate all such emissions, a plainly unsupportable assumption.[2] 32-16 (cont.)

D. Mitigation Measure CC-1.1 Is Vague, Unenforceable, and Insufficient.

The DEIR's sole proposed mitigation measure is largely insubstantial. It provides that the developer shall incorporate the proposed measures into the project, "in addition to other applicable measures identified in the City of Menlo Park Climate Action Plan." DEIR at 3.13-24. To the extent there are such "other applicable measures," they must be set forth in the DEIR. The decision maker cannot determine from this measure what steps will in fact be required of the developer and thus what degree of mitigation can be expected.

The mitigation measure also requires that the developer "install energy efficient heating and cooling systems, appliances and equipment, and control systems." *Id.* "Energy efficient" is a relative concept: something may be more or less energy efficient than something else, but a thing cannot be "energy efficient" in the abstract. *How* efficient must these systems be? What standards must they comply with? Without that information, the public and decision maker have no idea how effective this measure will be. 32-17

[1] Of course, given the City's bizarre standard of significance discussed below, a lead agency would never need to quantify the benefits of mitigation, because mere implementation of the mitigation would, ipso facto, eliminate any significant impact, whether the measure reduced emissions by 0.1 tons or 1,000,000 tons.

[2] For example, the measure would require only 2.5 percent (by cost) of the project's electricity be provided by renewable sources. Accordingly, the remaining 97.5 percent (by cost) of project energy would continue to be supplied by normal sources of electricity, including CO2-generating natural gas.

The measure also requires that the project obtain a meager 2.5 percent of its electricity from on-site renewable sources, to be calculated as a proportion of total cost rather than of quantity. DEIR 3.13-24. The DEIR fails to explain why the document selects 2.5 percent as the maximum feasible percentage to be generated by renewables. Moreover, by specifying that the percentage shall be based on cost rather than on quantity, the DEIR further minimizes the amount of renewable energy required. Because on-site renewable energy is certain to be more expensive than fossil-fuel-based electricity supplied by PG&E, the project will in fact derive less, perhaps substantially less, than 2.5 percent of its total electricity from on-site renewable sources. In fact, the required proportion of renewable electricity, when calculated by quantity rather than by cost, is likely to be roughly 1.5 percent.[3] 32-17 (cont.)

III. THE PROJECT NEGLECTS ALTERNATIVES AND MITIGATION MEASURES THAT COULD FURTHER REDUCE GHG EMISSIONS.

A. An Alternative Project Location Could Substantially Reduce Vehicular GHG emissions.

At the "core of an EIR" lies the analysis of alternatives. *Citizens of Goleta Valley v. Bd. of Supervisors*, 52 Cal. 3d 553, 564 (1990). A lead agency may not approve a project if there are feasible alternatives that would avoid or lessen its significant environmental effects. Pub. Res. Code §§ 21002, 21002.1(b).

> Without meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process . . . . [Courts will not] countenance a result that would require blind trust by the public, especially in light of CEQA's fundamental goal that the public be fully informed as to the environmental consequences of action by their public officials.

32-18

Laurel Heights I, 47 Cal. 3d at 404. An EIR therefore must analyze a reasonable range of alternatives to the proposed project. *Citizens for Quality Growth v. City of Mount Shasta*, 198 Cal. App. 3d 433, 443-45 (1988). A reasonable alternative is one that would feasibly

---

[3] The prevailing cost of commercial solar is approximately $0.25 per kilowatt hour. *See Solar Electricity Global Benchmark Price Indices,* <http://www.solarbuzz.com/solarindices.htm> (commercial system, sunny climate). By contrast, the prevailing cost of electricity from PG&E for large users is, at most, $0.15 per kilowatt hour. *See* PG&E, *Electric Schedule E-20* (Jan. 1, 2008), *available at* <http://www.pge.com/tariffs/tm2/pdf/ELEC_SCHEDS_E-20.pdf>.

attain most of the project's basic objectives while avoiding or substantially lessening the project's significant impacts. *See* Pub. Res. Code § 21100(b)(4); CEQA Guidelines § 15126.6(a). 32-18 (cont.)

The lion's share of GHG emissions generated by the project—68 percent—are vehicular emissions. DEIR at 3.13-20. The most effective way to reduce those emissions would be to adopt a project alternative that would locate the project in closer proximity to public transportation, specifically, the proposed Dumbarton Rail or CalTrain. The project site is located at least 1.5 miles from the closest proposed Dumbarton Rail station, and no bus service connects the two. Similarly, the project is located 3.1 miles from the nearest CalTrain station. The City should consider an alternative location closer to the City's downtown and CalTrain as part of its ongoing El Camino Corridor Visioning Process. Given the existing location—adjacent to a freeway interchange and miles distant from any public transit options—persons coming to and from the project have little choice but to drive and thereby generate substantial GHG emissions. 32-19

The DEIR fails to address alternative project locations. This violates CEQA. The Guidelines provide that if a lead agency concludes that alternative project locations are infeasible, the agency must substantiate that determination in the EIR. CEQA Guidelines § 15126.6(f)(2). The "key question" for evaluation of such alternatives is whether an alternative location could substantially reduce the severity of one or more project impacts. *Id.* § 15126.6(f)(2)(A). Here, an alternative location in closer proximity to public transit could substantially reduce the vehicular GHG emissions to be caused by the project. The DEIR should have evaluated an alternative location for the project in some configuration. That some of the project objectives might not be achieved as fully by an alternative project location, or that it might result in lower profits to the project proponent, do not justify the City from failing to analyze it. *See id.* § 15126.6(b); *Uphold Our Heritage v. Town of Woodside*, 147 Cal. App. 4th 587, 599 (2007); *Preservation Action Council v. City of San Jose*, 141 Cal. App. 4th 1336, 1352 (2006). In any event, if the City were to determine that such an alternative was infeasible it would be required to explain that determination in the EIR. CEQA Guidelines § 15126.6(f)(2)(B). 32-20

B. The DEIR Ignores Measures that Could Reduce or Offset Project GHG Emissions.

The DEIR likewise fails to propose a variety of mitigation measures that would reduce project emissions or offset those emissions by reducing emissions elsewhere. Several sources of GHG emission mitigation measures are readily available on the Internet. *See, e.g.,* CAPCOA, *CEQA and Climate Change*, App. B, attached as 32-21

Exhibit A; California Department of Justice, *The California Environmental Quality Act: Addressing Global Warming Impacts at the Local Agency Level, available at* <http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf>, attached as Exhibit E; Governor's Office of Planning and Research, *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*, *available at* <http://www.opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>, attached as Exhibit F; Sacramento Metropolitan Air Quality Management District, *Draft GHG Measures, available at* <http://www.airquality.org/climatechange/AQMDGuidanceForGHGReduction.pdf>, attached as Exhibit G.

Examples of measures that the City has not included the DEIR include the following:

- Ensure that public transportation will serve the site, by constructing bus stops or other facilities and funding the transportation agency to include site on routes if necessary.

- Ensure that shuttle service to mass transit uses low-emission, alternative fuel vehicles.

- Require use of a catalyzed diesel particulate filter on both new and existing diesel engines. Because black carbon is a component of diesel particulate matter, strategies that reduce particulate matter will also reduce black carbon.

- Use salvaged and recycled-content materials for building, hard surfaces, and non-plant landscaping materials. Use the combination of construction materials with the lowest carbon footprint.

- Use passive heating, natural cooling, and solar hot water systems.

- Construct the most energy-efficient buildings possible, to decrease heating and cooling costs.

- Require the use of only Energy Star heating, cooling, and lighting devices and appliances.

- Prohibit the use of incandescent light bulbs for interior lighting.

- Provide prioritized parking for electric and hybrid vehicles.

32-21 (cont.)

- Charge employees for parking and subsidize alternative transportation.
- Reduce available parking.
- Purchase "green electricity" from solar, geothermal, wind, or hydroelectric sources through green tags.
- Require vehicle fleets operated by commercial occupants of project buildings to be composed of low emission and alternative fuel vehicles.
- Limit idling time for commercial vehicles, including delivery, maintenance, and construction vehicles.

These measures would largely involve direct reductions in emissions that would otherwise be attributable to the project. In addition to these measures, the City should also establish a mitigation fee program to fund GHG emission reduction or sequestration projects to offset emissions from this project and other projects in the City. The fee could be used to fund a wide variety of emission reduction or sequestration projects *in the City*, including those identified in the City's Climate Action Plan. By funding local emission reductions, such a program would reduce GHG emissions, while providing local side benefits, including reducing co-pollutants generated along with GHGs, such as ozone precursors and particulate matter, and generating local "green" jobs. 32-21 (cont.)

Given the document's standard of significance, which provides that the project would not have a significant impact if it implements all emission reduction measures deemed feasible by the City, the project must be considered to have significant climate impacts if it does not implement *all* of these feasible mitigation measures.

IV. THE DEIR'S PROPOSED STANDARD OF SIGNIFICANCE FOR THE PROJECT'S CLIMATE IMPACTS VIOLATES CEQA.

The most significant flaw in the DEIR's climate impact analysis is the legal inadequacy of the standard of significance. The DEIR concludes that the project would have a significant impact if it would "[f]ail to implement all emission-reduction strategies deemed to be feasible by the City." DEIR at 3.13-21. 32-22

To our knowledge, and based on conversations with other practitioners, such a standard has never before been applied in a CEQA document. That is undoubtedly due to the fact that the standard is facially inconsistent with CEQA in myriad ways and, if used, would produce absurd results.

A. The Proposed Standard of Significance Is Grossly Inconsistent with the Text, Structure, and Operation of CEQA in Numerous Respects.

"Determining whether a project may have a significant effect plays a critical role in the CEQA process." CEQA Guidelines § 15064(a). A flawed standard of significance thus undercuts the proper functioning of an EIR. *Id.* § 15064(a)(2). It is also therefore an appropriate basis for invalidating an EIR. *Endangered Habitats League, Inc. v. County of Orange*, 131 Cal. App. 4th 777, 792-93 (2005).

1. Determination of Significant Effects

Most importantly, the proposed standard flies in the face of CEQA's definition of, and requirements for determination of, significant environmental impacts. A "'[s]ignificant environmental effect' means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project." CEQA Guidelines § 15382; *see also* Pub. Res. Code § 21068 ("'Significant effect on the environment' means a substantial, or potentially substantial, adverse change in the environment."). The definition's use of the phrase "*substantial* . . . adverse change" demands that a lead agency determine whether an impact is "significant" by considering the severity or extent of the changes to the environment caused by the project. Accordingly, in the context of a project's GHG emissions, significance must turn on the amount of GHG emissions attributable to the project. Indeed, the approaches to determining significance proposed by the numerous authorities that have considered this question have proposed thresholds based on the quantum of emissions to be caused by the project. *See, e.g.,* CAPCOA, *CEQA and Climate Change*; BAAQMD, *California Environmental Quality Act Thresholds of Significance*. 32-23

Indeed, the plain meaning of the phrase "significant impact" also demonstrates that the focus must be on the extent or severity of the project's impact. In that phrase, "significant" modifies "impact," not "effort" or "mitigation," or "strategies." One cannot decide whether a project's impact—the physical changes it causes in the environment—is significant without considering the extent of the impact itself.

By contrast, the City's proposed standard ignores the substantiality of the project's GHG emissions and thus the substantiality of its impact on the environment. The standard focuses solely on the efforts made by the project proponent. As long as the project proponent has "done its best" to reduce the project's impact, the impact will be less than significant, even if the project would still cause enormous or even catastrophic adverse changes to the environment. As a result, a project with one million tons of GHG emissions would have a less-than-significant climate impact as long as the project incorporated all emission reduction strategies feasible, while a project with one pound of

GHG emissions would have a significant impact as long as it failed to do so. This makes no sense whatsoever. It makes a mockery of CEQA's requirement that a lead agency analyze a project's significant impacts.

2. The Definition of Cumulatively Considerable Impacts

The City's standard is also inconsistent with CEQA's requirements for cumulative impact analysis. An EIR must discuss significant "cumulative impacts." CEQA Guidelines § 15130(a). "Cumulative impacts" are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." *Id.* § 15355(a). "[I]ndividual effects may be changes resulting from a single project or a number of separate projects." *Id.* A legally adequate "cumulative impacts analysis" views a particular project over time and in conjunction with other related past, present, and reasonably foreseeable future projects whose impacts might compound or interrelate with those of the project at hand. "Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time." *Id.* § 15355(b). Climate change is perhaps the archetypal cumulative impact.

A project has a significant effect—and the lead agency must find so—if it has an impact that is individually limited but "cumulatively considerable." *Id.* §§ 15065(a)(3), 15130(a). "Cumulatively considerable" is defined as meaning that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." *Id.* § 15065(a)(3). "[T]he greater the existing environmental problems are, the lower the threshold for treating a project's contribution to cumulative impacts as significant." *Communities for Better Env't v. Cal. Res. Agency*, 103 Cal. App. 4th 98, 120 (2002). 32-24

The City's standard ignores these considerations. Whether a project has implemented all feasible mitigation does not tell one anything about the significance of the project's contribution to a cumulative impact. It does not allow one to view the project's impact in the context of an existing environment problem. This is inconsistent with the proper treatment of cumulative effects. *See id.*

3. Project Setting and Baseline

CEQA requires an EIR to describe the environmental setting for the project, i.e., the existing physical conditions in which the project will operate. CEQA Guidelines § 15125. The setting is crucial to an adequate analysis of the significance of project impacts: 32-25

> Without a determination and description of the existing physical conditions on the property at the start of the environmental review process, the EIR cannot provide a meaningful assessment of the environmental impacts of the proposed project. "Before the impacts of a project can be assessed and mitigation measures considered, an EIR must describe the existing environment. It is only against this baseline that any significant environmental effects can be determined."

Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors, 87 Cal. App. 4th 99, 119-20 (2001) (citations omitted); CEQA Guidelines § 15125(a) ("The environmental setting will normally constitute the baseline physical conditions *by which a Lead Agency determines whether an impact is significant*." (emphasis added)). 32-25 (cont.)

The proposed standard of significance does not compare the project's impact against a baseline environmental condition in determining significance. Indeed, it ignores the baseline entirely. The existing environment could be pristine or degraded and the project could involve only minor environmental changes or utterly transform the existing environment—these differences would not affect the City's significance determination. These considerations have no bearing on the sole question posed by the standard of significance: whether the project has implemented all feasible mitigation. In this respect too the standard is inconsistent with CEQA.

4. The Relationship of Significance and Mitigation

The standard of significance also fundamentally conflates CEQA's distinct requirements that an EIR both analyze impacts determined to be significant *and* identify feasible mitigation that would reduce the severity of those impacts to a less-than-significant level. *See* CEQA Guidelines § 15126.2 (identification of significant impacts); *id.* § 15126.4 (consideration of mitigation for significant impacts). Indeed, the City's proposed standard would turn the analysis of mitigation into a paradox: CEQA requires mitigation only for projects with significant impacts, but under the proposed standard, only projects that will not implement all feasible mitigation will have significant impacts that need to be mitigated. CEQA requires that "an EIR shall describe feasible mitigation measures which could minimize significant adverse impacts." *Id.* § 15126.4(a)(1). The City's standard turns this requirement around. 32-26

5. Significant and Unavoidable Impacts and Findings of Overriding Considerations

Moreover, as long as the City's complies with CEQA's requirement that an EIR adopt all feasible mitigation for significant impacts, there could never be a residual 32-27

significant impact under the City's standard. In other words, compliance with the feasible mitigation requirement would prevent any project from having a significant and unavoidable impact. This is inconsistent with CEQA's process for addressing such residual significant impacts.

CEQA provides that where a project will have significant and unavoidable impacts, the lead agency may approve the project only if it makes findings of "overriding considerations," *viz.*, that the project's benefits justify approving the project notwithstanding its residual significant environmental effects. CEQA Guidelines §§ 15065(c)(4), 15093. This requirement ensures that the decision maker will consciously and explicitly decide that the benefits of a project justify going forward despite the significant environmental consequences that will occur, despite mitigation, once the project is implemented. *Id.* § 15093. 32-27 (cont.)

By the City's logic, even a project with severe environmental impacts might be approved without requiring the decision maker to explicitly confront those impacts and consciously accept the trade off of project benefits for those impacts. The project, ipso facto, would not be considered to have significant and unavoidable impacts so long as the lead agency adopted what it considered to be all feasible mitigation. This violates the fundamental purpose of the overriding considerations requirement.

B. The DEIR Provides No Explanation for Selecting the Proposed Standard of Significance.

While CEQA gives lead agencies some leeway in determining what constitutes a significant impact, the agency must rationally explain its decision and support it with substantial evidence. *Protect the Historic Amador Waterways v. Amador Water Agency*, 116 Cal. App. 4th 1099, 1111-12 (2004). Instead, the DEIR describes the standards it is *not* applying (which would have focused, in the conventional manner, on the project's emissions rather than on its efforts to reduce those emissions). It then simply asserts, *ex cathedra*, "For the purposes of this analysis, the City has determined that a project's contribution to the cumulative climate change impact would be considerable if it would . . . [f]ail to implement all emission-reduction strategies deemed to be feasible by the City." DEIR at 3.13-21. This conclusory proclamation is wholly insufficient to support the use of this unorthodox and unlawful standard. *See Laurel Heights I*, 47 Cal. 3d at 404 ("[T]he EIR must contain facts and analysis, not just the bare conclusions of a public agency."). 32-28

C. The Proposed Standard of Significance Would Produce Absurd Results.

Finally, as a practical matter, the City's standard would produce absurd results. A project that would emit one billion tons of GHGs would have a less than significant climate impact as long as the project proponent dutifully implemented all mitigation identified by the City. Yet a project that emitted only one pound of GHGs without implementing any mitigation would have a significant climate impact. This would make a mockery of CEQA both as drafted and as applied.

Indeed, when applied to other impact contexts, the absurdity of the City's approach becomes clear. How would such a standard apply to impacts to special status species? By the City's logic, as long as the project incorporated all feasible mitigation, such as creating new habitat elsewhere, it would not matter whether the project avoids all impact on the species or causes its complete extinction. In both cases, the impact would be less than significant. Similarly, a project would have less than significant impacts whether it resulted in intersections with LOS F or LOS A, as long as all feasible mitigation had been implemented. 32-29

V. THE CITY MUST SUBSTANTIALLY MODIFY THE DEIR AND RECIRCULATE IT FOR PUBLIC REVIEW AND COMMENT.

CEQA requires recirculation of an EIR when significant new information is added to the document after notice and opportunity for public review was provided. Pub. Res. Code § 21092.1; CEQA Guidelines § 15088.5. "Significant new information" includes: (1) information showing a new, substantial environmental impact resulting either from the project or from a mitigation measure; (2) information showing a substantial increase in the severity of an environmental impact not mitigated to a level of insignificance; (3) information showing a feasible alternative or mitigation measure that clearly would lessen the environmental impacts of a project and the project proponent declines to adopt the mitigation measure; or (4) instances where the draft EIR was so fundamentally and basically inadequate and conclusory in nature that public comment on the draft EIR was essentially meaningless. CEQA Guidelines § 15088.5(a); *Laurel Heights I*, 6 Cal. 4th at 1130. 32-30

The DEIR must be revised and recirculated. As described above, the EIR must be revised in ways that would add significant, new information showing a new, significant environmental impact or substantial increase in the severity of a significant environmental impact. Moreover, the flaws noted above constitute precisely the sort of pervasive flaws in the document that independently require recirculation under

Guidelines section 15088.5(a)(4). *See Mountain Lion Coalition v. Fish & Game Comm'n*, 214 Cal. App. 3d 1043, 1052-53 (1989).

* * *

Thank you for your consideration of these comments. Please feel free to contact me if you would like to discuss any of the issues raised in this letter.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

MATTHEW D. ZINN

EXHIBIT A

CAPCOA

CALIFORNIA AIR POLLUTION CONTROL OFFICERS ASSOCIATION

CEQA & Climate Change

Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act

January 2008

Disclaimer

The California Air Pollution Control Officers Association (CAPCOA) has prepared this white paper consideration of evaluating and addressing greenhouse gas emissions under the California Environmental Quality Act (CEQA) to provide a common platform of information and tools to support local governments.

This paper is intended as a resource, not a guidance document. It is not intended, and should not be interpreted, to dictate the manner in which an air district or lead agency chooses to address greenhouse gas emissions in the context of its review of projects under CEQA.

This paper has been prepared at a time when California law has been recently amended by the Global Warming Solutions Act of 2006 (AB 32), and the full programmatic implications of this new law are not yet fully understood. There is also pending litigation in various state and federal courts pertaining to the issue of greenhouse gas emissions. Further, there is active federal legislation on the subject of climate change, and international agreements are being negotiated. Many legal and policy questions remain unsettled, including the requirements of CEQA in the context of greenhouse gas emissions. This paper is provided as a resource for local policy and decision makers to enable them to make the best decisions they can in the face of incomplete information during a period of change.

Finally, this white paper reviews requirements and discusses policy options, but it is not intended to provide legal advice and should not be construed as such. Questions of legal interpretation, particularly in the context of CEQA and other laws, or requests for advice should be directed to the agency's legal counsel.

Acknowledgements

This white paper benefited from the hard work and creative insights of many people. CAPCOA appreciates the efforts of all who contributed their time and energy to the project. In particular, the Association thanks the following individuals:

Principal Authors

Greg Tholen, BAAQMD
Dave Vintze, BAAQMD
Jean Getchell, MBUAPCD
Matt Jones, YSAQMD
Larry Robinson, SMAQMD
Ron Tan, SBCAPCD

Editor

Barbara Lee, NSAPCD

Reviewers

CAPCOA Climate Protection Committee

Barbara Lee (NSCAPCD), Chair

Larry Allen, SLOCPCD
Bobbie Bratz, SBAPCD
Karen Brooks, SLOCAPCD
Chris Brown, MCAQMD
Tom Christofk, PCAPCD
Jorge DeGuzman, SMAQMD
Mat Ehrhardt, YSAQMD
Jean Getchell, MBUAPCD
Larry Greene, SMAQMD
Henry Hilken, BAAQMD
Alan Hobbs, PCAPCD
Jim Jester, SMAQMD
Dave Jones, KCAPCD
Tom Jordan, SJVUAPCD
Tom Murphy, SBAPCD
Don Price, VCAPCD
Jean Roggenkamp, BAAQMD
Ana Sandoval, BAAQMD
Amy Taketomo, MBUAPCD
Tim Taylor, SMAQMD
Mike Villegas, VCAPCD
David Vintze, BAAQMD
Dave Warner, SJVUAPCD
Jill Whynot, SCAQMD
John Yu, CAPCOA
Mel Zeldin, CAPCOA

CAPCOA Planning Managers: CEQA & Climate Change Subcommittee

Dave Vintze (BAAQMD), Chair
Greg Tholen (BAAQMD), Project Manager

Charles Anderson, SMAQMD
Aeron Arlin Genet, SLOCAPCD
Jean Getchell, MBUAPCD
Melissa Guise, SLOCAPCD
Matt Jones, YSAQMD
Barbara Lee, NSCAPCD
Ryan Murano, NSAQMD
Tom Murphy, SBCAPCD
Susan Nakamura, SCAQMD
Larry Robinson, SMAQMD
Jean Roggenkamp, BAAQMD
Ana Sandoval, BAAQMD
Ron Tan, SBCAPCD
Brigette Tollstrup, SMAQMD
Jill Whynot, SCAQMD

External Reviewers

James Goldstene, CARB
Annmarie Mora, CARB
Terri Roberts, OPR

Proofing & Layout

Jake Toolson, CAPCOA
John Yu, CAPCOA

Contract Support

Jones & Stokes, Sacramento, CA *(analysis of non-zero threshold approaches)*
EDAW, Inc., Sacramento, CA *(review of analytical methods and mitigation strategies)*.

Table of Contents

Executive Summary 1

Chapter

1. Introduction 5
2. Air Districts and CEQA Thresholds 11
3. Consideration of Fundamental Issues 13
4. Consideration of a Statewide Threshold 21
5. CEQA with No GHG Thresholds 23
6. CEQA With GHG Threshold of Zero 27
7. CEQA With Non-Zero Thresholds 31
   - Approach 1: Statute and Executive Order Approach 32
   - Approach 2: Tiered Approach 36
8. Analytical Methodologies for GHG 59
9. Mitigation Strategies for GHG 79
10. Examples of Other Approaches 85

Appendix A – Relevant Citations

Appendix B – Mitigation Measure Summary

Appendix C – Rule and Regulation Summary

List of Figures

Figure 1 – Climate Change Significance Criteria Flow Chart 38

List of Tables

Table 1 – Analysis of GHG Emissions from Stationary Combustion Equipment Permits 18
Table 2 – Approach 2 Tiering Options 41
Table 3 – Comparison of Approach 2 Tiered Threshold Options 49
Table 4 – Non-Zero Threshold Evaluation Matrix – Approach 1 56
Table 5 – Non-Zero Threshold Evaluation Matrix – Approach 2 57
Table 6 – Residential Project Example GHG Emissions Estimates 62
Table 7 – Commercial Project Example GHG Emissions Estimates 63
Table 8 – Specific Plan Example GHG Emissions Estimates 64
Table 9 – General Plan Example GHG Emissions Estimates.....68
Table 10 – Summary of Modeling Tools for GHG Emissions 75
Table 11 – Residential Project Example GHG Emissions Estimates with Mitigation ..81
Table 12 – Residential Projects Example Methodology and Mitigation 82
Table 13 – Commercial Projects Example Methodology and Mitigation 82
Table 14 – Specific Plans Example Methodology and Mitigation 83
Table 15 – General Plans Example Methodology and Mitigation.....83
Table 16 – Mitigation Measure Summary B-1
Table 17 – General Planning Level Mitigation Strategies Summary B-35
Table 18 – Rule and Regulation Summary C-1

List of Acronyms and Abbreviations

Acronym/ Abbreviation	Meaning
AB 32	Assembly Bill 32 Global Warming Solutions Act of 2006
AG	Attorney General
ARB	Air Resources Board
ASTM	American Society of Testing and Material
BAAQMD	Bay Area Air Quality Management District
BAU	Business as Usual
BEES	Building for Environmental and Economic Sustainability
Calfire	California Fire
Caltrans	California Department of Transportation
CAP	Criteria Air Pollutants
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CAT	Climate Action Team
CCAP	Center for Clean Air Policy
CCAR	California Climate Action Registry
CDFA	California Department of Food and Agriculture
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CF	Connectivity Factor
CH_4	Methane
CIWMB	California Integrated Waste Management Board
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CNG	Compressed Natural Gas
CPUC	California Public Utilities Commission
CUFR	California Urban Forestry
DGS	Department of General Services
DOE	U.S. Department of Energy
DOF	Department of Finance
DPF	Diesel Particulate Filter
DWR	Department of Water Resources
E85	85% Ethanol
EEA	Massachusetts Executive Office of Energy and Environmental Affairs
EERE	Energy Efficiency and Renewable Energy
EIR	Environmental Impact Report
EOE	Encyclopedia of Earth
EPA	U.S. Environmental Protection Agency
ETC	Edmonton Trolley Coalition
EV	Electric Vehicles
FAR	Floor Area Ratio

GHG	Greenhouse Gas
GGEP	Greenhouse Gas Emissions Policy
GGRP	Greenhouse Gas Reduction Plan
GP	General Plan
GWP	Global Warming Potential
IGCC	Integrated Gasification Combined Cycle
IOU	Investor Owned Utility
IPCC	International Panel on Climate Change
IT	Information Technology
ITE	Institute of Transportation Engineers
J&S	Jones & Stokes
km	Kilometer
LandGem	Landfill Gas Emissions Model
LEED	Leadership in Energy and Environmental Design
LNG	Liquefied Natural Gas
MBUAPCD	Monterey Bay Unified Air Pollution Control District
MEPA	Massachusetts Environmental Policy Act
MND	Mitigated Negative Declaration
MMT CO_2e	Million Metric Tons Carbon Dioxide Equivalent
MW	Megawatts
N_2O	Nitrous Oxide
NACAA	National Association Clean Air Agencies
ND	Negative Declaration
NEV	Neighborhood Electric Vehicle
NIST	National Institute of Standards and Technology
NO_X	Oxides of Nitrogen
NREL	National Renewable Energy Laboratory
NSCAPCD	Northern Sonoma County Air Pollution Control District
NSR	New Source Review
OPR	State Office of Planning and Research
PFC	Perfluorocarbon
PG&E	Pacific Gas & Electric
POU	Publicly Owned Utility
PM	Particulate Mater
RoadMod	Road Construction Emissions Model
ROG	Reactive Organic Gas
RPS	Renewable Portfolio Standards
RTP	Regional Transportation Plan
S-3-05	Executive Order S-3-05
SB	Senate Bill
SBCAPCD	Santa Barbara County Air Pollution Control District
SCAQMD	South Coast Air Quality Management District
SCM	Sustainable Communities Model
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Unified Air Pollution Control District
SLOCAPCD	San Luis Obispo County Air Pollution Control District

SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utilities District
SO_X	Sulfur Oxides
SP	Service Population
SRI	Solar Reflectance Index
SWP	State Water Project
TAC	Toxic Air Contaminants
TBD	To Be Determined
TDM	Transportation Demand Management
TMA	Transportation Management Association
THC	Total Hydrocarbon
UC	University of California
ULEV	Ultra Low Emission Vehicle
UNFCCC	United Nations Framework Convention on Climate Change
URBEMIS	Urban Emissions Model
USGBC	U.S. Green Building Council
VMT	Vehicle Miles Traveled
VTPI	Victoria Transit Policy
YSAQMD	Yolo-Solano Air Quality Management District

Introduction

The California Environmental Quality Act (CEQA) requires that public agencies refrain from approving projects with significant adverse environmental impacts if there are feasible alternatives or mitigation measures that can substantially reduce or avoid those impacts. There is growing concern about greenhouse gas emissions[1] (GHG) and recognition of their significant adverse impacts on the world's climate and on our environment. In its most recent reports, the International Panel on Climate Change (IPCC) has called the evidence for this "unequivocal." In California, the passage of the Global Warming Solutions Act of 2006 (AB 32) recognizes the serious threat to the "economic well-being, public health, natural resources, and the environment of California" resulting from global warming. In light of our current understanding of these impacts, public agencies approving projects subject to the CEQA are facing increasing pressure to identify and address potential significant impacts due to GHG emissions. Entities acting as lead agencies in the CEQA process are looking for guidance on how to adequately address the potential climate change impacts in meeting their CEQA obligations.

Air districts have traditionally provided guidance to local lead agencies on evaluating and addressing air pollution impacts from projects subject to CEQA. Recognizing the need for a common platform of information and tools to support decision makers as they establish policies and programs for GHG and CEQA, the California Air Pollution Control Officers Association has prepared a white paper reviewing policy choices, analytical tools, and mitigation strategies.

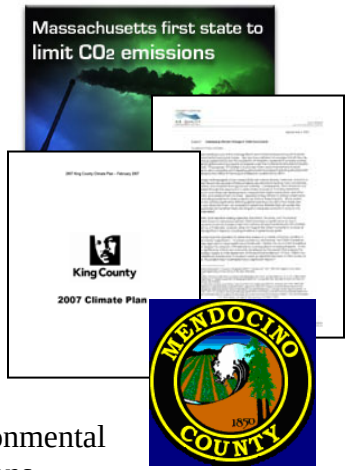
This paper is intended to serve as a resource for public agencies as they establish agency procedures for reviewing GHG emissions from projects under CEQA. It considers the application of thresholds and offers three alternative programmatic approaches toward

[1] Throughout this paper GHG, CO_2, CO_2e, are used interchangeably and refer generally to greenhouse gases but do not necessarily include all greenhouse gases unless otherwise specified.

determining whether GHG emissions are significant. The paper also evaluates tools and methodologies for estimating impacts, and summarizes mitigation measures. It has been prepared with the understanding that the programs, regulations, policies, and procedures established by the California Air Resources Board (CARB) and other agencies to reduce GHG emissions may ultimately result in a different approach under CEQA than the strategies considered here. The paper is intended to provide a common platform for public agencies to ensure that GHG emissions are appropriately considered and addressed under CEQA while those programs are being developed.

Examples of Other Approaches

Many states, counties, and cities have developed policies and regulations concerning greenhouse gas emissions that seek to require or promote reductions in GHG emissions through standards for vehicle emissions, fuels, electricity production/renewables, building efficiency, and other means. A few have developed guidance and are currently considering formally requiring or recommending the analysis of greenhouse gas emissions for development projects during their associated environmental processes. Key work in this area includes:



- Massachusetts Office of Energy and Environmental Affairs Greenhouse Gas Emissions Policy;
- King County, Washington, Executive Order on the Evaluation of Climate Change Impacts through the State Environmental Policy Act;
- Sacramento AQMD interim policy on addressing climate change in CEQA documents; and
- Mendocino AQMD updated guidelines for use during preparation of air quality impacts in Environmental Impact Reports (EIRs) or mitigated negative declarations.

The following paper evaluates options for lead agencies to ensure that GHG emissions are appropriately addressed as part of analyses under CEQA. It considers the use of significance thresholds, tools and methodologies for analyzing GHG emissions, and measures and strategies to avoid, reduce, or mitigate impacts.

Greenhouse Gas Significance Criteria

This white paper discusses three basic options air districts and lead agencies can pursue when contemplating the issues of CEQA thresholds for greenhouse gas emissions. This paper explores each path and discusses the benefits and disbenefits of each. The three basic paths are:

- No significance threshold for GHG emissions;

- GHG emissions threshold set at zero; or
- GHG threshold set at a non-zero level.

Each has inherent advantages and disadvantages. Air districts and lead agencies may believe the state or national government should take the lead in identifying significance thresholds to address this global impact. Alternatively, the agency may believe it is premature or speculative to determine a clear level at which a threshold should be set. On the other hand, air districts or lead agencies may believe that every GHG emission should be scrutinized and mitigated or offset due to the cumulative nature of this impact. Setting the threshold at zero will place all discretionary projects under the CEQA microscope. Finally, an air district or lead agency may believe that some projects will not benefit from a full environmental impact report (EIR), and may believe a threshold at some level above zero is needed.

This paper explores the basis and implications of setting no threshold, setting a threshold at zero and two primary approaches for those who may choose to consider a non-zero threshold. The first approach is grounded in statute (AB 32) and executive order (EO S-3-05) and explores four possible options under this scenario. The options under this approach are variations of ways to achieve the 2020 goals of AB 32 from new development, which is estimated to be about a 30 percent reduction from business as usual.

The second approach explores a tiered threshold option. Within this option, seven variations are discussed. The concepts explored here offer both quantitative and qualitative approaches to setting a threshold as well as different metrics by which tier cut-points can be set. Variations range from setting the first tier cut-point at zero to second-tier cut-points set at defined emission levels or based on the size of a project. It should be noted that some applications of the tiered threshold approach may require inclusion in a General Plan or adoption of enabling regulations or ordinances to render them fully effective and enforceable.

Greenhouse Gas Analytical Methodologies

The white paper evaluates various analytical methods and modeling tools that can be applied to estimate the greenhouse gas emissions from different project types subject to CEQA. In addition, the suitability of the methods and tools to characterize accurately a project's emissions is discussed and the paper provides recommendations for the most appropriate methodologies and tools currently available.

The suggested methodologies are applied to residential, commercial, specific plan and general plan scenarios where GHG emissions are estimated for each example. This chapter also discusses estimating emissions from solid waste facilities, a wastewater treatment plant, construction, and air district rules and plans.

Another methodology, a service population metric, that would measure a project's overall GHG efficiency to determine if a project is more efficient than the existing statewide average for per capita GHG emissions is explored. This methodology may be more directly correlated to a project's ability to help achieve objectives outlined in AB 32, although it relies on establishment of an efficiency-based significance threshold. The subcommittee believes this methodology may eventually be appropriate to evaluate the long-term GHG emissions from a project in the context of meeting AB 32 goals. However, this methodology will need further work and is not considered viable for the interim guidance presented in this white paper.

Greenhouse Gas Mitigation Measures

Common practice in environmental protection is first to avoid, then to minimize, and finally to compensate for impacts. When an impact cannot be mitigated on-site, off-site mitigation can be effectively implemented in several resource areas, either in the form of offsetting the same impact or preserving the resource elsewhere in the region.

This white paper describes and evaluates currently available mitigation measures based on their economic, technological and logistical feasibility, and emission reduction effectiveness. The potential for secondary impacts to air quality are also identified for each measure. A summary of current rules and regulations affecting greenhouse gas emissions and climate change is also provided.

Reductions from transportation related measures (e.g., bicycle, pedestrian, transit, and parking) are explored as a single comprehensive approach to land use. Design measures that focus on enhancing alternative transportation are discussed. Mitigation measures are identified for transportation, land use/building design, mixed-use development, energy efficiency, education/social awareness and construction.

Purpose

CEQA requires the avoidance or mitigation of significant adverse environmental impacts where there are feasible alternatives available. The contribution of GHG to climate change has been documented in the scientific community. The California Global Warming Solutions Act of 2006 (AB 32) mandates significant reductions in greenhouse gases (GHG); passage of that law has highlighted the need to consider the impacts of GHG emissions from projects that fall under the jurisdiction of the California Environmental Quality Act (CEQA). Because we have only recently come to fully recognize the potential for significant environmental impacts from GHG, most public agencies have not yet established policies and procedures to consider them under CEQA. As a result, there is great need for information and other resources to assist public agencies as they develop their programs.

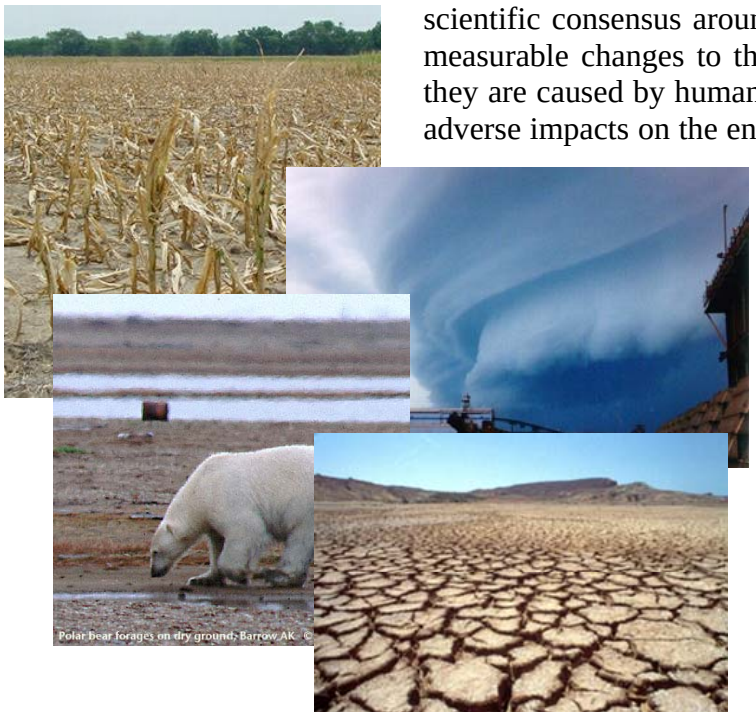
Air districts have historically provided guidance to local governments on the evaluation of air pollutants under CEQA. As local concern about climate change and GHG has increased, local governments have requested guidance on incorporating analysis of these impacts into local CEQA review. The California Air Pollution Control Officers Association (CAPCOA), in coordination with the CARB, the Governor's Office of Planning and Research (OPR) and two environmental consulting firms, has harnessed the collective expertise to evaluate approaches to analyzing GHG in CEQA. The purpose of this white paper is to provide a common platform of information and tools to address climate change in CEQA analyses, including the evaluation and mitigation of GHG emissions from proposed projects and identifying significance threshold options.

CEQA requires public agencies to ensure that potentially significant adverse environmental effects of discretionary projects are fully characterized, and avoided or mitigated where there are feasible alternatives to do so. Lead agencies have struggled with how best to identify and characterize the magnitude of the adverse effects that individual projects have on the global-scale phenomenon of climate change, even more so since Governor Schwarzenegger signed Executive Order S-3-05 and the state Legislature enacted The Global Warming Solutions Act of 2006 (AB 32). There is now a resounding call to establish procedures to analyze and mitigate greenhouse gas (GHG) emissions. The lack of established thresholds does not relieve lead agencies of their responsibility to analyze and mitigate significant impacts, so many of these agencies are seeking guidance from state and local air quality agencies. This white paper addresses issues inherent in establishing CEQA thresholds, evaluates tools, catalogues mitigation measures and provides air districts and lead agencies with options for incorporating climate change into their programs.

Background

National and International Efforts

International and Federal legislation have been enacted to deal with climate change issues. The Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation. The most recent reports of the IPCC have emphasized the scientific consensus around the evidence that real and measurable changes to the climate are occurring, that they are caused by human activity, and that significant adverse impacts on the environment, the economy, and human health and welfare are unavoidable.



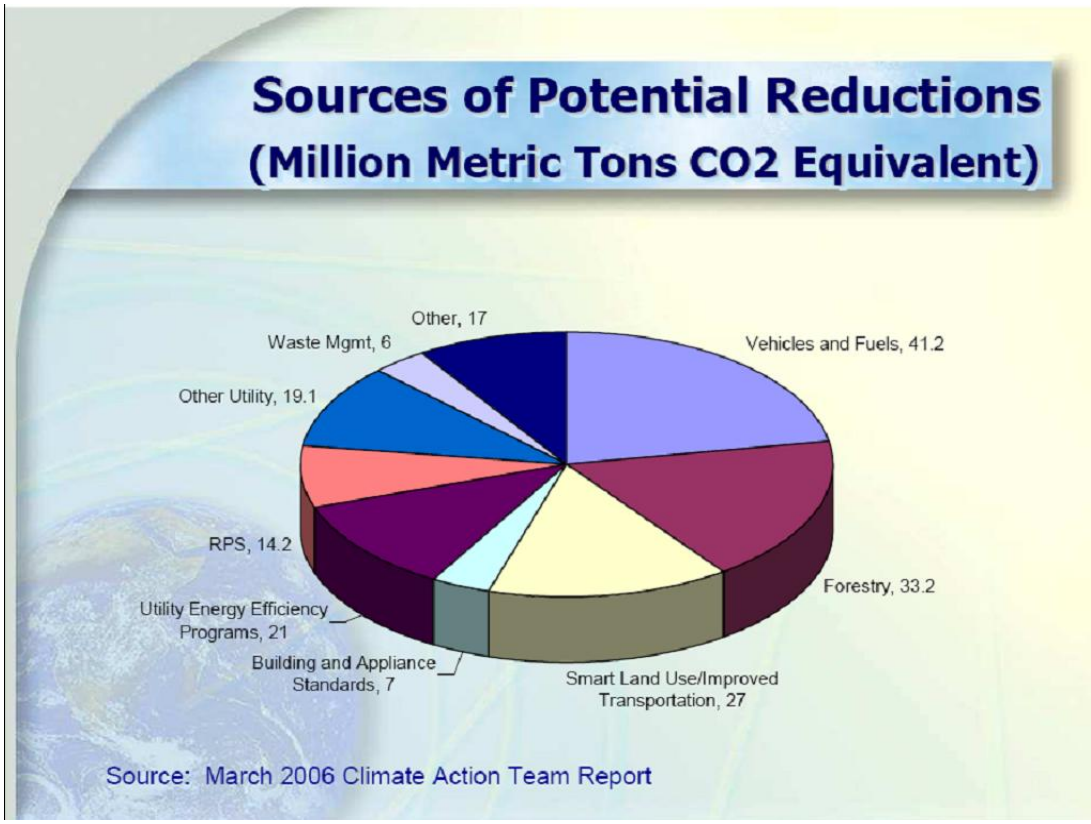
In October 1993, President Clinton announced his Climate Change Action Plan, which had a goal to return greenhouse gas emissions to 1990 levels by the year 2000. This was to be accomplished through 50 initiatives that relied on innovative voluntary partnerships between the private sector and government aimed at producing cost-effective reductions in greenhouse gas emissions. On March 21, 1994, the United States joined a number of countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC). Under the Convention, governments agreed to gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

These efforts have been largely policy oriented. In addition to the national and international efforts described above, many local jurisdictions have adopted climate change policies and programs. However, thus far little has been done to assess the significance of the affects new development projects may have on climate change.

Executive Order S-3-05

On June 1, 2005, Governor Schwarzenegger issued Executive Order S-3-05 (S-3-05). It included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed the Secretary of the California Environmental Protection Agency to coordinate with the Secretary of the Business, Transportation and Housing Agency, Secretary of the Department of Food and Agriculture, Secretary of the Resources Agency, Chairperson of the CARB, Chairperson of the Energy Commission and President of the Public Utilities Commission on development of a Climate Action Plan.

The Secretary of CalEPA leads a Climate Action Team (CAT) made up of representatives from the agencies listed above to implement global warming emission reduction programs identified in the Climate Action Plan and report on the progress made toward meeting the statewide greenhouse gas targets that were established in the Executive Order.



SOURCE: ARB 2007

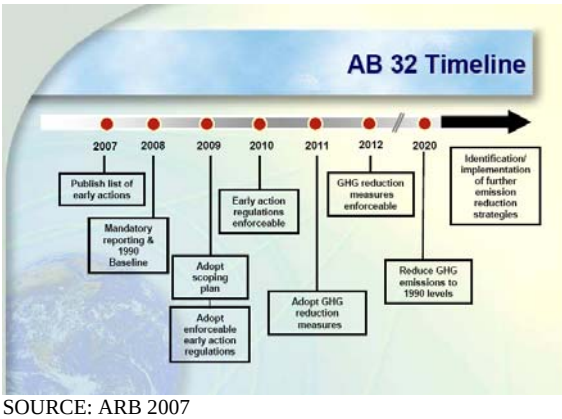
In accord with the requirements of the Executive Order, the first report to the Governor and the Legislature was released in March 2006 and will be issued bi-annually thereafter. The CAT Report to the Governor contains recommendations and strategies to help ensure the targets in Executive Order S-3-05 are met.

California Global Warming Solutions Act of 2006 (AB 32)

In 2006, the California State Legislature adopted the California Global Warming Solutions Act of 2006. AB 32 establishes a cap on statewide greenhouse gas emissions and sets forth the regulatory framework to achieve the corresponding reduction in statewide emissions levels. AB 32 charges the California Air Resources Board (CARB), the state agency charged with regulating statewide air quality, with implementation of the act. Under AB 32, greenhouse gases are defined as: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

The regulatory steps laid out in AB 32 require CARB to: adopt early action measures to reduce GHGs; to establish a statewide greenhouse gas emissions cap for 2020 based on 1990 emissions; to adopt mandatory reporting rules for significant source of greenhouse gases; and to adopt a scoping plan indicating how emission reductions will be achieved via regulations, market mechanisms and other actions; and to adopt the regulations needed to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gases.

AB 32 requires that by January 1, 2008, the State Board shall determine what the statewide greenhouse gas emissions inventory was in 1990, and approve a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not yet been approved, CARB's most recent emission inventory indicates that California had annual emissions of 436 million metric tons of carbon dioxide equivalent (MMT CO_2e) in 1990 and 497 MMT CO_2e in 2004.



SOURCE: ARB 2007

The regulatory timeline laid out in AB 32 requires that by July 1, 2007, CARB adopt a list of discrete early action measures, or regulations, to be adopted and implemented by January 1, 2010. These actions will form part of the State's comprehensive plan for achieving greenhouse gas emission reductions. In June 2007, CARB adopted three discrete early action measures. These three new proposed regulations meet the definition of "discrete early action greenhouse gas reduction measures," which include the following: a low carbon fuel standard; reduction of HFC-134a emissions from non-professional servicing of motor vehicle air conditioning systems; and improved landfill methane capture. CARB estimates that by 2020, the reductions from those three discrete early action measures would be approximately 13-26 MMT CO_2e.

CARB evaluated over 100 possible measures identified by the CAT for inclusion in the list of discrete early action measures. On October 25, 2007 CARB gave final approval to the list of Early Action Measures, which includes nine discrete measures and 35

additional measures, all of which are to be enforceable by January 1, 2010. AB 32 requires that by January 1, 2009, CARB adopt a scoping plan indicating how emission reductions will be achieved via regulations, market mechanisms and other actions.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is an important environmental issue that requires analysis under CEQA. This bill directs the OPR to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, by July 1, 2009. The Resources Agency is required to certify or adopt those guidelines by January 1, 2010. This bill also protects projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E) from claims of inadequate analysis of GHG as a legitimate cause of action. This latter provision will be repealed on January 1, 2010. Thus, this "protection" is highly limited to a handful of projects and for a short time period.

The Role of Air Districts in the CEQA Process

Air districts assume one of three roles in the CEQA process. They may be lead agencies when they are adopting regulations and air quality plans. In some instances, they can also be a lead agency when approving permits to construct or operate for applicants subject to district rules. However, in many cases where an air district permit is involved, another agency has broader permitting authority over the project and assumes the role of lead agency. In these situations, the air district becomes what is referred to as a responsible agency under CEQA. When CEQA documents are prepared for projects that do not involve discretionary approval of a district regulation, plan or permit, the air district may assume the role of a concerned or commenting agency. In this role, it is typical for air districts to comment on CEQA documents where there may be air quality-related adverse impacts, such as projects that may create significant contributions to existing violations of ambient standards, cause a violation of an ambient standard or create an exposure to toxic air contaminants or odors. In some cases, the air district may also act in an "advisory" capacity to a lead agency early on in its review of an application for a proposed development project.

A few air districts in California began developing significance thresholds for use in CEQA analyses in the late 1980's and early 1990's. By the mid-1990's most air districts had developed CEQA thresholds for air quality analyses. Many of the districts have included in their guidance the analysis of rule development and permits that may be subject to CEQA.

What is Not Addressed in this Paper

Impacts of Climate Change to a Project

The focus of this paper is addressing adverse impacts to climate change and the ability to meet statewide GHG reduction goals caused by proposed new land development projects. CEQA also requires an assessment of significant adverse impacts a project might cause by bringing development and people into an area affected by climate change (CEQA Guidelines §15126.2). For example, an area that experiences higher average temperatures due to climate change may expose new development to more frequent exceedances and higher levels of ozone concentrations. Alternatively, a rise in sea level brought on by climate change may inundate new development locating in a low-lying area. The methodologies, mitigation and threshold approaches discussed in this paper do not specifically address the potential adverse impacts resulting from climate change that may affect a project.

Impacts from Construction Activity

Although construction activity has been addressed in the analytical methodologies and mitigation chapters, this paper does not discuss whether any of the threshold approaches adequately addresses impacts from construction activity. More study is needed to make this assessment or to develop separate thresholds for construction activity. The focus of this paper is the long-term adverse operational impacts of land use development.

Introduction

Any analysis of environmental impacts under CEQA includes an assessment of the nature and extent of each impact expected to result from the project to determine whether the impact will be treated as significant or less than significant. CEQA gives lead agencies discretion whether to classify a particular environmental impact as significant. "The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved," ref: CEQA Guidelines §15064(b) ("Guidelines"). Ultimately, formulation of a standard of significance requires the lead agency to make a policy judgment about where the line should be drawn distinguishing adverse impacts it considers significant from those that are not deemed significant. This judgment must, however, be based on scientific information and other factual data to the extent possible (Guidelines §15064(b)).

CEQA does not require that agencies establish thresholds of significance. Guidelines §15064.7(a) encourages each public agency "…to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which normally means the effect will be determined to be less than significant."

Once such thresholds are established, an impact that complies with the applicable threshold will "normally" be found insignificant and an impact that does not comply with the applicable threshold will "normally" be found significant.

Additionally, Guidelines §15064.7(b) requires that if thresholds of significance are adopted for general use as part of the lead agency's environmental review process they must be adopted by ordinance, resolution, rule or regulation, and developed through a public review process and be supported by substantial evidence.

While many public agencies adopt regulatory standards as thresholds, the standards do not substitute for a public agency's use of careful judgment in determining significance. They also do not replace the legal standard for significance (i.e., if there is a fair argument, based on substantial evidence in light of the whole record that the project may have a significant effect, the effect should be considered significant) (Guidelines §15064(f)(1). Also see *Communities for a Better Environment v. California Resource Agency* 103 Cal. App. 4th 98 (2002)). In other words, the adoption of a regulatory standard does not create an irrebuttable presumption that impacts below the regulatory standard are less than significant.

Summary of CEQA Thresholds at Air Districts

This section briefly summarizes the evolution of air district CEQA significance thresholds. Ventura County APCD, in 1980, was the first air district in California that formally adopted CEQA significance thresholds. Their first CEQA assessment document contained impact thresholds based on project type: residential, nonresidential, and government. Then, as now, the District's primary CEQA thresholds applied only to ROG and NO_x. The 1980 Guidelines did not address other air pollutants.

Santa Barbara County APCD and the Bay Area AQMD adopted thresholds in 1985. The South Coast AQMD recommended regional air quality thresholds in 1987 for CO, SO_2, NO_2, particulates, ROG, and lead. Most of the other California air districts adopted CEQA guidance and thresholds during the 1990's. Air districts have updated their thresholds and guidelines several times since they were first published.

Originally, most districts that established CEQA thresholds focused on criteria pollutants for which the district was nonattainment and the thresholds only addressed project level impacts. Updates during the 1990's began to add additional air quality impacts such as odors, toxic air contaminants and construction. Several air districts also developed thresholds for General Plans that relied on an assessment of the plan consistency with the district's air quality plans. A consistency analysis involves comparing the project's land use to that of the general plan and the population and employment increase to the forecasts underlying the assumptions used to develop the air quality plan.

Most air district thresholds for CEQA are based on the threshold for review under the New Source Review (NSR). The NSR threshold level is set by district rule and is different depending on the nonattainment classification of the air district. Areas with a less severe classification have a higher NSR trigger level while the most polluted areas have the lowest NSR trigger level. Some districts, such as Ventura County APCD, have significantly lower CEQA thresholds that are not tied to the NSR requirements. In Ventura, one set of CEQA thresholds is 25 pounds per day for all regions of Ventura County, except the Ojai Valley. The second set of CEQA thresholds was set at 5 pounds per day for the Ojai Valley.

The Sacramento Metropolitan AQMD bases its thresholds for ozone precursors on the projected land use share of emission reductions needed for attainment. The emission reductions needed to reach attainment are based on commitments made in the state implementation plan (SIP) prepared for the federal clean air act.

CEQA Considerations in Setting Thresholds

Public agencies use significance thresholds to disclose to their constituents how they plan on evaluating and characterizing the severity of various environmental impacts that could be associated with discretionary projects that they review. Significance thresholds are also used to help identify the level of mitigation needed to reduce a potentially significant impact to a less than significant level and to determine what type of an environmental document should be prepared for a project; primarily a negative declaration, mitigated negative declaration or an environmental impact report.

While public agencies are not required to develop significance thresholds, if they decide to develop them, they are required to adopt them by ordinance, resolution, rule or regulation through a public process. A lead agency is not restrained from adopting any significance threshold it sees as appropriate, as long as it is based on substantial evidence. CEQA Guidelines §15064.7 encourages public agencies to develop and publish significance thresholds that are identifiable, quantitative, qualitative or performance level that the agency uses in the determination of the significance of environmental effects. The courts have ruled that a "threshold of significance" for a given environmental effect is simply that level at which the lead agency finds the effects of the project to be significant.

Before an agency determines its course with regard to climate change and CEQA, it must be made clear that a threshold, or the absence of one, will not relieve a lead agency from having to prepare an EIR or legal challenges to the adequacy of an analysis leading to a conclusion, or lack of a conclusion, of significance under CEQA. CEQA has generally favored the preparation of an EIR where there is any substantial evidence to support a fair argument that a significant adverse environmental impact may occur due to a proposed project. This paper explores three alternative approaches to thresholds, including a no threshold option, a zero threshold option and a non-zero threshold option.

<u>Fair Argument Considerations</u>

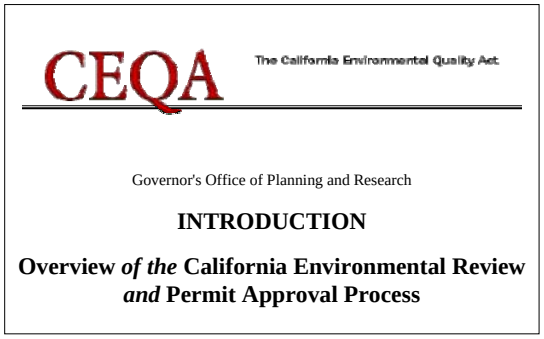
Under the CEQA fair argument standard, an EIR must be prepared whenever it can be fairly argued, based on substantial evidence in the administrative record, that a project may have a significant adverse effect on the environment. "Substantial evidence" comprises "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached." (Guidelines §15384) This means that if factual information is presented to the public agency that there is a reasonable possibility the project could have

a significant effect on the environment, an EIR is required even if the public agency has information to the contrary (Guidelines §15064 (f)).

The courts have held that the fair argument standard "establishes a low threshold for initial preparation of an EIR, which reflects a preference for resolving doubts in favor of environmental review." (*Santa Teresa Citizen Action Group v. City of San Jose* [2003] 114 Cal.App.4th 689) Although the determination of whether a fair argument exists is made by the public agency, that determination is subject to judicial scrutiny when challenged in litigation. When the question is whether an EIR should have been prepared, the court will review the administrative record for factual evidence supporting a fair argument.

The fair argument standard essentially empowers project opponents to force preparation of an EIR by introducing factual evidence into the record that asserts that the project may have a significant effect on the environment. This evidence does not need to be conclusive regarding the potential significant effect.

In 1998, the Resources Agency amended the State CEQA Guidelines to encourage the use of thresholds of significance. Guidelines §15064 (h) provided that when a project's impacts did not exceed adopted standards, the impacts were to be considered less than significant. The section went on to describe the types of adopted standards that were to be considered thresholds. Guidelines § 15064.7 provided that agencies may adopt thresholds of significance to guide their determinations of significance. Both of these sections were challenged when environmental groups sued the Resources Agency in 2000 over the amendments. The trial court concluded that §15064.7 was proper, if it was applied in the context of the fair argument standard.



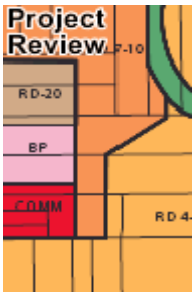
At the appellate court level, §15064(h) was invalidated.[2] Establishing a presumption that meeting an adopted standard would avoid significant impacts was "inconsistent with controlling CEQA law governing the fair argument approach." The Court of Appeal explained that requiring agencies to comply with a regulatory standard "relieves the agency of a duty it would have under the fair argument approach to look at evidence beyond the regulatory standard, or in contravention of the standard, in deciding whether an EIR must be prepared. Under the fair argument approach, any substantial evidence supporting a fair argument that a project may have a significant environmental effect would trigger the preparation of an EIR." (*Communities for a Better Environment v. California Resources Agency* [2002] 103 Cal.App.4th 98)

[2] Prior §15064(h) has been removed from the State CEQA Guidelines. Current §15064(h) discusses cumulative impacts.

In summary, CEQA law does not require a lead agency to establish significance thresholds for GHG. CEQA guidelines encourage the development of thresholds, but the absence of an adopted threshold does not relieve the agency from the obligation to determine significance.

Defensibility of CEQA Analyses

The basic purposes of CEQA, as set out in the State CEQA Guidelines, include: (1) informing decision makers and the public about the significant environmental effects of proposed projects; (2) identifying ways to reduce or avoid those impacts; (3) requiring the implementation of feasible mitigation measures or alternatives that would reduce or avoid those impacts; and (4) requiring public agencies to disclose their reasons for approving any project that would have significant and unavoidable impacts (Guidelines §15002). CEQA is enforced through civil litigation over procedure (i.e., did the public agency follow the correct CEQA procedures?) and adequacy (i.e., has the potential for impacts been disclosed, analyzed, and mitigated to the extent feasible?).



The California Supreme Court has held that CEQA is "to be interpreted in such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." (*Friends of Mammoth v. Board of Supervisors* [1972] 8 Cal.3d 247, 259) Within that context, the role of the courts is to weigh the facts in each case and apply their judgment. Although the court may rule on the adequacy of the CEQA work, the court is not empowered to act in the place of the public agency to approve or deny the project for which the CEQA document was prepared. Further, the court's review is limited to the evidence contained in the administrative record that was before the public agency when it acted on the project.

Putting aside the issue of CEQA procedure, the defensibility of a CEQA analysis rests on the following concerns:

- whether the public agency has sufficiently analyzed the environmental consequences to enable decision makers to make an intelligent decision;
- whether the conclusions of the public agency are supported by substantial evidence in the administrative record; and
- whether the agency has made a good faith effort at the full disclosure of significant effects.

CEQA analyses need not be perfect or exhaustive -- the depth and breadth of the analysis is limited to what is "reasonably feasible." (Guidelines §15151) At the same time, the analysis "must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed

project." (Laurel Heights Improvement Assn. v. Regents of University of California (1988) 47 Cal.3d 376)

By itself, establishment of a GHG threshold will not insulate individual CEQA analyses from challenge. Defensibility depends upon the adequacy of the analysis prepared by the lead agency and the process followed. However, the threshold can help to define the boundaries of what is a reasonable analysis by establishing when an analysis will be required and the basic scope of that analysis. The threshold would attempt to define the point at which an analysis will be required and when a level of impact becomes significant, requiring preparation of an EIR. If the threshold includes recommendations for the method or methods of analysis, it can establish the minimum level of analysis to address this issue.

Considerations in Setting Thresholds for Stationary Source Projects

In many respects, the analysis of GHG emissions from stationary sources is much more straightforward than the analysis of land use patterns, forecasted energy consumption, and emissions from mobile sources. The reason is that, for the most part, the latter analyses depend largely on predictive models with myriad inputs and have a wider range of error. Emissions from stationary sources involve a greater reliance on mass and energy balance calculations and direct measurements of emissions from the same or similar sources. Energy demand is more directly tied to production, and even associated mobile source emissions will likely fall within narrower predictive windows.

<u>Implementing CEQA Without a Threshold</u>

A lead agency is not required to establish significance thresholds for GHG emissions from stationary sources. The lead agency may find that it needs more information or experience evaluating GHG from these types of projects to determine an appropriate significance threshold. As with other project types, the lead agency could conduct a project specific analysis to determine whether an environmental impact report is needed and to determine the level of mitigation that is appropriate. The agency might also rely on thresholds established for criteria pollutants as a screening method, and analyze GHG emissions (and require mitigation) from projects with emissions above the criteria pollutant thresholds. Over time, the agency could amass information and experience with specific project categories that would support establishing explicit thresholds. The lead agency may also choose to base local CEQA thresholds on state guidelines or on the category-specific reduction targets established by ARB in its scoping plan for implementing AB32. Resource constraints and other considerations associated with implementing CEQA without GHG thresholds for stationary sources would be similar to those outlined for other types of projects (see Chapter 5 – No Threshold Option).

Implementing CEQA with Threshold of Zero

A lead agency may find that any increase in GHG emissions is potentially significant under CEQA. The resources and other considerations for implementing a threshold of zero for stationary sources are the same as those outlined for other types of projects (see Chapter 6 – Zero Threshold Option).

Implementing CEQA with a Non-Zero Threshold

A lead agency may identify one or more non-zero thresholds for significance of emissions of GHG from stationary sources. The agency could elect to rely on existing thresholds for reviewing new or modified stationary sources of GHG, if the state or local air district has established any. The agency could also apply the threshold(s) established for non-stationary sources to GHG emissions from stationary sources. Significance thresholds could also be established by ordinance, rule, or policy for a given category of stationary sources; this approach is especially conducive to a tiered threshold approach. For example, the agency could establish significance and mitigation tiers for stationary compression-ignition diesel-fueled generators. Under such an approach, the project proponent could be first required to use a lower GHG-emitting power source if feasible, and if not, to apply mitigation based on the size of the generator and other defined considerations, such as hours of operation. Certain classes of generators could be found to be insignificant under CEQA (e.g., those used for emergency stand-by power only, with a limit on the annual hours of use). As with non-stationary projects, the goal of establishing non-zero thresholds is to maximize environmental protection, while minimizing resources used. Resource and other considerations outlined for non-stationary projects are applicable here (see Chapter 7 – Non-Zero Threshold Options).

Implementing CEQA with Different Thresholds for Stationary and Non-stationary Projects

Although a lead agency may apply the same thresholds to stationary and non-stationary projects, it is not required to do so. There are, in fact, some important distinctions between the two types of projects that could support applying different thresholds. The lead agency should consider the methods used to estimate emissions. Are the estimates a "best/worst reasonable scenario" or are they based on theoretical maximum operation? How accurate are the estimates (are they based on models, simulations, emission factors, source test data, manufacturer specifications, etc.)? To what extent could emissions be reduced through regulations after the project is constructed if they were found to be greater than originally expected (i.e., is it possible to retrofit emissions control technology onto the source(s) of GHG at a later date, how long is the expected project life, etc.)? Are there emission limits or emissions control regulations (such as New Source Review) that provide certainty that emissions will be mitigated? Generally, stationary source emissions are based on maximum emissions (theoretical or allowed under law or regulation), are more accurate, and are more amenable to retrofit at a later time than non-stationary source emissions. It is also more likely that category specific

rules or some form of NSR will apply to stationary sources than non-stationary projects. Notwithstanding, it is almost always more effective and cost-efficient to apply emission reduction technology at the design phase of a project. There are, therefore, a number of considerations that need to be evaluated and weighed before establishing thresholds – and which may support different thresholds for stationary and non-stationary projects. Furthermore, the considerations may change over time as new regulations are established and as emissions estimation techniques and control technology evolves.

Direct GHG Emissions from Stationary Sources

The main focus of this paper has been the consideration of projects that do not, in the main, involve stationary sources of air pollution, because stationary source projects are generally a smaller percentage of the projects seen by most local land use agencies. That said, some discussion of stationary sources is warranted. As the broader program for regulating GHG from these sources is developed, the strategies for addressing them under CEQA will likely become more refined.

The primary focus of analysis of stationary source emissions has traditionally been those pollutants that are directly emitted by the source, whether through a stack or as fugitive releases (such as leaks). CAPCOA conducted a simplified analysis of permitting activity to estimate the number of stationary source projects with potentially significant emissions of greenhouse gases that might be seen over the course of a year. This analysis looked only at stationary combustion sources (such as boilers and generators), and only considered direct emissions. A lead agency under CEQA may see a different profile of projects than the data provided here suggest, depending on what other resources are affected by projects. In addition, air districts review like-kind replacements of equipment to ensure the new equipment meets current standards, but such actions might not constitute a project for many land use agencies or other media regulators. The data does provide a useful benchmark, however, for lead agencies to assess the order of magnitude of potential stationary source projects. A similar analysis is included for non-stationary projects in Chapter 7.

Table 1: Analysis of GHG Emissions from Stationary Combustion Equipment Permits[3]

	BAAQMD	SMAQMD	SJVUAPCD	SCAQMD
Total Applications for Year	1499	778	1535	1179
Affected at threshold of:				
900 metric tons/year	26	43	63	108
10,000 metric tons/year	7	5	26	8
25,000 metric tons/year	3	1	11	4

[3] District data varies based on specific local regulations and methodologies.

Emissions from Energy Use

In addition to the direct emissions of GHG from stationary projects, CEQA will likely need to consider the project's projected energy use. This could include an analysis of opportunities for energy efficiency, onsite clean power generation (e.g., heat/energy recovery, co-generation, geothermal, solar, or wind), and the use of dedicated power contracts as compared to the portfolio of generally available power. In some industries, water use and conservation may provide substantial GHG emissions reductions, so the CEQA analysis should consider alternatives that reduce water consumption and wastewater discharge. The stationary project may also have the opportunity to use raw or feedstock materials that have a smaller GHG footprint; material substitution should be evaluated where information is available to do so.

Emissions from Associated Mobile Sources

The stationary project will also include emissions from associated mobile sources. These will include three basic components: emissions from employee trips, emissions from delivery of raw or feedstock materials, and emissions from product transport. Employee trips can be evaluated using trip estimation as is done for non-stationary projects, and mitigations would include such measures as providing access to and incentives for use of public transportation, accessibility for bicycle and pedestrian modes of transport, employer supported car or vanpools (including policies such as guaranteed rides home, etc). Upstream and downstream emissions related to goods movement can also be estimated with available models. The evaluation will need to determine the extent of the transport chain that should be included (to ensure that all emissions in the chain have been evaluated and mitigated, but to avoid double counting). Mitigations could include direct actions by operators who own their own fleet, or could be implemented through contractual arrangements with independent carriers; again, the evaluation will need to consider how far up and down the chain mitigation is feasible and can be reasonably required.

Comparing Emissions Changes Across Pollutant Categories

The potential exists for certain GHG reduction measures to increase emissions of criteria and toxic pollutants known to cause or aggravate respiratory, cardiovascular, and other health problems. For instance, GHG reduction efforts such as alternative fuels and methane digesters may create significant levels of increased pollutants that are detrimental to the health of the nearby population (e.g.; particulate matter, ozone precursors, toxic air contaminants). Such considerations should be included in any CEQA analysis of a project's environmental impacts. While there are many win-win

strategies that can reduce both GHG and criteria/toxic pollutant emissions, when faced with situations that involve tradeoffs between the two, the more immediate public health concerns that may arise from an increase in criteria or toxic pollutant emissions should take precedence. GHG emission reductions could be achieved offsite through other mitigation programs.

Introduction

Under state law, it is the purview of each lead agency to determine what, if any, significance thresholds will be established to guide its review of projects under CEQA. While the state does provide guidelines for implementing CEQA, the guidelines have left the decision of whether to establish thresholds (and if so, at what level) to individual lead agencies. Frequently, lead agencies consult with resource-specific agencies (such as air districts) for assistance in determining what constitutes a significant impact on that specific resource.

With the passage of AB 32, the ARB has broad authority to regulate GHG emissions as necessary to meet the emission reduction goals of the statute. This may include authority to establish emission reduction requirements for new land use projects, and may also enable them to recommend statewide thresholds for GHG under CEQA.

In developing this white paper, CAPCOA recognizes that, as the GHG reduction program evolves over time, GHG thresholds and other policies and procedures for CEQA may undergo significant revision, and that uniform statewide thresholds and procedures may be established. This paper is intended to serve as a resource for public agencies until such time that statewide guidance is established, recognizing that decisions will need to be made about GHG emissions from projects before such guidance is available. This paper is not, however, uniform statewide guidance. As stated before, it outlines several possible approaches without endorsing any one over the others.

Some air districts may choose to use this paper to support their establishment of guidance for GHG under CEQA, including thresholds. This paper does not, nor should it be construed to require a district to implement any of the approaches evaluated here. Decisions about whether to provide formal local guidance on CEQA for projects with GHG emissions, including the question of thresholds, will be made by individual district boards.

Each of the 35 air districts operates independently and has its own set of regulations and programs to address the emissions from stationary, area and mobile sources, consistent with state and federal laws, regulations, and guidelines. The independence of the districts allows specific air quality problems to be addressed on a local level. In addition, districts have also established local CEQA thresholds of significance for criteria pollutants – also to address the specific air quality problems relative to that particular district.

The overall goal of air district thresholds is to achieve and maintain health based air quality standards within their respective air basins and to reduce transport of emissions to other air basins. In establishing recommended thresholds, air districts consider the existing emission inventory of criteria pollutants and the amount of emission reductions needed to attain and maintain ambient air quality standards.

However, unlike criteria pollutants where individual districts are characterized by varying levels of pollutant concentrations and source types, greenhouse gases (GHG) and their attendant climate change ramifications are a global problem and, therefore, may suggest a uniform approach to solutions that ensure both progress and equity.

Under SB97, the Office of Planning and Research is directed to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions through CEQA by July 1, 2009. Those guidelines may recommend thresholds. As stated, this paper is intended to provide a common platform of information and tools to support local decision makers until such time that statewide guidance or requirements are promulgated.

Local Ability to Promulgate District-Specific GHG Thresholds

One of the primary reasons behind the creation of air districts in California is the recognition that some regions within the state face more critical air pollution problems than others and, as has often been pointed out – one size does not fit all. For example, a "Serious" federal nonattainment district would need greater emission reductions than a district already in attainment – and, therefore, the more "serious" district would set its criteria pollutant CEQA thresholds of significance much lower than the air district already in attainment.

The action of GHGs is global in nature, rather than local or regional (or even statewide or national). Ultimately there may be a program that is global, or at least national in scope. That said, actions taken by a state, region, or local government can contribute to the solution of the global problem. Local governments are not barred from developing and implementing programs to address GHGs. In the context of California and CEQA, lead agencies have the primary responsibility and authority to determine the significance of a project's impacts.

Further, air districts have primary authority under state law for "control of air pollution from all sources, other than emissions from motor vehicles." (H&SC §40000) The term air contaminant or "air pollutant" is defined extremely broadly, to mean "any discharge, release, or other propagation into the atmosphere" and includes, but is not limited to, soot, carbon, fumes, gases, particulate matter, etc. Greenhouse gases and other global warming pollutants such as black carbon would certainly be included in this definition, just as the U.S. Supreme Court held in Massachusetts v. EPA that greenhouse gases were air pollutants under the federal Clean Air Act. Therefore, air districts have the primary authority to regulate global warming pollutants from nonvehicular sources. AB 32 does not change this result. Although it gives wide responsibility to CARB to regulate greenhouse gases from all sources, including nonvehicular sources, it does not preempt the districts. AB 32 specifically states That "nothing in this division shall limit or expand the existing authority of any district..."(H&SC § 38594). Thus, districts and CARB retain concurrent authority over nonvehicular source greenhouse gas emissions.

Introduction

The CEQA statutes do not require an air district or any lead agency to establish significance thresholds under CEQA for any pollutant. While there are considerations that support the establishment of thresholds (which are discussed in other sections of this document), there is no obligation to do so.

An air district or other lead agency may elect not to establish significance thresholds for a number of reasons. The agency may believe that the global nature of the climate change problem necessitates a statewide or national framework for consideration of environmental impacts. SB 97 directs OPR to develop "guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions by July 1, 2009," and directs the California Resources Agency to certify and adopt the guidelines by June 30, 2010.

An agency may also believe there is insufficient information to support selecting one specific threshold over another. As described earlier, air districts have historically set CEQA thresholds for air pollutants in the context of the local clean air plan, or (in the case of toxic air pollutants) within the framework of a rule or policy that manages risks and exposures due to toxic pollutants. There is no current framework that would similarly manage impacts of greenhouse gas pollutants, although the CARB is directed to establish one by June 30, 2009, pursuant to AB 32. A local agency may decide to defer any consideration of thresholds until this framework is in place.

Finally, an agency may believe that the significance of a given project should be assessed on a case-by-case basis in the context of the project at the time it comes forward.

Implementing CEQA Without Significance Thresholds for GHG

The absence of a threshold does not in any way relieve agencies of their obligations to address GHG emissions from projects under CEQA. The implications of not having a threshold are different depending on the role the agency has under CEQA – whether it is acting in an advisory capacity, as a responsible agency, or as a lead agency.

<u>Implications of No Thresholds for an Agency Acting in an Advisory Capacity</u>

Air districts typically act in an advisory capacity to local governments in establishing the framework for environmental review of air pollution impacts under CEQA. This may include recommendations regarding significance thresholds, analytical tools to assess emissions and impacts, and mitigations for potentially significant impacts. Although districts will also address some of these issues on a project-specific basis as responsible agencies, they may provide general guidance to local governments on these issues that

are program wide, and these are advisory (unless they have been established by regulation).

An air district that has not established significance thresholds for GHG will not provide guidance to local governments on this issue. This does not prevent the local government from establishing thresholds under its own authority. One possible result of this would be the establishment of different thresholds by cities and counties within the air district. Alternatively, the air district could advise local governments not to set thresholds and those jurisdictions may follow the air district's guidance.

It is important to note here (as has been clearly stated by the Attorney General in comments and filings) that lack of a threshold does *not* mean lack of significance. An agency may argue lack of significance for any project, but that argument would have to be carried forth on a case-by-case, project specific basis. By extension then, a decision not to establish thresholds for GHG is likely to result in a greater workload for responsible and lead agencies as they consider individual projects under CEQA.

Implications of No Thresholds for a Responsible Agency

If there are no established thresholds of significance, the significance of each project will have to be determined during the course of review. The responsible agency (e.g., the air district) will review each project referred by the lead agency. The review may be qualitative or quantitative in nature. A qualitative review would discuss the nature of GHG emissions expected and their potential effect on climate change as the district understands it. It could also include a discussion of the relative merits of alternative scenarios. A quantitative analysis would evaluate, to the extent possible, the expected GHG emissions; it would also need to evaluate their potential effect on climate change and might include corresponding analysis of alternatives. The air district, as a responsible agency, may also identify mitigation measures for the project.

The lack of established thresholds will make the determination of significance more resource intensive for each project. The district may defer to the lead agency to make this determination, however the district may be obligated, as a responsible agency, to evaluate the analysis and determination.

Implications of No Thresholds for a Lead Agency

The main impact of not having significance thresholds will be on the primary evaluation of projects by the lead agency. Without significance thresholds, the agency will have to conduct some level of analysis of every project to determine whether an environmental impact report is needed. There are three fundamental approaches to the case-by-case analysis of significance, including presumptions of significance or insignificance, or no presumption:

1. The agency can begin with a presumption of significance and the analysis would be used to support a case-specific finding of no significance. This is similar to establishing a threshold of zero, except that here, the "threshold" is rebuttable. This approach may result in a large number of projects proceeding to preparation of an environmental impact report. Because of the attendant costs, project proponents may challenge the determination of significance, although formal challenge is less likely than attempts to influence the determination.

2. The agency can begin with a presumption of insignificance, and the analysis would be used to support a case-specific finding of significance. A presumption of insignificance could be based on the perspective that it would be speculative to attempt to identify the significance of GHG emissions from a project relative to climate change on a global scale. This approach might reduce the number of projects proceeding to preparation of environmental impact reports. It is likely to have greater success with smaller projects than larger ones, and a presumption of *insignificance* may be more likely to be challenged by project opponents.

3. It is not necessary for the lead agency to have any presumption either way. The agency could approach each project from a *tabula rasa* perspective, and have the determination of significance more broadly tied to the specific context of the project; this approach is likely to be resource intensive, and creates the greatest uncertainty for project proponents. To the extent that it results in a lead agency approving similar projects based on different determinations of significance for GHG emissions, it may be more vulnerable to challenge from either proponents or opponents of the project. Alternatively, in the absence of either thresholds or presumptions, the lead agency could use each determination of significance to build its approach in the same way that subsequent judgments define the law.

Relevant Citations

The full text of relevant citations is in Appendix A.

Public Resources Code – §21082.2, Significant Effect on Environment; Determination; Environmental Impact Report Preparation.

State CEQA Guidelines – §15064, Determining the Significance of the Environmental Effects Caused by a Project.

Introduction

If an air district or lead agency determines that any degree of project-related increase in GHG emissions would contribute considerably to climate change and therefore would be a significant impact, it could adopt a zero-emission threshold to identify projects that would need to reduce their emissions. A lead agency may determine that a zero-emission threshold is justified even if other experts may disagree. A lead agency is not prevented from adopting any significance threshold it sees as appropriate, as long as it is based on substantial evidence.

If the zero threshold option is chosen, all projects subject to CEQA would be required to quantify and mitigate their GHG emissions, regardless of the size of the project or the availability of GHG reduction measures available to reduce the project's emissions. Projects that could not meet the zero-emission threshold would be required to prepare environmental impact reports to disclose the unmitigable significant impact, and develop the justification for a statement of overriding consideration to be adopted by the lead agency.

Implementing CEQA With a Zero Threshold for GHG

The scientific community overwhelmingly agrees that the earth's climate is becoming warmer, and that human activity is playing a role in climate change. Unlike other environmental impacts, climate change is a global phenomenon in that all GHG emissions generated throughout the earth contribute to it. Consequently, both large and small GHG generators cause the impact. While it may be true that many GHG sources are individually too small to make any noticeable difference to climate change, it is also true that the countless small sources around the globe combine to produce a very substantial portion of total GHG emissions.

A zero threshold approach is based on a belief that, 1) all GHG emissions contribute to global climate change and could be considered significant, and 2) not controlling emissions from smaller sources would be neglecting a major portion of the GHG inventory.

CEQA explicitly gives lead agencies the authority to choose thresholds of significance. CEQA defers to lead agency discretion when choosing thresholds. Consequently, a zero-emission threshold has merits.

The CEQA review process for evaluating a project's impact on global climate change under the zero threshold option would involve several components. Air quality sections would be written by lead agencies to include discussions on climate change in CEQA documents, GHG emissions would be calculated, and a determination of significance would be made. The local air districts would review and comment on the climate change discussions in environmental documents. Lead agencies may then revise final EIRs to accommodate air district comments. More than likely, mitigation measures will be specified for the project, and a mitigation monitoring program will need to be put in place to ensure that these measures are being implemented.

Since CEQA requires mitigation to a less than significant level, it is conceivable that many projects subjected to a zero threshold could only be deemed less than significant with offsite reductions or the opportunity to purchase greenhouse gas emission reduction credits. GHG emission reduction credits are becoming more readily available however the quality of the credits varies considerably. High quality credits are generated by actions or projects that have clearly demonstrated emission reductions that are real, permanent, verifiable, enforceable, and not otherwise required by law or regulation. When the pre- or post-project emissions are not well quantified or cannot be independently confirmed, they are considered to be of lesser quality. Similarly, if the reductions are temporary in nature, they are also considered to be poor quality. Adoption of a zero threshold should consider the near-term availability and the quality of potential offsets.

There are also environmental justice concerns about the effects of using offsite mitigations or emission reduction credits to offset, or mitigate, the impacts of a new project. Although GHGs are global pollutants, some of them are emitted with co-pollutants that have significant near-source or regional impacts. Any time that increases in emissions at a specific site will be mitigated at a remote location or using emission reduction credits, the agency evaluating the project should ensure that it does not create disproportionate impacts.

Administrative Considerations

If electing to pursue a zero threshold, an air district or lead agency should consider the administrative costs and the environmental review system capacity. Some projects that previously would have qualified for an exemption could require further substantial analysis, including preparation of a Negative Declaration (ND), a Mitigated Negative Declaration (MND) or an EIR. Moreover, the trade-offs between the volume of projects requiring review and the quality of consideration given to reviews should be considered. It may also be useful to consider whether meaningful mitigation can be achieved from smaller projects.

Consideration of Exemptions from CEQA

A practical concern about identifying GHG emissions as a broad cumulative impact is whether the zero threshold option will preclude a lead agency from approving a large set of otherwise qualified projects utilizing a Categorical Exemption, ND, or MND. The results could be a substantial increase in the number of EIR's. This is a valid and challenging concern, particularly for any threshold approach that is based on a zero threshold for net GHG emission increases.

CEQA has specified exceptions to the use of a categorical exception. Specifically, CEQA Guidelines §15300.2 includes the following exceptions:

"(b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant."

(c) Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances."

These CEQA Guidelines sections could be argued to mean that any net increase in GHG emissions would preclude the use of a categorical exemption. However, as described below, if the following can be shown, then the exceptions above could be argued not to apply:

(1) Cumulative local, regional and/or state GHG emissions are being reduced or will be reduced by adopted, funded, and feasible measures in order to meet broader state targets.

(2) Mandatory state or local GHG reduction measures would apply to the project's emissions such that broader GHG reduction goals would still be met and the project contributions would not be cumulatively considerable.

(3) Project GHG emissions are below an adopted significance threshold designed to take into account the cumulative nature of GHG emissions.

A similar argument could be made relative to the use of a ND (provided no additional mitigation (beyond existing mandates) is required to control GHG emissions) and to the use of a MND instead of an EIR. However, due to the "fair argument" standard, which is discussed in Chapter 3, caution is recommended in use of a ND or MND unless all three elements above can be fully supported through substantial evidence and there is no substantial evidence to the contrary. Establishing a significance threshold of zero is likely to preclude the use of a categorical exemption.

Relevant Citations

The full text of relevant citations is in Appendix A.

Public Resources Code – §21004, Mitigating or Avoiding a Significant Effect; Powers of Public Agency.

State CEQA Guidelines – §15064, Determining the Significance of the Environmental Effects Caused by a Project.

State CEQA Guidelines – §15130, Discussion of Cumulative Impacts.

State CEQA Guidelines – §15064.7, Thresholds of Significance.

Introduction

A non-zero threshold could minimize the resources spent reviewing environmental analyses that do not result in real GHG reductions or to prevent the environmental review system from being overwhelmed. The practical advantages of considering non-zero thresholds for GHG significance determinations can fit into the concept regarding whether the project's GHG emissions represent a "considerable contribution to the cumulative impact" and therefore warrant analysis.

Specifying a non-zero threshold could be construed as setting a *de minimis* value for a cumulative impact. In effect, this would be indicating that there are certain GHG emission sources that are so small that they would not contribute substantially to the global GHG budget. This could be interpreted as allowing public agencies to approve certain projects without requiring any mitigation of their GHG. Any threshold framework should include a proper context to address the *de minimis* issue. However, the CEQA Guidelines recognize that there may be a point where a project's contribution, although above zero, would not be a *considerable contribution* to the cumulative impact and, therefore, not trigger the need for a significance determination.

GHG emissions from all sources are under the purview of CARB and as such may eventually be "regulated" no matter how small. Virtually all projects will result in some direct or indirect release of GHG. However, a decision by CARB to regulate a class of sources does not necessarily mean that an individual source in that class would constitute a project with significant GHG impacts under CEQA. For example, CARB has established criteria pollutant emission standards for automobiles, but the purchase and use of a single new car is not considered a project with significant impacts under CEQA. At the same time, it is important to note that it is likely that all meaningful sources of emissions, no matter how small are likely to be considered for regulation under AB 32. It is expected that projects will have to achieve some level of GHG reduction to comply with CARB's regulations meant to implement AB 32. As such all projects will have to play a part in reducing our GHG emissions budget and no project, however small, is truly being considered *de minimis* under CARB's regulations.

This chapter evaluates a range of conceptual approaches toward developing GHG significance criteria. The air districts retained the services of J&S an environmental consulting, firm to assist with the development of a Statute and Executive Order-based threshold (Approach 1) and a tiered threshold (Approach 2) based on a prescribed list of tasks and deliverables. Time and financial constraints limited the scope and depth of this analysis, however, the work presented here may be useful in developing interim guidance while AB 32 is being implemented. J&S recognized that approaches other than those described here could be used.

As directed, J&S explored some overarching issues, such as:

- what constitutes "new" emissions?

- how should "baseline emissions" be established?
- what is cumulatively "considerable" under CEQA?
- what is "business as usual" ? and
- should an analysis include "life-cycle" emissions?

The answers to these issues were key to evaluating each of the threshold concepts.

Approach 1 – Statute and Executive Order Approach

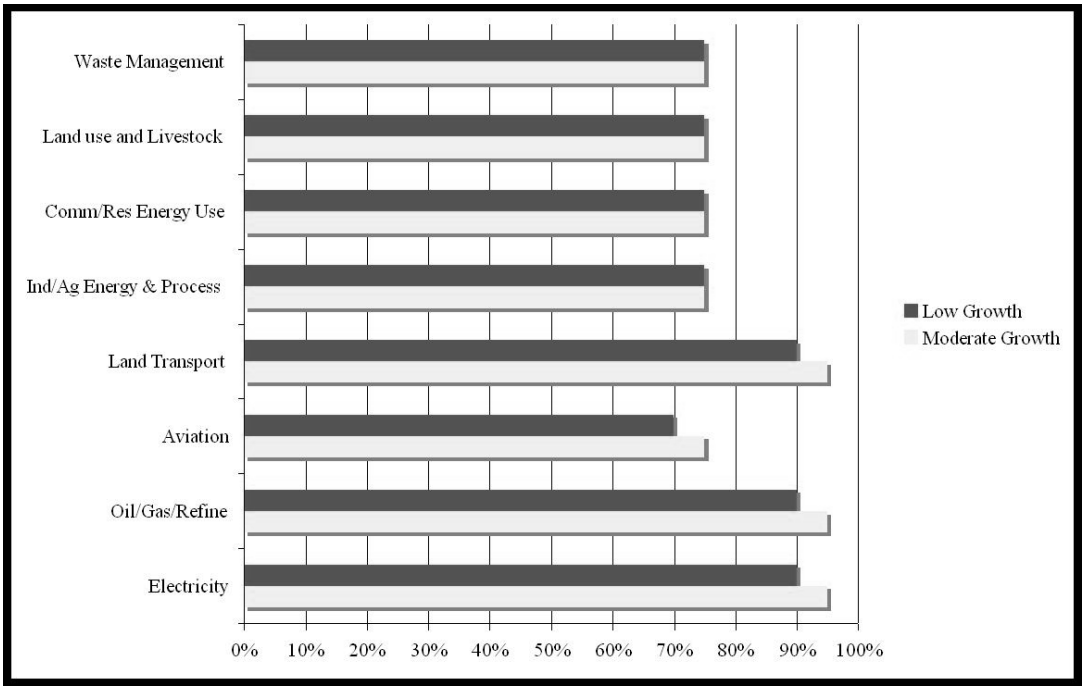
Thresholds could be grounded in existing mandates and their associated GHG emission reduction targets. A project would be required to meet the targets, or reduce GHG emissions to the targets, to be considered less than significant.

AB 32 and S-3-05 target the reduction of statewide emissions. It should be made clear that AB 32 and S-3-05 do not specify that the emissions reductions should be achieved through uniform reduction by geographic location or by emission source characteristics. For example, it is conceivable, although unlikely, that AB 32 goals could be achieved by new regulations that only apply to urban areas or that only apply to the transportation and/or energy sector. However, this approach to evaluating GHG under CEQA is based on the presumption that a new project must at least be consistent with AB 32 GHG emission reduction mandates.

The goal of AB 32 and S-3-05 is the significant reduction of future GHG emissions in a state that is expected to rapidly grow in both population and economic output. As such, there will have to be a significant reduction in the per capita GHG output for these goals to be met. CEQA is generally used to slow or zero the impact of new emissions, leaving the reduction of existing emission sources to be addressed by other regulatory means. With these concepts in mind, four options were identified for statute/executive order-based GHG significance thresholds and are described below.

<u>Threshold 1.1: AB 32/S-3-05 Derived Uniform Percentage-Based Reduction.</u> AB 32 requires the state to reduce California-wide GHG emissions to 1990 levels by 2020. Reducing greenhouse gas emission levels from 2020 to 1990 levels could require a 28 to 33 percent reduction of business-as-usual GHG emissions depending on the methodology used to determine the future emission inventories. The exact percent reduction may change slightly once CARB finalizes its 1990 and 2020 inventory estimates. In this context, business-as-usual means the emissions that would have occurred in the absence of the mandated reductions. The details of the business-as-usual scenario are established by CARB in the assumptions it uses to project what the state's GHG emissions would have been in 2020, and the difference between that level and the level that existed in 1990 constitutes the reductions that must be achieved if the mandated goals are to be met.

This threshold approach would require a project to meet a percent reduction target based on the average reductions needed from the business-as-usual emission from all GHG sources. Using the 2020 target, this approach would require all discretionary projects to achieve a 33 percent reduction from projected business-as-usual emissions in order to be considered less than significant. A more restrictive approach would use the 2050 targets. S-3-05 seeks to reduce GHG emissions to 80 percent below 1990 levels by 2050. To reach the 2050 milestone would require an estimated 90 percent reduction (effective immediately) of business-as-usual emissions. Using this goal as the basis for a significance threshold may be more appropriate to address the long-term adverse impacts associated with global climate change. Note that AB 32 and S-3-05 set emission inventory goals at milestone years; it is unclear how California will progress to these goals in non-milestone years.



SOURCE: ARB 2007

<u>Threshold 1.2: Uniform Percentage-Based (e.g.50%) Reduction for New Development</u>. This threshold is based on a presumption that new development should contribute a greater percent reduction from business-as-usual because greater reductions can be achieved at lower cost from new projects than can be achieved from existing sources. This approach would establish that new development emit 50 percent less GHG emissions than business-as-usual development. This reduction rate is greater than the recommended reduction rate for meeting the Threshold 1.1 2020 target (33 percent) but is significantly less restrictive than the Threshold 1.1 2050 target reduction rate (90 percent). If a 50 percent GHG reduction were achieved from new development, existing emissions would have to be reduced by 25 to 30 percent in order to meet the 2020 emissions goal depending on the year used to determine the baseline inventory. Although this reduction goal is reasonable for achieving the 2020 goal, it would not be possible to

reach the 2050 emissions target with this approach even if existing emissions were 100 percent controlled.

Threshold 1.3: Uniform Percentage-Based Reduction by Economic Sector. This threshold would use a discrete GHG reduction goal specific to the economic sector associated with the project. There would be specific reduction goals for each economic sector, such as residential, commercial, and industrial development. Specifying different reduction thresholds for each market sector allows selection of the best regulatory goal for each sector taking into account available control technology and costs. This approach would avoid over-regulating projects (i.e. requiring emissions to be controlled in excess of existing technology) or under-regulating projects (i.e. discouraging the use of available technology to control emissions in excess of regulations). This approach requires extensive information on the emission inventories and best available control technology for each economic sector. This data will be compiled as CARB develops its scoping plan under AB 32 and its implementing regulations; as a result, this approach will be more viable in the long term.

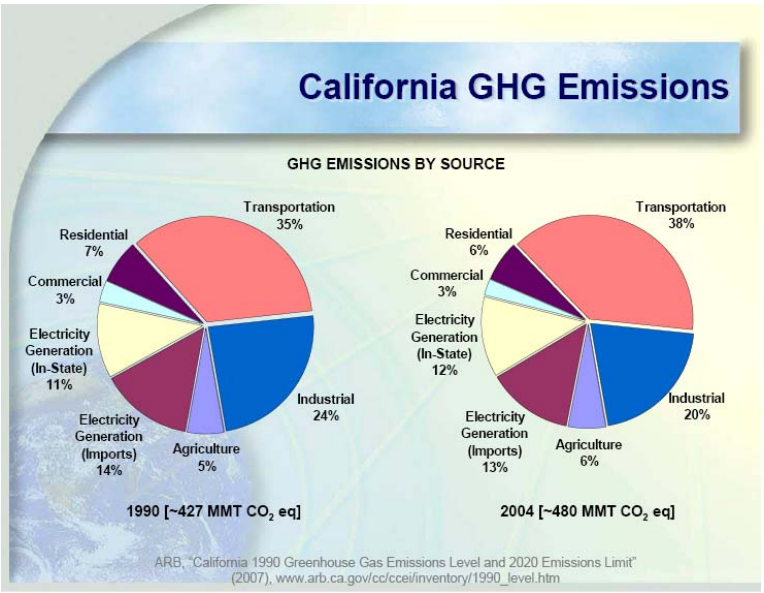
Threshold 1.4: Uniform Percentage-Based Reduction by Region. AB 32 and S-3-05 are written such that they apply to a geographic region (i.e. the entire state of California) rather than on a project or sector level. One could specify regions of the state such as the South Coast Air Basin, Sacramento Valley, or Bay Area which are required to plan (plans could be developed by regional governments, such as councils of governments) and demonstrate compliance with AB 32 and S-3-05 reduction goals at a regional level. To demonstrate that a project has less than significant emissions, one would have to show compliance with the appropriate regional GHG plan. Effectively this approach allows for analysis of GHG emissions at a landscape scale smaller than the state as a whole. Specifying regions in rough correlation to existing air basins or jurisdictional control allows for regional control of emissions and integration with regional emission reduction strategies for criteria and toxic air pollutants. Although differing GHG reduction controls for each region are possible, it is likely that all regions would be

required to achieve 1990 emission inventories by the year 2020 and 80 percent less emissions by 2050. Threshold 1.4 is considered viable long-term significance criteria that is unlikely to be used in the short term.

Implementing CEQA Thresholds Based on Emission Reduction Targets

Characterizing Baseline and Project Emissions

While the population and economy of California is expanding, all new projects can be considered to contribute new emissions. Furthermore, GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. "Business-as-usual" is the projection of GHG emissions at a future date based on current technologies and regulatory requirements in absence of other reductions. For example to determine the future emissions from a power plant for "business-as-usual" one would multiply the projected energy throughput by the current emission factor for that throughput. If adopted regulations (such as those that may be promulgated by CARB for AB 32) dictate that power plant emissions must be reduced at some time in the future, it is appropriate to consider these regulation standards as the new business-as-usual for a future date. In effect, business-as-usual will continue to evolve as regulations manifest. Note that "business-as-usual" defines the CEQA No Project conditions, but does not necessarily form the baseline under CEQA. For instance, it is common to subtract the future traffic with and without a project to determine the future cumulative contribution of a project on traffic conditions. However, existing conditions at the time of issuance of the notice of preparation is normally the baseline.



SOURCE: ARB 2007

Establishing Emission Reduction Targets

One of the obvious drawbacks to using a uniform percent reduction approach to GHG control is that it is difficult to allow for changes in the 1990 and future emission inventories estimates. To determine what emission reductions are required for new projects one would have to know accurately the 1990 budget and efficacy of other GHG promulgated regulations as a function of time. Since CARB will not outline its

regulation strategy for several more years, it is difficult to determine accurately what the new project reductions should be in the short term. Future updates to the 1990 inventory could necessitate changes in thresholds that are based on that inventory. It is important to note that it is difficult to create near term guidance for a uniform reduction threshold strategy since it would require considerable speculation regarding the implementation and effectiveness of forthcoming CARB regulations.

Of greater importance are the assumptions used to make the projected 2020 emission inventories. Projecting future inventories over the next 15-50 years involves substantial uncertainty. Furthermore, there are likely to be federal climate change regulations and possibly additional international GHG emission treaties in the near future. To avoid such speculation, this paper defines all future emission inventories as hypothetical business-as-usual projections.

This white paper is intended to support local decisions about CEQA and GHG in the near term. During this period, it is unlikely that a threshold based on emission reduction targets would need to be changed. However, it is possible that future inventory updates will show that targets developed on the current inventory were not stringent enough, or were more stringent than was actually needed.

