20- The Federal Highway Administration and the Department believe that an Environmental Assessment/Environmental Impact Report is the appropriate document for the Caldecott Improvement Project. Please see the essay on "The Environmental Process; Environmental Impact Statement/Environmental Impact Report (EIS/EIR) versus an Environmental Assessment/Environmental Impact Report (EA/EIR); and Criteria for Significance" in Chapter 1.

Claremont Elmwood Neighborhood Association

Claremont Elmwood Neighborhood Association
P.O. Box 5108 Berkeley, Ca. 94705 Dean Metzger, President

Gregory C. McConnell, Senior Environmental Planner
Attention: Sheryl Dorado, Associate Environmental Planner
California Department of Transportation, District Four
Mail Station B, P.O. Box 23660
Oakland, CA. 94623-0660

RE: Draft EA/EIR –Caldecott Improvement Project
Comments for CENA Submitted by: Sally Williams
CENA representative on the Fourth Bore Coalition

Dear Mr. McConnell and Ms. Dorado:

The California Department of Transportation should be commended for focusing its efforts on Context Sensitive Solutions. The statement of purpose Caltrans' posted on its website states, "Quality transportation design is the culmination of philosophy and principles in the project development process that provides a transportation system that enhances the place in which it serves. Whether a project is in an urban, rural or natural setting, the transportation facility must be in harmony with the **community goals** and the natural environment. Caltrans notes that the purpose of the website is to provide Caltrans designers and its partners with department policy, guidance and examples to ensure the protection and enhancement of the environment and quality of life while meeting the multi-modal transportation needs in California". The comments that follow are guided by the Caltrans policy of Context Sensitive Solutions.

As I stated in my three minute oral presentation on June 15th, 2006 at the Caltrans Public Hearing in Oakland on the Caldecott Improvement Project*, Caltrans 1960's Caldecott Tunnel project included an expansion of State Route 24 that dissected a quiet residential neighborhood and allowed its arterial streets to become crowded, polluting traffic corridors during rush hours. That project also caused a rise in the noise level emanating from SR 24 that is well above the normally accepted noise level for residential communities. The current Caldecott Improvement Project can redress the problems it created in the 1960's so that the new solutions meet Caltrans goals to protect and enhance the environment and quality of life while meeting multi-modal transportation needs. *(*The comments were submitted in writing and will be part of the public record.*) 1

The Caldecott Improvement Project will cost the taxpayers between $350-$480 million to eliminate backups in the non-peak commute directions *(DEIR p.xx)* with little to no benefit for west bound commuters. (*Metropolitan Transportation Commission Study of 2001 and DEIR p.xx)* The project will take over five years to build with construction crews numbering in the hundreds working six days a week, 24 hours a day, with six truck loads of dirt per hour hauled away from the site with probable disposal sites located on the eastern portion of Fish Ranch Road and at the Oakland Port. *(Caltrans)*. Therefore, it is imperative that this project is carefully evaluated so a revised Federal Environmental Impact Study/State Environmental Impact Report (EIS/EIR) can be prepared using National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEAQ)standards because the construction of the tunnel along with the construction of an electrical equipment building, two **new** substations, new freeway ramps, large construction launch sites, and parking for workers, all to be built over the earthquake fault, will have an enormous impact on the quality of life for residents, schools, parks and businesses in the surrounding communities; and it is not clear if assertedly benefited motorists will be benefited (*Antonio Rossman*)because Caltrans forecasts that traffic will increase by 55% between 2003-2032.

INDEX

TOPIC	PAGE
1. Traffic Issues	3
City of Berkeley: Recommendations re Caldecott Improvement Project	
Caltrans Chokepoints	
Congestion on State Route 24	
2. Metropolitan Transportation Commission 2001 Study of the SR 24 Corridor	3
3. Destination of Commuters and Induced Traffic Demand	4
4. Arterial Streets	6
5. Berkeley's Existing and Future Land Use	7
Berkeley Study Area and Project Area Discordant	
Impacts to Community Facilities and Public Services	8
Disruption of Community Character and Cohesion	8
6. Noise Abatement	9
Noise Levels on Hillsides of Canyons	9
City Noise Ordinances	10
Berkeley Jets Over Bay v. Board of Port Commissioners-Oakland	10
7. Resources: Pavement Materials	11
8. Influencing Speed, Its Environmental Benefits and Congestion Pricing	12
9. Truck Usage on Local Freeways and SR 24	13
10.Environmental Justice Communities	14
11. Air Pollution	16
Cypress Freeway Performance Agreement (excerpts)	16
12. Telecommunications	17
13. Architectural Features	17
14. Importance of SR 24 as an Emergency Lifeline Highway	17
Emergency Vehicles	17
Earthquakes	18
Fish Ranch Road	18
15. Construction Impacts	19
Construction Staging, Phases and Needed Mitigations	20
Coordination with non-transportation Construction Projects	21
16. Disposal of Materials and Disposal Site	22
Devil's Slide Tunnel	22
17. Conclusion	24
Support of Comments of Fourth Bore Coalition and Coalition Members	
Transportation Enhancements	
Support of Revision of DEIR to an EIS/EIR that meets NEPA and CEQA standards	

Note: The acronyms and terms used in this letter can be identified in the Metropolitan Transportation Commission's Glossary. www.mtc.ca.gov/library/glossary.htm

TRAFFIC ISSUES

City of Berkeley: Recommendations re Caldecott Improvement Project – Traffic Problems
As early as 2002, the City of Berkeley informed Caltrans and the Metropolitan Transportation Commission (MTC) that a study conducted by the UC Berkeley Institute for Transportation Studies concluded that 90% of all new highway capacity added to California's metropolitan areas is filled within four years and 60 percent – 70 percent of all new county-level highway capacity is filled within two years. The City of Berkeley further informed these agencies that "