Approach 2 – Tiered Approach

The goal of a tiered threshold is to maximize reduction predictability while minimizing administrative burden and costs. This would be accomplished by prescribing feasible mitigation measures based on project size and type, and reserving the detailed review of an EIR for those projects of greater size and complexity. This approach may require inclusion in a General Plan, or adoption of specific rules or ordinances in order to fully and effectively implement it.

A tiered CEQA significance threshold could establish different levels at which to determine if a project would have a significant impact. The tiers could be established based on the gross GHG emission estimates for a project or could be based on the physical size and characteristics of the project. This approach would then prescribe a set of GHG mitigation strategies that would have to be incorporated into the project in order for the project to be considered less than significant.

The framework for a tiered threshold would include the following:

- disclosure of GHG emissions for all projects;
- support for city/county/regional GHG emissions reduction planning;
- creation and use of a “green list” to promote the construction of projects that have desirable GHG emission characteristics;
- a list of mitigation measures;

- a decision tree approach to tiering; and
- quantitative or qualitative thresholds.

Decision-Tree Approach to Tiering

CEQA guidance that allows multiple methodologies to demonstrate GHG significance will facilitate the determination of significance for a broad range of projects/plans that would otherwise be difficult to address with a single non-compound methodology. Even though there could be multiple ways that a project can determine GHG significance using a decision-tree approach, only one methodology need be included in any single CEQA document prepared by the applicant. The presence of multiple methodologies to determine significance is designed to promote flexibility rather than create additional analysis overhead. Figure 1 shows a conceptual approach to significance determination using a tiered approach that shows the multiple routes to significance determination.

Figure 1 Detail Description

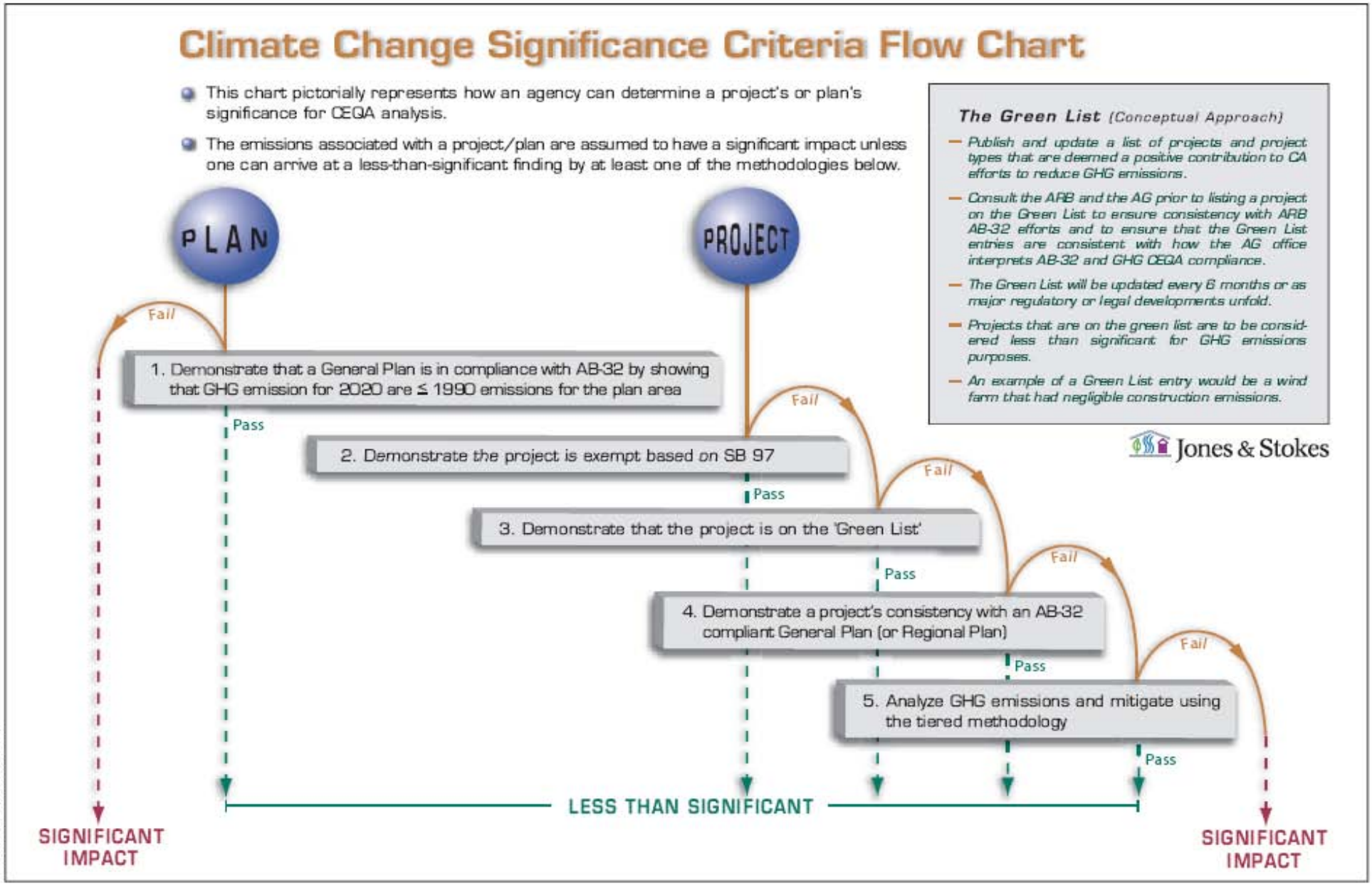
Figure 1 pictorially represents how an agency can determine a project's or plan's significance for CEQA analysis using the non-zero threshold methodology. The emissions associated with a project/plan are assumed to have a significant impact unless one can arrive at a less-than-significant finding by at least one of the methodologies below.

1. Demonstrate that a General Plan (GP) or Regional Plan is in Compliance with AB32

   - For most GPs or RPs this will require demonstration that projected 2020 emissions will be equal to or less than 1990 emissions.
   - GPs or RPs are expected to fully document 1990 and 2020 GHG emission inventories.
   - Projection of 2020 emissions is complicated by the fact that CARB is expected to promulgate emission reductions in the short term. Until explicit CARB regulations are in place, unmitigated GP 2020 emission inventories represent business-as-usual scenarios.
   - EIRs for GPs or RPs which demonstrate 2020 mitigated emissions are less than or equal to 1990 emissions are considered less than significant.

2. Demonstrate the Project is Exempt Based on SB 97

   - As specified in SB 97, projects that are funded under November 2006 Proposition 1B (Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act) and 1C (Disaster Preparedness and Flood Prevention Bond Act) may be exempt from analysis until January 1, 2010.



Jones & Stokes

Figure 1
Climate Change Significance Criteria Flow Chart

- An exemption can be used in an ND, MND, or EIR to support a less than significant finding for GHG impacts.

3. Demonstrate that the Project is on the 'Green List'

- This list would include projects that are deemed a positive contribution to California efforts to reduce GHG emissions. If the project is of the type described on the Green List it is considered less than significant.
- If the Green List entry description requires mitigation for impacts other than GHG, this methodology can be used in MNDs or EIRs; if the Green List entry does not require mitigation this methodology can be used in NDs, MNDs, or EIRs.

4. Demonstrate a Project's Compliance with a General Plan

- If a project is consistent with an appropriate General Plan's Greenhouse Gas Reduction Plan (GGRP), a project can be declared less than significant.
- Note that at this time there are no known jurisdictions that have a GGRP that has been fully subject to CEQA review. While Marin County has adopted a forward-thinking GGRP and it is described in the most recent GP update, the associated EIR does not analyze the secondary environmental impacts of some of the GGRP measures such as tidal energy. While one can reference GGRPs that have not been reviewed fully in CEQA, to attempt to show a project's compliance with such a plan as evidence that the project's GHG emission contributions are less than significant may not be supported by substantial evidence that cumulative emissions are being fully addressed in the particular jurisdiction.
- Compliance with a CEQA-vetted GGRP can be cited as evidence for all CEQA documents (Categorical Exemption, ND, MND, and EIR).

5. Analyze GHG Emissions and Mitigate using the Tiered Methodology

- Guidance and mitigation methodology for various development projects (residential, commercial, industrial) are listed in the form of tiered thresholds. If a project incorporates the mitigation measures specified in the tiered threshold tables the project is considered less than significant.
- All project emissions are considered less than significant if they are less than the threshold(s).
- If the tiered approach requires mitigation, this methodology can be used in MNDs or EIRs; if the tiered approach does not require mitigation this methodology can be used in NDs, MNDs, or EIRs.

The Green List

- The Green List would be a list of projects and project types that are deemed a positive contribution to California's efforts to reduce GHG emissions.
- If this approach is followed, it is suggested that CARB and the Attorney General (AG) are consulted prior to listing a project on the Green List to ensure consistency with CARB AB 32 efforts and to ensure that the Green List entries are consistent with how the AG office interprets AB 32 and GHG CEQA compliance.
- The Green List should be updated every 6 months or as major regulatory or legal developments unfold.
- Projects that are on the Green List are to be considered less than significant for GHG emissions purposes.
- A tentative list of potential Green List entries is presented below. Actual Green List entries should be far more specific and cover a broad range of project types and mitigation approaches. The list below is merely a proof-of-concept for the actual Green List.

1. Wind farm for the generation of wind-powered electricity
2. Extension of transit lines to currently developed but underserved communities
3. Development of high-density infill projects with easily accessible mass transit
4. Small hydroelectric power plants at existing facilities that generate 5 mw or less (as defined in Class 28 Categorical Exemption)
5. Cogeneration plants with a capacity of 50 mw or less at existing facilities (as defined in Class 29 Cat Exemption)
6. Increase in bus service or conversion to bus rapid transit service along an existing bus line
7. Projects with LEED "Platinum" rating
8. Expansion of recycling facilities within existing urban areas
9. Recycled water projects that reduce energy consumption related to water supplies that services existing development
10. Development of bicycle, pedestrian, or zero emission transportation infrastructure to serve existing regions

There are also several options for tiering and thresholds, as shown in Table 2 below. One could establish strictly numeric emissions thresholds and require mitigation to below the specific threshold to make a finding of less than significant. One could establish narrative emissions threshold that are based on a broader context of multiple approaches to GHG reductions and a presumption that projects of sufficiently low GHG intensity are less than significant.

In Concept 2A, a zero threshold would be applied to projects and thus only projects that result in a reduction of GHG emissions compared to baseline emissions would be less than significant absent mitigation. All projects would require quantified inventories. All projects that result in a net increase of GHG emissions would be required to mitigate their emissions to zero through direct mitigation or through fees or offsets or the impacts

Table 2: Approach 2 Tiering Options

	Concept 2A Zero	Concept 2B Quantitative	Concept 2C Qualitative
Tier 1	Project results in a net reduction of GHG emissions *Less than Significant*	Project in compliance with an AB 32-compliant General/Regional Plan, on the Green List, or below Tier 2 threshold. Level 1 Reductions (Could include such measures as: bike parking, transit stops for planned route, Energy Star roofs, Energy Star appliances, Title 24, water use efficiency, etc.) *Less than Significant*	Project in compliance with an AB 32-compliant General/Regional Plan, on the Green List, or below Tier 2 threshold. Level 1 Reductions (See measures under 2B) *Less than Significant*
Tier 2	Project results in net increase of GHG emissions Mitigation to zero (including offsets) *Mitigated to Less than Significant*	Above Tier 2 threshold Level 2 Mitigation (Could include such measures as: Parking reduction beyond code, solar roofs, LEED Silver or Gold Certification, exceed Title 24 by 20%, TDM measures, etc.) *Mitigated to Less than Significant*	Above Tier 2 threshold Level 2 Mitigation (See measures under 2B) *Mitigated to Less than Significant*
Tier 3	Mitigation infeasible to reduce emissions to zero (e.g., cost of offsets infeasible for project or offsets not available) *Significant and Unavoidable*	Above Tier 2 threshold With Level 1, 2 Mitigation Level 3 Mitigation: (Could include such measures as: On-site renewable energy systems, LEED Platinum certification, Exceed Title 24 by 40%, required recycled water use for irrigation, zero waste/high recycling requirements, mandatory transit passes, offsets/carbon impact fees) *Mitigated to Less than Significant*	Above Tier 3 thresholds Quantify Emissions, Level 3 Mitigation (see measures under 2B), and Offsets for 90% of remainder *Significance and Unavoidable*

would be identified as significant and unavoidable. This could be highly problematic and could eliminate the ability to use categorical exemptions and negative declarations for a wide range of projects.

In Concepts 2B and 2C, the first tier of a tiered threshold includes projects that are within a jurisdiction with an adopted greenhouse gas reduction plan (GGRP) and General Plan/Regional Plan that is consistent with AB 32 (and in line with S-3-05), or are on the Green List, or are below the Tier 2 threshold. All Tier 1 projects would be required to implement mandatory reductions required due to other legal authority (Level 1 reductions) such as AB 32, Title 24, or local policies and ordinances. With Level 1

reduction measures, qualifying Tier 1 projects would be considered less than significant without being required to demonstrate mitigation to zero.

In Concept 2B, the Tier 2 threshold would be quantitative, and quantified inventories would be required. Several quantitative threshold options are discussed below. A more comprehensive set of Level 2 mitigation would be required. If the project's emissions still exceed the Tier 2 threshold, an even more aggressive set of Level 3 mitigation measures would be required including offsets (when feasible) to reduce emissions below the Tier 2 threshold.

In Concept 2C, there would be two thresholds, a lower Tier 2 threshold (the "low bar") and a higher Tier 3 threshold (the "high bar"). The Tier 2 threshold would be the significance threshold for the purposes of CEQA and would be qualitative in terms of units (number of dwelling units, square feet of commercial space, etc.) or a per capita ratio. Projects above the Tier 2 threshold would be required to implement the comprehensive set of Level 2 mitigation. Projects below the Tier 2 threshold would not be required to quantify emissions or reductions. The Tier 3 threshold would be a threshold to distinguish the larger set of projects for which quantification of emissions would be required. Level 3 mitigation would be required and the project would be required to purchase offsets (when feasible) in the amount of 90 percent of the net emissions after application of Level 1 reductions and Level 2 and 3 mitigation. A variant on Concept 2C would be to require mandatory Level 3 mitigation without quantification and offsets.

Approach 2 Threshold Options

Seven threshold options were developed for this approach. The set of options are framed to capture different levels of new development in the CEQA process and thus allow different levels of mitigation. Options range from a zero first-tier threshold (Threshold 2.1) up to a threshold for GHG that would be equivalent to the capture level (i.e., number of units) of the current criteria pollutant thresholds used by some air districts (Threshold 2.4). The decision-based implementation approach discussed above could be used for any of these options. Table 3 below compares the results of each of the approaches discussed here.

Threshold 2.1: Zero First Tier Tiered Threshold.

This option would employ the decision tree concept and set the first tier cut-point at zero. The second tier cut-point could be one of the qualitative or quantitative thresholds discussed below. First-tier projects would be required to implement a list of very feasible and readily available mitigation measures.

Threshold 2.2: Quantitative Threshold Based on Market Capture

A single quantitative threshold was developed in order to ensure capture of 90 percent or more of likely future discretionary developments. The objective was to set the emission

threshold low enough to capture a substantial fraction of future residential and non-residential development that will be constructed to accommodate future statewide population and job growth, while setting the emission threshold high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions.

The quantitative threshold was created by using the following steps:

- Reviewing data from four diverse cities (Los Angeles in southern California and Pleasanton, Dublin, and Livermore in northern California) on pending applications for development.

- Determining the unit (dwelling unit or square feet) threshold that would capture approximately 90 percent of the residential units or office space in the pending application lists.

- Based on the data from the four cities, the thresholds selected were 50 residential units and 30,000 square feet of commercial space.

- The GHG emissions associated with 50 single-family residential units and 30,000 square feet of office were estimated and were found to be 900 metric tons and 800 metric tons, respectively. Given the variance on individual projects, a single threshold of 900 metric tons was selected for residential and office projects.

- A 900 metric ton threshold was also selected for non-office commercial projects and industrial projects to provide equivalency for different projects in other economic sectors.

- If this threshold is preferred, it is suggested that a more robust data set be examined to increase the representativeness of the selected thresholds. At a minimum, a diverse set of at least 20 cities and/or counties from throughout the state should be examined in order to support the market capture goals of this threshold. Further, an investigation of market capture may need to be conducted for different commercial project types and for industrial projects in order to examine whether multiple quantitative emissions thresholds or different thresholds should be developed.

The 900-ton threshold corresponds to 50 residential units, which corresponds to the 84th percentile of projects in the City of Los Angeles, the 79th percentile in the City of Pleasanton, the 50th percentile in the City of Livermore and the 4th percentile in the City of Dublin. This is suggestive that the GHG reduction burden will fall on larger projects that will be a relatively small portion of overall projects within more developed central cities (Los Angeles) and suburban areas of slow growth (Pleasanton) but would be the higher portion of projects within moderately (Livermore) or more rapidly developing areas (Dublin). These conclusions are suggestive but not conclusive due to the small sample size. The proposed threshold would exclude the smallest proposed developments

from potentially burdensome requirements to quantify and mitigate GHG emissions under CEQA. While this would exclude perhaps 10 percent of new residential development, the capture of 90 percent of new residential development would establish a strong basis for demonstrating that cumulative reductions are being achieved across the state. It can certainly serve as an interim measure and could be revised if subsequent regulatory action by CARB shows that a different level or different approach altogether is called for.

The 900-ton threshold would correspond to office projects of approximately 35,000 square feet, retail projects of approximately 11,000 square feet, or supermarket space of approximately 6,300 square feet. 35,000 square feet would correspond to the 46th percentile of commercial projects in the City of Los Angeles, the 54th percentile in the City of Livermore, and the 35th percentile in the City of Dublin. However, the commercial data was not separated into office, retail, supermarket or other types, and thus the amount of capture for different commercial project types is not known. The proposed threshold would exclude smaller offices, small retail (like auto-parts stores), and small supermarkets (like convenience stores) from potentially burdensome requirements to quantify and mitigate GHG emissions under CEQA but would include many medium-scale retail and supermarket projects.

The industrial sector is less amenable to a unit-based approach given the diversity of projects within this sector. One option would be to adopt a quantitative GHG emissions threshold (900 tons) for industrial projects equivalent to that for the residential/commercial thresholds described above. Industrial emissions can result from both stationary and mobile sources. CARB estimates that their suggested reporting threshold for stationary sources of 25,000 metric tons accounts for more than 90 percent of the industrial sector GHG emissions (see Threshold 2.3 for 25,000 metric ton discussion). If the CARB rationale holds, then a 900 metric ton threshold would likely capture at least 90 percent (and likely more) of new industrial and manufacturing sources. If this approach is advanced, we suggest further examination of industrial project data to determine market capture.

This threshold would require the vast majority of new development emission sources to quantify their GHG emissions, apportion the forecast emissions to relevant source categories, and develop GHG mitigation measures to reduce their emissions.

<u>Threshold 2.3: CARB Reporting Threshold</u>

CARB has recently proposed to require mandatory reporting from cement plants, oil refineries, hydrogen plants, electric generating facilities and electric retail providers, cogeneration facilities, and stationary combustion sources emitting $\geq$ 25,000 MT CO_2e/yr. AB 32 requires CARB to adopt a regulation to require the mandatory reporting and verification of emissions. CARB issued a preliminary draft version of its proposed reporting requirements in August 2007 and estimates that it would capture 94 percent of the GHG emissions associated with stationary sources.

This threshold would use 25,000 metric tons per year of GHG as the CEQA significance level. CARB proposed to use the 25,000 metric tons/year value as a reporting threshold, not as a CEQA significance threshold that would be used to define mitigation requirements. CARB is proposing the reporting threshold to begin to compile a statewide emission inventory, applicable only for a limited category of sources (large industrial facilities using fossil fuel combustion).

A 25,000 metric ton significance threshold would correspond to the GHG emissions of approximately 1,400 residential units, 1 million square feet of office space, 300,000 square feet of retail, and 175,000 square feet of supermarket space. This threshold would capture far less than half of new residential or commercial development.

As noted above, CARB estimates the industrial-based criteria would account for greater than 90 percent of GHG emissions emanating from stationary sources. However, industrial and manufacturing projects can also include substantial GHG emissions from mobile sources that are associated with the transportation of materials and delivery of products. When all transportation-related emissions are included, it is unknown what portion of new industrial or manufacturing projects a 25,000-ton threshold would actually capture.

An alternative would be to use a potential threshold of 10,000 metric tons considered by the Market Advisory Committee for inclusion in a Greenhouse Gas Cap and Trade System in California. A 10,000 metric ton significance threshold would correspond to the GHG emissions of approximately 550 residential units, 400,000 square feet of office space, 120,000 square feet of retail, and 70,000 square feet of supermarket space. This threshold would capture roughly half of new residential or commercial development.

Threshold 2.4: Regulated Emissions Inventory Capture

Most California air districts have developed CEQA significance thresholds for NOx and ROG emissions to try to reduce emissions of ozone precursors from proposed sources that are not subject to NSR pre-construction air quality permitting. The historical management of ozone nonattainment issues in urbanized air districts is somewhat analogous to today's concerns with greenhouse gas emissions in that regional ozone concentrations are a cumulative air quality problem caused by relatively small amounts of NOx and ROG emissions from thousands of individual sources, none of which emits enough by themselves to cause elevated ozone concentrations. Those same conditions apply to global climate change where the environmental problem is caused by emissions from a countless number of individual sources, none of which is large enough by itself to cause the problem. Because establishment of NOx/ROG emissions CEQA significance thresholds has been a well-tested mechanism to ensure that individual projects address cumulative impacts and to force individual projects to reduce emissions under CEQA, this threshold presumes the analogy of NOx/ROG emission thresholds could be used to develop similar GHG thresholds.

The steps to develop a GHG emission threshold based on the NOx/ROG analogy were as follows:

- For each agency, define its NOx/ROG CEQA thresholds.
- For each agency, define the regional NOx/ROG emission inventory the agency is trying to regulate with its NOx/ROG thresholds.
- For each agency, calculate the percentage of the total emission inventory for NOx represented by that agency's CEQA emission threshold. That value represents the "minimum percentage of regulated inventory" for NOx.
- The current (2004) California-wide GHG emission inventory is 499 million metric tons per year of CO_2 equivalent (MMT CO_2e). Apply the typical "minimum percentage of regulated inventory" value to the statewide GHG inventory, to develop a range of analogous GHG CEQA thresholds.

The preceding methodology was applied to two different air quality districts: the Bay Area Air Quality Management District (BAAQMD), a mostly-urbanized agency within which most emissions are generated from urban areas; and the San Joaquin Valley Air Pollution Control District (SJVAPCD), which oversees emissions emanating in part from rural areas that are generated at dispersed agricultural sources and area sources. For example, in the Bay Area the NOx threshold is 15 tons/year. The total NOx inventory for 2006 was 192,000 tons/year (525 tons/day). The threshold represents 0.008 percent of the total NOx inventory. Applying that ratio to the total statewide GHG emissions inventory of 499 MMT CO_2e (2004) yields an equivalent GHG threshold of 39,000 MMT CO_2e.

The range of analogous CEQA GHG thresholds derived from those two agencies is tightly clustered, ranging from 39,000 to 46,000 tons/year. A 39,000 to 46,000 metric ton threshold would correspond to the GHG emissions of approximately 2,200 to 2,600 residential units, 1.5 to 1.8 million square feet of office space, 470,000 to 560,000 square feet of retail, and 275,000 to 320,000 square feet of supermarket space. This threshold would capture far less than half of new residential or commercial development. Similarly, this threshold would capture less of new industrial/manufacturing GHG emissions inventory than Thresholds 2.2 or 2.3.

<u>Threshold 2.5: Unit-Based Thresholds Based on Market Capture</u>

Unit thresholds were developed for residential and commercial developments in order to capture approximately 90 percent of future development. The objective was to set the unit thresholds low enough to capture a substantial fraction of future housing and commercial developments that will be constructed to accommodate future statewide population and job growth, while setting the unit thresholds high enough to exclude small development projects that will contribute a relatively small fraction of the cumulative statewide GHG emissions. Sector-based thresholds were created by using the same steps

and data used to create Threshold 2.2- Quantitative Threshold Based on Market Capture above.

The distribution of pending application data suggests that the GHG reduction burden will fall on larger projects that will be a relatively small portion of overall projects within more developed central cities and suburban areas of slow growth but would be the higher portion of projects within moderately or rapidly developing areas. The proposed threshold would exclude the smallest proposed developments from potentially burdensome requirements to quantify and mitigate GHG emissions under CEQA. While this would exclude perhaps 10 percent of new residential development, the capture of 90 percent of new residential development would establish a strong basis for demonstrating that cumulative reductions are being achieved across the state. It can certainly serve as an interim measure and could be revised if subsequent regulatory action by CARB shows that a different level or different approach altogether is called for.

A similar rationale can be applied to the development of a commercial threshold. Threshold 2.5 would exclude many smaller businesses from potentially burdensome requirements to quantify and mitigate GHG emissions under CEQA. It should be noted that the GHG emissions of commercial projects vary substantially. For example, the carbon dioxide emissions associated with different commercial types were estimated as follows:

- 30,000 square-foot (SF) office = 800 metric tons/year CO_2
- 30,000 SF retail = 2,500 metric tons/year CO_2
- 30,000 SF supermarket = 4,300 metric tons/year CO_2

Thus, in order to assure appropriate market capture on an emissions inventory basis, it will be important to examine commercial project size by type, instead of in the aggregate (which has been done in this paper).

The industrial sector is less amenable to a unit-based approach given the diversity of projects within this sector. One option would be to use a quantitative threshold of 900 tons for industrial projects in order to provide for rough equivalency between different sectors. Industrial emissions can result from both stationary and mobile sources. However, if the CARB rationale for > 90 percent stationary source capture with a threshold of 25,000 metric tons holds, then a 900 metric ton threshold would likely capture at least 90 percent (and likely more) of new industrial sources. Further examination of unit-based industrial thresholds, such as the number of employees or manufacturing floor space or facility size, may provide support for a unit-based threshold based on market capture.

This threshold would require the vast majority of new development emission sources to quantify their GHG emissions, apportion the forecast emissions to relevant source categories, and develop GHG mitigation measures to reduce their emissions.

Threshold 2.6. Projects of Statewide, Regional, or Areawide Significance

For this threshold, a set of qualitative, tiered CEQA thresholds would be adopted based on the definitions of "projects with statewide, regional or areawide significance" under the Guidelines for California Environmental Quality Act, CCR Title 14, Division 6, Section 15206(b).

Project sizes defined under this guideline include the following:

- Proposed residential development of more than 500 dwelling units.
- Proposed shopping center or business establishment employing more than 1,000 persons or encompassing more than 500,000 square feet of floor space.
- Proposed commercial office building employing more than 1,000 persons or encompassing more than 250,000 square feet of floor space.
- Proposed hotel/motel development of more than 500 rooms.
- Proposed industrial, manufacturing or processing plant or industrial park planned to house more than 1,000 persons, or encompassing more than 600,000 square feet of floor space.

These thresholds would correspond to the GHG emissions of approximately 9,000 metric tons for residential projects, 13,000 metric tons for office projects, and 41,000 metric tons for retail projects. These thresholds would capture approximately half of new residential development and substantially less than half of new commercial development. It is unknown what portion of the new industrial or manufacturing GHG inventory would be captured by this approach.

Threshold 2.7 Efficiency-Based Thresholds

For this approach, thresholds would be based on measurements of efficiency. For planning efforts, the metric could be GHG emissions per capita or per job or some combination thereof. For projects, the metric could be GHG emission per housing unit or per square foot of commercial space. In theory, one could also develop metrics for GHG emissions per dollar of gross product to measure the efficiency of the economy.

This approach is attractive because it seeks to benchmark project GHG intensity against target levels of efficiency. The thresholds would need to be set such that there is reasonably foreseeable and sufficient reductions compared to business as usual to support meeting AB 32 and S-3-05 goals in time (in combination with command and control regulations). Because this approach would require substantial data and modeling to fully develop, this is a concept considered as a potential future threshold and not appropriate

for interim guidance in the short term. Thus, it is not evaluated in the screening evaluation in the next section.

Table 3 compares the results for each of the approaches.

Table 3: Comparison of Approach 2 Tiered Threshold Options

Threshold	GHG Emission Threshold (metric tons/year)	Future Development Captured by GHG Threshold
2.1: Zero Threshold	0 tons/year	All
2.2: Quantitative Threshold Based on Market Capture	~900 tons/year	Residential development > 50 dwelling units Office space > 36,000 ft^2 Retail space >11,000 ft^2 Supermarkets >6.300 ft^2 small, medium, large industrial
2.3: CARB GHG Mandatory Reporting Threshold OR Potential Cap and Trade Entry Level	25,000 metric tons/year OR 10,000 metric tons/year	Residential development >1,400 dwelling units OR 550 dwelling units Office space >1 million ft^2 OR 400,000 ft^2 Retail space >300,000 ft^2 OR 120,000 ft^2 Supermarkets >175,000 ft^2 OR 70,000 ft^2 medium/larger industrial
2.4: Regulated Inventory Capture	40,000 – 50,000 metric tons/year	Residential development >2,200 to 2,600 dwelling units Office space >1.5 to 1.8 million ft^2 Retail space >470,000 to 560,000 ft^2 Supermarkets >270,000 to 320,000 ft^2 medium/larger industrial
2.5: Unit-Based Threshold Based on Market Capture	Not applicable.	Residential development >50 dwelling units Commercial space >50,000 ft^2 > small, medium, large industrial (with GHG emissions > 900 tonsCO2e)
2.6: Projects of Statewide, Regional, or Areawide Significance	Not applicable.	Residential development >500 dwelling units Office space >250,000 ft^2 Retail space >500,000 ft^2 Hotels >500 units Industrial project >1,000 employees Industrial project >40 acre or 650,000 ft^2
2.7: Efficiency-Based Thresholds	TBD tons/year/person TBD tons/year/unit	Depends on the efficiency measure selected.

Implementing CEQA With Tiered Thresholds

Several issues related to Approach 2 are addressed below:

1. *Some applications of this approach may need to be embodied in a duly approved General Plan, or in some other formal regulation or ordinance to be fully enforceable.* Because CEQA does not expressly provide that projects may be deemed insignificant based on implementation of a set of mitigations, this approach may need to be supported with specific and enforceable mechanisms adopted with due public process.

2. *How would this concept affect adoption of air district rules and regulations?* Proposed air district rules and regulations may be subject to CEQA like other projects and plans. Thus, if significance thresholds were adopted by an APCD or AQMD, then they could also apply to air district discretionary actions. If GHG emissions would be increased by a rule or regulation for another regulated pollutant, that would be a potential issue for review under CEQA.

3. *Mitigation measures may not be all-inclusive; better measures now or new future technology would make these measures obsolete.* The mandatory mitigation measures could be periodically updated to reflect current technology, feasibility, and efficiency.

4. *Total reduction may not be quantified or difficult to quantify.* CEQA only requires the adoption of feasible mitigation and thus the reduction effectiveness of required mitigation should not be in question. However, the precise reduction effectiveness may indeed be difficult to identify. As described above, if a quantitative threshold is selected as the measure of how much mitigation is mandated, then best available evidence will need to be used to estimate resultant GHG emissions with mitigation adoption. If a qualitative threshold is selected, then it may not be necessary to quantify reductions.

5. *Difficult to measure progress toward legislative program goals.* One could require reporting of project inventories to the Climate Action Registry, air district, or regional council of governments, or other suitable body. Collection of such data would allow estimates of the GHG intensity of new development over time, which could be used by CARB to monitor progress toward AB 32 goals.

6. *Measures may have adverse impacts on other programs.* The identification of mandatory mitigation will need to consider secondary environmental impacts, including those to air quality.

7. *Consideration of life-cycle emissions.* In many cases, only direct and indirect emissions may be addressed, rather than life-cycle emissions. A project applicant has traditionally been expected to only address emissions that are closely related and within the capacity of the project to control and/or influence. The long chain

8. of economic production resulting in materials manufacture, for example, involves numerous parties, each of which in turn is responsible for the GHG emissions associated with their particular activity. However, there are situations where a lead agency could reasonably determine that a larger set of upstream and downstream emissions should be considered because they are being caused by the project and feasible alternatives and mitigation measures may exist to lessen this impact.

Approach 2 Tiered Threshold with Mandatory Mitigation

As shown in Table 2, due to the cumulative nature of GHG emissions and climate change impacts, there could be a level of mandatory reductions and/or mitigation for all projects integrated into a tiered threshold approach. In order to meet AB 32 mandates by 2020 and S-3-05 goals, there will need to be adoption of GHG reduction measures across a large portion of the existing economy and new development. As such, in an effort to support a determination under CEQA that a project has a less than considerable contribution to significant cumulative GHG emissions, mitigation could be required on a progressively more comprehensive basis depending on the level of emissions.

- Level 1 Reductions – These reduction measures would apply to all projects and would only consist of AB 32 and other local/state mandates. They would be applied to a project from other legal authority (not CEQA). Level 1 reductions could include such measures as bike parking, transit stops for planned routes, Energy Star roofs, Energy Star appliances, Title 24 compliance, water use efficiency, and other measures. All measures would have to be mandated by CARB or local regulations and ordinances.

- Level 2 Mitigation – Projects that exceed the determined threshold would be required to first implement readily available technologies and methodologies with widespread availability. Level 2 Mitigation could include such measures as: parking reduction below code minimum levels, solar roofs, LEED Silver or Gold Certification, exceed Title 24 building standards by 20 percent, Traffic Demand Management (TDM) measures, and other requirements.

- Level 3 Mitigation - If necessary to reduce emissions to the thresholds, more extensive mitigation measures that represent the top tier of feasible efficiency design would also be required. Level 3 Mitigation could include such measures as: on-site renewable energy systems, LEED Platinum certification, exceed Title 24 building requirements by 40 percent, required recycled water use for irrigation, zero waste/high recycling requirements, mandatory transit pass provision, and other measures.

- Offset Mitigation – If, after adoption of all feasible on-site mitigation, the project is still found to exceed a Tier 2 quantitative threshold, or exceed a Tier 3 qualitative threshold, or if a project cannot feasibly implement the mandatory on-site mitigation, then purchases of offsets could be used for mitigation. In the case

of a quantitative threshold, the amount of purchase would be to offset below the Tier 2 significance threshold. In the case of a qualitative threshold, the amount of purchase could be to offset GHG emissions overall to below the lowest equivalent GHG emissions among the Tier 2 qualitative thresholds. With Threshold 2.5, this would be approximately 900 tons of GHG emissions (corresponding to 50 residential units). With Threshold 2.6, this would be approximately 9,000 tons (corresponding to 500 residential units). Alternatively, one could require purchase of offsets in the amount of a set percentage (such as 90% or 50% for example) of the residual GHG emissions (after other mitigation). As discussed earlier, any decision to include or require the use of emission reduction credits (or offsets) must consider issues of availability, quality, and environmental justice.

Substantial Evidence Supporting Different Thresholds

If a project can be shown by substantial evidence not to increase GHG emissions relative to baseline emissions, then no fair argument will be available that the project contributes considerably to a significant cumulative climate change impact.

It is more challenging to show that a project that increases GHG emissions above baseline emissions does not contribute considerably to a significant cumulative climate change impact. It is critical therefore, to establish an appropriate cumulative context, in which, although an individual project may increase GHG emissions, broader efforts will result in net GHG reductions.

Approach 1-based thresholds that by default will require an equal level of GHG reductions from the existing economy (Thresholds 1.1, 1.3, and 1.4) may be less supportable in the short run (especially before 2012) than Approach 1.2 (which requires new development to be relatively more efficient than a retrofitted existing economy). This is because, prior to 2012, there will only be limited mandatory regulations implementing AB 32 that could address the existing economy in a truly systematic way that can be relied upon to demonstrate that overall GHG reduction goals can be achieved by 2020. Approach 1.2 will still rely on substantial reductions in the existing economy but to a lesser degree.

Approach 1-based thresholds that would spread the mitigation burden across a sector (Threshold 1.3) or across a region (Threshold 1.4) will allow for tradeoffs between projects or even between municipalities. In order to demonstrate that a sector or a region is achieving net reductions overall, there would need to be feasible, funded, and mandatory requirements in place promoting an overall reduction scheme, in order for a project to result in nominal net increased GHG emissions.

Approach 2-based thresholds that capture larger portions of the new development GHG inventory (Thresholds 2.2 and 2.5) would promote growth that results in a smaller increase in GHG emissions; they may therefore be more supportable than thresholds that do not and that have a greater reliance on reductions in the existing economy (Thresholds

2.3, 2.4, and 2.6), especially in the next three to five years. With an established cumulative context that demonstrates overall net reductions, all threshold approaches could be effective in ensuring growth and development that significantly mitigates GHG emissions growth in a manner that will allow the CARB to achieve the emission reductions necessary to meet AB 32 targets. In that respect, all of these thresholds are supported by substantial evidence.

Evaluation of Non-Zero Threshold Options

Overarching issues concerning threshold development are reviewed below. Where appropriate, different features or application of the two conceptual approaches and the various options for thresholds under each conceptual approach described above are analyzed. The screening evaluation is summarized in Tables 4 (Approach 1) and 5 (Approach 2). The summary tables rate each threshold for the issues discussed below based on the level of confidence (low, medium or high) ascribed by J&S. The confidence levels relate to whether a threshold could achieve a particular attribute, such as emission reduction effectiveness. For example, a low emission reduction effectiveness rating means the threshold is not expected to capture a relatively large portion of the new development inventory.

As described above, Threshold 2.7 is not included in this evaluation because the data to develop an efficiency-based threshold has not been reviewed at this time and because this threshold is not considered feasible as an interim approach until more detailed inventory information is available across the California economy.

<u>What is the GHG Emissions Effectiveness of Different Thresholds?</u>

Effectiveness was evaluated in terms of whether a threshold would capture a large portion of the GHG emissions inventory and thus require mitigation under CEQA to control such emissions within the larger framework of AB 32. In addition, effectiveness was also evaluated in terms of whether a threshold would require relatively more or less GHG emissions reductions from the existing economy verses new development. This is presumptive that gains from the existing economy (through retrofits, etc.) will be more difficult and inefficient relative to requirements for new development.

Approach 1-based thresholds that require equivalent reductions relative to business-as-usual (Thresholds 1.1, 1.3, and 1.4) for both the existing and new economy will be less effective than thresholds that support lower-GHG intensity new development (Approach 1.2). However, since Approach 1-based thresholds do not establish a quantitative threshold below which projects do not have to mitigate, the market capture for new development is complete.

Approach 2-based thresholds can be more or less effective at capturing substantial portions of the GHG inventory associated with new development depending on where the quantitative or qualitative thresholds are set. Lower thresholds will capture a broader range of projects and result in greater mitigation. Based on the review of project data for

the select municipalities described in the Approach 2 section above, thresholds based on the CARB Reporting Threshold/Cap and Trade Entry Level (Threshold 2.4) or CEQA definitions of "Statewide, Regional or Areawide" projects (Threshold 2.6) will result in a limited capture of the GHG inventory. Lower quantitative or qualitative thresholds (Thresholds 2.1, 2.2 and 2.5) could result in capture of greater than 90 percent of new development.

Are the Different Thresholds Consistent with AB 32 and S-3-05?

Thresholds that require reductions compared to business-as-usual for all projects or for a large portion of new development would be consistent with regulatory mandates. In time, the required reductions will need to be adjusted from 2020 (AB 32) to 2050 (S-3-05) horizons, but conceptually broad identification of significance for projects would be consistent with both of these mandates. Thresholds that exclude a substantial portion of new development would likely not be consistent, unless it could be shown that other more effective means of GHG reductions have already been, or will be adopted, within a defined timeframe.

All Approach 1-based thresholds would be consistent with AB 32 and S-3-05 if it can be demonstrated that other regulations and programs are effective in achieving the necessary GHG reduction from the existing economy to meet the overall state goals.

Approach 2-based thresholds that include substantive parts of the new development GHG inventory (Thresholds 2.1, 2.2 and 2.5) will be more consistent with AB 32 and S-3-05 than those that do not (Thresholds 2.3, 2.4, and 2.6) unless it can be demonstrated that other regulations and programs are effective in achieving the necessary GHG reduction from the existing economy to meet the overall state goals.

What are the Uncertainties Associated with Different Thresholds?

All thresholds have medium to high uncertainties associated with them due to the uncertainty associated with the effectiveness of AB 32 implementation overall, the new character of GHG reduction strategies on a project basis, the immaturity of GHG reduction technologies or infrastructure (such as widespread biodiesel availability), and the uncertainty of GHG reduction effectiveness of certain technologies (such as scientific debate concerning the relative lifecycle GHG emissions of certain biofuels, for example).

In general, Approach 1-based thresholds have higher uncertainties than Approach 2 thresholds because they rely on a constantly changing definition of business-as-usual. Threshold 1.2, with its relatively smaller reliance on the existing economy for GHG reductions has relatively less uncertainty than other Approach 1 thresholds. Thresholds that spread mitigation more broadly (Thresholds 1.3 and 1.4) have less uncertainty by avoiding the need for every project to mitigate equally.

Approach 2 thresholds with lower quantitative (2.1 and 2.2) or qualitative (2.5) thresholds will have uncertainties associated with the ability to achieve GHG reductions

from small to medium projects. Approach 2 thresholds with higher quantitative (2.3, 2.4) or qualitative (2.6) thresholds will have uncertainties associated with the ability to achieve relatively larger GHG reductions from the existing economy.

What are Other Advantages/Disadvantages of the Different Thresholds?

Thresholds with a single project metric (Thresholds 1.1, 1.2, 2.1, 2.2, 2.3, 2.4, 2.5, and 2.6) will be easier to apply to individual projects and more easily understood by project applicants and lead agencies broadly. Thresholds that spread mitigation across sectors (1.3) or regions (1.4), while simple in concept, will require adoption of more complicated cross-jurisdictional reduction plans or evaluation of broad sector-based trends in GHG intensity reduction over time. Approach 1 options would require all projects to quantify emissions in order to determine needed reductions relative to business-as-usual (which will change over time as described above). Concepts that are unit-based (Threshold 2.5 and 2.6) will not result in thresholds that have equal amount of GHG emissions, and thus equity issues may arise.

Table 4: Non-Zero Threshold Evaluation Matrix – Approach 1

Approach 1	**1.1**	**1.2**	**1.3**	**1.4**
	28% - 33% Reduction from BAU by 2020 by Project	**50% Reduction from BAU by 2020 by Project**	**28% - 33% Reduction by 2020 by Sector**	**28% - 33% Reduction by 2020 by Region**
GHG Emissions Reduction Effectiveness	**Low** - Captures all new projects but relies on a high level of reductions from the existing economy.	**Medium** - Captures all new projects and has a more realistic level of reductions from the existing economy.	**Low** - Captures all new projects but relies on a high level of reductions from the existing economy.	**Low** - Captures all new projects but relies on a high level of reductions from the existing economy.
Economic Feasibility	**Low** - Some projects will not be able to afford this level of reduction without effective market-based mechanisms like offsets.	**Low** - Some projects will not be able to afford this level of reduction without effective market-based mechanisms like offsets.	**Medium** - Sectors as a whole will be better able to achieve reductions than individual projects.	**Low** - Some regions and newly developed areas may not be able to afford this level of reduction without effective market-based mechanisms like offsets.
Technical Feasibility	**Medium** - Some projects will not be able to achieve this level of reduction without effective market-based mechanisms like offsets	**Low** - Relatively larger set of projects will not be able to achieve this level of reduction without effective market-based mechanisms like offsets	**High** - Some projects will not be able to achieve this level of reduction without effective market-based mechanisms like offsets	**Medium** - Some regions and newly developed areas may not be able to afford this level of reduction without effective market-based mechanisms like offsets.
Logistical Feasibility	**Low** - Absent broader reductions strategies, each project may reinvent the wheel each time to achieve mandated reductions.	**Low** - Absent broader reductions strategies, each project may reinvent the wheel each time to achieve mandated reductions.	**Low** - Absent broader reductions strategies, each project may reinvent the wheel each time to achieve mandated reductions.	**Low** - Absent broader reductions strategies, each project may reinvent the wheel each time to achieve mandated reductions.
Consistency with AB-32 and S-03-05	**Medium** - Would require heavy reliance on command and control gains.	**High**	**Medium-High** - Would rely on command and control gains, but would allow sectoral flexibility.	**Medium-High** - Would rely on command and control gains, but would allow regional flexibility.
Cost Effectiveness	**Low** - Will require all types of projects to reduce the same regardless of the cost/ton of GHG reductions.	**Low** - Will require all types of projects to reduce the same regardless of the cost/ton of GHG reductions.	**Low/Medium** - Allows tradeoffs within sector between high and low cost reduction possibilities but not between sectors.	**Low/Medium** - Allows tradeoffs within region between high and low cost reduction possibilities, but not between regions.
Uncertainties	**High** - BAU changes over time. Ability to reduce GHG emissions from existing economy will take years to demonstrate. Ability to limit GHG emissions from other new development will take years to demonstrate.	**Medium/High** - BAU changes over time. Ability to limit GHG emissions from other new development will take years to demonstrate.	**High** - BAU changes over time. Ability to reduce GHG emissions from existing economy will take years to demonstrate. Ability to limit GHG emissions from other new development will take years to demonstrate.	**High** - BAU changes over time. Ability to reduce GHG emissions from existing economy will take years to demonstrate. Ability to limit GHG emissions from other new development will take years to demonstrate.
Other Advantages	Simple/easy to explain.	Simple/easy to explain.	Spreads mitigation broadly	Spreads mitigation broadly
Other Disadvantages	Requires all projects to quantify emissions.	Requires all projects to quantify emissions.	Requires all projects to quantify emissions.	Requires all projects to quantify emissions.

Table 5: Non-Zero Threshold Evaluation Matrix – Approach 2

Approach 2	**2.1**	**2.2**	**2.3**	**2.4**	**2.5**	**2.6**
	Zero Threshold	**Quantitative (900 tons)**	**Quantitative CARB Reporting Threshold/Cap and Trade (25,000 tons/ 10,000 tons)**	**Quantitative Regulated Inventory Capture (~40,000 - 50,000 tons)**	**Qualitative Unit-Based Thresholds**	**Statewide, Regional or Areawide (CEQA Guidelines 15206(b)).**
GHG Emissions Reduction Effectiveness	**High** - Captures all sources.	**High** - Market capture at >90%. Captures diverse sources.	**Medium** - Moderate market capture.	**Low** - Low market capture.	**High** - Market capture at ~90%. Captures diverse sources; excl. smallest proj.	**Medium** - Moderate market capture. Excludes small and med. projects.
Economic Feasibility	**Low** - Early phases will be substantial change in BAU, esp. for smaller projects; may be infeasible to mitigate.	**Medium** - Early phases will be substantial change in BAU, esp. for smaller projects; may be infeasible to mitigate.	**High** - Large projects have greater ability to absorb cost.	**High** - Large projects have greater ability to absorb cost.	**Medium** - Early phases will be substantial change in BAU, esp. for smaller projects; may be infeasible to mitigate.	**High** - Large projects have greater ability to absorb cost.
Technical Feasibility	**Low** - Early phases will be substantial change in BAU, esp. for smaller projects; may be infeasible to mitigate.	**Medium** - Early phases will be substantial change in BAU, esp. for smaller projects; may be inefficient to mitigate.	**High** - Greater opportunities for multiple reduction approaches.	**High** - Greater opportunities for multiple reduction approaches.	**Medium** - Early phases will be substantial change in BAU, particularly for smaller projects may be inefficient to mitigate.	**High** - Greater opportunities for multiple reduction approaches.
Logistical Feasibility	**Low** - Unless fee or offset basis,very difficult to mitigate all projects.	**Medium** - BMPs broadly written to allow diversity; new req. will take time to integrate into new dev.	**High** - Less mitigation.	**High** - Less mitigation.	**Medium** - BMPs broadly written to allow diversity; new req. will take time to integrate into new dev.	**High** - Less mitigation.
Consistency with AB-32 and S-03-05	**High** - Market capture.	**High** - Market capture at >90%.	**Low** - Would rely on command and control success heavily.	**Low** - Would rely on command and control success heavily.	**Medium** - Need to demonstrate adequate market capture over time.	**Low** - Would rely on command and control success heavily.
Cost Effectiveness	**Low** - Will result in inefficient mitigation approaches. Efficiency will improve in time.	**Medium** - Emphasis is on new dev., req. for mitigation will result in inefficient mitigation approaches in early phases. Efficiency will improve in time.	**Medium** - Relies on command and control reductions for existing economy more heavily. With focus on larger projects, eff. of mitigation for new dev. high.	**Medium** - Relies on command and control reductions for existing economy more heavily. With focus on larger projects, eff. of mitigation for new dev. high.	**Medium** - Emphasis is on new dev.; req. for mitigation will result in inefficient mitigation approaches in early phases. Efficiency will improve in time.	**Medium** - Relies on command and control reductions for existing economy more heavily. With focus on larger projects, eff. of mitigation for new dev. high.
Uncertainties	**High** - Time to adapt for res. and comm.. sectors. Ability to mitigate without market-based mechanism for smaller projects unlikely.	**Medium/High** - Time to adapt for res. and comm.. sectors. Ability to mitigate without market-based mechanism for smaller projects uncertain.	**High** - Gains from command and control likely longer to be realized.	**High** - Gains from command and control likely longer to be realized.	**Medium/High** - Time to adapt for res. and comm.. sectors. Ability to mitigate without market-based mechanism for smaller projects uncertain.	**High** - Gains from command and control likely longer to be realized.
Other Advantages	Single threshold.	Single threshold. BMPs can be updated. Greenlist can be updated.	Single threshold. Does not change CEQA processing for most projects. CARB inventory = project inv.. All projects treated same.	Single threshold. Does not change CEQA processing for most projects. Follows established SIP practice.	BMPs can be updated. Greenlist can be updated. Unit-Based thresholds can be updated.	Existing guideline. Does not change CEQA processing for most projects. Endorsed by Cal. Chapter of the APA.
Other Disadvantages	Requires all projects to quantify emissions.	Requires nearly all projects to quantify emissions.			Sectoral projects have different GHG emis. Only largest projects to quantify emis.	Sectoral projects have different GHG emissions.

Introduction

This chapter evaluates the availability of various analytical methods and modeling tools that can be applied to estimate the greenhouse gas emissions from different project types subject to CEQA. This chapter will also provide comments on the suitability of the methods and tools to accurately characterize a projects emissions and offer recommendations for the most favorable methodologies and tools available. Some sample projects will be run through the methodologies and modeling tools to demonstrate what a typical GHG analysis might look like for a lead agency to meet its CEQA obligations. The air districts retained the services of EDAW environmental consultants to assist with this effort.

Methodologies/Modeling Tools

There are wide varieties of discretionary projects that fall under the purview of CEQA. Projects can range from simple residential developments to complex expansions of petroleum refineries to land use or transportation planning documents. It is more probably than not, that a number of different methodologies would be required by any one project to estimate its direct and indirect GHG emissions. Table 10 contains a summary of numerous modeling tools that can be used to estimate GHG emissions associated with various emission sources for numerous types of project's subject to CEQA. The table also contains information about the models availability for public use, applicability, scope, data requirements and its advantages and disadvantages for estimating GHG emissions.

In general, there is currently not one model that is capable of estimating all of a project's direct and indirect GHG emissions. However, one of the models identified in Table 9 would probably be the most consistently used model to estimate a projects direct GHG emissions based on the majority of projects reviewed in the CEQA process. The Urban Emissions Model (URBEMIS) is designed to model emissions associated with development of urban land uses. URBEMIS attempts to summarize criteria air pollutants and CO_2 emissions that would occur during construction and operation of new development. URBEMIS is publicly available and already widely used by CEQA practitioners and air districts to evaluate criteria air pollutants emissions against air district-adopted significance thresholds. URBEMIS is developed and approved for statewide use by CARB. The administrative reasons for using URBEMIS are less important than the fact that this model would ensure consistency statewide in how CO_2 emissions are modeled and reported from various project types.

One of the shortfalls of URBEMIS is that the model does not contain emission factors for GHGs other than CO_2, except for methane (CH_4) from mobile-sources, which is converted to CO_2e. This may not be a major problem since CO_2 is the most important GHG from land development projects. Although the other GHGs have a higher global warming potential, a metric used to normalize other GHGs to CO_2e, they are emitted in far fewer quantities. URBEMIS does not calculate other GHG emissions associated with

off-site waste disposal, wastewater treatment, emissions associated with goods and services consumed by the residents and workers supported by a project. Nor does URBEMIS calculate GHGs associated with consumption of energy produced off-site. (For that matter, URBEMIS does not report criteria air pollutant emissions from these sources either).

Importantly, URBEMIS does not fully account for interaction between land uses in its estimation of mobile source operational emissions. Vehicle trip rates are defaults derived from the Institute of Transportation Engineers trip generation manuals. The trip rates are widely used and are generally considered worst-case or conservative. URBEMIS does not reflect "internalization" of trips between land uses, or in other words, the concept that a residential trip and a commercial trip are quite possibly the same trip, and, thus, URBEMIS counts the trips separately. There are some internal correction settings that the modeler can select in URBEMIS to correct for "double counting"; however, a project-specific "double-counting correction" is often not available. URBEMIS does allow the user to overwrite the default trip rates and characteristics with more project-specific data from a traffic study prepared for a project.

Residential, Commercial, Mixed-Use Type Projects/ Specific Plans

Direct Emissions

URBEMIS can be used to conduct a project-specific model run and obtain CO_2e emissions for area and mobile sources from the project, and convert to metric tons CO_2e. When a project-specific traffic study is not available, the user should consult with their local air district for guidance. Many air district staff are experienced practitioners of URBEMIS and can advise the lead agency or the modeler on how to best tailor URBEMIS default input parameters to conduct a project-specific model run. When a traffic study has been prepared for the project, the user must overwrite default trip length and trip rates in URBEMIS to match the total number of trips and vehicle miles traveled (VMT) contained in the traffic study to successfully conduct a project-specific model run. URBEMIS is recommended as a calculation tool to combine the transportation study (if available) and EMFAC emission factors for mobile-sources. Use of a project-specific traffic study gets around the main shortfall of URBEMIS: the lack of trip internalization. URBEMIS also provides the added feature of quantifying direct area-source GHG emissions.

Important steps for running URBEMIS

1. Without a traffic study prepared for the project, the user should consult with the local air district for direction on which default options should be used in the modeling exercise. Some air districts have recommendations in the CEQA guidelines.

2. If a traffic study was prepared specifically for the project, the following information must be provided:

a. Total number of average daily vehicle trips *or* trip-generation rates by land use type per number of units; and,

b. Average VMT per residential *and* nonresidential trip.

c. The user overwrites the "Trip Rate (per day)" fields for each land use in URBEMIS such that the resultant "Total Trips" and the "Total VMT" match the number of total trips and total VMT contained in the traffic study.

d. Overwrite "Trip Length" fields for residential and nonresidential trips in UBEMIS with the project-specific lengths obtained form the traffic study.

3. Calculate results and obtain the CO_2 emissions from the URBEMIS output file (units of tons per year [TPY]).

Indirect Emissions

URBEMIS does estimate indirect emissions from landscape maintenance equipment, hot water heaters, etc. URBEMIS does not however, provide modeled emissions from indirect sources of emissions, such as those emissions that would occur off-site at utility providers associated with the project's energy demands. The California Climate Action Registry (CCAR) Protocol v.2.2 includes methodology, which could be used to quantify and disclose a project's increase in indirect GHG emissions from energy use. Some assumptions must be made for electrical demand per household or per square foot of commercial space, and would vary based on size, orientation, and various attributes of a given structure. An average rate of electrical consumption for residential uses is 7,000 kilowatt hours per year per household and 16,750 kilowatt hours per thousand square feet of commercial floor space. Commercial floor space includes offices, retail uses, warehouses, and schools. These values have been increasing steadily over the last 20 years. Energy consumption from residential uses has increased due to factors such as construction and occupation of larger homes, prices of electricity and natural gas, and increased personal income allowing residents to purchase more electronic appliances. Commercial energy consumption is linked to factors such as vacancy rates, population, and sales.

The modeler will look up the estimated energy consumption for the project's proposed land uses under year of project buildout, or use the values given in the previous paragraph for a general estimate. The CCAR Protocol contains emission factors for CO_2, CH_4, and nitrous oxide. The "CALI" region grid serves most of the State of California. If a user has information about a specific utility provider's contribution from renewable sources, the protocol contains methodology to reflect that, rather than relying on the statewide average grid. The incremental increase in energy production associated with project operation should be accounted for in the project's total GHG emissions for inclusion in the environmental document.

The incremental increase in energy production associated with project operation should be accounted for in the project's total GHG emissions, but it should be noted that these emissions would be closely controlled by stationary-source control-based regulations and additional regulations are expected under AB 32. However, in the interest of disclosing project-generated GHG emissions and mitigating to the extent feasible, the indirect emissions from off-site electricity generation can be easily calculated for inclusion in the environmental document.

Example Project Estimates for GHG Emissions

Residential Project

Project Attributes:

- 68 detached dwelling units
- 15.9 acres
- 179 residents
- 0 jobs
- Located in unincorporated Placer County (PCAPCD jurisdiction)
- Analysis year 2009

As shown in Table 6, the project's direct GHG emissions per service population (SP) would be approximately 8 metric tons CO_2e/SP/year.

Table 6: Residential Project Example GHG Emissions Estimates

URBEMIS Output (Project Specific)	Metric Tons/Year CO_2e	Demographic Data	
Area-source emissions	251	Residents	179
Mobile-source emissions	1,044	Jobs	0
Indirect emissions (from CCAR Protocol)	174		
Total operational emissions	**1,469**	Service population	179
Operational emissions/SP	**8.2**		

Notes:
CO_2e = carbon dioxide equivalent; CCAR = California Climate Action Registry; SP = service population(see definition of service population below in discussion of Normalization/Service Population Metric).

Sources: EDAW 2007, ARB 2007b, CCAR 2007, CEC 2000

Commercial Project

Project Attributes:

- Free Standing Discount Superstore: 241 thousand square feet (ksf)
- 0 residents

- 400 jobs
- Located in the San Joaquin Valley Air Pollution Control District's (SJVAPCD) jurisdiction
- Analysis year 2009

Table 7: Commercial Project Example GHG Emissions Estimates

URBEMIS Output (Project Specific)	Metric Tons/Year CO_2e	Demographic Data	
Area-source emissions	464	Residents	0
Mobile-source emissions	13,889	Jobs	400
Indirect emissions (from CCAR Protocol)	1,477		
Total operational emissions	**15,830**	Service population	400
Operational emissions/SP	**39.6**		

Notes:
CO_2e = carbon dioxide equivalent; CCAR = California Climate Action Registry; SP = service population (see definition of service population below in discussion of Normalization/Service Population Metric).

Sources: EDAW 2007, ARB 2007b, CCAR 2007, CEC 2000

Specific Plan

If used traditionally with default trip rates and lengths, rather than project-specific (Traffic Analysis Zone-specific) trip rates and lengths, URBEMIS does not work well for specific plan or general plan-sized projects with multiple land use types proposed. However, in all instances, projects of these sizes (several hundred or thousand acres) would be accompanied by a traffic study. Thus, for large planning-level projects, URBEMIS can be used as a calculation tool to easily obtain project-specific mobile-source emissions. The user should follow the steps discussed above; wherein he/she overwrites the default ITE trip rates for each land use type with that needed to make total VMT match that contained in the traffic study. The URBEMIS interface is a simple calculator to combine the traffic study and EMFAC emissions factors for mobile-source CO_2.

Project Attributes:

- 985 acres
- Total dwelling units: 5,634
- Commercial/Mixed Use: 429 ksf
- Educational: 2,565 ksf
- 14,648 residents
- 3,743 jobs
- Located in Sacramento County (SMAQMD jurisdiction)
- Analysis year 2009

Table 8: Specific Plan Example GHG Emissions Estimates

URBEMIS Output (Project Specific)	Metric Tons/Year CO_2e	Demographic Data	
Area-source emissions	23,273	Residents	14,648
Mobile-source emissions	73,691	Jobs	3,743
Indirect emissions (from CCAR Protocol)	32,744		
Total operational emissions	**129,708**	Service population	18,391
Operational emissions/SP	**7.1**		

Notes:
CO_2e = carbon dioxide equivalent; CCAR = California Climate Action Registry; SP = service population (see definition of service population below in discussion of Normalization/Service Population Metric).

Sources: EDAW 2007, ARB 2007b, CCAR 2007, CEC 2000

The specific plan example, when compared to the residential or commercial examples, illustrates the benefit of a mixed-use development when you look at CO_2e emissions per resident or job (service population) metric (see definition of service population below in discussion of Normalization/Service Population Metric). Though this particular specific plan is not an example of a true jobs/housing balance, the trend is clear: accommodating residents and jobs in a project is more efficient than residents or jobs alone.

Stationary- and Area-Source Project Types

GHG emissions from stationary or area sources that require a permit to operate from the air district also contain both direct and indirect sources of emissions. Examples of these types of sources would be fossil fuel power plants, cement plants, landfills, wastewater treatment plants, gas stations, dry cleaners and industrial boilers. All air districts have established procedures and methodologies for projects subject to air district permits to calculate their regulated pollutants. It is anticipated that these same procedures and methodologies could be extended to estimate a permitted facility's GHG calculations. For stationary and area sources that do not require air district permits, the same methodologies used for permitted sources could be used in addition to URBEMIS and CCAR GRP to calculate GHG emissions from these facilities.

Wastewater Treatment Facilities

Direct GHG emissions associated with a proposed waste water treatment plant can be calculated using AP-42 emission factors from Chapter 4.3.5 Evaporative Loss Sources: Waste Water-Greenhouse Gases and the CCAR methodology. In general, most wastewater operations recover CH_4 for energy, or use a flare to convert the CH_4 to CO_2. There are many types of wastewater treatment processes and the potential for GHG emissions from different types of plants varies substantially. There is not one standard set of emission factors that could be used to quantify GHG emissions for a state

"average" treatment plant. Thus, research will need to be conducted on a case-by-case basis to determine the "Fraction Anaerobically Digested" which is a function of the type of treatment process. Indirect emissions from these facilities can be calculated using the CCAR energy use protocols and URBEMIS model for transportation emissions.

Solid Waste Disposal Facilities

Air districts will have emission estimate methodologies established for methane emissions at permitted landfills. In addition, EPA's Landfill Gas Emissions Model (LandGem) and the CCAR methodology could also be used to quantify GHG emissions from landfill off gassing; however, this model requires substantial detail be input. The model uses a decomposition rate equation, where the rate of decay is dependent on the quantity of waste in place and the rate of change over time. This modeling tool is free to the public, but substantial project detail about the operation of the landfill is needed to run the model. Indirect emissions from these facilities can be calculated using the CCAR energy use protocols and URBEMIS model for transportation emissions.

Construction Emissions

GHG emissions would occur during project construction, over a finite time. In addition, a project could result in the loss of GHG sequestration opportunity due primarily to the vegetation removed for construction. URBEMIS should be used to quantify the mass of CO_2 that would occur during the construction of a project for land development projects. Some construction projects would occur over an extended period (up to 20–30 years on a planning horizon for general plan buildout, or 5–10 years to construct a dam, for example). OFFROAD emission factors are contained in URBEMIS for CO_2 emissions from construction equipment. For other types of construction projects, such as roadway construction projects or levee improvement projects, SMAQMD's spreadsheet modeling tool, the Road Construction Emissions Model (RoadMod), should be used. This tool is currently being updated to include CO_2 emissions factors from OFFROAD.

The full life-cycle of GHG emissions from construction activities is not accounted for in the modeling tools available, and the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level. The emissions disclosed will be from construction equipment and worker commutes during the duration of construction activities. Thus, the mass emissions in units of metric tons CO_2e/year should be reported in the environmental document as new emissions.

General Plans

In the short-term, URBEMIS can be used as a calculation tool to model GHG emissions from proposed general plans, but only if data from the traffic study is incorporated into model input. The same methodology applied above in the specific plan example applies to general plans. The CCAR GRP can be used to approximate indirect emissions from

increased energy consumption associated with the proposed plan area. The same models and methodologies discussed previously for wastewater, water supply and solid waste would be used to estimate indirect emissions resulting from buildout of the general plan.

In the longer-term, more complex modeling tools are needed, which would integrate GHG emission sources from land use interaction, such as I-PLACE^{3}S or CTG Energetics' Sustainable Communities Custom Model attempt to do. These models are not currently available to the public and only have applicability in certain areas of the state. It is important that a tool with statewide applicability be used to allow for consistency in project treatment, consideration, and approval under CEQA.

Scenarios

At the general plan level, the baseline used for analyzing most environmental impacts of a general plan update is typically no different from the baseline for other projects. The baseline for most impacts represents the existing conditions, normally on the date the Notice of Preparation is released. Several comparative scenarios could be relevant, depending on the exact methodological approach and significance criteria used for GHG assessment:

- Existing Conditions. The GHG emissions associated with the existing, on-the-ground conditions within the planning area.

- 1990 conditions. The GHG emissions associated with the general plan area in 1990. This is relevant due to the state's AB 32 GHG emission reduction goals' benchmark year of 1990. The GHG-efficiency of 1990 development patterns could be compared to that of the general plan buildout.

- Buildout of the Existing General Plan. The GHG emissions associated with buildout of the existing general plan (without the subject update). This is the no project alternative for the purposes of general plan CEQA analysis.

- Buildout of the Updated General Plan. The GHG emissions associated with buildout of the general plan, as proposed as a part of the subject update. This would include analysis of any changes included as a part of the general plan update for the existing developed portions of the planning area. Many communities include redevelopment and revitalization strategies as a part of the general plan update. The general plan EIR can include assumptions regarding what level and type of land use change could be facilitated by infill and redevelopment. Many jurisdictions wish to provide future projects consistent with these land use change assumptions with some environmental review streamlining. In addition, many communities include transit expansions, pedestrian/bicycle pathway improvements, multi-modal facility construction, travel demand policies, energy efficiency policies, or other measures that could apply to the existing developed area, just as they may apply to any new growth

areas. Such policies could affect the overall GHG emissions of the built out general plan area.

- Increment between Buildout of Updated General Plan and Existing General Plan Area. There are many important considerations associated with the characterization of the impact of the General Plan update. The actual GHG emissions impact could be described as the difference between buildout under the existing and proposed land use plan (No-Build Alternative). However, the courts have held that an EIR should also analyze the difference between the proposed General Plan and the existing environment (*Environmental Planning & Information Council v. County of El Dorado* (EPIC) (1982) 131 Cal.App.3d 350). At the General Plan level, over the course of buildout, some new land uses are introduced, which could potentially add operational GHG emissions and potentially remove existing sequestration potential. Some properties become vacant and are not redeveloped. Other properties become vacant and then are redeveloped. Communities cannot pretend to understand fully in advance each component of land use change. The programmatic document is the preferred method of environmental analysis. Through this programmatic framework, communities develop buildout assumptions as a part of the General Plan that are normally used as a basis of environmental analysis. For certain aspects of the impact analysis, it becomes important not just to understand how much "new stuff" could be accommodated under the updated General Plan, but also the altered interactions between both "new" and "existing" land uses within the planning area. As addressed elsewhere, there are tools available for use in understanding land use/transportation interactions at the General Plan level. Without the GHG targets established by AB 32, a simple mass comparison of existing conditions to General Plan buildout might be appropriate.

However, within the current legal context, the GHG efficiency of the updated General Plan becomes the focus of analysis. Some options in this regard include:

- Estimate the GHG emissions associated with all the land uses included within the planning area upon buildout of the General Plan using no project specific information (regional, countywide, or statewide defaults). Estimate GHG emissions using project specific information from the transportation engineer, transportation demand policies, community design elements, energy efficiency requirements, wastewater treatment and other public infrastructure design changes, and other components. Compare these two calculations. Is the second calculation reduced by the percent needed to meet AB 32 goals compared to the first calculation?

- Estimate the GHG emissions associated with the 1990 planning area and the per-capita or per-service population GHG associated with the 1990 planning area. (Many communities are establishing GHG inventories using different tools). Estimate the GHG emissions associated with buildout of the proposed General Plan update and the resulting per-capita or per-service population GHG

emissions. Compare the two calculations. Is the General Plan buildout per-capita or per-service population level greater than the 1990 estimate?

Example General Plan Update: Proposed new growth area

Project Attributes:

- 10,050 single family dwelling units
- 652 multi-family dwelling units
- 136 acres parks
- 2,047 ksf commercial (regional shopping center)
- 2,113 ksf office
- 383 acres industrial park
- 31,293 new residents
- 4,945 new jobs
- Located in Stanislaus County (SJVAPCD jurisdiction)
- Analysis year 2025

Table 9: General Plan Example GHG Emissions Estimates

URBEMIS Output (Project Specific)	Metric Tons/Year CO_2e	Demographic Data	
Construction emissions	12,083*	Residents	31,293
Area-source emissions	45,708		
Mobile-source emissions	263,954	Jobs	4,945
Indirect emissions (from CCAR Protocol)	78,385		
Total operational emissions	**388,046**	Service population	36,238
Operational emissions/SP	**10.7**		

* Approximately 241,656 metric tons CO_2e total at general plan buildout (assumes 20-year buildout period). Construction emissions were not included in total operational emissions.
Notes:
CO_2e = carbon dioxide equivalent; CCAR = California Climate Action Registry; SP = service population (see definition of service population below in discussion of Normalization/Service Population Metric).
Sources: EDAW 2007, ARB 2007b, CCAR 2007, CEC 2000

Due to the programmatic level of analysis that often occurs at the general plan level, and potential for many relevant GHG emission quantities, it could be preferable to use a qualitative approach. Such an analysis could address the presence of GHG-reducing policy language in the general plan.

Three possible tiers of approaches to addressing GHG mitigation strategies, either as general plan policy, general plan EIR mitigation measures, or both, include:

- Forward planning
- Project toolbox
- Defer to GHG reductions plan

The three basic approaches are described below.

1. Bring reduction strategies into the plan itself. The most effective way for local jurisdictions to achieve GHG emissions reductions in the medium- and long-term is through land use and transportation policies that are built directly into the community planning document. This involves creating land use diagrams and circulation diagrams, along with corresponding descriptive standards, that enable and encourage alternatives to travel and goods movement via cars and trucks. The land use and circulation diagrams provide a general framework for a community where people can conduct their everyday business without necessarily using their cars. The overall community layout expressed as a part of the land use and circulation diagrams is accompanied by a policy and regulatory scheme designed to achieve this community layout. Impact fees, public agency spending, regulations, administrative procedures, incentives, and other techniques are designed to facilitate land use change consistent with the communities' overall vision, as expressed in policy and in the land use diagram. There are many widely used design principles that can be depicted in land use and circulation diagrams and implemented according to narrative objectives, standards, and policies:

- Connectivity. A finely-connected transportation network shortens trip lengths and creates the framework for a community where homes and destinations can be placed close in proximity and along direct routes. A hierarchical or circuitous transportation network can increase trip lengths and create obstacles for walking, bicycling, and transit access. This policy language would likely be found in the Circulation Element.

- Compactness. Compact development, by its nature, can increase the efficiency of infrastructure provision and enable travel modes other than the car. If communities can place the same level of activity in a smaller space, GHG emissions would be reduced concurrently with VMT and avoid unnecessary conversion of open space. This policy language would likely be found in the Land Use Element.

- Diversity. Multiple land use types mixed in proximity around central "nodes" of higher-activity land uses can accommodate travel through means other than a car. The character and overall design of this land use mix is, of course, different from community to community. This policy language would likely be found in the Land Use Element.

- Facilities. Pedestrian, bicycle, and public transportation improvements, planning, and programming are sometimes an afterthought. To get a more GHG-efficient mode share, safe and convenient bike lanes, pedestrian pathways, transit shelters, and other facilities are required to be planned along with the vehicular travel network. This policy language would likely be found in the Circulation Element.

- Redevelopment. One way to avoid GHG emissions is to facilitate more efficient and economic use of the lands in already-developed portions of a community. Reinvestment in existing neighborhoods and retrofit of existing buildings is appreciably more GHG efficient than greenfield development, and can even result in a net reduction in GHG emissions. This policy language would likely be found in the Conservation or Land Use Element.

- Housing and Employment. Most communities assess current and future economic prospects along with long-range land use planning. Part of the objective for many communities is to encourage the coalescence of a labor force with locally available and appropriate job opportunities. This concept is best known as "jobs-housing balance." This policy language would likely be found in the Housing Element.

- Planning Level Versus Project Level. For transportation-related GHG emissions that local governments can mitigate through land use entitlement authority, the overall community land use strategy and the overall transportation network are the most fruitful areas of focus. The reduction capacity of project-specific mitigation measures is greatly limited if supportive land use and transportation policies are lacking at the community planning level. The regional economic context, of course, provides an important backdrop for land use and transportation policy to address GHG emissions. Within this context, the general plan is the readily available tool for local governments to establish such land use and transportation strategies. This policy language would likely be found in the Land Use and Circulation Elements.

- Shipping Mode Shift. Locate shipping-intensive land uses in areas with rail access. Some modes of shipping are more GHG-intensive than others. Rail, for example, requires only about 15 to 25 percent of the energy used by trucks to ship freight equivalent distances and involves reduced transportation-related GHG emissions. Cities and counties have little direct control over the method of shipment that any business may choose. Nevertheless, as a part of the general planning process, cities and counties can address constraints on the use of rail for transporting goods. This policy language would likely be found in the Land Use and Circulation Elements.

2. Provide a "toolbox" of strategies after the project site has been selected. In addition to the examples of design principles that are built into the community planning process, communities can offer project applicants a range of tools to reduce GHG emissions. Mitigation strategies are elaborated in detail in Chapter 9.

3. Defer to General Plan implementation measure. Develop and implement a GHG Emissions Reduction Plan. Another option for local governments would be development of an implementation measure as a part of the general plan that outlines an enforceable GHG reduction program. Perhaps the most well known example of this approach is the result of California's Attorney General settlement of the lawsuit brought against San

Bernardino County. The County has agreed to create a 1990 GHG inventory and develop measures to reduce such emissions according to the state's overall goals. Other communities have pursued similar programs (i.e., the City of San Diego, Marin County). Along with the inventories, targets, and example reduction measures, these programs would include quantitative standards for new development; targets for reductions from retrofitting existing development; targets for government operations; fee and spending program for GHG reduction programs; monitoring and reporting; and other elements. The local government itself should serve as a model for GHG reduction plan implementation, by inventorying emissions from government operations and achieving emission reductions in accordance with the plan's standards. An optional climate change element could be added to contain goals, policies, and this implementation strategy, or this could belong in an optional air quality element.

Other Project Types

Air District Rules, Regulations and Air Quality Plans

Air district air quality plans, rules and regulations could have the potential to increase or decrease GHG emissions within their respective jurisdiction. In general, air district air quality plans, rules and regulations act to reduce ozone precursors, criteria air pollutant and toxic air contaminant emissions, which would almost always act to reduce GHG emissions simultaneously. However, this may not always be the case.

Air Quality Plans

Air districts will have to include GHG emissions analysis as part of their criteria air pollutant and toxic air contaminant air pollutant analysis when considering the adoption of air quality plans and their subsequent rules and regulations needed to implement the plans. Multiple models and methodologies will be needed to accomplish this analysis.

Regional Transportation Plans

Regional transportation plans would also need to be evaluated on a case-by-case basis to determine if a net increase or decrease in GHG emissions would occur. Complex interactions between the roadway network, operating conditions, alternative transportation availability (such as public transit, bicycle pathways, and pedestrian infrastructure), and many other independent parameters specific to a region should be considered. Regional transportation models exist to estimate vehicular emissions associated with regional transportation plans, which includes the ability to estimate GHG emissions.

Normalization/Service Population Metric

The above methodology would provide an estimate of the mass GHG emissions generated by a proposed project, which could be compared to a mass emission threshold. EDAW developed a methodology that would measure a project's overall GHG efficiency

in order to determine if a project is more efficient than the existing statewide average for per capita GHG emissions. The following steps could be employed to estimate the GHG-"efficiency," which may be more directly correlated to the project's ability to help obtain objectives outlined in AB 32, although it relies on establishment of an efficiency-based significance threshold. The subcommittee believes this methodology may eventually be appropriate to evaluate the long-term GHG emissions from a project in the context of meeting AB 32 goals. However, this methodology will need substantially more work and is not considered viable for the interim guidance presented in this white paper.

- Divide the total operational GHG emissions by the Service Population (SP) supported by the project (where SP is defined as the sum of the number of residents and the number of jobs supported by the project). This value should be compared to that of the projected statewide GHG emissions inventory from the applicable end-use sectors (electricity generation, residential, commercial/institutional, and mobile-source) in 1990 divided by the projected statewide SP for the year 2020 (i.e., AB 32 requirements), to determine if the project would conflict with legislative goals.

    - If the project's operational GHG/SP falls below AB 32 requirements, then the project's GHG emissions are less than cumulatively considerable.

    - If the project's operational GHG/SP exceed AB 32 requirements (a substantial contribution), then the project's GHG emissions would conflict with legislative requirements, and the impact would be cumulatively considerable and mitigation would be required where feasible.

- New stationary and area sources/facilities: calculate GHG emissions using the CCAR GRP. All GHG emissions associated with new stationary or area sources should be treated as a net increase in emissions, and if deemed significant, should be mitigated where feasible.

- Road or levee construction projects or other construction-only projects: calculate GHG emissions using the RoadMod, which will be updated to contain GHG emission factors from EMFAC and OFFROAD. All construction-generated GHG emissions should be treated as a net increase, and if deemed significant, should be mitigated to the extent feasible.

- Air District rulemaking or air quality management plan-type projects should be evaluated on a case-by-case basis for secondary impacts of increased GHG emissions generation. In most cases, the types of projects that act to reduce regional air pollution simultaneously act to reduce GHG emissions, and would be beneficial, but should be evaluated for secondary effects from GHG emissions.

- Regional transportation plans should also be evaluated on a case-by-case basis for potential to either reduce or increase GHG emissions from the transportation sector. EMFAC can be utilized to determine the net change in GHG emissions

associated with projected vehicle VMT and from operating speed changes associated with additional or alleviated congestion.

To achieve the goals of AB 32, which are tied to GHG emission rates of specific benchmark years (i.e., 1990), California would have to achieve a lower rate of emissions per unit of population and per unit of economic activity than it has now. Further, in order to accommodate future population and economic growth, the state would have to achieve an even lower rate of emissions per unit than was generated in 1990. (The goal to achieve 1990 quantities of GHG emissions by 2020 means that this will need to be accomplished in light of 30 years of population and economic growth in place beyond 1990.) Thus, future planning efforts that would not encourage new development to achieve its fair share of reductions in GHG emissions would conflict with the spirit of the policy decisions contained in AB 32, thus impeding California's ability to comply with the mandate.

Thus, if a statewide context for GHG emissions were pursued, any net increase in GHG emissions within state boundaries would be considered "new" emissions. For example, a land development project, such as a specific plan, does not necessarily create "new" emitters of GHG, but would theoretically accommodate a greater number of residents in the state. Some of the residents that move to the project could already be California residents, while some may be from out of state (or would 'take the place' of in-state residents who 'vacate' their current residences to move to the new project). Some may also be associated with new births over deaths (net population growth) in the state. The out-of-state residents would be contributing new emissions in a statewide context, but would not necessarily be generating new emissions in a global context. Given the California context established by AB 32, the project would need to accommodate an increase in population in a manner that would not inhibit the state's ability to achieve the goals of lower total mass of emissions.

The average net influx of new residents to California is approximately 1.4 percent per year (this value represents the net increase in population, including the net contribution from births and deaths). With population growth, California also anticipates economic growth. Average statewide employment has grown by approximately 1.1 percent over the last 15 years. The average percentage of population employed over the last 15 years is 46 percent. Population is expected to continue growing at a projected rate of approximately 1.5 percent per year through 2050. Long-range employment projection data is not available from the California Department of Finance (DOF) and can be extrapolated in different ways (e.g., linear extrapolation by percentage rate of change, percentage of population employed, mathematical series expansion, more complex extrapolation based on further research of demographic projections such as age distribution). Further study would be needed to refine accurate employment projections from the present to 2050. For developing this framework, employment is assumed to have a constant proportionate relationship with the state's population. The projected number of jobs is assumed to be roughly 46 percent of the projected population.

In light of the statewide context established by California law, consistency is most important for evaluating GHG emissions from projects. Thus, URBEMIS and the CCAR GRP are the recommended tools for quantification of GHG emissions from most project types in the short term. Over the long term, more sophisticated models that integrate the relationship between GHG emissions and land use, transportation, energy, water, waste, and other resources, and have similar application statewide would have better application to the problem, but may not currently be as accessible or as easily operable. I-PLACE^{3}S and CTG Energetics' Sustainable Communities Model (SCM) are two examples of such models that contain emission factors for GHGs, which could be refined to have applicability statewide and made available to CEQA practitioners. Other models are likely to be developed, given the importance of this issue.

Short-Term and Long-Term Methodologies

The following tools can be used to quantify a project's GHG emissions until tools that are more comprehensive become available statewide:

1. Land development projects: URBEMIS 2007 v. 9.2 and the CCAR GRP v. 2.2 (short-term); further development of I-PLACE^{3}S or CTG's Sustainable Communities Model (long-term).
2. New stationary and area sources/facilities: AP-42 Chapter 4.3, LandGem v. 3.02, and/or CCAR GRP v. 2.2.
3. Road or levee construction projects or other construction-only projects: RoadMod/OFFROAD 2007.

Ideally, I-PLACE^{3}S or CTG's Sustainable Communities Model would be expanded to apply to all regions of the state. These types of models use an integrated approach, which is the best approach for reasonably approximating the emissions that result from interaction between land uses, but neither is available to the public and would create consistency problems in reporting emissions from projects across the state if these were used today. However, a similar model with statewide applicability will likely be developed due to the importance of the issue.Table 10 Summary of Modeling Tools for Estimating GHG Emissions and Project Applicability

Table 10: Summary of Modeling Tools for GHG Emissions

Method/Tool Description	Availability	Applicability	Scope	Ease of Use	Data Input (Requirements and Guidance)	Data Output	Recommendation Comments	Advantages/ Disadvantages
URBEMIS 2007	*Public domain -Download (www.urbemis.com) free of charge*	*Land development and construction projects (construction, mobile- and area-source emissions)*	*Local*	*Fairly Easy*	*Land use information, construction and operational data and assumptions (e.g., jurisdiction, acres of land use type, year of operation, etc.)*	*Mobile-source Construction & Operational CO_2 (lb/day or tons/year)*	*-Recommended for land use development and construction projects -Also recommended for net change in land use (zoning changes)*	*-Does not quantify indirect emissions from energy consumption or other GHGs (except methane from mobile-sources) -Free, available to public, and applicable statewide -Widely used for assessment of other air quality impacts*
California Climate Action Registry General Reporting Protocol v. 2.2	*Public guidance document*	*Indirect emissions from land development projects, stationary- and area-source facilities regulated under AB 32*	*State*	*Easy*	*Energy consumption*	*CO_2e (Metric tons/year)*	*-Recommended for indirect emissions from energy consumption for land use development projects, and for new stationary- or area- sources to be regulated*	*-Contains emission factors for CH_4 and N_2O in addition to CO_2 -Does not contain emission factors broken down by utility provider (statewide average grid only)*
Clean Air and Climate Projection (CACP) Software	*Public agencies (members of ICLEI, NACAA, or similar)*	*Local governments used for emissions inventories*	*Local*	*N/A*	*Energy usage, waste generation/disposal transportation*	*CO_2e (tons/year)*	*-Recommended for inventories of local government entities activities (must be a member of affiliated agency or group)*	*-Not available to public*
CTG Sustainable Communities Model	*Custom model*	*Land development*	*Regional, scalable*	*N/A*	*Land use information, operational (mobile, energy, economic, infrastructure) assumptions*	*CO_2e (tons/year)*	*-An integrated and comprehensive modeling tool, but cannot obtain*	*-Not available to public*

Method/Tool Description	Availability	Applicability	Scope	Ease of Use	Data Input (Requirements and Guidance)	Data Output	Recommendation Comments	Advantages/ Disadvantages
I-PLACE^{3}S	*Access fee through local COG* *Only available for eight California counties*	*Land use change*	*Regional, scalable*	*Fairly Easy*	*Parcel information*	*CO_2 (lb/day or tons/year)*	*-Recommended for land use development projects and land use changes* *-Especially good for general plans*	*-Not freely available to public* *-Not applicable statewide* *-Actually provides insight into land use interaction* *-Can include very specific project attributes* *-Trip rates are from behavioral survey data, instead of ITE*
EMFAC 2007	*Public domain*	*On-road mobile-sources*	*Statewide, regional*	*Fairly Easy*	*Vehicle fleet information*	*CO_2 (grams/mile)*	*-Not recommended for most projects (URBEMIS preferred)* *-Could be used for certain Air District Rulemaking applications*	*-Can compare emissions based on speed-distribution* *-Emission factors contained in URBEMIS* *-Not a stand-alone model*
OFFROAD 2007	*Public domain*	*Off-road mobile sources (construction equipment)*	*Statewide, regional*	*Fairly Easy*	*Construction fleet information*	*CO_2 (lb/day)*	*-Not recommended (URBEMIS preferred)* *-could be used for certain Air District Rulemaking applications (re: construction equipment)*	*-Emission factors contained in URBEMIS*
RoadMod (to be updated to include CO_2)	*Public domain*	*Off-road and on-road mobile sources (construction equipment and material haul trucks)*	*Statewide*	*Easy*	*Construction information*	*CO_2 (lb/day or tons/project)*	*-Recommended for construction-only projects (linear in nature; i.e., levees, roads, pipelines)*	*-To be updated to support emissions factors from OFFROAD 2007*

Method/Tool Description	Availability	Applicability	Scope	Ease of Use	Data Input (Requirements and Guidance)	Data Output	Recommendation Comments	Advantages/ Disadvantages
DTIM	*Public domain*	*On-road mobile-sources*	*Statewide, regional*	*Difficult (consists of a series of three programs and requires input files from traffic and emissions modeling)*	*-EMFAC files* *-Traffic model output files (e.g., link, interzonal, and trip end data)* *-User options file* *-Optional files*	*CO_2 (tons/year)*	*-Not recommended*	*-Not updated to support EMFAC 2007 emission factors* *-Input files include output files from regional transportation models which more accurately reflect VMT*
Southeast Climate Change Partnership Spreadsheet Model (UK)	*Public domain http://www.climatesoutheast.org.uk/*	*UK Local government/ agencies/ organizations used for emissions inventories*	*Local, county, regional*	*Fairly easy*	*Energy usage, waste generation/disposal, transportation*	*CO_2 (tonnes/year)*	*-Not recommended for use in California, but could be a valuable source for building an applicable spreadsheet model*	*-Applicability for UK, but could be updated with CA-specific emission factors*
EPA AP-42; Evaporation Loss Sources Chapter 4.3.5	*Public reference document*	*GHG emissions from waste water treatment facilities*	*Facility level*	*Easy equation; substantial research needed to use*	*Biochemical oxygen demand (BOD) loading, Fraction anaerobically digested*	*CH4 (lb/year)*	*-Recommended for Publicly owned treatment works (POTW) projects*	*-Substantial research needed to determine the "fraction anaerobically digested" parameter, which is dependent on the type of treatment plant/process*
LandGem v. 3.02	*Public domain http://www.epa.gov/ttn/catc/dir1/landgem-v302.xls*	*GHG emissions from anaerobic decomposition associated with landfills*	*Facility Level*	*Moderate*	*Solid waste processing, year of analysis, lifetime of waste in place*	*CO_2, CH_4 (Mega grams/year)*	*-Recommended for landfill emissions*	*-Emission rates change dependent on years of decomposition, waste in place rates of change.* *-Complex decomposition rate equation, but good first approximation*

Method/Tool Description	Availability	Applicability	Scope	Ease of Use	Data Input (Requirements and Guidance)	Data Output	Recommendation Comments	Advantages/ Disadvantages
CARROT	*Registry members*	*Stationary source emissions, vehicle fleet mobile sources*	*Facility level*	*Moderate*	*Facility-specific information*	*All GHGs*	*-Recommended for reporting facilities under AB 32 and for indirect emissions from energy consumption (CCAR Protocol)*	*-Estimates all GHGs and normalizes to CO_2e* *-Not publicly available*

Notes:

GHG = greenhouse gas; AB = assembly bill; CO_2e = carbon dioxide equivalent; CH_4 = methane; N_2O = nitrous oxide; COG = council of governments ; ITE = Institute of Transportation Engineers; CCAR = California Climate Action Registry

Source: Data compiled by EDAW and the California Air Pollution Control Officers Association in 2007

Introduction

This chapter (and Appendix B) identifies existing and potential mitigation measures that could be applied to projects during the CEQA process to reduce a project's GHG emissions that would be identified using the analytical methodologies included in this white paper. The Subcommittee retained the services of EDAW to assist with this effort. EDAW performed a global search of mitigation measures currently in practice and under study that would reduce GHG emissions.

Table 16 (Appendix B) provides a brief description of each measure along with an assessment of their feasibility (from a standpoint of economical, technological, and logistical feasibility, and emission reduction effectiveness), and identifies their potential for secondary impacts to air quality. During the global search performed, EDAW also took note of GHG reduction strategies being implemented as rules and regulation (e.g., early action items under AB 32), which are summarized in Table 18 (Appendix C). It is important to note that though compliance with such would be required by regulation for some sources, such strategies may be applicable to other project and source types.

The recurring theme that echoes throughout a majority of these measures is the shift toward New Urbanism, and research has consistently shown that implementation of Neotraditional Development techniques reduces VMT and associated emissions. The material reviewed assessed reductions from transportation-related measures (e.g., bicycle, pedestrian, transit, and parking) as a single comprehensive approach to land use. This comprehensive approach focuses on development design criteria conducive to enhancing alternate modes of transportation, including transit, walking, and bicycling. Transportation Demand Management (TDM) programs are viewed as a mechanism to implement specific measures. TDM responsibilities may include offering incentives to potential users of alternative modes of transportation and monitoring and reporting mode split changes.

The comprehensive approach makes it more difficult to assess reductions attributable to each measure. Nevertheless, there is a strong interrelationship between many of the measures, which justifies a combined approach. Consider the relationship between bike parking nonresidential, bike parking residential, endtrip facilities, and proximity to bike path/bike lane measures. In reality, these measures combined act as incentives for one individual to bike to work, while implementation of a single measure without the others reduces effectiveness.

The global nature of GHG emissions is an important feature that enables unique mitigation: abatement. When designing a project subject to CEQA, the preferred practice is first to avoid, then to minimize, and finally to compensate for impacts. Where the impact cannot be mitigated on-site, off-site mitigation is often and effectively implemented in several resource areas, either in the form of offsetting the same impact or preserving the resource elsewhere in the region. Frequently, mitigation fee programs or funds are established, where the proponent pays into the program and fees collected

throughout the region or state are used to implement projects that, in turn, proportionately offset the impacts of the projects to the given resource. It may be more cost-effective to reduce as much GHG on-site as feasible (economically and technologically). Then the proponent would pay into a "GHG retrofit fund" to reduce equivalent GHG emissions off-site. In contrast to regional air pollutant offset programs such as the Carl Moyer Program, it matters greatly where reductions of ozone precursors occur, as ozone affects regional air quality. The GHG retrofit fund could be used to provide incentives to upgrade older buildings and make them more energy efficient. This would reduce demand on the energy sector and reduce stationary source emissions associated with utilities. This program has been successfully implemented in the United Kingdom where developments advertise "carbon neutrality." Of course, some GHG emissions occur associated with operation of the development, but the development would offset the remainder of emissions through off-site retrofit. Avoiding emissions that would otherwise continue to occur at existing development would be a unique opportunity for mitigation of GHG emissions. Reduction of GHG emissions also may have important side benefits including reduction of other forms of pollution.

Depending on the significance threshold concept adopted, projects subject to the CEQA process would either qualitatively or quantitatively identify the amount of GHG emissions associated with their project using the analytical methodologies identified in the previous chapter. The analysis would then apply the appropriate number of mitigation measures listed in Appendix B to their project to reduce their GHG emissions below the significance level. Calculating the amount of GHG emission reductions attributable to a given mitigation measure would require additional research. The examples below illustrate how a project would be mitigated using this approach.

Residential Project Example

Project Attributes:

- 68 detached dwelling units
- 15.9 acres
- Located in unincorporated Placer County PCAPCD jurisdiction)
- Assume URBEMIS defaults for a rural project in Placer County, in absence of a traffic study (This is contrary to the recommendations contained under Task 1; a traffic study is necessary to asses project-specific GHG emissions).
- Analysis year 2009

Table 11: Residential Project Example GHG Emissions Estimates with Mitigation

URBEMIS Output (Unmitigated)	Metric Tons/Year CO_2e	URBEMIS Output (Mitigated)	Metric Tons/Year CO_2e	Percent Reduction
Area-source emissions	252	Area-source emissions	215	14.6
Mobile-source emissions	1,047	Mobile-source emissions	916	12.5
Total direct operational emissions (area + mobile)	1,299	Total operational emissions (area + mobile)	1,131	12.9

Notes:
CO_2e = carbon dioxide equivalent

Sources: Data compiled by EDAW in 2007

Using URBEMIS 2007 and assuming the project would implement the mitigation measures listed below, yearly project-generated emissions of CO_2e would be reduced by approximately 13 percent. Implementation of the following mitigation measures is assumed:

- 100 housing units within one-half-mile radius of project's center, including this project's 68 residential units;
- provision of 80 jobs in the study area;
- retail uses present with one-half-mile radius of project's center;
- 10 intersections per square mile;
- 100% of streets with sidewalks on one side;
- 50% of streets with sidewalks on both sides;
- 30% of collectors and arterials with bike lanes, or where suitable, direct parallel routes exist;
- 15% of housing units deed restricted below market rate;
- 20% energy efficiency increase beyond Title 24; and
- 100% of landscape maintenance equipment electrically powered and electrical outlets in front and rear of units.

Example Project Methodology and Mitigation

Table 12 –Residential Projects Example Methodology and Mitigation

Source	Methodology	Mitigation
Direct Emissions		
Construction	URBEMIS (OFFROAD emission factors)	MM C-1→MM C-4
Mobile Sources	URBEMIS (EMFAC emission factors)	MM T-3→MM T-8, MM T-10→ MM T-14, MM T-16, MM T-19→ MM T-21 MM D-2→MM D-8, MM D-10→ MM D-15, MM D-17 MM S-1→MM S-2 MM M-1→MM M-2
Area Sources	URBEMIS	MM D-13→MM D-15, MM D-17 MM E-1→MM E-8, MM E-10, MM E-12→MM E-23 MM S-1→MM S-2 MM M-1→MM M-2
Indirect Emissions		
Energy Consumption	CCAR GRP & CEC	

Table 13 –Commercial Projects Example Methodology and Mitigation

Source	Methodology	Mitigation
Direct Emissions		
Construction	URBEMIS (OFFROAD emission factors)	MM C-1→MM C-4
Mobile Sources	URBEMIS (EMFAC emission factors)	MM T-1→MM T-2, MM T-4→ MM T-15, MM T-17→MM T-21 MM D-1→MM D-3, MM D-5→ MM D-6, MM D-10, MM D-12, MM D-14→MM D-17 MM E-24 MM S-1→MM S-2 MM M-1→MM M-2
Area Sources	URBEMIS	MM D-14→MM D-17 MM E-1, MM E-4→MM E-13, MM E-16→MM E-24 MM S-1→MM S-2 MM M-1→MM M-2
Indirect Emissions		
Energy Consumption	CCAR GRP & CEC	

Table 14 –Specific Plans Example Methodology and Mitigation

Source	Methodology	Mitigation
Direct Emissions		
Construction	URBEMIS (OFFROAD emission factors)	MM C-1→MM C-4
Mobile Sources	Short-term: URBEMIS (EMFAC emission factors). Long-term: I-PLACE^{3}S/CTG SCM	MM T-1→MM T-21 MM D-1→MM D-12, MM D-18→ MM D-19 MM E-24 MM S-1→MM S-2 MM M-1→MM M-2
Area Sources	Short-term: URBEMIS (EMFAC emission factors). Long-term: I-PLACE^{3}S/CTG SCM	MM D-13→MM D-19 MM E-1→MM E-24 MM S-1→MM S-2 MM M-1→MM M-2
Indirect Emissions		
Energy Consumption	Short-term: CCAR GRP & CEC. Long-term: I-PLACE^{3}S/CTG SCM	

General Plans

- Include a general plan policy to reduce emissions within planning area to a level consistent with legislative requirements.
- Implementation strategies include preparation of a GHG reduction plan.
- Projects consistent with a general plan could be responsible for complying with such a policy.

Table 15 –General Plans Example Methodology and Mitigation

Source	Methodology	Mitigation
Direct Emissions		
Construction	URBEMIS (OFFROAD emission factors).	MS G-1 MM G-15
Mobile Sources	Short-term: URBEMIS (EMFAC emission factors). Long-term: I-PLACE^{3}S/CTG SCM	MS G-1 MS G-2→MS C-7, MS G-9, MS G-12, MS-13→MS-14, MS-16→MS-23
Area Sources	Short-term: URBEMIS (EMFAC emission factors). Long-term: I-PLACE^{3}S/CTG SCM	MS G-1 MS G-8→MS C-11, MS G-134, MS G-12, MS-15, MS-17, MS-22
Indirect Emissions		
Energy Consumption	Short-term: CCAR GRP & CEC. Long-term: I-PLACE^{3}S/CTG SCM	

Other Project Types

Air District Rules and Regulations

Air district rules and regulations could have the potential to increase or decrease GHG emissions within the respective jurisdiction. In general, air district rules and regulations act to decrease criteria air pollutant or toxic air contaminant emissions, which would usually act to reduce GHG emissions simultaneously. However, this may not always be the case and air district rules and regulations could address emissions from a large variety of different source types. Reductions of GHG emissions associated with implementation of applicable mitigation, which could also vary greatly, would need to be evaluated on a case-by-case basis. However, once applicable mitigation measures are identified, percent reductions based on the best available research to date, such as those specified in Table 15, could be applied to determine mitigated emissions.

Air Quality Plans

Similarly to air district rules and regulations, air quality plans could have the potential to increase or decrease GHG emissions because of criteria air pollutant reduction strategies. In general, strategies implemented by air districts to reduce criteria air pollutants also act to reduce GHG emissions. However, this may not always be the case. Reductions of GHG emissions associated with implementation of applicable mitigation would need to be evaluated on a case-by-case basis. The methodology identified above for determining whether the strategies contained within the GHG reduction plan would adhere to the level specified in general plan policy could also be used to determine the reductions associated with CAP strategies.

Regional Transportation Plans

Regional transportation plans and reductions of GHG emissions associated with implementation of applicable mitigation would also need to be evaluated on a case-by-case basis to determine if a net increase or decrease in GHG emissions would occur. Complex interactions between the roadway network, operating conditions, alternative transportation availability (such as public transit, bicycle pathways, and pedestrian infrastructure), and many other independent parameters specific to a region should be considered. EMFAC 2007 can be used with VMT from the RTP to create an inventory of GHG emissions. Reductions associated with implementation of applicable measures contained in Table 16 could be accomplished by accounting for VMT reductions in the traffic model.

Many states, counties, and cities have developed policies and regulations concerning greenhouse gas emissions that seek to require or promote reductions in GHG emissions through standards for vehicle emissions, fuels, electricity production/renewables, building efficiency, and other means. However, we could only identify three public agencies in the United States that are considering formally requiring the analysis of greenhouse gas emissions and climate change for development projects during their associated environmental processes. There may be others, but they were not identified during research conducted during preparation of this paper.

The following is a summary of those three efforts.

Commonwealth of Massachusetts - MEPA Greenhouse Gas Emissions Policy and Protocol

The Massachusetts Executive Office of Energy and Environmental Affairs (EEA) has determined that the phrase "damage to the environment" as used in the Massachusetts Environmental Policy Act (MEPA) includes the emission of greenhouse gases caused by projects subjects to MEPA Review. EEA has published a Greenhouse Gas Emissions Policy (GGEP) to fulfill the statutory obligation to take all feasible measurers to avoid, minimize or mitigate damage to the environment.

The GGEP concerns the following projects only:

- The Commonwealth or a state agency is the proponent;
- The Commonwealth or a state agency is providing financial assistance;
- The project is privately funded, but requires an Air Quality Permit from the department of Environmental Protection;
- The project is privately funded, but will generate:
    - 3,000 or more new vehicle trips per day for office projects;
    - 6,000 or more new vehicle trips per day for mixed use projects that are 25% or more office space; or
    - 10,000 or more new vehicle trips per day for other projects.

As a comparison, the trip generation amounts correspond as follows:

- 3,000 vehicle trips per day = approximately 250,000 square foot office development;
- 6,000 or more new vehicle trips per day for mixed use projects that are 25% or more office space = if 25% office space, then equivalent to approximately 130,000 square feet of office and either 100,000 square feet of retail or 450 single-family residential units or some combination thereof.
- 10,000 or more new vehicle trips per day = approximately 1,000 single family residential units or 250,000 square feet retail.

The draft policy states it is not intended to create a numerical GHG emission limit or a numerical GHG emissions reduction target, but rather to ensure that project proponents and reviewers have considered the GHG emissions impacts of their projects and taken all feasible means and measure to reduce those impacts.

The draft policy notes that some projects within these categories will have little or no greenhouse gas emission and the policy will not apply to such projects. EEA intends to identify in the scoping certificate whether a project falls within this *de minimis* exception.

The GGEP requires qualifying projects to do the following:

- to quantify their GHG emissions;
- identify measures to minimize or mitigate such emissions;
- quantify the reduction in emissions and energy savings from mitigation.

Emissions inventories are intended to focus on carbon dioxide, but analysis of other GHGs may be required for certain projects. EEA will require analysis of direct GGH emissions and indirect (electricity and transportation) emissions. The GGEP references the protocols prepared by the World Resource Institute as guidance for inventory preparation.

The policy is still in draft form, but the comment period closed on August 10, 2007.

King County, Washington - Executive Order on the Evaluation of Climate Change Impacts through the State Environmental Policy Act (SEPA)

On June 27, 2007, the King County Executive Ron Sims directed all King County Departments, as follows:

> *"…effective September 1, 2007 to require that climate impacts, including, but not limited to those pertaining to greenhouse gases, be appropriately identified and evaluated when such Departments are acting as the lead agency in reviewing the environmental impacts of private or public proposals pursuant to the State Environmental Policy Act".*

The Executive Order does not define what a "climate impact" is. Based on statements of the County Deputy Chief of Staff[*]

- County agencies will ask project proponents to supply information on transportation, energy usage and other impacts of proposed projects using the County's existing SEPA checklist.

[*] Marten Law Group: Environmental News, August 1, 2007, "King County (WA) First in Nation to Require Climate Change Impacts to be Considered During Environmental Review of New Projects".

- There is no current plan to require project proponents to take action to mitigate the impacts identifies.
- Development of emissions thresholds and mitigation requirements will be undertaken in connection with the County's upcoming 2008 update of its Comprehensive Plan.

Sacramento Metropolitan Air Quality Management District

The Sacramento Metropolitan Air Quality Management District released an interim guidance on addressing climate change in CEQA documents on September 6, 2007. While very general in nature, the District recommends that CEQA environmental documents include a discussion of anticipated GHG emissions during both the construction and operation phases of the project. This includes assessing the GHG emissions from projects (using readily available models) to determine whether a project may have a significant impact. If so, then the District recommends addressing all of the District's GHG mitigation measures (drawn from comments made by the California Attorney General) – with explanations on how the mitigation will be implemented or providing rationale for why a measure would be considered infeasible. The District provides assistance to agencies in their analysis of GHG emissions and the applicability of specific mitigation measures. The District's guidance can be found at: http://64.143.64.21/climatechange/ClimateChangeCEQAguidance.pdf

Mendocino Air Quality Management District – CEQA Guidelines

The Mendocino AQMD updated its "Guidelines for Use During Preparation of Air Quality Impacts in EIRs or Mitigated Negative Declarations" in May 2007. The guidelines call for preparing estimates of the increased emissions of air contaminations (including GHG) for projects.

The guidelines state that GHG emissions should be presumed to have a significant impact if CO emissions from District-approved modeling exceed either of the following:

- 80% of the level defined as significant for stationary sources in Regulation1, Rule 130 (s2) of the District (which is 550 lbs/day for CO, meaning a threshold of 440 lbs/day for CO for stationary sources); or
- levels established in District Regulation 1 Rule 130 (i2) for indirect sources (which is 690 lbs/day for CO for indirect sources).

If an average passenger vehicle emits 22 grams of CO/mile and 0.8 lb/mile of CO_2, then the 690-lb/day threshold for CO corresponds to approximately 11,400 lb/day CO_2 threshold for passenger vehicle-related emissions. If one assumes that the average passenger vehicle goes 12,500 miles/year (about 35 miles/day), then this is a threshold equivalent to about 420 vehicles. Using an average in California of about 1.77 vehicles/household, this would correspond to about 250 households/dwelling units.

Appendix A

Relevant Citations

Citations from the Public Resources Code (Division 13, §21000 et seq.) as amended through January 1, 2005.

Public Resources Code – Section 21004, MITIGATING OR AVOIDING A SIGNIFICANT EFFECT; POWERS OF PUBLIC AGENCY:

"In mitigating or avoiding a significant effect of a project on the environment, a public agency may exercise only those express or implied powers provided by law other than this division. However, a public agency may use discretionary powers provided by such other law for the purpose of mitigating or avoiding a significant effect on the environment subject to the express or implied constraints or limitations that may be provided by law."

Public Resources Code – Section 21082.2, SIGNIFICANT EFFECT ON ENVIRONMENT; DETERMINATION; ENVIRONMENTAL IMPACT REPORT PREPARATION:

(a) The lead agency shall determine whether a project may have a significant effect on the environment based on substantial evidence in light of the whole record.
(b) The existence of public controversy over the environmental effects of a project shall not require preparation of an environmental impact report if there is no substantial evidence in light of the whole record before the lead agency that the project may have a significant effect on the environment.
(c) Argument, speculation, unsubstantiated opinion or narrative, evidence which is clearly inaccurate or erroneous, or evidence of social or economic impacts which do not contribute to, or are not caused by, physical impacts on the environment, is not substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.
(d) If there is substantial evidence, in light of the whole record before the lead agency, that a project may have a significant effect on the environment, an environmental impact report shall be prepared.
(e) Statements in an environmental impact report and comments with respect to an environmental impact report shall not be deemed determinative of whether the project may have a significant effect on the environment.

Citations from the Guidelines for California Environmental Quality Act, CCR, Title 14, Division 6 (§15000 et seq.) as amended through July 27, 2007.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

State CEQA Guidelines – Section 15064, DETERMINING THE SIGNIFICANCE OF THE ENVIRONMENTAL EFFECTS CAUSED BY A PROJECT:

(a) Determining whether a project may have a significant effect plays a critical role in the CEQA process.

(1) If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, the agency shall prepare a draft EIR.

(2) When a final EIR identifies one or more significant effects, the Lead Agency and each Responsible Agency shall make a finding under Section 15091 for each significant effect and may need to make a statement of overriding considerations under Section 15093 for the project.

(b) The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area.

(c) In determining whether an effect will be adverse or beneficial, the Lead Agency shall consider the views held by members of the public in all areas affected as expressed in the whole record before the lead agency. Before requiring the preparation of an EIR, the Lead Agency must still determine whether environmental change itself might be substantial.

(d) In evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project.

(1) A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project. Examples of direct physical changes in the environment are the dust, noise, and traffic of heavy equipment that would result from construction of a sewage treatment plant and possible odors from operation of the plant.

(2) An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment. For example, the construction of a new sewage treatment plant may facilitate population growth in the service area due to the increase in sewage treatment capacity and may lead to an increase in air pollution.

(3) An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable.

(e) Economic and social changes resulting from a project shall not be treated as significant effects on the environment. Economic or social changes may be used, however, to determine that a physical change shall be regarded as a significant effect on the environment. Where a physical change is caused by economic or social effects of a

project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project. Alternatively, economic and social effects of a physical change may be used to determine that the physical change is a significant effect on the environment. If the physical change causes adverse economic or social effects on people, those adverse effects may be used as a factor in determining whether the physical change is significant. For example, if a project would cause overcrowding of a public facility and the overcrowding causes an adverse effect on people, the overcrowding would be regarded as a significant effect.

(f) The decision as to whether a project may have one or more significant effects shall be based on substantial evidence in the record of the lead agency.

(1) If the lead agency determines there is substantial evidence in the record that the project may have a significant effect on the environment, the lead agency shall prepare an EIR (Friends of B Street v. City of Hayward (1980) 106 Cal.App.3d 988). Said another way, if a lead agency is presented with a fair argument that a project may have a significant effect on the environment, the lead agency shall prepare an EIR even though it may also be presented with other substantial evidence that the project will not have a significant effect (No Oil, Inc. v. City of Los Angeles (1974) 13 Cal.3d 68).

(2) If the lead agency determines there is substantial evidence in the record that the project may have a significant effect on the environment but the lead agency determines that revisions in the project plans or proposals made by, or agreed to by, the applicant would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur and there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment then a mitigated negative declaration shall be prepared.

(3) If the lead agency determines there is no substantial evidence that the project may have a significant effect on the environment, the lead agency shall prepare a negative declaration (Friends of B Street v. City of Hayward (1980) 106 Cal.App. 3d 988).

(4) The existence of public controversy over the environmental effects of a project will not require preparation of an EIR if there is no substantial evidence before the agency that the project may have a significant effect on the environment.

(5) Argument, speculation, unsubstantiated opinion or narrative, or evidence that is clearly inaccurate or erroneous, or evidence that is not credible, shall not constitute substantial evidence. Substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion support by facts.

(6) Evidence of economic and social impacts that do not contribute to or are not caused by physical changes in the environment is not substantial evidence that the project may have a significant effect on the environment.

(7) The provisions of sections 15162, 15163, and 15164 apply when the project being analyzed is a change to, or further approval for, a project for which an EIR or negative declaration was previously certified or adopted (e.g. a tentative subdivision, conditional use permit). Under case law, the fair argument standard does not apply to determinations of significance pursuant to sections 15162, 15163, and 15164.

(g) After application of the principles set forth above in Section 15064(f)(g), and in marginal cases where it is not clear whether there is substantial evidence that a project may have a significant effect on the environment, the lead agency shall be guided by the following principle: If there is disagreement among expert opinion supported by facts

over the significance of an effect on the environment, the Lead Agency shall treat the effect as significant and shall prepare an EIR.
(h)(1) When assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project's incremental effect, though individually limited, is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
(2) A lead agency may determine in an initial study that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. When a project might contribute to a significant cumulative impact, but the contribution will be rendered less than cumulatively considerable through mitigation measures set forth in a mitigated negative declaration, the initial study shall briefly indicate and explain how the contribution has been rendered less than cumulatively considerable.
(3) A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding that the project complies with the specified plan or mitigation program addressing the cumulative problem, an EIR must be prepared for the project.
(4) The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

State CEQA Guidelines – Section 15130, DISCUSSION OF CUMULATIVE IMPACTS:
(a)(3). "An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

State CEQA Guidelines – Section 15064.7, THRESHOLDS OF SIGNIFICANCE:
"Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level

of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant."

Appendix B

Mitigation Measure Summary

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
Transportation								
Bicycle/Pedestrian/Transit Measures								
MM T-1: Bike Parking	LD (C, M), I, SP, TP, AQP, RR, P/Mobile	1%-5%/High: CCAP presents combined % reductions for a range of mitigation measures (Dierkers et al. 2007). SMAQMD allocates combined reductions among individual measures (e.g., 2.5% reduction for all bicycle-related measures and one-quarter of 2.5% for each individual measure) (TIAX 2005, EDAW 2006, SMAQMD 2007). VTPI presents % reductions for showers and combined measures in the TDM encyclopedia (VTPI	Yes: Lockers ($1,200-$2,950, $700/bike on average), Racks ($70-$2,000, $70/bike on average).	Yes (Caltrans 2005, Dierkers et al. 2007, VTPI 2007)	Yes (Caltrans 2005, Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs	Caltrans, Portland Bicycle Master Plan (City of Portland 1998), CCAP Transportation Emissions Guidebook (Dierkers et al. 2007), SMAQMD Recommended Guidance for Land Use Emission Reductions (SMAQMD 2007), VTPI, CA air quality management and control districts, and cities/counties.	Nonresidential projects provide plentiful short- and long-term bicycle parking facilities to meet peak season maximum demand (e.g., one bike rack space per 20 vehicle/employee parking spaces.
MM T-2: End of Trip Facilities	LD (C, M), I, SP, TP, AQP, RR, P/Mobile		Yes	Yes (Caltrans 2005, Dierkers et al. 2007, VTPI 2007)	Yes (Caltrans 2005, Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs		Nonresidential projects provide "end-of-trip" facilities including showers, lockers, and changing space (e.g., four clothes lockers and one shower provided for every 80 employee parking spaces, separate facilities for each gender for projects with 160 or more employee parking spaces).
MM T-3: Bike-Parking at Multi-	LD (R, M), SP, AQP, RR,		Yes: Lockers ($1,200-	Yes (Caltrans 2005,	Yes (Caltrans	Adverse: No Beneficial:		Long-term bicycle parking is provided at apartment

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
Unit Residential	P/Mobile	2007). JSA bases estimates on CCAP information (JSA 2004).	$2,950, $700/bike on average), Racks ($70-$2,000, $70/bike on average).	Dierkers et al. 2007, VTPI 2007)	2005, Dierkers et al. 2007, VTPI 2007)	CAPs, TACs		complexes or condominiums without garages (e.g., one long-term bicycle parking space for each unit without a garage). Long-term facilities shall consist of one of the following: a bicycle locker, a locked room with standard racks and access limited to bicyclists only, or a standard rack in a location that is staffed and/or monitored by video surveillance 24 hours per day.
MM T-4: Proximity to Bike Path/Bike Lanes	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile		Yes	Yes (Caltrans 2005, Dierkers et al. 2007, VTPI 2007)	Yes (Caltrans 2005, Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs		Entire project is located within one-half mile of an existing/planned Class I or Class II bike lane and project design includes a comparable network that connects the project uses to the existing offsite facility. Project design includes a designated bicycle route connecting all units, on-site bicycle parking facilities, offsite bicycle facilities, site entrances, and primary building entrances to existing Class I or Class II bike lane(s) within one-half mile. Bicycle route connects to all streets contiguous with project site. Bicycle route has minimum conflicts with automobile parking and circulation

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
								facilities. All streets internal to the project wider than 75 feet have Class II bicycle lanes on both sides.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective	Feasible (Yes/No)			Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM T-5: Pedestrian Network	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	1%-10%/High: CCAP presents combined % reductions for a range of mitigation measures (Dierkers et al. 2007). SMAQMD allocates 1% for each individual measure (TIAX 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs	CCAP Transportation Emissions Guidebook (Dierkers et al. 2007), SMAQMD Recommended Guidance for Land Use Emission Reductions (SMAQMD 2007), VTPI, CA air quality management and control districts, and cities/counties.	The project provides a pedestrian access network that internally links all uses and connects to all existing/planned external streets and pedestrian facilities contiguous with the project site. Project design includes a designated pedestrian route interconnecting all internal uses, site entrances, primary building entrances, public facilities, and adjacent uses to existing external pedestrian facilities and streets. Route has minimal conflict with parking and automobile circulation facilities. Streets (with the exception of alleys) within the project have sidewalks on both sides. All sidewalks internal and adjacent to project site are minimum of five feet wide. All sidewalks feature vertical curbs. Pedestrian facilities and improvements such as grade separation, wider sidewalks, and traffic calming are implemented wherever feasible to minimize pedestrian barriers. All site entrances provide pedestrian access.
MM T-6: Pedestrian	LD (R, C, M), I, SP, TP,		Yes	Yes (Dierkers et al. 2007,	Yes (Dierkers et	Adverse: No Beneficial:		Site design and building placement minimize barriers to

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
Barriers Minimized	AQP, RR, P/Mobile			VTPI 2007)	al. 2007, VTPI 2007)	CAPs, TACs		pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between residential and nonresidential uses that impede bicycle or pedestrian circulation are eliminated.
MM T-7: Bus Shelter for Existing/Planned Transit Service	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	1%-2%/High: CCAP presents these % reductions (Dierkers et al., 2007). SMAQMD assigns from .25%-1%, depending on headway frequency (TIAX 2005, EDAW 2006, SMAQMD 2007).	Yes: $15,000-$70,000.	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs	CCAP Transportation Emissions Guidebook (Dierkers et al. 2007), SMAQMD Recommended Guidance for Land Use Emission Reductions (SMAQMD 2007), VTPI, City of Calgary (City of Calgary 2004), CA air quality management and control districts, and cities/counties.	Bus or streetcar service provides headways of one hour or less for stops within one-quarter mile; project provides safe and convenient bicycle/pedestrian access to transit stop(s) and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting).

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM T-8: Traffic Calming	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	1%-10%/High: CCAP presents combined % reductions for a range of mitigation measures (Dierkers et al. 2007). SMAQMD allocates .25%-1.0% for each individual measure depending on percent of intersections and streets with improvements (TIAX 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs	CCAP Transportation Emissions Guidebook (Dierkers et al. 2007), SMAQMD Recommended Guidance for Land Use Emission Reductions (SMAQMD 2007), VTPI, CA air quality management and control districts, and cities/counties.	Project design includes pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways are designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips by featuring traffic calming features. All sidewalks internal and adjacent to project site are minimum of five feet wide. All sidewalks feature vertical curbs. Roadways that converge internally within the project are routed in such a way as to avoid “skewed intersections;” which are intersections that meet at acute, rather than right, angles. Intersections internal and adjacent to the project feature one or more of the following pedestrian safety/traffic calming design techniques: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, and roundabouts or mini-circles. Streets internal and adjacent to the project feature pedestrian safety/traffic calming measures such as on-street parking, planter strips with street trees,

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
								and chicanes/chokers (variations in road width to discourage high-speed travel).
Parking Measures								
MM T-9: Paid Parking (Parking Cash Out)	LD (C, M), I, SP, TP, AQP, RR, P/Mobile	1%-30%/High: CCAP presents a range of 15%-30% reduction for parking programs (Dierkers et al. 2007). SMAQMD presents a range of 1.0%-7.2%, depending on cost/day and distance to transit (TIAX 2005, EDAW 2006, SMAQMD 2007). Shoupe presents a 21% reduction [$5/day for commuters to downtown LA, with elasticity of -0.18 (e.g., if price increases 10%, then solo driving goes down by 1.8% more)] (Shoupe 2005). Urban Transit Institute	Yes: Vary by location and project size.	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs	CCAP Transportation Emissions Guidebook (Dierkers et al. 2007), SMAQMD Recommended Guidance for Land Use Emission Reductions (SMAQMD 2007), VTPI, CA air quality management and control districts, and cities/counties.	Project provides employee and/or customer paid parking system. Project must have a permanent and enforceable method of maintaining user fees for all parking facilities. The facility may not provide customer or employee validations. Daily charge for parking must be equal to or greater than the cost of a transit day/monthly pass plus 20%.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective	Feasible (Yes/No)			Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
		presents a range of 1%-10% reduction in trips to central city sites, and 2%-4% in suburban sites (VTPI 2007).						
MM T-10: Minimum Parking	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	1%-30%/High: CCAP presents a range of 15%-30% reduction for parking programs (Dierkers et al. 2007). SMAQMD presents a maximum of 6% (Nelson/Nygaard Consulting Associates, 2005, TIAX 2005, EDAW 2006).	Yes	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007), Note that in certain areas of the state, the minimum parking required by code is greater than the peak period parking demand for most land uses. Simply meeting minimum code requirements in these areas would not result in an emissions reduction.	Adverse: No Beneficial: CAPs, TACs	CCAP Transportation Emissions Guidebook (Dierkers et al. 2007), SMAQMD Recommended Guidance for Land Use Emission Reductions (SMAQMD 2007), VTPI, Governor's Office of Smart Growth (Annapolis, Maryland) (Zimbler), CA air quality management and control districts, and cities/counties.	Provide minimum amount of parking required. Once land uses are determined, the trip reduction factor associated with this measure can be determined by utilizing the ITE parking generation publication. The reduction in trips can be computed as shown below by the ratio of the difference of minimum parking required by code and ITE peak parking demand to ITE peak parking demand for the land uses multiplied by 50%. Percent Trip Reduction = 50 * [(min parking required by code – ITE peak parking demand)/ (ITE peak parking demand)]

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective	Feasible (Yes/No)			Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM T-11: Parking Reduction Beyond Code/Shared Parking	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	1%-30%/High: CCAP presents a range of 15%-30% reduction for parking programs (Dierkers et al. 2007). SMAQMD presents a maximum of 12% (Nelson/Nygaard, 2005, TIAX 2005, EDAW 2006).	Yes	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs		Provide parking reduction less than code. This measure can be readily implemented through a shared parking strategy, wherein parking is utilized jointly among different land uses, buildings, and facilities in an area that experience peak parking needs at different times of day and day of the week.
MM T-12: Pedestrian Pathway Through Parking	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	1%-4%/Moderate: CCAP presents combined % reductions for a range of mitigation measures (Dierkers et al. 2007). SMAQMD allocates 0.5% reduction for this measure (TIAX 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs		Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM T-13: Off - Street Parking	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	1%-4%/Moderate: CCAP presents combined % reductions for a range of mitigation measures (Dierkers et al. 2007). SMAQMD allocates a range of 0.1%-1.5% for this measure (TIAX 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs		Parking facilities are not adjacent to street frontage.
MM T-14: Parking Area Tree Cover	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	Annual net CO_2 reduction of 3.1 kg/m^2 canopy cover/Moderate (McPherson 2001).	Yes: $19 per new tree for CA, cost varies for maintenance, removal and replacement (McPherson 2001).	Yes	Yes	Adverse: VOCs Beneficial: CAPs, TACs	AG, State of CA Department of Justice (Goldberg 2007) and cities/counties (e.g., parking lot ordinances in Sacramento, Davis, and Los Angeles, CA).	Provide parking lot areas with 50% tree cover within 10 years of construction, in particular low emitting, low maintenance, native drought resistant trees. Reduces urban heat island effect and requirement for air conditioning, effective when combined with other measures (e.g., electrical maintenance equipment and reflective paving material).
MM T-15: Valet Bicycle Parking	LD (C, M), SP, AQP, TP, RR, P/Mobile	NA/Low	Yes	Yes	Yes: Raley Field (Sacramento, CA)	Adverse: No Beneficial: CAPs, TACs	Raley Field (Sacramento, CA).	Provide spaces for the operation of valet bicycle parking at community event "centers" such as amphitheaters, theaters, and stadiums.
MM T-16: Garage Bicycle Storage	LD (R, M), SP, AQP, TP, RR, P/Mobile	NA/Low	Yes: Less than $200/multiple bike rack.	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	City of Fairview, OR	Provide storage space in one-car garages for bicycles and bicycle trailers.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM T-17: Preferential Parking for EVs/CNG Vehicles	LD (C, M), I, SP, TP, AQP, RR, P/Mobile	NA/Low	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	USGBC, CA air quality management and control districts and cities/counties (e.g., BAAQMD).	Provide preferential parking space locations for EVs/CNG vehicles.
MM T-18: Reduced/No Parking Fee for EVs/CNG Vehicles	LD (C, M), I, SP, TP, AQP, RR, P/Mobile	NA/Low	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	Hotels (e.g., Argonaut in San Francisco, CA)	Provide a reduced/no parking fee for EVs/CNG vehicles.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
Miscellaneous Measure								
MM T-19: TMA Membership	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	1%-28%/High: CCAP presents a range of 3%-25% for TDMs with complementary transit and land use measures (Dierkers et al. 2007). VTPI presents a range of 6%-7% in the TDM encyclopedia (VTPI 2007). URBEMIS offers a 2%-10% range in reductions for a TDM that has 5 elements that are pedestrian and transit friendly and 1%-5% for 3 elements. SMAQMD presents a reduction of 5% (TIAX 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007, VTPI 2007)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Include permanent TMA membership and funding requirement. Funding to be provided by Community Facilities District or County Service Area or other nonrevocable funding mechanism. TDMs have been shown to reduce employee vehicle trips up to 28% with the largest reductions achieved through parking pricing and transit passes. The impact depends on the travel alternatives.
MM T-20: ULEV	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	NA/Low	Yes: Higher than corresponding gasoline models.	Yes	Yes: Fueling stations might not be readily available depending on location. More than 900 E85 fueling	Adverse: No Beneficial: CAPs, TACs	DGS, CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Use of and/or provide ULEV that are 50% cleaner than average new model cars (e.g., natural gas, ethanol, electric).

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
					stations in the U.S., 5 in CA. Vehicles available in select regions only			
MM T-21: Flex Fuel Vehicles	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	5466.97 lb GHG/year/Low (DOE Fuel Economy)	Yes: E85 costs less than gasoline per gallon, but results in lower fuel economy.	Yes	Yes: More than 900 E85 fueling stations in the U.S., 5 in CA. Vehicles available in select regions only	Adverse: Yes Issues with the energy intensive ethanol production process (e.g., wastewater treatment requirements). Beneficial: CAPs, TACs	DGS, CA air quality management and control districts and cities/counties (e.g., SJVAPCD).	Use of and/or provide vehicles that utilize gasoline/ethanol blends (e.g., E85).
Design								
Commercial & Residential Building Design Measures								
MM D-1: Office/Mixed Use Density	LD (C, M), SP, TP, AQP, RR, P/Mobile	0.05%-2%/Moderate: This range is from SMAQMD, depending	Yes	Yes (VTPI 2007)	Yes (VTPI 2007)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties	Project provides high density office or mixed-use proximate to transit. Project must provide

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective	Feasible (Yes/No)			Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
		on FAR and headway frequencies (Nelson/Nygaard Consulting Associates 2005, EDAW 2006, SMAQMD 2007).					(e.g., SMAQMD).	safe and convenient pedestrian and bicycle access to all transit stops within one-quarter mile.
MM D-2: Orientation to Existing/Planned Transit, Bikeway, or Pedestrian Corridor	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	0.4%-1%/Moderate: CCAP attributes a 0.5% reduction per 1% improvement in transit frequency (Dierkers et al. 2007). SMAQMD presents a range of 0.25%-5% (JSA 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (Dierkers et al. 2007)	Yes (Dierkers et al. 2007)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project is oriented towards existing transit, bicycle, or pedestrian corridor. Setback distance between project and existing or planned adjacent uses is minimized or nonexistent. Setback distance between different buildings on project site is minimized. Setbacks between project buildings and planned or existing sidewalks are minimized. Buildings are oriented towards existing or planned street frontage. Primary entrances to buildings are located along planned or existing public street frontage. Project provides bicycle access to any planned bicycle corridor(s). Project provides pedestrian access to any planned pedestrian corridor(s).
MM D-3: Services Operational	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	0.5%-5%/Moderate	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project provides on-site shops and services for employees.

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective	Feasible (Yes/No)			Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM D-4: Residential Density (Employ Sufficient Density for New Residential Development to Support the Use of Public Transit)	LD (R, M), SP, TP, AQP, RR, P/Mobile	1%-40%/High: #7, EPA presents a range of 32%-40% (EPA 2006). SMAQMD presents a range of 1%-12% depending on density and headway frequencies (Nelson/Nygaard Consulting Associates 2005, JSA 2005, EDAW 2006, SMAQMD 2007). Nelson/Nygaard presents a trip reduction formula: Trip Reduction = 0.6*(1-(19749*((4.814+ households per residential acre)/(4.814+7.14))^-06.39)/25914).	Yes	Yes (VTPI 2007, Holtzclaw 2007)	Yes (VTPI 2007, Holtzclaw 2007)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project provides high-density residential development. Transit facilities must be within one-quarter mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within one-quarter mile of project border.
MM D-5: Street Grid	LD (R, C, M), I, SP, TP, AQP, RR,	1%/Moderate: SMAQMD presents this % reduction (JSA	Yes	Yes (Dierkers et al. 2007, VTPI 2007)	Yes (Dierkers et al. 2007,	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties	Multiple and direct street routing (grid style). This measure only applies to projects

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
	P/Mobile	2005, EDAW 2006, SMAQMD 2007).			VTPI 2007)		(e.g., SMAQMD).	with an internal CF >/= 0.80, and average of one-quarter mile or less between external connections along perimeter of project. [CF= # of intersections / (# of cul-de-sacs + intersections)]. Cul-de-sacs with bicycle/pedestrian through access may be considered "complete intersections" when calculating the project's internal connectivity factor. External connections are bike/pedestrian pathways and access points, or streets with safe and convenient bicycle and pedestrian access that connect the project to adjacent streets, sidewalks, and uses. If project site is adjacent to undeveloped land; streets, pathways, access points, and right-of-ways that provide for future access to adjacent uses may count for up to 50% of the external connections. Block perimeter (the sum of the measurement of the length of all block sides) is limited to no more than 1,350 feet. Streets internal to the project should connect to streets external to the project whenever possible.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM D-6: NEV Access	LD (R, C, M), SP, TP, AQP, RR, P/Mobile	0.5%-1.5%/Low: SMAQMD presents this % reduction (EDAW 2006, SMAQMD 2007).	Yes	Yes (Litman 1999, Sperling 1994)	Yes (Litman 1999, Sperling 1994)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Make physical development consistent with requirements for neighborhood electric vehicles. Current studies show that for most trips, NEVs do not replace gas-fueled vehicles as the primary vehicle.
MM D-7: Affordable Housing Component	LD (R, M), SP, TP, AQP, RR, P/Mobile	0.4%-6%/Moderate: SMAQMD presents this % reduction (Nelson/Nygaard Consulting Associates 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Residential development projects of five or more dwelling units provide a deed-restricted low-income housing component on-site (or as defined in the code). Developers who pay into In-Lieu Fee Programs are not considered eligible to receive credit for this measure. The award of emission reduction credit shall be based only on the proportion of affordable housing developed on-site because in-lieu programs simply induce a net increase in development. Percentage reduction shall be calculated according to the following formula:

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
								% reduction = % units deed-restricted below market rate housing * 0.04
MM D-8: Recharging Area	LD (R, M), SP, TP, AQP, RR, P/Mobile	NA/Low	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs		Provide residential buildings with a "utility" room or space for recharging batteries, whether for use in a car, electric lawnmower, other electric landscaping equipment, or even batteries for small items such as flashlights.
Mixed-Use Development Measures								
MM D-9: Urban Mixed-Use	LD (M), SP, TP, AQP, RR, P/Mobile	3%-9%/Moderate: SMAQMD presents this % reduction (TIAX 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (EPA 2006)	Yes (EPA 2006)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Development of projects predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with functional interrelationships and a coherent physical design.
MM D-10: Suburban Mixed-Use	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	3%/Moderate: SMAQMD presents this % reduction (TIAX 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (EPA 2006)	Yes (EPA 2006)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Have at least three of the following on site and/or offsite within one-quarter mile: Residential Development, Retail Development, Park, Open Space, or Office.
MM D-11: Other Mixed-Use	LD (R, M), SP, TP, AQP, RR, P/Mobile	1%/Moderate: SMAQMD presents this % reduction (TIAX 2005, EDAW	Yes	Yes (EPA 2006)	Yes (EPA 2006)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	All residential units are within one-quarter mile of parks, schools or other civic uses.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
		2006, SMAQMD 2007).						
MM D-12: Infill Development	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	3%-30%/High: Infill development reduces vehicle trips and VMT by 3% and 20%, respectively (Fehr & Peers 2007). CCAP identifies a site level VMT reduction range of 20%-30% (Dierkers et al. 2007).	Yes	Yes (Dierkers et al. 2007)	Yes (Dierkers et al. 2007)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project site is on a vacant infill site, redevelopment area, or brownfield or greyfield lot that is highly accessible to regional destinations, where the destinations rating of the development site (measured as the weighted average travel time to all other regional destinations) is improved by 100% when compared to an alternate greenfield site.
Miscellaneous Measures								
MM D-13: Electric Lawnmower	LD (R, M), SP, AQP, RR, P/Area	1%/Low: SMAQMD presents this % reduction (EDAW 2006, SMAQMD 2007).	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Provide a complimentary electric lawnmower to each residential buyer.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM D-14: Enhanced Recycling/Waste Reduction, Reuse, Composting	LD (R, C, M), I, SP, AQP, RR, P/Stationary & Area	NA/Low	Yes	Yes	Yes: Association with social awareness.	Adverse: No Beneficial: CAPs, TACs	CIWMB	Provide infrastructure/education that promotes the avoidance of products with excessive packaging, recycle, buying of refills, separating of food and yard waste for composting, and using rechargeable batteries.
MM D-15: LEED Certification	LD (R, C, M), I, SP, AQP, RR, P/Stationary & Area	NA/Moderate	Yes: Receive tax rebates, incentives (e.g., EDAW San Diego office interior remodel cost $1,700,000 for 32,500 square feet) (USGBC 2007)	Yes	Yes: More than 700 buildings of different certifications in CA (USGBC 2007).	Adverse: No Beneficial: CAPs, TACs	USGBC, CA air quality management and control districts and cities/counties (e.g., BAAQMD).	LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.
MM D-16: Retro-Commissioning	LD (C, M), I, SP, AQP, RR, P/Stationary & Area	8%-10% reduction in energy usage/Moderate: (Mills et al. 2004)	Yes: Average $0.28/square feet, varies with building size (Haasl and Sharp 1999).	Yes	Yes: 27 projects underway in CA, 21 more to be completed in 2007, mostly state buildings owned by DGS (DGS 2007).	Adverse: No Beneficial: CAPs, TACs	DGS, CA air quality management and control districts and cities/counties (e.g., BAAQMD).	The process ensures that all building systems perform interactively according to the contract documents, the design intent and the owner's operational needs to optimize energy performance.
MM D-17 Landscaping	LD (R, C, M), I, SP, AQP, RR,	NA/Low	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	Alliance for the Chesapeake Bay, EPA Green Landscaping	Project shall use drought resistant native trees, trees with low emissions and high carbon

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
	P/Stationary & Area						Resources	sequestration potential. Evergreen trees on the north and west sides afford the best protection from the setting summer sun and cold winter winds. Additional considerations include the use of deciduous trees on the south side of the house that will admit summer sun; evergreen plantings on the north side will slow cold winter winds; constructing a natural planted channel to funnel summer cooling breezes into the house. Neighborhood CCR's not requiring that front and side yards of single family homes be planted with turf grass. Vegetable gardens, bunch grass, and low-water landscaping shall also be permitted, or even encouraged.
MM D-18: Local Farmers' Market	LD (M), SP/Mobile, Stationary, &	NA/Low	Yes	Yes	Yes: Associated with social	Adverse: No Beneficial: CAPs, TACs	Cities/counties (e.g., Davis, Sacramento)	Project shall dedicate space in a centralized, accessible location for a weekly farmers' market.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
	Area				choice and public awareness.			
MM D-19: Community Gardens	LD (M), SP/Mobile, Stationary, & Area	NA/Low	Yes	Yes	Yes: Associated with social choice and public awareness.	Adverse: No Beneficial: CAPs, TACs	Cities/counties (e.g., Davis)	Project shall dedicate space for community gardens.
Energy Efficiency/Building Component								
MM E-1: High-Efficiency Pumps	LD (R, C, M), SP, AQP, RR, P/Stationary & Area	NA/Low	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., BAAQMD).	Project shall use high-efficiency pumps.
MM E-2: Wood Burning Fireplaces/Stoves	LD (R, M), SP, AQP, RR, P/Stationary & Area	NA/Low: EDAW 2006	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project does not feature fireplaces or wood burning stoves.
MM E-3: Natural Gas Stove	LD (R, M), SP, AQP, RR, P/Stationary & Area	NA/Low: EDAW 2006	Yes: Cost of stove—$350 (gas) and $360 (electric) same brand, total yearly cost of $42.17 as opposed to $56.65 for electric (Saving Electricity 2006).	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project features only natural gas or electric stoves in residences.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM E-4: Energy Star Roof	LD (R, C, M), I, SP, AQP, RR, P/Stationary & Area	0.5%-1%/Low: SMAQMD presents this % reduction (EDAW 2006, SMAQMD 2007).	Yes	Yes	Yes: 866 Energy Star labeled buildings in California (Energy Star 2007)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project installs Energy Star labeled roof materials.
MM E-5: On-site Renewable Energy System	LD (R, C, M), I, SP, AQP, RR, P/Stationary & Area	1%-3%/Moderate: SMAQMD presents this % reduction (USGBC 2002 and 2005, EDAW 2006, SMAQMD 2007).	Yes	Yes (USGBC 2002 and 2005)	Yes (USGBC 2002 and 2005)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project provides onsite renewable energy system(s). Nonpolluting and renewable energy potential includes solar, wind, geothermal, low-impact hydro, biomass and bio-gas strategies. When applying these strategies, projects may take advantage of net metering with the local utility.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM E-6: Exceed Title 24	LD (R, C, M), I, GSP, AQP, RR, P/Stationary & Area	1%/Moderate: SMAQMD presents this % reduction (EDAW 2006, SMAQMD 2007).	Yes	Yes (PG&E 2002, SMUD 2006)	Yes (PG&E 2002, SMUD 2006)	Adverse: No Beneficial: CAPs, TACs	PG&E, SMUD, CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project exceeds title 24 requirements by 20%.
MM E-7: Solar Orientation	LD (R, C, M), I, SP, AQP, RR, P/Stationary & Area	0.5%/Low: SMAQMD presents this % reduction (EDAW 2006, SMAQMD 2007).	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project orients 75% or more of homes and/or buildings to face either north or south (within 30° of N/S). Building design includes roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows. Trees, other landscaping features and other buildings are sited in such a way as to maximize shade in the summer and maximize solar access to walls and windows in the winter.
MM E-8: Nonroof Surfaces	LD (R, C, M), I, GSP, AQP, RR, P/Stationary & Area	1.0%/Low: SMAQMD presents this % reduction (EDAW 2006, SMAQMD 2007).	Yes	Yes (USGBC 2002 and 2005)	Yes (USGBC 2002 and 2005)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30% of the site's nonroof impervious surfaces, including parking lots, walkways, plazas, etc.; OR place a minimum of 50% of parking spaces underground or covered by structured parking; OR use an open-grid pavement system (less than 50% impervious) for a minimum of

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
								50% of the parking lot area. The mitigation measure reduces heat islands (thermal gradient differences between developed and undeveloped areas to minimize impact on microclimate and human and wildlife habitats. This measure requires the use of patented or copyright protected methodologies created by the ASTM. The SRI is a measure of the constructed surface's ability to reflect solar heat, as shown by a small rise in temperature. It is defined so that a standard black (reflectance 0.05, emittance 0.90) is "0" and a standard white (reflectance 0.80, emittance 0.90) is 100. To calculate SRI for a given material, obtain the reflectance value and emittance value for the material. SRI is calculated according to ASTM E 1980-01. Reflectance is measured

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
								according to ASTM E 903, ASTM E 1918, or ASTM C 1549. Emittance is measured according to ASTM E 408 or ASTM C 1371. Default values for some materials will be available in the LEED-NC v2.2 Reference Guide.
MM E-9: Low-Energy Cooling	LD (C, M), I, SP, AQP, RR, P/Stationary & Area	1%-10%/Low: EDAW presents this percent reduction range (EDAW 2006).	Yes	Yes (USGBC 2002 and 2005)	Yes (USGBC 2002 and 2005)	Adverse: No Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Project optimizes building's thermal distribution by separating ventilation and thermal conditioning systems.
MM E-10: Green Roof	LD (R, C, M), I, SP, AQP, RR, P/Stationary & Area	1.0%/Moderate: SMAQMD presents this % reduction (EDAW 2006, SMAQMD 2007).	Yes	Yes (USGBC 2002 and 2005)	Yes (USGBC 2002 and 2005)	Adverse: Increased Water Consumption Beneficial: CAPs, TACs	CA air quality management and control districts and cities/counties (e.g., SMAQMD).	Install a vegetated roof that covers at least 50% of roof area. The reduction assumes that a vegetated roof is installed on a least 50% of the roof area or that a combination high albedo and vegetated roof surface is installed that meets the following standard: (Area of SRI Roof/0.75)+(Area of vegetated roof/0.5) >= Total Roof Area. Water consumption reduction measures shall be considered in the design of the green roof.
MM E-11: EV Charging Facilities	LD (C, M), SP, AQP, RR, P/Stationary & Area	NA/Low	Yes: $500-$5000/ vehicle site (PG&E 1999)	Yes	Yes: 381 facilities in CA (Clean Air Maps 2007).	Adverse: No Beneficial: CAPs, TACs	DOE, EERE, CA air quality management and control districts and cities/counties (e.g., BAAQMD).	Project installs EV charging facilities.
MM E-12:	LD (R, C, M),	NA/Low: Increasing	Yes: Light	Yes	Yes: Apply	Adverse: No		Project provides light-colored

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
Light-Colored Paving	I, SP, AQP, RR, P/Stationary & Area	the albedo of 1,250 km of pavement by 0.25 would save cooling energy worth $15M per year.	colored aggregates and white cement are more expensive than gray cement. Certain blended cements are very light in color and may reflect similarly to white cement at an equivalent cost to normal gray cement.		natural sand or gravel colored single surface treatments to asphalt (EOE 2007).	Beneficial: CAPs, TACs		paving (e.g., increased albedo pavement).
MM E-13: Cool Roofs	LD (R, C, M), I, SP, AQP, RR, P/Stationary & Area	NA/Low	Yes: 0.75–1.5/square feet coating (EPA 2007a)	Yes	Yes: Over 90% of the roofs in the United States are dark colored	Adverse: No Beneficial: CAPs, TACs	CEC	Project provides cool roofs. Highly reflective, highly emissive roofing materials that stay 50-60°F cooler than a normal roof under a hot summer sun. CA's Cool Savings

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
					(EPA 2007a).			Program provided rebates to building owners for installing roofing materials with high solar reflectance and thermal emittance. The highest rebate went to roofs on air conditioned buildings, while buildings with rooftop ducts and other nonresidential buildings were eligible for slightly less. The program aimed to reduce peak summer electricity demand and was administered by the CEC.
MM E-14: Solar Water Heaters	LD (R, M), SP, AQP, RR, P/Stationary & Area	20%–70% reduction in cooling energy needs/Moderate	Yes: $1675/20 square feet, requires a 50 gallon tank, annual operating cost of $176 (DOE 2007).	Yes	Yes: Based on solar orientation, building codes, zoning ordinances.	Adverse: No Beneficial: CAPs, TACs	Europe	Project provides solar water heaters.
MM E-15: Electric Yard Equipment Compatibility	LD (R, M), SP, AQP, RR, P/Stationary & Area	NA/Low	Yes: $75–$250/outlet from existing circuit (Cost Helper 2007).	Yes	Yes	Adverse: No Beneficial: CAPs, TACs		Project provides electrical outlets at building exterior areas.
MM E-16: Energy Efficient Appliance Standards	LD (R, C, M), SP, AQP, RR, P/Stationary & Area	NA/Low	Yes: Varies for each appliance—higher capital costs, lower operating costs (Energy	Yes	Yes: Major retail stores.	Adverse: No Beneficial: CAPs, TACs		Project uses energy efficient appliances (e.g., Energy Star).

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
			Star 2007).					
MM E-17: Green Building Materials	LD (R, C, M), SP, AQP, RR, P/Stationary & Area	NA/Low: 25-30% more efficient on average.	Yes	Yes: BEES software allows users to balance the environmental and economic performance of building products; developed by NIST (NIST 2007).	Yes	Adverse: No Beneficial: CAPs, TACs		Project uses materials which are resource efficient, recycled, with long life cycles and manufactured in an environmentally friendly way.
MM E-18: Shading Mechanisms	LD (R, C, M), I, SP, AQP, RR, P/Stationary, & Area	NA/Low: Up to $450 annual energy savings (Energy Star 2007).	Yes: Higher capital costs, lower operating and maintenance costs (Energy Star 2007).	Yes	Yes: Major retail stores.	Adverse: No Beneficial: CAPs, TACs		Install energy-reducing shading mechanisms for windows, porch, patio and walkway overhangs.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
MM E-19: Ceiling/Whole-House Fans	LD (R, C, M), I, SP, AQP, RR, P/Stationary, & Area	NA/Low: 50% more efficient than conventional fans (Energy Star 2007).	Yes: $45-$200/fan, installation extra (Lowe's 2007).	Yes	Yes: Major retail stores.	Adverse: No Beneficial: CAPs, TACs		Install energy-reducing ceiling/whole-house fans.
MM E-20: Programmable Thermostats	LD (R, C, M), I, SP, AQP, RR, P/Stationary, & Area	NA/Low: $100 annual savings in energy costs (Energy Star 2007).	Yes: $60/LCD display and 4 settings for typical residential use (Lowe's 2007).	Yes	Yes: Major retail stores.	Adverse: Yes, Mercury Beneficial: CAPs, TACs		Install energy-reducing programmable thermostats that automatically adjust temperature settings.
MM E-21: Passive Heating and Cooling Systems	LD (R, C, M), I, SP, AQP, RR, P/Stationary, & Area	NA/Low	Yes: $800 (wall heaters) to $4,000+ (central systems)	Yes	Yes	Adverse: No Beneficial: CAPs, TACs		Install energy-reducing passive heating and cooling systems (e.g., insulation and ventilation).
MM E-22: Day Lighting Systems	LD (R, C, M), I, SP, AQP, RR, P/Stationary, & Area	NA/Low	Yes: $1,300 to $1,500 depending upon the kind of roof (Barrier 1995), installation extra.	Yes	Yes: Work well only for space near the roof of the building, little benefit in multi-floor buildings.	Adverse: No Beneficial: CAPs, TACs		Install energy-reducing day lighting systems (e.g., skylights, light shelves and interior transom windows).
MM E-23: Low-Water Use Appliances	LD (R, C, M), I, SP, AQP, RR, P/Stationary, & Area	NA/Low: Avoided water agency cost for using water-efficient kitchen pre-rinse spray valves of $65.18 per acre-foot.	Yes: Can return their cost through reduction in water consumption,	Yes	Yes	Adverse: No Beneficial: CAPs, TACs		Require the installation of low-water use appliances.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
			pumping, and treatment.					
MM E-24: Goods Transport by Rail	LD (C, M), I, SP, AQP, RR, P/Mobile	NA/Moderate	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs	ARB Goods Movement Plan (ARB 2007)	Provide a spur at nonresidential projects to use nearby rail for goods movement.
Social Awareness/Education								
MM S-1: GHG Emissions Reductions Education	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile, Stationary, & Mobile	NA/Low	Yes	Yes	Yes: Similar programs currently exist in CA.	Adverse: No Beneficial: CAPs, TACs		Provide local governments, businesses, and residents with guidance/protocols/information on how to reduce GHG emissions (e.g., energy saving, food miles).
MM S-2: School Curriculum	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile, Stationary, & Mobile	NA/Low	Yes	Yes	Yes: Similar programs currently exist in CA.	Adverse: No Beneficial: CAPs, TACs		Include how to reduce GHG emissions (e.g., energy saving, food miles) in the school curriculum.
Construction								
MM C-1: ARB-Certified Diesel Construction Equipment	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	NA/Low	Yes: Oxidation Catalysts, $1,000-	Yes	Yes	Adverse: Yes, NO_x Beneficial: CAPs, TACs	AG, EPA, ARB, and CA air quality management and pollution control districts.	Use ARB-certified diesel construction equipment. Increases CO_2 emissions when trapped CO and carbon particles

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
			$2,000. DPF, $5000-$10,000; installation extra (EPA 2007b).					are oxidized (Catalyst Products 2007, ETC 2007).
MM C-2: Alternative Fuel Construction Equipment	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	NA/Low	Yes	Yes	Yes	Adverse: Yes, THC, NO_x Beneficial: CO, PM, SO_x	AG, EPA, ARB, and CA air quality management and pollution control districts.	Use alternative fuel types for construction equipment. At the tailpipe biodiesel emits 10% more CO_2 than petroleum diesel. Overall lifecycle emissions of CO_2 from 100% biodiesel are 78% lower than those of petroleum diesel (NREL 1998, EPA 2007b).
MM C-3: Local Building Materials	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	NA/Low	Yes	Yes	Yes: Depends on location of building material manufacture sites.	Adverse: No Beneficial: CAPs, TACs		Use locally made building materials for construction of the project and associated infrastructure.
MM C-4: Recycle Demolished Construction Material	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile	NA/Low	Yes	Yes	Yes	Adverse: No Beneficial: CAPs, TACs		Recycle/Reuse demolished construction material. Use locally made building materials for construction of the project and associated infrastructure.

Table 16 Mitigation Measure Summary								
Mitigation Measure	Applicable Project/Source Type[1]	Effective		Feasible (Yes/No)		Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
Miscellaneous								
MM M-1: Off-Site Mitigation Fee Program	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile & Area	NA/Moderate-High: Though there is currently no program in place, the potential for real and quantifiable reductions of GHG emissions could be high if a defensible fee program were designed.	Yes	Yes	No: Program does not exist in CA, but similar programs currently exist (e.g., Carl Moyer Program, SJVAPCD Rule 9510, SMAQMD Off-Site Construction Mitigation Fee Program).	Adverse: No Beneficial: CAPs, TACs		Provide/Pay into an off-site mitigation fee program, which focuses primarily on reducing emissions from existing development and buildings through retro-fit (e.g., increased insulation).
MM M-2: Offset Purchase	LD (R, C, M), I, SP, TP, AQP, RR, P/Mobile, Stationary, & Area	NA/Low	Yes	Yes	No: ARB has not adopted official program, but similar programs	No		Provide/purchase offsets for additional emissions by acquiring carbon credits or engaging in other market "cap and trade" systems.

AG=Attorney General; ARB=California Air Resources Board; ASTM=American Society for Testing and Material; BAAQMD=Bay Area Air Quality Management District; BEES= Building for Environmental and Economic Sustainability; CA=California; Caltrans=California Department of Transportation; CAPs=Criteria Air Pollutants; CCAP=Center for Clean Air Policy; CF=Connectivity Factor; CIWMB=California Integrated Waste Management Board; CO= Carbon Monoxide; CO_2=Carbon Dioxide; DGS=Department of General Services; DOE=U.S. Department of Energy; DPF=Diesel particulate Filter; E85=85% Ethanol; EERE=Energy Efficiency and Renewable Energy; EOE=Encyclopedia of Earth; EPA=U.S. Environmental Protection Agency; ETC=Edmonton Trolley Coalition; EVs/CNG=Electric Vehicles/Compressed Natural Gas; FAR=Floor Area Ratio; GHG=Greenhouse Gas; ITE=Institute of Transportation Engineers; kg/m^2=kilogram per square meter; km=Kilometer; lb=pound; LEED=Leadership in Energy and Environmental Design; M=Million; NA=Not Available; NEV=Neighborhood Electric Vehicle; NIST=National Institute of Standards and Technology; NO_X=Oxides of Nitrogen; NREL=National Renewable Energy Laboratory; N/S=North/South; PG&E=Pacific Gas and Electric; PM=Particulate Matter; SJVAPCD=San Joaquin Valley Air Pollution Control District; SMAQMD=Sacramento Metropolitan Air Quality Management District; SMUD=Sacramento Municipal Utilities District; SO_x=Sulfur Oxides; SRI=Solar Reflectance Index; TACs=Toxic Air Contaminants; TDM=Transportation Demand Management; TMA=Transportation Management Association; THC=Total Hydrocarbon; ULEV=Ultra Low Emission Vehicle; USGBC=U.S. Green Building Council; and VTPI=Victoria Transit Policy.

Table 16
Mitigation Measure Summary

Mitigation Measure	Applicable Project/Source Type[1]	Effective	Feasible (Yes/No)			Secondary Effects (Yes/No)	Agency/Organization/Other[6]	Description/Comments
		Emissions Reduction/Score[2]	Cost (Yes/No)[3]	Technical[4]	Logistical[5]			
					currently exist.			
Regional Transportation Plan Measures								
MM RTP-1: Dedicate High Occupancy Vehicle (HOV) lanes prior to adding capacity to existing highways.	RTP		Yes	Yes	Yes	Adverse: possible local CO Beneficial: regional CAPs, TACs	Caltrans, local government	Evaluate the trip reduction (and GHG reduction) potential of adding HOV lanes prior to adding standard lanes.
MM RTP-2: Implement toll/user fee programs prior to adding capacity to existing highways.	RTP		Yes	Yes	Yes	Adverse: possible local CO. Beneficial: regional CAPs, TACs	Caltrans	Evaluate price elasticity and associated trip reduction (and GHG reduction) potential with adding or increasing tolls prior to adding capacity to existing highways.

Note:
[1] Where LD (R, C, M) =Land Development (Residential, Commercial, Mixed-Use), I=Industrial, GP=General Plan, SP=Specific Plan, TP=Transportation Plans, AQP=Air Quality Plans, RR=Rules/Regulations, and P=Policy. It is important to note that listed project types may not be directly specific to the mitigation measure (e.g., TP, AQP, RR, and P) as such could apply to a variety of source types, especially RR and P.
[2] This score system entails ratings of high, moderate, and low that refer to the level of the measure to provide a substantive, reasonably certain (e.g., documented emission reductions with proven technologies), and long-term reduction of GHG emissions.
[3] Refers to whether the measure would provide a cost-effective reduction of GHG emissions based on available documentation.
[4] Refers to whether the measure is based on currently, readily available technology based on available documentation.
[5] Refers to whether the measure could be implemented without extraordinary effort based on available documentation.
[6] List is not meant to be all inclusive.
Source: Data complied by EDAW in 2007

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
MS G-1: Adopt a GHG reduction plan	GP/ Mobile, Stationary, & Area	City of San Bernardino	- Adopt GHG reduction targets for the planning area, based on the current legislation providing direction for state-wide targets, and update the plan as necessary. -The local government agency should serve as a model by inventorying its GHG emissions from agency operations, and implementing those reduction goals.
Circulation			
MS G-2: Provide for convenient and safe local travel	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	- Create a gridded street pattern with small block sizes. This promotes walkability through direct routing and ease of navigation. -Maintain a high level of connectivity of the roadway network. Minimize cul-de-sacs and incomplete roadway segments. -Plan and maintain an integrated, hierarchical and multi-modal system of roadways, pedestrian walks, and bicycle paths throughout the area. -Apply creative traffic management approaches to address congestion in areas with unique problems, particularly on roadways and intersections in the vicinity of schools in the morning and afternoon peak hours, and near churches, parks and community centers. -Work with adjacent jurisdictions to address the impacts of regional development patterns (e.g. residential development in surrounding communities, regional universities, employment centers, and commercial developments) on the circulation system. -Actively promote walking as a safe mode of local travel, particularly for children attending local schools. -Employ traffic calming methods such as median landscaping and provision of bike or transit lanes to slow traffic, improve roadway capacity, and address safety issues.
MS G-3: Enhance the regional transportation network and maintain effectiveness	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Encourage the transportation authority to reduce fees for short distance trips. -Ensure that improvements to the traffic corridors do not negatively impact the operation of local roadways and land uses.

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
			-Cooperate with adjacent jurisdictions to maintain adequate service levels at shared intersections and to provide adequate capacity on regional routes for through traffic. -Support initiatives to provide better public transportation. Work actively to ensure that public transportation is part of every regional transportation corridor. - Coordinate the different modes of travel to enable users to transfer easily from one mode to another. -Work to provide a strong paratransit system that promotes the mobility of all residents and educate residents about local mobility choices. - Promote transit-oriented development to facilitate the use of the community's transit services.
MS G-4: Promote and support an efficient public transportation network connecting activity centers in the area to each other and the region.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Promote increased use of public transportation and support efforts to increase bus service range and frequency within the area as appropriate. -Enhance and encourage provision of attractive and appropriate transit amenities, including shaded bus stops, to encourage use of public transportation. -Encourage the school districts, private schools and other operators to coordinate local bussing and to expand ride-sharing programs. All bussing options should be fully considered before substantial roadway improvements are made in the vicinity of schools to ease congestion.
MS G-5: Establish and maintain a comprehensive system, which is safe and convenient, of pedestrian ways and bicycle routes that provide viable options to travel by automobile.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Improve area sidewalks and rights-of-way to make them efficient and appealing for walking and bicycling safely. Coordinate with adjacent jurisdictions and regional agencies to improve pedestrian and bicycle trails, facilities, signage, and amenities. -Provide safe and convenient pedestrian and bicycle connections to and from town centers, other commercial districts, office complexes, neighborhoods, schools, other major activity centers, and surrounding communities. -Work with neighboring jurisdictions to provide well-designed pedestrian and bicycle crossings of major roadways. -Promote walking throughout the community. Install sidewalks where missing and make improvements

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
			to existing sidewalks for accessibility purposes. Particular attention should be given to needed sidewalk improvement near schools and activity centers. -Encourage businesses or residents to sponsor street furniture and landscaped areas. - Strive to provide pedestrian pathways that are well shaded and pleasantly landscaped to encourage use. - Attract bicyclists from neighboring communities to ride their bicycles or to bring their bicycles on the train to enjoy bicycling around the community and to support local businesses. - Meet guidelines to become nationally recognized as a Bicycle-Friendly community. - Provide for an education program and stepped up code enforcement to address and minimize vegetation that degrades access along public rights-of-way. -Engage in discussions with transit providers to increase the number of bicycles that can be accommodated on buses
MS G-6: Achieve optimum use of regional rail transit.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Support regional rail and work with rail authority to expand services. - Achieve better integration of all transit options. -Work with regional transportation planning agencies to finance and provide incentives for multimodal transportation systems. - Promote activity centers and transit-oriented development projects around the transit station.
MS G-7: Expand and optimize use of local and regional bus and transit systems.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Encourage convenient public transit service between area and airports. -Support the establishment of a local shuttle to serve commercial centers. -Promote convenient, clean, efficient, and accessible public transit that serves transit-dependent riders and attracts discretionary riders as an alternative to reliance on single-occupant automobiles.

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
			- Empower seniors and those with physical disabilities who desire maximum personal freedom and independence of lifestyle with unimpeded access to public transportation. -Integrate transit service and amenities with surrounding land uses and buildings.
Conservation, Open Space			
MS G-8: Emphasize the importance of water conservation and maximizing the use of native, low-water landscaping.	GP/Stationary & Area	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Reduce the amount of water used for landscaping and increase use of native and low water plants. Maximize use of native, low-water plants for landscaping of areas adjacent to sidewalks or other impermeable surfaces. -Encourage the production, distribution and use of recycled and reclaimed water for landscaping projects throughout the community, while maintaining urban runoff water quality objectives. -Promote water conservation measures, reduce urban runoff, and prevent groundwater pollution within development projects, property maintenance, area operations and all activities requiring approval. -Educate the public about the importance of water conservation and avoiding wasteful water habits. -Work with water provider in exploring water conservation programs, and encourage the water provider to offer incentives for water conservation.
MS G-9: Improve air quality within the region.	GP/ Mobile, Stationary, & Area	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Integrate air quality planning with area land use, economic development and transportation planning efforts. -Support programs that reduce air quality emissions related to vehicular travel. -Support alternative transportation modes and technologies, and develop bike- and pedestrian-friendly neighborhoods to reduce emissions associated with automobile use. -Encourage the use of clean fuel vehicles. -Promote the use of fuel-efficient heating and cooling equipment and other appliances, such as water

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
			heaters, swimming pool heaters, cooking equipment, refrigerators, furnaces, and boiler units. - Promote the use of clean air technologies such as fuel cell technologies, renewable energy sources. UV coatings, and alternative, non-fossil fuels. -Require the planting of street trees along streets and inclusion of trees and landscaping for all development projects to help improve airshed and minimize urban heat island effects. - Encourage small businesses to utilize clean, innovative technologies to reduce air pollution. - Implement principles of green building. - Support jobs/housing balance within the community so more people can both live and work within the community. To reduce vehicle trips, encourage people to telecommute or work out of home or in local satellite offices.
MS G-10: Encourage and maximize energy conservation and identification of alternative energy sources.	GP/ Stationary & Area	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Encourage green building designs for new construction and renovation projects within the area. -Coordinate with regional and local energy suppliers to ensure adequate supplies of energy to meet community needs, implement energy conservation and public education programs, and identify alternative energy sources where appropriate. -Encourage building orientations and landscaping that enhance natural lighting and sun exposure. -Encourage expansion of neighborhood-level products and services and public transit opportunities throughout the area to reduce automobile use. - Incorporate the use of energy conservation strategies in area projects. - Promote energy-efficient design features, including appropriate site orientation, use of light color roofing and building materials, and use of evergreen trees and wind-break trees to reduce fuel consumption for heating and cooling.

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
			-Explore and consider the cost/benefits of alternative fuel vehicles including hybrid, natural gas, and hydrogen powered vehicles when purchasing new vehicles. -Continue to promote the use of solar power and other energy conservation measures. - Encourage residents to consider the cost/benefits of alternative fuel vehicles. - Promote the use of different technologies that reduce use of non-renewable energy resources. -Facilitate the use of green building standards and LEED in both private and public projects. -Promote sustainable building practices that go beyond the requirements of Title 24 of the California Administrative Code, and encourage energy-efficient design elements, as appropriate. -Support sustainable building practices that integrate building materials and methods that promote environmental quality, economic vitality, and social benefit through the design, construction, and operation of the built environment. - Investigate the feasibility of using solar (photovoltaic) street lights instead of conventional street lights that are powered by electricity in an effort to conserve energy. - Encourage cooperation between neighboring development to facilitate on-site renewable energy supplies or combined heat and power co-generation facilities that can serve the energy demand of contiguous development.

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
MS G-11: Preserve unique community forests, and provide for sustainable increase and maintenance of this valuable resource.	GP/Stationary & Area	Cities/Counties (e.g., Aliso Viejo, Claremont)	- Develop a tree planting policy that strives to accomplish specific % shading of constructed paved and concrete surfaces within five years of construction. -Provide adequate funding to manage and maintain the existing forest, including sufficient funds for tree planting, pest control, scheduled pruning, and removal and replacement of dead trees. -Coordinate with local and regional plant experts in selecting tree species that respect the natural region in which Claremont is located, to help create a healthier, more sustainable urban forest. - Continue to plant new trees (in particular native tree species where appropriate), and work to preserve mature native trees. -Increase the awareness of the benefits of street trees and the community forest through a area wide education effort. -Encourage residents to properly care for and preserve large and beautiful trees on their own private property.
Housing			
MS G-12: Provide affordability levels to meet the needs of community residents.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Encourage development of affordable housing opportunities throughout the community, as well as development of housing for elderly and low and moderate income households near public transportation services. -Ensure a portion of future residential development is affordable to low and very low income households.
Land Use			
MS G-13: Promote a visually-cohesive urban form and establish connections between the urban core and outlying portions of the	GP/ Mobile, Stationary, & Area	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Preserve the current pattern of development that encourages more intense and higher density development at the core of the community and less intense uses radiating from the central core. -Create and enhance landscaped greenway, trail and sidewalk connections between neighborhoods and to commercial areas, town centers, and parks.

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
community.			-Identify ways to visually identify and physically connect all portions of the community, focusing on enhanced gateways and unifying isolated and/or outlying areas with the rest of the area. -Study and create a diverse plant identity with emphasis on drought-resistant native species.
MS G-14: Provide a diverse mix of land uses to meet the future needs of all residents and the business community.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Attract a broad range of additional retail, medical, and office uses providing employment at all income levels. -Support efforts to provide beneficial civic, religious, recreational, cultural and educational opportunities and public services to the entire community. -Coordinate with public and private organizations to maximize the availability and use of parks and recreational facilities in the community. -Support development of hotel and recreational commercial land uses to provide these amenities to local residents and businesses.
MS G-15: Collaborate with providers of solid waste collection, disposal and recycling services to ensure a level of service that promotes a clean community and environment.	GP/ Stationary, & Area	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Require recycling, composting, source reduction and education efforts throughout the community, including residential, businesses, industries, and institutions, within the construction industry, and in all sponsored activities.
MS G-16: Promote construction, maintenance and active use of publicly- and privately-operated parks, recreation programs, and a community center.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Work to expand and improve community recreation amenities including parks, pedestrian trails and connections to regional trail facilities. -As a condition upon new development, require payment of park fees and/or dedication and provision of parkland, recreation facilities and/or multi-use trails that improve the public and private recreation system. -Research options or opportunities to provide necessary or desired community facilities.

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
MS G-17: Promote the application of sustainable development practices.	GP/ Mobile, Stationary, & Area	Cities/Counties (e.g., Aliso Viejo, Claremont)	- Encourage sustainable development that incorporates green building best practices and involves the reuse of previously developed property and/or vacant sites within a built-up area. - Encourage the conservation, maintenance, and rehabilitation of the existing housing stock. -Encourage development that incorporates green building practices to conserve natural resources as part of sustainable development practices. -Avoid development of isolated residential areas in the hillsides or other areas where such development would require significant infrastructure investment, adversely impact biotic resources. - Provide land area zoned for commercial and industrial uses to support a mix of retail, office, professional, service, and manufacturing businesses.
MS G-18: Create activity nodes as important destination areas, with an emphasis on public life within the community.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Provide pedestrian amenities, traffic-calming features, plazas and public areas, attractive streetscapes, shade trees, lighting, and retail stores at activity nodes. -Provide for a mixture of complementary retail uses to be located together to create activity nodes to serve adjacent neighborhoods and to draw visitors from other neighborhoods and from outside the area.
MS G-19: Make roads comfortable, safe, accessible, and attractive for use day and night.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Provide crosswalks and sidewalks along streets that are accessible for people with disabilities and people who are physically challenged. -Provide lighting for walking and nighttime activities, where appropriate. -Provide transit shelters that are comfortable, attractive, and accommodate transit riders.
MS G-20: Maintain and expand where possible the system of neighborhood connections that attach neighborhoods to larger roadways.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	- Provide sidewalks where they are missing, and provide wide sidewalks where appropriate with buffers and shade so that people can walk comfortably. -Make walking comfortable at intersections through traffic-calming, landscaping, and designated crosswalks.

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
			-Look for opportunities for connections along easements & other areas where vehicles not permitted.
MS G-21: Create distinctive places throughout the area.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	-Provide benches, streetlights, public art, and other amenities in public areas to attract pedestrian activities. -Encourage new developments to incorporate drought tolerant and native landscaping that is pedestrian friendly, attractive, and consistent with the landscaped character of area. -Encourage all new development to preserve existing mature trees. -Encourage streetscape design programs for commercial frontages that create vibrant places which support walking, bicycling, transit, and sustainable economic development. -Encourage the design and placement of buildings on lots to provide opportunities for natural systems such as solar heating and passive cooling. - Ensure that all new industrial development projects are positive additions to the community setting, provide amenities for the comfort of the employees such as outdoor seating area for breaks or lunch, and have adequate landscape buffers.
MS G-22: Reinvest in existing neighborhoods and promote infill development as a preference over new, greenfield development	GP/ Mobile, Stationary, & Area	Cities/Counties (e.g., Aliso Viejo, Claremont)	- Identify all underused properties in the plan area and focus development in these opportunity sites prior to designating new growth areas for development. - Implement programs to retro-fit existing structures to make them more energy-efficient. -Encourage compact development, by placing the desired activity areas in smaller spaces.

Table 17 General Planning Level Mitigation Strategies Summary			
Strategy	Source Type[1]	Agency/Organization[2]	Description/Comments
Public Safety			
MS G-23: Promote a safe community in which residents can live, work, shop, and play.	GP/ Mobile	Cities/Counties (e.g., Aliso Viejo, Claremont)	- Foster an environment of trust by ensuring non-biased policing, and by adopting policies and encouraging collaboration that creates transparency. - Facilitate traffic safety for motorists and pedestrians through proper street design and traffic monitoring.

Note:
[1] Where GP=General Plan.
[2] List is not meant to be all inclusive.
Source: Data complied by EDAW in 2007

Appendix C

Rule and Regulation Summary

Table 18 Rule and Regulation Summary					
Rule/Regulation	Reduction	Implementation Date	Agency	Description	Comments
Low Carbon Fuel Standard	10-20 MMT CO_2e by 2020	January 1, 2010	ARB	This rule/regulation will require fuel providers (e.g., producers, importers, refiners and blenders) to ensure that the mix of fuels they sell in CA meets the statewide goal to reduce the carbon intensity of CA's transportation fuels by at least 10% by the 2020 target.	ARB Early Action Measure
Reduction of HFC-134a Emissions from Nonprofessional Servicing of Motor Vehicle Air Conditioning Systems	1-2 MMT CO_2e by 2020	January 1, 2010	ARB	This rule/regulation will restrict the use of high GWP refrigerants for nonprofessional recharging of leaky automotive air conditioning systems.	ARB Early Action Measure
Landfill Gas Recovery	2-4 MMT CO_2e by 2020	January 1, 2010	IWMB, ARB	This rule/regulation will require landfill gas recovery systems on small to medium landfills that do not have them and upgrade the requirements at landfills with existing systems to represent best capture and destruction efficiencies.	ARB Early Action Measure
Vehicle Climate Change Standards (AB 1493 Pavley, Chapter 200, Statutes of 2002)	30 MMT CO_2e by 2020	2009	ARB	This rule/regulation will require ARB to achieve the maximum feasible and cost effective reduction of GHG emissions from passenger vehicles and light-duty trucks.	ARB Early Action Measure
Reduction of PFCs from the Semiconductor Industry	0.5 MMT CO_2e by 2020	2007–2009	ARB	This rule/regulation will reduce GHG emissions by process improvements/source reduction, alternative chemicals capture and beneficial reuse, and destruction technologies	Underway or to be initiated by CAT members in 2007-2009 period

AB=Assembly Bill; ARB=California Air Resources Board; Calfire=California Fire; CA=California; Caltrans=California Department of Transportation; CAT=California Action Team; CEC=California Energy Commission; CDFA=California Department of Food and Agriculture; CH_4=Methane; CO_2=Carbon Dioxide; CPUC=California Public Utilities Commission; CUFR=California Urban Forestry; DGS=Department of General Services; DWR=Department of Water Resources; GHG=Greenhouse Gas; GWP=Global Warming Potential; IGCC= Integrated Gasification Combined Cycle; IOU= Investor-Owned Utility; IT=Information Technology; IWCB= Integrated Waste Management Board; LNG= Liquefied Natural Gas; MMT CO_2e=Million Metric Tons Carbon Dioxide Equivalent; MW=Megawatts; NA=Not Available; N_2O=Nitrous Oxide; PFC= Perfluorocompound; POU= Publicly Owned Utility; RPS= Renewable Portfolio Standards; RTP=Regional Transportation Plan SB=Senate Bill; SWP=State Water Project; TBD=To Be Determined; UC/CSU=University of California/California State University; ULEV=Ultra Low Emission Vehicle.

Table 18 Rule and Regulation Summary					
Rule/Regulation	Reduction	Implementation Date	Agency	Description	Comments
Restrictions on High GWP Refrigerants	9 MMT CO_2e by 2020	2010	ARB	This rule/regulation will expand and enforce the national ban on release of high GWP refrigerants during appliance lifetime.	ARB Early Action Measure
Cement Manufacture	<1 MMT CO_2e per year (based on 2004 production levels)	2010	Caltrans	This rule/regulation will allow 2.5% interground limestone concrete mix in cement use.	CAT Early Action Measure
Hydrogen Fuel Standards (SB 76 of 2005)	TBD	By 2008	CDFA	This rule/regulation will develop hydrogen fuel standards for use in combustion systems and fuel cells.	CAT Early Action Measure
Regulation of GHG from Load Serving Entities (SB 1368)	15 MMT CO_2e by 2020	May 23, 2007	CEC, CPUC	This rule/regulation will establish a GHG emission performance standard for baseload generation of local publicly owned electric utilities that is no higher than the rate of emissions of GHG for combined-cycle natural gas baseload generation.	CAT Early Action Measure
Energy Efficient Building Standards	TBD	In 2008	CEC	This rule/regulation will update of Title 24 standards.	CAT Early Action Measure
Energy Efficient Appliance Standards	TBD	January 1, 2010	CEC	This rule/regulation will regulate light bulb efficiency	CAT Early Action Measure
Tire Efficiency (Chapter 8.7 Division 15 of the Public Resources Code)	<1 MMT CO_2e by 2020	January 1, 2010	CEC & IWMB	This rule/regulation will ensure that replacement tires sold in CA are at least as energy efficient, on average, as tires sold in the state as original equipment on these vehicles.	CAT Early Action Measure
New Solar Homes Partnership	TBD	January 2007	CEC	Under this rule/regulation, approved solar systems will receive incentive funds based on system performance above building standards.	CAT Early Action Measure

Table 18 Rule and Regulation Summary					
Rule/Regulation	Reduction	Implementation Date	Agency	Description	Comments
Water Use Efficiency	1 MMT CO_2e by 2020	2010	DWR	This rule/regulation will adopt standards for projects and programs funded through water bonds that would require consideration of water use efficiency in construction and operation.	CAT Early Action Measure
State Water Project	TBD	2010	DWR	This rule/regulation will include feasible and cost effective renewable energy in the SWP's portfolio.	CAT Early Action Measure
Cleaner Energy for Water Supply	TBD	2010	DWR	Under this rule/regulation, energy supply contracts with conventional coal power plants will not be renewed.	CAT Early Action Measure
IOU Energy Efficiency Programs	4 MMT CO_2e by 2020	2010	CPUC	This rule/regulation will provide a risk/reward incentive mechanism for utilities to encourage additional investment in energy efficiency; evaluate new technologies and new measures like encouraging compact fluorescent lighting in residential and commercial buildings	CAT Early Action Measure
Solar Generation	TBD	2007–2009	DGS	3 MW of clean solar power generation implemented in CA last year, with another 1 MW coming up. The second round is anticipated to total additional 10 MW and may include UC/CSU campuses and state fairgrounds.	Underway or to be initiated by CAT members in 2007-2009 period

AB=Assembly Bill; ARB=California Air Resources Board; Calfire=California Fire; CA=California; Caltrans=California Department of Transportation; CAT=California Action Team; CEC=California Energy Commission; CDFA=California Department of Food and Agriculture; CH_4=Methane; CO_2=Carbon Dioxide; CPUC=California Public Utilities Commission; CUFR=California Urban Forestry; DGS=Department of General Services; DWR=Department of Water Resources; GHG=Greenhouse Gas; GWP=Global Warming Potential; IGCC= Integrated Gasification Combined Cycle; IOU= Investor-Owned Utility; IT=Information Technology; IWCB= Integrated Waste Management Board; LNG= Liquefied Natural Gas; MMT CO_2e=Million Metric Tons Carbon Dioxide Equivalent; MW=Megawatts; NA=Not Available; N_2O=Nitrous Oxide; PFC= Perfluorocompound; POU= Publicly Owned Utility; RPS= Renewable Portfolio Standards; RTP=Regional Transportation Plan SB=Senate Bill; SWP=State Water Project; TBD=To Be Determined; UC/CSU=University of California/California State University; ULEV=Ultra Low Emission Vehicle.

Table 18 Rule and Regulation Summary					
Rule/Regulation	Reduction	Implementation Date	Agency	Description	Comments
Transportation Efficiency	9 MMT CO_2e by 2020	2007–2009	Caltrans	This rule/regulation will reduce congestion, improve travel time in congested corridors, and promote coordinated, integrated land use.	Underway or to be initiated by CAT members in 2007-2009 period
Smart Land Use and Intelligent Transportation	10 MMT CO_2e by 2020	2007–2009	Caltrans	This rule/regulation will integrate consideration of GHG reduction measures and energy efficiency factors into RTPs, project development etc.	Underway or to be initiated by CAT members in 2007-2009 period
Cool Automobile Paints	1.2 to 2.0 MMT CO_2e by 2020	2009	ARB	Cool paints would reduce the solar heat gain in a vehicle and reduce air conditioning needs.	ARB Early Action Measure
Tire Inflation Program	TBD	2009	ARB	This rule/regulation will require tires to be checked and inflated at regular intervals to improve fuel economy.	ARB Early Action Measure
Electrification of Stationary Agricultural Engines	0.1 MMT CO_2e by 2020	2010	ARB	This rule/regulation will provide incentive funding opportunities for replacing diesel engines with electric motors.	ARB Early Action Measure
Desktop Power Management	Reduce energy use by 50%	2007–2009	DGS, ARB	This rule/regulation will provide software to reduce electricity use by desktop computers by up to 40%.	Currently deployed in DGS
Reducing CH_4 Venting/Leaking from Oil and Gas Systems (EJAC-3/ARB 2-12)	1 MMT CO_2e by 2020	2010	ARB	This rule/regulation will reduce fugitive CH_4 emissions from production, processing, transmission, and distribution of natural gas and oil.	ARB Early Action Measure
Replacement of High GWP Gases Used in Fire Protection Systems with Alternate Chemical (ARB 2-10)	0.1 MMT CO_2e by 2020	2011	ARB	This rule/regulation will require the use of lower GWP substances in fire protection systems.	ARB Early Action Measure
Contracting for Environmentally Preferable Products	NA	2007–2009	DGS	New state contracts have been or are being created for more energy and resource efficient IT goods, copiers, low mercury fluorescent lamps, the CA Gold Carpet Standard and office furniture.	Underway or to be initiated by CAT members in 2007-2009 period
Hydrogen Fuel Cells	NA	2007–2009	DGS	This rule/regulation will incorporate clean hydrogen fuel cells in stationary applications	Underway or to be initiated by CAT members in 2007-2009

Table 18 Rule and Regulation Summary					
Rule/Regulation	Reduction	Implementation Date	Agency	Description	Comments
				at State facilities and as back-up generation for emergency radio services.	period
High Performance Schools	NA	2007–2009	DGS	New guidelines adopted for energy and resource efficient schools; up to $100 million in bond money for construction of sustainable, high performance schools.	Underway or to be initiated by CAT members in 2007-2009 period
Urban Forestry	1 MMT CO_2e by 2020	2007–2009	Calfire, CUFR	This rule/regulation will provide five million additional trees in urban areas by 2020.	Underway or to be initiated by CAT members in 2007-2009 period
Fuels Management/Biomass	3 MMT CO_2e by 2020	2007–2009	Calfire	This rule/regulation will provide biomass from forest fuel treatments to existing biomass utilization facilities.	Underway or to be initiated by CAT members in 2007-2009 period
Forest Conservation and Forest Management	10 MMT CO_2e by 2020	2007–2009	Calfire, WCB	This rule/regulation will provide opportunities for carbon sequestration in Proposition 84 forest land conservation program to conserve an additional 75,000 acres of forest landscape by 2010.	Underway or to be initiated by CAT members in 2007-2009 period
Afforestation/Reforestation	2 MMT CO_2e by 2020	2007–2009	Calfire	This rule/regulation will subsidize tree planting.	Underway or to be initiated by CAT members in 2007-2009 period
Dairy Digesters	TBD	January 1, 2010	CDFA	This rule/regulation will develop a dairy digester protocol to document GHG emission reductions from these facilities.	ARB Early Action Measure

AB=Assembly Bill; ARB=California Air Resources Board; Calfire=California Fire; CA=California; Caltrans=California Department of Transportation; CAT=California Action Team; CEC=California Energy Commission; CDFA=California Department of Food and Agriculture; CH_4=Methane; CO_2=Carbon Dioxide; CPUC=California Public Utilities Commission; CUFR=California Urban Forestry; DGS=Department of General Services; DWR=Department of Water Resources; GHG=Greenhouse Gas; GWP=Global Warming Potential; IGCC= Integrated Gasification Combined Cycle; IOU= Investor-Owned Utility; IT=Information Technology; IWCB= Integrated Waste Management Board; LNG= Liquefied Natural Gas; MMT CO_2e=Million Metric Tons Carbon Dioxide Equivalent; MW=Megawatts; NA=Not Available; N_2O=Nitrous Oxide; PFC= Perfluorocompound; POU= Publicly Owned Utility; RPS= Renewable Portfolio Standards; RTP=Regional Transportation Plan SB=Senate Bill; SWP=State Water Project; TBD=To Be Determined; UC/CSU=University of California/California State University; ULEV=Ultra Low Emission Vehicle.

Table 18 Rule and Regulation Summary					
Rule/Regulation	Reduction	Implementation Date	Agency	Description	Comments
Conservation Tillage and Enteric Fermentation	1 MMT CO_2e by 2020	2007–2009	CDFA	This rule/regulation will develop and implement actions to quantify and reduce enteric fermentation emissions from livestock and sequester soil carbon using cover crops and conservation tillage.	Underway or to be initiated by CAT members in 2007-2009 period
ULEV	TBD	2007–2009	DGS	A new long term commercial rental contract was released in March 2007 requiring a minimum ULEV standard for gasoline vehicles and requires alternative fuel and hybrid-electric vehicles.	Underway or to be initiated by CAT members in 2007-2009 period
Flex Fuel Vehicles	370 metric tons CO_2, 0.85 metric tons of CH_4, and 1.14 metric tons of N_2O	2007–2009	DGS	Under this rule/regulation, DGS is replacing 800 vehicles with new, more efficient vehicles.	Underway or to be initiated by CAT members in 2007-2009 period
Climate Registry	TBD	2007–2009	DGS	Benchmarking and reduction of GHG emissions for state owned buildings, leased buildings and light duty vehicles.	Underway or to be initiated by CAT members in 2007-2009 period
Municipal Utilities Electricity Sector Carbon Policy	Included in SB 1368 reductions	2007–2009	CEC, CPUC, ARB	Under this rule/regulation, GHG emissions cap policy guidelines for CA's electricity sector (IOUs and POUs).	Underway or to be initiated by CAT members in 2007-2009 period
Alternative Fuels: Nonpetroleum Fuels	TBD	2007–2009	CEC	State plan to increase the use of alternative fuels for transportation; full fuel cycle assessment.	Underway or to be initiated by CAT members in 2007-2009 period
Zero Waste/High Recycling Strategy	5 MMT CO_2e by 2020	2007–2009	IWMB	This rule/regulation will identify materials to focus on to achieve GHG reduction at the lowest possible cost; Builds on the success of 50% Statewide Recycling Goal.	Underway or to be initiated by CAT members in 2007-2009 period
Organic Materials Management	TBD	2007–2009	IWMB	This rule/regulation will develop a market incentive program to increase organics diversion to the agricultural industry.	Underway or to be initiated by CAT members in 2007-2009 period
Landfill Gas Energy	TBD	2007–2009	IWMB	Landfill Gas to Energy & LNG/biofuels	Underway or to be initiated by CAT members in 2007-2009 period

Table 18 Rule and Regulation Summary					
Rule/Regulation	Reduction	Implementation Date	Agency	Description	Comments
Target Recycling	TBD	2007–2009	IWMB	This rule/regulation will focus on industry/public sectors with high GHG components to implement targeted commodity recycling programs.	Underway or to be initiated by CAT members in 2007-2009 period
Accelerated Renewable Portfolio Standard	Included in SB 1368 reductions	2007–2009	CPUC	This rule/regulation will examine RPS long term planning and address the use of tradable renewable energy credits for RPS compliance.	Underway or to be initiated by CAT members in 2007-2009 period
CA Solar Initiative	1 MMT CO_2e by 2020	2007–2009	CPUC	Initiative to deliver 2000 MWs of clean, emissions free energy to the CA grid by 2016.	Underway or to be initiated by CAT members in 2007-2009 period
Carbon Capture and Sequestration	TBD	2007–2009	CPUC	Proposals for power plants with IGCC and/or carbon capture in the next 18 months.	Underway or to be initiated by CAT members in 2007-2009
Source: Data complied by EDAW in 2007					

AB=Assembly Bill; ARB=California Air Resources Board; Calfire=California Fire; CA=California; Caltrans=California Department of Transportation; CAT=California Action Team; CEC=California Energy Commission; CDFA=California Department of Food and Agriculture; CH_4=Methane; CO_2=Carbon Dioxide; CPUC=California Public Utilities Commission; CUFR=California Urban Forestry; DGS=Department of General Services; DWR=Department of Water Resources; GHG=Greenhouse Gas; GWP=Global Warming Potential; IGCC= Integrated Gasification Combined Cycle; IOU= Investor-Owned Utility; IT=Information Technology; IWCB= Integrated Waste Management Board; LNG= Liquefied Natural Gas; MMT CO_2e=Million Metric Tons Carbon Dioxide Equivalent; MW=Megawatts; NA=Not Available; N_2O=Nitrous Oxide; PFC= Perfluorocompound; POU= Publicly Owned Utility; RPS= Renewable Portfolio Standards; RTP=Regional Transportation Plan SB=Senate Bill; SWP=State Water Project; TBD=To Be Determined; UC/CSU=University of California/California State University; ULEV=Ultra Low Emission Vehicle.

EXHIBIT B

Workshop Draft Options Report

California Environmental Quality Act Thresholds of Significance

DRAFT

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Prepared by:

EDAW
2022 J Street
Sacramento, CA 95811

April 2009

EDAW | AECOM

Workshop Draft Options Report

California Environmental Quality Act Thresholds of Significance

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

DRAFT

Prepared for:

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Attn: Greg Tholen
Principal Environmental Planner
(415) 749-4741

Prepared by:

EDAW
2022 J Street
Sacramento, CA 95811

Contact:

Honey Walters
Associate Principal
(916) 414-5800

April 2009

EDAW | AECOM

P 08110224.01

TABLE OF CONTENTS

Section **Page**

1 Introduction 1

2 Threshold Options Evaluation 5
2.2 Construction-Related Impacts 5
2.3 Operational-Related Impacts 9
2.4 Odors Impacts 35
2.5 Plan-Level Impact Thresholds 37

References 40

Appendices

A CEQA Thresholds of Significance Used by Other California Air Districts
B Development Projections and URBEMIS Modeling
C Criteria Air Pollutant Emissions Modeling and Threshold Sensitivity Analysis
D BAAQMD and ARB GHG Emissions Inventory Data
E GHG Emissions Modeling and Threshold Sensitivity Analysis
F TAC Unweighted Cancer Risk
G TAC Population-Weighted Cancer Risk

Exhibit

1 Example Derivation from BAAQMD Single-Family Residential Development Projections 13

Figures

1 California Land-Use Related Greenhouse Gas Emissions 24
2 San Francisco Bay Area Air Basin Land-Use Related Greenhouse Gas Emissions 25
3 Modeled Inhalation Cancer Risk in the San Francisco Bay Area Air Basin 32
4 Population-Weighted Diesel Particulate Matter Emissions by Age and Income 32
5 San Francisco Bay Area Air Basin Unweighted Inhalation Cancer Risk 34
6 San Francisco Bay Area Air Basin Population-Weighted Inhalation Cancer Risk 35

DRAFT

Tables

1 Ambient Air Quality Standards and Designations for the San Francisco Bay Area Air Basin 2
2 New Source Review Significant Emission Rates 6
3 Best Available Control Technology and Offset Requirements 6
4 Option 1 Threshold Emission Levels for Construction-Related Criteria Air Pollutants and Precursors 7
5 Current BAAQMD Thresholds of Significance for Project-Level Operational-Related Criteria Air Pollutants and Precursors 9
6 Option 1 Threshold Emission Levels for Operational-Related Criteria Air Pollutants and Precursors 10
7 Unmitigated Criteria Air Pollutants and Precursors from Projected Development Subject to CEQA in the San Francisco Bay Area Air Basin 14
8 Option 1 Operational-Related Criteria Air Pollutant and Precursor Threshold Level Sensitivity Analysis 16
9 San Francisco Bay Area Air Basin Emissions Inventory with California Clean Air Act Five Percent per Year Emissions Reduction Goal 16
10 Option 3 Operational-Related Criteria Air Pollutant and Precursor Threshold Level Sensitivity Analysis 17
11 Foreseeable Greenhouse Gas Emission Reductions from State Regulations and Legislation 21
12 California's Greenhouse Gas Emissions Inventory, 1990 Emissions Limit, and 2020 Projections from Land Use-Related Sectors 22
13 San Francisco Bay Area Air Basin's Greenhouse Gas Emissions Inventory, 1990 Emissions Limit, and 2020 Projections from Land Use-Related Sectors 23
14 Greenhouse Gas Threshold Level Sensitivity Analysis 28
15 Statistical Summary of Population-Weighted Background Risk 35
16 BAAQMD Project Screening Trigger Levels for Potential Odor Sources 36
17 California Greenhouse Gas Emissions, Population Projections, and Greenhouse Gas Efficiency Thresholds 39

DRAFT

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
AB	Assembly Bill
ABAG	Association of Bay Area Governments
APS	Alternative Planning Strategy
AQP	air quality plan
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
BMP	Best Management Practices
CAA	federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAP	climate action plan
CAPCOA	California Air Pollution Control Officers Association
CARE	Community Air Risk Evaluation
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DOF	California Department of Finance
EDD	California Economic Development Department
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
ERPG	Emergency Response Planning Guidelines
GBC	California Green Building Code
GHG	greenhouse gas
GPA	general plan amendment
HAP	hazardous air pollutants
IS/MND	Initial Study/Mitigated Negative Declaration
lb/day	pounds per day
LCFS	Low Carbon Fuel Standard
LOS	level of service
MDAQMD	Mojave Desert Air Quality Management District
MEI	Maximally Exposed Individual

DRAFT

MMT	million metric tons
MMT/yr	million metric tons per year
MPO	Metropolitan Planning Organization
MT	metric tons
N_2O	nitrous oxide
NAAQS	National Ambient Air Qualtiy Standards
NAICS	North American Industry Classification System
NOE	Notice of Exemption
NO_X	oxides of nitrogen
NSR	New Source Review
OPR	Governor's Office of Planning and Research
PM_{10}	respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
$PM_{2.5}$	fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
PM	particulate matter
ppm	parts per million
PSD	Prevention of Significant Deterioration
RMPP	Risk Management Prevention Program
ROG	reactive organic gases
RTP	Regional Transportation Plan
SB	Senate Bill
SCH	California State Clearinghouse
SCS	Sustainable Communities Strategy
sf	square feet
SFBAAB	San Francisco Bay Area Air Basin
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO_2	sulfur dioxide
TACs	toxic air contaminants
T-BACT	Toxic Best Available Control Technology
TBPs	Toxic Best Practices
TCMs	transportation control measures
tons/day	tons per day
tpy	tons per year
UNFCCC	United Nations Framework Convention on Climate Change
URBEMIS	Urban Emissions Model
VCAPCD	Ventura County Air Pollution Control District
VMT	vehicle miles traveled

DRAFT

1 INTRODUCTION

The Bay Area Air Quality Management District (BAAQMD) has direct and indirect regulatory authority over sources of air pollution in the San Francisco Bay Area Air Basin (SFBAAB), which is currently designated as an ozone nonattainment area for the California and national ambient air quality standards (CAAQS and NAAQS, respectively). The U.S. Environmental Protection Agency (EPA) has also recently designated the SFBAAB as nonattainment for the new 24-hour fine particulate with an aerodynamic resistance diameter of 2.5 micrometers or less ($PM_{2.5}$) standard of 35 microgram per cubic meter ($\mu g/m^3$). However, since the new presidential administration has ordered a freeze on all pending federal rules, the designation will not be effective until after publication of the regulation in the Federal Register. With regards to the CAAQS, the SFBAAB is also designated as a nonattainment area for respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less (PM_{10}) and $PM_{2.5}$. As a result of past, present, and future development projects within BAAQMD's jurisdiction, and the current nonattainment status of the SFBAAB, a cumulative air quality impact exists. The most current attainment designations for the SFBAAB are shown in Table 1 for each CAAQS and NAAQS as applicable.

The purpose of this report is to evaluate options for California Environmental Quality Act (CEQA) thresholds of significance for use within BAAQMD's jurisdiction. As part of an earlier task, EDAW's first step in this process was to research current CEQA thresholds of significant used by other air districts in California and supporting documentation, where available, as compiled in Appendix A and summarized below.

With respect to criteria air pollutant and precursor emissions, numerous air districts (e.g., Monterey Bay Unified Air Pollution Control District, Santa Barbara County Air Pollution Control District, Mojave Desert Air Quality Management District [MDAQMD], and South Coast Air Quality Management District) have based thresholds of significance for reactive organic gases (ROG) and oxides of nitrogen (NO_X) on limits established by the federal New Source Review (NSR) Program. In certain cases, these NSR limits, which are identified in regulation on an annual basis (tons per year [tpy]), are converted to pounds per day (lb/day) for precursor emissions. While some air districts have no quantitative threshold levels, many use the CAAQS as thresholds of significance, particularly for carbon monoxide (CO) where impacts are more localized in nature. Dispersion modeling is often required to evaluate whether a concentration-based threshold would be exceeded as a result of project implementation. Within jurisdictions where thresholds of significance have not been adopted, air districts advise the lead agencies on a case-by-case basis and rely on guidance of nearby air districts.

EDAW obtained supporting documentation for non-NSR-derived thresholds of significance from the Sacramento Metropolitan Air Quality Management District (SMAQMD) and the Ventura County Air Pollution Control District (VCAPCD). SMAQMD prepared draft justification documentation for both construction- and operational-related thresholds of significance in 2001. The bases for these were derived from the reductions (tons per day [tons/day] of ozone precursors) committed to by control measures contained in the State Implementation Plan and in a manner that was intended to optimize capture (i.e., require mitigation) of a substantial portion of projects, while requiring a level of mitigation that would be realistic and achievable.

VCAPCD developed thresholds of significance for precursors by determining the emissions capture rate associated with applying five different increments of ROG and NO_X emissions levels to projected development. This approach was intended to achieve a balance between the number of projects affected and the amount of emissions subject to mitigation.

DRAFT

Table 1
Ambient Air Quality Standards and Designations for the San Francisco Bay Area Air Basin

Pollutant	Averaging Time	California		National [1]		
		Standards [2,3]	Attainment Status [4]	Primary [3, 5]	Secondary [3, 6]	Attainment Status [7]
Ozone	1-hour	0.09 ppm (180 μg/m^3)	N (Serious)	–	–	–
	8-hour	0.07 ppm (137 μg/m^3)	–	0.75 ppm (147 μg/m^3)	Same as Primary Standard	N
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	A	35 ppm (40 mg/m^3)	–	U/A
	8-hour	9 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (56 μg/m^3)	–	0.053 ppm (100 μg/m^3)	Same as Primary Standard	U/A
	1-hour	0.18 ppm (338 μg/m^3)	A	–		–
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	–	0.030 ppm (80 μg/m^3)	–	A
	24-hour	0.04 ppm (105 μg/m^3)	A	0.14 ppm (365 μg/m^3)	–	
	3-hour	–	–	–	0.5 ppm (1300 μg/m^3)	
	1-hour	0.25 ppm (655 μg/m^3)	A	–	–	–
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 μg/m^3	N	-	Same as Primary Standard	U
	24-hour	50 μg/m^3		150 μg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 μg/m^3	N	15 μg/m^3	Same as Primary Standard	N[9]
	24-hour	–	–	35 μg/m^3		
Lead[8]	30-day Average	1.5 μg/m^3	A	–	–	–
	Calendar Quarter	–	–	1.5 μg/m^3	Same as Primary Standard	

DRAFT

Table 1
Ambient Air Quality Standards and Designations for the San Francisco Bay Area Air Basin

Pollutant	Averaging Time	California		National [1]		
		Standards [2,3]	Attainment Status [4]	Primary [3, 5]	Secondary [3, 6]	Attainment Status [7]
Sulfates	24-hour	25 µg/m^3	A	**No National Standards**		
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	U			
Vinyl Chloride[8]	24-hour	0.01 ppm (26 µg/m^3)	U			
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) because of particles when the relative humidity is less than 70%.	U			

Notes: µg/m^3 = micrograms per cubic meter; mg/m^3 = milligram per cubic meter; ppm = parts per million.

[1] National standards (other than ozone, respirable and fine particulate matter (PM_{10} and $PM_{2.5}$, respectively)), and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For respirable particulate matter, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms per cubic meter is equal to or less than one. For fine particulate matter, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[2] California standards for ozone, carbon dioxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, PM, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; parts per million (ppm) refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Unclassified (U): A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
Attainment (A): A pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a 3-year period.
Nonattainment (N): A pollutant is designated nonattainment if there was a least one violation of a state standard for that pollutant in the area.
Nonattainment/Transitional (NT): A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the standard for that pollutant.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Nonattainment (N): Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
Attainment (A): Any area that meets the national primary or secondary ambient air quality standard for the pollutant.
Unclassifiable (U): Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

[8] The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[9] The U.S Environmental Protection Agency (EPA) lowered the 24-hour $PM_{2.5}$ standard from 65 µg/m^3 to 35 µg/m^3 in 2006. EPA issued attainment status designations for the 35 µg/m^3 standard on December 22, 2008. EPA has designated the San Francisco Bay Area Air Basin as nonattainment for the 35 µg/m^3 $PM_{2.5}$ standard. The EPA designation will be effective 90 days after publication of the regulation in the Federal Register. The Office of the President has ordered a freeze on all pending federal rules; therefore, the effective date of the designation is unknown at this time.

Source: ARB 2009c.

DRAFT

With respect to toxic air contaminants (TACs), an excess cancer risk level of 10 in one million and a hazard index of one are widely used based on a thorough review of district-adopted CEQA guidance and discussions with air district staff. In most cases, these are applied to stationary sources and not to construction or mobile sources of TACs. The rationale for not applying these to construction-related emissions is that such activities are short-term and intermittent in nature and the primary health concern with diesel particulate matter (PM) is long-term exposure. Because these were originally developed based on the behavior of stationary sources (e.g., constant emissions rate over time), these are also typically not applied to mobile sources. Some air districts (e.g., MDAQMD) also use adopted rules and regulations based on limits established by the federal Toxic NSR Program (e.g., new or modified source that emit more than 10 tpy of a single hazardous air pollutant [HAP] or more than 25 tpy of multiple HAPs would be required to implement maximum achievable control technology) for thresholds of significance (e.g., projects that would violate a rule or regulation would be considered significant with respect to TACs). Others refer to the *Air Quality and Land Use Handbook: A Community Health Perspective* released by the California Air Resources Board (ARB) in 2005 for guidance on land use compatibility issues; however, this document was intended to be advisory, not regulatory.

For assessing odor impacts, no quantitative thresholds of significance have been adopted, but instead many air districts use screening-level buffer distances for common odor-generating sources in combination with complaint history. Typically, a significant odor impact would occur under the complaint-based threshold if the project has: 1) more than one confirmed complaint per year averaged over a three-year period, or 2) more than three unconfirmed complaints per year averaged over a three-year period. Projects that would involve the siting of sensitive receptors within the screening-level distances or the siting of an odor-producing land use within these distances from existing sensitive receptors would be considered to have a significant odor impact and further analysis and/or mitigation would be required. Prevailing wind direction relative to the source and receptors are also taken into consideration.

Many air districts state that if implementation of a proposed project would not result in the generation of emissions that exceed applicable project-level mass emission thresholds, then the cumulative impact of the project on air quality would also be considered less than significant. In other words, if project-generated emissions would exceed the operational-related thresholds of significance in a designated nonattainment area, then the project's incremental contribution would be considered cumulatively considerable, and therefore, significant.

No air district in California has adopted a threshold of significance for greenhouse gas (GHG) emissions for nonindustrial land use development projects. On December 5, 2008 the South Coast Air Quality Management District adopted a GHG screening significance threshold for industrial projects of 10,000 metric tons CO_2e per year that also incorporates tiered decision tree approach to apply performance standards. In addition, pursuant to SB 97, OPR was directed to develop CEQA mitigation guidelines for GHG emissions. OPR looked to ARB for technical expertise in the development, and evidence in support, of these thresholds. ARB released its draft interim CEQA thresholds concepts for industrial, commercial, and residential projects for public comment in October 2008. As of the time of writing, ARB is still accepting public comments on these draft options, and has not suggested a timeline for revision or adoption.

DRAFT

2 THRESHOLD OPTIONS EVALUATION

The following section evaluates options for CEQA thresholds of significance for use within BAAQMD's jurisdiction including current approaches for impact determinations.

2.2 CONSTRUCTION-RELATED IMPACTS

2.2.1 CRITERIA AIR POLLUTANTS AND PRECURSORS

2.2.1.1 CURRENT APPROACH

BAAQMD's current threshold of significance for construction activities is qualitative in nature (i.e., emissions quantification is not required) and only applies to fugitive PM_{10} dust emissions. If BAAQMD-recommended Best Management Practices (BMPs), which are tiered based on the size of the construction site (less than or greater than four acres), are incorporated into the proposed project, then air quality impacts from project construction can be considered less than significant. The construction threshold of significance requires all projects, regardless of size, to implement at least a minimum level of mitigation for construction-related fugitive PM_{10} dust emissions.

2.2.1.2 OPTION 1: CLEAN AIR ACT EMISSIONS LIMIT APPROACH

The federal and California Clean Air Acts (CAA and CCAA, respectively) impose emission limitations on stationary sources (e.g., federal NSR, and BAAQMD Best Available Control Technology [BACT] and Offset Requirements) that serve to reduce emissions from those sources to the extent feasible. This approach evaluates the use of the CAA/CCAA stationary source emission limitation levels as CEQA thresholds of significance for construction-related criteria air pollutant and precursor emissions. This approach is considered appropriate because the source of the emissions is irrelevant to their effect on cumulative air quality impacts.

Basis and Analysis

The NSR Program[1] was created by the CAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based ambient air quality standards. Existing regulations require the NSR Program to address any pollutant for which there is an established ambient air quality standard. The NSR Program is composed of two primary components: Prevention of Significant Deterioration (PSD) applies to pollutants where the standard has been attained and NSR applies to pollutants where the standard has not been attained. The CAA regulations also require the installation of BACT, air quality monitoring and modeling analyses to ensure that a project's emissions will not cause or contribute to a violation of any air quality standard, limiting the incremental increase of a pollutant and offsetting new emissions with creditable emission reductions.

The determination of whether a source is subject to NSR is based, in part, on comparison to the Significant Emission Rates identified in the regulations. These are derived from modeling analyses to determine the level of emissions below which a source alone is not expected to have an impact on air quality (Please refer to Table 2). Though the limits are adopted in regulation to control stationary source emissions, they are considered to have the same effect of controlling emissions from land use development.

BAAQMD Regulation 2, Rule 2 provides for the review of new and modified sources and mechanisms, including the use of BACT and offsets before a source is allowed to operate. Specifically, an applicant for a permit to

[1] Code of Federal Regulation (CFR) [i.e., PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Nonattainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

DRAFT

operate shall apply BACT to any new or modified source that could result in the potential to emit more than the levels shown in Table 3.

Table 2
New Source Review Significant Emission Rates

Emissions Type	Significant Emissions Rate (tpy)
ROG	40
NO_X	40
CO	100
SO_2	40
PM_{10}	15
$PM_{2.5}$	10

Notes: CO = carbon monoxide; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; SO_2 = sulfur dioxide; tpy = tons per year.
Sources: BAAQMD 2005, EPA 2008.

Table 3
Best Available Control Technology and Offset Requirements

Emissions Type	BACT Emissions Level (lb/day)[1]	Offset Emissions Level (tpy)[2]
ROG	10	10
NO_X	10	10
CO	10	-
SO_2	10	100
PM_{10}	10	100

Notes: BACT = Best Available Control Technology; CO = carbon monoxide; lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; SO_2 = sulfur dioxide; tpy = tons per year.
[1]The project size equivalent would be approximately 40 single-family dwelling units.
[2] The project size equivalent would be approximately 200 single-family dwelling units.
Source: BAAQMD 2005.

With respect to BAAQMD's Offset Requirements, before a permit to operate is issued for a new or modified source that could emit more than the levels specified in Table 3, federally enforceable emission offsets must be provided for the source's emissions and any preexisting cumulative increases. Emission offsets are verified reductions from an emission source that has shut down or has reduced its historical emissions through better control devices or modified operations. Verified offsets then can be used at a new or modified source and retired.

The aforementioned information serves as the bases for this option, which applies the federal PSD Significant Emission Rate limits to criteria air pollutants and precursors for which the SFBAAB is designated as attainment. For those pollutants the SFBAAB is designated as a nonattainment area, this option applies BAAQMD's Offset Requirement limits, except for PM_{10} and $PM_{2.5}$. Though the SFBAAB is currently designated as a nonattainment area for both PM_{10} and $PM_{2.5}$, the federal NSR Significant Emission Rate limits of 15 and 10 tpy, respectively, are recommended for this option as BAAQMD has not established an Offset Requirement limit for $PM_{2.5}$ and the existing limit of 100 tpy is much less stringent. The BACT Requirement limits as shown in Table 4 represent the levels at which, if exceeded, stationary sources must install common control devices. However, stationary source

DRAFT

are still allowed to result in emissions up to the offset requirement and above if federally enforceable offsets are provided. With respect to construction sources, analogous common control devices include increasingly stringent tailpipe standards for off-road equipment, after-market controls such as diesel particulate matter traps and oxidation catalysts.

The CARB new off-road regulations will require the use of newer equipment with lower emission rates and retrofitting of older equipment with after-market controls. These statewide regulations will essentially require the equivalent of installing BACT on all off-road construction equipment over the next several years. Therefore it would be appropriate to set a threshold level of significance at the NSR offset level to be consistent with this approach. Thus, utilization of the BACT Requirements as thresholds of significance for CEQA would result in achieving considerably more emission reductions from land use development than is needed to achieve air quality goals.

The federal NSR Significant Emission Rate and BAAQMD's Offset Requirement limits are identified in regulation on an annual basis (in units of tpy). For this option, the applicable limits were converted to maximum daily emissions (pounds per day) for each threshold of significance as shown in Table 4. This is appropriate because of the short-term intermittent nature of construction activities and if emissions would not exceed these maximum daily threshold emission levels on the worst-case day, then the project would also not exceed the annual levels even if such occurred every day for 365 days.

Table 4
Option 1 Threshold Emission Levels for Construction-Related Criteria Air Pollutants and Precursors

Emissions Type	Maximum Daily Emissions Level (lb/day)
ROG	54
NO_X	54
CO	547
SO_2	219
PM_{10}	82
$PM_{2.5}$	54

Notes: CO = carbon monoxide; lb/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; SO_2 = sulfur dioxide.
Sources: Data compiled by EDAW 2009, BAAQMD 2005, EPA 2008.

All of these levels are adopted within current regulation and, thus, this option relies upon the associated legislation and rulemaking for federal NSR and BAAQMD, and associated definitions of significant emissions limits for criteria air pollutants and precursors.

2.2.2 GREENHOUSE GASES

A review of BAAQMD's GHG emissions inventory reveals greenhouse gas emissions from construction activity represent a relatively small portion (less than two percent) of the overall GHG emissions inventory in the SFBAAB. Regardless, BAAQMD staff has identified two potential approaches to set a significance threshold for construction GHG emissions.

DRAFT

2.2.2.1 OPTION 1: OPERATIONAL THRESHOLD APPROACH

This approach includes the same CEQA threshold of significance for construction-related GHG emissions as that for project operations, which is discussed in detail in section 3.3.3. Assuming that a project has an operational lifetime of approximately 30 years, the aggregate operational GHG emissions associated with a project that would generate 1,175 metric tons (MT) of carbon dioxide equivalent (CO_2e) emissions per year would result in an aggregate of 35,250 MT of CO_2e emissions over 30 years. Please refer to Option 1A under Operational-Related Greenhouse Gas Emissions. Thus, if a project would result in GHG emissions greater than 35,250 MT of CO_2e over the duration of construction, the impact would be considered significant.

2.2.2.2 OPTION 2: REGIONAL ALLOCATION APPROACH

The goal of this approach is to reduce the projected 2020 emissions associated with construction to the 1990 level, the overall goal of AB 32, by setting a per project threshold, that when aggregated, the total annual construction emissions would not exceed the total 1990 inventory levels in 2020. BAAQMD's current CO_2e emissions inventory estimated that in 1990 CO_2e emissions from construction activity were 1.3 million metric tons (MMT) CO_2e for off-road construction equipment. In addition, about five percent of the on-road medium/heavy duty truck CO_2e emissions inventory is attributed to construction debris and material haul trips, which equals 0.2 MMT CO_2e per year. Therefore, the total 1990 inventory for construction-related CO_2 emissions is 1.5 MMT, whereas the total projected 2020 construction-related emissions inventory is 2.9 MMT CO_2e. It is also estimated that approximately 4,000 development projects would be constructed in the SFBAAB between 2010 and 2020, or an average of 400 projects per year. The threshold of significance can be established by spreading the goal of 1.5 MMT over the 400 projects (1,500,000/400 equals 3,750 tons/year, or 10.3 tons/day). Therefore, projects with construction CO_2e emissions above 10 metric tons per day (tons/day) would be considered to have a significant impact.

2.2.3 TOXIC AIR CONTAMINANTS

2.2.3.1 OPTION 1: CASE-BY-CASE APPROACH

This approach entails using the "Expose sensitive receptors to substantial pollutant concentrations" question as contained in the State of California CEQA Appendix G checklist to determine the significance of construction-related TAC emissions on a case-by-case basis.

Basis and Analysis

Construction could result in the generation of diesel PM, which ARB has designated as a TAC, from the use of off-road heavy-duty equipment during site grading, excavation, material transport, paving, and other construction activities. However, due to the variable nature of such activities, the generation of TAC emissions in most cases would be temporary especially considering the short amount of time such heavy-duty equipment are typically within an influential distance (e.g., 70 percent reduction at approximately 500 feet from mobile sources [ARB 2005]) to nearby sensitive receptors (i.e., people or facilities that generally house people [e.g., schools, hospitals, residences]) that may experience adverse effects from unhealthful concentrations of air pollutants. In addition, current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 40, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities resulting in difficulties with producing accurate modeling results. Staff is currently assessing the size of a construction project where an assessment of the health risk to nearby receptors would be warranted. A recommended screening level for assessing a construction project's health risks will be provided in the methodologies section of the CEQA Guidelines update.

DRAFT

2.2.4 ODORS

Construction-related activities typically do not result in the generation of odor emissions. BAAQMD currently does not have a numeric significance threshold for construction-related odor impacts, but instead allows individual agencies to address this issue on a case-by-case basis, taking into consideration the specific construction-related characteristics of each project and proximity of off-site receptors.

2.3 OPERATIONAL-RELATED IMPACTS

2.3.1 CRITERIA AIR POLLUTANTS AND PRECURSORS (REGIONAL)

2.3.1.1 CURRENT APPROACH

At the project level, BAAQMD currently recommends that a proposed project that is estimated to generate criteria air pollutant or precursor emissions in excess of the annual or daily thresholds in Table 5 should be considered to have a significant air quality impact.

Table 5
Current BAAQMD Thresholds of Significance for Project-Level Operational-Related Criteria Air Pollutants and Precursors

Pollutant	Threshold (tpy)	Threshold (lb/day)	Threshold (kg/day)
ROG	15	80	36
NO_X	15	80	36
PM_{10}	15	80	36

Notes: kg/day = kilograms per day; lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year.
Source: BAAQMD 1999.

These thresholds of significance would be exceeded by an unmitigated project size approximately equivalent to a 430-unit single family subdivision.

With respect to cumulative impacts, BAAQMD's current approach is that any proposed project (other than plans) that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.

For any project that does not individually result in significant operational-related air quality impacts, the determination of a significant cumulative impact should be based on an evaluation of the consistency of the project with the local general plan and of the general plan with the regional air quality plan. (The appropriate regional air quality plan for the SFBAAB is the most recently adopted air quality plan [AQP] that has been developed in response to the CCAA.)

If a project is proposed in a city or county with a general plan that is consistent with the AQP and the project is consistent with that general plan (i.e., does not require a general plan amendment [GPA]), then the project would not have a significant cumulative impact (provided, of course, the project does not individually have any significant impacts). No further analysis regarding cumulative impacts is necessary.

In a jurisdiction with a general plan consistent with the AQP, a project may be proposed that is not consistent with that general plan because it requires a GPA. In such instances, the cumulative impact analysis should consider the

DRAFT

difference(s) between the project and the original (pre-GPA) land use designation for the site with respect to motor vehicle use and potential land use conflicts. A project would not have a significant cumulative impact if:

- Vehicle miles traveled (VMT) from the project would not be greater than the VMT that would be anticipated under the original land use designation, and
- The project would not result in sensitive receptors being in close proximity to sources of objectionable odors, TACs or accidental releases of hazardous materials.

For a project in a city or county with a general plan that is not consistent with the AQP, the cumulative impact analysis is based on the combined impacts of the proposed project and past, present and reasonably anticipated future projects. A project would have a significant cumulative impact if these combined impacts would exceed any of the thresholds established above for project operations.

The cumulative impact threshold of significance could affect all projects, regardless of size, and require mitigation for cumulative impacts.

2.3.1.2 OPTION 1: CLEAN AIR ACT EMISSIONS LIMIT APPROACH

This option is identical to Option 1 discussed above under Construction-Related Criteria Air Pollutants and Precursors; except this approach would use the annual in addition to the maximum daily levels as shown in Table 6. See the Clean Air Act description of NSR/PSD beginning on Page 5.

Basis and Analysis

For this option, operational-related criteria air pollutant and precursor emissions were estimated based on projected land use development in the SFBAAB using California Department of Finance and California Economic Development Department data. A sensitivity analysis of the threshold level was conducted for each nonattainment pollutant [ozone precursors (ROG and NO_x), PM_{10} and $PM_{2.5}$] in order to determine reasonable emission capture rates based on NSR/PSD thresholds. Emission capture rates are hereafter defined as the proportion of project-generated emissions that would exceed the CEQA threshold of significance and would thereby be subject to mitigation. The sensitivity analysis involved adjusting the mass emissions threshold level in order to develop a matrix of emission reduction scenarios. Please refer to Table 8 for the results of the sensitivity analysis.

Table 6
Option 1 Threshold Emission Levels for Operational-Related Criteria Air Pollutants and Precursors

Emissions Type	Annual Emissions Level (tpy)	Maximum Daily Emissions Level (lb/day)
ROG	10	54
NO_X	10	54
CO	100	547
SO_2	40	219
PM_{10}	15	82
$PM_{2.5}$	10	54

Notes: CO = carbon monoxide; lb/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; SO_2 = sulfur dioxide; tpy = tons per year.
Sources: Data compiled by EDAW 2009, BAAQMD 2005, EPA 2008.

DRAFT

Methodology and Information Sources

Development Projections

EDAW calculated growth projections for new land use development in the SFBAAB from 2010 to 2020 based on the following two data sets: (1) the California Department of Finance (DOF) projections for population, household size, and residential unit distribution (DOF 2009); and (2) the California Economic Development Department (EDD) for employment projections by North American Industry Classification System (NAICS) code (EDD 2009). These data sources were selected primarily because DOF and EDD have a long history and good track record of projecting growth estimates, and because they do so on a statewide level, thereby considering allocations between regions. This data was also reported at a level of specificity that allows for simple translation into land use type categories consistent with those in the Urban Emissions Model (URBEMIS). URBEMIS includes general land use categories (e.g., residential, educational, recreational, commercial, retail, and industrial). Within each general category there are several specific land use types resulting in a total of 52 possible land use types. Please refer to Exhibit 1 for a graphical representation of the derivation process for this concept for the single family residential land use type.

Data from the Association of Bay Area Governments (ABAG) was available, but not at the land use category resolution required for conversion into URBEMIS. Notwithstanding, the DOF/EDD data were not at a fine enough resolution to develop projections for every URBEMIS land use category. In instances of asymmetry between the DOF/EDD data and the URBEMIS land use categories, development projections were aggregated into the most similar URBEMIS category based on density and behavioral trip capture (i.e., trip generation rates) assumptions. The NAICS data projected less development over the next ten years in comparison to ABAG, thus, making the NAICS dataset more conservative for the purposes of this threshold evaluation, because fewer projects (and fewer associated emissions) would be available for capture by the threshold. In other words, the emissions reduction potential of the CEQA threshold would be lower using more conservative development projections. If more development occurs than was expected under the growth projections, the emissions reduction potential associated with the CEQA significance threshold would be greater than assumed in this analysis. Please refer to Appendix A for detailed land use development projections and associated emissions calculations.

For residential development, the DOF population, household size, and residential unit distribution projections were used to calculate population-driven residential square footage projections. For non-residential development, EDD projections for employment by NAICS code were used to calculate employment-driven commercial, retail, and industrial development square footage projections. Using type and size distribution data from projects in the SFBAAB that passed through the CEQA process from 2001–2008, the development square footage annual projections were translated into units and project size distributions for each URBEMIS land use category. This analysis then uses the project type and size distributions to develop a projected development inventory for new development that would occur over the next ten years (i.e., 2010–2020). Please refer to Appendix B for detailed development projections calculations.

Project Characteristics

The CEQA Projects Database (Rimpo and Associates 2009), which includes information from environmental documents prepared by lead agencies within BAAQMD's jurisdiction and filed with the California State Clearinghouse (SCH) during the past eight years (2001-2008), was used by EDAW to conduct a frequency analysis of projects categorized by land use type and size. Projects for which an Environmental Impact Report (EIR) or Initial Study/Mitigated Negative Declaration (IS/MND) was prepared during the last eight years were distributed over size intervals of 50,000 square feet (sf) by each corresponding URBEMIS land use category to develop frequency distributions of project type and size. These frequency distributions were applied to the total development projections to obtain development forecasts by project size and type in the SFBAAB. This development forecast dataset represents the manner in which the projected development will come under the

DRAFT

purview of CEQA in terms of project type and size. It was assumed that past projects proposed in the SFBAAB Area are indicative of project attributes in the future.

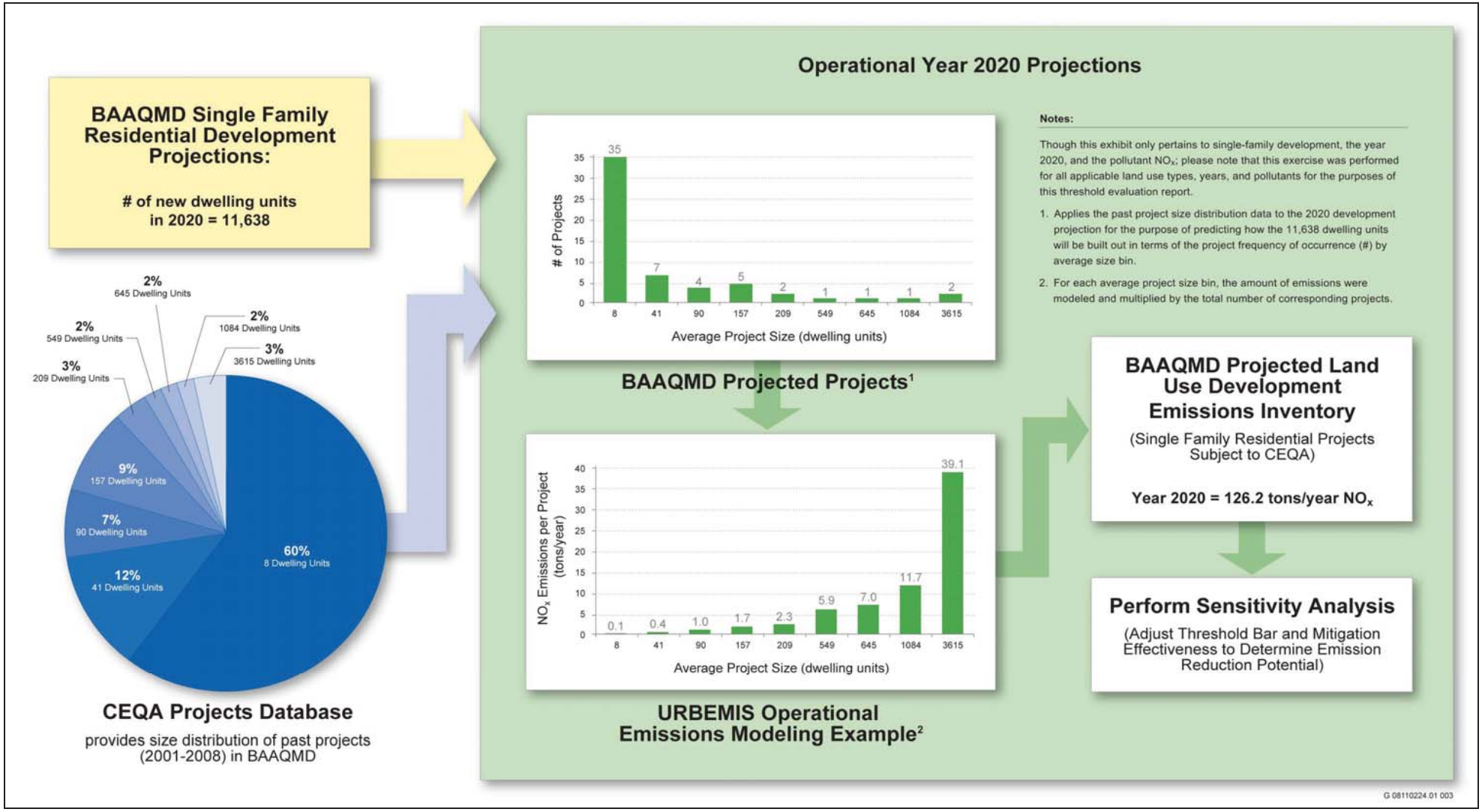
It was necessary to forecast these attributes into the future to model the mass emissions for projects of different types and sizes in order to evaluate the sensitivity (e.g., emissions reduction and capture rates) of the threshold level for each pollutant. Projects of a certain size would trigger the CEQA threshold, and would require mitigation. The sensitivity analysis involved adjusting the threshold in order to achieve a balance that attains a reasonable (feasible) amount of emissions reduction.

It is important to note that there is some unknown amount of projected development included in the forecast totals that would not be subject to CEQA, because some of the projected development included in the DOF/EDD data would be categorically (e.g., certain infill development projects in urban areas [Class 32; CEQA Guidelines Section 15332]) or statutorily exempt (e.g., actions related to construction of less than 100 low-income housing units in urban areas [California Public Resources Code 21080.14]). Our presumption is that the quantity of potential development that is exempt is not considerable. Data to support this conclusion is incomplete, despite EDAW's attempt to acquire it throughout the State. First, Notices of Exemption (NOE) are not required to be posted or filed for exempt projects; they are voluntary. Furthermore, NOEs are not required to be filed with the SCH unless a State agency serves as the CEQA lead agency. Otherwise, NOEs only need be filed with the County Clerk's office. NOEs filed with the SCH represent a small portion of total NOEs, and rarely do NOEs where the State is the lead agency represent development that could be categorized within URBEMIS. Typically, NOEs accompany ministerial actions that do not result in actual development, such as the subdivision of land or modification of an existing use. Further, it is our experience that many exempt development projects are, at some point, largely captured under CEQA, such as through an EIR prepared for a proposed subdivision. The exemption would apply to the building permits for already evaluated projects, in this instance. Projects that are not exempt are typically small, or would otherwise not meet a category that exempts the projects (plus lead agencies cannot, under CEQA, categorically exempt projects that considerably contribute to cumulative impacts or may have potentially significant impacts). Thus, it was concluded that NOEs represent a less-than-substantial portion of total projected development in the SFBAAB.

Next, an emissions inventory for new development that would fall under the purview of CEQA was calculated. This quantity of unmitigated emissions of precursors and particulate matter (i.e., approximately 2,848–12,322 tpy as shown in Table 7) would be considered to potentially conflict with current attainment planning efforts and would thereby be cumulatively considerable.

By its very nature, air pollution is largely a cumulative impact. Ambient air quality standards are violated or approach nonattainment levels due to past development that has formed the urban fabric, and attainment of standards can be jeopardized by adding projects to the existing development inventory. The non-attainment status of regional pollutants is a result of past and present development within the SFBAAB. Without the large scale of development that has occurred throughout the SFBAAB, nonattainment would not have occurred. Thus, this regional impact is a cumulative impact, and projects would adversely affect this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of the regional air quality standards. Consequently, the threshold of significance is that amount of pollution that is deemed cumulatively considerable and therefore a significant adverse air quality impact.

DRAFT



Notes: BAAQMD = Bay Area Air Quality Management District; CEQA = California Environmental Quality Act; NO_x = oxides of nitrogen; tons/year = tons per year; URBEMIS = Urban Emissions Model.
Source: Data adapted by EDAW 2009.

Example Derivation from BAAQMD Single-Family Residential Development Projections **Exhibit 1**

Table 7 Unmitigated Criteria Air Pollutants and Precursors from Projected Development Subject to CEQA in the San Francisco Bay Area Air Basin									
Year	Number of Projects/Yr	Unmitigated[1] Emissions (tpy)				Aggregate Unmitigated [1] Emissions Between 2010-2020 (Tons)			
		ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
2010	366	911	856	1,121	259	-	-	-	-
2015	404	777	618	1,240	287	-	-	-	-
2020	436	725	463	1,336	308	8,045	6,453	12,322	2,848

Notes: CEQA = California Environmental Quality Act; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year; yr = year.

[1] Unmitigated emissions are the results of an URBEMIS model run using default model settings, including default (i.e., worst-case) trip generation rates and average trip length assumptions. The modeling does not account for project attributes that may reduce emissions relative to the default settings (i.e., full trip generation) scenario, such as proximity to transit or mix of land use types. Please refer to Appendix B for detailed unmitigated emissions calculations.

Sources: Data calculated by EDAW 2009, Rimpo and Associates 2009, DOF 2009, EDD 2009.

As discussed previously, a frequency distribution of project sizes and types was calculated based on the last eight years of data from the CEQA Projects Database. Project size intervals (i.e., "bins") of 50,000 sf (approximately 28 single family homes) were used to assess the sensitivity of operational criteria air pollutant and precursor threshold levels at different increments to determine a reasonable emissions capture rate which achieves a feasible (as defined by CEQA) amount of emission reductions when considering mitigation effectiveness.

Threshold Level Sensitivity Analysis

Based on the project-level data from the development projections that were used to calculate the unmitigated amount of criteria air pollutants and precursors shown in Table 8, EDAW conducted a sensitivity analysis of operational-related mass emission threshold levels for ROG, NO_X, PM_{10}, and $PM_{2.5}$. This was done to determine the number of occurrences wherein such levels would be exceeded by projected development subject to CEQA. In situations where development would exceed these threshold levels, CEQA requires implementation of feasible mitigation, to the extent that this impact is reduced to below significance. Feasible means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (California Administrative Code, Title. 14, § 15364; California Public Resources Code, § 21061.1.). BAAQMD would achieve emissions reductions from new development associated with implementation of feasible mitigation.

EDAW has considerable experience evaluating operational emission reductions associated with land use development projects in California. Reductions of 15 percent in operational emissions typically are achievable when considering standard (i.e., not "smart growth") projects. A reasonable and demonstrable amount of feasible mitigation can be required of projects, at least to the extent they are not already planned with emissions-reducing characteristics. If mitigation is deemed infeasible, CEQA allows lead agencies to override any remaining significant impacts provided certain findings are made. Thus, since a 15 percent reduction in operational emissions from an unmitigated (i.e., full trip generation URBEMIS default model run) baseline is a practicable amount of mitigation, as demonstrated in nearby jurisdictions, 15 percent mitigation effectiveness was assumed for the purposes of this analysis. It was assumed that all of the projects that would trigger the CEQA thresholds would attempt to mitigate their emissions by at least 15 percent or down to the level of the threshold as required by CEQA.[2] It is the policy of the state that public agencies should not approve projects as proposed if there are

[2] (California Public Resources Code Section 21002; *See Laurel Heights I*, 47 Cal.3d at 400-401)

DRAFT

feasible alternatives or feasible mitigation measures which will avoid or substantially lessen the significant environmental effects of such projects.

Results of the threshold sensitivity analysis are presented in Table 8.

For criteria air pollutants for which the SFBAAB is currently in attainment (e.g., CO, SO_2), the operational thresholds were not evaluated in the sensitivity analysis because it is not foreseeable that there would be any impacts that could cause a violation of the CAAQS. Concentration levels of CO in the SFBAAB have not exceeded the CAAQS in the past 11 years and sulfur dioxide (SO_2) concentrations have never exceeded the standards (EPA 2009). BAAQMD has demonstrated that attainment pollutants are sufficiently controlled by air quality plans and regulations, thus, significant air quality impacts for CO and SO_2 emissions would not be expected to occur as a result of a project's operational-related emissions.

2.3.1.3 OPTION 2: CALIFORNIA CLEAN AIR ACT APPROACH

This approach is similar to Option 1, but uses a measurement of percent emissions reduction relative to the total emissions inventory as the supporting basis for each threshold level.

Basis

The CCAA requires a five percent per year reduction from the total emissions inventory. If a nonattainment area cannot achieve the five percent per year goal, the CCAA requires the area to implement all feasible measures to attain the state standards as soon as possible. The CEQA threshold developed in this section will contribute a portion of that five percent per year requirement. If compounded annually between 2010 and 2020, a total of 38.75 percent reduction from the emissions inventory would be required.

Analysis

Table 10 summarizes the quantity of BAAQMD's emissions inventory reduction required by the CCAA during the period from 2010 through 2020 in tons/day. Table 10 summarizes the amount of emissions reduction that could be achieved through the different CEQA significance threshold levels evaluated. The values in Table 10 were calculated in the same manner as in Option 1, except in units of tons/day. The column labeled "% Toward CCAA Requirement" lists the portion of the CCAA requirement that would be achieved through the various CEQA significance threshold levels. None of the threshold levels evaluated in this option would achieve the full 5 percent per year requirement. The remaining emission reductions would need to be achieved through other control measures and regulations in BAAQMD's jurisdiction.

DRAFT

Table 8
Option 1 Operational-Related Criteria Air Pollutant and Precursor Threshold Level Sensitivity Analysis
(Unmitigated Emissions from Land Use Development between 2010 and 2020)

Basis of Threshold	Mass Emissions Threshold Level (tpy)				Mitigation Effectiveness for Projects with Emissions >Threshold Level	Aggregate Emissions Reduction from Mitigation Between 2010–2020 (Tons)				% Project Capture[1]				% Emissions Capture [1]				Project Size Equivalent (number of single family dwelling units) [2]
	ROG	NO_X	PM_{10}	$PM_{2.5}$		ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$	
NSR (Significant Emissions Rate)	40	40	15	10	15%	1,102	229	1,867	344	1%	0%	2%	1%	31%	0%	31%	23%	523
(BAAQMD Rule 2, Offset)	10	10	100	-	15%	1,033	1,137	32	-	2%	1%	0%		43%	25%	16%	-	396
5 tpy Level[3]	5	5	5	5	15%	1,518	1,008	2,555	533	5%	2%	9%	1%	57%	33%	52%	30%	198
BAAQMD (Rule 2, BACT)	1.8	1.8	1.8	1.8	15%	2,028	1,496	3,457	510	14%	10%	58%	7%	73%	53%	92%	52%	62

Notes: BAAQMD = Bay Area Air Quality Management District; BACT = Best Available Control Technology; NSR = New Source Review; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ROG = reactive organic gases; tpy = tons per year.

[1] Emissions capture refers to the portion of emissions that would exceed the CEQA significance threshold and would thereby be subject to mitigation. Similarly, project capture refers to the portion of projects that would result in emissions that exceed the CEQA significance threshold and would be subject to mitigation.

[2] Project size equivalent is determined by the limiting pollutant (i.e., whichever threshold is exceeded first).

[3] The mass emission level of 5 tpy represents a moderate scenario between offset levels and BACT levels. 5 tpy is not based on regulation or defined by BAAQMD as an emissions level of importance, but presented here for informational purposes only.

Please refer to Appendix C for detailed unmitigated emissions calculations.

Sources: Data calculated by EDAW 2009, DOF 2009, EDD 2009, Rimpo and Associates 2009.

Table 9
San Francisco Bay Area Air Basin Emissions Inventory with California Clean Air Act Five Percent per Year Emissions Reduction Goal

BAAQMD Emissions Inventory (2010) (tons/day)				CCAA % reduction (over 2010–2020)	BAAQMD Inventory with CCAA Required Reduction (2020) (tons/day)				Difference (CCAA Reduction) (tons/day)			
ROG	NO_X	PM_{10}	$PM_{2.5}$		ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$
335.5	449.6	216.1	87.9	38.75%	205.5	275.4	132.4	53.9	130.0	174.2	83.8	34.1

Notes: BAAQMD = Bay Area Air Quality Management District; CCAA = California Clean Air Act; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 microns or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 microns or less; ROG = reactive organic gases; tons/day = tons per day.

Source: BAAQMD 2009.

DRAFT

Table 10
Option 3 Operational-Related Criteria Air Pollutant and Precursor Threshold Level Sensitivity Analysis

	Mass Emissions Threshold Level (tpy)				Mitigation Effectiveness for Projects with Emissions > Threshold Level	Emissions Reduction From Mitigation Between 2010–2020 (tons/day)				% Toward CCAA Requirement				Project Size Equivalent (number of single family dwelling units)[1]
	ROG	NO_X	PM_{10}	$PM_{2.5}$		ROG	NO_X	PM_{10}	$PM_{2.5}$	ROG	NO_X	PM_{10}	$PM_{2.5}$	
NSR (Significant Emissions Rate)	40	40	15	10	15%	0.30	0.06	0.51	0.09	0.2%	0.0%	0.6%	0.3%	523
(BAAQMD Rule 2, Offset)	10	10	100	-	15%	0.28	0.31	0.01	-	0.2%	0.2%	0.0%	-	396
5 tpy Level[2]	5	5	5	5	15%	0.42	0.28	0.70	0.15	0.3%	0.2%	0.8%	0.4%	198
BAAQMD (Rule 2, BACT)	1.8	1.8	1.8	1.8	15%	0.56	0.41	0.95	0.14	0.4%	0.2%	1.1%	0.4%	62

Notes: BAAQMD = Bay Area Air Quality Management District; BACT = Best Available Control Technology; CCAA = California Clean Air Act; NSR = New Source Review; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 microns or less; PM_{10} = respirable particulate matter with an aerodynamic resistance diameter of 10 microns or less; ROG = reactive organic gases; tons/day = tons per day; tpy =tons per year.

[1] Project size equivalent is determined by the limiting pollutant (i.e., whichever threshold is exceeded first).

[2] The mass emission level of 5 tpy represents a moderate scenario between offset levels and BACT levels. 5 tpy is not based on regulation or defined by BAAQMD as an emissions level of importance, but presented here for informational purposes only.

Please see Table 9 for % project and emission capture rates associated with these mass emission levels.

Please refer to Appendix C for detailed unmitigated emissions calculations.

Sources: Data calculated by EDAW 2009, DOF 2009, EDD 2009, Rimpo and Associates 2009.

DRAFT

2.3.2 LOCAL CARBON MONOXIDE

2.3.2.1 CURRENT APPROACH

The current approach is based on ambient concentration limits set by the California Clean Air Act for Carbon Monoxide and Appendix G of the State CEQA Guidelines.

2.3.2.2 BASIS AND ANALYSIS

State ambient air quality standards for carbon monoxide provide the most appropriate metric for determining if a new land use project would have a significant impact to local and regional air quality. Carbon monoxide is a directly emitted pollutant with primarily localized adverse effects when concentrations exceed the health based standards established by the California Air Resources Board (ARB). In addition, Appendix G of the State of California CEQA Guidelines includes the checklist question: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? Answering yes to this question would indicate that the project would result in a significant impact under CEQA. Since the ambient air quality standards are health-based (i.e., protective of public health), there is substantial evidence in support of their use as CEQA significance thresholds.

2.3.3 GREENHOUSE GASES

2.3.3.1 CURRENT APPROACH

BAAQMD does not currently have an adopted threshold of significance for GHG emissions. BAAQMD currently recommends that lead agencies quantify GHG emissions resulting from new development and apply all feasible mitigation measures to lessen the impact. One of the primary objectives in updating the current CEQA Guidelines is to identify a GHG significance threshold, analytical methodologies, and mitigation measures to ensure new land use development meets its fair share of the emission reductions needed to address the cumulative environmental impact of GHG emissions. GHG CEQA significance thresholds evaluated herein are intended to serve as interim levels during the implementation of the AB 32 Scoping Plan and SB 375, which will occur over a few years time. Until AB 32 and SB 375 have been fully implemented, or ARB adopts a recommended threshold, the BAAQMD recommends that local agencies in the SFBAAB apply the interim GHG threshold developed herein.

2.3.3.2 SCIENTIFIC AND REGULATORY JUSTIFICATION

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is *extremely unlikely* that global climate change of the past 50 years can be explained without the contribution from human activities (IPCC 2007).

According to Article 2 of the United Nations Framework Convention on Climate Change (UNFCCC), "Avoiding Dangerous Climate Change" means: *"stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."* Dangerous climate change was defined based on several key indicators including the potential for severe degradation of coral reef systems, disintegration of the West Antarctic Ice Sheet, and shut down of the large-scale, salinity- and thermally-driven circulation of the oceans. "Avoiding dangerous climate change" is expected to be achieved by stabilizing global average temperatures at a maximum of 2°C above pre-industrial levels. In order to stabilize at a global equilibrium temperature of 2–2.4°C above pre-industrial levels, ambient CO_2 concentrations must stabilize at 350–400 ppm. Ambient global CO_2 concentrations in 1990 were approximately 353 ppm (UNFCCC 2009).

DRAFT

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total GHG emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

Assembly Bill 32, the California Global Warming Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006, which set the 2020 greenhouse gas emissions reduction goal into law. AB 32 finds and declares that "Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020, and establishes regulatory, reporting, voluntary, and market mechanisms to achieve quantifiable reductions in GHG emissions to meet the statewide goal.

In October of 2008, ARB published its *Climate Change Proposed Scoping Plan* (*Proposed Scoping Plan*), which is the State's plan to achieve GHG reductions in California required by AB 32 (ARB 2008). The *Proposed Scoping Plan* contains the main strategies California will implement to achieve a reduction of 169 MMT CO_2e emissions, or approximately 30 percent from the state's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT of CO2e, or almost 10 percent, from 2002-2004 average emissions) so that the state can return to 1990 emission levels, as required by AB 32. The *Proposed Scoping Plan* was approved by ARB on December 11, 2008.

Senate Bill 375

Senate Bill (SB) 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012. New provisions of CEQA would incentivize qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

2.3.3.3 Option 1: Plan-Based Approach

This approach sets a GHG significance threshold based on AB 32 GHG emission reduction goals while taking into consideration emission reduction strategies outlined in ARB's Scoping Plan. Within Option 1, there are three sub-options to consider, which are described below. BAAQMD took eight essential steps in developing this Plan-Based Approach.

Step 1. Estimate from ARB's statewide GHG emission inventory the growth in emissions between 1990 and 2020 attributable to "land use"-driven sectors of the emission inventory per OPR's guidance document.

Step 2. Estimate the GHG emission reductions anticipated statewide to these same "land use" -driven emission inventory sectors associated with adopted regulations identified in the AB 32 Scoping Plan.

DRAFT

Step 3. Determine any short fall or "gap" between the 2020 statewide emission inventory estimates and the anticipated emission reductions from Scoping Plan adopted regulations. This "gap" represents additional GHG emission reductions needed statewide from these "Land use"-driven emissions inventory sectors, which represents new land development's fair share of the emission reductions needed to meet statewide GHG emission reduction goals.

Step 4. Determine the percent reduction this "gap" represents in the "land use"-driven statewide emissions inventory sectors and apply that percent to the same GHG emissions inventory sectors from BAAQMD's GHG emission inventory to identify the mass of emission reductions needed in the SFBAAB from "land use"-driven emission inventory sectors.

Step 5. Forecast new land use development for the SFBAAB using DOF/EDD projections for all land use types. Translate the land use development projections into land use categories consistent with those contained in the Urban Emissions Model (URBEMIS).

Step 6. Apply BAAQMD's CEQA database to projected new land use development to determine the frequency distribution of project sizes and types that would be expected to see come through the CEQA process in the SFBAAB between 2010 and 2020.

Step 7. Estimate mitigation effectiveness for GHG emission reductions for all land use development projects subject to CEQA.

Step 8. Conduct a sensitivity analysis of the numeric GHG mass emissions threshold needed to achieve the desired emission reduction (i.e., "gap") determined in Step 4. This mass emission GHG threshold is that which would be needed to achieve the emission reductions necessary by 2020 to fill the SFBAAB's fair share of the statewide "gap" in emission reductions needed from the "land use"-driven emission inventory sectors to meet AB 32 goals.

Basis and Analysis

Derivation of Greenhouse Gas Reduction Goal

To meet the target emissions limit established in AB 32 (equivalent to levels in 1990), total GHG emissions would need to be reduced by approximately 30 percent from projected 2020 forecasts (ARB 2009a). The AB 32 Scoping Plan is ARB's plan for meeting this mandate (ARB 2008). While the Scoping Plan does not specifically identify GHG emission reductions from the CEQA process for meeting AB 32 derived emission limits, the scoping plan acknowledges that "other strategies to mitigate climate change should also be explored." The Scoping Plan also acknowledges that "Some of the measures in the plan may deliver more emission reductions than we expect; others less and new ideas and strategies will emerge." In addition, climate change is considered a significant environmental issue and, therefore, warrants consideration under CEQA. SB 97 represents the State Legislature's confirmation of this fact, and it directed the Governor's Office of Planning and Research (OPR) to develop CEQA Guidelines for evaluation of GHG emissions impacts and recommend mitigation strategies. In response, OPR released the *Technical Advisory: CEQA and Climate Change* (OPR 2008), and has released proposed CEQA guidelines (April 14, 2009) for consideration of GHG emissions. It is known that new land use development must also do its fair share toward achieving AB 32 goals (or, at a minimum, should not hinder the State's progress toward the mandated emission reductions).

If left unchecked, GHG emissions from new land use development in California may result in a cumulatively considerable amount of GHG emissions and a substantial conflict with the State's ability to meet the goals within AB 32. Thus, BAAQMD has elected to adopt an interim GHG threshold for CEQA analysis, which can be used by lead agencies within the SFBAAB. This would help these lead agencies navigate this dynamic regulatory and technological environment where the field of analysis has remained wide open and inconsistent. BAAQMD's

DRAFT

framework for developing a GHG threshold for land development projects that is based on policy and substantial evidence follows, and is detailed in Appendix D.

Foreseeable Emissions Reductions from the Scoping Plan Measures

As stated above, to meet the requirements set forth in AB 32 (i.e., achieve California's 1990-equivalent GHG emissions levels by 2020) California would need to achieve an approximate 30 percent reduction in emissions across all sectors of the GHG emissions inventory compared with 2020 projections. However, to meet the requirements of AB 32 in the emissions sectors that are related to land use development (e.g., on-road passenger and heavy-duty motor vehicles, commercial and residential area sources [i.e., natural gas], electricity generation/consumption, waste water treatment, and water consumption), California would need to achieve an approximate 24 percent reduction in GHG emissions from these "land use-driven" sectors (ARB 2009a) by 2020. GHG emission reductions within these land use-driven sectors that are anticipated to occur from implementation of the Scoping Plan measures statewide are summarized in Table 11. Since the GHG emission reductions anticipated with the Scoping Plan were not accounted for in ARB's or BAAQMD's 2020 GHG emissions inventory forecasts (i.e., business as usual), an adjustment was made to include (i.e., give credit for) GHG emissions reductions associated with adopted legislation only, such as SB 107, the California Green Building Code (GBC), AB 1493 (Pavley) (though adopted, AB 1493 has not been implemented at the time of writing), and a portion of the reduction anticipated from the Low Carbon Fuel Standard (LCFS). With reductions from these State regulations (Scoping Plan measures) taken into consideration, California would still need to achieve a 2.8 percent reduction from projected 2020 GHG emissions to meet the 1990 GHG emissions goal from these "land-use driven" sectors. Refer to Tables 11 through 13 for data used in this analysis and Appendix C for detailed calculations.

Assembly Bill 1493 and the Low Carbon Fuel Standard

AB 1493 (Pavley) is intended to regulate CO_2 emissions from passenger vehicles; however, AB 1493 has not been implemented at the time of writing, because California has not received federal approvals to implement these emissions standards. It appears likely that AB 1493 will be implemented in the near future, as the new presidential administration has directed EPA to reexamine its position for denial of CCAA's waiver and for its past opposition to GHG emissions regulation. It appears likely that California will receive the waiver sometime in 2009, notwithstanding the previous denial by EPA.

Table 11
Foreseeable Greenhouse Gas Emission Reductions from State Regulations and Legislation

Affected Emissions Source	California Legislation	% Emissions Reduction from 2020 GHG inventory	Year of Effect	End Use Sector (% of Total Inventory)	Scaled % Emissions Reduction (credit)
Mobile	AB 1493 (Pavley)	19.7%	2020	On road transportation (44%)	8.6%
	LCFS	2%	2020	On road transportation (44%)	0.9%
Area	GBC	8.5% Residential	2010	Natural gas (Residential, 10%)	0.7%
		9.4% Non-residential		Natural gas (Non-residential, 4%)	0.4%
Indirect	SB 1078, 107	20%	2010	Electricity (In-State Generation, 17%)	3.0%
	GBC	21.2% Residential	2010	Electricity (34%)	7.6%
		4.9% Non-residential	2010		
Total credits given to land use-driven emission inventory sectors from Scoping Plan measures					**21.1%**[1]

Notes: AB = Assembly Bill; GBC = California Green Building Code; LCFS = Low Carbon Fuel Standard; SB = Senate Bill.
[1] Percentages do not sum to 21.1% exactly in table due to rounding.
Please refer to Appendix D for detailed calculations.
Sources: Data calculated by EDAW 2009, CEC 2007.

DRAFT

Table 12
California's Greenhouse Gas Emissions Inventory, 1990 Emissions Limit, and 2020 Projections from Land Use-Related Sectors

Sector	1990 Emissions (MMT CO_2e/yr)	2002-2004 Average (MMT CO_2e /yr)	2020 Emissions Projections (MMT CO_2e/yr)	% of Total
Transportation	**137.992**	**168.657**	**209.101**	**57%**
On-Road Passenger Vehicles	108.945	133.947	160.783	44%
On-Road Heavy Duty	29.047	34.710	48.318	13%
Electric Power	**95.385**	**88.970**	**107.401**	**29%**
In-State Generation	33.808	32.152	55.039	15%
Imported Electricity	61.577	56.818	52.362	
Commercial and Residential	**44.220**	**41.579**	**47.970**	**13%**
Residential Fuel Use	29.657	28.515	32.100	9%
Commercial Fuel Use	13.462	11.704	13.755	4%
Commercial Combined Heat and Power	1.101	1.360	2.115	
Recycling and Waste[1]	**2.833**	**3.390**	**4.190**	**1%**
Domestic Waste Water Treatment	2.833	3.390	4.190	
TOTAL GROSS EMISSIONS	**280.430**	**302.596**	**368.662**	
% Reduction Goal from Statewide land use driven sectors (from 2020 levels to reach 1990 levels within these emission inventory sectors)			23.9%	
% Reduction from AB 32 Scoping Plan measures applied to land use driven sectors (Refer to Table 12)			-21.1%	
% Reduction needed statewide beyond Scoping Plan measures (Gap)			2.8%[2]	

Notes: AB = Assembly Bill; MMT CO_2e /yr = million metric tons of carbon dioxide equivalent emissions per year.
[1] Landfills not included.
[2] Represents an upper bound for the % emissions reduction that can be achieved through the GHG CEQA significance threshold. Please refer to Appendix D for detailed calculations.
Sources: Data compiled by EDAW 2009, ARB 2009a.

DRAFT

Table 13 San Francisco Bay Area Air Basin's Greenhouse Gas Emissions Inventory, 1990 Emissions Limit, and 2020 Projections from Land Use-Related Sectors				
Sector	1990 Emissions (MMT CO_2e /yr)	2007 Emissions (MMT CO_2e /yr)	2020 Emissions Projections (MMT CO_2e /yr)	% of Total[2]
Transportation	**26.1**	**30.8**	**35.7**	**50%**
On-Road Passenger Vehicles	23.0	27.5	32.0	
On-Road Heavy Duty	3.1	3.3	3.7	
Electric Power	**25.1**	**15.2**	**18.2**	**26%**
In-State Generation	16.2	8.1	9.9	
Imported Electricity	8.9	7.1	8.3	
Commercial and Residential	**8.9**	**15.0**	**16.8**	**24%**
Residential Fuel Use	5.8	7.0	7.5	
Commercial Fuel Use	3.1	8.0	9.3	
Recycling and Waste[1]	**0.2**	**0.4**	**0.4**	**1%**
Domestic Waste Water Treatment	0.2	0.4	0.4	
TOTAL GROSS EMISSIONS	**60.3**	**61.4**	**71.1**	
SFBAAB's "Fair Share" % Reduction (from 2020 levels to reach 1990 levels) with Regulatory Reductions (from Table 13)			2.8%[3]	
SFBAAB's Equivalent Mass Emissions Reduction Target at 2020			2.0[3]	

Notes: MMT CO_2e /yr = million metric tons of carbon dioxide equivalent emissions per year; SFBAAB = San Francisco Bay Area Air Basin.
[1] Landfills not included.
[2] Percentages do not sum exactly to 100% in table due to rounding.
[3] Represents an upper bound for the % and mass emissions reduction that can be achieved through the GHG CEQA significance threshold. Please refer to Appendix D for detailed calculations.
Sources: Data compiled by EDAW 2009, BAAQMD 2008.

The CO_2 reduction associated with the foreseeable implementation of AB 1493 is currently unknown. The AB 32 Scoping Plan assigns an approximate 20 percent reduction in emissions from passenger vehicles associated with the implementation of AB 1493. The AB 32 Scoping Plan also notes that "AB 32 specifically states that if the Pavley regulations do not remain in effect, ARB shall implement alternative regulations to control mobile sources to achieve equivalent or greater reductions of greenhouse gas emissions (HSC § 38590)." Thus, it is reasonable to assume full implementation of AB 1493 standards, or equivalent programs that would be implemented by ARB.

In addition, according to the Scoping Plan, the LCFS is expected to result in approximately 9.3 percent reduction in the carbon intensity of transportation fuels. However, it is possible that some portion of the emissions reductions required from the LCFS would be achieved over the life cycle of transportation fuel production rather than from mobile-source emission factors. The actual amount of GHG emission reduction that could be expected from motor vehicles from LCFS implementation is unknown. It was conservatively assumed that on-road passenger vehicle emission factors would be reduced by 2 percent, and the remaining 7.3 percent reduction would occur at refineries during fuel production.

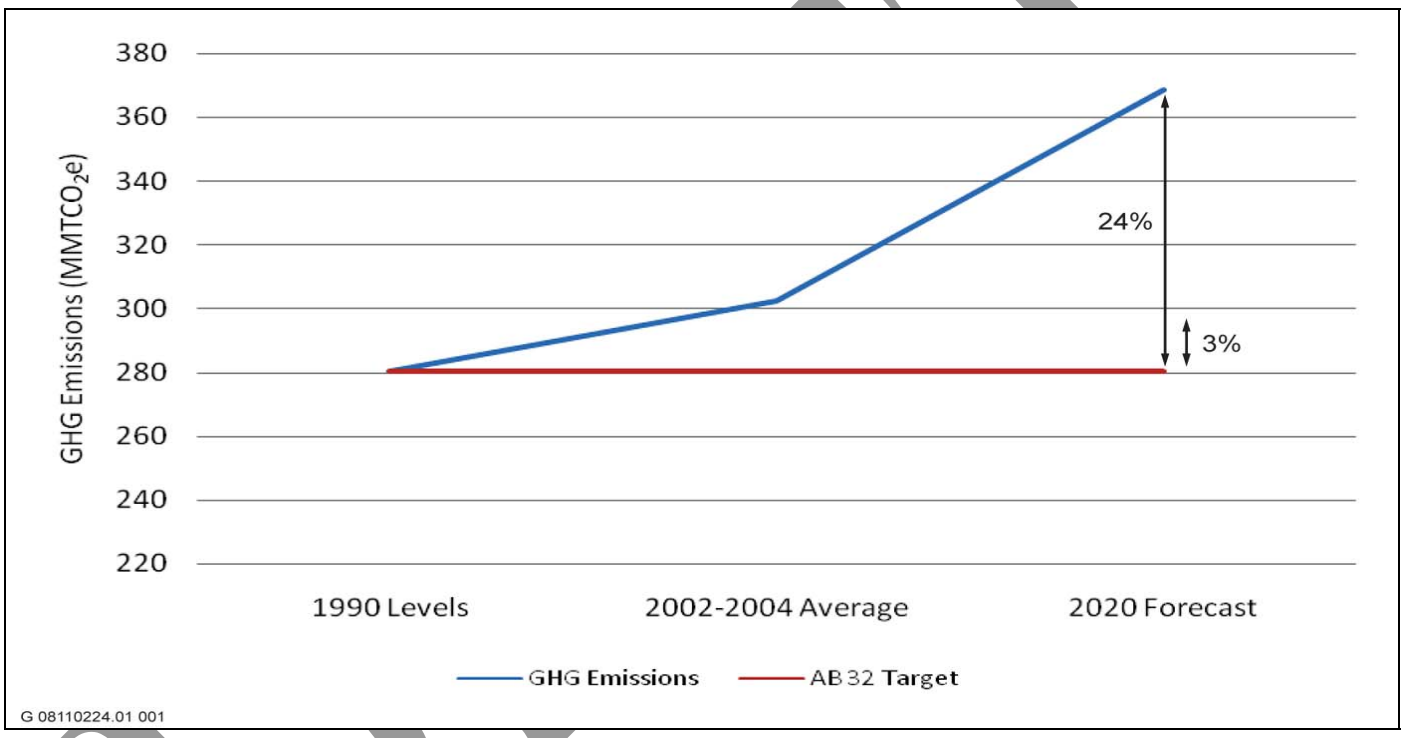
Because the transportation sector is the largest emissions sector of the state's GHG emissions inventory, it is reasonable to assume that legislation would aggressively target the transportation emissions sector for requisite reductions. The amount of emissions reductions associated with State regulations that are ultimately credited toward BAAQMD's overall emission reduction goal may need to be revised in response to implementation of future legislation and programs identified in the Scoping Plan, as well as the application of AB 1493 and LCFS.

DRAFT

Threshold Development

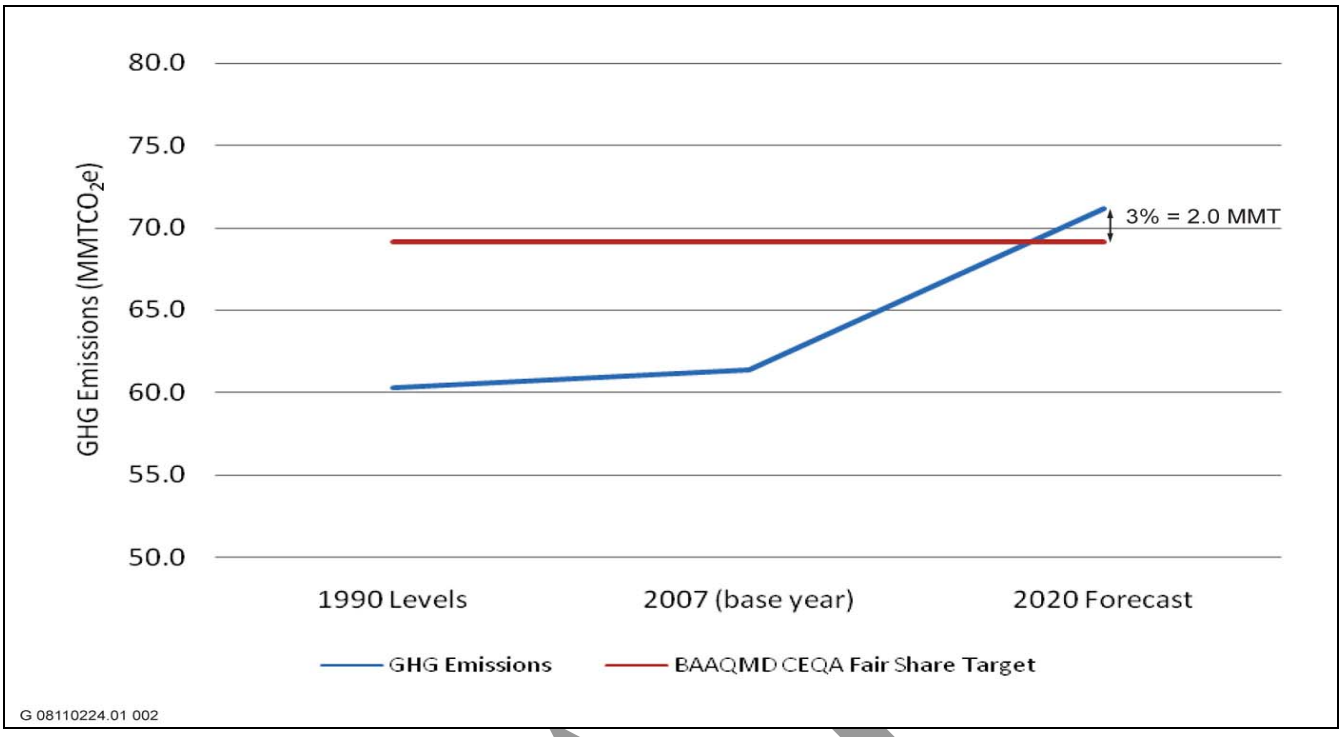
AB 32 mandates GHG reductions to 1990-equivalent levels by 2020, with foreseeable emission reductions from State regulations taken into account, were applied to the "land use-driven" emission sectors (i.e., those that are quantified for a project pursuant to a CEQA analysis [on-road passenger vehicles, commercial and residential natural gas, commercial and residential electricity consumption, and domestic waste water treatment], as directed by OPR in the Technical Advisory: *Climate Change and CEQA* [OPR 2008]). This translates to 2.8 percent reduction in GHG emissions from these sectors.

Applying a 2.8 percent reduction to these same emissions sectors in the SFBAAB's GHG emissions inventory would result in an equivalent fair share of 2.0 million metric tons per year (MMT/yr) reductions in GHG emissions from new land use development (refer to Figures 1 and 2).



Notes: AB = Assembly Bill, GHG = greenhouse gas, MMTCO2e = million metric tons carbon dioxide equivalent.
Sources: Data compiled by EDAW 2009, ARB 2009a.

California Land Use-Related Greenhouse Gas Emissions **Figure 1**



Notes: BAAQMD = Bay Area Air Quality Management District; CEQA = California Environmental Quality Act; GHG = greenhouse gas, MMTCO2e = million metric tons carbon dioxide equivalent.
Sources: Data compiled by EDAW 2009, BAAQMD 2008.

San Francisco Bay Area Air Basin Land Use-Related Greenhouse Gas Emissions **Figure 2**

A projected development inventory for the next ten years in the SFBAAB was calculated in the same manner as described above under the *Operational-Related Criteria Air Pollutants and Precursors* section (Page 15). Please refer to Exhibit 1. CO_2e emissions were modeled for projected development in the SFBAAB and compiled to estimate the associated GHG emissions inventory. The GHG (i.e., CO_2e) CEQA threshold level was adjusted for projected land use development that would occur within BAAQMD's jurisdiction over the period from 2010 through 2020.

Option 1A: Numeric-Only Threshold (Bright Line)

Option 1A involves using a numeric mass emissions significance threshold. If project-generated GHG emissions would be greater than the mass emission level, the impact would be significant and mitigation would be required. If project-generated emissions were below the mass emission level, no CEQA related mitigation measures would be required. This option is consistent with significance thresholds recommended by air districts throughout the State for criteria pollutants. Establishing a "bright line" to determine the significance of a project's GHG emission impact provides a level of certainty to lead agencies in determining if a project needs to reduce its GHG emissions through mitigation measures and when an EIR is required.

The Sensitivity Analysis (Table 14) conducted for Option 1 demonstrates various mass emission threshold levels (i.e., bright lines) that could be chosen based on the mitigation effectiveness anticipated to be achieved per project to meet the aggregate emission reductions of 2.0 MMT needed in the SFBAAB by 2020. Choosing a mass emission threshold level from Option 1 would result in about 60 percent of all projects and 90 percent of all GHG emissions anticipated to occur between now and 2020 from new land use development being above the significance threshold and having to implement all feasible mitigation measures to meet their CEQA obligations. This sensitivity analysis assumes the scenarios under Option 1A will achieve mitigation effectiveness on average of between 25 and 35 percent.

DRAFT

Project applicants and lead agencies could use readily available computer models to estimate a project's GHG emissions, based on project specific attributes, to determine if they are above or below the bright line numeric threshold. If they are above the threshold, they would then identify mitigation measures that they could implement to get below the bright line numeric significance threshold. This process would be a more straightforward analytical process than the other options discussed below.

Option 1B: Performance Standards-Only Threshold

Option 1B involves implementation of performance standards by all projects subject to CEQA that are not categorically or statutorily exempt that would achieve a minimum 24 percent emission reduction from all projects. If the project would implement performance measures to achieve a minimum 24 percent reduction in GHG emissions, the impact would be considered less than significant. The rationale for this approach is based on our analysis of the OPR identified land use-driven GHG emission inventory sectors in ARB's statewide GHG emission inventory that identified the total amount of emission reductions needed statewide to meet AB32 goals. This approach would also not give any "credit" to a project for statewide AB 32 emission reductions anticipated through implementation of the Scoping Plan for land use-driven sectors as these measures would be considered in the business as usual or baseline calculations for the project.

The sensitivity analysis (Table 14) indicates, at least theoretically, that requiring all projects to achieve a 24 percent emission reduction would result in the SFBAAB meeting its fair share of the emission reductions needed to meet the statewide 2020 GHG emission reduction goal. However, it should be noted that all projects (100 percent) subject to CEQA would have to calculate their unmitigated GHG emissions, or baseline, and then identify mitigation measures to reduce 24 percent of those emissions. It could prove very difficult for the smallest of projects to implement sufficient mitigation measures to reduce their GHG emissions by 24 percent, thereby requiring these smaller projects to prepare an EIR for no other impacts than GHG emissions and climate change.

Option 1B would require a substantial amount of guidance to project applicants and lead agencies on how to calculate a project's unmitigated baseline GHG emissions and the amount of emission reductions that could be taken credit for with each separate mitigation measure proposed for implementation.

Option 1C: Combination of Performance Standards and Numeric Threshold

Option 1C involves using a combination of a numeric mass emissions threshold and minimum performance standards for all projects that would result in emissions below the numeric threshold. If project-generated emissions would be over the numeric threshold level, the impact would be significant and mitigation would be required. A mitigation effectiveness range of between 25 and 35 percent was considered feasible. All projects that would result in GHG emissions less than the numeric threshold would be required to reduce emissions by a minimum of 5 percent to be considered less than significant.

The results of the sensitivity analysis presented in Table 14 for Option 1C suggest that a mass emission CEQA threshold of <2,175 MT/yr (equivalent to approximately120 single family dwelling units) combined with a moderately aggressive mitigation effectiveness of 30 percent on average from all projects above this mass amount would be needed to achieve the requisite emissions capture to reach 2.0 MMT CO_2e of GHG emissions reduction by 2020. A higher CEQA emission threshold of 3,000 MT/yr (equivalent to approximately 160 single family dwelling units) combined with a 30 percent mitigation effectiveness would not achieve 2.0 MMT CO_2e emission reductions by 2020. In addition, the sensitivity analysis for this option assumed a standard mitigation requirement through implementation of a prescribed set of performance standards of 5 percent emissions reduction for all projects that were below the numeric threshold. This was done to ensure that most projects would have to implement some amount of mitigation rather than placing the burden only on projects that exceeded the threshold. Because most projects would contribute some amount of GHG emissions, which have cumulative impacts, it is reasonable to expect that every project could achieve some amount of emission reduction. The 5 percent mitigation requirement was built into the threshold analysis, which was designed to achieve a reduction of 2.0

DRAFT

MMT CO_2e by 2020. The amount of 5 percent was chosen because it is our experience that it is relatively easy to achieve 5 percent reduction in operational GHG emissions through implementation of relatively few performance measures. For example, this amount would be achievable for projects located along transit or bicycle infrastructure. Sources of information cited in the report by the California Air Pollution Control Officers Association (CAPCOA) entitled CEQA and Climate Change indicate that there are measures and methods for quantification of mitigation effectiveness that can achieve the minimum 5 percent reduction in GHG emissions (CAPCOA 2008).

Based on our experience with developing mitigation measures for GHG emissions of this nature, a moderately aggressive performance standard for feasible mitigation at the project level is approximately 25-35 percent from today's GHG emission levels. The remainder of BAAQMD's 2.0 MMT CO_2e reduction goal, derived above, may be achieved through additional reductions expected from implementation of the AB 32 Scoping Plan. As additional regulations and legislation aimed at reducing GHG emissions from land use-related sectors become available in the future, the 2.0 MMT GHG emissions reduction goal may be revisited and recalculated by BAAQMD.

2.3.3.4 OPTION 2: CALIFORNIA AIR RESOURCES BOARD APPROACH

This option would involve implementation of the CEQA threshold(s) that are currently being developed by ARB in coordination with OPR, in response to SB 97 requirements.

Basis and Analysis

Pursuant to SB 97, OPR was directed to develop CEQA mitigation guidelines for GHG emissions. OPR looked to ARB for technical expertise in the development, and evidence in support, of these thresholds. ARB released its draft interim CEQA thresholds concepts for industrial, commercial, and residential projects for public comment in October 2008. The threshold concepts include:

- If the project is statutorily or categorically exempt from CEQA, it would be considered to result in a less-than-significant impact for GHG emissions.
- If the project is consistent with an ARB-approved SCS developed pursuant to SB 375, it would be considered to result in a less-than-significant impact for GHG emissions.
- For industrial projects (i.e., projects that would apply for air district permits), if the project would implement prescriptive performance standards related to construction and mobile-source operational GHG emissions, and meet a mass emissions threshold of 7,000 MT CO_2e/yr, it would be considered to result in a less-than-significant impact for GHG emissions.
- For residential and commercial projects, if the project would implement a series of prescriptive performance measures addressing GHG emissions from construction, mobile sources, energy consumption, water consumption, and solid waste, and potentially meet a mass emissions threshold; which is still under development and was not provided in the interim threshold draft; it would be considered to result in a less-than-significant impact for GHG emissions.

As of the time of writing, ARB is still accepting public comments on these draft options, and has not suggested a timeline for revision or adoption (ARB 2009b).

DRAFT

Table 14
Greenhouse Gas Threshold Level Sensitivity Analysis

Option	Mitigation Effectiveness Assumptions: Performance Standards Applied to All Projects with Emissions < Threshold Level	Mitigation Effectiveness Assumptions: Mitigation Effectiveness Applied to Emissions > Threshold Level	Mass Emission Threshold Level (MT CO_2e/yr)	% of Projects Captured	% of Emissions Captured	Emissions Reduction per year (MT/yr)	Aggregate Emissions Reduction (MMT) at 2020	Threshold Project Size Equivalent (single family dwelling units)
1A	N/A	35%	1,175	58%	92%	202,729	2.0	65
1A	N/A	30%	1,150	59%	92%	200,091	2.0	64
1A	N/A	25%	1,075	59%	92%	200,752	2.0	60
1A	N/A	35%	1,945	14%	61%	189,516	1.9	107
1A	N/A	30%	1,195	58%	92%	190,141	1.9	66
1A	N/A	25%	1,120	59%	92%	190,602	1.9	62
1A	N/A	35%	2,175	14%	60%	180,256	1.8	120
1A	N/A	30%	1,350	21%	67%	180,491	1.8	75
1A	N/A	25%	1,500	20%	67%	179,535	1.8	83
1A	N/A	35%	2,875	10%	56%	170,452	1.7	159
1A	N/A	30%	2,000	14%	61%	170,363	1.7	111
1A	N/A	25%	2,250	14%	60%	170,636	1.7	125
1A	N/A	35%	3,175	10%	55%	160,295	1.6	176
1A	N/A	30%	2,900	10%	56%	159,686	1.6	161
1A	N/A	25%	2,825	11%	57%	159,614	1.6	156
1B	24%	N/A	N/A	100%	100%	192,544	1.9	N/A[2]
1C	5%	35%	2,475	14%	60%	200,316	2.0	135
1C	5%	30%	2,175	14%	60%	200,368	2.0	120
1C	5%	25%	1,725	17%	63%	204,398	2.0	95
1C	5%	30%	3,000	10%	56%	174,019	1.7	160
1C	5%	30%	10,000	2%	33%	209,682	1.2	550

Notes: MMT = million metric tons per year; MT CO_2e/yr = metric tons of carbon dioxide equivalent emissions per year; MT/yr = metric tons per year; N/A = not applicable.
[1] Please refer to Table 9 for assumptions regarding regulatory emission reductions.
[2] Any project subject to CEQA would trigger this threshold.
Please refer to Appendix E for detailed calculations.
Source: Data modeled by EDAW 2009.

DRAFT

2.3.4 TOXIC AIR CONTAMINANT IMPACTS

2.3.4.1 CURRENT APPROACH

Any project with the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of TAC would be deemed to have a significant impact. This applies to new sensitive receptors locating near existing sources of TACs, as well as sources of TAC locating near existing receptors. The current TAC threshold of significance applies to all projects, regardless of size, and requires mitigation for TAC impacts above the thresholds listed below.

Proposed development projects that have the potential to expose sensitive receptors or the general public to TAC in excess of the following thresholds from any source, mobile or stationary would be considered to have a significant air quality impact if the:

- Probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million.
- Ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index greater than 1 for the MEI.

Accidental Releases/Acutely Hazardous Air Emissions

The BAAQMD currently recommends, at a minimum, that the lead agency, in consultation with the administering agency of the Risk Management Prevention Program (RMPP), find that any project resulting in receptors being within the Emergency Response Planning Guidelines (ERPG) exposure level 2 for a facility has a significant air quality impact. ERPG exposure level 2 is defined as "the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action."

The current Accidental Release/Hazardous Air Emissions threshold of significance could affect all projects, regardless of size, and require mitigation for Accidental Release/Hazardous Air Emissions impacts.

2.3.5 OPERATIONAL-RELATED

2.3.5.1 SITING A NEW SOURCE OF TACS

Option 1: Stationary Source Permit Approach

This option would consist of applying the current stationary source permitting thresholds to project-generated stationary, area-, and mobile-source TAC emissions.

Basis and Analysis

Stationary sources of emissions are subject to BAAQMD's permit process per adopted rules and regulations. The permitting process requires that all new or modified stationary sources that emit TACs perform modeling to determine what the concentration of TACs will be at the boundary of their property. This current permitting approach does not include area or mobile sources of emissions in the modeling or permitting assessment. If a proposed stationary source will have operational TAC concentrations from permitted equipment that result in an estimated 1 excess cancer risk in a million, the project is required to install Toxic Best Available Control Technology (TBACT) to minimize emissions of TACs. The TAC modeling must also demonstrate to BAAQMD that implementation of the proposed project would not result in additional incremental exposure of surrounding receptors to levels that exceed 10 in one million for excess cancer risk or a hazard index above one.

DRAFT

The Option 1 approach would expand on the current approach by requiring the application of the one in a million requirement for stationary sources to install TBACT to projects that have TAC emissions from sources (primarily mobile) not currently required to obtain permits to operate. These non-stationary source type projects would be required to implement Toxic Best Practices (TBP) if their modeled cancer risks are above the one in a million threshold. The BAAQMD would identify a list of TBPs for non-stationary sources to implement if they are above the one in a million threshold. The threshold of significant impact, thereby requiring implementation of all feasible onsite mitigation measures would remain at the current 10 in a million excess cancer risk. Stationary source permits to operate would still not be issued to stationary sources that could not reduce their risk on site below the 10 in a million excess cancer risk threshold.

Option 2: Tiered Approach

This approach would involve application of a tiered (more stringent) CEQA threshold in areas of high concern, while the current 10 in one million threshold would be applied in all other areas.

Basis and Analysis

BAAQMD's Community Air Risk Evaluation (CARE) Program examines TAC emissions from stationary sources, area sources, and on-road and off-road mobile sources. Phase 1 of the CARE Program involved developing a TAC emissions inventory and conducting computer modeling to identify areas in the SFBAAB that are cumulatively impacted from sources of TACs. Demographic data was then used to identify communities of individuals that are disproportionally impacted from high concentrations of TACs. According to the findings of Phase 1 of the CARE Program, diesel PM accounts for about 80 percent of the inhalation cancer risk from TACs in the SFBAAB. The highest diesel PM emissions occur in the urban core areas of Concord, eastern San Francisco, western Alameda County, Redwood City/East Palo Alto, Richmond/San Pablo, and San Jose (BAAQMD 2006).

Option 2 would apply a more restrictive significance threshold of 5 in one million for excess cancer risk and require the installation of TBACT and TBP for any source with TACs locating in a CARE community. These thresholds would apply to stationary, area, and mobile sources of TAC emissions. Please refer to Figures 3 and 4 for CARE program priority community locations.

Option 3: No Net Increase Approach

Option 3 is identical to Option 2 except that it would proposes a no net increase inhalation cancer risk CEQA significance threshold for siting a new source of TACs in CARE priority communities identified as the urban core areas of Concord, eastern San Francisco, western Alameda County, Redwood City/East Palo Alto, Richmond/San Pablo, and San Jose. This threshold would not define a "substantial change" (see definition of significant impact in section below), because all changes would be considered significant. The practical implications of essentially setting a zero threshold for TACs in these communities could be substantial. A no net increase or zero threshold could make it extremely difficult for a wide variety of businesses to locate in the CARE communities, businesses that are essential to daily lives. A large number of relatively small projects would need to prepare an EIR since any increase in TACs would be considered a significant impact. There are not adequate mitigation strategies or alternatives available to eliminate all TAC from even the smallest of sources.

2.3.5.2 SITING A NEW RECEPTOR

Impacts of the Existing Environment on a Proposed Project

In addressing the potential for impacts from existing sources of toxic exposure, Lead Agencies should take care to focus their analyses squarely on impacts arising from *changes* to the environment caused by the proposed project. (*See* CEQA § 21068, defining "significant effect on the environment" as "a substantial, or potentially substantial, adverse *change* in the environment" (emphasis added).) A Lead Agency can address a preexisting environmental

DRAFT

condition—such as existing sources of toxics—under CEQA only if there is a nexus between the preexisting condition and some physical change arising from the project. For example, the mere existence of preexisting groundwater contamination underneath a property does not constitute a significant environmental impact from a project on the property that would not affect the contamination in any way, as the California Court of Appeal held in the case of *Baird v. County of Contra Costa* (1995) 32 Cal.App.4th 1464, 1468. But where a change caused by the project will implicate the preexisting contamination in some way, such as introducing people to an area with a preexisting hazard, the contamination does warrant consideration under CEQA. Thus, where a developer seeks to acquire contaminated property and the acquisition will require it to manage the contaminated soil, the preexisting contamination is subject to CEQA analysis, as the Court of Appeal held in *McQueen v. Mid-Peninsula Regional Open Space District* (1988) 202 Cal.App.3d 1136, 1147, 249 Cal. Rptr. 439. In that case the project did entail a change implicating the preexisting contamination, which is the key distinction the court pointed to in *Baird*. (*See also City of Santa Monica v. City of Los Angeles*, 2007 Cal. App. Unpub. LEXIS 7409, *87–*89 n.22 (distinguishing *Baird* in noting that constructing buildings above subterranean methane contamination could concentrate the methane and constitute a physical change triggering CEQA analysis of the methane impacts).)

Lead agencies should, therefore, ensure that they focus on physical changes caused by the project that will implicate existing sources of toxic exposure. An example of such a change caused by the project would be if the project causes additional people to be attracted to the project location and thereby to be exposed to additional toxic risks. This approach to evaluating risks to new occupants of a project from existing sources of risk has been endorsed by the Resources Agency in Section 15126.2(a) of the CEQA Guidelines. Lead agencies using such an approach should specifically identify the changes being caused by the project in relation to existing sources of risk to minimize the chances of falling afoul of *Baird*.

Option 1: Statistical/Percentile Health Impact-Based Approach

This approach considers a method of determining whether a project would result in a significant impact if it would attract or locate new sensitive receptors into an area exposed to TAC concentrations exceeding the ambient median exposure for the entire SFBAAB.

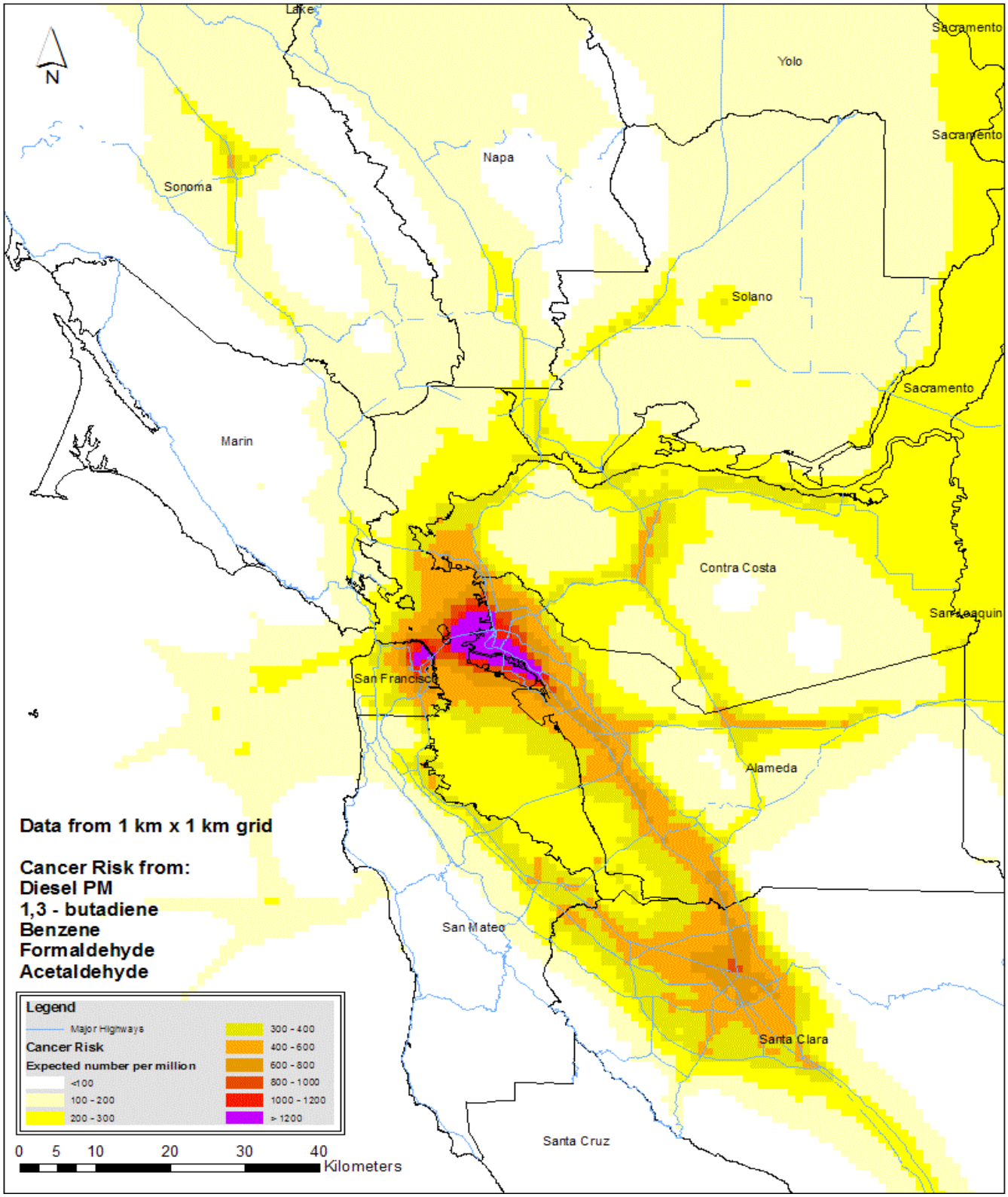
Basis and Analysis

According to BAAQMD's CARE program's one kilometer resolution grid point data, 50 percent of the land area in the SFBAAB currently experiences background inhalation cancer risk levels of less than 152 excess cases per one million, with a standard deviation of 180. The frequency distribution of unweighted (i.e., does not include population) inhalation cancer risk in the SFBAAB is presented in Figure 5, and detailed in Appendix E.

Based on the Phase I findings from the CARE Program, majority of the cancer risks in the SFBAAB are along major freeways. Diesel PM from on-road and off-road mobile sources are the greatest single contributor (over 80 percent) of the TAC cancer risk in the SFBAAB. Cancer risks in areas along these major freeways are estimated to range from 200 to over 500 excess cases in a million. Typical annual average ambient levels of diesel PM in the SFBAAB are approximately 1.3 micrograms per cubic meter ($\mu g/m^3$), which equates to approximately 300 excess cancer cases in a million.

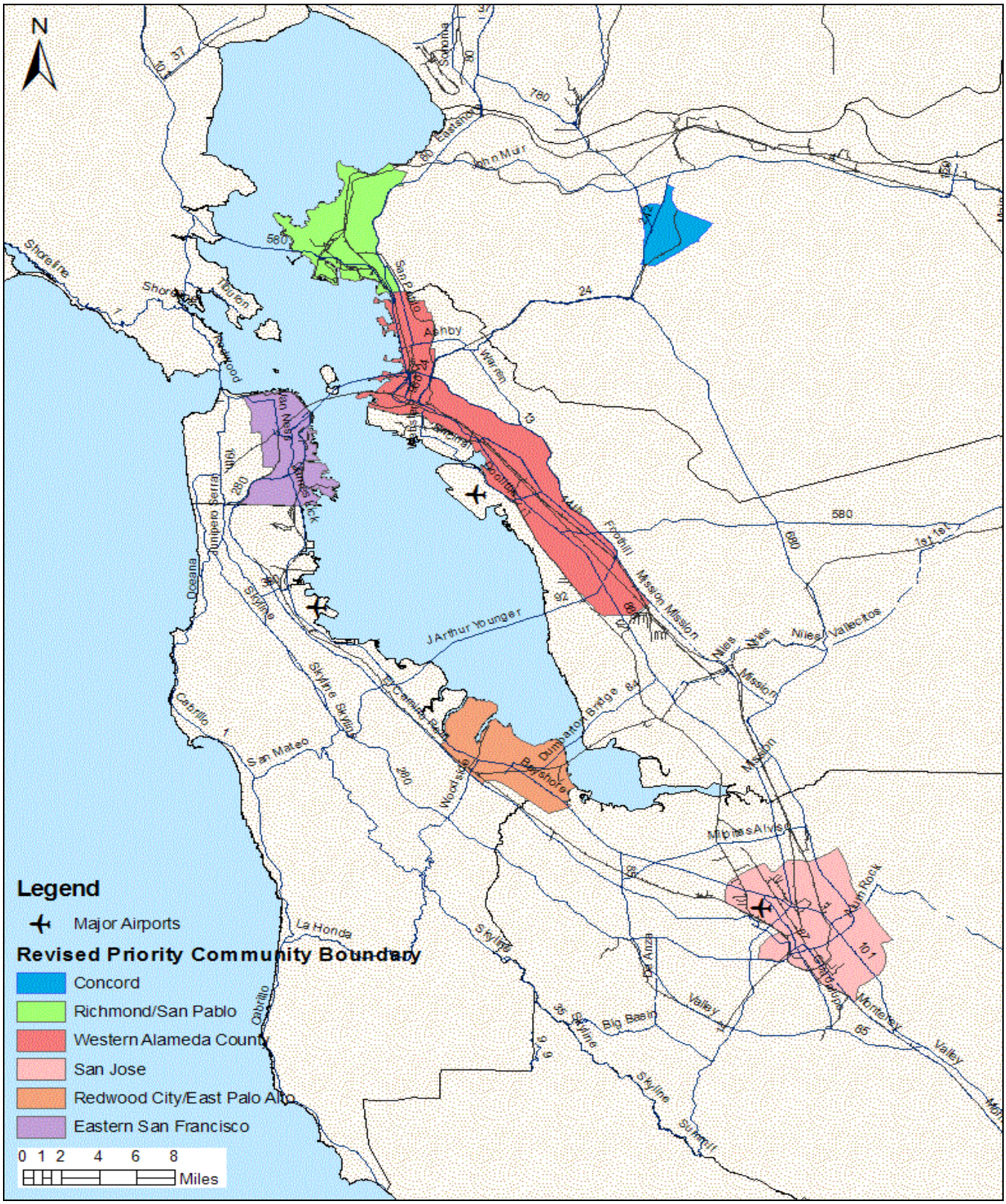
By weighing the cancer risk by the number of sensitive receptors (i.e., people under the age of 18 and over the age of 64) living in each grid cell, BAAQMD is able to identify areas of high potential risk exposure. This analysis weights risk by the population of each grid point. Fifty percent of BAAQMD's population is estimated to have an ambient background inhalation cancer risk of less than 500 cases in one million. Approximately two percent of the SFBAAB population is exposed to background risk levels of less than 200 excess cases in one million. This is in contrast to the upper percentile ranges where 8 percent of the SFBAAB population is exposed to background risk levels of greater than 1,000 excess cases per one million. Please refer to Figure 6 for a graphical representation of population-weighted risk data, and refer to Table 15 for a summary of population-weighted inhalation cancer risk percentile data.

DRAFT



Notes: PM = particulate matter.
Source: BAAQMD 2008.

Modeled Inhalation Cancer Risk in the San Francisco Bay Area Air Basin **Figure 3**

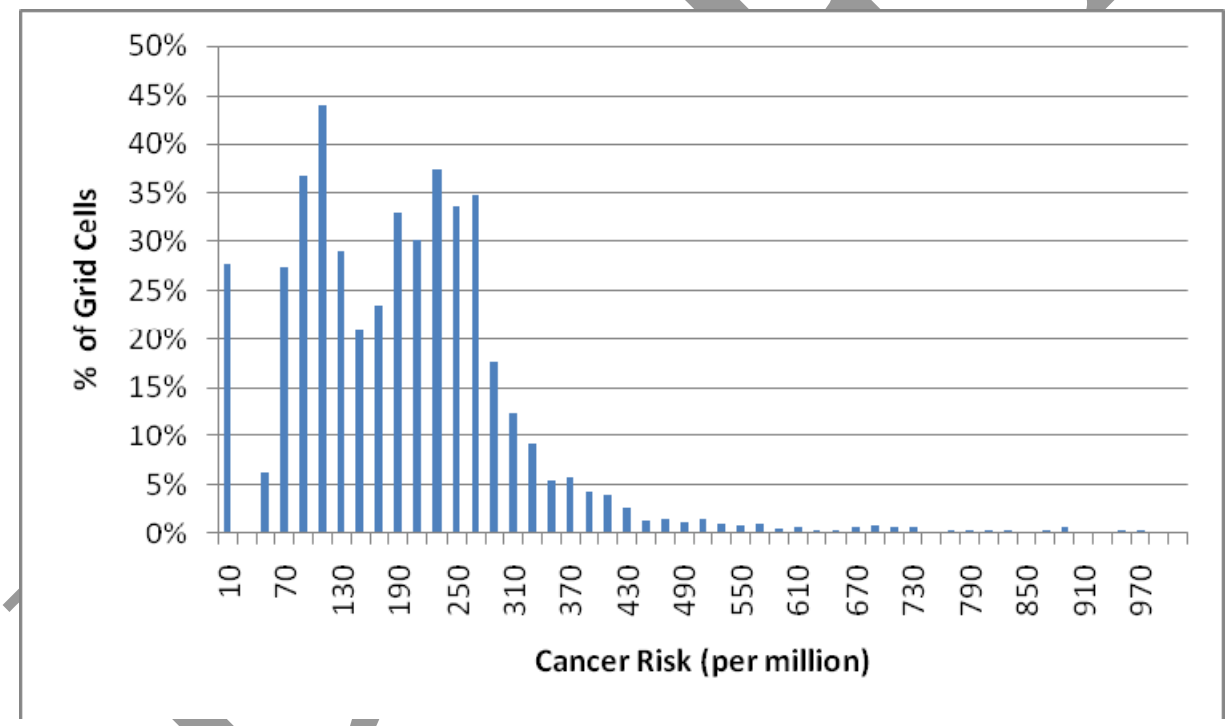


Source: BAAQMD 2008.

Priority Community Areas **Figure 4**

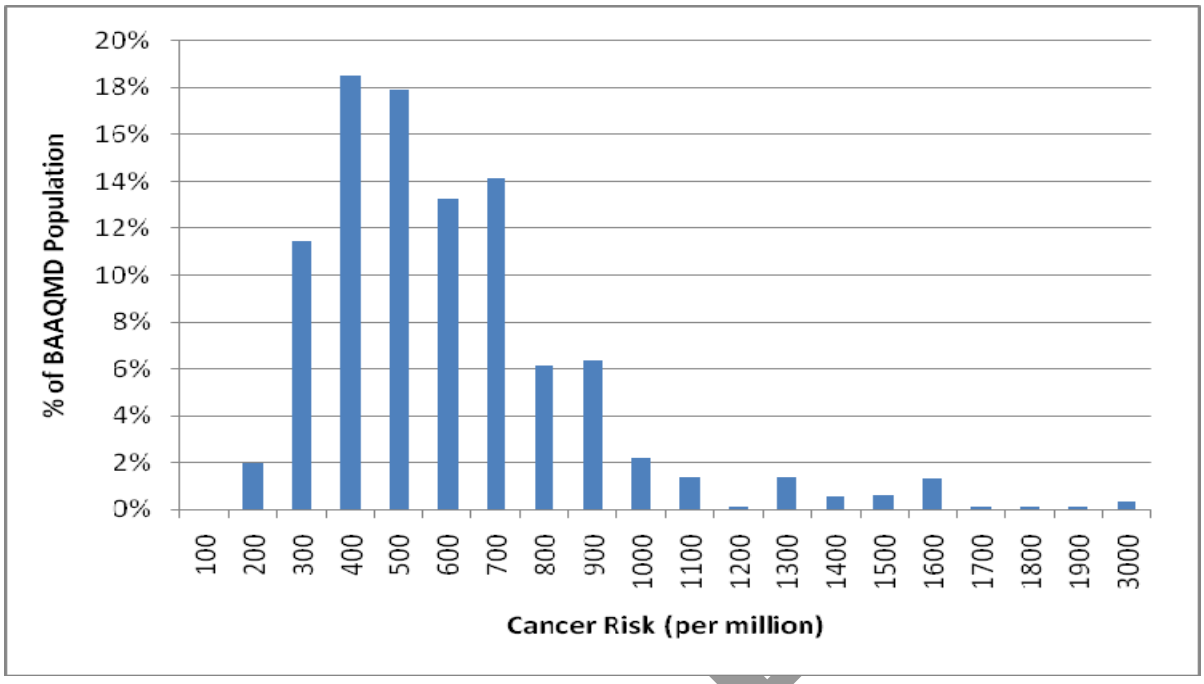
Option 1 for siting new sensitive receptors in areas currently impacted from nearby sources of TACs would set a significance threshold at the cleanest areas in the Bay Area, with an exposure to inhalation cancer risk occurring now in the SFBAAB, of 500 excess cancer cases in a million. This option would attempt to reconcile the issues associated with promoting high density infill transit oriented development, while, at the same time, trying to reduce the public's exposure to TACs. Many of the features that make transit oriented development favorable from a regional air quality perspective (e.g., being located along existing transportation, transit, and train corridors) can also expose sensitive receptors to high concentrations of TACs. At some point the benefits to regional air quality from development in these areas are superseded by the need to protect the public from moving into an area of high TACs.

Further complicating this issue is ARB's diesel risk reduction plan, which estimates an 85 percent reduction in statewide diesel particulate matter (PM) emissions by 2020, and whether currently existing areas of high cancer risks from diesel PM will be at acceptable levels in 2020 due to implementation thereof. Since CEQA is concerned about the existing condition at the time the Notice of Preparation is prepared, BAAQMD staff believe it would be a mistake to assume ARB's plan would ensure significant impacts did not occur. This threshold would need to be revisited after ARB's diesel risk reduction plan has been implemented.



Source: BAAQMD 2009.

San Francisco Bay Area Air Basin Unweighted Inhalation Cancer Risk **Figure 5**



Notes: BAAQMD = Bay Area Air Quality Management District.
Sources: EDAW 2009, BAAQMD 2009.

San Francisco Bay Area Air Basin Population-Weighted Inhalation Cancer Risk **Figure 6**

Table 15
Statistical Summary of Population-Weighted Background Risk

Portion of Population (Percent of population below level of background risk)	Background Risk (inhalation cancer cases in one million)
92	1,000
90	900
83	800
77	700
63	600
50	500
32	400
13	300
2	200
0	100

Source: Data compiled by EDAW 2009.
See Appendix G for detailed calculations.

2.4 ODORS IMPACTS

2.4.1.1 CURRENT APPROACH

The BAAQMD considers a project locating near an existing source of odors as having a significant odor impact if it is proposed for a site that is closer to an existing odor source than any location where there has been:

DRAFT

- More than one confirmed complaint per year averaged over a three year period; or
- Three unconfirmed complaints per year averaged over a three year period.

If the proposed project is located farther than the screening distance for the source of the odors identified in Table 16, the odor impacts are considered less than significant.

If a proposed project is determined to result in potential odor problems as defined by the criteria in District Regulation 7: Odorous Substances, and sensitive receptors are located closer than the screening distance in Table 16, the BAAQMD recommends that mitigation measures should be identified to reduce a potentially significant impact.

Table 16
BAAQMD Project Screening Trigger Levels for Potential Odor Sources

Type of Operation Project Screening	Distance
Wastewater Treatment Plant	1 mile
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g. auto body shops)	1 mile
Rendering Plant	1 mile
Coffee Roaster	1 mile

Notes: BAAQMD = Bay Area Air Quality Management District.
Source: BAAQMD 1999.

The odor threshold of significance could affect all projects, regardless of size, and require mitigation for odor impacts.

2.4.2 Siting a New Receptor or Source

Odors are generally considered a nuisance, but can result in a public health concern. Some land uses that are needed to provide services to the population of an area can result in offensive odors, such as filling portable propane tanks or recycling center operations. When a proposed project includes the siting of sensitive receptors in proximity to an existing odor source, or when siting a new source of potential odors, the following qualitative evaluation should be performed.

2.4.2.1 Option 1: Qualitative Approach

When determining whether potential for odor impacts exists, consider the following factors and make a determination based on evidence in each qualitative analysis category:

- **Distance:** Use the screening-level distances in Table 16.

DRAFT

- **Wind Direction:** Consider whether sensitive receptors are located upwind or downwind from the source for the most of the year. If odor occurrences associated with the source are seasonal in nature, consider whether sensitive receptors are located downwind during the season in which odor emissions occur.

- **Complaint History:** Consider whether there is a history of complaints associated with the source. If there is no complaint history associated with a particular source (perhaps because sensitive receptors do not already exist in proximity to the source), consider complaint-history associated with other similar sources in BAAQMD's jurisdiction with potential to emit the same or similar types of odorous chemicals or compounds, or that accommodate similar types of processes.

- **Character of Source:** Consider the character of the odor source, for example, the type of odor events according to duration of exposure or averaging time (e.g., continuous release, frequent release events, or infrequent events).

- **Exposure:** Consider whether the project would result in the exposure of a substantial number of people to odorous emissions.

2.5 PLAN-LEVEL IMPACT THRESHOLDS

2.5.1 CURRENT THRESHOLD APPROACH

General Plans of cities and counties must show consistency with regional plans and policies affecting air quality to claim a less than significant impact on air quality. General plan amendments, redevelopment plans, specific area plans, annexations of lands and services, and similar planning activities should receive the same scrutiny as general plans with respect to consistency with regional air quality plans. For a proposed local plan to be consistent with the regional air quality plan it must be consistent with the most recently adopted AQP, which are updated approximately every three years.

All of the following criteria must be satisfied for a proposed plan to be determined to be consistent with the AQP, and therefore, result in a less than significant impact on air quality.

2.5.1.1 DETERMINING LOCAL PLAN CONSISTENCY

Proposed Plans must show over the planning period of the plan that:

- Population growth for the jurisdiction will not exceed the values included in the current AQP, and
- The rate of increase in VMT for the jurisdiction is equal to or lower than the rate of increase in population.

2.5.1.2 DETERMINING LOCAL PLAN CONSISTENCY WITH CLEAN AIR PLAN TRANSPORTATION CONTROL MEASURES

Determining consistency of local plans with the AQP also involves assessing whether AQP transportation control measures (TCMs) for which local governments are implementing agencies are indeed being implemented. The AQP identifies implementing agencies/entities for each of the TCMs included in the AQP. Local plans that do not demonstrate reasonable efforts to implement TCMs in the AQP would be considered to be inconsistent with the regional air quality plan and therefore have a significant air quality impact.

2.5.1.3 LOCAL PLAN IMPACTS ASSOCIATED WITH TOXIC AIR CONTAMINANT AND ODORS

For local plans to have a less-than-significant impact with respect to potential TACs and odors, buffer zones would have to be established around existing and proposed land uses that would emit these air pollutants. Buffer

DRAFT

zones to avoid odors and toxics impacts should be reflected in local plan policies, land use map(s), and implementing ordinances (e.g., zoning ordinance).

The threshold of significance for plan impacts could affect all plan adoptions and amendments and require mitigation for a plan's air quality impacts.

OPTION 1: CURRENT PLUS GHG EFFICIENCY APPROACH

This approach maintains the current approach and adds a greenhouse gas component. Option 1 proposes the development of a GHG-efficiency metric (e.g., GHG emissions per unit) which would enable comparison of a proposed general plan to the current general plan and to determine if the proposed general plan meets AB 32 emission reduction goals.

BASIS AND ANALYSIS

AB 32 identifies local governments as essential partners in achieving California's goal to reduce GHG emissions. Local governments have primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth and the changing needs of their jurisdiction. ARB has developed the Local Government Operations Protocol and is developing a protocol to estimate community-wide GHG emissions. ARB encourages local governments to use these protocols to track progress in reducing GHG emissions. ARB encourages local governments to institutionalize the community's strategy for reducing its carbon footprint in its general plan. SB 375 creates a process for regional integration of land development patterns and transportation infrastructure planning with the primary goal of reducing GHG emissions from the largest sector of the GHG emission inventory, light duty vehicles.

If a statewide context for GHG emissions reductions is established, GHG efficiency can be viewed independently from the jurisdiction in which the plan is located. Normalizing this projected 2020 mass of emissions from land use-related emissions sectors by a demographic unit related to what the general plan itself is accommodating (e.g., population and employment) provides consideration for GHG efficiency of a project and the opportunity to evaluate the project's consistency with AB 32 targets. For the purposes of this exercise, the sum of the number of jobs and the number of residents at a point in time is termed the "service population" (SP). GHG efficiency metrics were developed for the emissions rates at the State level that would accommodate projected growth (as indicated by population and employment growth) under trend forecast conditions, and the emission rates needed to accommodate growth while allowing for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020).

If a general plan demonstrates, through dividing the emissions inventory projections (MT CO_2e) by the amount of growth that would be accommodated in 2020, that it could meet the GHG efficiency metrics proposed in this section, (either 6.4 MT CO_2e/capita or 4.4 MT CO_2e/SP) BAAQMD believes that the amount of GHG emissions associated with the general plan would be less than significant, regardless of its size (and magnitude of GHG emissions). Please refer to Table 18. In other words, the general plan would accommodate growth in a manner that would not hinder the State's ability to achieve AB 32 goals, and thus, would be less than significant for GHG emissions and their contribution to climate change.

When analyzing long-range plans, such as general plans, it is important to note that the planning horizon will often surpass the 2020 timeframe for implementation of AB 32. Executive Order S-3-05 establishes a more aggressive emissions reduction goal for the year 2050 of 80 percent below 1990 emissions levels. The year 2020 should be viewed as a milestone year, and the general plan should not preclude the community from a trajectory toward the 2050 goal. However, the 2020 timeframe is examined in this threshold evaluation because doing so for the 2050 timeframe (with respect to population, employment, and GHG emissions projections) would be too speculative. Advances in technology and policy decisions at the state level will be needed to meet the aggressive 2050 goals. It is beyond the scope of the analysis tools available at this time to examine reasonable emissions

DRAFT

reductions that can be achieved through CEQA analysis in the year 2050. As the 2050 timeframe draws nearer, BAAQMD will need to reevaluate the threshold to better represent progress toward 2050 goals.

Table 17
California Greenhouse Gas Emissions, Population Projections, and Greenhouse Gas Efficiency Thresholds

	1990	2002-2004 Average	2020
Population	29,758,213	36,199,342	44,135,923
Employment	14,294,100	16,413,400	20,194,661
California Service Population (Population + Employment)	44,052,313	52,612,742	64,330,584
Projected GHG emissions(metric tons CO_2e)/capita[1]	9.42	8.36	8.35
Projected GHG emissions (metric tons CO_2e)/SP[1]	6.37	5.75	5.73
AB 32 Goal GHG emissions (metric tons CO_2e)/capita[1]	9.42	7.75	**6.35**
AB 32 Goal GHG emissions (metric tons CO_2e)/SP[1]	6.37	5.33	**4.36**

Notes: AB = Assembly Bill; CO_2e = carbon dioxide equivalent; GHG = greenhouse gas; SP = service population.
[1] Greenhouse gas efficiency levels were calculated using only the "land use-related" sectors of ARB's emissions inventory.
Please refer to Appendix D for detailed calculations.
Sources: Data compiled by EDAW 2009, ARB 2009a, DOF 2009, EDD 2009.

Benefits of the Service Population metric are that it allows decision makers to compare GHG efficiency of general plan alternatives that vary residential and non-residential development totals, encourages GHG efficiency through improving jobs/housing balance, and treats all jurisdictions equitably, rather than giving preference to communities that accommodate more residential (population-driven) land uses than non-residential (employment driven) land uses. Another benefit of an efficiency-based metric is that it does not penalize well-planned communities that propose a large amount of development. Instead, GHG efficiency metrics act to encourage the types of development that BAAQMD and OPR support (i.e., infill and transit-oriented development), rather than discourage large developments for being accompanied by a large mass of GHG emissions. This type of threshold can shed light on a well-planned general plan that accommodates a large amount of growth in a GHG-efficient way.

2.5.1.4 OPTION 2: CURRENT APPROACH PLUS CLIMATE ACTION PLAN-FOCUSED APPROACH

This approach would also build on the current approach to evaluating the significance of proposed plans on local and regional air quality and GHG emissions. Local jurisdictions that may not initiate a general plan update for a number of years may decide to address GHG emissions in a stand-alone Climate Action Plan. Option 2 would require an analysis demonstrating that the CAP is consistent with all of the AB 32 Scoping Plan measures.

Basis and Analysis

The CAP should identify a land use design, transportation network, goals, policies and implementation measures that would achieve a 23.9 percent reduction in GHG emissions relative to 2020 emissions levels as discussed in the section above and calculated in Appendix C. As discussed previously, 23.9 percent was calculated relative to 2020 emissions projections from the "land use-related" GHG emissions sectors only (e.g., the sectors over which local government would have financial, operational, or discretionary control through land use entitlement authority; see Appendix C). The CAP should be adopted by resolution and include enforceable and specific policies and implementation programs demonstrating that those policies will achieve AB 32 goals.

DRAFT

REFERENCES

ARB. *See* California Air Resources Board.

BAAQMD. *See* Bay Area Air Quality Management District.

Bay Area Air Quality Management District. 1999 (December). *BAAQMD CEQA Guidelines*. San Francisco, CA.

_____. 2005. Regulation 2, Rule 2. New Source Review. Available: <http://www.baaqmd.gov/dst/regulations/rg0202.pdf>. Accessed February 2009.

_____.2006. CARE Phase 1 Findings and Policy Recommendations. Available: <http://baaqmd.gov/CARE/documents/care_p1_findings_recommendations_v2.pdf>. Accessed March 2009.

_____. 2008. Source Inventory of Bay Area Greenhouse Gas Emissions. San Francisco, CA.

California Air Pollution Control Officers Association. 2008 (January). *CEQA and Climate Change*. Sacramento, CA. Available: <http://www.capcoa.org/CEQA/CAPCOA%20White%20Paper.pdf>. Accessed April 10, 2009.

California Air Resources Board. 2005. *Land Use Compatibility Handbook. A Community Health Perspective.* Sacramento, CA.

_____. 2008 (December). *Climate Change Proposed Scoping Plan*. Sacramento, CA. Available: <http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>. Accessed March 2009.

_____. 2009a. Greenhouse Gas Inventory and Forecast. Available: <http://www.arb.ca.gov/cc/inventory/data/tables/arb_ghg_inventory_forecast_2008_06_26.xls>. Accessed March 2009.

_____ .2009b. *Preliminary Draft Staff Proposal: Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act*. Available: <http://www.arb.ca.gov/cc/localgov/ceqa/meetings/10270prelimdraftproposal102408.pdf>. Accessed March 2009.

_____ .2009c. *Area Designations and Maps*. Available: <http://www.arb.ca.gov/desig/desig.htm>, Accessed April 10, 2009.

CEC. *See* California Energy Commission.

CEC. 2007. Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available: <http://www.energy.ca.gov/title22008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF>. Accessed March 2009.

California Department of Finance. 2009. Residential Development Data: E5 – City and County Population Estimates. 2000-2050 - Race and Ethnic Populations Totals. Available: <http://www.labormarketinfo.edd.ca.gov/?pageid=145 >. Accessed February 2009.

DRAFT

California Economic Development Department. 2009. Commercial/Industrial Employment Data: Projections of Employment by Industry and Occupation. Available: <http://www.labormarketinfo.edd.ca.gov/?pageid=145>. Accessed February 2009.

DOF. *See* California Department of Finance.

EDD. *See* California Economic Development Department.

EPA. *See* U.S. Environmental Protection Agency.

Governor's Office of Planning and Research. 2008 (June 19). *Technical Advisory: CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review.* Sacramento, CA. Available: <http://opr.ca.gov/ceqa/pdfs/june08-ceqa.pdf>. Accessed February 2009.

Intergovernmental Panel on Climate Change. 2007 (February). *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.* Geneva, Switzerland.

IPCC. *See* Intergovernmental Panel on Climate Change.OPR. *See* Governor's Office of Planning and Research.

Rimpo and Associates. 2009. BAAQMD CEQA Projects Database. Orangevale, CA.

UNFCCC. *See* United Nations Framework Convention on Climate Change.

United Nations Framework Convention on Climate Change. 2009. *Article 1 of the UNFCCC.* Available: http://unfccc.int/essential_background/convention/background/items/2536.php. Accessed April 8, 2009.

U.S. Environmental Protection Agency. 2008. Federal Register: Implementation of the New Source Review (NSR) Program for Particulate Matter ($PM_{2.5}$) less than 2.5 Micrometers. Available: <http://www.epa.gov/fedrgstr/EPA-AIR/200May/Day-1a10768.pdf>. Accessed February 2009.

_____. 2009. Monitor Values Report Data. Available: <http://www.epa.gov/air/data/index.html>. Accessed April 8, 2009.

DRAFT

EXHIBIT C

Bay Area Air Quality Management District
CEQA Guidelines Update

Public Workshop

Staff-Recommended California Environmental Quality Act (CEQA) Thresholds of Significance

September 8, 9, & 10, 2009
Redwood City, Santa Rosa, & Oakland

Objectives of the Guidelines

- Assist in attainment of state and federal standards.
- Protect public health.
- Reduce emissions from land use and transportation.
- Support transit-oriented, smart growth and infill development.

Reasons to Update Thresholds

- Substantial changes in air quality regulatory activity since last update in 1999.
- Address emerging & growing air quality concerns.
  - Greenhouse gases.
  - Local impacts.
- Changes in analytical methodologies & mitigation strategies.

Scope of the Guidelines Update

- Comprehensive review of thresholds, analytical methods, mitigation strategies.
- Provide guidance to local governments for analyzing air quality impacts of new land use developments.
- Address construction and operational related emissions from individual projects and plan-level (general plans, specific plans, etc.) developments.

New and Revised Thresholds

- Criteria Pollutants: Ozone Precursors (ROG, NOx) & Particulate Matter (PM_{10}, $PM_{2.5}$)
- Greenhouse Gases
- Local Community Risks and Hazards

- Unchanged Thresholds: Carbon Monoxide and Odors

Criteria Pollutant – Project Level

Project Level	Construction and Operational (daily)	Operational (annual)
ROG	54 lb/day	10 tpy
NO_X	54 lb/day	10 tpy
PM_{10}	82 lb/day	15 tpy
$PM_{2.5}$	54 lb/day	10 tpy

Why These Thresholds?

- Levels based on the trigger levels for the federal New Source Review (NSR) Program.

Criteria Pollutant – Plan Level

Thresholds for Plan Level Emissions	
ROG	Consistency with Current Air Quality Plan control measures AND Rate of VMT increase or vehicle trips is less than the rate of increase in the Plan's population growth rate.
NO_X	
PM_{10}	
$PM_{2.5}$	

Why These Thresholds?

- Addresses past difficulty of comparing projects with the growth rates in AQPs that could be several years older.
- The option of using vehicle trips rather than VMT for comparison addresses problem that VMT is not always available.
- Supports implementation of transportation control measures.

GHG – Project Level

Project Level	Operational Related
Non Stationary Sources	Compliance with Qualified Climate Action Plan OR Threshold of 1,100 MT CO2e/yr OR 6.7 MT CO2e/capita/yr (residential) & 4.6 MT CO2e/SP/yr (mixed use)
Stationary Sources	10,000 MT/yr

Why These Thresholds?

- Numerical threshold represents needed GHG emission reductions from land use to meet AB 32.
- Efficiency approach offers options for large projects.
- Stationary source threshold recognizes reductions expected from AB 32 regulations.

GHG – Plan Level

	Operational Related
Plan Level	Qualified Climate Action Plan • emissions inventory • reduction goal consistent with AB 32 • measures • monitoring OR 6.7 MT CO2e/capita/yr (residential) & 4.6 MT CO2e/SP/yr (mixed use)

Why These Thresholds?

- Qualified Climate Action Plan follows OPR guidance.
- Recognizes Bay Area communities that developed climate action plans.
- Qualified Climate Action Plans ensure that projects achieve their fair share of GHG emission reductions.
- Efficiency approach allows comparison of small and large plans on equal terms.

GHG – Construction

Project Level	Construction Related, Plan & Project
Non Stationary Sources	Best Management Practices • Alternative fuels • Local materials • Recycled demolition
Stationary Sources	

Why These Thresholds?

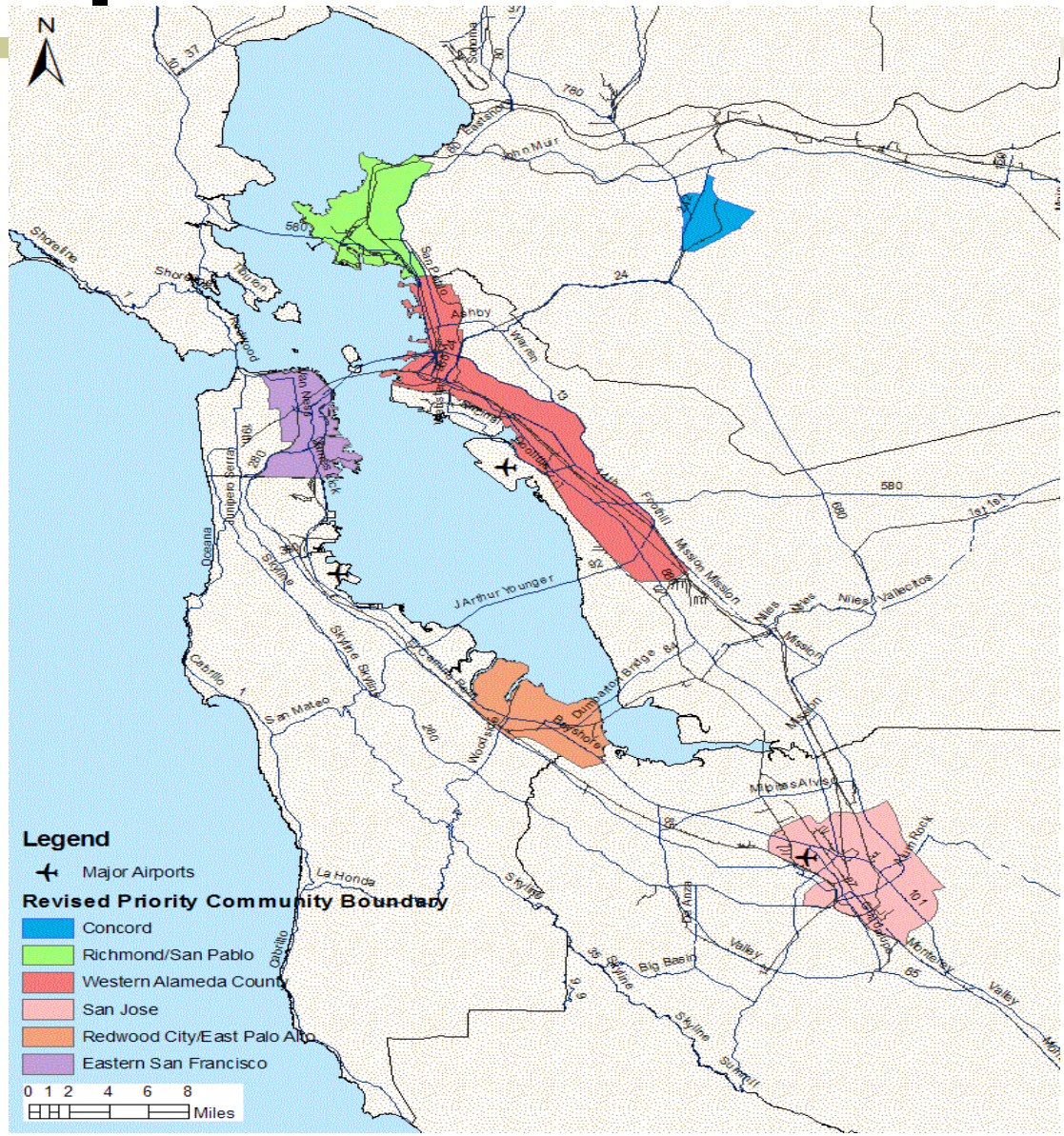
- Adaptable over time; considers improvements in construction emission reduction technologies.
- Operational thresholds alone would only capture extremely large construction and result in fewer reductions.

Questions and Comments

Local Community Risks & Hazards

- New Source: land use developments that create emissions, including permitted sources, gas stations, roadways, etc.
- New Receptor: land use developments that house people, such as residential, hospitals, schools, etc., that may be sensitive to local emissions.
- Cumulative Impacts: the total impact from emissions of nearby sources.

Impacted Communities



- Impacted communities are communities disproportionally impacted by local air pollution.
- The Air District's Community Air Risk Evaluation program identified 6 impacted communities in the Bay Area.

Local Community Risks & Hazards – New Source

Siting a New Source	<u>Impacted Communities</u> • Cancer risk of > 5 in a million • Chronic non-cancer Hazard Index > 0.5 • Acute non-cancer Hazard Index > 1.0 • $PM_{2.5}$ level > 0.2 µg/m^3 annual average <u>Elsewhere</u> • Cancer risk of > 10 in a million • Non-cancer Hazard Index > 1.0 • $PM_{2.5}$ level > 0.3 µg/m^3 annual average

Why These Thresholds?

- Recognizes increased burden from sources in impacted communities.
- Consistent with EPA proposed stationary source significant impact level.
- Encompasses a broader analysis than excess cancer risk alone.
- Achievable with current control technologies.

Local Community Risk & Hazards – New Receptor (impacts from single source)

Siting a New Receptor	<u>All Areas</u> • Cancer risk of >10 in a million • Non-cancer Hazard Index >1.0 • $PM_{2.5}$ level > 0.3 µg/m^3 annual average <u>Impacted Communities</u> • Implement TBACT/TBP <u>Zone of Influence</u> • 1,000 foot radius from fence line of receptor

<u>Why These Thresholds?</u>

- Provides health protectiveness to local residents.
- Incentivizes aggressive mitigation approaches reduce risks in targeted infill areas.
- The 1,000-foot distance supported by findings that impacts diminish significantly between 500- 1,000 ft. from large sources.

Local Community Risks & Hazards – New Source/Receptor (cumulative)

Risks & Hazards	Operational and Construction Related
Cumulative Significance Criteria (Source or Receptor)	<u>All Areas</u> • Cancer risk of > 100 in a million • Non-cancer Hazard Index > 1.0 • $PM_{2.5}$ level > 2 µg/m^3 annual average <u>Zone of Influence</u> • 1,000 foot radius from fence line of source or receptor

<u>Why These Thresholds?</u>

- Cancer risk is consistent with ambient air levels.
- Provides health protectiveness from multiple local sources.

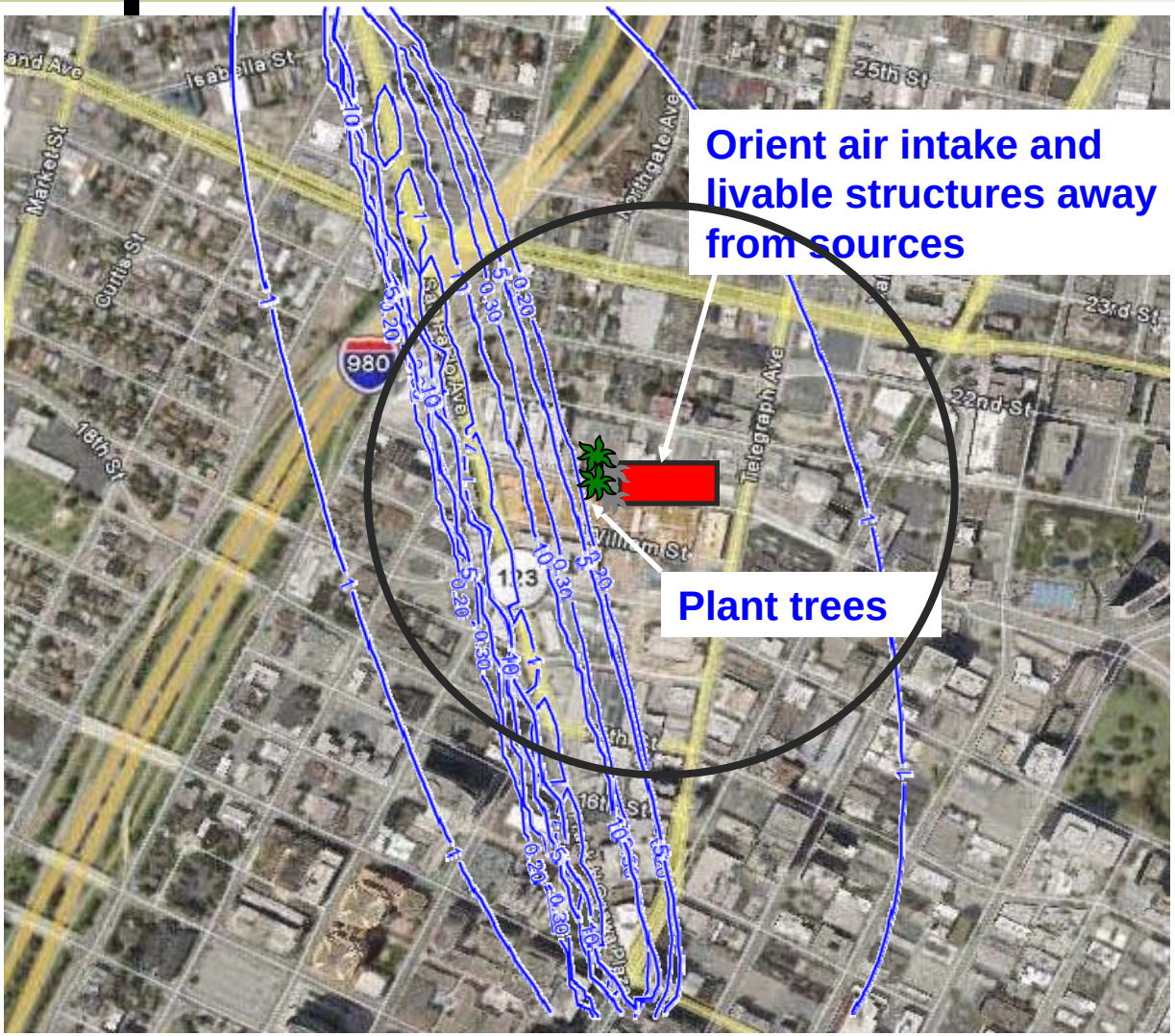
Local Community Risks & Hazards – Plan Level

Risks & Hazards / Odors	• Overlay zones around existing and planned sources of TACs and odors • Special overlay zones of least 500 feet on each side of all freeways and high volume roadways

Why These Thresholds?

- Local jurisdictions can take preemptive action before project-level review to reduce the potential for significant exposures.
- Overlay zones is more effective than project by project basis - more mitigation options exist for overlay approach than case-by-case.
- Supports more robust cumulative consideration for future project CEQA analyses.

Example
Siting a New Receptor



Step 1 – Implement Toxics Best Practices

Step 2 – Evaluate Single Source Contribution

– 1,000 foot radius

– PM2.5 from roadway

PM2.5 (ug/m3) from San Pablo Ave (5300 vehicles per hour)		
200 ft	500 ft*	1000 ft
0.6	0.16	<0.3 ug/m3

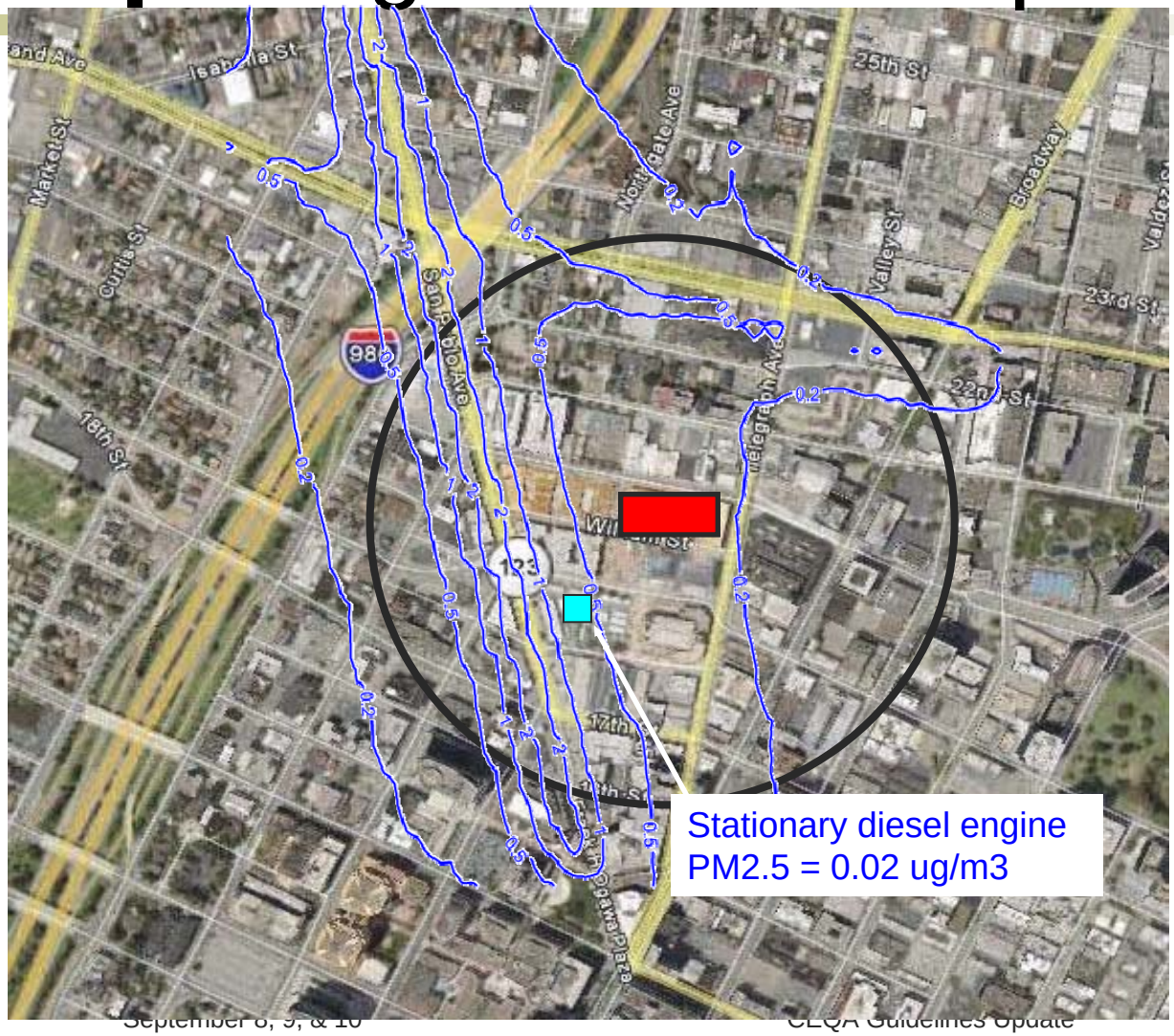
Cancer risk from San Pablo Ave (risk per million)		
200 ft	500 ft*	1000 ft
7	3	<10 in million

– Compare to thresholds

Less than Significant Impact

* Distance to new development

Example
Siting a New Receptor (PM2.5)



Step 3 – Cumulative Analysis for **PM2.5**

– 1,000 foot radius

– Evaluate ALL roadways

PM2.5 (ug/m3) contribution from ALL Roads (distance from San Pablo Ave)		
200 ft	500 ft*	1000 ft
1	0.4	0.25

– Evaluate ALL stationary sources

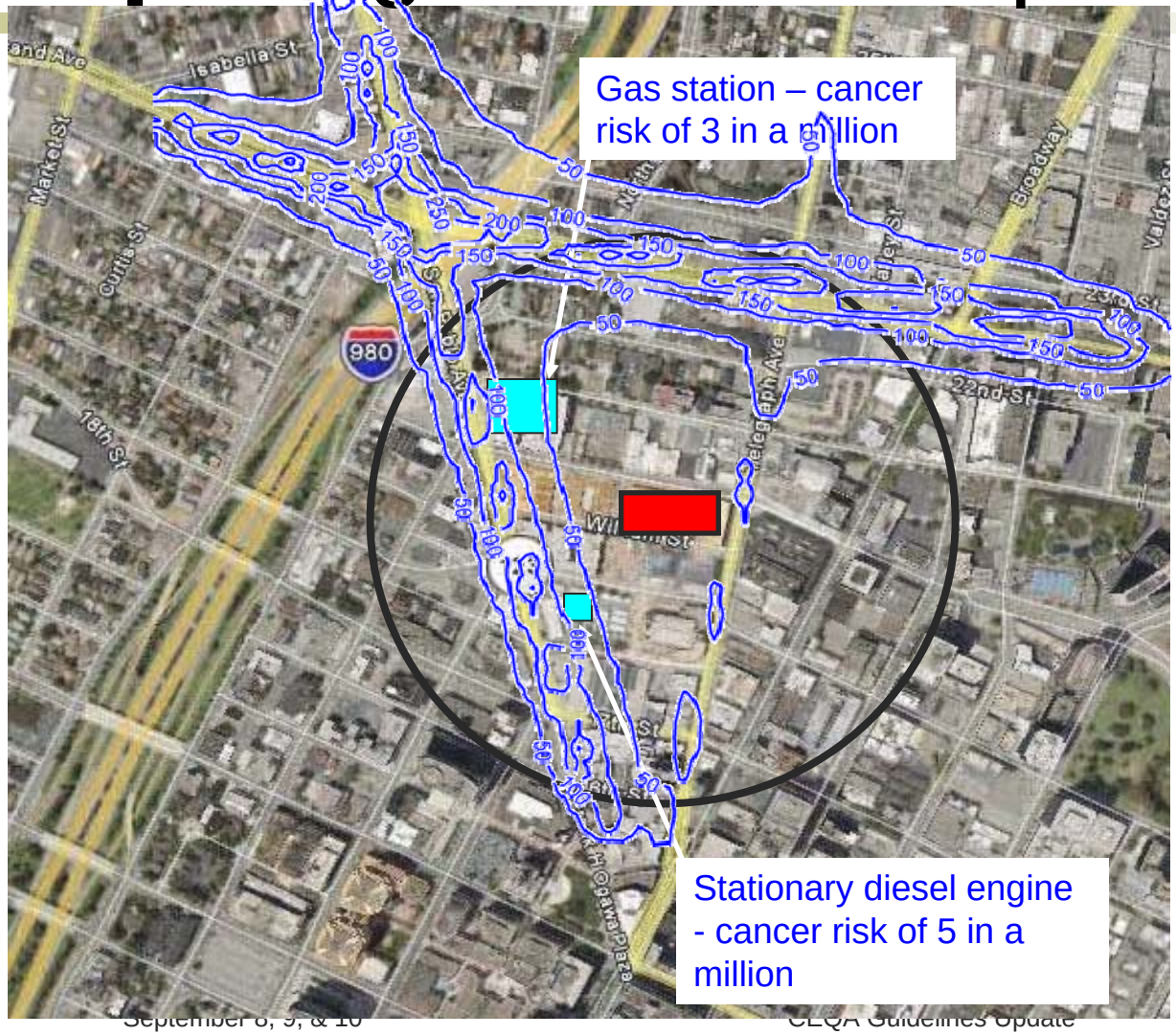
PM2.5 (ug/m3) from All Sources		
Roads	Pt Sources	Total
0.4	2 ug/m3 >	0.42

– Compare to threshold

Less than Significant Impact

* Distance to new development

Example
Siting a New Receptor (Cancer)



Step 3 – Cumulative Analysis for **Cancer Risk**

All Major Sources

– Roadways

Cancer risk (risk per million) from All roads (distance from San Pablo)		
200 ft	500 ft*	1000 ft
60	35	35

– Stationary Sources

Cancer risk (risk per million) from All Sources		
Roads	Pt Sources	Total
35	100 in a million >	43

– Compare to threshold

Less than Significant Impact

* Distance to new development

Schedule/Next Steps

- Comments due September 25, 2009
- Draft CEQA Guidelines – October 2009
- Visit our website for updates:
  - http://www.baaqmd.gov/Divisions/Planning-and-Research/
  - Click on Planning Programs and Initiatives (left side menu)
  - Click on CEQA Guidelines (left side menu)

- Contact: Greg Tholen at gtholen@baaqmd.gov
  415-749-4954

Questions and Comments

EXHIBIT D

Global and regional climate changes due to black carbon

Black carbon in soot is the dominant absorber of visible solar radiation in the atmosphere. Anthropogenic sources of black carbon, although distributed globally, are most concentrated in the tropics where solar irradiance is highest. Black carbon is often transported over long distances, mixing with other aerosols along the way. The aerosol mix can form transcontinental plumes of atmospheric brown clouds, with vertical extents of 3 to 5 km. Because of the combination of high absorption, a regional distribution roughly aligned with solar irradiance, and the capacity to form widespread atmospheric brown clouds in a mixture with other aerosols, emissions of black carbon are the second strongest contribution to current global warming, after carbon dioxide emissions. In the Himalayan region, solar heating from black carbon at high elevations may be just as important as carbon dioxide in the melting of snowpacks and glaciers. The interception of solar radiation by atmospheric brown clouds leads to dimming at the Earth's surface with important implications for the hydrological cycle, and the deposition of black carbon darkens snow and ice surfaces, which can contribute to melting, in particular of Arctic sea ice.

V. RAMANATHAN[1] AND G. CARMICHAEL[2]
[1]Scripps Institution of Oceanography, University of California at San Diego, 9500 Gilman Drive, #0221, La Jolla, California 92093-0221, USA;
[2]College of Engineering, University of Iowa, Iowa City, Iowa 52240, USA
e-mail: vramanathan@ucsd.edu; gcarmich@engineering.uiowa.edu

Black carbon (BC) is an important part of the combustion product commonly referred to as soot[1]. BC in indoor environments is largely due to cooking with biofuels such as wood, dung and crop residue. Outdoors, it is due to fossil fuel combustion (diesel and coal), open biomass burning (associated with deforestation and crop residue burning), and cooking with biofuels[1]. Soot aerosols absorb and scatter solar radiation. BC refers to the absorbing components of soot, often defined using elemental carbon and some condensed organics[2]. Recent findings suggest other secondary organics also contribute to strong absorption in the ultraviolet region of the spectrum, components that were presumably ignored in the original definition of BC[3]. Dust, which also absorbs solar radiation, is not included in the definition of BC. Globally, the annual emissions of BC are (for the year 1996) ~8 Tg yr^{-1} (ref. 4), with about 20% from biofuels, 40% from fossil fuels and 40% from open biomass burning. The uncertainty in the published estimates for BC emissions is a factor of two to five on regional scales and at least ±50% on global scales.

High BC emissions (Fig. 1) occur in both the northern and the Southern Hemisphere, resulting largely from fossil fuel combustion and open burning, respectively. Atmospheric brown clouds (ABCs) are composed of numerous submicrometre aerosols, including BC, but also sulphates, nitrates, fly ash and others. ABCs have been extensively documented by surface observatories, field observations and satellite data[5–15]. Single-particle mass spectrometer data reveal that BC is internally mixed with other aerosol species such as sulphates, nitrates, organics, dust and sea salt[16]. BC is removed from the atmosphere by rain and snowfall[2]. Wet removal as well as direct deposition to the surface limits the atmospheric lifetime of BC to about one (±1) week[17].

REGIONAL HOTSPOTS

Until about the 1950s, North America and Western Europe were the major sources of soot emissions, but now developing nations in the tropics and East Asia are the major source regions[18,19] (Fig. 1). Historical BC emissions are available for fossil fuel combustion and biofuel cooking[18,19]. Past emissions of BC from biomass burning are very uncertain[19], although, published reports of extensive brown clouds and their possible effects on the atmosphere date back to at least the 1880s[20].

Integration of field observations[7,14] and new satellite aerosol sensors[15] have revealed the global distribution of ABCs and their radiative forcing[21–23]. Their concentrations peak close to major source regions and give rise to regional hotspots of BC-induced atmospheric solar heating (Fig. 1b). Such hotspots have recently been identified[24] as the Indo-Gangetic plains in South Asia; eastern China; most of Southeast Asia including Indonesia; regions of Africa between sub-Sahara and South Africa; Mexico and Central America; and most of Brazil and Peru in South America. Populations of about 3 billion are living under the influence of these regional ABC hotspots.

© 2008 Nature Publishing Group

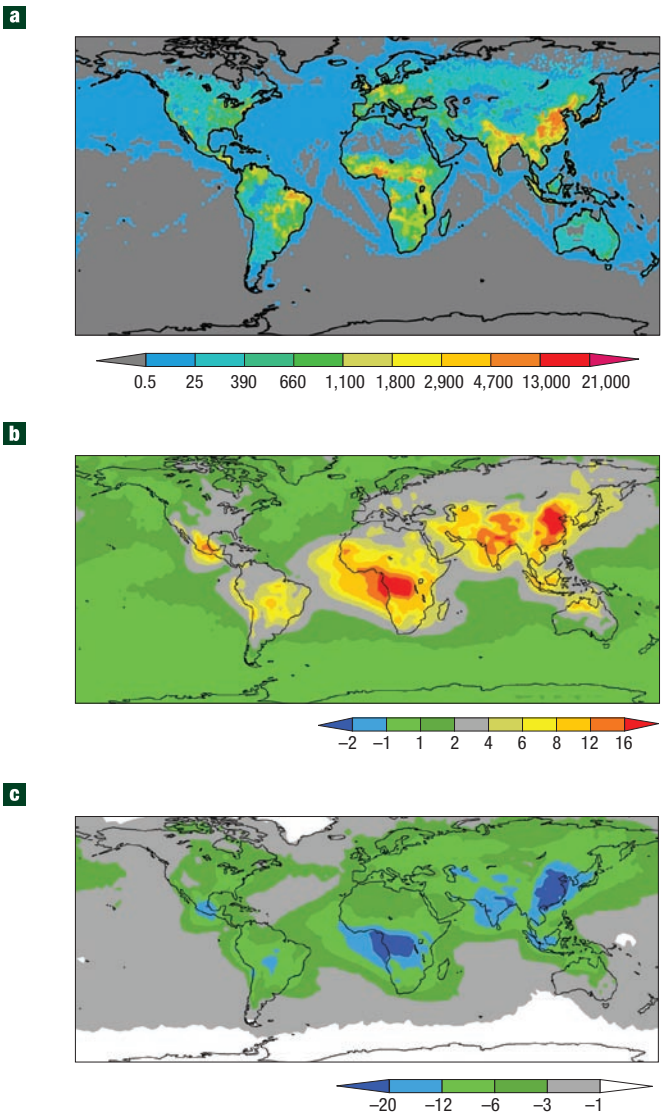


Figure 1 Global distribution of BC sources and radiative forcing. **a**, BC emission strength in tons per year from a study by Bond *et al.*[4], including emissions from fuel combustion (fossil fuels and biofuels) and open biomass burning (forest fires, savanna burning and outdoor cooking) for the year 1996. The uncertainty in the regional emission is about ±100% or more. **b**, Atmospheric solar heating due to BC from the study by Chung *et al.*[23] for the 2001 to 2003 period. This study integrates satellite aerosol data, surface network of aerosol remote sensing instruments and field observations with an aerosol-transport-chemical model and a radiative transfer model to obtain the forcing. Uncertainty in the forcing is ±30%. **c**, As in **b**, but for surface dimming due to ABCs. This shows the reduction in absorbed solar radiation at the surface by all anthropogenic aerosols (BC and non-BC) in ABCs.

RADIATIVE FORCING OF THE CLIMATE SYSTEM

Solar absorption by BC increases inversely with wavelengths from near-infrared (1 μm) to ultraviolet wavelengths with a power law of one to three depending on the source[3,25], thus giving the brownish colour to the sky. Unlike the greenhouse effect of CO_2, which leads to a positive radiative forcing of the atmosphere and at the surface[26] with moderate latitudinal gradients[27,28], black carbon has opposing effects of adding energy to the atmosphere and reducing it at the surface. Furthermore the forcing has significant latitudinal gradients. It alters the radiative forcing through a complex web of processes[7].

The first concerns the increase in top-of-the atmosphere (TOA) radiative forcing. This occurs via several pathways: (1) by absorbing the solar radiation reflected by the surface–atmosphere–cloud system, BC reduces the albedo of the planet; (2) soot deposited over snow and sea ice can decrease the surface albedo[29–32]; (3) soot inside cloud drops and ice crystals can decrease the albedo of clouds by enhancing absorption by droplets and ice crystals[31–34]. All three of these processes contribute to a positive TOA forcing. On the other hand, non-BC aerosols such as sulphates, nitrates and organics in ABCs reflect more solar radiation, increasing the albedo of the planet and resulting in a negative TOA forcing. In addition non-BC aerosols also nucleate cloud drops and thus increase the albedo of clouds. This effect is referred to as an indirect effect or 'cloud-albedo effect'[35–37].

Figure 2 compares the BC forcing (Fig. 2c) with forcing due to all greenhouse gases (GHGs; Fig. 2a), forcing due to CO_2 alone (Fig. 2b) and forcing of all aerosols other than BC (Fig. 2d). The BC forcing includes only the direct forcing from pathway 1 because pathways 2 and 3 are more uncertain and, furthermore, contribute only about 0.1 W m^{-2} to the global forcing[33]. At the TOA, the ABC (that is, BC + non-BC) forcing of −1.4 W m^{-2} (sum of TOA values in Figs 2c,d), which includes a −1 W m^{-2} indirect forcing, may have masked as much as 50% (±25%) of the global forcing due to GHGs. The estimated aerosol forcing of −1.4 W m^{-2} due to ABCs is within 15% of the aerosol forcing derived in the recent IPCC report[37] and is also consistent with other studies[35,36].

The BC forcing of 0.9 W m^{-2} (with a range of 0.4 to 1.2 W m^{-2}) (Fig. 2c) is as much as 55% of the CO_2 forcing and is larger than the forcing due to the other GHGs such as CH_4, CFCs, N_2O or tropospheric ozone[37]. Similar conclusions regarding the large magnitude of the BC forcing have been inferred by others[38–41] and their estimates range from 0.4 W m^{-2} to 1.2 W m^{-2}. The estimate shown in Fig. 2c is obtained from the observationally constrained study of Chung *et al.*[23]. Values generated by many general circulation climate models (GCMs) are mostly in the lower range of 0.2 W m^{-2} to 0.4 W m^{-2} (refs 37,42,43). There are several reasons for the lower estimates. Many ignore the internally mixed state of BC with other aerosols. Such mixing enhances forcing by a factor of two (ref. 39). Field observations have consistently shown that BC is well mixed with sulphates, organics and others[16,44]. Another factor contributing to lower BC forcing in GCMs is that observed BC concentrations peak at about 2 km above the surface[7,14,44] whereas, in most models they are concentrated close to the surface[45]. BC at elevated levels enhances solar absorption significantly because it can absorb the solar radiation reflected by the highly reflective low clouds[38,40,46]. Furthermore, GCMs with lower positive forcing, in general, ignore biomass burning, which is about 40% of the total BC emission. Column integrated aerosol absorption has been retrieved from a worldwide surface network of solar spectral radiometers, referred to as AERONET[47]. The retrieved aerosol absorption[11,48] is a factor of two or more larger than the GCM simulated values[41,49]. The exceptions to the low forcing bias of GCMs are the models that constrain aerosol solar absorption with AERONET values[50] and models that account for the mixing state of BC with other aerosols and include BC from biomass burning[39,40]. The BC forcings estimated by these models are in the range of 0.6 to 0.8 W m^{-2} (refs 39,40) and 0.8 to 1.2 W m^{-2} (refs 41,50).

The second process concerns atmospheric solar heating. In addition to absorbing reflected solar radiation, BC absorbs direct solar radiation and together the two processes contribute to a

© 2008 Nature Publishing Group

significant enhancement of lower atmosphere (from the surface to about 3 km altitude) solar heating, by as much as 50% in the hotspots (that is, regions with 15 W m^{-2} forcing) (see Fig. 1b). Direct measurement of this solar heating has evaded us until now as it requires multiple aircraft flying over the same domain at different altitudes to measure flux divergences (that is, heating rates) for an extensive period of time. These challenges were recently overcome by deploying three lightweight unmanned aerial vehicles (UAVs) with well-calibrated and miniaturized instruments to simultaneously measure aerosols, BC and spectral as well as broadband radiation fluxes[14,51,52]. The UAV study[14] demonstrated that ABCs with a visible absorption optical depth as low as 0.02 are sufficient to enhance solar heating of the lower atmosphere by 50%. Global average BC solar heating of the atmosphere, as per the present estimate, is 2.6 W m^{-2} (Fig. 2c), which is comparable to the TOA GHG forcing (Fig. 2a).

The third process is the surface dimming. The BC absorption of direct solar radiation reduces the solar radiation reaching the surface and leads to dimming (Fig. 2c). The BC dimming is further enhanced by the direct and indirect effects of non-BC aerosols (Fig. 2d). The total dimming effect is −4.4 W m^{-2} (sum of Fig. 2c,d) — about −3.4 W m^{-2} from the direct effect of ABCs and the remaining −1 W m^{-2} from the indirect effect[35–37]. The dimming can be as large as 5 to 10% over the regional hotspots (Fig. 1). It is important to note that the surface dimming and absorption of direct solar radiation do not contribute much to TOA forcing as it is simply a redistribution of the direct solar radiation between the surface and the atmosphere. However, globally, this redistribution can weaken the radiative–convective coupling of the atmosphere and decrease global mean evaporation and rainfall[26].

Is the planet dimmer now than it was during the early twentieth century? Solar radiometers around the world are indicating that surface solar radiation in the extra tropics was lower by as much as 5% to 10% during the mid-twentieth century[53,54], whereas in the tropics such dimming trends have been reported to extend into the twenty-first century. But many of these radiometers are close to urban areas and it is unclear if the published trends are representative of true regional to global averages[55]. The Indian Ocean Experiment[7] used a variety of chemical, physical and optical measurements to convincingly demonstrate that ABCs can lead to dimming as large as 5–10% (Fig. 1c) over widespread regions in the North Indian Ocean and South Asia. In order to get a handle on the global average dimming, Chung *et al.*[23] integrated field observations with satellite data and aerosol transport models to retrieve an observationally constrained estimate. As seen from Fig. 1c, over large regions the reduction of solar absorption at the surface exceeds 10 W m^{-2} (>5%), which is consistent with the dimming reported from surface observations. The global annual average dimming (for 2001–2003), however, is −4.4 W m^{-2}, as opposed to the −10 W m^{-2} estimated by surface radiometers. Thus, great care should be exercised to extrapolate surface measurements over land areas to global averages. The global dimming of −4.4 W m^{-2} has been compared to the GHGs forcing of 3 W m^{-2} from 1850 to present[54]. Such comparisons, without a proper context could be misleading because, as shown in Fig. 2, for BC, the surface forcing is negative whereas the TOA forcing is positive (Fig. 2c).

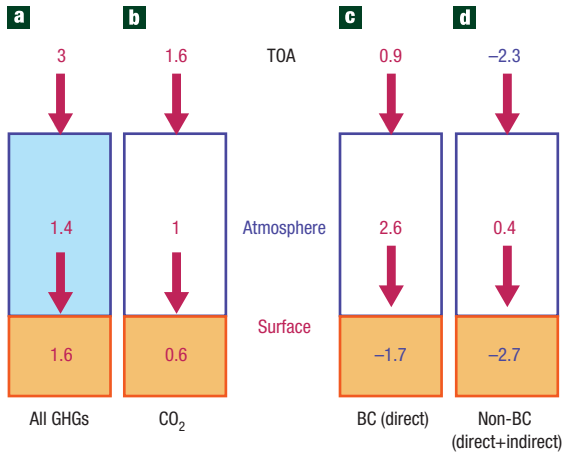


Figure 2 Comparison of the global mean radiative forcing due to greenhouse gases (GHGs) with that of ABCs. **a**,**b**, Forcing for all GHGs (CO_2, CH_4, N_2O, halons and ozone) (**a**), and for CO_2 (**b**). The number at the top of the atmosphere box (blue box) is the top-of-the atmosphere (TOA) forcing; the number within the atmosphere box is the atmospheric forcing; and the number within the brown box is the forcing at the surface. The TOA forcing is the sum of the forcing of the atmosphere and the surface. The forcing values represent the change in radiative forcing due to increase in gases for the year 2005, which is the same as the forcing from pre-industrial to present. The TOA numbers are taken from ref. 68 and the atmospheric and surface forcings are derived from an atmospheric radiative transfer model. The numbers at the surface and the atmosphere are slightly adjusted to agree with the TOA IPCC forcing. The uncertainty in the forcing values is ±20%. **c**, BC forcing obtained by running the Chung *et al.* analysis[23] with and without BC. The forcing values are valid for the 2001–2003 period and have an uncertainty of ±50%. **d**, Non-BC forcing. This includes the direct and the indirect forcing. The direct forcing is obtained by subtracting the total anthropogenic forcing in Chung *et al.* from the BC forcing shown in **b**. The indirect forcing (of about 1 W m^{-2} at the TOA and at the surface) is an average of values derived from recent studies[35–37].

GLOBAL CLIMATE EFFECTS

The TOA BC forcing implies that BC has a surface warming effect of about 0.5 to 1 °C, where we have assumed a climate sensitivity of 2 to 4 °C for a doubling of CO_2. Conversely, ABCs have a cooling effect of about −0.75 to −2.5 °C (ref. 35). Because BC forcing results in a vertical redistribution of the solar forcing, a simple scaling of the forcing with the CO_2 doubling climate sensitivity parameter may not be appropriate[40,56,57]. For example, GCMs suggest that the reduction of sea ice and snow albedo by BC is three times as effective as CO_2 forcing for global average surface warming[57].

BC and non-BC aerosols perturb the hydrological cycle significantly. The surface and atmospheric warming due to GHGs would lead to an increase in atmospheric humidity (owing to an increase in saturation vapour pressure) and rainfall (owing to an increase in the radiative heating at the surface)[26,58]. With respect to ABCs, the overall negative forcing at the TOA, as well as the surface dimming, should lead to a decrease in evaporation and rainfall[7,37]. It is difficult to predict the net effect of GHGs and ABCs on global rainfall, given the large positive forcing at the TOA and the larger negative forcing at the surface. We can not resort to observed rainfall trends to infer the net anthropogenic effect on global rainfall as long-term rainfall measurements are only available for land regions.

REGIONAL CLIMATE EFFECTS

We have just begun to comprehend the chain of response and feedbacks on the regional climate due to BC[9,12,14,23,59–65]. In regions where radiative–convective coupling of the surface and the atmosphere is strong (for example, equatorial oceans and tropical

© 2008 Nature Publishing Group

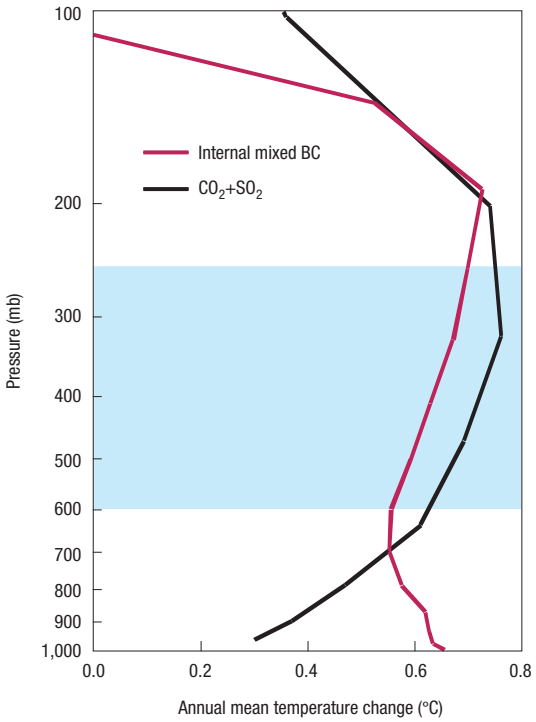


Figure 3 Simulated atmospheric temperature change due to GHGs and BC for the South Asian region. The values are annual mean temperature changes over the South Asian region, averaged from 20° N to 40° N and from 70° E to 100° E. The blue line is the change due to the increase in all GHGs and sulphate aerosols as simulated by ref. 60. The red line is the estimated temperature change due to BC taken from the global circulation model study of Chung and Seinfeld[67].

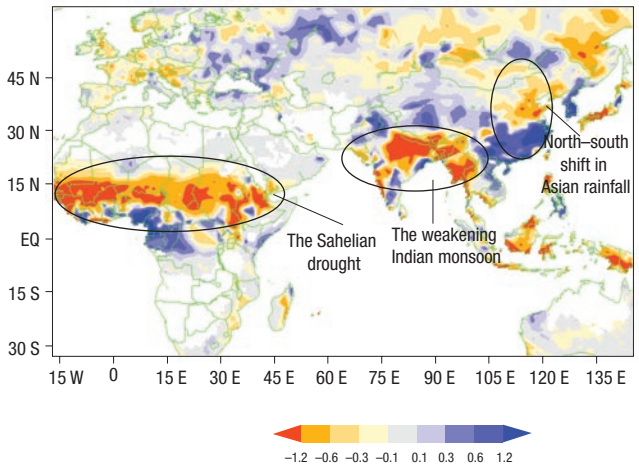


Figure 4 Precipitation trend from 1950–2002. The plot is adopted from ref. 65. (units: change in mm per day from 1950 to 2002). The red and dark blue shaded regions are statistically significant.

land during wet seasons), the surface–atmosphere response will be determined by the TOA forcing, and as a result BC by itself will lead to a warming of both the surface (in spite of the surface dimming) and the atmosphere (in spite of the atmospheric solar heating), whereas ABCs will lead to a cooling of both the surface and the atmosphere. In regions where such coupling is weak (for example, dry seasons in the tropics), the surface dimming due to ABCs can lead to surface cooling and thus can mask the greenhouse warming[66], whereas the atmospheric solar heating by BCs can lead to a warming of the atmosphere and intensify the greenhouse warming of the troposphere. GCMs that include just the BC forcing[14,64,67] show that BC leads to a warming from the surface to about 12 km altitude, by as much as 0.6 °C over most of the Northern Hemisphere including the Arctic region (for example, see Fig. 11 in Chung and Seinfeld[40], and ref. 64). The magnitude of the BC atmospheric warming is comparable to the simulated warming due to GHGs forcing[68]. Regionally, the combined effect of ABCs is to cause a surface cooling[65] over South Asia while warming the atmosphere by as much as 0.6 °C during winter and spring[14,60]. Such differential warming of the atmosphere with respect to the surface over the South Asian region has also been observed with microwave satellite sensor observations of the trends from 1979 to 2003[14,60].

BC atmospheric heating may be an important contributing factor to the retreat of Himalayan glaciers. Analysis of temperature trends on the Tibetan side of the Himalayas reveals warming in excess of 1 °C since the 1950s. This large warming trend at the elevated levels is proposed as the causal factor for the retreat of glaciers through melting[69,70]. GCM simulations suggest that advection of the warmer air heated by BC from South and East Asia over the Himalayas contributes to a warming of about 0.6 °C (annual mean) in the lower and mid troposphere (see Fig. 3) of the Himalayan region[14,64]. This is as large as the warming trend due to the GHGs (Fig. 3), leading to the inference[14] that BC forcing is as important as GHGs in the observed retreat of over two thirds of the Himalayan glaciers[71].

BC contributes to melting of snow through another process. When soot is deposited over snow and sea ice, it darkens the snow and significantly enhances solar absorption by snow and ice[30,32]. Recent studies suggest that this is one of the important contributors to the retreat of the Arctic sea ice (see summary of earlier studies in ref. 57). Simulations by Flanner *et al.*[57] showed that the deposition of BC from sources in North America and Europe over the Arctic sea ice may have resulted in an Arctic surface warming trend of as much as 0.5 to 1 °C (ref. 72). In addition, the study estimated that BC-induced reduction of snow albedo is a major forcing term (about 20 W m^{-2}) in the Tibetan side of the Himalayas. Ice-core records of BC deposition over Greenland from the early nineteenth century onwards have now provided a historical record for examining the role of BC forcing in the retreat of sea ice[73].

Atmospheric heating and dimming by BC and non-BC aerosols can perturb the monsoon significantly. Precipitation trends over many regions of the tropics during the last 50 years have been negative, particularly over Africa, South Asia and northern China (Fig. 4)[68]. These drying patterns can not be explained solely by global warming[74,75]. Natural variability and anthropogenic aerosol forcing are emerging as major players in the observed trends[60,74–76]. The impacts of ABCs and BC on the South Asian monsoon have received attention recently[40,59,60,62,63,65,67,74]. Precipitation over land is driven by evaporation from the land surface and long-range transport of moisture from the surrounding Indian Ocean. These model studies reveal that ABCs have three distinct effects on the long-range transport of moisture and its convergence over South Asia:

(i) A decrease in the evaporation of the Indian Ocean owing to dimming. Emissions of BC and other aerosol precursors from South Asia have increased significantly since 1950s[18,19]. This has resulted in a dimming trend of about 7% as detected by surface radiometers in India[60]. Similar dimming has also occurred

© 2008 Nature Publishing Group

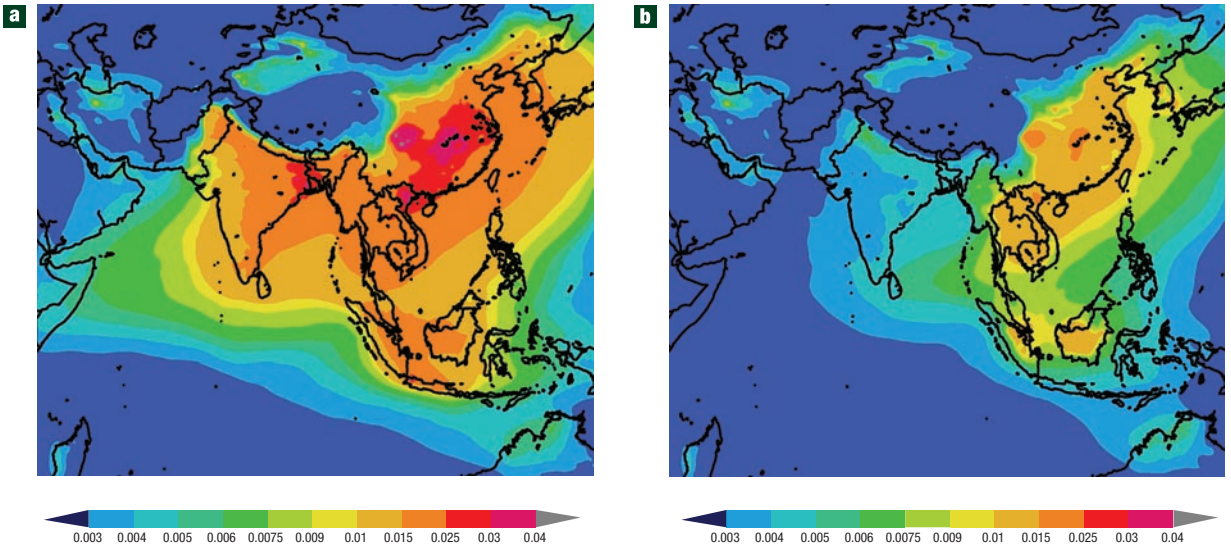


Figure 5 The effect of biofuel cooking on Asian BC loading. **a**, The simulated annual mean optical depth of BC aerosols for 2004–2005 using the regional aerosol/chemical/transport model described in ref. 96. The values include BC emissions from biofuel cooking (indoor cooking with wood/dung/crop residues), fossil fuels and biomass burning. **b**, As for **a**, but without biofuel cooking.

over the Indian Ocean[7] (See Fig. 1c). As about 75% or more of the surface radiative heating is balanced by evaporation[26], the dimming trend leads to a decrease in evaporation from the North Indian Ocean[60], so less moisture is fed to the monsoonal inflow into South Asia.

(ii) A decrease in meridional sea surface temperature (SST) gradient. Because ABCs are concentrated over the North Indian Ocean (Fig 1), the dimming is suppressing the greenhouse warming over the North Indian Ocean while the GHGs warming is proceeding unabated over the southern Indian Ocean. As a result, the summertime north-to-south SST gradient (with warmer waters over the North Indian Ocean) has decreased since the 1950s, as has been seen from observations[60,74]. The weakening of the SST gradient weakens the monsoonal circulation, as shown by numerous studies[60,74,75], and in turn weakens the monsoonal rainfall during summertime. It is important to note that, although the ABC dimming peaks in winter and spring, the SST response is delayed until summer owing to the slower response time of the ocean[60,64,74].

(iii) An increase in atmospheric meridional heating gradient. The stronger BC solar heating of the atmosphere over South Asia (Fig. 1b) strengthens the monsoonal outflow with stronger rising motions over the subcontinent, accompanied by a stronger moisture flux into South Asia[60,63,64,74]. This effect, which increases rainfall, peaks during spring when the BC heating is at its peak value.

The atmospheric heating shown in Fig. 1b is solely due to BC, whereas the dimming is due to both the BCs and non-BC aerosols in ABCs (Figs 1c and 2d). The larger dimming over the land regions compared with the adjacent oceans also suggest that the dimming decreases the land–sea contrast in surface temperature — a major monsoon forcing term. In order to account for the delayed oceanic response to the dimming, fully coupled ocean–atmosphere models are required. To date, three such studies have been published[60,62,64] and all of them estimate an increase in pre-monsoon rainfall during spring followed by a decrease in summer monsoon rainfall, in agreement with observed trends (Fig. 4; ref. 60). The link between dimming, the north–south SST gradient and a decrease in land rainfall has also been invoked to explain the Sahel drought[75] of the 1970s and 1980s.

CLIMATE SYSTEM RESPONSE AND FEEDBACKS

The immediate response of the atmosphere to ABCs is to increase or decrease cloud cover. The non-BC aerosols, by nucleating more cloud drops, decrease the effective radius of the cloud drop. This can suppress formation of larger drizzle drops, extend the lifetime of clouds, and thus increase cloud cover[37]. On the other hand, BC solar heating can decrease the relative humidity of the cloud layer, leading to evaporation of cloud drops and thus decreasing low cloud fraction and albedo. This semi-direct effect can enhance the positive climate forcing by BC[37]. A relative comparison of the increase in cloud cover by non-BC aerosols and the decrease due to BC was undertaken[77] empirically with a surface network of sun photometers[47]. This study suggested that the non-BC effects dominate overall, except for in heavily polluted regions with absorption optical depths exceeding 0.05 (for example, the Amazon during the burning season; Africa during Savanna burning season; and urban regions in South and East Asia). An alternative scenario is that BC solar heating induces convection and consequently leads to cloud formation[78]. The global magnitude of the semi-direct effect is highly uncertain.

Spring season dust storms from Asia and Africa transport large quantities of dust across the Pacific Ocean[79,80] and the Atlantic Ocean[81].The dust is transported either as individual layers or mixed with industrial soot. Such dust–soot mixtures increase the atmospheric solar heating and surface dimming significantly[79,80] and can also serve as nuclei for ice clouds and feedback on precipitation[82]. For the first time, such dust–soot mixtures were tracked in an aircraft all the way across the Pacific Ocean from near the surface to about 14 km altitude[83].

An increase in drought intensity due to global warming can intensify occurrence of forest fires, as has been documented for California[84]. Increase in forest fires, such as the boreal forest fires of 1996, can increase soot deposition in sea ice and enhance its melting[57]. Surface cooling occurring simultaneously with lower atmosphere warming (due to BC and dust) can stabilize the

© 2008 Nature Publishing Group

boundary layer during the dry season and increase the lifetimes of aerosols in ABCs and increase persistence of soot-filled fog. Soot can also influence precipitation formation mechanisms[85,86].

Two extreme scenarios have been proposed for such feedbacks. For South Asia, GCM simulations suggest that a two- to threefold increase in soot loading (from present day levels) is sufficient to substantially weaken the monsoon circulation, decrease rainfall by more than 25% and increase drought frequency significantly[59]. As wash out by rain is a major sink for BC, large decreases in rainfall can have a positive feedback on BC concentrations. The other scenario is the so-called nuclear winter scenario[87–89], in which large-scale increase in BC from fires resulting from a global-scale nuclear war can nearly shut down sunlight at the ground (total dimming), which can collapse the troposphere and decrease rainfall drastically.

REDUCING FUTURE BLACK CARBON EMISSIONS

Given that BC has a significant contribution to global radiative forcing, and a much shorter lifetime compared with CO_2 (which has a lifetime of 100 years or more), a major focus on decreasing BC emissions offers an opportunity to mitigate the effects of global warming trends in the short term (see, for example, refs 90–92). Reductions in BC are also warranted from considerations of regional climate change and human health[93,94].

It is clear from Fig. 2 that air pollution mitigation steps can have significant impacts on future climate changes. The logical deduction from Fig. 2a,c,d is that the elimination of present day ABCs through emission reduction strategies would intensify surface warming by about 0.4 to 2.4 °C (see also, ref. 35). If only the non-BC aerosols were controlled, it could potentially add 2.3 W m^{-2} to the TOA forcing and push the system closer to the 3 °C cumulative warming (since 1850s), which is a likely threshold for unprecedented climate change[95]. If on the other hand, the immediate target for control shifts entirely to BC (owing to its health impacts) without a reduction in non-BC aerosols, the elimination of the positive forcing by BC will decrease both the global warming and the retreat of sea ice and glaciers. It is important to emphasize that BC reduction can only help delay and not prevent unprecedented climate changes due to CO_2 emissions.

ASIAN EMISSIONS AND FUTURE TRENDS

Given the fact that technology exists for large reductions of soot emissions, we explore the impact of a major focus on soot reductions. We focus on Asia, where emissions from China and India alone account for ~25 to 35% of global BC emissions and the regional climate responses to BC are (expected to be) large. In addition, with the economies of China and India expanding with double digit growth rates, Asia can become a much larger source of ABCs, depending on the energy path taken to sustain this growth rate. In fact new estimates indicate that BC emissions for China in 2006 have doubled since 2000, whereas SO_2 emissions have grown during this period by more than 50% (D. G. Streets, manuscript in preparation, data available at http://www.cgrer.uiowa.edu/EMISSION_DATA_new/summary_of_changes.html). East Asia and South Asia also represent a different mix of emissions, and therefore can illustrate potentials for various control options that are also representative of global choices. The majority of soot emission in South Asia is due to biofuel cooking, whereas in East Asia, coal combustion for residential and industrial uses plays a larger role. The large BC emissions are reflected in the geographical extent of the large absorbing component of aerosol optical depth, simulated with a regional aerosol-chemistry transport model[96] (see areas with BC optical depth > 0.01 in Fig. 5a).

What are the opportunities to reduce the positive forcing by BC? Providing alternative energy-efficient and smoke-free cookers and introducing transferring technology for reducing soot emissions from coal combustion in small industries could have major impacts on the radiative forcing due to soot[97]. Figure 4b shows the impact of replacing biofuel cooking with BC-free cookers (solar and bio and natural gas) in South and East Asia. The impacts are dramatic: over South Asia, a 70 to 80% reduction in BC heating; and in East Asia, a 20 to 40% reduction. The impact on human health will potentially be even more dramatic as over 400,000 annual fatalities among women and children are attributed to smoke inhalation during indoor cooking[93,94]. However, changes in BC alone do not tell the entire story as the climate response also depends on how the BC to non-BC aerosol fraction responds to future emissions. As BC is co-emitted with non-BC aerosols, it is necessary to evaluate how various mitigation strategies impact this fraction. With an emphasis on the opportunities discussed here, this ratio would probably decrease in the future, more quickly in East Asia, amplifying the effectiveness of BC reductions[98].

doi:10.1038/ngeo156

Published online: 23 March 2008.

References

1. Andreae, M. O. & Crutzen, P. J. Atmospheric aerosols: Bio-geochemical sources and role in atmospheric chemistry. *Science* **276,** 1052–1056 (1997).
2. Penner, J. E. & Novakov, T. Carbonaceous particles in the atmosphere: A historical perspective to the Fifth International Conference on Carbonaceous Particles in the Atmosphere. *J. Geophys. Res.* **101,** 19373–19378 (1996).
3. Andreae, M. O. & Geleneser, A. Black carbon or brown carbon? the nature of light-absorbing carbonaceous aerosols. *Atmos. Chem. Phys.* **6,** 3131–3148 (2006).
4. Bond, T. C. *et al.* A technology-based global inventory of black and organic carbon emissions from combustion. *J. Geophys. Res.* **109,** doi:10.1029/2003JD003697 (2004).
5. Russell, P. B., Hobbs, P. V., & Stowe, L. L. Aerosol properties and radiative effects in the United States East Coast haze plume: An overview of the Tropospheric Aerosol Radiative Forcing Observational Experiment (TARFOX). *J. Geophys. Res.* **104,** 2213–2222 (1999).
6. Scholes, M. & Andreae, M. O. Biogenic and pyrogenic emisssion from Africa and their impact on the global atmosphere. *Ambio* **29,** 23–29 (2000).
7. Ramanathan, V. *et al.* Indian Ocean experiment: An integrated analysis of the climate forcing and effects of the great Indo-Asian haze. *J. Geophys. Res.* **106,** 28371–28398 (2001).
8. Kaufman, Y. J., Tucker, C. J., & Mahoney, R. L. Fossil fuel and biomass burning effect on climate: heating or cooling? *J. Climate* **4,** 578–588 (1991).
9. Abel, S. J. *et al.* Evolution of biomass burning aerosol properties from an agricultural fire in southern Africa. *Geophys. Res. Lett.* **30,** doi:10.1029/2003GL017342 (2003).
10. Bellouin, N., Boucher, O., Tanré, D., & Dubovik, O. Aerosol absorption over the clear-sky oceans deduced from POLDER-1 and AERONET observations. *Geophys. Res. Lett.* **30,** doi:10.1029/2003GL017121 (2003).
11. Eck, T. F. *et al.* Variability of biomass burning aerosol optical characteristics in southern Africa during the SAFARI 2000 dry season campaign and a comparison of single scattering albedo estimates from radiometric measurements. *J. Geophys. Res.* **108,** doi:10.1029/2002JD002321 (2003).
12. Haywood, J. M. *et al.* The mean physical and optical properties of regional haze dominated by biomass burning aerosol measured from the C-130 aircraft during SAFARI 2000. *J. Geophys. Res.* **108,** doi:10.1029/2002JD002226 (2003).
13. Hsu, N. C., Herman, J. R., & Tsay, S. C. Radiative impacts from biomass burning in the presence of clouds during boreal spring in southeast Asia. *Geophys. Res. Lett.* **108,** doi:10.1029/2002GL016485 (2003).
14. Ramanathan, V. *et al.* Warming trends in Asia amplified by brown cloud solar absorption. *Nature* **448,** 575–578 (2007).
15. Kaufman, Y. J. *et al.* Absorption of sunlight by dust as inferred from satellite and ground-based remote sensing. *Geophys. Res. Lett.* **28,** 1479–1482 (2001).
16. Guazzotti, S. A., Coffee, K. R., & Prather, K. A. Continuous measurements of size-resolved particle chemistry during INDOEX-Intensive Field Phase 99. *J. Geophys. Res.* **106,** 28607–28628 (2001).
17. Rodhe, H., Persson, C., & Akesson, O. An investigation into regional transport of soot and sulfate aerosols. *Atmos. Environ.* **6,** 675–693 (1972).
18. Novakov, T. *et al.* Large historical changes of fossil-fuel black carbon aerosols. *Geophys. Res. Lett.* **30,** doi:10.1029/2002GL016345 (2003).
19. Bond, T. C. *et al.* Historical emissions of black and organic carbon aerosol from energy-related combustion, 1850–2000. *Global Biogeochem. Cycles* **21,** doi:10.1029/2006GB002840 (2007).
20. Danckelman, V. Die Bewölkungsverhältnisse des südwestlichen Afrikas. *Meteor. Z.* **1,** 301–311 (1884).
21. Yu, H. *et al.* A review of measurement-based assessments of the aerosol direct radiative effect and forcing. *Atmos. Chem. Phys.* **6,** 613–666 (2006).
22. Bellouin, N., Boucher, O., Haywood, J., & Reddy, M. S. Global estimate of aerosol direct radiative forcing from satellite measurements. *Nature* **438,** 1138–1141 (2005).
23. Chung, C., Ramanathan, V., Kim, D., & Podgorny, I. A. Global anthropogenic aerosol direct forcing derived from satellite and ground-based observations. *J. Geophys. Res.* **110,** doi:10.1029/2005JD006356 (2005).

© 2008 Nature Publishing Group

24. Ramanathan, V. *et al.* Atmospheric brown clouds: Hemispherical and regional variations in long-range transport, absorption, and radiative forcing. *J. Geophys. Res.* **112,** doi:10.1029/2006JD008124 (2007).
25. Kirchstetter, T. W., Novakov, T., & Hobbs, P. V. Evidence that the spectral dependence of light absorption by aerosols is affected by organic carbon. *J. Geophys. Res.* **109,** doi:10.1029/2004JD004999 (2004).
26. Ramanathan, V. The role of ocean-atmosphere interactions in the CO2 climate problem. *J. Atmos. Sci.* **38,** (918–930) (1981).
27. Kiehl, J. T. & Briegleb, B. P. The relative roles of sulfate aerosols and greenhouse gases in climate forcing. *Science* **260,** 311–314 (1993).
28. Ramanathan, V., Lian, M. S., & Cess, R. D. Increased atmospheric CO2: Zonal and Seasonal Estimates of the Effect on the Radiation Energy Balance and Surface Temperature. *J. Geophys. Res.* **84,** 4949–4958 (1979).
29. Cess, R. D. Arctic aerosols: Model estimates of interactive influences upon the surface-atmosphere clear-sky radiation budget. *Atmos. Environ.* **17,** 2555–2564 (1983).
30. Clarke, A. & Noone, K. Soot in the Arctic: a cause for perturbation in radiative transfer. *J. Geophys. Res.* **19,** 2045–2053 (1985).
31. Chylek, P., Ramaswamy, V., & Cheng, R. J. Effect of graphitic carbon on the albedo of clouds. *J. Atmos. Sci.* **41,** 3076–3084 (1984).
32. Warren, S. & Wiscombe, W. Dirty snow after nuclear war. *Nature* **313,** 467–470 (1985).
33. Jacobson, M. Z. Effects of absorption by soot inclusions within clouds and precipitation on global climate. *J. Phys. Chem.* **110,** 6860–6873 (2006).
34. Mikhailov, E. F. *et al.* Optical properties of soot-water drop agglomerates: an experimental study. *J. Geophys. Res.* **111,** doi:10.1029/2005JD006389 (2006).
35. Andreae, M. O., Jones, C. D., & Cox, P. M. Strong present-day aerosol cooling implies a hot future. *Nature* **435,** 1187–1190 (2003).
36. Crutzen, P. J. & Ramanathan, V. The Parasol Effect in Climate. *Science* **302,** 1679–1681 (2003).
37. Forster, P. & Ramanswamy, V. in *Climate Change 2007: The Physical Science Basis — Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (eds Solomon, S. *et al.*) (Cambridge Univ. Press, Cambridge, UK, New York, USA, 2007).
38. Haywood, J. M. & Ramaswamy, V. Global sensitivity studies of the direct radiative forcing due to anthropogenic sulfate and black carbon aerosols. *J. Geophys. Res.* **103,** 6043–6058 (1998).
39. Jacobson, M. Z. Strong radiative heating due to the mixing state of black carbon. *Nature* **409,** 695–697 (2001).
40. Chung, S. H. & Seinfeld, J. H. Global distribution and climate forcing of carbonaceous aerosols. *J. Geophys. Res.* **107,** doi:10.1029/2001JD001397 (2002).
41. Sato, M. *et al.* Global atmospheric black carbon inferred from AERONET. *Proc. Natl Acad. Sci. USA* **100,** 6319–6324 (2003).
42. Highwood, E. J. & Kinnersley, R. P. When smoke gets in our eyes: The multiple impacts of atmospheric black carbon on climate, air quality and health. *Environ. Intl* **32,** 560–566 (2006).
43. Koch, D. *et al.* Global impacts of aerosols from particular source regions and sectors. *J. Geophys. Res.* **112,** doi:10.1029/2005JD007024 (2007).
44. Spencer, M. T. *et al.* Size-resolved chemical composition of aerosol particles during a monsoonal transition period over the Indian Ocean. *J. Geophys. Res.* (in the press).
45. Textor, C. *et al.* Analysis and quantification of the diversities of aerosol life cycles within AeroCom. *Atmos. Chem. Phys.* **6,** 1777–1813 (2006).
46. Podgorny, I. A. & Ramanathan, V. A modeling study of the direct effect of aerosol over the Tropical Indian Ocean. *J. Geophys. Res.* **106,** 24097–24105 (2001).
47. Holben, B. N. *et al.* An emerging ground-based aerosol climatology: aerosol optical depth from AERONET. *J. Geophys. Res.* **106,** 12067–12097 (2001).
48. Dubovik, O. *et al.* Variability of absorption and optical properties of key aerosol types ovserved in worldwide locations. *J. Atmos. Sci.* **59,** 590–608 (2002).
49. Schuster, G. L., Dubovick, O., Holben, B. N., & Clothiaux, E. E. Inferring black carbon content and specific absorption from Aerosol Robotic Network (AERONET) aerosol retrievals. *J. Geophys. Res.* **110,** doi:10.1029/2004JD004548 (2005).
50. Hansen, J. & Nazarenko, L. Soot climate forcing via snow and ice albedos. *Proc. Natl Acad. Sci. USA* **101,** 423–428 (2004).
51. Corrigan, C. E. *et al.* Capturing vertical profiles of aerosols and black carbon over the Indian Ocean using autonomous unmanned aerial vehicles. *Atmos. Chem. Phys. Discuss.* **7,** 11429–11463 (2007).
52. Ramana, M. V. *et al.* Albedo, atmospheric solar absorption and heating rate measurements with stacked UAVs. *Quart. J. Royal. Met. Soc.* (in the press).
53. Stanhill, G. & Cohen, S. Global dimming: a review of the evidence for a widespread and significant reductions in global radiation with discussion of its probable causes and possible agricultural consequences. *Agric. Forest Meteorol.* **107,** 255–278 (2001).
54. Wild, M. *et al.* From dimming to brightening: Decadal changes in solar radiation at the Earth's surface. *Science* **308,** 847–850 (2005).
55. Alpert, P., Kishcha, P., Kaufman, Y. J., & Schwarzbard, R. Global dimming or local dimming? Effect of urbanization on sunlight availability. *Geophys. Res. Lett.* **32,** doi:10.1029/2005GL023320 (2005).
56. Hansen, J. *et al.* Efficacy of climate forcings. *J. Geophys. Res.* **110,** doi:10.1029/2005JD005776 (2005).
57. Flanner, M. G., Zender, C. S., Randerson, J. T., & Rasch, P. J. Present-day forcing and response from black carbon in snow. *J. Geophys. Res.* **112,** doi:10.1029/2006JD008003 (2007).
58. Manabe, S. & Wetherald, R. T. Thermal equilibrium of the atmosphere with a given distribution of relative humidity. *J. Atmos. Sci.* **24,** 241–259 (1967).
59. Menon, S., Hansen, J., Nazarenko, L., & Luo, Y. Climate effects of black carbon aerosols in China and India. *Science* **297,** 2250–2253 (2002).
60. Ramanathan, V. *et al.* Atmospheric brown clouds: impacts on South Asian climate and hydrologic cycle. *Proc. Natl Acad. Sci. USA* **102,** 5326–5333 (2005).
61. Lau, K.-M. & Kim, M.-K. Asian monsoon anomalies induced by aerosol direct effects. *Clim. Dynam.* **26,** 855–864 (2006).
62. Lau, W. M. Aerosol-hydrological cycle research: a new challenge for monsoon climate research. *B. Am. Meteorol. Soc.* (in the press).
63. Wang, C. A modeling study on the climate impacts of black carbon aerosols. *J. Geophys. Res.* **109,** doi:10.1029/2003JD004084 (2004).
64. Meehl, G. A., Arblaster, J. M., & Collins, W. D. Effects of black carbon aerosols on the Indian monsoon. *J. Climate* (in the press).
65. Chung, C. & Ramanathan, V. Weakening of N. Indian SST gradients and the monsoon rainfall in India and the Sahel. *J. Climate.* **19,** 2036–2045 (2006).
66. Krishnan, R. & Ramanathan, V. Evidence of surface cooling from absorbing aerosols. *J. Geophys. Res.* **29,** doi:10.1029/2002GL014687 (2002).
67. Chung, S. H. & Seinfeld, J. H. Climate response of direct radiative forcing of anthropogenic black carbon. *J. Geophys. Res.* **110,** doi:10.1029/2004JD005441 (2005).
68. Solomon, S. *et al.* (eds) *Climate Change 2007: The Physical Science Basis — Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge Univ. Press, Cambridge, UK, New York, USA, 2007).
69. Thompson, L. G. *et al.* Tropical glacier and ice core evidence of climate changes on annual to millenial time scales. *Climatic Change* **59,** 137–155 (2003).
70. Barnett, T. P., Adam, J. C., & Lettenmaier, D. P. Potential impacts of a warming climate on water availability in snow-dominated regions. *Nature* **438,** 303–309 (2005).
71. *Global Outlook for Ice and Snow* (United Nations Environment Program, Nairobi, Kenya, 2007).
72. Holland, M. M., Bitz, C. M., & Tremblay, B. Future abrupt reductions in the summer Arctic sea ice. *Geophys. Res. Lett.* **33,** doi:10.1029/2006GL028024 (2006).
73. McConnell, J. R. *et al.* 20th-century industrial black carbon emissions altered arctic climate forcing. *Science* **317,** 1381–1384 (2007).
74. Chung, C. & Ramanathan, V. Relationship between trends in land precipitation and tropical SST gradient. *Geophys. Res. Lett.* **34,** doi10.1029/2007GL030491 (2007).
75. Rotstayn, L. D. & Lohmann, U. Tropical rainfall trends and the indirect aerosol effect. *J. Climate* **15,** 2103–2116 (2002).
76. Hoerling, M., Hurrell, J., & Eischeid, J. Detection and attribution of 20th century northern and southern African rainfall change. *J. Climate* **19,** 3989–4008 (2006).
77. Kaufman, Y. J. & Koren, I. Smoke and pollution aerosol effect on cloud cover. *Science* **313,** 655–658 (2006).
78. Rudich, Y., Sagi, A., & Rosenfeld, D. Influence of the Kuwait oil fires plume (1991). on the microphysical development of clouds. *J. Geophys. Res.* **108,** doi:10.1029/2003JD003472 (2003).
79. Zhu, A., Ramanathan, V., Li, F., & Kim, D. Dust plumes over the Pacific, Indian and Atlantic Oceans: Climatology and radiative impact. *J. Geophys. Res.* **112,** doi:10.1029/2007JD008427 (2007).
80. Clarke, A. D. *et al.* Size distributions and mixtures of dust and black carbon aerosol in Asian outflow: Physiochemistry and optical properties. *J. Geophys. Res.* **109,** doi:10.1029/2003JD004378 (2004).
81. Prospero, J. M. & Lamb, J. P. African droughts and dust transport to the Caribbean: Climate change and implications. *Science* **302,** 1024–1027 (2003).
82. Rosenfeld, D., Rudich, Y., & Lahav, R. Desert dust suppressing precipitation: a possible desertification feedback loop. *Proc. Natl Acad. Sci. USA* **98,** 5975–5980 (2001).
83. Stith, J. L. & Ramanathan, V. The Pacific Dust Experiment (PaCDEX) Field Campaign: A summary of accomplishments during the field campaign and examples of early results. *Eos Trans. AGU* **88** (Fall Meeting suppl.) A13G-08 (2007).
84. Westerling, A. L., Hidalgo, H. G., Cayan, D. R., & Swetnam, T. W. Warming and earlier spring increase western US forest wildfire activity. *Science* **313,** 940–943 (2006).
85. Andreae, M. O. *et al.* Smoking Rain Clouds over the Amazon. *Science* **303,** 1337–1341 (2004).
86. Rosenfeld, D. TRMM observed first direct evidence of smoke from forest fires inhibiting rainfall. *Geophys. Res. Lett.* **26,** 3105–3108 (1999).
87. Crutzen, P. J. & Birks, J. W. The atmosphere after a nuclear war: twilight at noon. *Ambio* **11,** 115–125 (1982).
88. Thompson, S. L., Ramaswamy, V., & Covey, C. Atmospheric effects of nuclear war aerosols in general circulation model simulations: influence of smoke optical properties. *J. Geophys. Res.* **92,** 10942–10960 (1987).
89. Turco, P. *et al.* Nuclear winter: global consequences of multiple nuclear explosions. *Science* **222,** 1283–1292 (1983).
90. Hansen, J. E. & Sato, M. Trends of measured climate forcing agents. *Proc. Natl Acad. Sci. USA* **98,** 14778–14783 (2001).
91. Jacobson, M. Z. Control of fossil-fuel particulate black carbon plus organic matter, possibly the most effective method of slowing global warming. *J. Geophys. Res.* **107,** doi:10.1029/2001JD001376 (2002).
92. Bond, T. C. & Sun, H. Can reducing black carbon emissions counteract global warming? *Environ. Sci. Technol.* **39,** 5921–5926 (2005).
93. Smith, K. R. National burden of disease in India from indoor air pollution. *Proc. Natl Acad. Sci. USA* **97,** 13286–13293 (2005).
94. Sridharan, P. V. & Pachauri, R. K. *Looking Back to Think Ahead: Green India 2047 New Delhi* (Tata Energy Research Institute, 1998).
95. Metz, B., Davidson, O., Bosch, P, Dave, R. & Meyer, L. (eds) *Climate Change 2007: Mitigation of Climate Change — Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.* (Cambridge Univ. Press, Cambridge, UK, New York, USA, 2007).
96. Adhikary, B. *et al.* Characterization of the seasonal cycle of south Asian aerosols: A regional-scale modeling analysis. *J. Geophys. Res.* **112,** doi:10.1029/2006JD008143 (2007).
97. Ramanathan, V. & Balakrishnan, K. *Reduction of Air Pollution and Global Warming by Cooking with Renewable Sources: A Controlled and Practical Experiment in Rural India* (Project Surya, 2007); http://www-ramanathan.ucsd.edu/Surya-WhitePaper.pdf.
98. Streets, D. G. Dissecting future aerosol emissions: warming tendencies and mitigation opportunities. *Climatic Change* **81,** 313–330 (2007).

Acknowledgments

This work was funded by the NSF, NOAA and NASA. We thank C. Chung, J. H. Seinfeld and G. A. Meehl for providing simulated temperature changes from their published GCM studies. We thank V. Ramaswamy, T. Bond, M. Jacobson, M. Flanner, G. Meehl and C. Wang for their valuable comments on an earlier draft of the paper.

Correspondence and requests for materials should be addressed to V.R.

© 2008 Nature Publishing Group

EXHIBIT E

EDMUND G. BROWN JR.
Attorney General

State of California
DEPARTMENT OF JUSTICE

The California Environmental Quality Act
Addressing Global Warming Impacts at the Local Agency Level

Under the California Environmental Quality Act (CEQA), local agencies have a very important role to play in California's fight against global warming – one of the most serious environmental effects facing the State today. Where local agencies undertake projects directly, they can and should design sustainable projects from the start, incorporating global warming related considerations into their projects at the earliest stages. Further, local agencies can encourage well-designed, sustainable private projects by analyzing and disclosing to the public the environmental benefits of such projects in any required environmental documents. And where projects as proposed will have significant global warming related effects, local agencies can require feasible changes or alternatives, and impose enforceable, verifiable, feasible mitigation to substantially lessen those effects. By the sum of their decisions, local agencies will help to move the State away from "business as usual" and toward a low-carbon future.

This document provides information that may be helpful to local agencies in carrying out their duties under CEQA as they relate to global warming. Included in this document are various measures that may reduce the global warming related impacts of a project. As appropriate, the measures can be included as design features of a project, required as changes to the project, or imposed as mitigation (whether undertaken directly by the project proponent or funded by mitigation fees). The measures set forth in this package are examples; the list is not intended to be exhaustive. Moreover, the measures cited may not be appropriate for every project. The decision of whether to approve a project – as proposed or with required changes or mitigation – is for the local agency, exercising its informed judgment in compliance with the law and balancing a variety of public objectives.

The first section of this document lists examples of measures that could be applied to a diverse range of projects where the lead agency determines that the project under consideration will have significant global warming related effects. In general, a given measure should not be considered in isolation, but as part of a larger set of measures that, working together, will reduce greenhouse gas emissions and the effects of global warming.

The second section of this document lists examples of potential greenhouse gas reduction measures in the general plan context. This section is included both to suggest how the measures set forth in the first section could be incorporated into a general plan, as well as to identify measures that are general plan specific. The measures in the second section may also be appropriate for inclusion in larger scale plans, including regional plans (*e.g.*, blueprint plans) and in specific plans. Including these types of measures at the larger planning level, as appropriate, will help to ensure more sustainable project-specific development.

The third section provides links to sources of information on global warming impacts and emission reduction measures. The list is not complete, but may be a helpful start for local agencies seeking more information to carry out their CEQA obligations as they relate to global warming.

The endnotes set forth just some of the many examples of exemplary emission reduction measures already being implemented by local governments and agencies, utilities, private industry, and others. As these examples evidence, California at every level of government is taking up the challenge, devising new and innovative solutions, and leading the charge in the fight against global warming.

(1) Generally Applicable Measures

Energy Efficiency[1]

- Design buildings to be energy efficient.[2]
- Install efficient lighting and lighting control systems. Site and design building to take advantage of daylight.
- Use trees, landscaping and sun screens on west and south exterior building walls to reduce energy use.
- Install light colored "cool" roofs and cool pavements.[3]
- Provide information on energy management services for large energy users.[4]
- Install energy efficient heating and cooling systems, appliances and equipment, and control systems.[5]
- Install light emitting diodes (LEDs) for traffic, street and other outdoor lighting.[6]
- Limit the hours of operation of outdoor lighting.
- Use solar heating, automatic covers, and efficient pumps and motors for pools and spas.[7]
- Provide education on energy efficiency.[8]

Renewable Energy

- Install solar, wind, and geothermal power systems and solar hot water heaters. Educate consumers about existing incentives.[9]
- Install solar panels on carports and over parking areas.[10]
- Use on-site generated biogas, including methane, in appropriate applications.***
- Use combined heat and power in appropriate applications.[11]

Water Conservation and Efficiency[12]

- Create water-efficient landscapes.[13]
- Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
- Use reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.
- Design buildings to be water-efficient. Install water-efficient fixtures and appliances.
- Use graywater. (Graywater is untreated household waste water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines.) For example, install dual plumbing in all new development allowing graywater to be used for landscape irrigation.[14]
- Restrict watering methods (*e.g.*, prohibit systems that apply water to non-vegetated surfaces) and control runoff.
- Restrict the use of water for cleaning outdoor surfaces and vehicles.

- Implement low-impact development practices that maintain the existing hydrologic character of the site to manage storm water and protect the environment. (Retaining storm water runoff on-site can drastically reduce the need for energy-intensive imported water at the site.)[15]
- Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include many of the specific items listed above, plus other innovative measures that are appropriate to the specific project.
- Provide education about water conservation and available programs and incentives.[16]

Solid Waste Measures

- Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).
- Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.
- Recover by-product methane to generate electricity.[17]
- Provide education and publicity about reducing waste and available recycling services.[18]

Land Use Measures

- Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.[19]
- Educate the public about the benefits of well-designed, higher density development.[20]
- Incorporate public transit into project design.
- Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.
- Develop "brownfields" and other underused or defunct properties near existing public transportation and jobs.
- Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking.[21]

Transportation and Motor Vehicles

- Limit idling time for commercial vehicles, including delivery and construction vehicles.
- Use low or zero-emission vehicles, including construction vehicles.
- Promote ride sharing programs *e.g.*, by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.
- Create car sharing programs. Accommodations for such programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.[22]
- Create local "light vehicle" networks, such as neighborhood electric vehicle (NEV) systems.[23]

- Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (*e.g.*, electric vehicle charging facilities and conveniently located alternative fueling stations).
- Increase the cost of driving and parking private vehicles by, *e.g.*, imposing tolls and parking fees.
- Institute a low-carbon fuel vehicle incentive program.[24]
- Build or fund a transportation center where various public transportation modes intersect.
- Provide shuttle service to public transit.
- Provide public transit incentives such as free or low-cost monthly transit passes.
- Promote "least polluting" ways to connect people and goods to their destinations.[25]
- Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.
- Incorporate bicycle-friendly intersections into street design.
- For commercial projects, provide adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. For large employers, provide facilities that encourage bicycle commuting, including, *e.g.*, locked bicycle storage or covered or indoor bicycle parking.
- Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.[26]
- Work with the school district to restore or expand school bus services.
- Institute a telecommute and/or flexible work hours program.[27] Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences.
- Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation.

Off-Site Mitigation

If, after analyzing and requiring all reasonable and feasible on-site mitigation measures for avoiding or reducing greenhouse gas-related impacts, the lead agency determines that additional mitigation is required, the agency may consider additional off-site mitigation. The project proponent could, for example, fund off-site mitigation projects (*e.g.*, alternative energy projects, or energy or water audits for existing projects) that will reduce carbon emissions, conduct an audit of its other existing operations and agree to retrofit, or purchase carbon "credits" from another entity that will undertake mitigation.

The topic of offsets can be complicated, and a full discussion is outside the scope of this summary document. Issues that the lead agency should consider include:

- The location of the off-site mitigation. (If the off-site mitigation is far from the project, any additional, non-climate related benefits of the mitigation will be lost to the local community.)
- Whether the emissions reductions from off-site mitigation can be quantified and verified.
- Whether the mitigation ratio should be greater than 1:1 to reflect any uncertainty about the effectiveness of the offset.

(2) General Plan Measures[28]

Global warming measures may be reflected in a general plan as goals, policies, or programs; in land use designations; or as additional mitigation measures identified during the CEQA review process. Many of the measures listed above may be appropriate for inclusion in a general plan. In addition, a non-exhaustive list of measures specific to the general plan context follows. The examples are listed under required general plan elements. A given example may, however, be appropriate for inclusion in more than one element, or in a different element than listed. Global warming measures may, alternatively, be included in an optional Climate Change or Energy element.

Conservation Element[29]

- Climate Action Plan or Policy: Include a comprehensive climate change action plan that includes: a baseline inventory of greenhouse gas emissions from all sources; greenhouse gas emissions reduction targets and deadlines; and enforceable greenhouse gas emissions reduction measures.[30] (Note: If the Climate Action Plan complies with the requirements of Section 15064(h)(3) of the CEQA Guidelines, it may allow for the streamlining of individual projects that comply with the plan's requirements.)
- Climate Action Plan Implementation Program: Include mechanisms to ensure regular review of progress toward the emission reduction targets established by the Climate Action Plan, report progress to the public and responsible officials, and revise the plan as appropriate, using principles of adaptive management. Allocate funding to implement the plan. Fund staff to oversee implementation of the plan.
- Strengthen local building codes for new construction and renovation to require a higher level of energy efficiency.[31]
- Require that all new government buildings, and all major renovations and additions, meet identified green building standards.[32]
- Ensure availability of funds to support enforcement of code and permitting requirements.
- Adopt a "Green Building Program" to require or encourage green building practices and materials.[33] The program could be implemented through, *e.g.*, a set of green building ordinances.
- Require orientation of buildings to maximize passive solar heating during cool seasons, avoid solar heat gain during hot periods, enhance natural ventilation, and promote effective use of daylight. Building orientation, wiring, and plumbing should optimize and facilitate opportunities for on-site solar generation and heating.
- Provide permitting-related and other incentives for energy efficient building projects, *e.g.*, by giving green projects priority in plan review, processing and field inspection services.[34]
- Conduct energy efficiency audits of existing buildings by checking, repairing, and readjusting heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization.[35] Offer financial incentives for adoption of identified efficiency measures.[36]
- Partner with community services agencies to fund energy efficiency projects, including heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization, for low income residents.
- Target local funds, including redevelopment and Community Development Block Grant

resources, to assist affordable housing developers in incorporating energy efficient designs and features.

- Provide innovative, low-interest financing for energy efficiency and alternative energy projects. For example, allow property owners to pay for energy efficiency improvements and solar system installation through long-term assessments on individual property tax bills.[37]
- Fund incentives to encourage the use of energy efficient vehicles, equipment and lighting.[38] Provide financial incentives for adoption of identified efficiency measures.
- Require environmentally responsible government purchasing.[39] Require or give preference to products that reduce or eliminate indirect greenhouse gas emissions, *e.g.*, by giving preference to recycled products over those made from virgin materials.[40]
- Require that government contractors take action to minimize greenhouse gas emissions, *e.g.*, by using low or zero-emission vehicles and equipment.
- Adopt a "heat island" mitigation plan that requires cool roofs, cool pavements, and strategically placed shade trees.[41] (Darker colored roofs, pavement, and lack of trees may cause temperatures in urban environments to increase by as much as 6-8 degrees Fahrenheit as compared to surrounding areas.[42]) Adopt a program of building permit enforcement for re-roofing to ensure compliance with existing state building requirements for cool roofs on non-residential buildings.
- Adopt a comprehensive water conservation strategy. The strategy may include, but not be limited to, imposing restrictions on the time of watering, requiring water-efficient irrigation equipment, and requiring new construction to offset demand so that there is no net increase in water use.[43] Include enforcement strategies, such as citations for wasting water.[44]
- Adopt water conservation pricing, *e.g.*, tiered rate structures, to encourage efficient water use.[45]
- Adopt fees structures that reflect higher costs of services for outlying areas.[46]
- Adopt water-efficient landscape ordinances.[47]
- Strengthen local building codes for new construction and implement a program to renovate existing buildings to require a higher level of water efficiency.
- Adopt ordinances requiring energy and water efficiency upgrades as a condition of issuing permits for renovations or additions, and on the sale of residences and buildings.[48]
- Provide individualized water audits to identify conservation opportunities.[49] Provide financial incentives for adopting identified efficiency measures.
- Provide water audits for large landscape accounts. Provide financial incentives for efficient irrigation controls and other efficiency measures.
- Require water efficiency training and certification for irrigation designers and installers, and property managers.[50]
- Implement or expand city or county-wide recycling and composting programs for residents and businesses. Require commercial and industrial recycling.
- Extend the types of recycling services offered (*e.g.*, to include food and green waste recycling).
- Establish methane recovery in local landfills and wastewater treatment plants to generate

electricity.[51]

- Implement Community Choice Aggregation (CCA) for renewable electricity generation. (CCA allows cities and counties, or groups of them, to aggregate the electric loads of customers within their jurisdictions for purposes of procuring electrical services. CCA allows the community to choose what resources will serve their loads and can significantly increase renewable energy.)[52]
- Preserve existing conservation areas (*e.g.*, forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, and groundwater recharge areas) that provide carbon sequestration benefits.
- Establish a mitigation program for development of conservation areas. Impose mitigation fees on development of such lands and use funds generated to protect existing, or create replacement, conservation areas.
- Provide public education and information about options for reducing greenhouse gas emissions through responsible purchasing, conservation, and recycling.

Land Use Element[53]

- Adopt land use designations to carry out policies designed to reduce greenhouse gas emissions, *e.g.*, policies to minimize or reduce vehicle miles traveled, expand development near existing public transportation corridors, encourage alternative modes of transportation, and increase infill, mixed use, and higher density development.
- Identify and facilitate the development of land uses not already present in local districts – such as supermarkets, parks and recreation fields, and schools in neighborhoods; or residential uses in business districts – to reduce vehicle miles traveled and allow bicycling and walking to these destinations.
- Create neighborhood commercial districts.
- Require bike lanes and bicycle/pedestrian paths.
- Prohibit projects that impede bicycle and walking access, *e.g.*, large parking areas that cannot be crossed by non-motorized vehicles, and new residential communities that block through access on existing or potential bicycle and pedestrian routes.
- Site schools to increase the potential for students to walk and bike to school.[54]
- Enact policies to limit or discourage low density development that segregates employment, services, and residential areas.[55]
- Where there are growth boundaries, adopt policies providing certainty for infill development.[56]
- Require best management practices in agriculture and animal operations to reduce emissions, conserve energy and water, and utilize alternative energy sources, including biogas, wind and solar.

Circulation Element[57]

- In conjunction with measures that encourage public transit, ride sharing, bicycling and walking, implement circulation improvements that reduce vehicle idling. For example, coordinate controlled intersections so that traffic passes more efficiently through congested areas.[58]
- Create an interconnected transportation system that allows a shift in travel from private passenger vehicles to alternative modes, including public transit, ride sharing, car sharing, bicycling and walking. Before funding transportation improvements that increase vehicle miles traveled, consider alternatives such as increasing public transit or improving bicycle or pedestrian travel routes.
- Give funding preference to investment in public transit over investment in infrastructure for private automobile traffic.[59]
- Include safe and convenient bicycle and pedestrian access in all transportation improvement projects.
- Ensure that non-motorized transportation systems are complete, connected and not interrupted by impassable barriers, such as freeways.[60]
- Require amenities for non-motorized transportation, such as secure and convenient bicycle parking.[61]
- Provide adequate and affordable public transportation choices including expanded bus routes and service and other transit choices such as shuttles, light rail, and rail where feasible.
- Assess transportation impact fees on new development in order to maintain and increase public transit service.[62]
- Provide public transit incentives, including free and reduced fare areas.[63]
- Adopt a comprehensive parking policy that discourages private vehicle use and encourages the use of alternative transportation.[64] For example, reduce parking for private vehicles while increasing options for alternative transportation; eliminate minimum parking requirements for new buildings; "unbundle" parking (require that parking is paid for separately and is not included in rent for residential or commercial space); and set appropriate pricing for parking.
- Develop school transit plans to substantially reduce automobile trips to, and congestion surrounding, schools. (According to some estimates, parents driving their children to school account for 20-25% of the morning commute.) Plans may address, *e.g.*, necessary infrastructure improvements and potential funding sources; replacing older diesel buses with low or zero-emission vehicles; mitigation fees to expand school bus service; and Safe Routes to School programs[65] and other formal efforts to increase walking and biking by students.
- Create financing programs for the purchase or lease of vehicles used in employer ride sharing programs.
- Enter into partnerships to create and expand polluting vehicle buy-back programs to include vehicles with high greenhouse gas emissions.
- Provide public education and information about options for reducing motor vehicle-related greenhouse gas emissions. Include information on trip reduction; trip linking; public transit;

biking and walking; vehicle performance and efficiency (*e.g.*, keeping tires inflated); low or zero-emission vehicles; and car and ride sharing.

Housing Element[66]

- Improve the jobs-housing balance and promote a range of affordable housing choices near jobs, services and transit.
- Concentrate mixed use, and medium to higher density residential development in areas near jobs, transit routes, schools, shopping areas and recreation.
- Increase density in single family residential areas located near transit routes or commercial areas. For example, promote duplexes in residential areas and increased height limits of multi-unit buildings on main arterial streets, under specified conditions.
- Encourage transit-oriented developments.[67]
- Impose minimum residential densities in areas designated for transit-oriented, mixed use development to ensure higher density in these areas.
- Designate mixed use areas where housing is one of the required uses.
- In areas designated for mixed use, adopt incentives for the concurrent development of different land uses (*e.g.*, retail with residential).
- Promote infill, mixed use, and higher density development by, for example, reducing developer fees;[68] providing fast-track permit processing; reducing processing fees; funding infrastructure loans; and giving preference for infrastructure improvements in these areas.

Open Space Element[69]

- Preserve forested areas, agricultural lands, wildlife habitat and corridors, wetlands, watersheds, groundwater recharge areas and other open space that provide carbon sequestration benefits.
- Establish a mitigation program for development of those types of open space that provide carbon sequestration benefits. Require like-kind replacement for, or impose mitigation fees on development of such lands. Use funds generated to protect existing, or create replacement, open space.
- Allow alternative energy projects in areas zoned for open space where consistent with other uses and values.
- Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, *e.g.*, requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.
- Connect parks and publicly accessible open space through shared pedestrian/bike paths and trails to encourage walking and bicycling.

Safety Element[70]

- Address expected effects of climate change that may impact public safety, including increased risk of wildfires, flooding and sea level rise, salt water intrusion; and health effects of increased heat and ozone, through appropriate policies and programs.
- Adopt programs for the purchase, transfer or extinguishment of development rights in high risk areas.
- Monitor the impacts of climate change. Use adaptive management to develop new strategies, and modify existing strategies, to respond to the impacts of climate change.

Energy Element

Many of the goals, policies, or programs set forth above may be contained in an optional energy element. The resources set forth below may be useful to local agencies in developing an energy element or an energy conservation plan.

- The California Public Utilities Commission issued a report entitled California Long Term Energy Efficiency Strategic Plan in September 2008. The report serves as a road map for achieving maximum energy savings across all major groups and sectors in California. Section 12 of the report focuses on the role of local governments as leaders in using energy efficiency to reduce energy use and greenhouse gas emissions. The section includes numerous specific suggestions for local government policies designed to reduce energy use. The report is available at http://www.californiaenergyefficiency.com/index.shtml.
- The Local Government Commission produced a detailed report in 2002 entitled General Plan Policy Options for Energy Efficiency in New and Existing Development. The document sets forth energy saving policies suitable for inclusion in general plans. Policies range from exceeding State minimum building efficiency standards, to retrofitting buildings to reduce energy consumption, to implementing energy conservation strategies for roofs, pavement and landscaping. The report also contains suggested general plan language. The report is available here: http://www.redwoodenergy.org/uploads/Energy_Element_Report.pdf.
- The California Energy Commission summarizes the energy-related efforts of Humboldt County, City of Pleasanton, City of Pasadena, City and County of San Francisco, the Los Angeles area, City of Chula Vista, the San Diego region, City of San Diego, City and County of San Luis Obispo, and City of Santa Monica, in the 2006 Integrated Energy Policy Report at pp. 82-87, available here: http://www.energy.ca.gov/2006publications/CEC-100-2006-001/CEC-100-2006-001-CMF.PDF.
- In 2006, the Association of Monterey Bay Area Governments published a regional energy plan, available here: http://www.ambag.org/programs/EnergyWatch/regional_plan.html. Part 1 describes the plan's goals and course of action. Part 2 describes actions that local agencies already have taken and identifies the most cost-effective measures in each sector. The appendices list existing energy programs that may provide support and funding for energy efficiency projects, suggest language for energy-related provisions to be included in general plans, and list and give brief explanations of more than one hundred energy-saving measures.
- The California Local Energy Efficiency Program (CALeep) has available on its website, http://www.caleep.com/default.htm, various resources and documents, including an energy

"Workbook." The Workbook lays out a process for instituting local energy efficiency programs based in part on information developed in six California pilot projects (Inland Empire Utilities Agency, City of Oakland, San Joaquin Valley, Sonoma County, South Bay Cities Council of Governments, and Ventura County Regional Energy Alliance). The Workbook is designed to be used by local officials to initiate, plan, organize, implement, and assess energy efficiency activities at the local and regional level.

(3) Resources About Global Warming and Local Action

The following web sites and organizations provide general information about mitigating global warming impacts at the local level. These sites represent only a small fraction of the available resources. Local agencies are encouraged to conduct their own research in order to obtain the most current and relevant materials.

- The U.S. Conference of Mayors' Climate Protection Agreement contains valuable information for the many local agencies that are joining the fight against global warming. The Agreement is available here: http://www.coolcities.us/resources/bestPracticeGuides/USM_ClimateActionHB.pdf. Over one hundred and twenty California cities have joined the "Cool Cities" campaign, which means they have signed the U.S. Mayor's Climate Protection Agreement and are taking concrete steps toward addressing global warming. These steps include preparing a city-wide greenhouse gas emissions inventory and creating and implementing a local Climate Action Plan. Additional resources, including various cities' Climate Action Plans, are located at the Cool Cities website: http://www.coolcities.us/resources.php.

- In July 2007, Alameda County became one of twelve charter members of the "Cool Counties" initiative. Participating counties sign a Climate Stabilization Declaration, which is available at the website for King County (Washington State): http://www.metrokc.gov/exec/news/2007/0716dec.aspx. Participating counties agree to work with local, state, and federal governments and other leaders to reduce county geographical greenhouse gas emissions to 80% below current levels by 2050 by developing a greenhouse gas emissions inventory and regional reduction plan. Current member counties are recruiting new members and are committed to sharing information. Cool Counties contact information is available at: http://www.kingcounty.gov/exec/coolcounties.

- Local Governments for Sustainability, a program of International Cities for Local Environmental Initiatives (ICLEI), has initiated a campaign called Cities for Climate Protection (CCP). The membership program is designed to empower local governments worldwide to take action on climate change. Many California cities have joined ICLEI. More information is available at the organization's website: http://www.iclei.org/.

- The Institute for Local Government (ILG), an affiliate of the California State Association of Counties and the League of California Cities, has instituted a program called the California Climate Action Network (CaliforniaCAN!). The program provides information about the latest climate action resources and case studies. More information is available at the CaliforniaCAN! website: http://www.cacities.org/index.jsp?displaytype=&section=climate&zone=ilsg.

  ILG's detailed list of climate change "best practices" for local agencies is available at http://www.cacities.org/index.jsp?displaytype=&section=climate&zone=ilsg&sub_sec=climate_local.

ILG maintains a list of local agencies that have adopted Climate Action Plans. The list is available here: http://www.cacities.org/index.jsp?zone=ilsg&previewStory=27035. According to ILG, the list includes Marin County and the cities of Arcata, Berkeley, Los Angeles, Palo Alto, San Diego, and San Francisco. Many additional local governments are in the process of conducting greenhouse gas inventories.

- The non-profit group Natural Capitalism Solutions (NCS) has developed an on-line Climate Protection Manual for Cities. NCS states that its mission is "to educate senior decision-makers in business, government and civil society about the principles of sustainability." The manual is available at http://www.climatemanual.org/Cities/index.htm.

- The Local Government Commission provides many planning-related resources for local agencies at its website: http://www.lgc.org/.

  In cooperation with U.S. EPA, LGC has produced a booklet discussing the benefits of density and providing case studies of well-designed, higher density projects throughout the nation. Creating Great Neighborhoods: Density in Your Community (2003) is available here: http://www.lgc.org/freepub/PDF/Land_Use/reports/density_manual.pdf.

- The Pew Center on Global Climate Change was established in 1998 as a non-profit, non-partisan and independent organization. The Center's mission is to provide credible information, straight answers, and innovative solutions in the effort to address global climate change. See http://www.pewclimate.org. The Pew Center has published a series of reports called Climate Change 101. These reports provide a reliable and understandable introduction to climate change. They cover climate science and impacts, technological solutions, business solutions, international action, recent action in the U.S. states, and action taken by local governments. The Climate Change 101 reports are available at http://www.pewclimate.org/global-warming-basics/climate_change_101.

- The Climate Group, www.theclimategroup.org, is a non-profit organization founded by a group of companies, governments and activists to "accelerate international action on global warming with a new, strong focus on practical solutions." Its website contains a searchable database of about fifty case studies of actions that private companies, local and state governments, and the United Kingdom, have taken to reduce GHG emissions. Case studies include examples from California. The database, which can be searched by topic, is available at http://theclimategroup.org/index.php/reducing_emissions/case_studies.

- The Bay Area Climate Solutions Database features over 130 climate-related projects, programs and policies in the San Francisco Bay Area that are being undertaken by businesses, public agencies, non-government organizations, and concerned individuals. The database is available at http://www.bayareaclimate.org/services.html.

- U.S. EPA maintains a list of examples of codes that support "smart growth" development, available here: http://www.epa.gov/piedpage/codeexamples.htm. Examples include transit-oriented development in Pleasant Hill and Palo Alto, rowhouse design guidelines from Mountain View, and street design standards from San Diego.

- In November 2007, U.S. EPA issued a report entitled "Measuring the Air Quality and Transportation Impacts of Infill Development." This report summarizes three regional infill development scenarios in Denver, Colorado; Boston, Massachusetts; and Charlotte, North

Carolina. The analysis shows how standard transportation forecasting models currently used by metropolitan planning organizations can be modified to capture at least some of the transportation and air quality benefits of brownfield and infill development. In all scenarios, more compact and transit oriented development was projected to substantially reduce vehicle miles traveled. As the agency found, "The results of this analysis suggest that strong support for infill development can be one of the most effective transportation and emission-reduction investments a region can pursue." The report is available at http://www.epa.gov/smartgrowth/impacts_infill.htm.

- The Urban Land Institute (ULI) is a nonprofit research and education organization providing leadership in responsible land use and sustainability. In 2007, ULI produced a report entitled, "Growing Cooler: The Evidence on Urban Development and Climate Change," which reviews existing research on the relationship between urban development, travel, and greenhouse gases emitted by motor vehicles. It further discusses the emissions reductions that can be expected from compact development and how to make compact development happen. "Growing Cooler" is available at http://www.smartgrowthamerica.org/gcindex.html.
- The California Department of Housing and Community Development, http://www.hcd.ca.gov/, has many useful resources on its website related to housing policy and housing elements and specific recommendations for creating higher density and affordable communities. See http://www.hcd.ca.gov/hpd/hrc/plan/he/.
- The California Transportation Commission (CTC) recently made recommendations for changes to regional transportation guidelines to address climate change issues. Among other things, the CTC recommends various policies, strategies and performance standards that a regional transportation agency should consider including in a greenhouse reduction plan. These or analogous measures could be included in other types of planning documents or local climate action plans. The recommendation document, and Attachment A, entitled Smart Growth/Land Use Regional Transportation Plan Guidelines Amendments, are located at http://www.dot.ca.gov/hq/transprog/ctcbooks/2008/0108/12_4.4.pdf.
- The California Energy Commission's Research Development and Demonstration (RD&D) Division supports energy research, development and demonstration projects designed to bring environmentally safe, affordable and reliable energy services and products to the marketplace. On its website, http://www.energy.ca.gov/research/reports_pubs.html, RD&D makes available a number of reports and papers related to energy efficiency, alternative energy, and climate change.
- The Governor's Office of Planning and Research (OPR) provides valuable resources for lead agencies related to CEQA and global warming at http://opr.ca.gov/index.php?a=ceqa/index.html. Among the materials available are a list of environmental documents addressing climate change and greenhouse gas emissions and a list of local plans and policies addressing climate change. In addition, OPRs' The California Planners' Book of Lists 2008, which includes the results of surveys of local agencies on matters related to global warming, is available at http://www.opr.ca.gov/index.php?a=planning/publications.html#pubs-C.
- The California Air Pollution Control Officers Association has prepared a white paper entitled "CEQA and Climate Change" (January 2008). The document includes a list of mitigation measures and information about their relative efficacy and cost. The document is available at

http://www.capcoa.org/ceqa/?docID=ceqa.

- The Attorney General's global warming website includes a section on CEQA. See http://ag.ca.gov/globalwarming/ceqa.php. The site includes all of the Attorney General's public comment letters that address CEQA and global warming.

(4) Endnotes

1. Energy efficiency leads the mitigation list because it promises significant greenhouse gas reductions through measures that are cost-effective for the individual residential and commercial energy consumer.

2. Leadership in Energy and Environmental Design (LEED) administers a Green Building Ratings program that provides benchmarks for the design, construction, and operation of high-performance green buildings. More information about the LEED ratings system is available at http://www.usgbc.org/DisplayPage.aspx?CategoryID=19. Build it Green is a non-profit, membership organization that promotes green building practices in California. The organization offers a point-based, green building rating system for various types of projects. See http://www.builditgreen.org/guidelines-rating-systems. Lawrence Berkeley National Laboratories' Building Technologies Department is working to develop coherent and innovative building construction and design techniques. Information and publications on energy efficient buildings are available at the Department's website at http://btech.lbl.gov. The California Department of Housing and Community Development has created an extensive Green Building & Sustainability Resources handbook with links to green building resources, available at http://www.hcd.ca.gov/hpd/green_build.pdf.

3. For more information, see Lawrence Berkeley National Laboratories, Heat Island Group at http://eetd.lbl.gov/HeatIsland/.

4. See California Energy Commission, "How to Hire an Energy Services Company" (2000) at http://www.energy.ca.gov/reports/efficiency_handbooks/400-00-001D.PDF.

5. Energy Star is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy that certifies energy efficient products and provides guidelines for energy efficient practices for homes and businesses. More information about Energy Star-certified products is available at http://www.energystar.gov/. The Electronic Product Environmental Assessment Tool (EPEAT) is a system that ranks computer products based on their conformance to a set of environmental criteria, including energy efficiency. More information about EPEAT is available at http://www.epeat.net/AboutEPEAT.aspx.

6. LED lighting is substantially more energy efficient than conventional lighting and can save money. See http://www.energy.ca.gov/efficiency/partnership/case_studies/TechAsstCity.pdf (noting that installing LED traffic signals saved the City of Westlake about $34,000 per year). As of 2005, only about a quarter of California's cities and counties were using 100% LEDs in traffic signals. See California Energy Commission (CEC), Light Emitting Diode Traffic Signal Survey (2005) at p. 15, available at http://www.energy.ca.gov/2005publications/CEC-400-2005-003/CEC-400-2005-003.PDF. The CEC's Energy Partnership Program can help local governments take advantage of energy saving technology, including, but not limited to, LED traffic signals. See http://www.energy.ca.gov/efficiency/partnership/.

7. See Palm Desert Energy Partnership at http://www.sce.com/rebatesandsavings/palmdesert. The City, in partnership with Southern California Edison, provides incentives and rebates for efficient equipment.

See Southern California Edison, Pool Pump and Motor Replacement Rebate Program at http://www.sce.com/RebatesandSavings/Residential/pool/pump-motor.

8. Many cities and counties provide energy efficiency education. See, for example, the City of Stockton's Energy Efficiency website at http://www.stocktongov.com/energysaving/index.cfm. See also "Green County San Bernardino," http://www.greencountysb.com/ at pp. 4-6. Private projects may also provide education. For example, a homeowners' association could provide information and energy audits to its members on a regular basis.

9. See http://www.gosolarcalifornia.ca.gov/documents/CEC-300-2007-008-CMF.PDF. At the direction of Governor Schwarzenegger, the California Public Utilities Commission (CPUC) approved the California Solar Initiative on January 12, 2006. The initiative creates a $3.3 billion, ten-year program to install solar panels on one million roofs in the State. See http://www.gosolarcalifornia.ca.gov/nshp/index.html.

10. For example, Alameda County has installed two solar tracking carports, each generating 250 kilowatts. By 2005, the County had installed eight photovoltaic systems totaling over 2.3 megawatts. The County is able to meet 6 percent of its electricity needs through solar power. See http://www.acgov.org/gsa/Alameda%20County%20-%20Solar%20Case%20Study.pdf.

11. Many commercial, industrial, and campus-type facilities (such as hospitals, universities and prisons) use fuel to produce steam and heat for their own operations and processes. Unless captured, much of this heat is wasted. Combined heat and power (CHP) captures waste heat and re-uses it, *e.g.*, for residential or commercial space heating or to generate electricity. See U.S. EPA, Catalog of CHP Technologies at http://www.epa.gov/chp/documents/catalog_of_%20chp_tech_entire.pdf. The average efficiency of fossil-fueled power plants in the United States is 33 percent. By using waste heat recovery technology, CHP systems typically achieve total system efficiencies of 60 to 80 percent. CHP can also substantially reduce emissions of carbon dioxide. http://www.epa.gov/chp/basic/efficiency.html. Currently, CHP in California has a capacity of over 9 million kilowatts. See list of California CHP facilities at http://www.eea-inc.com/chpdata/States/CA.html.

12. The California Energy Commission has found that the State's water-related energy use – which includes the conveyance, storage, treatment, distribution, wastewater collection, treatment, and discharge – consumes about 19 percent of the State's electricity, 30 percent of its natural gas, and 88 billion gallons of diesel fuel every year. See http://www.energy.ca.gov/2007publications/CEC-999-2007-008/CEC-999-2007-008.PDF. Accordingly, reducing water use and improving water efficiency can help reduce energy use and associated greenhouse gas emissions.

13. The Water Conservation in Landscaping Act of 2006 (AB 1881) requires the Department of Water Resources (DWR), not later than January 1, 2009, to update the Model Water Efficient Landscape Ordinance. The draft of the entire updated Model Water Efficient Landscape Ordinance will be made available to the public. See http://www.owue.water.ca.gov/landscape/ord/updatedOrd.cfm.

14. See Graywater Guide, Department of Water Resources, Office of Water Use Efficiency and Transfers at http://www.owue.water.ca.gov/docs/graywater_guide_book.pdf. See also The Ahwahnee Water Principles, Principle 6, at http://www.lgc.org/ahwahnee/h2o_principles.html. The Ahwahnee Water Principles have been adopted by City of Willits, Town of Windsor, Menlo Park, Morgan Hill, Palo Alto,

Petaluma, Port Hueneme, Richmond, Rohnert Park, Rolling Hills Estates, San Luis Obispo, Santa Paula, Santa Rosa, City of Sunnyvale, City of Ukiah, Ventura, Marin County, Marin Municipal Water District, and Ventura County.

15. See Office of Environmental Health Hazard Assessment and the California Water and Land Use Partnership, Low Impact Development, at http://www.coastal.ca.gov/nps/lid-factsheet.pdf.

16. See, for example, the City of Santa Cruz, Water Conservation Office at http://www.ci.santa-cruz.ca.us/wt/conservation; Santa Clara Valley Water District, Water Conservation at http://www.valleywater.org/conservation/index.shtm; and Metropolitan Water District and the Family of Southern California Water Agencies, Be Water Wise at http://www.bewaterwise.com. Private projects may provide or fund similar education.

17. See Public Interest Energy Research Program, Dairy Power Production Program, Dairy Methane Digester System, 90-Day Evaluation Report, Eden Vale Dairy (Dec. 2006) at http://www.energy.ca.gov/2006publications/CEC-500-2006-083/CEC-500-2006-083.PDF. See also discussion in the general plan section, below, relating to wastewater treatment plants and landfills.

18. Many cities and counties provide information on waste reduction and recycling. See, for example, the Butte County Guide to Recycling at http://www.recyclebutte.net. The California Integrated Waste Management Board's website contains numerous publications on recycling and waste reduction that may be helpful in devising an education project. See http://www.ciwmb.ca.gov/Publications/default.asp?cat=13. Private projects may also provide education directly, or fund education.

19. See U.S. EPA, Our Built and Natural Environments, A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality (Jan. 2001) at pp. 46-48 http://www.epa.gov/dced/pdf/built.pdf.

20. See California Department of Housing and Community Development, Myths and Facts About Affordable and High Density Housing (2002), available at http://www.hcd.ca.gov/hpd/mythsnfacts.pdf.

21. Palo Alto's Green Ribbon Task Force Report on Climate Protection recommends pedestrian and bicycle-only streets under its proposed actions. See http://www.city.palo-alto.ca.us/civica/filebank/blobdload.asp?BlobID=7478.

22. There are a number of car sharing programs operating in California, including City CarShare http://www.citycarshare.org/ and Zip Car http://www.zipcar.com/.

23. The City of Lincoln has a NEV program. See http://www.lincolnev.com/index.html.

24. The County of Los Angeles has instituted an alternative fuel vehicle purchasing program open to County employees, retirees, family members, and contractors and subcontractors. See http://www.lacounty.gov/VPSP.htm.

25. Promoting "least polluting" methods of moving people and goods is part of a larger, integrated "sustainable streets" strategy now being explored at U.C. Davis's Sustainable Transportation Center. Resources and links are available at the Center's website. See http://stc.ucdavis.edu/outreach/ssp.php.

26. See, for example, Marin County's Safe Routes to Schools program at http://www.saferoutestoschools.org ; see also California Center for Physical Activity's California Walk to School website at http://www.cawalktoschool.com.

27. Through a continuing FlexWork Implementation Program, the Traffic Solutions division of the Santa Barbara County Association of Governments (SBCAG) is sponsoring flexwork consulting, training and implementation services to a limited number of Santa Barbara County organizations that want to create or expand flexwork programs for the benefit of their organizations, employees and the community. See http://www.flexworksb.com/read_more_about_the_fSBp.html.

28. For information on the general plan process, see Governor's Office of Planning and Research, General Plan Guidelines (1998), available at http://ceres.ca.gov/planning/genplan/gpg.pdf.

29. The Conservation Element addresses the conservation, development, and use of natural resources including water, forests, soils, rivers, and mineral deposits. Measures proposed for the Conservation Element may alternatively be appropriate for other elements. In practice, there may be substantial overlap in the global warming mitigation measures appropriate for the Conservation and Open Space Elements.

30. See the Attorney General's settlement agreement with the County of San Bernardino, available at http://ag.ca.gov/cms_pdfs/press/2007-08-21_San_Bernardino_settlement_agreement.pdf; Attorney General's settlement agreement with the City of Stockton, available at http://ag.ca.gov/cms_attachments/press/pdfs/n1608_stocktonagreement.pdf . See also Marin County Greenhouse Gas Reduction Plan (Oct. 2006) at http://www.co.marin.ca.us/depts/CD/main/pdf/final_ghg_red_plan.pdf; Marin Countywide Plan (Nov. 6, 2007) at http://www.co.marin.ca.us/depts/CD/main/fm/cwpdocs/CWP_CD2.pdf; Draft Conservation Element, General Plan, City of San Diego at http://www.sandiego.gov/planning/genplan/pdf/generalplan/ce070918.pdf.

31. Public Resources Code Section 25402.1(h)2 and Section 10-106 of the Building Energy Efficiency Standards establish a process that allows local adoption of energy standards that are more stringent than the statewide Standards. More information is available at the California Energy Commission's website. See http://www.energy.ca.gov/title24/2005standards/ordinances_exceeding_2005_building_standards.html; see also California Public Utilities Commission, California Long Term Energy Efficiency Strategic Plan (Sept. 2008) at p. 92, available at http://www.californiaenergyefficiency.com/docs/EEStrategicPlan.pdf.

32. See, *e.g.*, LEED at http://www.usgbc.org/DisplayPage.aspx?CategoryID=19; see also Build it Green at http://www.builditgreen.org/guidelines-rating-systems.

33. During 2007 and 2008, an unprecedented number of communities across the State adopted green building requirements in order to increase energy efficiency and decrease greenhouse gas emissions and other environmental impacts within their jurisdictions. The California Attorney General's office has prepared a document that identifies common features of recent green building ordinances and various approaches that cities and counties have taken. The document is available at http://ag.ca.gov/globalwarming/greenbuilding.php.

34. See, *e.g.*, "Green County San Bernardino," http://www.greencountysb.com/. As part of its program, the County is waiving permit fees for alternative energy systems and efficient heating and air conditioning systems. See http://www.greencountysb.com/ at p. 3. For a representative list of incentives for green building offered in California and throughout the nation, see U.S. Green Building Council, Summary of Government LEED Incentives (updated quarterly) at https://www.usgbc.org/ShowFile.aspx?DocumentID=2021.

35. For example, Riverside Public Utilities offers free comprehensive energy audits to its business customers. See http://www.riversideca.gov/utilities/busi-technicalassistance.asp.

36. Under Southern California Gas Company's Energy Efficiency Program for Commercial/Industrial Large Business Customers, participants are eligible to receive an incentive based on 50% of the equipment cost, or $0.50 per therm saved, whichever is lower, up to a maximum amount of $1,000,000 per customer, per year. Eligible projects require an energy savings of at least 200,000 therms per year. See http://www.socalgas.com/business/rebates.

37. The City of Berkeley is in the process of instituting a "Sustainable Energy Financing District." According to the City, "The financing mechanism is loosely based on existing 'underground utility districts' where the City serves as the financing agent for a neighborhood when they move utility poles and wires underground. In this case, individual property owners would contract directly with qualified private solar installers and contractors for energy efficiency and solar projects on their building. The City provides the funding for the project from a bond or loan fund that it repays through assessments on participating property owners' tax bills for 20 years." See http://www.cityofberkeley.info/Mayor/PR/pressrelease2007-1023.htm.

    The California Energy Commission's Public Interest Energy Research Program estimates that the technical potential for rooftop applications of photovoltaic systems in the State is about 40 gigawatts in 2006, rising to 68 gigawatts in 2016. See Public Interest Energy Research Program, California Rooftop Photovoltaic (PV) Resource Assessment and Growth Potential by County (2007), available at http://www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2007-048.

38. As described in its Climate Action Plan, the City of San Francisco uses a combination of incentives and technical assistance to reduce lighting energy use in small businesses such as grocery stores, small retail outlets, and restaurants. The program offers free energy audits and coordinated lighting retrofit installation. In addition, the City offers residents the opportunity to turn in their incandescent lamps for coupons to buy fluorescent units. See San Francisco's Climate Action Plan, available at http://www.sfenvironment.org/downloads/library/climateactionplan.pdf.

39. Among other strategies for reducing its greenhouse gas emissions, Yolo County is considering a purchasing policy that mandates all purchases of electrical equipment meet or exceed the PG&E Energy Star rating. This would require departments to purchase improved efficiency refrigerators, microwaves and related appliances that have greater power efficiencies and less GHG impacts. See http://www.yolocounty.org/Index.aspx?page=878.

40. See, for example, Los Angeles County Green Purchasing Policy, June 2007 at http://www.responsiblepurchasing.org/UserFiles/File/General/Los%20Angeles%20County,%20Green%20Purchasing%20Policy,%20June%202007.pdf. The policy requires County agencies to purchase

products that minimize environmental impacts, including greenhouse gas emissions. See also California Energy Commission, Existing Green Procurement Initiatives, available at http://www.cec.org/files/pdf/ECONOMY/Green-Procurement_Initiatives_en.pdf.

41. Some local agencies have implemented a cool surfaces programs in conjunction with measures to address storm water runoff and water quality. See, for example, The City of Irvine's Sustainable Travelways/Green Streets program at http://www.cityofirvine.org/depts/redevelopment/sustainable_travelways.asp; The City of Los Angeles's Green Streets LA program at http://water.lgc.org/water-workshops/la-workshop/Green_Streets_Daniels.pdf/view; see also The Chicago Green Alley Handbook at http://egov.cityofchicago.org/webportal/COCWebPortal/COC_EDITORIAL/GreenAlleyHandbook_Jan.pdf.

42. See the website for Lawrence Berkeley National Laboratory's Urban Heat Island Group at http://eetd.lbl.gov/HeatIsland/LEARN/ and U.S. EPA's Heat Island website at www.epa.gov/heatisland/. To learn about the effectiveness of various heat island mitigation strategies, see the Mitigation Impact Screening Tool, available at http://www.epa.gov/heatisld/resources/tools.html.

43. For example, the City of Lompoc has a policy to "require new development to offset new water demand with savings from existing water users, as long as savings are available." See http://www.ci.lompoc.ca.us/departments/comdev/pdf07/RESRCMGMT.pdf.

44. The Eastern Municipal Water District imposes fines on all customers, including residential customers, for excessive runoff. See Water Use Efficiency Ordinance 72.23, available at http://www.emwd.org/usewaterwisely.

45. The Irvine Ranch Water District in Southern California, for example, uses a five-tiered rate structure that rewards conservation. The water district has a baseline charge for necessary water use. Water use that exceeds the baseline amount costs incrementally more money. While "low volume" water use costs $.082 per hundred cubic feet (ccf), "wasteful" water use costs $7.84 per ccf. See http://www.irwd.com/AboutIRWD/rates_residential.php. Marin County has included tiered billing rates as part of its general plan program to conserve water. See Marin County Countywide Plan, page 3-204, PFS-2.q, available at http://www.co.marin.ca.us/depts/CD/main/fm/cwpdocs/CWP_CD2.pdf.

46. The Sacramento Regional Sanitation District has adopted a tiered sewer impact fee ordinance that charges less for connections to identified "infill communities" as compared to identified "new communities." See http://www.srcsd.com/pdf/ord-0106.pdf.

47. See the City of Fresno's Watering Regulations and Ordinances at http://www.fresno.gov/Government/DepartmentDirectory/PublicUtilities/Watermanagement/Conservation/WaterRegulation/WateringRegulationsandRestrictions.htm.

48. See, *e.g.*, the City of San Diego's plumbing retrofit ordinance at http://www.sandiego.gov/water/conservation/selling.shtml; City of San Francisco's residential energy conservation ordinance (fact sheet) at http://www.sfgov.org/site/uploadedfiles/dbi/Key_Information/19_ResidEnergyConsBk1107v5.pdf.

49. The City of Roseville offers free water conservation audits through house calls and on-line surveys. See http://www.roseville.ca.us/eu/water_utility/water_conservation/for_home/programs_n_rebates.asp.

50. See Landscape Performance Certification Program, Municipal Water District of Orange County at http://waterprograms.com/wb/30_Landscapers/LC_01.htm.

51. For example, San Diego's Metropolitan Wastewater Department (SDMWD) installed eight digesters at one of its wastewater treatment plants. Digesters use heat and bacteria to break down the organic solids removed from the wastewater to create methane, which can be captured and used for energy. The methane generated by SDMWD's digesters runs two engines that supply enough energy for all of the plant's needs, and the plant sells the extra energy to the local grid. See http://www.sandiego.gov/mwwd/facilities/ptloma.shtml. In addition, the California Air Resources Board approved the Landfill Methane Capture Strategy as an early action measure. http://www.arb.ca.gov/cc/landfills/landfills.htm. Numerous landfills in California, such as the Puenta Hills Landfill in Los Angeles County (http://www.lacsd.org/about/solid_waste_facilities/puente_hills/clean_fuels_program.asp), the Scholl Canyon Landfill in the City of Glendale (http://www.glendalewaterandpower.com/the_environment/renewable_energy_development.aspx), and theYolo Landfill in Yolo County, are using captured methane to generate power and reduce the need for other more carbon-intensive energy sources.

52. On April 30, 2007, the Public Utilities Commission authorized a CCA application by the Kings River Conservation District on behalf of San Joaquin Valley Power Authority (SJVPA). SJVPA's Implementation Plan and general CCA program information are available at www.communitychoice.info. See also http://www.co.marin.ca.us/depts/CD/main/comdev/advance/Sustainability/Energy/cca/CCA.cfm. (County of Marin); and http://sfwater.org/mto_main.cfm/MC_ID/12/MSC_ID/138/MTO_ID/237 (San Francisco Public Utilities Commission). See also Public Interest Energy Research, Community Choice Aggregation (fact sheet) (2007), available at http://www.energy.ca.gov/publications/displayOneReport.php?pubNum=CEC-500-2006-082.

53. The Land Use Element designates the type, intensity, and general distribution of uses of land for housing, business, industry, open-space, education, public buildings and grounds, waste disposal facilities, and other categories of public and private uses.

54. The Center for Physical Activity within the California Department of Public Health supports school siting and joint use policies and practices that encourage kids to walk and bike to school; discourage car trips that cause air pollution and damage the environment; and position schools as neighborhood centers that offer residents recreational, civic, social, and health services easily accessible by walking or biking. The Center offers school siting resources on its website at http://www.caphysicalactivity.org/school_siting.html#resources.

55. Samples of local legislation to reduce sprawl are set forth in the U.S. Conference of Mayors' Climate Action Handbook. See http://www.iclei.org/documents/USA/documents/CCP/Climate_Action_Handbook-0906.pdf.

56. For a list and maps related to urban growth boundaries in California, see Urban Growth Boundaries and Urban Line Limits, Association of Bay Area Governments (2006) at http://www.abag.ca.gov/jointpolicy/Urban%20Growth%20Boundaries%20and%20Urban%20Limit%20Lines.pdf.

57. The Circulation Element works with the Land Use element and identifies the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities.

58. See Orange County Transportation Authority, Signal Synchronization at http://www.octa.net/signals.aspx. Measures such as signal synchronization that improve traffic flow must be paired with other measures that encourage public transit, bicycling and walking so that improved flow does not merely encourage additional use of private vehicles.

59. San Francisco's "Transit First" Policy is listed in its Climate Action Plan, available at http://www.sfenvironment.org/downloads/library/climateactionplan.pdf. The City's policy gives priority to public transit investments and provides public transit street capacity and discourages increases in automobile traffic. This policy has resulted in increased transit service to meet the needs generated by new development.

60. The City of La Mesa has a Sidewalk Master Plan and an associated map that the City uses to prioritize funding. See http://www.ci.la-mesa.ca.us/index.asp?NID=699; see also Toolkit for Improving Walkability in Alameda County, available at http://www.acta2002.com/ped-toolkit/ped_toolkit_print.pdf; and U.S. EPA's list of transit-related "smart growth" publications at http://www.epa.gov/dced/publications.htm#air, including Pedestrian and Transit-Friendly Design: A Primer for Smart Growth (1999), available at www.epa.gov/dced/pdf/ptfd_primer.pdf. Pursuant to the California Complete Streets Act of 2008 (AB 1358, Gov. Code, §§ 65040.2 and 65302), commencing January 1, 2011, upon any substantive revision of the circulation element of the general plan, a city or county will be required to modify the circulation element to plan for a balanced, multimodal transportation network that meets the needs of all users.

61. See the City of Oakland's Bicycle Parking Requirements ordinance, available at www.oaklandpw.com/assetfactory.aspx?did=3337.

62. San Francisco assesses a Downtown Transportation Impact Fee on new office construction and commercial office space renovation within a designated district. The fee is discussed in the City's Climate Action plan, available at http://www.sfenvironment.org/downloads/library/climateactionplan.pdf.

63. For example, Seattle, Washington maintains a public transportation "ride free" zone in its downtown from 6:00 a.m. to 7:00 p.m. daily. See http://transit.metrokc.gov/tops/accessible/paccessible_map.html#fare.

64. See, for example, Reforming Parking Policies to Support Smart Growth, Metropolitan Transportation Commission (June 2007) at http://www.mtc.ca.gov/planning/smart_growth/parking_seminar/Toolbox-Handbook.pdf; see also the City of Ventura's Downtown Parking and Mobility Plan, available at

http://www.cityofventura.net/community_development/resources/mobility_parking_plan.pdf, and its Downtown Parking Management Program, available at http://www.ci.ventura.ca.us/depts/comm_dev/downtownplan/chapters.asp.

65. See Safe Routes to School Toolkit, National Highway Traffic Safety Administration (2002) at www.nhtsa.dot.gov/people/injury/pedbimot/bike/Safe-Routes-2002; see also www.saferoutestoschools.org (Marin County).

66. The Housing Element assesses current and projected housing needs. In addition, it sets policies for providing adequate housing and includes action programs for that purpose.

67. The U.S. Conference of Mayors cites Sacramento's Transit Village Redevelopment as a model of transit-oriented development. More information about this project is available at http://www.cityofsacramento.org/planning/projects/65th-street-village/. The Metropolitan Transportation Commission (MTC) has developed policies and funding programs to foster transit-oriented development. More information is available at MTC's website: http://www.mtc.ca.gov/planning/smart_growth/#tod. The California Department of Transportation maintains a searchable database of 21 transit-oriented developments at http://transitorienteddevelopment.dot.ca.gov/miscellaneous/NewHome.jsp.

68. The City of Berkeley has endorsed the strategy of reducing developer fees or granting property tax credits for mixed-use developments in its Resource Conservation and Global Warming Abatement Plan. City of Berkeley's Resource Conservation and Global Warming Abatement Plan p. 25 at http://www.baaqmd.gov/pln/GlobalWarming/BerkeleyClimateActionPlan.pdf.

69. The Open Space Element details plans and measures for preserving open space for natural resources, the managed production of resources, outdoor recreation, public health and safety, and the identification of agricultural land. As discussed previously in these Endnotes, there may be substantial overlap in the measures appropriate for the Conservation and Open Space Elements.

70. The Safety Element establishes policies and programs to protect the community from risks associated with seismic, geologic, flood, and wildfire hazards.

EXHIBIT F

Technical Advisory

CEQA AND CLIMATE CHANGE: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

This technical advisory is one in a series of advisories provided by the Governor's Office of Planning and Research (OPR) as a service to professional planners, land use officials and CEQA practitioners. OPR issues technical guidance from time to time on issues that broadly affect the practice of CEQA and land use planning. The emerging role of CEQA in addressing climate change and greenhouse gas emissions has been the topic of much discussion and debate in recent months. This document provides OPR's perspective on the issue.

I. PURPOSE

General scientific consensus and increasing public awareness regarding global warming and climate change have placed new focus on the California Environmental Quality Act (CEQA) review process as a means to address the effects of greenhouse gas (GHG) emissions from proposed projects on climate change. Many public agencies—along with academic, business, and community organizations—are striving to determine the appropriate means by which to evaluate and mitigate the impacts of proposed projects on climate change. Approaches and methodologies for calculating GHG emissions and addressing the environmental impacts through CEQA review are rapidly evolving and are increasingly available to assist public agencies to prepare their CEQA documents and make informed decisions.

JUNE 19, 2008

STATE OF CALIFORNIA
Arnold Schwarzenegger, Governor

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
Cynthia Bryant, Director

1400 Tenth Street
Sacramento, CA 95814

PO Box 3044
Sacramento, CA 95812

(916)322-2318

www.opr.ca.gov

The Governor's Office of Planning and Research (OPR) will develop, and the California Resources Agency (Resources Agency) will certify and adopt amendments to the Guidelines implementing the California Environmental Quality Act ("CEQA Guidelines"), on or before January 1, 2010, pursuant to Senate Bill 97 (Dutton, 2007). These new CEQA Guidelines will provide regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents. In the interim, OPR offers the following informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents. This guidance was developed in cooperation with the Resources Agency, the California Environmental Protection Agency (Cal/EPA), and the California Air Resources Board (ARB).

II. BACKGROUND

Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of GHG emissions in the atmosphere. Greenhouse gases trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities, appears to be closely associated with global warming.

State law defines GHG to include the following: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (Health and Safety Code, section 38505(g).) The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide.

Requirements of AB 32 and SB 97

Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006 (Nunez, 2006), recognizes that California is the source of substantial amounts of GHG emissions. The statute begins with several legislative findings and declarations of intent, including the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snow pack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems. (Health and Safety Code, section 38501.)

In order to avert these consequences, AB 32 establishes a state goal of reducing GHG emissions to 1990 levels by the year 2020 (a reduction of approximately 25 percent from forecast emission levels) with further reductions to follow. The law requires the ARB to establish a program to track and report GHG emissions; approve a scoping plan for achieving the maximum technologically feasible and cost effective reductions from sources of GHG emissions; adopt early reduction measures to begin moving forward; and adopt, implement and enforce regulations – including market mechanisms such as "cap-and-trade" programs – to ensure the required reductions occur. The ARB recently adopted a statewide GHG emissions limit and an emissions inventory, along with requirements to measure, track, and report GHG emissions by the industries it determined to be significant sources of GHG emissions.

CEQA requires public agencies to identify the potentially significant effects on the environment of projects they intend to carry out or approve, and to mitigate significant effects whenever it is feasible to do so. While AB 32 did not amend CEQA to require new analytic processes to account for the environmental impacts of GHG emissions from projects subject to CEQA, it does acknowledge that such emissions cause significant adverse impacts to human health and the environment.

Senate Bill 97, enacted in 2007, amends the CEQA statute to clearly establish that GHG emissions and the effects of GHG emissions are appropriate subjects for CEQA analysis. It directs OPR to develop draft CEQA Guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009 and directs the Resources Agency to certify and adopt the CEQA Guidelines by January 1, 2010.

Requirements of CEQA

CEQA is a public disclosure law that requires public agencies to make a

good-faith, reasoned effort, based upon available information, to identify the potentially significant direct and indirect environmental impacts—including cumulative impacts— of a proposed project or activity. The CEQA process is intended to inform the public of the potential environmental effects of proposed government decisions and to encourage informed decision-making by public agencies. In addition, CEQA obligates public agencies to consider less environmentally-damaging alternatives and adopt feasible mitigation measures to reduce or avoid a project's significant impacts.

The lead agency is required to prepare an Environmental Impact Report (EIR), a Mitigated Negative Declaration, or equivalent document, when it determines that the project's impacts on the environment are potentially significant. This determination of significance must be based upon substantial evidence in light of all the information before the agency.

Although the CEQA Guidelines, at Appendix G, provide a checklist of suggested issues that should be addressed in an EIR, neither the CEQA statute nor the CEQA Guidelines prescribe thresholds of significance or particular methodologies for performing an impact analysis. This is left to lead agency judgment and discretion, based upon factual data and guidance from regulatory agencies and other sources where available and applicable. A threshold of significance is essentially a regulatory standard or set of criteria that represent the level at which a lead agency finds a particular environmental effect of a project to be significant. Compliance with a given threshold means the effect normally will be considered less than significant. Public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact.

We realize that perhaps the most difficult part of the climate change analysis will be the determination of significance. Although lead agencies typically rely on local or regional definitions of significance for most environmental issues, the global nature of climate change warrants investigation of a statewide threshold of significance for GHG emissions. To this end, OPR has asked ARB technical staff to recommend a method for setting thresholds which will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state. Until such time as state guidance is available on thresholds of significance for GHG emissions, we recommend the following approach to your CEQA analysis.

III. RECOMMENDED APPROACH

Each public agency that is a lead agency for complying with CEQA needs to develop its own approach to performing a climate change analysis for projects that generate GHG emissions. A consistent approach should be applied for the analysis of all such projects, and the analysis must be based on best available information. For these projects, compliance with CEQA entails three basic steps: identify and quantify the GHG emissions; assess the significance of the impact on climate change; and if the impact is found to be significant, identify alternatives and/or mitigation measures that will reduce the impact below significance.

Lead agencies should determine whether greenhouse gases may be generated by a proposed project, and if so, quantify or estimate the GHG emissions by type and source. Second, the lead agency must assess whether those emissions are individually or cumulatively significant. When assessing whether a project's effects on climate change are "cumulatively considerable" even though its GHG contribution may be individually limited, the lead agency must consider the impact of the project when viewed in connection with the effects of past, current, and probable future projects. Finally, if the lead agency determines that the GHG emissions from the project as proposed are potentially significant, it must investigate and implement ways to avoid, reduce, or otherwise mitigate the impacts of those emissions. Although the scientific knowledge and understanding of how best to perform this analysis is rudimentary and still evolving, many useful resources are available (see Attachment 1).

Until such time as further state guidance is available on thresholds of significance, public agencies should consider the following general factors when analyzing whether a proposed project has the potential to cause a significant climate change impact on the environment.

Identify GHG Emissions

- Lead agencies should make a good-faith effort, based on available information, to calculate, model, or estimate the amount of CO_2 and other GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities.
- Technical resources, including a variety of modeling tools, are available to assist public agencies to quantify GHG emissions. OPR recognizes that more sophisticated emissions models for particular types of projects are continually being developed and that the state-of-the-art quantification

models are rapidly changing. OPR will periodically update the examples of modeling tools identified in Attachment 2.

- There is no standard format for including the analysis in a CEQA document. A GHG/climate change analysis can be included in one or more of the typical sections of an EIR (e.g., air quality, transportation, energy) or may be provided in a separate section on cumulative impacts or climate change.

Determine Significance

- When assessing a project's GHG emissions, lead agencies must describe the existing environmental conditions or setting, without the project, which normally constitutes the baseline physical conditions for determining whether a project's impacts are significant.
- As with any environmental impact, lead agencies must determine what constitutes a significant impact. In the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a "significant impact", individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.
- The potential effects of a project may be individually limited but cumulatively considerable. Lead agencies should not dismiss a proposed project's direct and/or indirect climate change impacts without careful consideration, supported by substantial evidence. Documentation of available information and analysis should be provided for any project that may significantly contribute new GHG emissions, either individually or cumulatively, directly or indirectly (e.g., transportation impacts).
- Although climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment. CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project.

Mitigate Impacts

- Mitigation measures will vary with the type of project being contemplated, but may include alternative project designs or locations that conserve energy and water, measures that reduce vehicle miles traveled

(VMT) by fossil-fueled vehicles, measures that contribute to established regional or programmatic mitigation strategies, and measures that sequester carbon to offset the emissions from the project.

- The lead agency must impose all mitigation measures that are necessary to reduce GHG emissions to a less than significant level. CEQA does not require mitigation measures that are infeasible for specific legal, economic, technological, or other reasons. A lead agency is not responsible for wholly eliminating all GHG emissions from a project; the CEQA standard is to mitigate to a level that is "less than significant".
- If there are not sufficient mitigation measures that the lead agency determines are feasible to achieve the less than significant level, the lead agency should adopt those measures that are feasible, and adopt a Statement of Overriding Considerations that explains why further mitigation is not feasible. A Statement of Overriding Considerations must be prepared when the lead agency has determined to approve a project for which certain impacts are unavoidable. These statements should explain the reasons why the impacts cannot be adequately mitigated in sufficient detail, and must be based on specific facts, so as not to be conclusory.
- Agencies are encouraged to develop standard GHG emission reduction or mitigation measures that can be applied on a project-by-project basis. Attachment 3 contains a preliminary menu of measures that lead agencies may wish to consider. This list is by no means exhaustive or prescriptive. Lead agencies are encouraged to develop their own measures and/or propose project alternatives to reduce GHG emissions, either at a programmatic level or on a case-by-case review.
- In some cases GHG emission reduction measures will not be feasible or may not be effective at a project level. Rather, it may be more appropriate and more effective to develop and adopt program-level plans, policies and measures that will result in a reduction of GHG emissions on a regional level.

IV. ADDITIONAL LAND USE CONSIDERATIONS

CEQA can be a more effective tool for GHG emissions analysis and mitigation if it is supported and supplemented by sound development policies and practices that will reduce GHG emissions on a broad planning scale and that can provide the basis for a programmatic approach to project-specific CEQA analysis and mitigation.

Local governments with land use authority are beginning to establish policies that result in land use patterns and practices that will result in less energy use and reduce GHG emissions. For example, some cities and counties have adopted general plans and policies that encourage the development of compact, mixed-use, transit-oriented development that reduces VMT; encourage alternative fuel vehicle use; conserve energy and water usage; and promote carbon sequestration. Models of such developments exist throughout the state (see OPR climate change website for examples of city and county plans and policies, referenced in Attachment 1).

For local government lead agencies, adoption of general plan policies and certification of general plan EIRs that analyze broad jurisdiction-wide impacts of GHG emissions can be part of an effective strategy for addressing cumulative impacts and for streamlining later project-specific CEQA reviews.

International, national, and statewide organizations such as ICLEI (Local Governments for Sustainability), the Cities for Climate Protection, and the Clean Cities Coalition —to name just a few — have published guidebooks to help local governments reduce GHG emissions through land use planning techniques and improved municipal operations. Links to these resources are provided at the end of this advisory.

Regional agencies can also employ a variety of strategies to reduce GHG emissions through their planning processes. For example, regional transportation planning agencies adopt plans and programs that address congestion relief, jobs-to-housing balance, reduction of vehicle miles traveled (VMT), and other issues that have implications for GHG emission reductions.

State agencies are also tackling the issue of climate change. Some have adopted or support policies and programs that take climate change into account, including the Department of Water Resources' State Water Plan; the Department of Transportation's State Transportation Plan; and the Business, Housing and Transportation Agency's Regional Blueprint Planning Program. These efforts not only raise public awareness of climate change and how the State can reduce GHG emissions, but also offer specific information and resources for lead agencies to consider.

V. NEXT STEPS

OPR has asked ARB technical staff to recommend a method for setting a threshold of significance for GHG emissions. OPR has requested that the ARB identify a range of feasible options, including qualitative and quantitative options.

OPR is actively seeking input from the public and stakeholder groups, as it develops draft CEQA Guidelines for GHG emissions. OPR is engaged with the Resources Agency and other expert state agencies, local governments, builders and developers, environmental organizations, and others with expertise or an interest in the development of the Guidelines.

OPR will conduct public workshops later this year to receive input on the scope and content of the CEQA Guidelines amendments. It is OPR's intent to release a preliminary draft of the CEQA Guidelines amendments for public review and comment in the fall. This will enable OPR to deliver a proposed package of CEQA Guidelines amendments to the Resources Agency as early as January 2009, well before the statutory due date of July 1, 2009.

We encourage public agencies and the public to refer to the OPR website at www.opr.ca.gov for information about the CEQA Guidelines development process and to subscribe to OPR's notification system for announcements and updates.

For more information about this technical advisory and assistance in addressing the impacts of GHG emissions on the environment, please contact:

Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street
P.O. Box 3044
Sacramento, CA 95812-3044
Telephone: (916) 445-0613
Fax: (916) 323-3018
Web Address: www.opr.ca.gov

ATTACHMENTS

1. References and Information Sources
2. Technical Resources/Modeling Tools to Estimate GHG Emissions
3. Examples of GHG Reduction Measures

Attachment 1

References and Information Sources

The following is a list of websites of organizations that can offer additional information regarding methods to characterize, quantify, assess and reduce GHG emissions. In addition, a list of useful resources and reference materials is provided on the subject of climate change and greenhouse gases.

ORGANIZATIONS

- Governor's Office of Planning and Research
  http://www.opr.ca.gov
- California Climate Action Team
  http://www.climatechange.ca.gov/climate_action_team/
- California Climate Change Portal
  http://www.climatechange.ca.gov
- California Air Resources Board Climate Change Website
  http://www.arb.ca.gov/cc/cc.htm
- California Climate Action Registry
  http://www.climateregistry.org/
- California Department of Water Resources, Climate Change and California Water Plan Website
  http://www.waterplan.water.ca.gov/climate/
- California Energy Commission Climate Change Proceedings
  http://www.energy.ca.gov/global_climate_change/index.html
- California Public Utilities Commission, Climate Change Website
  http://www.cpuc.ca.gov/static/energy/electric/climate+change/_index.htm
- Green California Website
  http://www.green.ca.gov/default.htm
- Western Climate Initiative
  http://www.westernclimateinitiative.org

- California Air Pollution Control Officers Association
  http://www.capcoa.org
- Local Governments for Sustainability (ICLEI)
  http://www.iclei.org/
- ICLEI Cities for Climate Protection (CCP)
  http://www.iclei.org/index.php?id=800
- United Nations Framework Convention on Climate Change
  http://unfccc.int/2860.php
- Intergovernmental Panel on Climate Change
  http://www.ipcc.ch
- United States Environmental Protection Agency
  http://www.epa.gov/climatechange/
- City of Seattle U.S. Mayors Climate Protection Agreement
  http://www.seattle.gov/mayor/climate/
- Mayors for Climate Protection
  http://www..coolmayors.com
- U.S. Conference of Mayors Climate Protection Web Page
  http://usmayors.org/climateprotection
- Institute for Local Government California Climate Action Network
  http://www.ca-ilg.org/climatechange

STATUTES, REGULATIONS, AND EXECUTIVE ORDERS

- SB 97
  http://opr.ca.gov/ceqa/pdfs/SB_97_bill_20070824_chaptered.pdf
- SB 97 Governor's Signing Message
  http://opr.ca.gov/ceqa/pdfs/SB-97-signing-message.pdf
- AB 32
  http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf
- AB 1493
  http://www.leginfo.ca.gov/pub/01-02/bill/asm/ab_1451-1500/ab_1493_bill_20020722_chaptered.pdf

- Regulations implementing AB 1493

  http://www.arb.ca.gov/regact/grnhsgas/revfro.pdf and http://www.arb.ca.gov/regact/grnhsgas/revtp.pdf

- SB 1368

  http://www.leginfo.ca.gov/pub/05-06/bill/sen/sb_1351-1400/sb_1368_bill_20060929_chaptered.pdf

- Executive Order S-01-07 regarding low carbon standard for transportation fuels

  http://gov.ca.gov/index.php?/executive-order/5172/

- Executive Order S-20-06 regarding implementation of AB 32

  http://gov.ca.gov/index.php?/executive-order/4484/

- Executive Order S-3-05 regarding greenhouse gas goals

  http://gov.ca.gov/index.php?/executive-order/1861/

- Executive Order S-20-04 regarding energy conservation by state

  http://gov.ca.gov/index.php?/executive-order/3360/

REPORTS

- OPR List of Environmental Documents Addressing Climate Change

  http://opr.ca.gov/ceqa/pdfs/Environmental_Assessment_Climate_Change.pdf

- OPR List of Local Plans Addressing Climate Change

  http://opr.ca.gov/ceqa/pdfs/City_and_County_Plans_Addressing_Climate_Change.pdf

- *Climate Action Team Proposed Early Action Measures to Mitigate Climate Change in California*, April 2007

  http://www.climatechange.ca.gov/climate_action_team/reports/2007-04-20_CAT_REPORT.PDF

- California Air Resources Board, *Early Action Items to Mitigate Climate Change in California*, October 2007

  http://www.arb.ca.gov/cc/ccea/meetings/ea_final_report.pdf

- California Air Resourced Board, *Draft Greenhouse Gas Inventory*, November 2007

  http://www.arb.ca.gov/cc/inventory/data/tables/rpt_Inventory_IPCC_All_2007-11-19.pdf

- *Climate Action Team Report to the Governor and Legislature*, March 2006, http://www.climatechange.ca.gov/climate_action_team/reports/index.html

- California Climate Change Center, *Our Changing Planet: Assessing the Risks to California - Summary Report*

  http://www.energy.ca.gov/2006publications/CEC-500-2006-077/CEC-500-2006-077.PDF

  Detailed reports available at: http://www.climatechange.ca.gov/biennial_reports/2006report/index.html
- California Energy Commission, *2007 Integrated Energy Policy Report Update*

  http://www.energy.ca.gov/2007publications/CEC-100-2007-008/CEC-100-2007-008-CMF.PDF
- California Department of Water Resources, *Progress on Incorporating Climate Change into Management of California's Water Resources*

  http://baydeltaoffice.water.ca.gov/climatechange/DWRClimateChangeJuly06.pdf - pagemode=bookmarks&page=1
- *Climate Action Program at Caltrans*, December 2006

  http://www.dot.ca.gov/docs/ClimateReport.pdf
- California Air Pollution Control Officers Association, *CEQA & Climate Change*, January 2008

  http://www.capcoa.org/ceqa/CAPCOA%20White%20Paper%20-%20CEQA%20and%20Climate%20Change.pdf
- West Coast Governors' Global Warming Initiative, November 2004

  http://www.climatechange.ca.gov/westcoast/documents/2004-11_final_report/2004-11-18_STAFF_RECOMMENDS.PDF
- Western Climate Initiative Work Plan, October 2007

  http://www.westernclimateinitiative.org/ewebeditpro/items/O104F13792.pdf
- California Climate Change Center, University of California at Berkeley, *Managing Greenhouse Gas Emissions in California*, 2007

  http://calclimate.berkeley.edu/managing_GHGs_in_CA.html
- U.S. Conference of Mayors, *Energy & Environment Best Practices*

  http://www.usmayors.org/climateprotection/AtlantaEESummitCDROMVersion.pdf
- *U.S. Mayors Climate Protection Agreement Climate Action Handbook*, 2006

  http://www.seattle.gov/climate/docs/ClimateActionHandbook.pdf
- Natural Capitalism Solutions *Climate Protection Manual for Cities*, June 2007

  http://www.climatemanual.org

- National Governor's Association Center for Best Practices *Growing with Less Greenhouse Gases*, November 2002
  http://www.nga.org/cda/files/112002ghg.pdf
- National Governor's Association Center for Best Practices *State and Regional Greenhouse Gas* Initiatives, October 2006
  http://www.nga.org/Files/pdf/0610GREENHOUSE.PDF
- United States Climate Change Program *The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States*, May 2008
  http://www.usda.gov/oce/global_change/sap_2007_FinalReport.htm

Attachment 2

Technical Resources/Modeling Tools to Estimate GHG Emissions

TOOL	AVAILABILITY	SCOPE LOCAL/ REGIONAL	SCOPE TRANSPORTATION/ BUILDINGS	DATA INPUT REQUIREMENTS	DATA OUTPUT
URBEMIS	• Download • Public domain (free)	• Local project level	• Transportation • Some building (area source) outputs • Construction	• Land use information • Construction, area source, and transportation assumptions	• CO2 (pounds per day) • Mitigation impacts
Clean Air and Climate Protection (CACP) Software	• Download • Available to public agencies (free)	• Local project level	• Buildings • Communities • Governments	• Energy usage • Waste generation and disposal • Transportation fuel usage or VMT	• CO2e (tons per year)
Sustainable Communities Model (SCM)	• Custom model	• Regional • Scalable to site level	• Transportation • Buildings • Neighborhoods • Master planned communities	• Location and site specific information • Transportation assumptions • On-site energy usage	• CO2e (tons per year)
Internet-accessed Planning for Community Energy, Economic and Environmental Sustainability I-PLACE^{3}S	• Web-based • Small access fee • Full model now available in eight CA counties	• Regional • Scalable to site level	• Transportation • Housing • Land Use • Buildings • Energy • Economics	• Parcel level land use data (ability to work with less data) • Project-level data for alternative comparisons	• CO2 (any quantity over any time)
Climate Action Registry Reporting On-Line Tool (CARROT)	• Web-based • Available to Registry members • General public can view entity reports	• Regional, scalable to entity and facility level	• General Reporting and Certification Protocols o Transportation o Buildings/facilities • Specific protocols for some sectors	• Mobile source combustion (VMT or fuel usage) • Stationary combustion (fuel usage) • Indirect emissions (electricity usage)	• Each GHG and CO2e (tons per year)
EMFAC	• Download • Public domain (free)	• Statewide • Regional (air basin level)	• Transportation emission factors	• Travel activity data to calculate CO2 from projects.	• CO2 and methane (grams per mile) emission factors

VMT = Vehicle miles traveled
eCO2 = Carbon dioxide equivalent emissions
Note: This is not meant to be a definitive list of modeling tools to estimate climate change emissions impacts. Other tools may be available.

Description of Modeling Tools

URBEMIS

The Urban Emissions Model is used extensively during the CEQA process by local air districts and consultants to determine the impacts of projects on criteria pollutants. It was recently updated to calculate CO2 emissions as well. Future updates will include additional greenhouse gases. URBEMIS uses the ITE Trip Generation Rate Manual and the Air Resources Board's (ARB) motor vehicle emissions model (EMFAC) to calculate transportation-related CO2 emissions and ARB's OFFROAD2007 model for CO2 emissions from off-road equipment. Area source outputs include natural gas use, landscaping equipment, consumer products, architectural coatings, and fireplaces. It also estimates construction impacts and impacts of mitigation options. Web site: http://www.urbemis.com.

Clean Air and Climate Protection (CACP) Software

This tool is available to state and local governments and members of ICLEI, NACAA, NASEO and NARUC to determine greenhouse gas and criteria pollutant emissions from government operations and communities as a whole. The user must input aggregate information about energy (usage), waste (quantity and type generated, disposal method, and methane recovery rate) and transportation (VMT) for community analyses. CACP uses emission factors from EPA, DOE, and DOT to translate the energy, waste and transportation inputs into greenhouse gas (in carbon dioxide equivalents) and criteria air pollutant emissions. If associated energy, waste and transportation reduction are provided, the model can also calculate emission reductions and money saved from policy alternatives. Web site: http://cacpsoftware.org.

Sustainable Communities Model (SCM)

This model quantifies total CO2e emissions allowing communities the ability to optimize planning decisions that result in the greatest environmental benefit for the least cost. Total CO2e emissions are based on emissions from energy usage, water consumption and transportation. The model provides an interactive comparison of various scenarios to provide environmental performance, economic performance, and cost benefit analysis.

Web site: www.ctg-net.com/energetics/documents/doc_SCM_070731.pdf

I-PLACE'S

This model is an internet-accessed land use and transportation model designed specifically for regional and local governments to help understand how their growth and development decisions can contribute to improved sustainability. It estimates CO2, criteria pollutant and energy impacts on a neighborhood or

regional level for existing, long-term baseline and alternative land use plans. The data input requirements are extensive and require a fiscal commitment from the Metropolitan Planning Organization and its member local governments. Once the data is available, the IPLACES tool can be developed for that region relatively quickly, in approximately one week. The benefits include a multifunctional tool that provides immediate outputs to compare alternatives during public meetings, multilevel password protected on-line access, as well as providing access for local development project CEQA analyses. This tool also supports regional travel models and integrated land use and transportation assessments. Web site: http://www.sacregionblueprint.org/sacregionblueprint/the_project/technology.cfm and http://www.places.energy.ca.gov/places

CARROT

The California Climate Action Registry offers the Climate Action Registry Reporting On-Line Tool (CARROT) for Registry members to calculate and report annual greenhouse gas (GHG) emissions. CARROT calculates direct and indirect GHG emissions for the following emission categories by source: stationary combustion, process emissions, mobile source combustion, fugitive emissions and electricity use by source. It calculates emissions using entity collected data such as fuel purchase records, VMT and utility bills. While reporting and certification through CARROT is only available to members, the public may access entity reports online. Reporting protocols are also available to the public, including the General Reporting Protocol (www.climateregistry.org/docs/PROTOCOLS/GRP%20V2-March2007_web.pdf) and cement, forestry and power/utility sector protocols. Additional sector protocols are under development. Website: www.climateregistry.org/CARROT/

EMFAC

The Air Resources Board's EMission FACtors (EMFAC) model is used to calculate emission rates from all motor vehicles in California. The emission factors are combined with data on vehicle activity (miles traveled and average speeds) to assess emission impacts. The URBEMIS model described above uses EMFAC to calculate the transportation emission impacts of local projects. Web site: http://www.arb.ca.gov/msei/onroad/onroad.htm

Attachment 3

Examples of GHG Reduction Measures

The following are examples of measures that have been employed by some public agencies to reduce greenhouse gas emissions, either as general development policies or on a project-by-project basis. These are provided for illustrative purposes only.

LAND USE AND TRANSPORTATION

- Implement land use strategies to encourage jobs/housing proximity, promote transit-oriented development, and encourage high density development along transit corridors. Encourage compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling and the use of public transit systems.
- Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings
- Encourage new developments to integrate housing, civic and retail amenities (jobs, schools, parks, shopping opportunities) to help reduce VMT resulting from discretionary automobile trips.
- Apply advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services.
- Incorporate features into project design that would accommodate the supply of frequent, reliable and convenient public transit.
- Implement street improvements that are designed to relieve pressure on a region's most congested roadways and intersections.
- Limit idling time for commercial vehicles, including delivery and construction vehicles.

URBAN FORESTRY

- Plant trees and vegetation near structures to shade buildings and reduce energy requirements for heating/cooling.
- Preserve or replace onsite trees (that are removed due to development) as a means of providing carbon storage.

GREEN BUILDINGS

- Encourage public and private construction of LEED (Leadership in Energy and Environmental Design) certified (or equivalent) buildings.

ENERGY CONSERVATION POLICIES AND ACTIONS

- Recognize and promote energy saving measures beyond Title 24 requirements for residential and commercial projects
- Where feasible, include in new buildings facilities to support the use of low/zero carbon fueled vehicles, such as the charging of electric vehicles from green electricity sources.
- Educate the public, schools, other jurisdictions, professional associations, business and industry about reducing GHG emissions.
- Replace traffic lights, street lights, and other electrical uses to energy efficient bulbs and appliances.
- Purchase Energy Star equipment and appliances for public agency use.
- Incorporate on-site renewable energy production, including installation of photovoltaic cells or other solar options.
- Execute an Energy Savings Performance Contract with a private entity to retrofit public buildings. This type of contract allows the private entity to fund all energy improvements in exchange for a share of the energy savings over a period of time.
- Design, build, and operate schools that meet the Collaborative for High Performance Schools (CHPS) best practices.
- Retrofit municipal water and wastewater systems with energy efficient motors, pumps and other equipment, and recover wastewater treatment methane for energy production.
- Convert landfill gas into energy sources for use in fueling vehicles, operating equipment, and heating buildings.
- Purchase government vehicles and buses that use alternatives fuels or technology, such as electric hybrids, biodiesel, and ethanol. Where feasible, require fleet vehicles to be low emission vehicles. Promote the use of these vehicles in the general community.
- Offer government incentives to private businesses for developing buildings with energy and water efficient features and recycled materials. The incentives can include expedited plan checks and reduced permit fees.
- Offer rebates and low-interest loans to residents that make energy-saving improvements on their homes.

- Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.

PROGRAMS TO REDUCE VEHICLE MILES TRAVELED

- Offer government employees financial incentives to carpool, use public transportation, or use other modes of travel for daily commutes.
- Encourage large businesses to develop commute trip reduction plans that encourage employees who commute alone to consider alternative transportation modes.
- Develop shuttle systems around business district parking garages to reduce congestion and create shorter commutes.
- Create an online ridesharing program that matches potential carpoolers immediately through email.
- Develop a Safe Routes to School program that allows and promotes bicycling and walking to school.

PROGRAMS TO REDUCE SOLID WASTE

- Create incentives to increase recycling and reduce generation of solid waste by residential users.
- Implement a Construction and Demolition Waste Recycling Ordinance to reduce the solid waste created by new development.
- Add residential/commercial food waste collection to existing greenwaste collection programs.

EXHIBIT G

SMAQMD Draft GHG Measures

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
Bicycle/Pedestrian/Transit Measures					
1	**Bike parking**	C,M	0.625	**Non-residential projects provide plentiful short-term and long-term bicycle parking facilities to meet peak season maximum demand**	As a rule of thumb, the Center for Clean Air Policy (CCAP) guidebook attributes a 1% to 5% reduction associated with the use of bicycles, which reflects the assumption that their use is typically for shorter trips. Based on the CCAP guidebook, the TIAX report allots 2.5% reduction for all bicycle-related measures and a 1/4 of that for this measure alone. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.
2	**End of trip facilities**	C,M	0.625	**Non-residential projects provide "end-of-trip" facilities including showers, lockers, and changing space**	The Transportation Demand Management (TDM) Encyclopedia allows a 2-5% reduction for worksite showers ad lockers. The CCAP guidebook attributes a 1% to 5% reduction associated with the use of bicycles, which reflects the assumption that their use is typically for shorter trips. Based on the CCAP guidebook, the TIAX report allots 2.5% reduction for all bicycle-related measures and a 1/4 of that for this measure alone. Source: TDM Encyclopedia May 11, 2006; CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.
3	**Bike parking at multi-unit residential**	R	0.625	**Long-term bicycle parking is provided at apartment complexes or condominiums without garages**	As a rule of thumb, the CCAP guidebook attributes a 1% to 5% reduction associated with the use of bicycles, which reflects the assumption that their use is typically for shorter trips. Based on the CCAP guidebook, the TIAX report allots 2.5% reduction for all bicycle-related measures and a 25% of that for this measure alone. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
4	**Proximity to bike path/bike lanes**	R,C,M	0.625	**Entire project is located within 1/2 mile of an existing Class I or Class II bike lane and project design includes a comparable network that connects the project uses to the existing offsite facility**	As a rule of thumb, the CCAP guidebook attributes a 1% to 5% reduction associated with the use of bicycles, which reflects the assumption that their use is typically for shorter trips. Based on the CCAP guidebook, the TIAX report allots 2.5% reduction for all bicycle-related measures and a 1/4 of that for this measure alone. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.
5	**Pedestrian network**	R,C,M	1	**The project provides a pedestrian access network that internally links all uses and connects to all existing or planned external streets and pedestrian facilities contiguous with the project site.**	Because this measure also eliminates physical barriers between residential and non-residential uses that impede bicycle or pedestrian circulation, this measure is similar in nature to 6. As cited in the TIAX report, the CCAP guidebook attributes a 1% reduction in VMT. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.
6	**Pedestrian barriers minimized**	R,C, M	1	**Site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between residential and non-residential uses that impede bicycle or pedestrian circulation are eliminated**	The reduction is based on the TIAX report, which indicates a 1% reduction, and the CCAP report, which attributes a 1% to 5% reduction. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
7	**Bus shelter for existing transit service**	R,C,M	.25-1.0	**Bus or Streetcar service provides headways of one hour or less for stops within 1/4 mile; project provides safe and convenient bicycle/pedestrian access to transit stop(s) and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting).**	This reduction is based on the assumption that the measure applies to providing bus stop route information & benches. Emission reductions are based on conclusion obtained from the TIAX report and the CCAP guidebook. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.
8	**Bus shelter for planned transit service**	R,C,M	0.25	**Project provides transit stops with safe and convenient bicycle/pedestrian access. Project provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting) in anticipation of future transit service.**	This reduction is based on the assumption that the measure applies to providing bus stop route information & benches. Emission reductions are based on conclusion obtained from the TIAX report and the CCAP guidebook. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by TIAX on behalf of SMAQMD.
9	**Traffic calming**	R,C,M	0.25-1.0	**Project design includes pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways are designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips by featuring traffic calming features.**	SMAQMD appears to have the best information available as reflected in their Guidance for Land Use Emission Reductions, which allocates reductions by the percent of intersections with traffic calming improvements as indicated in the table below. We were unable to locate more specific information. Source: Draft Update to SMAQMD Guidance for Land Use Emission Reductions.
Parking Measures					
10a	**Paid parking**	R,C,M	1.0-7.2	**Employee and/or customer paid parking system**	Shoupe, 2005. Parking Cash Out. [$5/day reduces drive-alone share by 21% for commuters to downtown LA, with elasticity of -0.18 (e.g., if price increases 10%, then solo driving goes down by 1.8% more (Wilson 1991)] [Reported 1-10% reduction in trips to central city sites, and 2-4% in suburban sites (Urban Institute)].

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
10b	**Parking cash out**	C, M	0.6-4.5	**Employer provides employees with a choice of forgoing subsidized parking for a cash payment equivalent to the cost of the parking space to the employer**	Shoupe, 2005. Parking Cash Out. [2/3 as effective as charging for parking (8 case studies - chapter 4, 13% reduction in solo driver trips, -12% VMT per employee, and -11% in vehicle trips per commuter)].
11	**Minimum parking**	R,C,M	0.1-6.0	**Provide minimum amount of parking required. Special review of parking required.**	Nelson/Nygaard, 2005. pg. 16. (trip reduction = ((actual parking provision - ITE parking generation rate) / ITE parking generation rate) *0.5). (Note: this formula is not verbatim from that cited in the Nelson/Nygaard document, since the formula provided did not make sense for computing trip reductions. This is what EDAW believes was meant, and this method actually works.)
12	**Parking reduction beyond code**	R,C,M	2.5	**Provide parking reduction less than code. Special review of parking required. Recommend a Shared Parking strategy.**	Nelson/Nygaard, 2005. pg. 16. (trip reduction = ((actual parking provision - ITE parking generation rate) / ITE parking generation rate) *0.5). (Note: this formula is not verbatim from that cited in the Nelson/Nygaard document, since the formula provided did not make sense for computing trip reductions. This is what EDAW believes was meant, and this method actually works.)
13	**Pedestrian pathway through parking**	R,C,M	0.5	**Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances**	The CCAP guidebook attributes between 1% and 4% reduction from all pedestrian measures. There is no specific information related to providing shaded pedestrian pathways between transit facilities and building entrances. It could be said that providing covered carpool/vanpool spaces near the entrance to the buildings has the similar goal of increasing the comfort of the user while walking to the building entrance. The TIAX report assigns a 1% reduction to the covered carpool measure. Transit usage is most affected by the headway times and the proximity to the destination. Therefore, it would seem reasonable to assume .5% Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by Tax on behalf of SMAQMD.

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
14	**Off street parking**	R,C,M	0.1-1.5	**Parking facilities are not adjacent to street frontage**	No empirical support for this specific measure; however, range of values is based on other pedestrian-oriented measures. The range recognizes the dependence of this measure on other measures. To be awarded 1.0 points, development must be in an area with density, wide sidewalks, and where other uses are also hiding parking. The efficacy of this measure is reduced to 0.1 if the development does not include other pedestrian and mixed-use measures. Parking structure with ground-floor retail is awarded 0.5.
Site Design measures					
15	**Office/Mixed-use density**	C, M	0.1-1.5	**Project provides high density office or mixed-use proximate to transit**	No empirical support for this measure, beyond that provided by SMAQMD in its draft guidance. According to Nelson/Nygaard, 2005, trip generation at the non-residential end is influenced by density to a much lesser degree, so this is fairly consistent with the transit reductions applied in measure 20.
16	**Orientation toward existing transit, bikeway, or pedestrian corridor**	R,C,M	0.5	**Project is oriented towards existing transit, bicycle, or pedestrian corridor. Setback distance is minimized**	The CCAP guidebook attribute a 0.5% reduction per 1% improvement in transit frequency. Based on a case study presented in the CCAP report, a 10% increase in transit rider ship would result in a 0.5% reduction. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by Tax on behalf of SMAQMD.
17	**Orientation toward planned transit, bikeway, or pedestrian corridor**	C, M	0.25	**Project is oriented towards planned transit, bicycle, or pedestrian corridor. Setback distance is minimized**	The CCAP guidebook attributes a 0.5 % reduction per 1% improvement in transit frequency. Based on a case study presented in the CCAP report, a 10% increase in transit rider ship would result in a 0.5% reduction. Source: CCAP Transportation Emission Guidebook; TIAX Results of 2005 Literature Search Conducted by Tax on behalf of SMAQMD.

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
18	**Residential density**	R	1.0-12	**Project provides high-density residential development**	Nelson/Nygaard, 2005. pg 11. (trip reduction = 0.6*(1-(19749*((4.814+households per residential acre)/(4.814+7.14))^-.639)/25914) (Holtzclaw et al 2002). Asymptote of 60% reduction. **Relative to a 3 du/ac development.** Note that there is no direct empirical support for the added reductions for proximity to transit; the 60% asymptote in this equation is to correct for double-counting from transit services, mix-of-uses, and bicycle and pedestrian connections (which could contribute another 40% reduction).
19	**Street grid**	R, C, M	1	**Multiple and direct street routing (grid style)**	Reductions are based on CCAP estimates for similar measures. Source: CCAP Transportation Emission Guidebook.
20	**Neighborhood Electric Vehicle access**	R,C,M	0.5-1.5	**Make physical development consistent with requirements for neighborhood electric vehicles**	No direct empirical support for this measure available. May not be relevant/applicable in the near term, until NEVs become more common/inexpensive. Current studies show that for most trips, NEVs do not replace gas-fueled vehicles as the primary vehicle. For the purposes of providing incentives for developers to promote NEV use, assume that a neighborhood with internal NEV connections only receives 0.5 points, with external connections to other surrounding uses, 1.0 point, with external connections to other NEV networks, 1.5 points.
21	**Affordable Housing Component**	R	0.6-4.0	**Residential development projects of 5 or more dwelling units provide a deed-restricted low-income housing component on-site (as defined in Ch 22.35 of Sacramento County Ordinance Code) [Developers who pay into In-Lieu Fee Programs are not considered eligible to receive credit for this measure]**	Nelson/Nygaard, 2005. pg. 15. (trip reduction = % units deed-restricted below market rate housing * 0.04).
Mixed-use measures					

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
22	**Urban mixed-use**	M	3.0-9.0	**Development of projects predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential, are combined in a single building or on a single site in an integrated development project with functional interrelationships and a coherent physical design.**	Nelson/Nygaard, 2005. pg. 12. (trip reduction = (1-(ABS(1.5*h-e)/(1.5*h+e))-0.25)/0.25*0.03) where h = study area housing units, e = study area employment (Criteron & Fehr & Peers, 2001). Asymptote of 9% reduction, and an ideal 1.5 jobs per household.
23	**Suburban mixed-use**	R,C,M	3	**Have at least three of the following on site and/or offsite within ¼ mile: Residential Development, Retail Development, Park, Open Space, or Office**	By definition, this type of land use implies that housing availability is greater than employment availability. On a project-by-project basis, use formula :Nelson/Nygaard, 2005. pg. 12. (trip reduction = (1-(ABS(1.5*h-e)/(1.5*h+e))-0.25)/0.25*0.03) where h = study area housing units, e = study area employment (Criteron & Fehr & Peers, 2001) to obtain higher than 3% reduction. Otherwise, assume 3% max reduction.
24	**Other mixed-use**	R, M	1	**All residential units are within ¼ mile of parks, schools or other civic uses.**	This measure has less to do with employment/housing balance. No empirical support for this measure, but logic from measures 24 and 25 still applies.
Building Component Measures					

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
25	**No fireplace**	R	1.0	**Project does not feature fireplaces or wood burning stoves**	Reductions assume a 100% emission reduction from baseline conditions, as calculated using the methodology documented in the Staff Report for SMAQMD Rule 417, Wood Burning Appliances, Appendix D. The approach is consistent with SMAQMD rule development, based on a conversation with SMAQMD staff (Mr. Donny Homer). Calculating emission reductions in the greater Sacramento area yields 1.0 point benefit to the project, consistent with the current point value of the measure. Emission reductions are calculated as follows: Emission Reduction = (Emissions) – [(New Emissions certified stove aesthetic x fraction of adoption) + (New Emissions certified stove heat x fraction of adoption) + (New EmissionsNG aesthetic x fraction of adoption) + (New EmissionsNG heat x fraction of adoption)+ (New Emissions electric aesthetic x fraction of adoption) + (New Emissions electric heat x fraction of adoption)]

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
26	**Ozone Destruction Catalyst**	R, C, M	1.25	**Install ozone destruction catalyst on air conditioning systems**	Reductions assume over 80% of harmful, ground level ozone is converted into oxygen through application of air conditioning system technology. The proposed point value for this operational mitigation measure is 1.5, a mid-point value consistent with the rating assigned to this measure by the Feather River Air Quality Management District as a Standard Mitigation Measures for All Projects. The SMAQMD has had point values for this measure ranging from 1.25 (i.e., Land Use Mitigation Measures), to 2.5 for specific projects (i.e., Lent Ranch Marketplace, City of Elk Grove). Air conditioning systems for commercial, office and residential buildings within the project will be treated with an ozone destruction catalyst ("cap" or coating of the condenser coils) to convert ozone to oxygen as the catalyst makes contact with air moving through the air conditioner. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, specifications and any available manufacturer's documentation on the devices to be used.
27a					Reductions are based on the credits documented in the SMAQMD Guidance for Land Use Reductions and consistent with the point rating now set at 0.5 for qualified roof products. Baseline conditions assume indirect emission reduction through more even temperature control of environmental space. Approach is enforceable and may be monitored through site review and/or consultation with lead agency that roofing materials match those described in the SMAQMD Guidance for Land Use Reductions.

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
27b	**Energy Star roof**	R,C,M	0.5-1.0	**Install Energy Star labeled roof materials**	Additional emission reductions are available based on use of Energy Star compliant (highly reflective) and high emissivity roofing (emissivity of at least 0.9 when tested in accordance with ASTM 408) for a minimum of 75% of the roof surface. Based on the quantification methodology used by the SMAQMD Guidance for Land Use Reductions, an additional 0.5 point, for a total of 1.0 points, is available for qualified roof products that meet ATSM high emissivity requirements. Approach is enforceable and may be monitored through site review and/or consultation with lead agency that roofing materials match those described in the SMAQMD Guidance for Land Use Reductions.
28	**Onsite renewable energy system**	R,C,M	1.0-3.0	**Project provides onsite renewable energy system(s)**	Reductions are based on the Energy & Atmosphere credits (EA Credit 2) documented in the Leadership in Energy & Environmental Design (LEED), Green Building Rating System for New Constructions and Major Renovations, Version 2.2, October 2005. The reduction assumes that at least 12.5% of the buildings total energy use (as expressed as a fraction of annual energy cost) is supplied through the use of on-site renewable energy systems. Alternatively a project may use the Department of Energy (DOE) Commercial Buildings Energy Consumption Surevy (CBECS) database to determine the estimated electricity use. Non-polluting and renewable energy potential includes solar, wind, geothermal, low-impact hydro, biomass and bio-gas strategies. When applying these strategies, projects may take advantage of net metering with the local utility. The measure is enforcable through LEED Letter certification and building design calculations demonstrating that at least 12.5% of total energy costs are supplied by the renewable energy system(s).

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
29	**Exceed title 24**	R,C,M	1.0	**Project Exceeds title 24 requirements by 20%**	Reductions assume at least a 20% over Title 24 requirements, as calculated by the Sacramento Municipal Utility District (SMUD, 2006 Advantage Home Program Overview). The proposed point value for this operational mitigation measure is 1.0, consistent with the rating assigned to this measure by SMAQMD Land Use Mitigation Measures. Total compliance margin is based on energy savings relative to the total energy budget and cooling energy budget of the Title 24 Standard design home. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, specifications and any available manufacturer's documentation on the devices to be used. This measure's successful implementation may be verified by a site review following construction to confirm that the project as built contains ozone destruction catalysts as described in the Air Quality Plan.
30	**Solar orientation**	R	0.5	**Orient 75 or more percent of homes and/or buildings to face either north or south (within 30 degrees of N/S)**	Reduction assumes that proper solar orientation can produce a total energy savings of 11% to 16.5% and reduce heating fuel consumption by up to 25% (Local Government Commission, 1998). Mitigation measure points are based on the credits documented in the SMAQMD Guidance for Land Use Reductions and consistent with the point rating now set at 0.5 for proper orientation. Reduction methodology will be based on quantification of the difference in solar radiance from development with designed orientations (75 or more percent of homes and/or buildings to face within 30 degrees either north or south) compared to evenly distributed orientations. Project compliance will be based on the percentage of orientation buildings designed with proper design features (overhangs, landscaping).

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
31	**Non-Roof Surfaces**	R,C,M	1.0	**Provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30% of the site's non-roof impervious surfaces, including parking lots, walkways, plazas, etc.; OR place a minimum of 50% of parking spaces underground or covered by structured parking; OR use an open-grid pavement system (less than 50% impervious) for a minimum of 50% of the parking lot area. Unshaded parking lot areas, driveways, fire lanes, and other paved areas have a minimum albedo of .3 or greater**	Reductions are based on the Sustainable Site credits (SS Credit 7.1) documented in the Leadership in Energy & Environmental Design (LEED), Green Building Rating System for New Constructions and Major Renovations, Version 2.2, October 2005. The reduction assumes that the project provides any combination of the following strategies for 50% of the site landscape (including roads, sidewalks, courtyards nd parking lots): Shade (within 5 years of occupancy); paving materials with a solar Reflectance Index (SRI) of at least 29; open grid pavement system.
32	**Green Roof**	R,C,M	0.5	**Install a vegetated roof that covers at least 50% of roof area**	Reductions are based on the Energy & Atmosphere credits (EA Credit 2) documented in the Leadership in Energy & Environmental Design (LEED), Green Building Rating System for New Constructions and Major Renovations, Version 2.2, October 2005. The reduction assumes that a vegetated roof is installed on a least 50% of the roof area or that a combination high albedo and vegetated roof surface is installed that meets the following standard: (Area of SRI Roof/0.75)+(Area of vegetated roof/0.5) >= Total Roof Area.
TDM and Misc. measures					

SMAQMD MEASURE #	Measure Name	Land Use Type	Estimated CO2 Equivalent Point	Measure Description	Reduction Methodology and Source
33	**Transportation Management Association membership**	R,C,M	5	**Include permanent TMA membership and funding requirement. Funding to be provided by Community Facilities District or County Service Area or other non-revocable funding mechanism.**	TCM Encyclopedia estimates a 6-7% reduction. Urbemis specifies percent reductions based on the number of elements adopted. CCAP estimated reductions from 3% to 25% for TDMs with complementary transit and land use measures. TDMs have been shown to reduce employee vehicle trips up to 28% with the largest reductions achieved through parking pricing and transit passes. The impact depends on the travel alternatives. Sources: TCM Encyclopedia, May 11, 2006; CCAP Transportation Emission Guidebook; Nygaard, 2005' Urbemis.
34	**Electric lawnmower**	R	1	**Provide a complimentary electric lawnmower to each residential buyer**	Reduction is based on a 0.5% reduction in total airshed VOC emissions, as attributable to the Lawn Mower Buy-Back program (Portland, Oregon, ten-year ozone maintenance plan). Mitigation measure points are based on the credits documented in the SMAQMD Guidance for Land Use Reductions and consistent with the point rating now set at 1.0 for electric lawnmowers. Approach is enforceable and may be monitored through site review and/or consultation with lead agency that roofing materials match those described in the SMAQMD Guidance for Land Use Reductions.
99	**Other**	R,C,M	TBD	**Other proposed strategies, in consultation with project lead agency and SMAQMD**	TBD

LETTER 32: MATTHEW D. ZINN, SHUTE, MIHALY & WEINBERGER, LLP

Response to Comment 32-0

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment 32-1

The Draft EIR for the Menlo Gateway project identifies the greenhouse gas (GHG) emissions that would be generated by the project and identifies specific mitigation to address the impact. Changes in scientific knowledge of climate change as well as changes in standard protocols, methods of analysis, and guidance on significance for CEQA analysis continues. As described in more detail below, the Draft EIR provides full disclosure of impacts given the best available information at the time the analysis was prepared. The revisions to the analysis, as described below and in Chapter 2, Revisions to the Draft EIR, are in response to comments on the Draft EIR and the draft Bay Area Air Quality Management District (BAAQMD) guidance, published after release of the Draft EIR. These draft Guidelines will be considered again by the BAAQMD in June 2010. In this way, the EIR continues to give decision makers and the public the best available information on potential impacts related to climate change and GHG emissions. CEQA does not require perfection, but does require the best efforts of the Lead Agency in evaluating and disclosing potential impacts to the environment. The Draft EIR and Final EIR for the Menlo Gateway project provide the best available information at this time, and therefore, fulfills the mandates of CEQA.

The standards for recirculation of a Draft EIR are established in section 15088.5 of the State CEQA Guidelines. That section states that recirculation is required when one or more of the following conditions exist:

- A new significant impact is identified;
- A new feasible mitigation measure is identified and the project applicant will not implement it;
- A new feasible alternative is identified that is environmentally superior to the project and the lead agency rejects it; or
- The draft EIR is determined to be so fundamentally flawed that the public was denied the opportunity to be fully informed about the environmental consequences of the project.

No new significant impact has been identified. The Draft EIR concluded that the project's GHG emissions would have a potentially significant impact. Based upon the updated information and analysis, the Final EIR also concludes the project would have a potentially significant impact if completed prior to 2018 and that if completed in 2018 or later the impacts would be below the significance threshold developed by the BAAQMD.

No new feasible mitigation has been identified that the project sponsor would not implement. With the exception of solar energy (which has been determined to be infeasible as described in the text changes to the Climate Change section – see Chapter 2, Revisions to the Draft EIR), those mitigation measures in CC-1.1 have been incorporated into the project. The project sponsor has indicated they would implement the new feasible trip reduction measure (to be achieved by transportation demand management) identified in the Final EIR. With this mitigation measure, the potential significant climate change impact is mitigated to below the significance threshold. Therefore, recirculation is not required on this basis.

There is no substantial increase in the severity of an environmental impact over what was indicated in the Draft EIR. In fact, with the refined analysis taking into account the project's emission reduction features, the Final EIR evidences that the project's GHG emissions will be less than those reported in the Draft EIR. The Draft EIR stated that the project's emissions after taking into account project design strategies would be 15,075 metric tons (MT)/year. The refinements to Table 3.13-7 show that the project's net emissions would be 13,583 MT/year.

The Draft EIR was not fundamentally flawed and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. This is evidenced by the extensive, lengthy and detailed comments, such as the ones in this letter, received in response to the Draft EIR. Again, recirculation is not required on this basis.

Lastly, recirculation is not required when the new information merely clarifies or amplifies modifications in an adequate EIR. As described above, the new information provided, much of which is in response to comments suggesting the EIR include an analysis based on the draft BAAQMD thresholds, merely clarifies or amplifies the information in the Draft EIR with more detailed calculations and analysis. As a result, recirculation is not required.

Response to Comment 32-2

The City of Menlo Park is dedicated to the reduction of GHG emissions in conformity with State legislation. The project is qualitatively reducing its contribution to global climate change by implementing all mitigation measures deemed feasible by the City of Menlo Park. In addition, based on the updated project features (which now include all of Mitigation Measure CC-1.1. included in the Draft EIR, with the exception of solar) and a revised mitigation measure, the project is quantitatively reducing GHG levels below the applicable draft BAAQMD threshold to a less-than-significant level. Please see also the memorandum prepared by ENVIRON included in Appendix D of this Final EIR.

Response to Comment 32-3

The Draft EIR fully discloses the generation of GHG emissions that would occur should the project be implemented and acknowledges impacts associated with the project. The calculations regarding annual emissions have been revised as described in the text changes to the Climate Change section – see Chapter 2, Revisions to the Draft EIR. The comment references the draft BAAQMD significance thresholds, which this Final EIR considers. See Response to Comment 32-9 and text changes to the

Climate Change section for an explanation of the tiered threshold and selection of the 4.6 MT CO_2e/SP/year rather than the 1,100 CO_2e/year standard referenced in the comment. Project design features and mitigation measures, described in more detail in the text changes to the Climate Change section, substantially reduce emissions to a less-than- significant level under the refined standard.

Response to Comment 32-4

As described in Response to Comment 32-3, above, with design features and mitigation that would be enforced through conditions of approval and the Mitigation Monitoring and Reporting Program (MMRP), potential impacts from GHG emissions are reduced to less than significant. The specific details of project design features and mitigation measures, as well as their enforceability, are described in Response to Comment 13 and additional evidence has been provided in the memorandum prepared by Environ included in Appendix D to this Final EIR. The emissions, and the impact of the various reduction measures, are calculated by URBEMIS and other appropriate methodologies and thus provide technical evidence that the strategies will achieve the stated emissions reduction.

Response to Comment 32-5

Alternatives to the proposed project were addressed in Chapter 6, Alternatives, in the Draft EIR. CEQA requires that an EIR identify alternatives to the project, but does not expressly require that it discuss alternative locations for the project. (Public Resources Code sections 21001(g), 21002.1(a) and 21061; *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 491) The Draft EIR did not discuss alternative locations because alternative locations would fail to achieve key project objectives, including rejuvenating the older industrial district east of US 101 near the Marsh Road interchange and enhancing the image of the City's US 101/Marsh Road gateway.

The Draft EIR also did not discuss alternative sites because no suitable environmentally superior site is available. The project is 16-acres, comprised of one 7-acre parcel and one 9-acre parcel. In an effort to locate an alternative site closer to transit that would reduce vehicle trips or vehicle miles traveled and thereby reduce GHG emissions, the City considered two sites and determined that both were neither feasible or environmentally superior and therefore, not worth discussing in depth in the Draft EIR.

The City considered the GM (former Tyco) site of approximately 22 acres located at the intersection of Bayfront Expressway and Willow Road as an alternative. This site is located adjacent to the proposed, but unfounded, Dumbarton Rail line. However, the site is not owned by the project sponsor and is too large for the proposed project as it is 6 acres larger than the project site. The City also considered a combination of 6 parcels that totaled approximately 8.4 acres along El Camino Real, former car dealer sites owned by Stanford University. These combined parcels would be approximately half of the project site or 7.6 acres smaller than the 16-acre project site. This was too small to accommodate the project.

As the City could not identify another similarly-sized property owned or controlled by the project sponsor that would meet project objectives, an alternative site was not analyzed.

Response to Comment 32-6

At the time the Draft EIR was released and currently, there are no required or mandatory numeric or quantitative thresholds of significance for greenhouse gas emissions at the state, regional or local levels. Under the CEQA Guidelines, a lead agency has broad discretion to determine how to analyze and mitigate GHG emissions and should examine all feasible means of mitigation. As a result, the qualitative standard in the Draft EIR does not violate CEQA.

Since publication of the Draft EIR, the BAAQMD has provided guidance and draft threshold criteria for quantitatively analyzing GHG emissions. To augment the qualitative analysis in the Draft EIR, the Final EIR provides a quantitative comparison of project generated emissions using the draft BAAQMD per capita GHG threshold for "non-stationary source" projects and finds that with project design features and mitigation, impacts from GHG emissions are less than significant if the project is completed in 2018 or later or less than significant with trip reduction mitigation measures (achievable through transportation demand management) if completed in 2017. More details on the draft BAAQMD GHG guidance threshold criteria and refinements to the evaluation of project emissions are provided in the revisions to the Climate Change section provided in Chapter 2, Revisions to the Draft EIR. Please see Responses to Comments 32-8 and 32-9. See also Appendix D.

Response to Comment 32-7

The Draft EIR complies with the State CEQA Guidelines and alerts the decision makers and the public to potential impacts that are expected to occur as a result of the project. The Draft EIR provides this information both qualitatively and quantitatively in making a significance determination for review by the decision makers and the public. This process continues into the Final EIR for the Menlo Gateway project. Comments submitted in response to the Draft EIR analysis are reviewed, and when necessary, additional details and corrections are provided to fully disclose all possible impacts to the environment. Note that an EIR need not be perfect, rather, the analysis in an EIR needs to reflect the best efforts of the Lead Agency using information that is available at the time of the analysis.

Response to Comment 32-8

Based on the refined analysis and corrected calculations, the overall project would generate a maximum of 16,588 MT per year, not the 23,000 stated in the comment, and this would be further reduced with the measures identified. Please see Response to Comments 32-9 and 32-26 and text changes to the Climate Change section (Chapter 2, Revisions to the Draft EIR) for an explanation of the qualitative standard of significance used in the Draft EIR. The Final EIR provides a quantitative comparison of project generated emissions to the draft BAAQMD per capita GHG emissions threshold criteria that was not available at the time the Draft EIR was being prepared.

Table 3.13-5 of the Draft EIR (page 3.13-20) provides estimates of project generated emissions and existing emissions in CO_2e/year that are currently emitted by operations of industrial businesses (i.e., warehousing, etc.) on-site. These on-site light industrial/office uses would be replaced by development proposed as part of the Menlo Gateway development application. In order to predict the net increase in

emissions associated with the project, the net future emissions were calculated. Since publication of the Draft EIR the project sponsor has included additional design features that have reduced the project's contribution to GHG emissions. Therefore, Table 3.13-5 has been revised and is included in Chapter 2, Revisions to the Draft EIR. The project's "Total Net Future Emissions" would be project generated emissions of 11,805 MT CO_2e/year.

Table 3.13-7 (page 3.13-23) in the Draft EIR summarizes the reduction in emissions assuming all the project reduction emissions strategies are implemented. Based on the further detailed project design features Table 3.13-7 was updated to more accurately reflect the project's proposed reductions. The refined information indicates that vehicular emissions would be reduced by 2,311 MT CO_2e. When vehicular emission reductions are combined with direct and indirect emission reductions the total reduction is 3,005 MT CO_2e. Corrections to Table 3.13-7 are included in Chapter 2, Revisions to the Draft EIR. GHG emissions generated by the project are reduced to 13,583 MT CO_2e/year.

The Draft EIR concluded that the project could have a potentially significant GHG impact, but that it could be mitigated to less than significant by the adoption of measures specified in CC-1.1. Augmenting the analysis with the draft BAAQMD guidelines threshold of 4.6 MT/service population, the project's emissions would be less than the 4.6 threshold, and therefore based on the BAAQMD draft threshold, the project, with the identified trip reduction mitigation (for completion prior to 2018) or without any mitigation (assuming completion in 2018 or later) would not be considered to have a cumulatively considerable climate change impact.

Response to Comment 32-9

The most recently released, but not-yet-adopted draft BAAQMD document, "*BAAQMD California Environmental Quality Act Guidelines Update—Proposed Thresholds of Significance* (December 7, 2009), proposes a tiered threshold approach for development projects (see page 6, Section 2.2, BAAQMD CEQA Guideline Update, Proposed Threshold of Significance), which the BAAQMD is proposing to adopt in June 2010. See also text changes to the Climate Change section Chapter 2, Revisions to the Draft EIR.

The draft BAAQMD tiered threshold for development projects is as follows:

Criterion 1: Demonstrate compliance with a qualified Climate Action Plan,

OR

Criterion 2: Demonstrate that Project generated emissions are at or below 1,100 MT CO_2e/year (used for small projects),

OR

Criterion 3: Demonstrate that Project generated emissions are at or below 4.6 MT CO_2e/Service Population (SP)/year.

As the City's CAP is not specific to private projects, Criterion 1 does not apply. BAAQMD staff provided insight into the second criterion. Criterion 2 is a screening level value meant to evaluate

small or modestly-sized projects. Therefore, the BAAQMD Criterion 2 is not an appropriate threshold to use for a project of this size. However, given the size of the project, Criterion 3 is useful to quantitatively evaluate the significance of the project.

In using the BAAQMD Criterion 3 threshold of 4.6 MT CO_2e/SP/year, the service population for the project needs to be determined. The service population was obtained from Table 3.9-5 in Section 3.9, Population and Housing, of the Draft EIR which shows total employment within the project to be 2,566 employees.[11] To get the per capita emissions, the total project generated emissions are divided by the service population. Without factoring in mitigation or project design features that would reduce GHG emissions, total project generated emissions would be an estimated 16,588 MT CO_2e per year or 6.46 MT CO_2e/SP/year. Therefore, without emission reduction features, the project is above the BAAQMD Criterion 3 Threshold of 4.6 MT CO_2e/SP/year.

Since publication of the Draft EIR the project sponsor has incorporated all of the mitigation measures included in Mitigation Measure CC-1.1 into the project, with the exception of the solar component that the City determined was not feasible. Table 3.13-6 included on page 3.13.22 in the Draft EIR has been revised to include the new project features, as shown in Chapter 2, Revisions to the Draft EIR. Based on the refined project design features and updated analysis, total emissions from the project would be 11,777 MT CO_2e/year or less if the project is completed and operational after 2018 or 4.59 MT CO_2e/SP/year. If the project were completed prior to 2018 total emissions would be 11,988 MT CO_2e/year or 4.67 MT CO_2e/SP/year. The analysis shows that if the project is completed after 2018 it would be below the BAAQMD Criterion 3 Threshold of 4.6 MT CO_2e/SP/year. However, if the project were to be completed prior to 2018 then it would exceed the BAAQMD threshold. Given this information, additional mitigation is required if the project were to be completed prior to 2018 in order to reduce the project's emissions to below the BAAQMD threshold, and this mitigation has been included in changes to the Draft EIR, see Chapter 2, Revisions to the Draft EIR.

Response to Comment 32-10

The *California Air Pollution Control Officers Association* (CAPCOA) report (January 2008) provides a wide variety of options in developing GHG emissions thresholds for CEQA analysis. The California Air Resources Board and the BAAQMD have chosen the tiered approach discussed as "Approach 2" on page 36, Chapter 7 of the CAPCOA publication. Like the BAAQMD draft thresholds, the CAPCOA proposed thresholds are not binding, and are just one of several thresholds that have been proposed by different agencies. As the lead agency, the City has discretion to select the model or methodology. As the commenter noted, the BAAQMD is the agency with the greatest experience in pollution control in the Bay Area. Because this commenter and others strongly encouraged consideration of the draft BAAQMD, the City has selected the most appropriate BAAQMD threshold to analyze greenhouse gas emissions, rather than those proposed by CAPCOA.

In addition, as indicated in Response to Comment 32-9, a more quantitative comparison to the draft BAAQMD per capita threshold demonstrates that, with mitigation, the project's impact is less than

[11] Environ Memorandum to Justin Murphy, City of Menlo Park, March 3, 2010. Page 12.

significant. These determinations are consistent with Approach 2 in the CAPCOA publication, the draft BAAQMD Threshold criteria, and the Lead Agency's criteria for determining significance.

Response to Comment 32-11

While there is evidence that black carbon may impact the climate, the significance of black carbon is still being debated among scientists. CEQA Guidelines §15364.5 defines GHG emissions as including, but not limited to, carbon dioxide(CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The definition in CEQA Guideline §15364.5 does not include "black carbon" as a listed GHG, and while the text also includes the term "including but not limited to…" in anticipation of new compounds being determined to be a GHG, black carbon has not received a definitive definition. There are many substances within the upper atmosphere including water vapor and ozone that may play a role in the regulation of the climate, but, until more research is done, the City is limited to focusing on those substances that are defined as GHGs in the CEQA Guidelines.

With respect to emissions during construction, Mitigation Measure AQ-2.2, would reduce emissions from heavy-duty diesel-powered construction equipment, thereby reducing black carbon emissions.

Response to Comment 32-12

The comment is a general statement on the requirements of CEQA and a listing of the general categories of mitigations that can be identified. The analysis within the Draft EIR provides the best available information on GHG emissions and how the project will reduce impacts related to GHG emissions. The project, as proposed, includes numerous strategies that will substantially reduce GHG emissions as compared to a "worst case" analysis of the emissions of a project with the overall size and uses of this one. Because they are part of the project, these strategies are not considered "mitigation", but they accomplish the same purpose, which is to substantially reduce the project's impact on the environment with respect to emission of GHGs.

Based on the emissions reductions, and taking into account additional mitigation where necessary (for completion prior to 2018) the project's emissions fall below BAAQMD's draft threshold and, therefore, it is not necessary to consider further mitigations. Most of the measures included in the original Mitigation Measure CC1.1 were incorporated as project elements.

As indicated in Response to Comment 32-9, the Final EIR shows quantitatively how the project, with additional mitigation refinement, reduces emissions below the draft BAAQMD per capita GHG emissions thresholds. This information constitutes substantial evidence that the project will reduce GHG emissions to less than significant both qualitatively and quantitatively. Modeling and spreadsheets provided in the Draft EIR appendices (see Appendix I), including corrections in the modeling provided in Appendix D to this Final EIR, further substantiate quantitatively that the project reduces emissions to less-than-significant levels.

Response to Comment 32-13

Table 3.13-6 (page 3.13-22 of the Draft EIR) lists the design features of the project that the project sponsor is incorporating into the project. Since publication of the Draft EIR, more specific design criteria was obtained from the project sponsor and is included in the proposed revisions to the Draft EIR in Chapter 2 of this Final EIR. The following is a brief summary of some of the project design features that address GHG:

- Achieve LEED gold for the office buildings and LEED silver for the hotel.
- Incorporate 100% cool roofs for the office and hotel; and orient buildings to maximize passive heating and cooling efficiency and natural ventilation, where appropriate.
- Shade fifty percent of the parking lot and other hard surfaces with tree canopy.
- Collect heat outputs from laundry and cooking machinery for reuse in building HVAC.
- Plant drought tolerant landscaping; minimize evaporative water loss by covering pools, adjusting fountain operating hours.
- Reduce potable water usage by using low-flow and restroom toilets, urinals, lavatories, and sinks; final laundry rinse cycle water would be used as the first rinse cycle of the next load.
- Crush and reuse existing paving and concrete as a base material, recycle or salvage construction waste.
- Provide charging stations for electric vehicles.
- Prepare and implement a recycled content purchasing policy (e.g. prohibiting use of plastic water bottles).
- Implement an aggressive TDM program.

The design features represent performance standards that the project will be required to meet as further refinements to the project design and engineering of the buildings continue. The reductions in GHG emissions associated with the latest version of the performance standards are quantified as explained in Response to Comment 32-9. In addition, these features will be made binding through conditions of approval as discussed in Response to Comment 32-14.

Response to Comment 32-14

The performance standards and strategies listed in Table 3.13-6 are binding through implementation of conditions of approval that will include these strategies. The project sponsor has committed to obtaining LEED gold for the office buildings and silver for the hotel. See revisions to Table 3.13-6 (Chapter 2, Revisions to the Draft EIR). To obtain LEED certification the project sponsor must go through a process that starts with basic design, continues through the engineering of the building envelope such as insulation, energy systems including but not limited to, the air conditioning/heating ducting, air intake, appliances and other factors, and requires the project sponsor/building owner to test these systems once the building is complete and modify, as necessary, to ensure that the operation of

the building actually meets the standards needed to achieve LEED certification at the applicable level. For all of these reasons, the City's conditions of approval represent binding obligations to meet the energy efficiencies and emission reduction.

Response to Comment 32-15

The effectiveness of the GHG emission reduction strategies is substantiated in the Draft EIR and this Final EIR through use of the URBEMIS model. The URBEMIS spreadsheet calculations are provided in Appendix I of the Draft EIR and revised calculations are provided in Appendix D of the Final EIR. The URBEMIS model was developed by the consulting firm Jones & Stokes under contract with the California Air Resources Board to provide criteria pollutant emission quantification including emissions reduction calculations based upon various design features that would reduce vehicle miles traveled (VMT), which in turn, reduces mobile source emissions. Carbon dioxide calculations were added to the latest version of UBEMIS. The mobile source reductions associated with the use of shuttles, bicycle paths and infrastructure, sidewalks, local bus transit, etc. are adopted and acceptable by the California Air Resources Board and the BAAQMD. The estimated VMT reductions are rather conservative by nature and may underestimate total emissions reductions. Note that the URBEMIS model calculates natural gas consumption and energy efficiency of a building using the 2005 Title 24 Energy Standards. The current version of Title 24 Energy Standards was adopted in 2008, became effective in 2009 and represents a 15 percent increase in efficiency from the 2005 Title 24 Energy Standards. Therefore, there is a 15 percent efficiency increase in Title 24 Standards applied within the URBEMIS model to account for the current Title 24 Standards. The recently amended CEQA Guidelines indicate that the URBEMIS model is an appropriate method to calculate GHG emissions. As discussed previously, the updated analysis of GHG emissions associated with the project was modeled using the URBEMIS model and includes the 2008 Title 24 Energy Standards. However, in some instances more project-specific information was included in the model versus relying on the URBEMIS standard model defaults. As discussed in the revisions to the Climate Change section in Chapter 2, Revisions to the Draft EIR, it is estimated that the project will achieve a 23 percent reduction in energy compared to the 2008 Title 24 Energy Standards due to design features and use of more energy efficient equipment and appliances.

Response to Comment 32-16

The EIR quantifies emissions and emission reductions based upon as much information as can be reasonably known about the project at the time. An error was found in the emission reductions associated with vehicular emissions in Table 3.13-7, which underestimates the total reductions associated with project design features. Vehicular emissions would be reduced by 2,311 MT CO_2e. When vehicular emission reductions are combined with direct and indirect emission reductions, the total reduction is 3,005 MT CO_2e. The corrections to Table 3.13-7 are included in Chapter 2, Revisions to the Draft EIR.

Based upon the analysis provided in Response to Comment 32-9, the design features have been updated requiring LEED certification and other energy efficiency measures, such that the project will be

23 percent more efficient than 2008 Title 24 Energy Standards. As stated above, this is a binding obligation and will be implemented through conditions of approval.

As stated above and substantiated by the URBEMIS model runs and spreadsheet calculations (shown in Appendix D in this Final EIR), the project would reduce emissions from the baseline case by 3,005 MT CO_2e. Improvements in design features (23 percent above Title 24 Energy Standards) and TDM mitigation measures that are needed to meet the draft BAAQMD per capita GHG threshold (Criterion 3) are demonstrated in the refined calculations summarized in the revised text and provided in Appendix D of this Final EIR.

Response to Comment 32-17

Mitigation Measure CC-1.1 in the Draft EIR was developed in consideration of the City's CAP. As the CAP does not apply to private projects, there are no other applicable unspecified measures that would be imposed on the proposed project. In addition, since the Draft EIR was released, all but one of the provisions of Mitigation Measure CC-1.1 have been incorporated as project emission reduction strategies (see revised Table 3.13-6 in Chapter 2, Revisions to the Draft EIR), and the general reference to energy efficient heating and cooling has been replaced by more specific descriptions.

The only aspect of Mitigation Measure CC-1.1 that is not incorporated as a project feature is the requirement for the project to obtain 2.5 percent of its energy from renewable sources. This was not included in the project because the cost-benefit of a solar energy system was determined to be smaller than that provided by additional transportation mitigation measures. Because the renewable requirement is not needed to reduce the emissions below the BAAQMD draft significance threshold the City no longer deems a 2.5 percent renewable requirement a feasible mitigation. See Appendix D. This determination is based on the high installation cost of such a photo voltaic system and the uncertainties about the financial incentives that may be available when such systems might be installed. It is the City's preference for the project to achieve GHG emissions reductions through further trip reduction (which also achieves other City goals) and the City does not believe it is necessary to add to the cost burden that the project is incurring through use of the many emission reductions features included as part of the project (see description of these features included in Table 3.13-6 in Chapter 2, Revisions to the Draft EIR).

Response to Comment 32-18

The project alternatives were addressed in Chapter 6, Alternatives, in the Draft EIR. The CEQA Guidelines specify that the alternatives analysis needs to be focused on alternatives that substantially lessen any significant effects of a project. The Draft EIR concluded that the project could have a cumulatively considerable impact on climate change; however, the impact could be mitigated to less than cumulatively considerable by specified mitigation. The updated analysis in the Final EIR concludes that under the draft BAAQMD guidelines, the project's climate change impacts would be significant only if the project is completed before 2018, and could be reduced below the draft BAAQMD threshold by a further trip reduction through the implementation of additional TDM measures. See text changes to the Climate Change section Chapter 2, Revisions to the Draft EIR.

Also, as discussed in Response to Comment 32-5 above, the City's evaluation did not identify a feasible site near transit that would achieve the project's objective.

Response to Comment 32-19

Please see Responses to Comments 32-5 and 32-18 regarding alternative locations. In addition, the project includes enhanced shuttle systems to both the Menlo Park and Redwood City Caltrain stations, and this plus the other TDM measures would achieve many of the same benefits as locating the project closer to Caltrain (even assuming appropriate sites were available). Also, since a project of this size, even if located near Caltrain, would generate increased vehicle traffic, such an alternative site would potentially result in substantially increased congestion near the Caltrain station.

Response to Comment 32-20

The CEQA Guidelines state that one of the primary questions to determine when developing alternatives to a project site is if "any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR" (CEQA Guidelines section 15126.6(f)(2)(A). Please see Responses to Comments 32-5, 32-18 and 32-19, above regarding alternative locations.

Response to Comment 32-21

The project's emission reduction strategies, along with Mitigation Measure CC-1.1 in the Draft EIR, include a wide variety of emission reduction features, that when combined together, reduce emissions to less-than-significant levels. Since the Draft EIR was released, all but one of the provisions of Mitigation Measure CC-1.1 have been incorporated as project emission reduction strategies (see revised Table 3.13-6 in Chapter 2, Revisions to the Draft EIR). Refinement of the project design and analysis as described in Response to Comment 32-9 allows the project to demonstrate that project generated emissions are below the recently proposed BAAQMD GHG per capita threshold. In addition, based on the refined emissions analysis and the draft BAAQMD efficiency standard, the project does not exceed the significance threshold upon project completion in 2018 and thereafter and only slightly exceeds the threshold prior to 2018. Prior to 2018 the impacts can be mitigated to a level of less than significant with appropriate vehicle trip reduction, which can be achieved by certain TDM measures. Consequently, there is no CEQA basis under the City's revised threshold, which incorporates the new BAAQMD draft threshold, for an imposition of any GHG mitigation fees. Note, however, that the revised Mitigation Measure CC-1.1 includes potential fees to offset GHG emissions within the City if the project does not adequately reduce trips and thereby adequately reduce emissions below the draft BAAQMD threshold.

The following is a brief comparison of the commentor's suggested mitigations (shown in **bold**) with what the project is proposing:

- **Ensure public transportation will serve the site.** Although not currently served by transit, recent design refinements of the project include infrastructure for a bus stop as described in Response to Comment 32-13, above. The project will include shuttle service from Caltrain, which achieves some of the functions of regular transit service.
- **Ensure that shuttle service to mass transit uses low-emissions, alternative fueled vehicles.** Shuttle services to Caltrain are a form of public transit. The project expands the Caltrain Shuttle fleet to enhance shuttle service to the project site. The Caltrain fleet includes both conventional gasoline fueled shuttles, as well as a hydrogen fuel cell shuttle.
- **Require the use of catalyzed diesel particulate filter on both new and existing diesel engines.** The project sponsor will require that construction contracts include a provision that all diesel-powered equipment include a diesel particulate filter. Requirements by the CARB and BAAQMD requiring that all diesel fueled construction equipment have particulate filters will reduce diesel particulate matter.
- **Use salvaged and recycled-content materials for building.** The BAAQMD best management practices include using recycled building materials when feasible. The project will comply with this requirement.
- **Use passive heating, natural cooling, and solar hot water systems.** The project sponsor has committed to obtaining LEED gold for the office buildings and LEED silver for the hotel. LEED Certification includes the use of passive heating and natural cooling. Solar hot water systems are incorporated into the project design.
- **Construct the most energy-efficient building possible.** The buildings will achieve energy efficiency of 23 percent above 2008 Title 24 Energy Standards.
- **Require the use of only Energy Star heating, cooling, and lighting devices and appliances.** The project includes the use of energy efficient heating, cooling, lighting and appliances, not necessarily only Energy Star appliances and systems.
- **Prohibit the use of incandescent light bulbs for interior lighting.** Light fixtures will be energy efficient which are unlikely to be compatible with incandescent light bulbs. However, a prohibition on incandescent lights is not necessary to ensure that emissions are reduced to less-than-significant levels.
- **Provide prioritized parking for electric and hybrid vehicles.** The project includes the installation of electric car charging stations which provides similar incentives for the use of electric cars. See revisions to Table 3.13-6.
- **Charge employees for parking and subsidize alternative transportation.** The project does not include parking charges because, given its location outside a central city where parking charges are accepted, charging for parking would result in an unsustainable competitive disadvantage. However, the project's TDM program per revised Table 3.13-6 includes a vanpool program for employees, guaranteed ride home program, shuttle service to rail transit, subsidized public transit for employees, and subsidized payment program for employees that

commute via walking or bicycles. These project features reduce transportation emissions such that, when combined with other reduction features and mitigation, total GHG emissions are reduced to less- than-significant levels.

- **Reduce available parking.** Parking for the project has already been reduced to accommodate a shared parking arrangement between the proposed office, hotel, health club, and restaurant uses on the Independence site.
- **Purchase "green electricity".** Over time, an increasingly large proportion of PG&E's power will come from renewable sources.
- **Require vehicle fleets operated by commercial occupants of the project building to be composed of low emissions and alternative fuel vehicles.** The commercial component of the project does not include the types of commercial uses that generally would own commercial vehicle fleets. Therefore, this suggested reduction measure is not applicable to the project.
- **Limit idling time for commercial delivery, maintenance and construction vehicles.** California Air Resources Board rules and state law already limit idling time on commercial delivery, maintenance and construction vehicles.

Response to Comment 32-22

At the time the Draft EIR was released and currently, there are no required or mandatory numeric or quantitative thresholds of significance for greenhouse gas emissions at the state, regional or local levels. Under the CEQA Guidelines, a lead agency has broad discretion to determine how to analyze and mitigate greenhouse gas emissions and should examine all feasible means of mitigation. It is on this basis that the Draft EIR's standard of significance was established. The Draft EIR utilized a qualitative approach, whereby if a project included all feasible emission reduction strategies, then the project would be consistent with meeting the City's, and therefore the States, GHG reduction goals. The standard of significance in the Draft EIR was and is consistent with the current status of the law, as the CEQA Guidelines do not currently provide numeric or quantitative thresholds of significance for greenhouse gas emissions.

Comments on the Draft EIR, in this and other comment letters, recommended using the draft BAAQMD thresholds of significance. The draft BAAQMD thresholds were released after the Draft EIR was published, and they provide a quantitative method for determining impacts of a project. The draft BAAQMD GHG threshold is a refinement of the standard of significance used in the Draft EIR. While the standard of significance in the Draft EIR made it clear that it would be necessary for a project to incorporate extensive emissions reductions to adequately mitigate GHG emissions, the BAAQMD threshold refines this original approach by recognizing that a project can fall below the significance threshold without incorporating or analyzing every conceivable GHG reduction measure. The basic consistency between these two approaches is demonstrated by the fact that the features and mitigation measures identified to reduce the impact to a less-than-significant level in the Draft EIR are virtually the same as the features and mitigations needed to reduce the project's impact to below the BAAQMD threshold.

As a result, the refined BAAQMD analysis leads to a similar conclusion found in the Draft EIR—given all of the project's GHG-reducing features, no additional mitigation is required to reduce the project's impact to a less-than-significant level if the project is constructed and operational after 2018. If the project is completed prior to 2018 additional mitigation (vehicle trip reductions) is required to reduce the impact to a less-than-significant level. See Chapter 2, Revisions to the Draft EIR for new updated information and Appendix D for supplementary information pertaining to climate change.

Please see Responses to Comments 32-9 and 32-26.

Response to Comment 32-23

The CEQA Guidelines do not require that the significance of an impact, including a climate change impact, be determined solely on quantitative grounds, but rather recognize that qualitative thresholds may be used as appropriate. As discussed in the Draft EIR, the City was aware of some of the draft numerical thresholds that had been proposed by various agencies, but that none had been adopted or formally approved. Based on its experience in the development of the Menlo Park CAP, the City determined that the goals of reducing greenhouse gas and the resultant impacts on climate change could be met and mitigated if new projects incorporate a full complement of feasible measures that could reduce vehicle trips and enhance energy efficiency. As refined by inclusion of the BAAQMD draft threshold, the standard focuses on the ratio between a project's service population and GHG emissions, which represents a numerical approach that is consistent with the spirit and intent of the Draft EIR's significance threshold. Thus, the BAAQMD draft threshold serves to bolster and refine the Draft EIR's threshold. In order for the project's emissions to fall below the new quantitative draft BAAQMD threshold, it still must incorporate substantial emission reduction measures as compared to most projects that were built and operated previously. Incorporating the new BAAQMD standard simply provides a more precise measuring stick to determine when a project has incorporated sufficient emission reduction measures to reach a level of less than significance. See Response to Comment 32-22.

CEQA Guidelines section 15064.4 states that a significance determination may be based on consideration of whether the project exceeds a threshold of significance that the lead agency determines applies to the project. Nothing in the CEQA Guidelines suggests that the threshold for one project need apply to all possible projects/circumstances.

Please see Responses to Comments 32-3, 32-6, 32-7, 32-8, 32-9 and 32-26.

Response to Comment 32-24

The Draft EIR includes information about the world-wide, national, California, Bay Area and even City of Menlo Park's existing GHG emissions. What is clear from that information is that the project's emissions represent an extraordinarily small percentage of the cumulative GHG emissions of the world, an appropriate comparison given the global scale of the problem. The reality in this CEQA context is that, new individual projects, such as this one, will never substantially or measurably contribute to the world's GHG emissions problem. The people who might work in this project already do or will work

somewhere else, and the hotel guests will travel to and stay somewhere else, even if this project is not built, thus generating similar or even greater amounts of GHG emissions that cannot be accurately attributed to any one individual development project. Nevertheless, the City believes that projects should incorporate a broad range of GHG reduction measures.

CEQA Guidelines section 15064.4 states that a significance determination may be based on consideration of whether the project exceeds a threshold of significance that the lead agency determines applies to the Project. The City made a determination that the all feasible mitigation measures presented in the Draft EIR applied to this project to reduce climate change impacts. Since that time, the draft BAAQMD thresholds were released and the City has determined that the BAAQMD's draft threshold of 4.6 MT/service population is also an appropriate threshold for this project that harmonizes with the standard in the Draft EIR as discussed Response to Comment 32-22. Therefore, the City has concluded that the Draft EIR's standard, as augmented by the quantitative factors in the BAAQMD draft threshold, is an appropriate threshold for determining that this project (after mitigation in some circumstances) would not have a cumulatively considerable impact on climate change.

Please see also Response to Comment 32-8.

Response to Comment 32-25

The Draft EIR fully describes the baseline of GHG emissions at varying levels from the entire world, the nation, down to the existing emissions for the City and the project site. It also describes the rising carbon dioxide levels in the atmosphere. The Setting section starting on page 3.13-2 of the Draft EIR describes the existing conditions relative to GHG and climate, as well as the regulatory setting. Thus, the Draft EIR more than adequately describes the baseline conditions.

The recent CEQA Guideline amendments recognize that significance can be determined by reference to whether a project complies with a GHG reduction plan, which explicitly does not require comparison to a particular baseline of emissions. Moreover, the draft BAAQMD guidelines include two options – the 4.6 MT/service population threshold that has been used to augment the EIR's significance determination, and compliance with an enforceable climate action plan – both of which do not require any sort of baseline comparison.

On the issue of standards of significance, please see Responses to Comments 32-9 and 32-26 and text changes to the Climate Change section Chapter 2, Revisions to the Draft EIR.

Response to Comment 32-26

At the time the Draft EIR was released and currently, there are no required or mandatory numeric or quantitative thresholds of significance for greenhouse gas emissions at the state, regional or local levels. Under the CEQA Guidelines, a lead agency has broad discretion to determine how to analyze and mitigate greenhouse gas emissions and should examine all feasible means of mitigation. It is on this basis that the Draft EIR's standard of significance was established.

The Draft EIR analyzed the impacts associated with GHG emissions and determined there was a potentially significant impact using the above described standard. Then, in accordance with CEQA Guidelines section 15126.4, the Draft EIR considered all feasible mitigation measures which could reduce the impact and concluded that mitigation measures were available and feasible to reduce GHG emissions and that, if those mitigations were complied with, the impact would be reduced to a less than significant level.

Since the Draft EIR was published, the BAAQMD has released draft thresholds of significance for GHG emissions. The draft BAAQMD GHG threshold is a refinement of the standard of significance used in the Draft EIR. While the standard of significance in the Draft EIR made it clear that it would be necessary for a project to incorporate extensive emissions reductions to adequately mitigate greenhouse gas emissions, the BAAQMD threshold refines this original approach by recognizing that a project can fall below the significance threshold without incorporating or analyzing every conceivable GHG reduction measure. The basic consistency between these two approaches is demonstrated by the fact that the emission reduction features and mitigation measures identified to reduce the project's impact to a less-than-significant level in the Draft EIR are virtually the same as the features and mitigations needed to reduce the project's impact to below the BAAQMD threshold. Under the refined significance threshold, if the project exceeded the BAAQMD draft threshold, it could potentially result in a finding that the project could have a significant unavoidable climate change impact, although in this case the project would be mitigated below the level.

See Chapter 2, Revisions to the Draft EIR, for a complete summary of changes made to the analysis based on the project incorporating additional project design features. Please see also Response to Comment 32-9.

Response to Comment 32-27

Using the standard in the Draft EIR, it would be possible for a project to have a residual significant impact. For example, if the project sponsor refused to comply with the mitigation measures determined feasible by the City, the project would have a significant impact. In such a situation, there could be significant and unavoidable impacts such that the project could only be approved with the adoption of a statement of overriding considerations.

Since the Draft EIR was published, the BAAQMD has prepared draft thresholds of significance. The Final EIR augmented the analysis of the project based on these draft thresholds and has determined with the inclusion of mitigation measures from the Draft EIR (except on-site renewable power) into the project design and additional TDM mitigation measures there is still a less than significant impact. Using this refined threshold might have shown that there was a significant and unavoidable impact regarding which decision makers needed to make findings of overriding considerations. However, the additional analysis supports the conclusion that the climate change impact is less than significant. Please see Response to Comment 32-9 and Chapter 2, Revisions to the Draft EIR, for a complete summary of the analysis.

Response to Comment 32-28

As discussed in Response to Comment 32-26 and 32-27, the City's determination to use a standard of whether or not the project incorporates all feasible emission reduction strategies was based upon its review of the various standards that were available at that time, and the City's experience through development of the City's CAP, that there were a range of a GHG emissions measures that could enable the City to meet the State's greenhouse gas reduction goals. As noted above, the Final EIR's analysis is consistent with the new draft BAAQMD 4.6 threshold, which was not available when the Draft EIR was prepared, and the incorporation of the BAAQMD's draft threshold represents an appropriate enhancement of the City's approach in the Draft EIR. This 4.6 MT/service population threshold assesses the extent to which a project can effectively mitigate its per capita carbon footprint, regardless of the size of the project.

Please see Responses to Comments 32-3, 32-6, 32-7, 32-8, 32-9, 32-22, 32-24 and 32-27, above.

Response to Comment 32-29

CEQA Guidelines section 15064.4 states that a significance determination may be based on consideration of whether the project exceeds a threshold of significance that the lead agency determines applies to the project. Nothing in the CEQA Guidelines suggests that the threshold that the City determines is appropriate for one project need apply to all possible projects/circumstances because different size projects could result in different levels of emissions, and therefore should not necessarily be treated identically. The fact that different sizes of project may trigger the use of different thresholds is reflected in the tiered nature of the draft BAAQMD thresholds.

Please see Responses to Comments 32-3, 32-6, 32-7, 32-8, 32-9, 32-22, 32-24 and 32-27, above.

Response to Comment 32-30

Although the Final EIR introduces some additional information about GHGs, including a refined threshold for the determination of significance, and a refined emission analysis, none of the criteria for recirculation exist.

Please see Response to Comment 32-1, above.

September 14, 2009 Planning Commission Transcript

CITY OF MENLO PARK PLANNING COMMISSION

REPORTER'S TRANSCRIPT OF PROCEEDINGS
MONDAY, SEPTEMBER 14, 2009
CITY COUNCIL CHAMBERS
MENLO PARK, CALIFORNIA

Reported by: MARK I. BRICKMAN, CSR RPR
License No. 5527

ATTENDEES

THE PLANNING COMMISSION:
Henry Riggs - Chairman
Jack O'Malley - Vice Chair
Vincent Bressler
Katie Ferrick
John Kadvany
Melody Pagee
Kirsten Keith (Not present)

CITY STAFF
Deanna Chow, Senior Planner
Justin Murphy, Development Services Manager
Thomas Rogers, Associate Planner

---o0o---

BE IT REMEMBERED that, pursuant to Notice of the Meeting, and on September 14, 2009, at the City Council Chambers, Menlo Park, California, before me, MARK I. BRICKMAN, CSR No. 5527, State of California, there commenced a Planning Commission meeting under the provisions of the City of Menlo Park.

---o0o---

AGENDA

Page
Call to Order - 7:02 PM 4
Roll Call 4
A. Public Comments (None)
B. Consent (None)
C. Public Hearing
1. Re Bohannon Development Company 101-155 Constitution Drive and 100-190 Independence Drive (Menlo Gateway Project) 5
Staff Report - Thomas Rogers 8
Presentations by Consultants:
Rodney A. Jeung 13
Mark Spencer 28
David Doezema 35
Public Comments - 45
Commission Comments: 64
D. Commission Business
1. Review of planning items: 144
E. Reports and Announcements - (None)
Adjournment 145

CHAIRMAN RIGGS: Good evening and welcome to the Menlo Park Planning Commission for September 14, 2009. Tonight we have at the Commission from my left John Kadvany and Jack O'Malley. I am Henry Riggs. To my right is Melody Pagee, Vince Bressler and Katie Ferrick.

The staff tonight from the left, we have Deanna Chow, our Senior Planner; Justin Murphy, our Development Services Manager and Thomas Rogers, our Associate Planner.

We begin our hearings with public comment. This is -- under public comment, the public may address the Commission on a consent calendar item or any subject not listed on the agenda within the jurisdiction of the discussion.

When you do so, please state your name and city, your political jurisdiction in which you live for the record.

The Commission cannot respond to non-agendized items, other than to receive testimony and/or provide general information.

I see I do have cards for the public hearing. All right? If there's no one for public comment at this time, we will close the public comment period.

Move on to our consent calendar. We do not have a consent item tonight, so that brings us right to our public hearing.

Page 5

Let me briefly review our process tonight. After I read the item, which is conventionally known as the Bohannon project, the -- we will introduce staff, the consultant will present. There is a fairly lengthy presentation. Then as usual, the Commission will have questions for staff.

We'll limit ourselves to questions at that time so that we can move on to public comment before we bring it back up here for specific questions and comments.

So the hearing tonight is a request for a General Plan Amendment, Zoning Ordinance Amendment, Rezoning, Development Agreement.

I see Architectural Control written in here, although I don't believe that's the case. Thomas; is that right?

MR. ROGERS: There is an Architectural Control component to this application, yes.

CHAIRMAN RIGGS: All right. Tentative Parcel Maps, Heritage Tree Removal Permits, Below Market Rate Agreement, an Environmental Review/ for Bohannon Development Company, 101 to 155 Constitution Drive and 100 to 190 Independence Drive, Menlo Gateway Project.

Again, this is a summary of the project. This is a General Plan Amendment to create a new mixed use commercial business park land use designation which would

Page 6

allow research and development facilities, offices, hotel/ motel, health fitness centers, cafe and restaurant and related commercial use.

The maximum floor area ratio or FAR would be set at one hundred percent for offices, R&D and related commercial facilities. Twelve and a half percent for health and fitness centers, cafes and restaurants, day care facilities and related retail and community facilities, and 25 percent for hotel or motel use for a maximum total FAR for 137.5 percent.

Secondly, the General Plan Amendment is to change the land use designation of the properties from limited industry to a new mixed use commercial business park designation.

Third, the Zoning Ordinance Amendment is to create the new M-3 -- that is mixed use commercial business park zoning district -- to allow for uses and FAR as stated in the corresponding General Plan Land Use Designation.

In addition, the M-3 zoning district would permit a maximum building height of 140 feet and a maximum number of 235 hotel rooms, would specify use based off-street parking requirements.

Four, rezoning the properties from M-2, general industrial, to the new M-3, mixed use commercial business park.

Page 7

Five, Development Agreement to create vested rights in project approvals, address implementation of the proposed design and infrastructure improvements in the project area, and specify benefits to the City.

Six, architectural control approval of specific project plans for the construction of new buildings with a maximum of 955,170 square feet of gross floor area -- that would be the 137.5 percent FAR -- and a maximum building height of 140 feet.

Specifically the Construction (sic) Drive site would include two eight-story office buildings totaling 494,669 square feet, potential neighborhood serving, convenience retail and community facility space, two multi-story parking structures.

The Independence site would include a 200,000 square feet eight-story office building, a 171,563 square foot eleven story 230 room hotel, a 68,519 square foot health and fitness center, a 4,245 square foot restaurant, potential neighborhood serving convenience retail and community facility space, and a shared multi-story parking structure.

Seven, the tentative parcel maps, one on the Independence site and one on the Constitution site, to merge lots, adjust lot lines and establish easements.

Eight, heritage tree removal permits to remove

Page 8

forty heritage trees on the Independence site and 32 heritage trees on the Constitution site.

Nine, a BMR agreement for the payment of in-lieu fees associated with the City's below market rate housing program; and ten, the Environmental Impact Report or EIR to analyze the potential environmental impacts of the proposal.

Specifically this public hearing will be an opportunity to provide comments on the content of the Draft EIR prepared for the project.

In addition, the Commission will hold a study session on October 5 to review the proposed project in more detail, including the fiscal impact analysis and potential public benefit ideas.

Thomas.

MR. ROGERS: Thank you.

As noted earlier, staff will now provide a brief project summary to orient the proceedings for this evening.

The presentation on behalf of staff, I'm Thomas Rogers. I will be giving a project summary. And I'll hand things off then to Rod Jeung from PBS&J, the City's environment document consultant for an overview of the Draft EIR.

Next, Mark Spencer from DKS Associates will provide an overview of traffic and circulation section of

Page 9

the EIR, and David Doezema from Keyser Marston Associates will provide information about the housing needs analysis that was done for the EIR, which is available as an appendix.

The order is a little bit different than what was printed in the staff report, but we believe this makes for a more efficient meeting. So to give the Commission a sense, we'll change the order to what's shown on the slide.

The project location is located near the intersection of US 101 and Marsh Road, and it's made up of two sites, informally known as the Constitution sites on the northeast and then Independence Drive on the southwest.

Dialing in a little bit closer here on the project sites, the Independence Drive site -- sorry. The Constitution Drive sites is made up of parcels numbered 101 to 155 Constitution Drive. The total lot area of these sites is approximately nine acres.

On the southwest, the Independence site, which abuts US 101, is made up of four parcels -- sorry. Five parcels addressed 100 to 190 Independence drive. These parcels total approximately seven acres in size.

This provides -- this illustration provides an overview of the proposed development showing in the bold colors both these sites with the proposed development on there.

Page 10

We're going to dial in on the Independence Drive site first. Again, this is the one abutting 101. On -- going from left to right, there would be an office/R&D building, research and development totaling 200,000 square feet, of which up to 3,000 could be exchanged for retail or community facilities.

Moving over to the right, there's a parking structure which has a size that's somewhat in flux. The total size of that parking structure would be 1,017 spaces to 1,230 spaces.

Moving over to the right, there is a hotel/ health club integrated development that would total 171,563 square feet in size. That totals 230 rooms. The health club component of that would be 69,500 -- 467 square feet, and additionally there would be a cafe restaurant that would be part of that comeplex at 6,947 square feet.

Moving to Constitution, there would be -- moving from left to right a parking garage, two office buildings and another parking garage. The two office R&D buildings would total together 495,000 square feet.

Of that, 7,420 could be neighborhood convenience retail similar to the other developments.

The parking garages, garage A on the left is 701 spaces. Garage B on the right would 803 spaces. In addition, there would be 145 surface parking spaces, making

Page 11

up for a total of 1,649 spaces.

As the chair noted, the project incorporates several elements. First and foremost, there are amendments to the General Plan and Zoning Ordinance Amendment creating new mixed use commercial business park land use designation and the new M-3 zoning district.

In addition, this is -- there's specific development proposals that are being proposed that conform to the proposed General Plan and zoning as I noted on Independence and Constitution.

The M-3 and M-2 zoning districts differ in several ways. Most notably the maximum allowed height would be 140 feet under the proposed M-3 zoning from the current 35 foot maximum, and in addition, total floor area ratio, which is an expression of the maximum size of buildings in relation to the size of the parcels themselves, would be 137.5 percent, up from the current 55 percent maximum for light industrial, general industrial uses.

The specific development proposal is just a total of the -- the developments that we went through when we went through the site by site totals, and I believe that that -- just to close, there's a bird's eye view, a rendering that was prepared from a -- I believe a helicopter-type view showing proposed development in

Page 12

relation to its surroundings.

Before I hand things off to Rod on the consultant side, just a reiteration, that the focus of the meeting tonight will be on the Draft EIR, commenting formally on the Draft EIR, which Rod will give you an overview of.

As always, the distinction between Draft EIR comments and other types of project comments can be hard, so I want to encourage the Commission to -- to feel free to ask if anything is more an EIR comment or more a comment that would be appropriate, and you can cancel that, Rod. I don't think that -- it's was okay when we did it before. The file should also be up in the window below.

But the -- just to encourage the Commission, we do have another study session scheduled, as the chair noted, for October 5th. That will be much more general in nature.

So to the extent that the -- there's anything that is not directly related to the EIR, but you want to express, just know that there's a -- another opportunity coming up in just a few short weeks.

There's always something with Microsoft.

MR. JEUNG: I apologize.

MR. ROGERS: And another good opportunity would be to just note that we have received two letters that were

Page 13

1 distributed to the Commission, one from Morris Brown and
2 another from Elizabeth Lasensky.
3 These are available. I believe we made some
4 extra copies to put on the rear dais. Those copies are
5 out. If you guys could share, I'd appreciate that.
6 The deadline, as Rod is going to note, for
7 comments is the 21st of September, next Monday night.
8 Those comments could be relayed to me in e-mail or through
9 hard copies, but they need to be in our hands on the 21st.
10 With that, I'll hand things over to Rod.
11 MR. JEUNG: Thank you very much, Thomas.
12 Good evening, Chairman Riggs, members of the
13 Planning Commission and members of the public. My name is
14 Rod Jeung. I'm the project director on this assignment.
15 I'm with PBS&J. We're based out of San
16 Francisco, and I'm very pleased this evening to be before
17 you to talk a little bit about some of the summary
18 conclusions that came out of the Draft Environmental Impact
19 Report that our firm prepared.
20 This will look rather familiar because I know
21 Thomas and Justin have already gone through it, but from
22 our perspective, what we're going to do is provide you with
23 a very brief overview to the California Environmental
24 Quality Act, which you'll hear us referred to as CEQA
25 throughout the presentation.

Page 14

1 I'll then go through a summary of some of the
2 key conclusions that were identified in the environmental
3 document.
4 As Thomas said, I would like to stress that this
5 is a -- an opportunity for the public and the Planning
6 Commission and others to raise comments regarding the Draft
7 Environmental Impact Report, so I will go ahead and
8 identify the different methods by which we are seeking
9 public comments.
10 And then as we all know in Menlo Park, traffic,
11 traffic, traffic is very, very important, and so I'm going
12 to be turning a lot of the presentation over to Mark
13 Spencer from DKS, and then because of the importance of the
14 size of this public and the potential housing implications,
15 turn it over to David from Keyser Marston Associates.
16 There's something that was very important in
17 what Thomas described earlier as the project location and
18 it's something that I want to reiterate from a CEQA
19 perspective, and that is when you take a look at the two
20 proposed project sites, the Constitution site and the
21 Independence site, the first thing that we notice from an
22 environmental perspective is that those sites are already
23 largely developed.
24 There's already some 220,000 square feet of
25 office and research development on those two sites, and

Page 15

1 what that means is that as we begin to evaluate the
2 proposed project and the additional square footage that
3 would be allowed under the new M-3 zoning, we're not going
4 to be taking a look at that full development potential, but
5 we're going to net out the amount of the development that
6 is that is currently on the site.
7 Because what we're really concerned about is how
8 the existing conditions are going to change as a result of
9 the proposed project.
10 The second thing that I would note is that as
11 you look at the boundaries that define the project sites,
12 you see that there's the Bayfront segment on the north,
13 there's the Marsh/101 interchange on the west. There's
14 Highway 101 on the south.
15 So it's largely an isolated site. It's what we
16 might call an infill development site where we're looking
17 to intensify the amount of development that's occurring on
18 an area that's pretty much enclosed.
19 If you look at the areas that are currently
20 residentially developed -- and I want to point this out
21 simply because oftentimes we're concerned about the
22 potential sensitivity of residential neighborhoods and the
23 effects that they might experience as a result of increased
24 development potential.
25 There is development over on the southeast side

Page 16

1 or southwest side -- excuse me -- of the interchange, and
2 then there is the other residential neighborhood south of
3 the railroad tracks.
4 So from a proximity perspective, we don't have
5 sensitive receptors nearby the zoning site.
6 This again is just the area plan that Thomas
7 went over, and I just wanted to note that the two office
8 buildings on the Constitution side on the north basically
9 flank an open space feature that's intended to be an
10 amphitheater. So there is some open space relationship to
11 the Bayfront Park to the north of Menlo Park to the north.
12 There are two garages that are on either side,
13 the west and east sides of that project site, and then when
14 you look at the Independence side on the south, the office
15 building is right along the offramp of 101, the parking
16 garage is in between, and then the sports club or the
17 health club and the hotel are on the east side.
18 So from the benefit of those of you who may not
19 be familiar with CEQA, the California Environmental Quality
20 Act, what I do want to stress is that this is a fairly
21 structured, very much regulated process that we go through.
22 The California Environmental Quality Act, CEQA
23 guidelines that are promulgated by the state and various
24 court cases that have interpreted CEQA basically tell us
25 what documentation should be prepared, what topics, what

Page 17

1 subject matter should be included, how that information
2 should be presented.
3 So there's already a lot of information.
4 There's a lot of guidelines that dictate what goes into an
5 environmental document.
6 It's important to understand that the California
7 Environmental Quality Act specifies that the EIR is an
8 informational document. It's just one piece of the puzzle
9 that you need to consider as decision-makers.
10 So as we go through the conversations tonight
11 and as you go into your study session later on, you'll
12 realize that the environmental impacts are but one piece.
13 You're also going to be considering to what
14 extent this project satisfies the goals and visions that
15 have been articulated in the Menlo Park General Plan.
16 You'll think about the fiscal benefits or
17 impacts associated with this. We'll talk a little bit more
18 about the housing implications of this project. We'll talk
19 about some of the demands that this project places on the
20 infrastructure, the road system, community resources and
21 natural resources, but the focus of the Environmental
22 Impact Report is really on the physical change that results
23 from this proposed project, and all those other pieces of
24 information that are going to be so critical to making a
25 decision are things that you're going to have to consider

Page 18

1 in addition to the Environmental Impact Report.
2 As I mentioned, the California Environmental
3 Quality Act specifies for us all of the different types of
4 topics that have to be evaluated in a comprehensive
5 environmental document.
6 So as you can see on this list here, there are
7 some seventeen different topics ranging from land use to
8 hazards and visual quality, noise, traffic and circulation.
9 These are all the things that are examined as
10 part of the California Environmental Quality Act, and
11 they're -- they're comprehensive. They're intended to
12 cover all of the different jurisdictions within the State
13 of California. So there are going to be things that aren't
14 necessarily relevant to Menlo Park.
15 So, for example, agricultural resources, there
16 aren't such resources in the City.
17 To speak real briefly about the Menlo Gateway
18 CEQA Project to date, a Notice of Preparation was released
19 for this project back on June 29th, 2005.
20 A subsequent Notice of Preparation was issued
21 with the new application that came in from the project
22 sponsors. That Notice of Preparation was issued on May
23 29th, 2007, and the Notice of Preparation is simply an
24 announcement going out to the state and public and
25 interested parties that the City is intending to prepare an

Page 19

1 Environmental Impact Report, but one of the key things that
2 we get out of that are responses to that Notice of
3 Preparation.
4 So there are various public agencies and
5 interested parties who can submit comments to inform us
6 better about those topics that really deserve more priority
7 or closer examination.
8 As I showed earlier, there are seventeen
9 different topics that we have to look at, but you have to
10 look at those topics through the lens of local community
11 and to understand what's really going to be relevant.
12 So not only do we take a look at the comments
13 that came in in response to the Notice of Preparation, but
14 there were scoping sessions there were held, one before the
15 Planning Commission back in June 2007, and then that same
16 month before the City Council, and the purpose of the
17 scoping meetings was again to solicit input from the
18 community and from the decision-makers about which issues
19 are going to be most relevant, which issues are going to be
20 most important, and also what alternatives should be
21 considered in the environmental document.
22 All of that information was taken into account
23 as we began to develop the draft environmental document.
24 The draft environmental document that Chairman
25 Riggs read a little bit earlier was released on July 23rd,

Page 20

1 2009, and then going beyond what CEQA requires as a
2 minimum, which is a 45-day review period, there's been a
3 sixty-day review period, and that public review period will
4 close on September 21st, next Monday.
5 What I tried to do on the next two slides is
6 capture in a very summarized fashion some thirty or forty
7 pages that appear in the summary of the Draft Environmental
8 Impact Report, and what I have here is on the left-hand
9 column all the different impact topics that were evaluated
10 in the environmental document.
11 And then I have three columns, one that's
12 labeled LTS for less than significant, one that's labeled
13 PF for potentially significant, and one that labeled SU for
14 significant avoidable, and what I tried to do is capture
15 within each of these different categories the range of
16 impacts that were identified in the Environmental Impact
17 Report.
18 So when you take a look at the first row, as
19 just an example, aesthetics and visual quality, there are a
20 number of different specific issues or impacts that are
21 identified within that broader topic.
22 Some of those issues or impacts were considered
23 less than significant, but there were some topics, some
24 impacts that are considered potentially significant, and if
25 there was a topic that was considered potentially

Page 21

significant, it's our obligation under the California Environmental Quality Act to suggest mitigation measures or ways of reducing or alleviating those impacts.

If there is nothing checked on the far right column under significant and unavoidable, that means that the mitigation measures in our estimation would reduce the impacts to less than significant.

If, however, there's a check mark in that far right column under significant and unavoidable, it means whatever mitigation measures we were able to devise working with City Staff we deemed to be in -- un -- either infeasible or not sufficient to reduce the impact to less than significant.

So I'm sorry if that was a little long or confusing, but again, just taking this across -- let me just run through air quality.

There are some topics related to air quality where the impacts are considered less than significant and -- and no further analysis really warranted, no developmental mitigation measures.

However, when we looked at the construction period, roughly the five or seven plus years that it would take to go ahead and develop this project as it's been presented, there would be construction related emissions associated with the construction equipment, the

Page 22

construction trucks that are driving to the site, the grading of the site, the demolition that would occur.

Each of those different activities during the construction period would result -- result in emissions that are greater than the thresholds that have been established for significance.

There are mitigation measures that are identified in the environmental document that we believe would reduce those impacts to less than significant.

However, when you get to the far right column, you see that there are certain emissions that are called NOx or nitrogen oxides and PM for particulate matter.

Those two types of pollutants are going to result in emissions that are greater than the thresholds that have been established by the Bay Area Air Quality Management District, and the mitigation measures that have been identified in the Environmental Impact Report are not sufficient to reduce it to less than significant. So those are considered significant and unavoidable.

So I'm not going to read through every single one of these. Suffice it to say that if there are questions that come up during the course of the question and answer period, I'd be happy to come back to this, but this is a summary of the information that's contained in the environmental document.

Page 23

As you can see in this first chart, just about everything for every individual topic from aesthetics all the way to hydrology and water quality, there are mitigation measures that have been identified that would be successful in reducing the impacts. Air quality is one of those where we don't think that's possible.

The second chart shows all the other topics that are evaluated in the environmental document from land use through climate change.

Again, many of the issues, many of the impacts within a particular topics are considered less than significant.

There are two areas where there may be potentially significant impacts related to construction noise and the emission of greenhouse gases. There are available mitigation measures to reduce those to less than significant.

However, again, looking at the far right-hand column, there's traffic noise, there's construction vibration, especially if there's going to be any kind of pile driving.

There are intersection delays and roadway congestion that Mark will talk a little bit about later, and there's an issue related to water supply that I want to highlight in a moment.

Page 24

Those are the impacts that were considered significant and unavoidable.

This is just another version of what I mentioned as being those impacts that are considered significant and unavoidable. There are four major areas: Air quality, noise, traffic and water supply, and I will note that under water supply, it's really specific scenarios under which we might find the water supply in Menlo Park to be insufficient and inadequate to support the proposed project.

As you know, the General Plan Amendment and the zoning allows for a range of different uses. In the event that one hundred percent of the floor area that comes in at these sites is for R&D, research and development, and they all involve wet labs.

Under that particular scenario, we can envision that there would be a significant water demand.

Similarly, when you take a look at the cumulative conditions and you go out and look at scenarios where you have multiple dry years, in those particular circumstances, there would also be a significant unavoidable water supply impact.

In conducting the Environmental Impact Report, there's an obligation to prepare and identify mitigation measures to reduce the impacts to less than significant.

Page 25

There's also an obligation to take a look at alternative ways of feasibly obtaining most of the project objectives and seeking to reduce some of the project impacts.

So we've identified impacts that relate to water supply, that relate to air quality, that relate to traffic and that relate to noise, and so the impetus for these different alternatives was to say: Can we reduce some of the project related impacts by reducing the intensity of development on the project site.

And you can see on this chart that the project would allow 137.5 percent floor area ratio. Each of the different alternatives that have been identified for study in the EIR result in a lower floor area ratio.

The lowest would be 31.5 percent under alternative one, and that's basically saying let's take the existing buildings, leave them as they are and see what would happen if they were fully occupied.

So taking that existing roughly 220,000 square feet and seeing what happens when that maxes out.

At the other end, you have alternative five where we're taking a look at the amount of development that could occur with the new office/ R&D/hotel/health club, but not at the intensity developed at the proposed project.

The implications of looking at these different

Page 26

alternatives was pretty instructive, and our goal was to make sure that you had an adequate range of different alternatives to make an informed decision about the project, and we note that alternatives one through five, basically taking a look at lower development intensities at the site, would allow us to eliminate the noise impact that was identified along Marsh Road.

Alternatives four and five would also eliminate the air quality impact associated with the oxides of nitrogen. It would not, however, reduce the particulate matter impact to a less than significant, and then all alternatives would lessen to water supply impacts.

So we're finding that as you go through all of those different alternatives, you do have an opportunity to review some of the impacts that are identified in the Environmental Impact Report.

In closing my part of the presentation tonight, I wanted to reiterate something that was very important, and that is the public process that we need to go through, and as part of that public process, we are really encouraging you and wanting to hear from yourselves and from the public about any comments regarding the adequacy of the environmental document, and this can be anything from there's a -- there's an intersection that should have been evaluated; there's an alternative you might want to

Page 27

consider; we don't agree with that classification or conclusion about a significant impact. Anything regarding the adequacy of this environmental document that's going to be useful to you as a decision-maker.

And so there are three different ways of obtaining those comments. The first is to submit those comments to Thomas Rogers, and his e-mail address is on the screen.

We do ask though those comments be submitted to Thomas by September 21st, next Monday at 5:30 PM.

A second option if people do not want to send things by e-mail is to go ahead and prepare a letter and bring it here to the City's offices or to go ahead and mail it in to the City of address at 701 Laurel Street, Menlo Park, zip code 94025.

Or of course tonight our purpose for being here is to open this up for public testimony later on, and we'll be definitely taking comments and listening and recording those comments.

So with that, I'd like to turn the presentation over to Mark who's going to spell out a little more detail for you the transportation impacts.

Thank you.

MR. SPENCER: Just give me a second to change the presentation over.

Page 28

Good evening. My name is Mark Spencer. I'm a principal with DKS Associates, Transportation Engineers, and we worked with the City Staff and with DBS&J and associated consultants to prepare the transportation analysis for this project.

What I'm going to present this evening is a summary that includes the following elements of the traffic analysis:

First, the elements that were included in the transportation impact analysis or TIA, the findings of the traffic analysis, summary of the impacts, particularly in transportation impacts, mitigation measures and simply where the location of those would be, as well as a comparison of the project alternatives and how those compare from a transportation perspective to the proposed project.

First, with respect to the traffic study elements, we looked at three conditions in time: The existing condition which, for the purposes of this analysis, was based on traffic counts in 2006 and 2007.

We began this project actually back in 2005 and did several iterations and updates with various traffic counts.

We also did a near-term analysis upon project buildout as well as buildout of other projects within the

Page 29

area, and then a longer term or a cumulative condition as Rod referred to.

For intersection level of service analysis, we looked at a total of 21 intersections in the area -- I'll show a map of that in just a minute -- of which sixteen are signalized and five in or around the project site are unsignalized, and we looked at both weekday AM and PM peak periods, and that's fairly common and also allows for a common comparison to other traffic studies; not only in the area, but within the broader region within the City or within the county, perhaps.

We also looked at roadway segment analysis. This is part of the City of Menlo Park traffic impact guidelines as well as that that's required from the county itself, and we looked at nine different roadway segments as well as routes of regional significance, and those are described by C/CAG or the County of San Mateo.

Those will include things like 101, State Route 84 and so forth.

We also looked at several program employment and planned transportation facility improvements and incorporate -- incorporated those into the analysis at a point in time in which those are anticipated to be completed.

Those might include roadway widening projects or

Page 30

signal modification projects, or even an improvement on a freeway ramp. Anything that's programmed and funded is included within the analysis and programmed in at such time as when that's anticipated to be completed.

Also we considered potential impacts to public transit service as well as pedestrian and bicycle facilities, as well as a parking analysis.

The map that's on the screen right now shows the study area and study intersections. First we'll look at where -- obviously where the project sites are, and then the highlighted dots show the study intersections. Because of a translation with the Power Point, everything came out as nice brown dots, but the unsignalized intersections just for reference include those along Independence and Chrysler and Constitution, mostly within the -- in this area in here near the project sites themselves.

In terms of the project trip generation, what we did is we took a look at what the existing uses are on the site, and at the time we did the traffic counts what percent of those buildings were occupied, and then we subtracted that out of existing use or provided some level of credit for that.

We did do a net new trip analysis based on what we would anticipate for both the Independence and

Page 31

Constitution sites. We went quite a bit back and forth with City Staff to work on what would be an appropriate trip generation for the site.

And the sum totals that are on the bottom actually are the same ones that are in the DEIR.

As you can see, the project is relatively intense in terms of its traffic generation, but not in a -- there's projects and it's all relative to other projects.

When you look at this compared to the hotel project on Sand Hill or other projects, you have to have a little bit of perspective.

This project generates about eleven to 1,200 hundred peak hour trips, net new trips and about 11,000 trips per day potentially.

Now, on the findings in the traffic analysis, there would be less than significant impacts in terms of transit, potential -- you know, how many additional transit riders with the affects on transit operations, pedestrian and bicycle facilities as well as parking.

It's worth mentioning at this time that the project applicant spent sometime preparing a Transportation Demand Management Program that helps lessen the effects of the transportation impacts.

That TDM or Transportation Demand Management

Page 32

document is included within the EIR itself.

To be conservative, we did not account for any trip credits that are part of that program. So that would be sort of over and above any impact and mitigation which is being required through the EIR analysis.

Continuing on, in the near-term with project impact -- this will be upon full buildout of the two projects sites -- seven intersections, eight roadway segments and three routes of regional significance would be impacted, and in the longer term, that number of -- that number changes from seven to eleven study intersections for the same eight roadway segments and the same three routes of regional significance as you move forward in time.

So the difference is four more intersections over time would experience increased growth and then experience impacts.

In terms of a summary of the near-term impacts, the locations that are highlighted here, specifically in red, indicate where the hot spots, of where -- where the intersection impacts would be in the near-term.

And in terms of roadway segments, you can see immediately around the sites themselves as well as a segment on Marsh Road between Bay and Bohannon.

In terms of long-term impacts, we have several intersections that would be impacted, and then a few more

Page 33

in yellow.
We have the same seven that we had initially in red. The four additional intersections in the long-term now show up in yellow.
As you can see, we're also looking at an intersection in the Town of Atherton over there at Middlefield and Marsh, and we're also having an impact at University at Bayfront.
In terms of the roadway segments, those would be the same as what we looked at and what we determined for the near-term impacts.
In terms of potential mitigation, first for the intersection of Bayfront and Chrysler, it's a Caltrans jurisdiction, which means they would be responsible for implementation of the mitigation, but there is some additional lane capacity that we would be recommending for that.
I don't want to go into detail on all of the various mitigations that were -- I can do that through question and answer later if you wanted to add more detail on that, but we specifically want to call out that there's certain intersections that are not within the City's control, and that does affect how we determine significance within the CEQA document.
The alternative table's the same as we saw

Page 34

before, but to provide a summary of comparison between the project across the -- with the five alternatives, first in the near-term, alternative five is the most similar, but it's not as intense as the proposed project.
As you can see, with each alternative moving from left to right, the alternatives get more intense with the higher floor area ratio and more intense development, and consequently as expected, you would find more intersections pop up and are determined to be significant and unavoidable, shows up as SU on the chart.
And the determination under alternative five actually matches what you'd see under the near-term proposed project condition.
In terms of the long-term impacts, again we have the eleven intersections, ten of which are significant and unavoidable, one which is less than significant, Constitution and Chrysler.
As we move through the alternatives, you can see that alternative five is almost the same, but that it actually does not have the impact at Willow/Newbridge as well as Marsh and the 101 northbound off-ramp.
Just based on the delay and the criteria which we measure traffic impacts. But again, very similar result, and also use these similar results across alternatives four and five.

Page 35

That concludes what I had as a summary for Transportation Impact Analysis, and certainly will be available to answer any questions that you may have later on.
Right now I'm going to turn the presentation over for the remaining part of it.
CHAIRMAN RIGGS: Thank you, Mark.
MR. DOEZEMA: Good evening. I'm David Doezema with Keyser Marston Associates and we worked with the staff and PBS&J to prepare the housing needs analysis for the project.
The housing needs analysis is divided into two main components: An analysis of demand for housing by income or affordability level that's created by the project, and analysis of potential impact on Menlo Park's allocation of housing units under the Regional Housing Needs Allocation process, also referred to as RHNA, and the purpose of the analysis was to provide information about potential impacts of the project, but -- but like the fiscal impact analysis that was prepared, it's not a requirement of CEQA to do this type of analysis, although it is referenced in the population and housing section of the EIR, and it's an appendix to the -- to the EIR, as well.
So first I'll go through the analysis that deals

Page 36

with demand for housing by affordability or income level.
The first step in that analysis is to estimate the employees associated with the project, and as shown on this slide here, there's approximately 1,880 employees that will be added as a result of this project after accounting for demolition of the existing space, and those employees would be associated with approximately 1,090 households.
We -- we convert from employees to households using a relationship from the census of approximately 1.72 workers in each worker household.
The total demand for 1,090 units or 1,090 households is translated into housing demand by affordability level using Keyser Marston jobs/housing nexus model, which was developed over fifteen years ago in order to convert -- in order to analyze linkage between land use and housing needs by affordability level.
The data sources that are used in that model are US Bureau of Labor Statistics data on employee occupations, and that's -- that's national level data on occupations and local data on employee pay levels from the California Employment Development Department, and then census data on household characteristics and commute patterns.
This slide shows the steps in the model. We've talked already about the first two steps on employee growth and households.

Page 37

So starting with step three, we -- we take that pure labor statistics data on occupational compositions of certain industries and use that to estimate what the occupational composition of workers in -- in the proposed project would be.

In step four, we take local level compensation data and apply those compensations to the occupations in order to estimate household income.

And then in the fifth step, we estimate -- we apply a household distribution to that based on census averages.

And then the last step, we take the estimated household income for each household size and compare that to income limits published by the State Department of Housing and Community Development in order to determine how many households would fall into each income category.

The results of the analysis are shown on this slide. As you can see, about half of the total housing demand is in the two top tiers, which is above moderate and upper income. That covers 127 -- excuse me. 120 to 150 percent of median income, and then above 150 percent of median income, so that's 550 in those two categories.

And that's -- that's not unexpected because there's a lot of office jobs that are associated with this project, and those office jobs tend to be higher paying

Page 38

jobs, but notwithstanding that, about 25 percent of jobs in the office are estimated to be administrative which tend to have lower compensation models, and there's also the hotel jobs as well as retail and restaurant jobs.

And so that explains why you see 184 and 219 in the very low and low income categories respectively.

So to -- to those estimates, what we've done is apply what we've termed here as the Menlo Park share, which all that is is -- is taking -- taking the existing number of workers in Menlo Park and looking at how many of those workers in Menlo Park live in Menlo Park and applying that same percentage to this in order to -- to produce some allocation of -- of the total which might be expected to seek housing in Menlo Park.

So you reduce -- reduce the -- the findings from 1,090 households or housing units to 109 by making that allocation.

So the next part of the analysis is -- looks at the potential impact to Menlo Park's allocation under the Regional Housing Needs Allocation or RHNA.

So RHNA assigns each city a housing production target, and that housing production target has to be incorporated into the City's housing element in order to be certified by the -- the State Department of Housing and Community Development.

Page 39

And that process is established under state housing element law, and most recent period that's -- that that occurred for is from 2007 to 2014, and it happens roughly every five to seven years.

ABAG or the Association of Bay Area Governments is responsible for that process in the Bay Area, but in the most recent cycle for 2007 to 2014, San Mateo County opted to do its own, what's known as the subregional process.

So within San Mateo, the -- that allocation just occurred on the county level.

The formula that's used to make this allocation can change with each allocation cycle, and it's not known what the formula would be for the next cycle.

So we had to sort of produce, you know, estimates under certain different assumptions in order to do this analysis.

ABAG's demographic projection document, it's called projections. It's used as the base source of information in all these allocation formulas.

Our analysis looks at the potential impact on Menlo Park's RHNA allocation from the 1,900 roughly added jobs from the project, and since, as I mentioned before, the formula is unknown, we tested four possibilities, and in -- every time these possibilities are using demographic information from ABAG in the calculation.

Page 40

So the first -- the first two are the formulas that were used in the most recent cycle and then the cycle before that, in option C that's shown on the screen is a variant on the formula that was used in '99 -- for the '99 to '06 cycle, and it provides an allocation based on existing jobs rather than job growth as was actually used from '99 to '06. It's just a variant on that formula.

And option D is referred to as the job bank credit, and that was a formula considered in '99 to '06, and it was intended to adjust for existing jobs/housing balance, and if -- if a formula in the future were adopted that were designed to adjust for jobs/housing balance and attempt to make some kind of correction for it, it could result in a higher allocation to Menlo Park.

So we wanted to have at least one of the methodologies recognize that possibility.

So, you know, another variable here is that it's also unknown how the project would be specifically reflected in ABAG's projections, and since projection is used to make the allocation, you know, that -- that would influence the results.

So we've -- we've done two things to bracket range. The first thing is to assume that the jobs would be reflected in ABAG's projections as existing jobs, and this -- this we've referred to as the base estimate, and not --

Page 41

that is the approach that was recommended to us by ABAG staff.

The second option is the upper end estimate. That's what -- that's what we referred to it as, and in there, the 1,900 jobs are reflected in ABAG's projections, and in addition, the fact that those existing jobs are here in Menlo Park influences ABAG's projections model to allocate additional job growth in Menlo Park, you know, in their model and in their projections document, and -- and that's to bracket the upper range of potential -- potential impacts to -- to the RHNA numbers.

This -- this slide shows the results, and as you can see, the potential impact to Menlo Park's RHNA allocation could range from zero to 76 units depending on these various assumptions that RHNA had for the period from 2015 to 2022 which would be the next cycle.

The -- the numbers for the current cycle from 2007 to 2014 are already set, so the project would not change those numbers from -- and it all just depends on these just different variables that I discussed. So that concludes the presentation of the housing needs analysis, and I'd be happy to answer any questions if during the question and answer period.

Thank you.

CHAIRMAN RIGGS: Thank you, David. I'll start

Page 42

off with a question for you right away.

So the zero to 76 is a range that responds to housing demands specifically from the ABAG point of view.

Is that correct?

MR. DOEZEMA: That's correct.

CHAIRMAN RIGGS: All right. Whereas using your formula, that I do want to ask about, you took the roughly 1,900 jobs and converted that to a housing demand closing to 109.

MR. DOEZEMA: Correct.

CHAIRMAN RIGGS: And could I ask about the -- some clarity about the ten percent factor.

Is that something that's sort of historical? Does it apply specifically to Menlo Park?

Of course we're all somewhat prejudiced and we figure if you work in Menlo Park, of course you'd want to work here all hundred percent.

MR. DOEZEMA: It's -- every city has a different commute relationship, and -- and that -- that's based on the census data for the most recent census, which is 2000, which seems like a while ago now, and actually the trend -- you know, unfortunately I don't have the numbers for prior censuses, but the trend has been towards fewer workers living locally, and that's a trend that you see in multiple jurisdictions.

Page 43

And, you know, you can speculate about what the reasons for that might be. I mean, it could be related to transportation infrastructure. It could be related to housing affordability or a number of factors, but that's been the trend that you see across jurisdictions.

And we have actually a table -- a table in our report that shows what the commute -- commute factors are for any number of jurisdictions in the Bay Area.

CHAIRMAN RIGGS: All right. But the -- you noted about almost exactly fifty percent of the new employees would be above the moderate level. So that's above 120 percent of median income, medium household income.

Median household is what, around 94,000 here?

MR. DOEZEMA: For San Mateo County for a four-person household is 95,000, yes.

CHAIRMAN RIGGS: All right. So we're talking about 115,000 and up as income levels.

MR. DOEZEMA: Yes.

CHAIRMAN RIGGS: Per household.

MR. DOEZEMA: Right.

CHAIRMAN RIGGS: So perhaps fifty percent of them could actually afford to buy a home in Menlo Park. So maybe 25 percent of the -- again, I'm just making up a formula here, but I'm sort of challenging why for Menlo

Page 44

Park with a project that has had potential income range would there not be a larger impact on the Menlo Park housing demand?

MR. DOEZEMA: I mean, I -- I admit that using this existing relationship -- I mean, it's -- it's -- it's un -- unknown -- it's unknown whether that would be achieved or not, and obviously the factors that you mentioned are important and could -- could influence that.

CHAIRMAN RIGGS: I don't actually mean to challenge your decision. It's just discovering the background a little more clearly.

All right. Thank you.

And so we've had presentations from PBS&J and DKS, as well.

Any initial questions up here before we take public comment?

All right. We're being unusually restrained tonight, and I think that's much to the benefit of the public. We will withhold our further questions and certainly comments and move to the public comment period.

I have six cards, and there are several names on here who will already be familiar with the process, but we like to limit public comment to three minutes.

In fact, we're going to try to limit our later comments, as well.

Page 45

You'll have to excuse my rather informal timer. We don't have the ability to use the City Council timer on -- on Monday nights.

So I will -- I'll call out based on the cards as I received them names, and if you would step up and state your name and city of residence for the record, and I'll start this lovely machine.

It will go beep at three minutes, and if you would then yield to the next speaker.

First speaker is -- and apologies if I don't pronounce properly, Khabral Muhammad, and the next speaker would be Clem Maloney.

CHAIRMAN RIGGS: Welcome,

MR. MUUHAMMAD: Thank you.

Good evening. My name's is Khabral Muhammad. I'm the site supervisor for the Project Build program at JobTrain for Menlo Park, 1200 O'Brien Drive, and we're actually entering into our 44th year serving Menlo Park, the community of Menlo Park, job development and career support, things like that, basically for low income people, and we just wanted to basically express our support for the David D. Bohannon organization on this project, which is actually committed to a first course hiring program with JobTrain that would allow candidates, qualified candidates who graduate from our program to be hired in the

TC-1

Page 46

construction phase of this project as well as ongoing phases through culinary and hospitality with the hotel piece, as well.

So basically that's our stance on it. We just wanted to urge you to support it, as well.

Anyway, thank you.

CHAIRMAN RIGGS: Thank you.

Mr. Maloney, who will be followed by Charlie Bourne.

MR. MALONEY: Clem Maloney, 35-year resident of the Willows neighborhood in Menlo Park.

I've been kind of studying the project for two years. As an environmental and safety manager for 25 years, I've evaluated about a dozen EIRs.

Very -- I -- you've got a three-page letter tonight with detailed analysis, and so here's some -- what to say in three minutes.

TC-2

Number one, the General Plan Amendment, I personally think this is a good idea to modernize land use designations if they're justified. In this case, I believe it is.

Zoning, I believe that the M-3 looks like a good move for Menlo Park's future, and this is detailed and explained in the letter.

Architectural control, a high FAR is -- is tough

Page 47

to justify, but downtown has got a 200 percent FAR if there's parking provided, so by two state highways, not by residential, a high FAR I think would be appropriate for this project.

City budget. The public benefit money apparently has been verified by an objective fiscal consultant, so that pleases me that we have third party there.

A few comments on impacts. There are so many of them, a lot of detail. I looked at five in my letter, and I -- in my letter I also went into detailed analysis of the traffic section, which is an area that I study a lot.

Land use, as I mentioned, modernization is appropriate on land use. I just submitted the letter tonight to Thomas.

So population and housing. The BMR housing fund, approximately eight and a half million, and then in-lieu fees I see as a real positive for programs in the City.

Public services. Interesting when you think of the revenue that this will bring to the City, that will support our public services in the future.

TC-2 (cont.)

Budget issues are real tough. Reserves is not the place to -- to get our funding for City budget. Apparently fire department and schools are working out

Page 48

details with the developer.

Traffic. Boiling this down, a lot of specific analysis that I did there, but it looks to me like only about ten percent of that 11,000 trips will actually be affecting our Menlo Park neighborhoods.

I'm in the Willows, and -- and that really -- even because it's over by 101 and the Bayfront Expressway, it really looks like it will be a negligible change to the current traffic patterns.

Of course there's all the detail you have to look at.

I note also there will be adequate parking, and of course mitigations are being funded by the developer to help.

CHAIRMAN RIGGS: Excuse me, Clem. That's three minutes. Thank you.

Charlie Bourne.

MR. BOURNE: Thank you.

I speak as a 51-ear Menlo resident. My comments are primarily -- primarily from an engineering point of view. I speak also as a current member of the Menlo Transportation Commission.

TC-3

I would note that your notes for this evening include a report from the Transportation Commission review of this project.

Page 49

This was not a good review. We had five days' notice and the provision of parts of the EIR for a meeting.

The agenda for that meeting was split with another major topic, traffic impact fee. Consequently, there was little time for preparation and meeting time for this issue.

We raised lots of questions, but had little review or critical analysis.

I've continued to review transportation since our meeting, and I would make three specific points.

TC-3 (cont.)

First with regard to parking. A critical review leads me to believe that the project plan is short by more than 800 to 1,500 parking spaces. I believe that the plan is short by 800 to 1,500 parking spaces.

Secondly, the project had ma -- has major adverse impacts on our city and our region. Marsh Road, Willow Road, Middlefield Road and other roads are likely to be jammed with no hope of mitigation.

And finally my third comment, I would urge you to vote to separate this proposal into two pieces. A specific development proposals and the M-3 Zoning and General Plan Amendment issue, and then vote no on both of them.

Thank you.

CHAIRMAN RIGGS: Thank you, Charlie.

Page 50

Next up would be Ash Vasudeva followed by Elias Blawie.

MR. VASUDEVA: Commissioner Rigs and members of the Planning Commission, thank you for the opportunity to address you tonight.

I am Ash Vasudeva, resident of Menlo Park, and I speak to you on behalf of the Belle Haven Neighborhood Association, of which I'm the president.

The Belle Haven Neighborhood Association has strongly supported this proposed project as part of an opportunity to -- to revitalize and invest in the area of Menlo Park north of the 101 freeway and east of -- of that area.

TC-4

We see it as a powerful driver to -- to create jobs; not only with JobTrain, but to attract the kinds of -- of jobs that are part of the modern economy.

We urge support for this program, and at the same time, I want to acknowledge that there are concerns for the project as they have been discussed, mostly around the area of traffic.

We know -- and you may or may not know -- that the arteries that surround particularly the Belle Haven neighborhood -- Marsh Road, Willow Road, Bayfront Expressway, the 101 freeway -- are jammed, and when those arteries are jammed, additional traffic is like a Big Mac

Page 51

headed your way. It's not good for the heart of any neighborhood.

So we hope that as you consider this project, you balance the real need for the kinds of investments proposed here with the need to be -- to moderate the kinds of traffic impacts that are happening.

TC-4 (cont.)

We hope that the Planning Commission and the City Council working with the developer finds the right impact -- the right -- the right compromise between those two competing interests.

Again, I want to reiterate our underlying support for this project and hope that we can address some of the issues that were raised in the EIR today.

Thank you.

CHAIRMAN RIGGS: Thank you, and Elias followed by Nancy Ash -- Nancy Cash. Sorry.

MR. ROGERS: Through the chair, there was an additional card donating time to Mr. Blawie. So his time should be for six months.

CHAIRMAN RIGGS: All right. Thank you.

MR. BLAWIE: Good evening, members of the Commission. Elias Blawie, long-time resident of Menlo Park.

What is in front of you this evening I would start out by saying is actually not a project, but rather

Page 52

an option with a series of vested rights in favor of the developer. Read item 5 of the proposal in front of you.

It's a huge project, by the way. Higher and taller than anything you've ever seen or are likely to see. Keep that in mind.

Both the size of the project and at its core through the Development Agreement, this is an option, not a project with long-term vested rights whether or not built in the short-term.

TC-5

The project is grossly out of scale. 140 feet high I would submit in Menlo Park is laughable. Six story parking garages straight out of the mid-20th Century. Laughable. Not green. Concrete jungle.

825,000 feet of parking garage. Huge all by itself. When was the last time you looked at an 825,000 square foot project? Just the parking garages.

The excess zone and trade gambit for hotel is blatantly obvious, but it doesn't pass the Rosewood smell test, a similar hotel size with a hundred thousand square feet of office, not 700,000 square feet.

Housing analysis doesn't pass the smell test. Look at the proposed employment and the likely use. You threw it out in some of the earlier dialogue.

High end offices. These folks will want to live in Menlo Park and nearby communities, not Fremont, not

Page 53

1 Union City or some such.
2 In turn, those -- that fact will cost our
3 schools and our roads, our traffic dearly.
4 Menlo Park is a basic eight district. It
5 doesn't get more money for more students. It gets more
6 money solely based on property tax rise, simplifying.
7 This property doesn't lie in the Menlo Park City
8 School District, either.
9 The crux of the analysis in the housing arena
10 rests on one sentence, actually. That sentence says:
11 "Using census data from 2000, an average ten percent of the
12 employees in Menlo Park live in Menlo Park. Application of
13 this factor that new housing demand created by"
14 blah-blah-blah.
15 That's it, that sentence. We need a whole heck
16 of a lot more analysis than that, and I would submit ten
17 percent is absurdly low.
18 However, think about the analysis itself. We're
19 saying it's okay. We'll take the ten -- we'll acknowledge
20 the ten percent and dump the ninety on somebody else.
21 That's not right, either, at a matter of public
22 policy.
23 I'll also submit that the estimated square
24 footage per employee that drives the analysis is also
25 faulty.

TC-5 (cont.)

Page 54

1 350 square feet per employee, not in any
2 commercial development that I have lived in during my
3 professional life.
4 If you change that assumption, you will
5 dramatically change the employee count and the traffic
6 count and the housing analysis and all sorts of other
7 things. Pay attention to that particular variable.
8 We will see much more traffic than estimated,
9 plain and simple, and the traffic that is estimated is
10 already significant.
11 In particular look at east/west traffic related
12 to folks living in Menlo Park and related to folks using
13 Menlo Park services.
14 There are not very many services out there,
15 either, if you think about that. Think about midday or
16 other time of day traffic.
17 Let me ask you why -- or let me submit as a
18 question to study other comparable so readily available
19 that just have not been studied.
20 Rosewood, Whiskey Gulch, University Circle,
21 other proposals by this very same developer further up the
22 Peninsula.
23 I think you'll find when you study those
24 carefully, the conclusions you would reach about traffic
25 generation, about intensity of use, all kinds of things

Page 55

1 would not compare favorably for the developer for what is
2 in front of you.
3 CHAIRMAN RIGGS: Excuse me, Elias. You have
4 one minute.
5 Okay. Thank you.
6 I would urge you to look carefully at those.
7 You also have the opportunity given the type of
8 use most likely here to study many other employers in town.
9 You can study Sun on the commercial side. You can study
10 many a law firm, which is located very nearby on Marsh
11 Road, and you can project what would be likely tenants or
12 on Sand Hill Road or on Middlefield, and look -- look again
13 at University Circle.
14 Who are the tenants of that facility? Look at
15 the construction of it. A hotel, offices occupied way
16 disproportionately by law firms. It isn't hard to figure
17 out who the tenants of this building will likely be.
18 And from that, you can do a much better analysis
19 of travel, of housing, of a variety of things than you have
20 in front of you so far.
21 I urge you to give it very careful
22 consideration. Thank you very much.
23 CHAIRMAN RIGGS: Thank you, Elias.
24 And Ms. Cash, followed by Victor Torreano.
25 MS. CASH: Good evening to the Planning

TC-5 (cont.)

Page 56

1 Commission. I'm Nancy Cash. I'm representing the Mr.
2 Olive Apostolic Original Holy Church of God, which is
3 located in the Belle Haven section of Menlo Park, and we
4 have many members that actually live in Belle Haven.
5 There are twelve of us here tonight that were
6 actually able to make it, and for expediency, we decided to
7 send a letter, which I will read so we don't all have to
8 all try to speak and take up a lot of time, and this letter
9 is signed by fifty individuals.
10 So it says: "Ladies and gentlemen, we the
11 undersigned are writing to express our support of the Menlo
12 Gateway project proposed by the David D. Bohannon
13 organization. We are members of the Mt. Olive Apostolic
14 Original Holy Church of God and/or a resident of the Belle
15 Haven neighborhood in Menlo Park.
16 "We believe that the Menlo Gateway project will
17 be a major benefit to our community financially,
18 aesthetically and by providing services and resources that
19 will enhance the Menlo Park area east of Highway 101.
20 "From a financial perspective, the project will
21 bring in much needed revenue for the City in the form of
22 taxes and fees. In tough economic times like these, a
23 major revenue producing project like Menlo Gateway can
24 provide assistance to the City in balancing its budget, and
25 indirectly, it benefits the residents of Menlo Park,

TC-6

Page 57

because the more income the city will have from projects like this, the less will City will have to raises taxes and fees and cut services.

"For the residents of Belle Haven, many of whom are lower income and therefore less able to afford higher taxes and fees and more dependent upon city services, this is of particular importance.

"The Menlo Gateway project will also have a more direct impact upon the residents of Menlo Park in the form of approximately 2,100 jobs that are expected to be created on top of the approximately 1,900 construction jobs that the project is expected to generate.

"David Bohannon has demonstrated his commitment to the City by entering into a Letter of Intent with JobTrain ensuring that Menlo Park residents will be given first priority for any available jobs.

"With an unemployment rate of 11.89 percent in the Silicon Valley, this is a major benefit, particularly for Belle Haven residents.

"Aesthetically, the project will provide a much needed facelift to the industrial area near Marsh Road and Highway 101.

"Everyone in the area is familiar with the transformation taking place in East Palo Alto at University Avenue and 101. The office buildings, Four Seasons Hotel

TC-6 (cont.)

Page 58

and the surrounding retail areas have been a significant enhancement to that area.

"Menlo Gateway will do the same for the eastern section of Menlo Park. It will provide a beautiful hotel, office buildings, a cafe, retail space and a health club.

"We also believe that completion of this project will entice other businesses to the area, thus continuing the trend of improvement.

"Speaking on behalf of the church, it will be wonderful to have a hotel so close by. We host several events each year, including our annual Pentecost convention, which draws delegates from across the United States.

"The hotel will give our delegates a beautiful, convenient place to stay. We are also looking forward to the opportunity to host events such as banquets, meetings, et cetera at the hotel that are too large for us to host in the church.

"Retail services and community facility space are extremely limited in Belle Haven, and the fact that the Menlo Gateway project will contain both is an added benefit.

"In summary, we have long desired major improvements to the eastern section of Menlo Park. The City has made progress in the form of a new housing

Page 59

development -- of the new housing development and the streetscape design on Hamilton Avenue, along with the retail area on the corner of Willow Road and Hamilton.

"The Menlo Gateway project will be another major step toward the redevelopment and beautification of our neighborhood.

"This along with David Bohannon's commitment to providing much needed jobs for the residents of Menlo Park and the financial benefits to the City make this project a win-win for everyone, and we strongly encourage you to make a positive recommendation of the project to the City Council.

Thank you for your time and consideration." It's signed Dr. H.L. Bostick, Pastor and founder and Menlo Park resident along with fifty other members of the church.

Thank you.

CHAIRMAN RIGGS: Thank you, Miss Cash.

And Mr. Torreano. By the way, Mr. Torreano's is the last card I have.

If you would like to speak tonight, please bring it toward to our staff table at this time.

MR. TORREANO: Good evening, Commission and staff and member of the public.

My name Victor Torreano. I'm the vice-president of the San Mateo Building and Construction Trade

TC-6 (cont.)

Page 60

Labor Unions. I'm also a resident of Redwood City nearby.

San Mateo Building and Construction Council is a group of 26 construction and labor crafts that does about -- has about tens of thousands of members here on the Peninsula and around the Bay Area.

They are paid decent wages, healthcare for their families and they also have pensions that they can retire with dignity.

Tonight we're here standing in front of you to support the -- the Gateway project, and as a resident of Redwood City, I know that our city is also looking for ways to strengthen their economic development there.

TC-7

Menlo Park for a successful future needs healthy economic base. As we can see in the Draft Environmental Impact Report, the Menlo Gateway project is ideally situated east of 101 in the City's M-2 zone, which is aging and underutilized.

And it is next to the Belle Haven community which supports the project.

Ironically, we've heard a lot about planning for the entire M-2. It seems to come across as a stall tactic.

Menlo Gateway project is here before the City and the time is now, especially since the DEIR is borne out that the Menlo Gateway project is largely self- mitigating and will not create the kinds of impact or the sky is

Page 61

TC-7 (cont.)

1 falling reaction.
2 Even though the construction will start within
3 two years or so from now, the members of the building
4 trades in San Mateo County are looking for the promise of
5 jobs, not the promise of more studies.
6 All right. Now, I know a lot of members out
7 there are out of work and they see these type of projects
8 as beacons of hope to get back to work.
9 Lastly, the DEIR is extensively well thought
10 out. It is comprehensive in its scope and is adequate for
11 its role as an informational document under CEQA.
12 Thank you.
13 CHAIRMAN RIGGS: All right. Thank you.
14 Seeing no other cards, no one else coming --
15 MR. ROGERS: Mr. Chairman, there's one card
16 that may have gotten loss in transit.
17 CHAIRMAN RIGGS: You indicated there was a card
18 in support of Mr. Blawie?
19 MR. ROGERS: There should be one from Morris
20 Brown also in the pile.
21 CHAIRMAN RIGGS: Okay. I don't have that. But
22 thank you for clarifying.
23 David?
24 MR. SPEAR: Yes. Good evening.
25 CHAIRMAN RIGGS: Apologies, David.

Page 62

TC-8

1 MR. SPEAR: Thank you.
2 You have quite a bit of work here to do, and
3 it's 8:25 already. You read a laundry list of items -- of
4 ten items in the beginning, Chairman, and one of them, item
5 number five, you said Development Agreement, and in the
6 staff report, I didn't notice too much information about
7 that, and I find it difficult, you know, how -- how are you
8 going to make your decision without really understanding
9 that Development Agreement?
10 I know there's been a range of sort of years
11 discussed on that, but I would ask -- I really suggest you
12 ask some hard questions about a Development Agreement and
13 what -- how long is that going to be for.
14 I wanted to sort of take a look at this from two
15 sort of views. One, the first is the very, very high
16 level.
17 Does it make sense to sort of spot zone for a
18 project in the middle of our Menlo Park's bread basket of
19 M-2 without going through a thorough review such as -- such
20 as we're going through at the El Camino downtown process.
21 I mean, how can -- how can we call ourselves
22 planning for this with -- with just allowing for this donut
23 with a big hole in the middle to be zoned to -- you know,
24 to be proposed to be changed?
25 I really think that that -- that type of zoning

Page 63

TC-8 (cont.)

1 and that type of planning is not what we should be doing as
2 a community, and certainly not as -- as what you should be
3 doing as Planning Commission.
4 I think it will create major problems without
5 thoroughly thinking this through and creating unsustainable
6 growth problems.
7 Getting down into some more specific details,
8 just to point out, I, too, looked at a couple things in --
9 in reviewing the EIR.
10 One is the assumptions. The assumptions in the
11 EIR really determine the results, and one of the major
12 assumptions was the square foot per employee -- per
13 employee as referenced earlier.
14 I think some other assumptions are just ask
15 yourself. Does it make logical sense that we're creating
16 1,880 new jobs, and yet the traffic impacts are less than
17 half of that during an AM peak period? Does that make
18 sense just to you? Does it really make sense?
19 Does the number of households, 1,090 new
20 households -- and does it make sense that Menlo Park only
21 gets ten percent of that as our share?
22 I mean, if every -- every city in the county did
23 that same thing, that's just basically a shell game. Let's
24 -- let's force the households on the next community over by
25 all this growth. Let's give them to Belmont, give them to

Page 64

1 Atherton, give them to everyone else.
2 This -- the -- the housing needs analysis was
3 flawed. I think it needs to be redone.
4 And thus, I think it's going to change your RHNA
5 allocations in the future.
6 There is no way that ABAG's going to go lower in
7 the future based on that. It's only going to go higher.
8 So specifically I believe the PH3 is wrong and
9 the EIR as is chapter four, the growth inducement, I think
10 those are flawed and need to be redone.
11 Thank you.
12 CHAIRMAN RIGGS: All right. Thank you, David.
13 All right. Do we have any other speakers?
14 All right. With that, we will close public
15 comment, and if we didn't have some questions for our
16 consultant already, we -- I think we have some now.
17 COMMISSIONER BRESSLER: I had comments. Are we
18 still in the question period here?
19 CHAIRMAN RIGGS: No. At this point, it's
20 questions and comments. I think -- although we might want
21 to lead off with questions. The floor is here.
22 COMMISSIONER BRESSLER: Well, I do have one
23 thing that's a question. Okay. I'll start with that.
24 I received a couple of e-mails from the
25 developer on this project, and I'll just -- I'll just read

Page 65

it here.
By way of comment, this was -- this was sent to a number of Planning Commissioners, as well, and I responded, so a number of you are aware of this.
It was sent to more than -- more than a majority of the Planning Commissioners, and it says: "Dear Planning Commissioner, in light of upcoming EIR public comment hearing, I thought I would -- I would offer you an opportunity for us to meet prior to the September 14th meeting and have a quote CEQA end quote briefing of sorts.
"You've been given a huge amount of information to absorb, so I thought that a meeting might be helpful as you wade through the DEIR and its appendices." Then it gives contact information.
This is an e-mail from David Bohannon, and my response to this was -- and I'll quote my response. "I'm a little troubled by this, specifically the word in quotes 'CEQA briefing of sorts.' If we need two or three public meetings to review the EIR, that's fine by me. I believe that what we have here is probably a Brown Act violation."
I sent that to the Planning Commissioners who have been sent this e-mail. I bcc'd the City Attorney and certain members of the Council, and I want to bring this out here today.
And my question is: If there are private

Page 66

meetings with more than a majority of the members of the Planning Commission, and those are to -- they're classified here as a CEQA briefing of sorts, is that a Brown Act violation?
So I wish that Doug McClure were here.
CHAIRMAN RIGGS: Justin, please.
MR. MURPHY: Yes. On -- on that specific topic, I did -- the City Attorney did review those e-mails, and that e-mail to the Planning Commission is not a Brown Act violation. We're not aware of any Brown Act violation.
If more than a majority of the Planning Commissioners then decided to meet with the applicant and discuss it, then that has the potential of serial communication.
So we believe that the Planning Commission is well schooled in the Brown Act, and you kind of self-regulate yourself in terms of avoiding communications among more than three of you.
So a one-way communication from the applicant by itself is not a Brown Act violation.
COMMISSIONER BRESSLER: Okay. I'm not -- I'm not sure that directly addresses my concern here.
I mean, I'm not saying that the e-mail is a Brown Act violation. My concern is that there could be private meetings to brief the Planning Commission on the

Page 67

EIR, whereas this meeting is specifically designed to do that, and I'm troubled that -- I'm just troubled by that in general, and if you don't have any further comment on that, that's fine, but I don't think it's appropriate.
CHAIRMAN RIGGS: Well, I can comment on that since, Vince, you did bring it up, and I realize you're trying to make sure we are being responsible.
This actually is not an infrequent occurrence. It's just that this is a particularly large project.
On smaller projects, including new homes, even home remodels, we commissioners often get an invitation to come to even a living room and be frankly lobbied by the applicant, which I think is the applicant's right, and that also would be the reason that all commissioners are schooled in the Brown Act.
During my four years, I've actually been through this -- the reminders, the initial review of Brown Act and at least two reminders in detail about avoiding meetings among us to prejudge a decision or exchange our -- or spread our opinions, which I believe is the -- the core to it.
COMMISSIONER BRESSLER: I do -- I do make a distinction between this and the type of meeting. By the way, I almost never accept those meetings, because I don't think those are appropriate for the most part, either,

Page 68

unless it's clarification of the facts.
But this seems to be an invitation to interpret the document, and I think that should be done in a public forum.
Now, that -- that may be the spirit instead of the letter of the Brown Act, but -- I mean, part of the reason I'm bringing this up is because I don't agree with meeting with developers in general.
I was invited to meet with the developer of Willow Road gas station project. I didn't do it. Other people here did. I don't think that's right.
I mean, we have public meetings. You have the information presented. The public has the benefit of that. That's my opinion.
But in this one in particular, I have a problem with. Okay.
CHAIRMAN RIGGS: Okay. Fair enough.
John, do you have a question?
COMMISSIONER KADVANY: No.
CHAIRMAN RIGGS: Okay. Any other questions regarding the -- the presentation tonight, which is on the EIR in general, and specifically on traffic and housing counts?
Melody.
COMMISSIONER PAGEE: Yeah. I have a question

Page 69

for staff regarding all the square footages. I think that I indicated earlier today in my e-mail to you that they're kind of muddle -- muddled between different requirements and what is the differences between them.

So in some instances, we're looking at the office square footage, hotel square footage, the restaurant, but retail was built into that. Whether it's added or not -- not added or included in the office complex.

Can you clarify those numbers so that it's out there?

And then I didn't -- one question I didn't have answered is the -- the parking.

What dictates the square footage per parking and is it different from office to hotel and restaurant? If you can go through each of those numbers, it would help me.

MR. ROGERS: Sure. I'll tackle the square footages. I think if my colleagues help getting the parking stuff ready, we'll be able to tackle that when I'm done.

So there are differences between the square footages of the proposed zoning ordinance amendment and the square footages of the specific proposed development that's shown on the attached project plans.

In any case, the M-3 zoning district maximum is

Page 70

the largest possible envelope. So the square footages are shown on page 3 of the staff report for the M-3 zoning district which max -- show a maximum office, a hundred percent, max hotel, 24 percent, maximum other, thir -- 13.5 percent, adding up to a total of 137.5 percent maximum.

That is what was analyzed in the EIR in terms of maximum impacts associated with the project such as traffic generation.

There are -- however, it's not always possible to -- when you get to the level of designing a building, they don't always come out to exactly those numbers.

And so the specific development proposals are a little bit less in most instances. I believe the office square footage is at the hundred percent maximum, maybe a foot or two difference, but the -- the hotel and health club are a little bit less.

But in terms of the -- the Commission's evaluation, the focus should be on the zoning district as absolute maximum. It's never going to go above that.

The EIR establishes essentially a cap in what could be then built without Supplemental Environmental Impact Report being affected.

COMMISSIONER PAGEE: Okay. And then parking?

MR. ROGERS: Parking. Part of the proposal incorporates the adoption of unique use space to parking

Page 71

standards for the project. And so the zoning ordinance would amend chapter 16.72 of the zoning ordinance establishing standards that are unique to the M-3 zoning district.

For administrative and professional offices, it would be 350 square feet -- sorry. One parking space for every 350 square feet of gross floor area.

For motel and hotel, it would be .91 of a parking space for every one guest room. Health and fitness centers, one space for every 190 square feet of gross floor area. Cafes and restaurants, one space for every 65 square feet of gross square area.

And then for kind of the other category, day care facilities, neighborhoods serving community retail, personal services or community facilities, it would be one space for every 350 feet of square feet of gross floor area.

All of these are bracketed by a potential to apply shared parking based on ULI, Urban Land Institute standards, which are then analyzed in more and more detail in the Draft EIR.

So the -- the best discussion of the actual parking, we can start on page 3.11-55 of the traffic circulation section.

So it's the application of those parking

Page 72

standards that I just listed with the potential for shared parking to reduce that based on different types of land uses that have different demands at different types of day.

COMMISSIONER PAGEE: Okay. And then kind of a comment and question.

Are existing parking regulations, I believe, push at six per 1,000?

MR. ROGERS: Our parking standards vary for every zoning district, so it's hard to have an accurate apples to apples comparison.

The existing M-2 zoning is a catchall one space per 300 square feet gross floor area.

However, there are other -- other zoning districts that have an office kind of bent that are five spaces per thousand.

Then in other zoning districts, such as our downtown, there's a standard six spaces per a thousand. So it really varies, not by use, but by the zoning district.

COMMISSIONER PAGEE: Okay. And then why would we not use -- in an area where there is not much street parking in the way of overflow parking, why would we not encourage the six per 1,000 or five per 1,000 in this area?

MR. ROGERS: Well, the basis for looking at different standards is based on observation of what different uses actually demand.

Page 73

And so there are certain uses for which six per thousand is insufficient, even. So a high -- a high volume re -- restaurant type use generates more than that, and so you would -- you would look at the use.

And so in this case, office, in terms of observable performance, typically generates a demand that's less than six per thousand.

So that's why the proposal is incorporated in alternates standard of one space per 350 square feet.

COMMISSIONER PAGEE: Okay. And then the -- the final question regarding this issue or item would be: For the Rosewood Hotel, what was the average parking for that piece of property?

MR. ROGERS: I don't have that information immediately available. Let's see if my colleagues have that offhand.

If we don't have it, it's an item that we can research and get back to you and the Commission on as potentially as part of a summary --

COMMISSIONER PAGEE: Okay. Project.

MR. ROGERS: -- for the October 5th meeting.

COMMISSIONER PAGEE: Okay. Thank you.

CHAIRMAN RIGGS: Thomas, following up on that, you said that the parking shared factor was on 3.11-5. I'm seeing traffic on that.

Page 74

MR. ROGERS: The header at the very bottom under Other Considerations, there's a parking impact analysis that continues on to the subsequent pages. 3.11-55 on to 56.

CHAIRMAN RIGGS: Oh, 55. Huh? Thank you. Vince.

COMMISSIONER BRESSLER: Yeah. I just -- since we're on parking, I'm going to point out that the parking doesn't count towards the FAR, and this -- this actual group is the one that, you know, is reviewing that whole policy last, but I can tell you that I never had in mind when we reviewed that policy that there would be absolutely huge stand-alone parking structures that are like buildings unto themselves that wouldn't count towards FAR.

So I -- you know, what I'm going to say -- my comment here that specifically addresses the DEIR is that what we need here is a complete review of the FAR in terms of whether it applies in the sense that whether these guys should be excluded when they build huge stand-alone parking structures.

TC-9

Because that's not what we envision. We haven't seen this kind of thing associated with a specific project in Menlo Park, and I don't think that the FAR guidelines apply.

I think it needs to be completely reviewed and

Page 75

it needs to be addressed by the EIR.

CHAIRMAN RIGGS: All right. Other comments or questions.

John.

COMMISSIONER KADVANY: One -- this is kind of a specific question, but it gets to the -- the relationship between the specific project and the General Plan and -- and Zoning Amendments.

On -- I noticed in the -- very early in the EIR, on page 1.2, there's a comment that said it was unlikely that the General Plan Zoning Amendments would be approved, but not the specific development proposal.

I was wondering, is that meant literally or does it mean something more along the lines of but not the development proposal or something along the lines of one of the alternatives discussed?

You see what I'm -- see what I'm saying?

It's on page 1.2. I mean, it may be just offered as sort of an offhand remark, but it -- it does sort of suggest it's like kind of all or nothing thing, you know.

TC-10

MR. ROGERS: That's -- it's not the intent of that statement to imply that one of the alternatives or a different alternative that's not in there couldn't ultimately be the City's action.

Page 76

COMMISSIONER KADVANY: Yeah, good. That may be a good edit so -- so early on.

Here's -- here's another question about alternatives that I thought the range was good was -- was covered.

I thought -- I was wondering if any thought had been given to consideration of an alternative along -- which would be sort of an Independence Drive project only, since I -- my informal understanding is it's sort of the order of the project is, you know, that the hotel and parking -- and the office and the -- you know, it goes together there, and then you have other offices.

TC-11

I was -- it seems like -- or is that an easy -- is it easy to calculate impacts for that -- something like that based on the information that's collected?

MR. ROGERS: The alternatives were as a result of the -- the scoping session, which was fairly involved, as Rod indicated. So they were the -- the result of the City Council and the public.

That's not to say that additional alternatives or change alternatives couldn't be analyzed as part of a Final EIR.

But just to clarify, alternative number three is essentially the proposed development on the Independence sites with the Constitution site developed under the

Page 77

1 existing M-2 zoning.
2 The way that the square footages get allocated
3 is not exactly a comparison I think along the lines of what
4 you're looking for, but between -- between alternatives one
5 and -- sorry. Alternatives two, which is existing M-2
6 buildout, and alternative three, which is capping the
7 office development at 45 percent for the overall
8 developments, and then incorporating the hotel and health
9 club, I think you can kind of get a sense of what the --
10 the impacts are, but that may or may not be exactly what
11 you're looking at.
12 COMMISSIONER KADVANY: That's good.
13 MR. THOMAS: Okay.
14 COMMISSIONER KADVANY: That's great.
15 I -- I have a question for Mark -- Mark Spencer,
16 I guess, on a transportation question.
17 I -- Mark, I think you said in your
18 presentation, if I recall correctly, that on the -- on the
19 Transportation Demand, TDM proposal, that you didn't -- you
20 didn't give it any credit -- credit to be conservative, I
21 think -- I think -- I think that's what you said, but in
22 the document, in the EIR, the EIR -- the EIR says --
23 doesn't say -- it never uses an expression like that.
24 That is probably EIR protocol, but basically the
25 EIR says it's unlikely that the TDM would reduce impacts

TC-12

Page 78

1 both, you know, below significant levels.
2 So can we take those as equivalent and, you
3 know, should I -- should I -- I mean, it's one thing to say
4 I'm being conservative. It's another thing to say I don't
5 expect -- you know, given the nature of what we understand
6 of this program --
7 MR. SPENCER: Let me see if I can clarify.
8 COMMISSIONER KADVANY: You understand what I'm
9 saying.
10 MR. SPENCER: I understand. I get that
11 question quite a bit.
12 A TDM program, Transportation Demand Management
13 program sets out a series of activities by providing things
14 such as bicycle lockers, by contributing towards employees'
15 shuttle passes, transit passes, perhaps contributing to the
16 existing shuttle, for Caltrain, providing pedestrian
17 amenities. It could be a number of different things.
18 Anything that reduces the number of trips coming
19 to a site, encouraging carpooling, vanpooling, transit,
20 walking, biking and so forth.
21 As a transportation professional, all of these
22 are extremely important and very, very worthwhile things to
23 do.
24 One of the issues that we have in our industry
25 as traffic professionals is that it's very hard to come up

Page 79

1 with a very quantitative for sure analysis that says if I
2 implement measures A, B, C and D, I know for sure I'm going
3 to reduce the number of trips by X percent, and across --
4 the more mixed use you have, the more opportunity you have
5 to be successful.
6 This project is mixed use. It does have a good
7 chance of having a success -- a successful TDM program.
8 But realistically, we can't quantify it with
9 some level of certainty that could withstand a challenge
10 under a CEQA document.
11 So while we encourage these measures and we say
12 these are good to do, we don't know for sure if the level
13 of reduction in trips would be enough to reduce the -- the
14 impact to that less than significant level.
15 Some of the delays that we experience in
16 intersections as a result of the project are -- are larger
17 than -- and then some are not as great depending on which
18 intersection you're talking about, but because we can't say
19 with absolute certainty, gee, we know this is going to
20 reduce it by ten or twelve seconds at this intersection or
21 whatever it might be, therefore it doesn't get considered
22 in the numerical analysis in the EIR. And that's -- that's
23 how it gets treated.
24 But they're worth -- in terms of the value to
25 the program and what it means, I think that shouldn't be

Page 80

1 underestimated from that perspective.
2 COMMISSIONER KADVANY: Thanks.
3 CHAIRMAN RIGGS: Thank you, Mark.
4 Katie, do you have a question?
5 COMMISSIONER FERRICK: Yes. I think it might
6 be for you, yeah.
7 First, water supply. In the staff report, there
8 -- they talk about the significant and unavoidable water
9 supply impacts, and I'm wondering if you could talk about
10 the practical meaning of significant and unavoidable
11 impacts, like what does that mean for people here?
12 MR. JEUNG: Sure. Over the past few years, as
13 part of the California Environmental Quality Act, we've
14 been required to take a look at the available water supply.
15 From two perspectives. One from a long-range
16 speakers perspective, because the state is very much
17 interested in making sure that there is adequate long-term
18 water supply available to support a project.
19 And second, there's a request to look at that
20 long-term water supply under a number of different
21 scenarios, and those scenarios take into account a number
22 of successive dry years and multiple periods of drought
23 conditions.
24 So when we do the impact analysis -- and we
25 often use our brains. We try to do a conservative

TC-13

Page 81

1 analysis -- it's taking into account those particular
2 scenarios where we have dry years and we have successive
3 periods of drought, and under those circumstances, when
4 you're looking into the future and you're taking into
5 account Menlo Park's available water supply, whether it
6 comes from groundwater, whether it comes from the Hetch
7 Hetchy system, et cetera, we take a look at all the
8 available and planned and programmed water improvements and
9 we see how much water entitlement the City of Menlo Park
10 has, and then we compare that against the demands that are
11 projected for the project.
12 And as has been pointed out earlier, it's hard
13 to get a good handle on the project because when you're
14 allowing something under an M-3 zone that allows anything
15 from R&D space to office space to a certain percentage of
16 hotel use, you make certain assumptions about how much
17 water could be demanded or required under those project
18 conditions, and so when you take a look at a scenario or a
19 situation where all of the floor space comes in as a -- a
20 research and development and then comes as a wet lab, when
21 there's that demanding of water use against the
22 conservative supply scenarios, we have a condition where
23 there's not going to be adequate water supply, and -- and
24 we're just making that as a point of information for the
25 benefit of the Planning Commission.

Page 82

1 Does that help?
2 COMMISSIONER FERRICK: Yes. I'm glad to hear
3 you say you're working with the planned improvement such as
4 the Hetch Hetchy system, and I'm sure you're aware they're
5 going to be doing a lot of digging --
6 MR. JEUNG: Yes.
7 COMMISSIONER FERRICK: -- of those big
8 pipelines right there.
9 MR. JEUNG: I think the complication there is
10 just how long the contract is going to continue under the
11 current conditions.
12 There's a projected date of exploration, and so
13 once you get beyond that, it becomes pretty tentative, a
14 little bit tentative on -- on how available the water
15 supply is going to be.
16 And so that's again why we take this
17 conservative approach in the environmental document.
18 Because, as Mark said, we're not certain of some of those
19 conditions in the future.
20 COMMISSIONER FERRICK: Mm-hmm. And my other
21 question for you has to do with air quality.
22 I understand the ones for the construction
23 phase, but could you expand on the -- on the significant
24 and unavoidable air quality impacts post construction that
25 you were mentioning?

TC-14

Page 83

1 MR. JEUNG: Mm-hmm.
2 COMMISSIONER FERRICK: Thanks.
3 MR. JEUNG: There are two different components
4 that are primary contributors to the air emissions. So For
5 any given project, whether it's a housing development,
6 whether it's a commercial development, you have the certain
7 amount of emissions associated with the trips that are
8 going to be generated by that project.
9 So as Mark pointed out, there's some 11,000 or
10 so new daily trips. All of those cars and the mechanisms
11 or the means by which people are going to be arrive at the
12 site are going to generate emissions associated with
13 additional air quality or air emissions.
14 In addition, the proposed project as a site
15 contributes stationary source emissions. So there are --
16 there are those that are related to mobile sources, such as
17 the cars, and then there's stationary sources.
18 So, for example, the heating and the ventilation
19 that's going to be required to support the office, the R&D,
20 the hotel, the health club, all of that is going to
21 contribute to emissions, as well.
22 We take all of those different sources, the
23 trips and the square footage and the types of uses and put
24 it into a model that's called Urbanist, and the Urbanist
25 model then generates for us using factors that have been

Page 84

1 approved by the California Air Resources Board the amount
2 of emissions that are associated with all those uses, both
3 stationary and mobile.
4 The amount of emissions that are then calculated
5 are compared against standards that are promulgated by the
6 Bay Area Air Quality Management District.
7 And so the district has come out and said that
8 in general, given our conditions here in the Bay Area, if
9 there's more than eighty pounds per day of certain criteria
10 pollutants such as the NOx or the particulate matter, in
11 those cases, it should be declared that the project would
12 have a significant air quality impact, and that was the
13 case here.
14 We tend to find that with every large project.
15 COMMISSIONER FERRICK: So it's the -- it's the
16 transportation, not the buildings themselves or the uses
17 within?
18 MR. JEUNG: For the vast majority of the
19 emissions, whether you're looking at the mobile or the
20 stationary sources, it's primarily from the mobile sources.
21 So when we do take a look at the alternatives,
22 for example, and we're trying to reduce the number of
23 pollutants per day or the pounds per day, we were looking
24 at opportunities to reduce the number of trips.
25 COMMISSIONER FERRICK: Mm-hmm.

Page 85

1 MR. JEUNG: And that's where we were working
2 closely with City Staff and Mark Spencer.
3 COMMISSIONER FERRICK: And how closely -- I
4 mean, I'm just thinking back to the housing, the ten
5 percent.
6 That would -- that would go commensurately down
7 if the number of people living close by?
8 MR. JEUNG: Yeah.
9 COMMISSIONER FERRICK: Okay. Thank you.
10 MR. JEUNG: Mm-hmm.
11 CHAIRMAN RIGGS: Thank you.
12 COMMISSIONER FERRICK: And then I think I
13 have -- I can come back later.
14 CHAIRMAN RIGGS: Okay. And Jack, and then I'm
15 just going to insert a request to the consultants. If it's
16 possible to answer a question with we took the worst case
17 drought and the worst case building load and it came out
18 that this is the result.
19 We have a lot of questions to ask you tonight,
20 and in the interest of time, rather than completeness, that
21 would be appreciated.
22 Jack.
23 COMMISSIONER O'MALLEY: I have a couple general
24 questions and a number of specific questions.
25 The general questions really involve answers to

Page 86

1 questions that have been asked to me by other residents of
2 Menlo Park.
3 One of the major questions is: Why are we only
4 considering the outside perimeter of that section for M-3
5 zoning? Why didn't we take that -- that whole area and
6 deal with it as M-3 zoning?
7 MR. ROGERS: Just roughly speaking, the area
8 that's proposed as part of this project is the only area in
9 that particular space in between Chrysler and Marsh that's
10 under the ownership of the project sponsor.
11 The twelve or thirteen sites in the middle are
12 owned by separate entities.
13 COMMISSIONER O'MALLEY: I understand that, but
14 why wouldn't Council consider looking at that whole area in
15 general?
16 I -- I understand that there would be a need for
17 additional environmental -- Environmental Impact Reports if
18 the people there decided to do something later on, but it
19 just seems to me that -- that would make sense to do that.
20 So your -- your response is basically because
21 only Mr. Bohannon has -- has asked for that.
22 MR. ROGERS: That's --
23 COMMISSIONER O'MALLEY: And that's my answer.
24 That will be my answer, then.
25 Is that right?

Page 87

1 MR. ROGERS: Yes.
2 COMMISSIONER O'MALLEY: All right. Another
3 general question, I didn't see any -- it may be here, but I
4 -- I read -- tried to read a lot of this material. I
5 haven't got through everything -- every single page of it,
6 but I didn't see any input from Redwood City or Palo Alto.
7 MR. ROGERS: Yeah. Those jurisdictions -- all
8 the neighboring jurisdictions of potential interest were
9 noticed with the Draft EIR. So the comment period is still
10 open until next week.
11 We had some preliminary inquiries from Redwood
12 City. We have not seen a normal comment or any other
13 format comments, but I would not be surprised if those came
14 in from those jurisdictions or other ones.
15 COMMISSIONER O'MALLEY: Okay. And one of our
16 speakers earlier talked about this as being not a project,
17 but rather an option to build a project.
18 How long will the project be under consideration
19 and still have the possibility of not -- of not being
20 built?
21 MR. ROGERS: That's probably a topic that we
22 can discuss in more detail on the 5th, but I'll answer it
23 in brief.
24 The applicant has not yet requested a specific
25 term. So at this point, it's a matter for future

Page 88

1 negotiation.
2 The one point in addition that staff would just
3 like to make is that the -- the options can also be phrased
4 in terms of the benefits to the City. So there can be
5 provisions for, you know, revenues or in-lieu type fees to
6 be paid if a project isn't built by a certain time.
7 That's the kind of thing that could be part of a
8 Development Agreement.
9 So if a project wasn't built, but was
10 contributing the revenues that it would contribute if
11 built, that's something that could be considered as part of
12 the Development Agreement's time frame discussion.
13 COMMISSIONER O'MALLEY: All right. And Henry,
14 I have a couple of small questions to ask and then I have a
15 number of specific questions, but I'll -- I'll hold them
16 till later, okay, but I did want to --
17 CHAIRMAN RIGGS: Okay.
18 COMMISSIONER O'MALLEY: -- you know, get a
19 little bit more input on traffic noise and -- and
20 vibrations.
21 If I understand traffic noise, you're looking at
22 the noise over and above what presently exists, or is it
23 over what used to exist, say, in 2006 or 2007?
24 MR. JEUNG: In order to be succinct, the noise
25 analysis and impacts do look at the potential change from

TC-15 TC-16 TC-17 TC-18

Page 89

existing conditions, and the existing conditions were defined as when the Notice of Preparation was released in 2006/2007.

COMMISSIONER O'MALLEY: Okay. It was back at that time.

All right. So these extra trips that have been projected will -- will cause us to get into the position of not being able to mitigate -- mitigate that problem.

TC-19 I was curious. How many additional trips would it take to reach that point where you could not mitigate the problem? I mean, are we talking, you know, a few thousand trips, I think 11,000 trips during the day? Would 1,000 trips do that?

MR. JEUNG: We did try to do a sensitivity analysis when we looked at the different alternatives. So I think some of the alternatives were pegged to reduce some of the noise impacts that were identified.

So I'll take a moment to look that up.

I -- I can see from the analysis that we did that actually all of the reductions ended up eliminating the noise impact.

So even if the project were reduced to 117 percent FAR, that would reduce the noise impact, but we don't have the tipping point, and we can figure that out and provide that to you for your study session.

Page 90

COMMISSIONER O'MALLEY: Okay. That would be nice. Thank you.

I had one question, also, about the R&D lab and the water impact along the lines of Katie.

TC-20 I -- I guess there's a formula used. If you define something as an R&D lab, there is a formula that says how much water you'll use on an annual basis per employees.

Is that how you do that?

MR. JEUNG: Pretty much. What we did is we took a look at historical information that we had from other studies about how much water consumption is associated with an R&D lab, and we assigned that to this project.

And I can't remember off the top of my head whether that was square footage or based on employees, but that was the formula that was used.

COMMISSIONER O'MALLEY: I was just curious. It just seemed to me that that was the major reason for one of the problems of water.

MR. JEUNG: You're absolutely correct.

COMMISSIONER O'MALLEY: And I haven't -- I have been involved in my career with a number of R&D labs, so I don't remember ever using an excessive amount of water. That's why I bring up this question.

Page 91

And just -- this is something I probably should know, but I want to make sure I truly know it.

What's the definition of a project trip? TC-21

MR. SPENCER: A project trip is a vehicle trip, one vehicle trip generated by whatever's being proposed.

What we look at is based on square footage, based on the number of hotel rooms, whatever the factor may be how many trips are coming to the site and how many trips would be leaving the site during any given time period.

So minimally, any project has to generate at least two trips, one in and one out within the framework of at least a day, and then you build from there.

COMMISSIONER O'MALLEY: For how many employees? How many employees per trip, in each vehicle trip, then? TC-22

MR. SPENCER: The vehicle trip estimate is actually not based on the number of employees in this particular case.

When you're looking at square footages for office use, the density of that building is -- is indirectly factored in, but we're not saying. "Gee, we think there's a thousand employees; therefore, we generate so many trips."

What we're looking at is if you have, say, 200,000 square feet of office space, based on known factors

Page 92

of that kind of office space, who would anticipate it would generate so many vehicle trips in and out of that site.

So it's based -- it's not based on employees. It's based on square footage. For a hotel, it's based on the number of rooms. For a restaurant, it might be based on the number of seats within the restaurant.

COMMISSIONER O'MALLEY: All right. I understand that, then. I appreciate your explanation, and you have data to support that, obviously, and that's what you're using is database.

MR. SPENCER: Yes. Very solid data on that.

COMMISSIONER O'MALLEY: Thank you.

CHAIRMAN RIGGS: I've got a couple of questions. I want to start with a couple that were picked up by our speakers.

One had to do with traffic impacts as it was analyzed. I seem to remember somewhere around 1,100 trips in the morning, about 1,800 new employees.

Can you align or help align trips with employees, what kind of factor was used? TC-23

MR. SPENCER: As I just stated earlier, there is no factor between number of employees and the number of trips.

There is a trip generation table in the EIR that shows the factors that were used to calculate the number of

Page 93

trips.
CHAIRMAN RIGGS: Well, I guess let me put it another way for those present or those listening on our various services.
How would one grasp or understand that you could have an AM peak trips, new trips in of 937 when you have 1,800 new employees?
I'm -- I'm sure there's a basis for it. It's just it would help -- help to speak to it.
MR. SPENCER: I'm looking at the trip generation table. Which is table 3.11-5 in the Draft EIR, which does show you 937 inbound trips, net new trips all together.
I don't have the number of employees here. The number of employees is estimated -- as you said, I think it's at 1,800.
Again, I'll tell you two things. One, most of the trips are assumed to be single occupant auto. There would be some carpooling and some other uses, but most are single occupant auto, people driving themselves. Very typical for this environment.
Not all of those employees arrive in the same peak hour. What you see represented here is the highest one-hour period of the morning commute.
CHAIRMAN RIGGS: Oh, right. So --

Page 94

MR. SPENCER: So you will have potentially 900 in one hour and 900 in another hour, and you might have, you know, some on the fringes.
The morning commute period lasts in the Bay Area typically between 5:30 and 9:30. It does spread quite a bit --
CHAIRMAN RIGGS: Correct.
MR. SPENCER: -- so this is the single highest peak of that time.
CHAIRMAN RIGGS: All right. Fair enough. That's just the right answer.
We also had a -- well, there's not much to do about that.
I think we've spoken to a couple of those.
TC-24 Following up on a question from Commissioner O'Malley to staff regarding the limits of the M-3.
Thomas, were -- first of all, the neighboring land owners were presumably notified from the Notice of Intent forward of this project going forward.
Would that be true?
MR. ROGERS: That is correct.
CHAIRMAN RIGGS: And was there any limitation should these landowners wish to join the definition of M-3?
MR. ROGERS: Because this is a private development application, that would be subject to the

Page 95

private sponsor's willingness to incorporate them within this application.
Applications do require payment of fees and the provision of information, so it needs to be a coordinated consolidated effort.
So if an individual didn't want to incorporate someone, they wouldn't have to, but someone could make their own application independently.
But again the way this one is structured, it is all around what the individual applicant has been proposing in terms of its geographic extents.
CHAIRMAN RIGGS: If I had an adjacent site of, say, two acres, could I come forward and say I would like also an M-3 designation? TC-25
MR. ROGERS: You could. It involves a payment of fees.
CHAIRMAN RIGGS: And I would pay the fees and I would say --
MR. ROGERS: And also an EIR.
CHAIRMAN RIGGS: I saw what he ordered for lunch and I'll take that, and you could pay the fees and --
MR. ROGERS: Acknowledging from the -- from that applicant side that there's no M-3 zoning at this current point.

Page 96

CHAIRMAN RIGGS: Right.
MR. ROGERS: It's just a proposal, but there's no prohibition against that.
CHAIRMAN RIGGS: Okay. There's a mention in the zoning regarding setbacks, that they are -- that there's a five foot average.
How would we have -- how would we even apply an average -- that's in the staff report, actually, in the summary. In the development regulations comparison, and that's the side setback. TC-26
MR. ROGERS: So that is averaging -- those properties have two side setbacks. So the full zoning ordinance text in the appendix list that it can basically go from zero to ten feet.
So you got zero on one side and ten feet on the other side, that averages five, or you could have five and five on both sides.
It's a sort of sliding scale similar to what the R-E zoning district allows with a total setback of thirty feet, but you can adjust.
CHAIRMAN RIGGS: All right. So it's the same thing, just a smaller number.
I wanted to make note -- and fortunately, this is a Draft EIR -- that all the maps that are used for reference, maps are actual -- actually aerials, as well,

Page 97

are all from prior -- prior to 1999.

They all show the -- and that would be with the exception of the colored area plans, but there are at least I think five plans in here which show the pre-1999 freeway exchange.

TC-27

And given that we're talking about traffic flow and the impact on the freeway exchange, I don't think this should move forward with an out of date plan.

The impact report in PS-2, I believe it is, notes that there is no impact on equipment required by the Menlo Park Fire Protection District, but the Fire Protection District has separately noted, I believe, that they will need a new kind of ladder truck.

TC-28

Is this something that should be represented in the EIR and then responded to as mitigated?

MR. ROGERS: The CEQA standards are a little bit different than what the fiscal impact analysis looked at. So if I mess this up, Rod's going to correct me.

If the project required a new fire station to be built, that would be a capital facility that would need to be analyzed in terms of its CEQA impact.

However, the purchase of a piece of equipment that can be housed within the existing facility does not.

However, Commissioner Riggs is correct, that it is a source for further discussion as the Commission gets

Page 98

into the fiscal impact analysis at the next meeting.

CHAIRMAN RIGGS: Okay. Thank you.

Then the flood elevation -- let me see. I guess that's under Hydrology.

If I read it correctly, it says that the flood elevation is at seven feet. The current project is below that. It's going to add two feet, which will bring it up to over eight feet.

TC-29

I was just trying to follow the math.

MR. ROGERS: The topography on the different sites does vary over different areas, but roughly speaking, yes, the base flood elevation is seven feet, and the project elevations would be eight feet or a little bit above the floor.

CHAIRMAN RIGGS: That's right. I had forgotten there would be more than one elevation.

Okay. All right. That's actually it for questions and I'll hold comments. I'm going to take a wild guess at who has a light on.

John?

COMMISSIONER KADVANY: No. Go ahead.

CHAIRMAN RIGGS: Melody.

COMMISSIONER PAGEE: Okay.

CHAIRMAN RIGGS: Go ahead.

COMMISSIONER PAGEE: Would you explain your

Page 99

last point on the FEMA as far as the flood plain elevation? You're saying that the project will add two feet to the seven foot flood plain.

TC-30

CHAIRMAN RIGGS: No. The existing elevation.

COMMISSIONER PAGEE: Site elevation.

CHAIRMAN RIGGS: Site elevation was -- I didn't realize was 6.3, because I thought one of them was five, but I guess there are different elevations with the different sites.

But the -- I did see what Tom has alluded to, that the project is committed to bringing it up to -- I think it's 8.3 feet. Notably above the seven foot hundred year flood level.

COMMISSIONER PAGEE: So excavation would be done to the site or added to the site or fill would be --

CHAIRMAN RIGGS: Fill.

COMMISSIONER PAGEE: -- brought to the site to raise it. Okay. I thought that's the point you were trying to make.

On this R&D lab -- and this might be for one of you guys -- we talked about water coming into the site.

With R&D labs, you have a tremendous amount of water leaving the site, as well, and how -- I didn't see anything specifically addressing the capacities of our existing sewer system in that area and how that would

TC-31

Page 100

impact our sewer system and our wastewater treatment plant.

MR. JEUNG: Yes. Please bear with me while I look that up. Because it -- excuse me. It was evaluated. Sorry.

MR. MURPHY: It's on page 3.12-6. There's an explanation, a setting for the wastewater.

MR. JEUNG: Thank you.

There's also a table on page 3.12-19. That table identifies the amount of wastewater generation from each of the proposed uses at the site, and there's a -- an assessment of those wastewater for those relative to achieving capacity.

COMMISSIONER PAGEE: Can you summarize that quickly?

MR. JEUNG: It's called Impact UT-3, and there is sufficient capacity at the wastewater treatment facility to accommodate the projected wastewater flows.

COMMISSIONER PAGEE: And -- and then that would compare with just this project.

MR. JEUNG: Yes.

COMMISSIONER PAGEE: And what else is there? Not the maximum of all M-2s that might dump into the facility.

MR. JEUNG: That's a very good point. The analysis that I just described that's comprised of Impact

Page 101

1 UT-3 looks at this proposed document.
2 If you then look at all the other developments,
3 the key-most of developments, that's covered on a different
4 page, and bear with me.
5 That's examined on page 3.12-32, where we looked
6 at all the other development potential associated with
7 other foreseeable projects surrounding this proposed
8 project site and estimated that there would be sufficient
9 wastewater treatment capacity.
10 COMMISSIONER PAGEE: So that's only specific to
11 this project site?
12 MR. JEUNG: No. It's taking into account other
13 future possible development in the Menlo Park area.
14 COMMISSIONER PAGEE: Okay.
15 MR. JEUNG: And other contributors to the
16 wastewater treatment facility.
17 COMMISSIONER PAGEE: All right. Thank you.
18 CHAIRMAN RIGGS: John.
19 COMMISSIONER KADVANY: Thank you.
20 This is another question for Mark on
21 transportation. It looks like -- you have a lot of people
22 are naturally concerned about the impact on traffic
23 surrounding -- surround the project area, but it appears
24 that inside the project area, there's some significant
25 change, especially in this kind of nexus of streets around

Page 102

1 Independence and Chrysler and Constitution, you get some
2 real big changes and some significant delays.
TC-32 3 Will you kind of talk around that a bit, kind of
4 what we're going from? What's it like today? What's being
5 looked at here?
6 MR. SPENCER: Certainly. I'll try and give you
7 a brief summary of that comparison.
8 COMMISSIONER KADVANY: My -- my impres -- my
9 subjective impression is that we're going from very lightly
10 used area in terms of traffic to one that's in kind of a --
11 you know, much more like what's on the outside, outside
12 world, so to speak.
13 MR. SPENCER: Certainly. I think in the
14 general sense here, you're correct in that there's going to
15 be, you know, obviously very -- the heaviest demands of
16 traffic from the project obviously are going to be at the
17 project driveways and on the streets immediately
18 surrounding the project, and then it dissipates as you move
19 further away from the site. As you hit the freeway, as you
20 go over the bridge, as you -- you know, as you move
21 further.
22 So that's why it doesn't take -- you're right.
23 I mean, currently you have very good levels of service.
24 If you look at, you know, existing conditions,
25 we measure traffic again in terms of levels of service,

Page 103

1 like a report card, A's and B's and C's are very good and
2 very rare.
3 You know, of the intersections on Independence
4 at Marsh, Constitution, Chrysler, on Chilco, these are all,
5 you know, pretty much A's and B's right now. They're very
6 lightly traveled.
7 Again, you have underutilized parcels in the
8 area, and you don't have a lot of internal circulation
9 currently occurring within the site itself.
10 Obviously the -- the traffic on Bayfront is
11 something much different.
12 As this development comes on line, we're going
13 to go from these A's and B's -- I'm going to quickly try to
14 jump ahead. But you'll hit those impacts relatively
15 quickly at those intersections, and particularly because
16 those are mostly unsignalized intersections.
17 COMMISSIONER KADVANY: They're stop signs.
18 MR. SPENCER: And stop signs.
19 So the trigger to have an impact based on the
20 delay on those is not that hard to trigger, but you will
21 quickly increase to --
22 COMMISSIONER KADVANY: Well, I'm noticing --
23 MR. SPENCER: D's and F's.
24 COMMISSIONER KADVANY: For example, like here
25 we go from something like ten and seventeen second delays

Page 104

1 at Independence -- well, Independence Drive, Constitution
2 to 85 seconds. So a minute and a half. So that's -- a
3 minute and a half's a pretty long span.
4 MR. SPENCER: That is, and that's why --
5 COMMISSIONER KADVANY: That's a lot of cars
6 backed up. It kind of gives you an image of some internal
7 congestion in peak hours.
8 MR. SPENCER: That is peak hours, but we also
9 it's a heavy intensification around the site. We looked at
10 the queues. Do they back up from one intersection to
11 another? What do we need to do in terms of do you need
12 more street capacity? Do you need to change from a stop
13 sign to traffic signal control?
14 Throughout the program, when we looked at those
15 eleven intersections that -- over the course of the
16 long-term analysis that are going to be impacted, one of
17 those can be reduced to a less than significant level.
18 We did, however, recommend mitigation for every
19 single one of those locations in terms of this is what you
20 can do to improve the conditions at these locations. Can
21 you add a turn lane? Can you improve the traffic signal
22 timing? Can you do various things to improve the
23 conditions?
24 And each of those cases, we could make headway
25 and improve the conditions. We didn't ignore them, because

Page 105

1 they're -- because we can't get it to a less than
2 significant level.
3 It's just that you can only bring it down so
4 much, and then you kind of hit a wall at a certain point.
5 So in some of the cases, we bring down the --
6 the congestion level quite a bit, but not to that under
7 CEQA threshold and City threshold to that less than
8 significant level, which basically has to bring it back to
9 the condition of baseline, really, that we're starting
10 with.
11 So that's -- but there are a whole series of
12 things that are being proposed in terms of this would
13 considerably help the situation.
14 COMMISSIONER KADVANY: I -- I guess I'm
15 trying -- you know, the traffic analysis is hard to get a
16 hold of because it's by intersections, it by road segments
17 and you kind of like to get a more holistic perspective,
18 and I sort of get a sense of that because of the thinking
19 in terms of this going -- right now, from a traffic
20 engineer's perspective only, you know, there's not -- it's
21 underutilized, meaning it's -- right?
22 You know, it's kind of -- it's kind of funny
23 because it's nice to drive in because you can get through
24 there very quickly.
25 So we're going for -- you know, so we have this

TC-33

Page 106

1 space there from a traffic perspective where not -- not
2 much is happening.
3 So it's like a free space in your computer, and
4 when you start to fill that up on your computer, that's
5 when you start to have trouble, because -- you know,
6 regionally because you have no free space.
7 Is -- is that a valid analogy there?
8 MR. SPENCER: Not -- not quite. I'll tell you
9 the difference.
10 When you fill up space on your hard drive on
11 your computer, it's there all the time, unless you erase it
12 or move it. So once you fill it up, it's there.
13 It's not like I'm only filling it up for fifteen
14 minutes or an hour and a half, and then that congestion on
15 your computer calms down.
16 If you're on a network system in your office on
17 a computer and suddenly everyone jumps on the Internet and
18 they're downloading movies or something, the system slows
19 down, and then as they -- they're done with all that
20 downloading, the system gets faster again.
21 That's a more accurate analogy comparing it to a
22 computer situation. That's what we have here.
23 As -- as a traffic professional, yes, I'll see
24 underutilized capacity on the roadway. I don't want to
25 fill it up. That's certainly not my goal. That

Page 107

1 doesn't -- that's not what we're about. It's not all about
2 cars.
3 I'm about movement of people and goods and
4 services, and it's not healthy to have everything just
5 filled up and jammed all the time.
6 You have see surges of traffic as a result of
7 development, and you'll see it for periods of time and then
8 it will dissipate.
9 Okay. Over the course of the day, you're going
10 to see some levels going up, you know, at a higher base
11 level than what you had, because you have 24-hour uses
12 there. You've got hotels, you've got other things that
13 you're thinking about at this point.
14 But it's not -- it's not going to be a continual
15 drone of very heavy congestion 24/7, 365 days a year.
16 COMMISSIONER KADVANY: Okay. Thank you.
17 CHAIRMAN RIGGS: Thank you.
18 And then Vince and then Katie.
19 COMMISSIONER BRESSLER: Okay. I wanted to
20 address something that hasn't come up here tonight, and
21 first I want to explain something about what I think would
22 be a real win-win for the City and the people in East
23 Menlo.
24 What I would actually like to see in this area
25 is light manufacturing which gives real jobs into the

Page 108

TC-34

1 future, not just construction jobs; not just, you know,
2 service jobs.
3 And my concern here is that we're moving very
4 far away from that possibility by doing this.
5 Okay. But given where we're at and given that
6 certain promises have been made, I think it's our
7 responsibility up here to try and get those promises in the
8 record, and I don't know exactly whether it belongs in the
9 EIR.
10 We do have indications in the EIR how many jobs
11 are going to be in Menlo Park. The EIR is structured to
12 try and minimize that because that minimizes the impacts.
13 So that's not broken out in terms of what that
14 would mean for East Menlo. I think it should be broken out
15 for what that means for East Menlo, and I think as this
16 process continues, we should make these agreements part of
17 the public record and we should talk about these things so
18 that they can be enforced; so that they can be understood;
19 so that our commitment to that neighborhood can be enforced
20 and understood; so that we can understand the impacts and
21 benefits, not just on all of Menlo Park, but on the
22 particular area where the project's going in.
23 I think that's really, really important, and I
24 have other things to say, but I'm going to let Katie do her
25 thing now because she's been waiting.

Page 109

1 CHAIRMAN RIGGS: All right, and I'll just note
2 briefly that we will talk about that in the Development
3 Agreement, but as David Spear pointed out, we are -- oh no.
4 Elias pointed out, this is -- the EIR backs up the
5 opportunity to build this level, so it -- it's on the
6 table, and thank you for putting it there.
7 Katie.
8 COMMISSIONER FERRICK: Thank you.
9 My question actually backs up better off of
10 Commissioner Kadvany and the more global statement that
11 Mr. Bressler just made.
12 Mark, traffic. The slide that you had up
13 actually did kind of give a little bit more of a global
14 picture of sort of those dots and how that in the future,
15 the impacts on the various intersections and segments of
16 roadway, and the one that kind of caught my eye not only in
17 the EIR, but there was that you pointed out that one
18 segment only oddly enough a two-lane segment of Marsh Road
19 at that point has a significant unavoidable impact, and
TC-35 20 that's Marsh Road between Bay and Bohannon.
21 And I didn't know why in your assessment that
22 was where it didn't -- I was surprised if that was, why not
23 Bay to Middlefield and why not, you know, the rest of that
24 stretch, especially because that stretch has -- is two
25 lanes on both sides.

Page 110

1 I didn't -- didn't know.
2 MR. SPENCER: First off, it's an excellent
3 catch on your part to notice that, that subtlety. And
4 honestly, I -- I don't recall offhand.
5 I know we looked at several segments of Marsh,
6 and why that one popped up or why that one was remaining
7 compared to the others, I'm going to have to look for an
8 answer.
9 It might just take me a little bit, so I don't
10 want to take the Commission's time right now, but I want to
11 get back to you on that and we'll submit it as part of the
12 response.
13 COMMISSIONER FERRICK: Thanks.
14 MR. SPENCER: I'll look that up.
15 CHAIRMAN RIGGS: I will say as a user of that
16 segment, it does not surprise me, however.
17 Vince, follow-up.
18 COMMISSIONER BRESSLER: Another follow-up, I
19 have a few more things I'd like to see the EIR address.
20 As Commissioner Riggs pointed out -- and I think
TC-36 21 he pointed it out because it is a glaring thing. I want to
22 go back to the jobs/housing imbalance and -- and look into
23 this a little bit more here.
24 And as Elias pointed out when he was talking,
25 everything seems to evolve around this ten percent. In

Page 111

1 other words, we have a -- basically a ninety percent jobs/
2 housing imbalance, and, you know, this project is going to
3 just keep with that.
4 I don't know how they came up with the ABAG
5 numbers other than they said they used the methodology. I
6 find it very hard to believe that ABAG would settle for a
7 ninety percent jobs/housing imbalance.
8 Where -- I mean, there's a little bit of
9 verbiage in EIR about trading with Redwood City. Redwood
10 City has a pretty bad jobs/housing imbalance, too, if you
11 look at their table, but ours is terrible.
12 So I -- just to be realistic here, I think that
13 the EIR could do a very simple analysis, but it would take
14 some work.
15 I think that the -- the ten percent number
16 should be broken out. There should be a number. Let's say
17 we're going to go for fifty percent jobs/housing imbalance
18 here. Okay. That means that half of the jobs created are
19 going to be in Menlo Park.
20 Now I want to know what that does to the
21 traffic. The traffic analysis only goes to the
22 intersections, you know -- the farthest it goes away that
23 I've seen is Marsh and Middlefield. TC-36 (cont.)
24 Well, heck, if we're going to have that jobs/
25 housing imbalance, you got to -- and you're going to really

Page 112

1 address it, which I think we're going to be asked to do,
2 then you have to say where are those people going to live.
3 And if you say where are those people going to
4 live, then you have to redo the traffic analysis to look at
5 how they're going to get to work, and there's nothing in
6 here about getting people from the railroad tracks out
7 there.
8 There's nothing forcing the developer to
9 consider these issues at all here, and I find that very
10 disappointing.
11 So I think that there should be a fifty percent
12 level, a 25 percent level and the ten percent level, and
13 even on the ten percent level, they should be forced to --
14 to say where are we going to put that housing, and what is
15 the traffic impact from putting that out?
16 And that's a real analysis of the impact of this
17 project so we can break it out and really understand what
18 it does to our community.
19 We don't have that here.
20 Okay. That's all I had to say about that topic.
21 CHAIRMAN RIGGS: Okay. Thanks.
22 John, new issue or something to add?
23 COMMISSIONER KADVANY: Yeah. Just to follow up
24 on what Vince said. This may get to this -- this aspect of
25 this -- the proposal, but we have simultaneously General --

Page 113

1 General Plan and Zoning Amendment which is generic large
2 envelope and a specific project, and it may be that this is
3 the type of analysis which asks -- which is more -- which
4 is what you would say for a zoning, you know.
5 A zoning change or whatever, basically say well,
6 you don't know what's going to go in there. But you could
7 have different times of activity and you want to have your
8 analysis reflected.
9 I don't know if that's the way these things
10 work, but that's a -- well, following up on that, I
11 have -- I have an economic question. Maybe this is for
12 Rod. I'm -- I'm not sure.
13 There was a comment in the economic analysis,
14 and this -- this gets back to something that Commissioner
15 O'Malley said vis-a-vis the -- the donut -- the donut hole
16 in -- in the middle.
17 It was a suggestion -- it was a comment in the
18 economic analysis that the -- the General Plan Amendment
19 could be crafted or phrased in such a way to either
20 encour -- encourage or discourage the remai -- the
TC-37 21 remaining parcel owners to start developing in a certain
22 way.
23 And I was wondering if there's anything to
24 expand on that or is it just kind of a throw-away comment?
25 It seemed like it was hinting at this issue of how to think

Page 114

1 forward to making use of this new M-3 designation in a kind
2 of rationale.
3 CHAIRMAN RIGGS: Excuse me, John, do you have a
4 specific question rather than just --
5 COMMISSIONER KADVANY: Yeah. Can you fill that
6 out? What does it mean to encourage or discourage? How
7 would you -- what does that mean to craft the -- the
8 amendment in such a way? What's -- what's that mean? It's
9 like a sentence or two.
10 MR. ROGERS: I believe that's a little bit more
11 a question for staff. The fiscal impact analysis, which is
12 on the agenda for the meeting of the 5th, was conducted by
13 a different consultant. It was Bay Area Economics. It was
14 not PBS&J.
15 So with your assent, we'll defer that question.
16 COMMISSIONER KADVANY: Sure. Good enough.
17 I do have one just comment on -- on the -- it is
18 on the EI -- EIR. There is a little discussion of shadow
19 analysis. The building -- the possible buildings are so
20 tall, it does seem reasonable to have some kind of shadow
21 analysis, as simple as it might be.
22 When I -- there are people that have written in
23 a couple of e-mails mentioning it, but when I read the area
24 -- the EIR, it was kind of like well, we don't really need
25 to do a shadow analysis, but if you -- if you make me do

Page 115

1 it, here's the logic behind it which doesn't -- you don't
2 really have any impact.
3 CHAIRMAN RIGGS: So John, are you asking for
4 one?
5 COMMISSIONER KADVANY: No. Some simple -- I
6 think something between what's there now and a full shadow
7 analysis. Something based simply on the geometry of the
8 building. TC-38
9 CHAIRMAN RIGGS: Are you asking for a simple
10 shadow analysis?
11 COMMISSIONER KADVANY: Yes.
12 CHAIRMAN RIGGS: Okay. Thank you.
13 And Jack.
14 COMMISSIONER O'MALLEY: You know, my questions,
15 a number of them have been responded to, and the others
16 that I have really I think I should wait till we have our
17 next meeting, because they're questions that I would ask
18 the developer. So fine.
19 CHAIRMAN RIGGS: I do have I think -- I do have
20 some EIR oriented comments, but first I have a question to
21 follow up on the issue from public comment and that Vince
22 has brought up.
23 If -- this is a question for staff.
24 If we the Commission feel that the M-3 zoning
25 would be justified by the public benefits represented in

Page 116

1 this project, it would appear that we are assuming a link
2 that may not be there.
3 For example, if we talk about employment and TC-39
4 employment coming from a specific area and through job
5 training, this is clearly a development, a developer
6 commitment for a specific project.
7 If we -- if the City goes through and passes an
8 amendment to the General Plan and to the Zoning Ordinance
9 and then this project is not built, the M-3 is there with
10 the land, and now a different project could come through
11 totaling 137 percent with no such commitments.
12 Would this M-3 zoning assume that it nonetheless
13 comes through this Commission and City Council, or would at
14 this point it would be possible to build to rights?
15 MR. ROGERS: The overall Development Agreement
16 would establish the overall expectations for any
17 development on these sites, and so if there was an
18 individual developer that did not build, but would agree to
19 in the Development Agreement certain guarantees like with
20 the jobs source kind of contract, if that was in the
21 Development Agreement, a new developer couldn't come in to
22 build a physical project without that additional public
23 benefit component.
24 So to the extent that the Development Agreement
25 provides an umbrella, things could be incorporated within

Page 117

that that could happen with one developer or another developer potentially.

CHAIRMAN RIGGS: But the Development Agreement is between the City and a particular developer.

If the particular developer goes away, the M-3 remains; does it not?

MR. ROGERS: The -- well, again, the Development Agreement can set up a particular course of actions that happens in the event of a developer bankruptcy or elective decision not to develop.

And so there can be another instance where a developer goes bankrupt and one requires their assets and the Development Agreement contract would be considered an asset of the developer and then that new person comes in.

And so I don't think that there's a --.

CHAIRMAN RIGGS: Cannot a third party come forward and say well, I don't know about a hotel, but I'm going to build some office buildings?

MR. ROGERS: Oh, no. Under the -- the way this is structured with the requirement of a Development Agreement for the M-3 zoning, there's not a way for the.

CHAIRMAN RIGGS: Okay. The M-3 zoning requires a Development Agreement?

MR. ROGERS: That is correct.

CHAIRMAN RIGGS: Okay. So that is the link.

Page 118

Yeah, Melody.

COMMISSIONER PAGEE: And how long does the EIR for this particular parcel last? Isn't there an expiration date?

I can't imagine that projected traffic would be the same ten years from now or fifteen years from now. Water will change.

MR. ROGERS: Well, just generally the EIR analyzes the -- the development as it's projected to be developed as well as any other developments in the area that have specific and detailed information associated with them.

So with the Development Agreement, that locks in the entitlements.

I don't have any sort of outer range offhand that I can say is an -- you know, an upper limit, but an EIR needs to certify the -- the conditions as they exist at the time and as they can be projected reasonably at that time based on the information about other projects, so --

COMMISSIONER PAGEE: And are the -- how far they projected into the future?

MR. ROGERS: The transit analysis goes out to 2027, which was twenty years from the 2007 Notice of Preparation.

COMMISSIONER PAGEE: So the assumption would be

Page 119

that this project in 2027 could still be built?

MR. ROGERS: That's a little more definitive than I would be prepared to say at this point. If that's a source of interest for the Commission, we can explore that further with the City Attorney and we'd be prepared to respond in more detail at the meeting on the 5th.

COMMISSIONER PAGEE: Will he be here on the 5th?

MR. ROGERS: There's been some discussion about it subject to a number of factors. If the Commission wants to relay a strong interest in it, we'll pass that along and consider it.

But certainly we interact with the City Attorney on all these questions, so --

COMMISSIONER PAGEE: Right, but if we had additional questions on that night, we would have a time delay or we have the inability to get an answer. The time would -- would be beneficial to us.

CHAIRMAN RIGGS: I have some more comments, but Vince, did you have --

COMMISSIONER BRESSLER: Oh, this is about the Development Agreement. I just wanted to follow up on that.

It's my understanding -- please correct me if I'm wrong, Thomas, but we don't actually see the Development Agreement here.

Page 120

It's not something that is a matter of the public record. It's not part of the public process.

Is that correct?

MR. ROGERS: No. That's not correct. The Draft Development Agreement would be available for the Planning Commission's consideration.

COMMISSIONER BRESSLER: Do we get to vote on it?

MR. ROGERS: Yes. In conjunction with your responsibilities as -- as a recommending body to the Council in conjunction with all the other project requirements.

COMMISSIONER BRESSLER: Okay.

MR. ROGERS: Full text.

COMMISSIONER BRESSLER: Okay. I still think it would be very much in the interest of this project to get some of these agreements that exist only as words that have been spoken into the record tonight down a little bit more, and the sooner, the better.

I don't -- you know, whether there's a formal process for that or not. Because I don't really know what the nature of those agreements is, and it would be nice to clarify it so that we don't have any surprises when we get to that point.

CHAIRMAN RIGGS: But Thomas, am I right in

Page 121

1 defining a Development Agreement as customized approval
2 conditions?
3 MR. ROGERS: That's one way of -- of looking at
4 it. It establish -- it can establish certain performance
5 measures.
6 The key thing from a developer's perspective is
7 it can lock in project approvals for an extended time. But
8 again, it can also lock in benefits to occur a certain time
9 regardless of whether construction has actually taken
10 place, so --
11 CHAIRMAN RIGGS: What I was hoping to do is
12 assure my fellow commissioners that the -- the Development
13 Agreement will -- we will comment on the Development
14 Agreement and it will be a tool similar to -- but larger
15 than the tool of conditions on smaller projects.
16 MR. ROGERS: It has many attributes in common
17 with that. It also has additional attributes.
18 CHAIRMAN RIGGS: All right. Thank you.
19 And let me take a moment to -- well, for my own
20 sake to corral comments that are specifically EIR related.
21 For example, I'd like to speak about how much
TC-40 22 open space is resulting from our new FA -- from the
23 proposed FAR.
24 Is that an EIR issue?
25 MR. ROGERS: Certainly a lot of tonight's about

Page 122

1 listening. So it's not necessarily a matter of responding
2 to a comment.
3 I want to encourage everyone to make any comment
4 that they think is applicable, because then we can respond
5 to it in the EIR. The response may be this is not an EIR
6 issue, but at least you get a chance to say it.
7 It's -- it is certainly something that can be
8 discussed as part of the overall project approvals at the
9 next meeting.
10 CHAIRMAN RIGGS: And related to that. For
11 example, in the EIR, intersections that are impacted, but
12 are in Atherton or are on the state highway are not
13 addressed with mitigation because they're outside of the
14 City's control.
15 However, from my point of view, if this project
16 affects an intersection and the intersection matters to the
17 population of -- of this town, then it's not outside of our
18 purview to expect it to be addressed, whether it's
19 addressed between the developer and Atherton or the
20 developer and Caltrans.
21 Is that a comment appropriate to the EIR or is
22 that again a separate issue?
23 MR. MURPHY: Yeah. The way I would interpret
24 that would be a separate issue, because the EIR did attempt
25 to identify all feasible mitigation measures.

Page 123

1 What the EIR does, though, is identify those
2 intersections that are outside the City's jurisdiction for
3 which the City does not have control over. So that's why
4 they're categorized as significant unavoidable.
5 So if there's a desire for the City to pursue
6 those separately, that would be a Development Agreement
7 item and not necessarily an EIR item.
8 So you would comment more about the -- the
9 specifics of the mitigation that's suggested as opposed to
10 how it's accomplished.
11 CHAIRMAN RIGGS: All right. And then something
12 that is proposed as a possible mitigation, but if I
13 understand it correctly was not listed as a requirement to
14 mitigate are adaptive signals.
15 The EIR refers to multiple intersections that
16 could benefit from adaptive signals, and then indicates
17 that the applicant might contribute to an adaptive signal
18 project.
19 Would it -- especially given that the mitigation
20 is not complete, would it not be appropriate to ask that
21 this project revise these signals, period?
22 MR. MURPHY: Mark Spencer may chime in, as
23 well, but part of it gets to the concept of an adaptive
24 signal is identified as a partial mitigation because it
25 does not fully mitigate --

Page 124

TC-41

1 CHAIRMAN RIGGS: Correct.
2 MR. MURPHY: -- in terms of going to different
3 intersections.
4 Or -- I'm not exactly --
5 CHAIRMAN RIGGS: So there are multiple
6 intersections within Menlo Park that could benefit from
7 adaptive signals. Perhaps I'm just misreading it.
8 Does the EIR mean to say adapt -- adaptive
9 signals shall be provided by this project, but this will
10 not be a complete mitigation?
11 I did read it that way. I read it as feel free
12 to make a contribution toward adaptive signals sometimes in
13 the next decade.
14 MR. SPENCER: I think that would be more
15 correct. It doesn't state that it shall happen, and in
16 each instance, it's I think clearly stated that it's -- it
17 would serve along with other measures as partial
18 mitigation, but collectively would not result in less than
19 significant impacts.
20 So it's a contributing factor towards improving
21 transportation at that particular location. Also bearing
22 in mind that adaptive signal timing requires a program
23 across several intersections in order to be effective.
24 It's not a you can do it in one place and only with a
25 signalized lane location. It's along corridors.

Page 125

1 CHAIRMAN RIGGS: Right, and for a 10,000 square
2 foot office building, we've been hesitant to make the
3 developer go update a bunch of signals, but for a million
4 square feet, sort of a different point of view.
5 Well, going back to staff, then, is that more
6 appropriate for the Development Agreement, then?
7 MR. MURPHY: It's generally more appropriate
8 for the Development Agreement, but one thing to keep in
9 mind is that there would be greater specificity that would
10 come associated with the -- the kind of EIR component of
11 adaptive signal as part of the -- as this project would go
12 through the review process as part of the Development
13 Agreement and the mitigation monitoring and reporting
14 program, there would then be specificity about the dollar
15 amounts and timing of payment, but that was not identified
16 in the Draft EIR yet.
17 CHAIRMAN RIGGS: Okay. So the quantitative
18 mitigation -- well, yes. I understand. We'll move that to
19 October.
20 All right. That just leaves me with three
21 comments. I'll start out with a couple of positives.
22 I'd just like to say that the commitment to
23 leave certified buildings to me, although it's not a
24 mitigation in itself, it is a symbol of significant
25 mitigation. I'm pleased to see that.

TC-42

Page 126

1 Also, the Traffic Demand Management Plan I
2 thought was particularly effective, and I can speak to that
3 in experience. I did work on a campus for three and a half
4 years during -- and during that time, TDM was voluntarily
5 enacted, and the effect on parking and morning traffic was
6 notable.
7 And then AE2.1 which deals with -- I call it
8 light pollution, I believe it's glare from the project,
9 there's a reference that this being in an urban setting,
10 the night sky views are not really there to protect, and I
11 would have to disagree.
12 Living approximately a mile from this project, I
13 am often amazed that -- just by standing in the middle of
14 my street with fairly obscured street lights due to the
15 matured growth of the trees, it feels like being in Tahoe,
16 and the sky is quite clear.
17 So I think -- although mitigations were
18 indicated, I believe twenty foot high poles colored correct
19 and shielded.
20 I would just like to make a background note that
21 the north end of Menlo Park is not an urban night sky.
22 And Vince, over to you.
23 COMMISSIONER BRESSLER: Okay. A different
24 thing than has been discussed here.
25 I notice that there's no hotel only option. I

TC-43

TC-44

TC-45

Page 127

1 know the developer doesn't -- has stated here that this is
2 not a real option.
3 My question is: My understanding of the EIR is
4 that you can reduce the impact and the EIR remains valid.
5 So if we approve an EIR that includes the hotel,
6 does that mean that the hotel only option is valid
7 according to that EIR?
8 MR. ROGERS: Generally speaking, yes. You can
9 reduce the size of a project and it would still be covered
10 by the outer envelope of a larger EIR.
11 So a hotel only approval or an office only
12 approval would be covered by this. It just may not get
13 built, possibly.
14 COMMISSIONER BRESSLER: Okay. That's great.
15 Thanks.
16 CHAIRMAN RIGGS: Jack.
17 COMMISSIONER O'MALLEY: I have a question for
18 staff.
19 In this report there, chapter two is a project
20 description, and it goes into quite some detail as to what
21 is going to be done.
22 My question is: This EIR is -- is based I think
23 on that project description, and if -- if some of those
24 things that are described in the project are not done, does
25 that invalidate the EIR?

TC-45 (cont.)

TC-46

Page 128

1 MR. ROGERS: It would depend on the specific
2 element. There could be, you know, an element that's
3 exchanged for something that's, you know, not technically
4 the exact same thing, but is functionally equivalent.
5 I don't necessarily want to get into a
6 discussion of which ones are the -- the ones they can't do.
7 But overall, it does set the -- kind of
8 parameters and the understanding of what the project is.
9 It's a very -- definitely a very important part of the
10 document. It's one that we've spent a lot of time on
11 before starting the rest of the documents.
12 So I'd say in general, it's -- it's not
13 something that can be tinkered with after the fact without
14 eventually endangering the overall document.
15 But again, it depends on the specifics.
16 COMMISSIONER O'MALLEY: The reason I bring it
17 up is that in one portion -- this is one of the questions I
18 felt was more appropriate for the next meeting, but now
19 that it's been mentioned.
20 The lead principles, it indicates that they're
21 going to go for certification, gold for offices and silver
22 for the hotel, and -- and that's fine, but it doesn't
23 guarantee they're going to get certification, and that
24 always bothers me.
25 I see -- in a number of reports like this, I see

TC-47

Page 129

TC-47 (cont.)

1 people making comments they're going to go for this,
2 they're going to go for that, but when you question them in
3 great detail, you find out that well, the goals are there.
4 They're going to do the goals, but they -- they don't want
5 to commit to actually getting the certification.
6 That was one of the reasons I -- I brought that
7 up, because -- because as I looked at the project
8 description, I thought it was just a general description,
9 but it is a legal part of this document. That's what I'm
10 hearing you saying.
11 Okay. So that one could -- if major changes
12 were made to that, one could challenge it. Whether or not
13 the challenge would hold is another issue. It's a
14 statement, not a question.
15 Thank you.
16 CHAIRMAN RIGGS: All right. Katie.
17 COMMISSIONER FERRICK: Thank you.
18 I just have -- it sounds like we're kind of
19 winding down, so I wanted to be sure and get my last few
20 questions in, and they may not be something that can be
21 answered tonight, but I had one thing on drainage, one
22 thing on housing, a traffic and then several comments, so
23 something for everyone.
24 TC-48 I couldn't quite find this. For drainage, how
25 much of the fifteen acres is permeable percentage-wise?

Page 130

1 I'll let you look that up. I'm moving on.
2 What are the -- I know we were talking earlier
3 about the jobs to housing allocation and surmising that
4 TC-49 other county -- cities are the same.
5 Can you comment on that? Like what -- are
6 we -- is this ten percent? It just seems so low to me, you
7 know, just not knowing what the other cities are.
8 Is there?
9 MR. DOEZEMA: Actually, in the -- in the report
10 --
11 COMMISSIONER FERRICK: Yeah.
12 MR. DOEZEMA: -- there's a list of cities in
13 five different counties, and Menlo Park -- we did a
14 ranking.
15 COMMISSIONER FERRICK: Mm-hmm.
16 MR. DOEZEMA: So out of the 105 jurisdictions
17 listed, Menlo Park is 99th.
18 So that means there are, I guess, six
19 jurisdictions that have a lower percentage than Menlo Park.
20 COMMISSIONER FERRICK: In the world or --
21 MR. DOEZEMA: In the five counties.
22 COMMISSIONER FERRICK: Okay. Thank you.
23 And then a question is -- I've already asked the
24 applicant.
25 TC-50 What, if any, traffic mitigations were completed

Page 131

TC-50 (cont.)

1 by the developers of University Circle and Bay Meadows
2 thinking that, you know, that might take some research and
3 basically the main arteries, the University Avenue,
4 Hillsdale Avenue (sic) and the surrounding project area.
5 And that might also be more appropriate for
6 October, anyway, because it's really a financial -- partly
7 financial question.
8 And then my comments are that I'm really happy
9 to see it be LEED certified, going for that in such a large
10 scale, and I think it will make a really healthy place for
11 TC-51 people to work and that I was really happy to see the
12 extensive community outreach through this whole process.
13 And then a quick architecture question that may
14 be best addressed, but I'm trying to figure it out.
15 On the Constitution site, between the office
16 buildings, it looks like there's that main plaza kind of
17 entry area, but I don't see any curb cut or cutout for
18 TC-52 dropping off people or like a little drive or anywhere to
19 even stop.
20 So I didn't know how that would ever be accessed
21 by -- as an entry. So that's just something I wanted to
22 bring up. So the architectural control or something we're
23 supposed to deal with a little bit tonight.
24 CHAIRMAN RIGGS: Well, yeah. Except it's part
25 of -- that's why I did that little double-take when reading

Page 132

1 it.
2 Architectural control is part of our project
3 duties, but tonight it's pretty much limited to EIR.
4 COMMISSIONER FERRICK: Okay.
5 CHAIRMAN RIGGS: On the other hand, it's --
6 COMMISSIONER FERRICK: I'll be bringing that up
7 at a later date.
8 CHAIRMAN RIGGS: And very good observation.
9 Do you want a response on --
10 COMMISSIONER FERRICK: If you found it.
11 CHAIRMAN RIGGS: -- What EPA did about traffic
12 mitigations at University?
13 COMMISSIONER FERRICK: Mm-hmm.
14 CHAIRMAN RIGGS: I'll let Mark.
15 MR. SPENCER: I can't speak to that, but I can
16 give you an answer to your earlier question so at least we
17 can get that into the record and check one off our -- our
18 list.
19 COMMISSIONER FERRICK: Great.
20 MR. SPENCER: How's that?
21 You had asked earlier about the segment of Marsh
22 between Scott and Bohannon and why that was not
23 significantly impacted, but the segment from Bohannon to
24 Bay was.
25 The reason for that is that the segment between

Page 133

1 Scott and Bohannon on Marsh is classified differently under
2 the City of Menlo Park Roadway Classification System.
3 The classification between Scott and Bohannon is
4 a primary arterial, sometimes referred to as a major
5 arterial, and therefore it's a categorically exempt from
6 daily traffic analysis.
7 However, the segment between Bohannon and Bay is
8 considered a minor arterial. It does have an average daily
9 traffic over 18,000 vehicles and the project does add more
10 than a hundred trips to that segment, and therefore it does
11 significantly impact that segment.
12 Now, obviously the project also adds quite a bit
13 more than that, actually. It does add to both segments,
14 but it's just a different classification.
15 The capacity of the roadways, the cross-
16 sections are exactly the same. It's just a classification
17 change that occurs at the Bohannon intersection as you move
18 further west.
19 COMMISSIONER FERRICK: Thank you. That helps a
20 lot.
21 So in practical experience, it will be the same
22 amount of traffic. It's just that --
23 MR. SPENCER: You betcha.
24 COMMISSIONER FERRICK: -- you drive into a
25 different area, yeah. Got ya.

Page 134

1 CHAIRMAN RIGGS: Could I follow up on that a
2 little bit?
3 Am I right that the increase in delay through
4 the intersection was I think under two seconds? At the
5 intersection of Florence and Marsh Road? Florence, also
6 known as Bohannon when it crosses --
7 COMMISSIONER FERRICK: On the other side, yeah.
8 MR. SPENCER: Yeah. The intersection delay was
9 not that great an allocation.
10 CHAIRMAN RIGGS: I guess that's the bottom
11 line.
12 COMMISSIONER FERRICK: And also the Bay and
13 Marsh. You use that one a few hundred times a day, too,
14 right?
15 CHAIRMAN RIGGS: Yes, I do.
16 Vince.
17 COMMISSIONER BRESSLER: A few times tonight,
18 the Rosewood Hotel project has come up, and since this is
19 the first time we've talked about an M-3 and this is --
20 this project would initiate a new zoning district, I'm just
21 wondering why didn't the Rosewood Hotel need a new zoning
22 district? Why did this need a new zoning district, but
23 not the Rosewood Hotel?
24 CHAIRMAN RIGGS: Staff, Thomas.
25 MR. ROGERS: I think that's a -- more

Page 135

1 discussion for the 5th and I think it's something that you
2 can be prepared to ask the applicant further response from.
3 CHAIRMAN RIGGS: Well, we -- is it not true
4 that we were able to modify -- to -- to create a planned
5 development area over an Sand Hill Road that was not as
6 divergent in height or density as this project is from its
7 current one?
8 MR. ROGERS: The Rosewood Hotel was -- did
9 involve the application of an existing zoning district, the
10 C-4 non-El Camino zoning district to a parcel that was not
11 zoned C-4.
12 So it was a rezoning. It was not a zoning
13 ordinance text amendment. It was a General Plan land use
14 designation amendment, but it was not a General Plan text
15 amendment.
16 COMMISSIONER BRESSLER: I'll be a little more
17 specific, because what I'd like to see the next time we see
18 this project is how to fit this within an existing zoning
19 designation, and I think that needs to be part of this
20 document, as well.
21 Because it's a lot to ask to create an entirely
22 new zoning district for one project, and I really -- it's
23 not really appropriate in my mind, and I think we need to
24 see that.
25 So I've given you a template, to come at with

TC-53

Page 136

1 the Rosewood and see how they did that, and maybe we don't
2 have to create a new zoning district for one project.
3 CHAIRMAN RIGGS: Okay. And Melody.
4 COMMISSIONER PAGEE: Just to add to John's
5 question regarding lead. Because the applicant can provide
6 all the documentation, they don't have the final say on
7 whether or not they become LEED certified.
8 That often is not done for two to four months
9 after a project's complete and all the documentation has
10 been submitted.
11 So what the applicant does in preparing for
12 their project, they put down goals. Yes, definitely
13 they're going to need that or maybe they might need it or
14 definitely no, they won't, and when they score that, the
15 total yeses gives them an indication of where they might be
16 falling as far as gold, silver or platinum for
17 certification.
18 And then it's up to another body, USGBC, to
19 determine whether or not their yeses is were done correctly
20 and that they had the right certification or that there may
21 be -- there may be something to require.
22 So their goal would be to fall there, but it's
23 often out of their control unless they provide the proper
24 documentation whether or not they -- they get their
25 certification they desire.

TC-54

Page 137

1 COMMISSIONER O'MALLEY: Okay. So basically
2 our way of protecting ourself, then, and protecting the
3 City is to specifically address every single goal that the
4 applicants are trying to achieve in order to get the
5 certifications?
6 COMMISSIONER PAGEE: Or -- or make a financial
7 incentive that if -- if they don't make it, then, you know,
8 offsetting dollars.
9 COMMISSIONER O'MALLEY: Okay. We have some
10 options there.
11 COMMISSIONER PAGEE: Mm-hmm.
12 COMMISSIONER O'MALLEY: Thank you.
13 CHAIRMAN RIGGS: John.
14 COMMISSIONER KADVANY: I think I have a couple
15 questions for Rod.
16 Could you just clarify a little bit the
17 assumption behind the square footage/employee ratio that
18 was discussed a couple times. Maybe people are not
19 thinking about like the amount of like work space,
20 staircases, bathrooms, however you do that.
21 What -- you know, is that an industry standard
22 or whatever?
23 MR. JEUNG: That -- that's a great question.
24 It's come up repeatedly on a number of different
25 environmental documents that we work on, and we do look at

TC-55

Page 138

1 different sources for arriving at what we consider to be an
2 appropriate employment density for different land uses.
3 In this case, we had the benefit of working with
4 Keyser Marston and with BAE who have done a lot of real
5 estate studies for other communities for these types of
6 uses.
7 So that's one source of information that we use
8 to check the densities that were used.
9 There's also information that's contained within
10 the traffic trip generation modules that the traffic
11 engineers use, because they provide trip generation not
12 only by square footage, but also by employees.
13 So we're also able to draw upon information
14 that's contained in those documents.
15 There's also documentation available from ABAG
16 that describes how many square feet per employee, and all
17 of those different sources are then considered in trying to
18 arrive at what we think is reasonable.
19 All of that information is shared with staff and
20 we discuss if it's appropriate to Menlo Park.
21 COMMISSIONER KADVANY: But it's a figure that
22 wraps in staircases?
23 MR. JEUNG: Right.
24 COMMISSIONER KADVANY: It's not just -- it's
25 more than just cubicle.

Page 139

1 MR. JEUNG: Right.
2 COMMISSIONER KADVANY: Good. A second
3 different question is: Can you say anything about the --
4 the -- on the Constitution side, everything on that side is
5 coming up pretty close and high to the high voltage
6 transmission lines.
7 What's -- what's happening about developing
8 in the cor -- you know, that corridor? We have the open
9 space, so we have the open space out there and so on.
10 I mean, what are we looking for there in terms
11 of appropriate building safety, I guess.
12 MR. JEUNG: I'll let staff speak to some of the
13 planning considerations related to that, but I can speak a
14 little bit to some of the environmental.
15 When -- when we're developing near a high
16 voltage line, there are typically two considerations --
17 three considerations that we're looking for.
18 We're looking first at the right-of-way and the
19 easement that's been established by the utilities to make
20 sure we're beyond that area, obviously, so we're not
21 encroaching to the right of way.
22 Second, there's a certain amount of noise that's
23 associated with the crackling that occurs along high
24 voltage lines.
25 Those oftentimes you can hear at 75 decibels at

TC-56

Page 140

1 fifty to a hundred feet.
2 So typically if we're concerned about
3 residential development, we want to make sure there's an
4 adequate setback to protect against the -- the noise
5 associated with the high voltage lines.
6 The third thing is associated with electro-
7 magnetic fields. There's been a tremendous amount of
8 discussion and a lot of guidance documents that have come
9 out from the California Public Utilities Commission. There
10 have also been the benefit of thirty years of
11 epidem -- I trip on this word. Epidemiological studies to
12 try to demonstrate if there is a causal link to exposure to
13 high levels of electromagnetic fields and any health risks.
14 To date, there isn't a strong causal link, and
15 so typically, agencies such as the California Public
16 Utilities Commission will recommend instead that you apply
17 a practice of prudent avoidance, and that is again trying
18 to maintain a certain amount of distance from those
19 particular high voltage lines.
20 We've done General Plan Amendments, for example,
21 in other communities where the commercial development is
22 fairly close to the high voltage transmission lines.
23 Residential development, we try to provide a bit more
24 space.
25 COMMISSIONER KADVANY: Is the right of way --

Page 141

1 does the right-of-way just go up straight vertically in the
2 space or is it a cone or how does --
3 MR. JEUNG: We're looking at the right-of-way
4 as it hits the ground. So that's where we're kind of
5 measuring right-of-way.
6 COMMISSIONER KADVANY: Thanks. Thanks.
7 CHAIRMAN RIGGS: All right. No other comments
8 or questions?
9 All right. I want to thank the consultants for
10 spending this -- well, inevitably long amount of time with
11 us as we try to represent the many questions that the
12 community has.
13 Thomas, any -- perhaps you could just mention
14 our next steps.
15 MR. ROGERS: Thank you.
16 So the comments that are received tonight will
17 be transcribed and reviewed for inclusion in the Final EIR
18 along with any written comments that have been or will be
19 received by the September 21st deadline.
20 I would encourage those of you hearing any other
21 comments to make sure -- from anyone who didn't verbalize
22 them tonight to get them in writing to me by next Monday.
23 The Planning Commission will next hold a study
24 session on this item with a very general -- general focus
25 on October 5th.

Page 142

1 One thing of note is that meeting does have
2 another item on it. It's a review of the El Camino
3 Downtown Specific Plan reviewing direction from the
4 workshop that's taking place this Thursday.
5 That's a very important item, as well. Both
6 these items could take sometime, so to the extent that we
7 can -- as always, assuming we can address comments or
8 questions in advance of the meeting to have the meeting run
9 most effective, we always appreciate that, and then during
10 the meeting, appreciate your assistance directing the
11 comments effectively.
12 At this current moment, we're planning for the
13 El Camino Real study session to start before the Bohannon
14 Menlo Gateway study session that evening. Following
15 the City Council -- following the Planning Commission's
16 review on the 5th, it goes to the City Council in November,
17 and I would encourage everyone to stay involved.
18 If they're not already on on our project team
19 outlets, that's a Gateway to stay informed.
20 CHAIRMAN RIGGS: All right. I believe that
21 closes our public hearing and I'll turn that over to Deanna
22 for Commission business.
23 MR. ROGERS: All right. You're not done with
24 me.
25 El Camino downtown specific plan has a workshop

Page 143

1 that's Thursday, September 17th. The workshop program
2 starts at seven o'clock, although we're encouraging folks
3 to come early at 6:30 in order to get preview of the
4 materials we're presenting for the meeting.
5 The meeting format will involve a presentation
6 from the consultant and then an interactive open house
7 style format similar to the first workshop in this process
8 in April, and then to reconvene for individual comments and
9 summaries, as well, an understanding of next step.
10 So I listed the Planning Commission meeting
11 that's happening in October. There's also a City Council
12 meeting happening after the Planning Commission meeting.
13 That was originally scheduled for October 6th, but has been
14 rescheduled for October 13th.
15 The intent of that -- both of those meetings is
16 to review the direction from the workshop in advance of the
17 preparations for the Draft EIR and Draft Specific plan,
18 which are going to require a lot of technical work and
19 associated detail type stuff over the next few months, the
20 winter into the spring.
21 There's also a meeting of the oversight
22 committee meeting on Thursday, October 1st.
23 So with the workshop this Thursday, we were
24 informed recently that there's an unfortunate conflict with
25 the Hillview Middle School parents' night, so to the extent

Page 144

1 that any of you are directly affected by that or know
2 people who are directly affected by that, we wanted to
3 encourage everyone to attend even part of the meeting.
4 If you can drop by for half an hour, it's still
5 a value. We're looking very seriously at opportunities for
6 videotaping this particular meeting.
7 It may not be the -- the most elegant format,
8 but we're looking to mitigate that impact as it will -- as
9 it were to the best of our ability, and in any event, all
10 materials, as has been the case for the last -- all the
11 last workshops and every single meeting associated with
12 this project, all those materials will be on the website
13 afterwards, and we can receive comments electronically, as
14 well.
15 Do you want me to go to the -- all right. I got
16 them all.
17 COMMISSIONER FERRICK: Okay.
18 CHAIRMAN RIGGS: Deanna.
19 MS. CHOW: For the appeal for 825 Santa Cruz
20 Avenue, at the last meeting, we updated you that the City
21 Council will be hearing that on September 22nd.
22 There is the potential that that item would be
23 deferred until the October 6th City Council meeting, and
24 that would be -- that will be on the request of both the
25 appellant as well as the applicant.

And then finally, 1300 El Camino Real project, which the Planning Commission has provided its recommendation to the City Council, that will be scheduled for also the October 6th City Council meeting.

And moving on to reports and announcements, again, the Commission recognition event is scheduled for September 24th at six o'clock PM here outside our Council Chambers, and if you have not already RSVP'd to Margaret, I'm happy to take your RSVP, or you call or e-mail Margaret, and I can provide you with the information if you don't already have it.

CHAIRMAN RIGGS: Okay. Any Commissioner comments before we close?

All right. This meeting is adjourned.

(The meeting concluded at 10:14 PM).

---o0o---

STATE OF CALIFORNIA)
COUNTY OF SAN FRANCISCO)

I, the undersigned, hereby certify that the discussion in the foregoing meeting was taken at the time and place therein stated; that the foregoing is a full, true and complete record of said matter.

I further certify that I am not of counsel or attorney for either or any of the parties in the foregoing meeting and caption named, or in any way interested in the outcome of the cause named in said action.

IN WITNESS WHEREOF, I have hereunto set my hand this _____day of _____, 2009.

_____

Mark I. Brickman CSR No. 5527

TRANSCRIPTS FROM THE SEPTEMBER 14, 2009, PLANNING COMMISSION HEARING

Response to Comment TC-1

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the project is noted.

Response to Comment TC-2

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. Please see Responses to Comment Letter 20.

Response to Comment TC-3

In response to the concern that the project does not provide adequate parking, please see Responses to Comments 11-4, 16-3 and 16-6. In regards to the concern that specific roads will be impacted by project traffic, please see Responses to Comment Letter 3 from the Town of Atherton. In addition, please see Responses to Comment Letter 25.

Response to Comment TC-4

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the project is noted.

Response to Comment TC-5

Please see Responses to Comments 6-10, 8-6, 11-7, 11-7 and 29-6, regarding housing and the housing analysis that was done for the project. Response to Comment 10-3 addresses the payment of required school impact fees. Please see Response to Comment 11-4 regarding the parking demand evaluated for the project.

Response to Comment TC-6

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the project is noted. Please see also Comment Letter 22 from the Mt. Olive Apostolic Original Holy Church of God.

Response to Comment TC-7

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document. However, the commentor's support of the project is noted.

Response to Comment TC-8

Please see Responses to Comments 11-16, 16-2 and 17-38 that address the Development Agreement and Responses to Comments 6-10, 8-6, 11-7, 11-7 and 29-6, regarding housing and the housing analysis that was done for the project. Lastly, growth inducement is addressed in Responses to comments 8-3 and 8-5. In addition, please see Responses to Comment Letter 29.

Response to Comment TC-9

Please see Response to Comment 8-4.

Response to Comment TC-10

On page 1-2 of the Draft EIR it is stated that it "is possible, although unlikely, that the city could approve the proposed GPA/ZOE, but deny the specific Menlo Gateway development application." As further explained on page 2-1 of the Draft EIR:

> While the project is being evaluated at a project-specific level, it is important for the City to understand the full environmental implications of adopting the proposed GPA/ZOA, even in the absence of other specific development applications. In addition, it is possible, although unlikely, that the City could approve the proposed GPA/ZOA but deny the specific development application. Thus, while this is a project-level DEIR, this document also discusses the effects of the GPA/ZOA at a program level, assuming future development proposals could seek consideration from the City under the proposed new General Plan land use designation and M-3 zoning regulations. Analyses of the potential effects of adoption of the GPA/ZOA and of the specific development proposed within the Menlo Gateway application for the project area are both presented in this DEIR for purposes of evaluating environmental impacts under the California Environmental Quality Act (CEQA) (pursuant to CEQA Guideline Section 15168).

The City Council could decide to adopt the proposed GPA/ZOA for the project site, but not approve the proposed Menlo Gateway development project. While this scenario is a possibility, it is not likely to occur.

Response to Comment TC-11

Please see Responses to Comments 10-5 and 11-10 that address the feasibility of a hotel-only alternative.

Response to Comment TC-12

While the EIR analysis conservatively assumes that the TDM measures would help to reduce trips, the Draft EIR does not quantify the actual TDM trip reduction; therefore, the impact is still significant and unavoidable. See the discussion under Mitigation Measure TR-1.1 (I) on page 3.11-35 of the Draft EIR.

Response to Comment TC-13

CEQA requires development projects to evaluate the availability of water supplies looking at conditions under normal and drought years. The Water Supply Assessment prepared for the project evaluated three different water demand scenarios with the maximum GPA/ZOA with 100 percent R&D being the most water intensive. In addition, since release of the Draft EIR, the project sponsor has refined the baseline water assumptions, which necessitated updating the analysis in the Draft EIR. Please see Chapter 2, Revisions to the Draft EIR, for more specific information. Please see also the response provided in the transcript, immediately following the comment as well as Responses to Comments 6-13, 8-9 and 8-15.

Response to Comment TC-14

During the operation of a project, there are air pollutants emitted from stationary sources including heating and cooling equipment, as well as mobile sources - delivery vehicles and employee vehicles. The EIR analyzes those emissions using the URBEMIS model and, as stated in the response provided in the transcript, compares those emissions to standards or thresholds set forth by the Bay Area Air Quality Management District to determine if there is an impact. Please see the response provided in the transcript, immediately following the comment.

Response to Comment TC-15

In order for the entire M-2 area to be evaluated, the City could have undertaken a study that outlined a vision for the area that included land uses, development standards, and design guidelines. In the absence of a specific plan, a project sponsor can submit an application to the City to develop just their parcels. The City is obligated to review such a development application in a timely fashion. Other property owners within the M-2 area are not precluded from submitting their own development applications.

Response to Comment TC-16

The City of Redwood City sent a comment letter on the Draft EIR, see Comment Letter 2. The City of Palo Alto did not comment on the Draft EIR.

Response to Comment TC-17

The project is slated to begin the hearing process in April 2010. It will go before the City's Planning Commission and the City Council. If the City Council ultimately approves the project and the EIR is certified, there is a 30 day period during which the EIR can be challenged. Without a court injunction, it does not preclude the project sponsor from commencing project construction. It is anticipated that project construction would be dependent on a number of factors, including the real estate market and status of project funding.

Response to Comment TC-18

The EIR analyzed noise associated with an increase in traffic attributed to the project. To determine the existing or ambient noise levels, noise monitors are set up around the project site to document existing noise levels. The change in noise associated with the project is then compared to existing conditions to determine if the project exceeds any noise standard or threshold. Please see the response provided in the transcript, immediately following the comment.

Response to Comment TC-19

Please see the response provided in the transcript, immediately following the comment. In addition, the noise impact would be reduced to a less-than-significant level (at the one location that was significant) with a 7 percent reduction in the project trips.

Response to Comment TC-20

The demand factor used to calculate the amount of water used by a R&D use was obtained from the Cal Water South San Francisco Service Area median water demands from R&D users (see Table 3-2 in the WSA, Appendix H in the Draft EIR). The R&D water demand rate of 0.155 gpd/ft^2 is based on square footage and not by employee. R&D uses typically can include wet labs, which use a great deal of water depending upon the research that is being conducted. The water demand factor used for office uses is 0.053 gpd/sf^2, which is significantly less than the water demand factor for R&D. For more information, please see the WSA included in Appendix H of the Draft EIR.

Response to Comment TC-21

The ITE Manual is used by the traffic engineers to determine how many trips various types of land uses generate. For example, residential uses generate more daily vehicle trips than office uses and retail uses generate even more daily trips. Please see the response provided in the transcript, immediately following the comment.

Response to Comment TC-22

Please see the response provided in the transcript, immediately following the comment, as well as Table 3.11-5 on page 3.11-25 of the Draft EIR that shows the AM and PM peak hour trip generation.

Response to Comment TC-23

As stated in the transcript, immediately following the comment, the number of trips is determined by the land use and not the number of employees. Please see also Response to TC-22, above.

Response to Comment TC-24

In accordance with the CEQA Guidelines, a Notice of Preparation (NOP) for an EIR was filed with the State Clearinghouse on June 29, 2005. The 30-day public review comment period for the NOP ended on July 28, 2005. The project was revised and a second NOP was released On May 24, 2007. The City of Menlo Park (City) circulated the NOP to help identify the type of impacts that could result from the proposed project, as well as potential areas of controversy. The NOP was mailed to public agencies (including the State Clearinghouse), organizations, and individuals likely to be interested in the project and its potential impacts, including those who requested to receive notices on the proposed project. In addition, the NOP was posted on the City's website. Public scoping meetings were held on June 4, 2007 before the Planning Commission and on June 19, 2007 before the City Council. The scoping period for the NOP was set to originally close on June 25, 2007, but was extended to July 10, 2007 to enable the City Council to continue the public scoping process.

The Draft EIR was made available for public and agency review on July 23, 2009. Copies of the Notice of Availability of the Draft EIR (NOA) were mailed to public agencies (including the State Clearinghouse), organizations, and individuals. The NOA was advertised in local newspaper. Copies of the Draft EIR were made available at the Community Development Department, at the Menlo Park Library, and on the City's website.

A public comment session on the Draft EIR was held before the Planning Commission on September 14, 2009. The CEQA-mandated 45-day public comment period for the Draft EIR was extended to September 21, 2009.

Response to Comment TC-25

Please see Response to Comment TC-15, above.

Response to Comment TC-26

As indicated in the response provided in the transcript, immediately following the comment, the building setbacks for the Menlo Gateway project range from zero to ten feet, with an average of five feet.

Response to Comment TC-27

The aerial photographs of the project site included in the Draft EIR include Figure 2-2, Site Plan in Chapter 2, Project Description; Figure 3.1-6, View Points of the Independence and Constitution Sites in Section 3.1, Aesthetics; and Figure 2, Project Site included in the Initial Study (see Appendix B in

the Draft EIR). All of the other graphics in the Draft EIR do not use an aerial as the base map. The graphics listed above are used to show the location of the project site and do not depict any aspects of the project (i.e., traffic diagrams) that would be considered inaccurate if overlaid on an older aerial photograph. The graphics in the Draft EIR include the most current site plans and data that were available at the time the Draft EIR was released.

Response to Comment TC-28

Please see Responses to Comment Letter 4 from the Menlo Park Fire Protection District.

Response to Comment TC-29

Please see Responses to Comments 5-2 and 8-30.

Response to Comment TC-30

Please see Responses to Comments 5-2 and 8-30.

Response to Comment TC-31

The Draft EIR analyzes wastewater associated with project operation, both under the Menlo Gateway project as well as the GPA/ZOA. As stated on page 3.12-18 of the Draft EIR and as updated in Chapter 2, Revisions to the Draft EIR, the analysis assumes 100 percent of the water consumed indoors in the project area would become wastewater conveyed to the SBSA regional treatment plant. The capacity of the regional plant is discussed in the Setting on page 3.12-6. The ability of the regional plant to handle increased flows associated with the project is evaluated under Impact UT-3 on page 3.12-18. The analysis determined that adequate capacity exists at the regional plant to serve the project.

Response to Comment TC-32

As indicated in the response provided in the transcript, immediately following the comment, the Menlo Gateway project will increase traffic in areas immediately surrounding the project site. The existing level of service at many intersections will be impacted due to the project and some impacts will not be able to be mitigated to a less-than-significant level.

Response to Comment TC-33

As indicated in the response provided in the transcript, immediately following the comment, the project will increase traffic in and around the project site. There will be peak times during the morning and afternoon when a majority of people who work in the office buildings will be entering or leaving the project site. However, since there are other uses including the hotel and athletic club, there will be traffic moving throughout all times of the day and evening.

Response to Comment TC-34

Please see Responses to Comments 29-12 and 29-13, regarding jobs associated with the project.

Response to Comment TC-35

A response to this comment is provided starting on page 132 of the transcript. To summarize the response, the reason that the segment of Marsh Road between Scott and Bohannon was not significantly impacted by project traffic is because this roadway segment is classified differently under the City's roadway classification system. This roadway segment is classified as a primary or major arterial. A primary or major arterial is categorically exempt from having to do a daily traffic analysis.

Response to Comment TC-36

Please see Responses to Comments 29-5, 29-6 and 29-12 regarding the 10 percent factor and the estimated jobs/housing balance.

Response to Comment TC-37

Please see Responses to Comments 8-4 through 8-6 regarding the M-3 zoning and the potential for growth inducing effects to occur.

Response to Comment TC-38

The project sponsor has prepared a shadow analysis, please see Response to Comment 6-2 and Chapter 2, Revisions to the Draft EIR, for more information regarding the shadow analysis that was done for the project. See Appendix F of the Final EIR.

Response to Comment TC-39

As indicated in the response provided in the transcript, immediately following the comment, the Development Agreement will establish expectations for development of the Menlo Gateway project. If the developer is not able to meet the terms of the Development Agreement, the site does not necessarily revert to the GPA and ZOA, because those land use changes were tied specifically to the Menlo Gateway development proposal. If the site was sold to another entity and there was a new proposal to develop the site, it would go through its own environmental review process depending upon the entitlements being sought.

Please see Responses to Comments 17-41 and TC-10.

Response to Comment TC-40

As discussed on page 2-18 of the Draft EIR in Chapter 2, Project Description, the Menlo Gateway project would include approximately 175,100 sf of landscaping within the Constitution site and 124,290 sf within the Independence site. The project would result in an increase over existing landscaped land

of approximately 20 percent and 8 percent within the Constitution and Independence sites, respectively. The landscaped areas would be designed to provide visibility and access to Bedwell Bayfront Park with generous areas for passive and active recreation. Between the two buildings on the Constitution site, an earthen amphitheater along with an entry courtyard would serve as the focal point of the landscaping design.

Response to Comment TC-41

Please see the response provided in the transcript, immediately following the comment. The project proposes adaptive signal timing to address some of the traffic impacts. The requirement to do adaptive signal timing is something that could be included as a condition of approval.

Response to Comment TC-42

The comment is referencing the project sponsor's commitment to pursuing LEED gold and silver certification for the hotel and office buildings. The Chairman's support is noted.

Response to Comment TC-43

The Chairman's support of the project's TDM Plan is noted.

Response to Comment TC-44

Section 3.1, Aesthetics, in the Draft EIR addresses the increase in light and glare associated with the project. The Chairman's opinion regarding night sky views is noted.

Response to Comment TC-45

Please see Responses to Comments 10-5 and 11-10 regarding why the Draft EIR did not analyze a hotel only alternative.

Response to Comment TC-46

The EIR is based on the description of the project provided in Chapter 2, Project Description. Many of the elements or components of the project will be included as part of the conditions of approval or Mitigation, Monitoring and Reporting Program. Elements of the project contained in the conditions of approval will be implemented. If the project is approved and the EIR certified and the project sponsor decides to make substantial changes to the project, it may require additional environmental review. If, however, changes to the project do not result in any additional discretionary actions and are relatively minor as to not create significant impacts, there would be no need for additional environmental review. See CEQA Guidelines sections 15162-15164.

Response to Comment TC-47

Please see Response to Comment TC-46, above, as well as Responses to Comments 8-28, 12-1, and 19-17. The City intends to include as a condition of approval that the project sponsor obtain LEED silver and gold rating for the hotel and office buildings.

If the project is approved, the EIR certified and a Notice of Determination (NOD) is filed, there is a 30-day period of time in which the EIR can be legally challenged.

Response to Comment TC-48

As discussed in the Draft EIR under Impact Hy-2 on page 3.5-23, under existing conditions, the project area contains over 71 percent impervious surface area, leaving approximately 29 percent in pervious or permeable surface area. The Menlo Gateway project would reduce the amount of impervious surfaces by about 3 percent to 68 percent. Maximum development under the GPA/ZOA would result in an increase of impervious cover compared to existing conditions, or more than 71 percent.

Response to Comment TC-49

The *Housing Needs Analysis, Bohannon Office/Hotel Mixed Use Project General Plan Amendment and Rezoning Project*, prepared by Keyser Marston and included as Appendix F in the Draft EIR (see page 31, Table IV-I) reviews other neighboring cities and ranks them according to their commute patterns.

Response to Comment TC-50

The comment does not include specific comments or concerns that address the adequacy of the EIR nor the City's compliance with CEQA and thus does not warrant further response in this document.

Response to Comment TC-51

The comment is referencing the project sponsor's commitment to pursuing LEED gold and silver certification for the hotel and office buildings. The Commissioner's support is noted.

Response to Comment TC-52

The comment is referencing an emergency vehicle access point between the two office buildings on the Constitution site. The Commissioner's concern is noted.

Response to Comment TC-53

The comment is posing a question as to whether the proposed project can fit within an existing zoning district. Please see Responses to Comments 11-11, 8-2 and 8-3 regarding the proposed zoning requested for the project.

Response to Comment TC-54

The LEED process requires the U.S. Green Building Council (USGBC) to review a project and award points based on a variety of categories. The City plans to include a condition of approval that the project sponsor obtain LEED certification of gold for the office buildings and silver for the hotel. See Appendix D for preliminary LEED scorecards.

Response to Comment TC-55

Please see the response provided in the transcript, immediately following the comment. To determine a project's the employee ratio, a number of factors are reviewed. Specifically, for this project, the consulting firm Keyser Marston and Bay Area Economics prepared separate analyses that addressed the number of square feet per employee that should be used for this particular project.

Response to Comment TC-56

Please see the response provided in the transcript, immediately following the comment. Development in close proximity to high voltage transmission lines is required to determine if there would be an infringement into the right-of-way and if any sensitive uses would be in close proximity to the transmission lines that would exceed what the California Public Utilities Commission views as a safe distance.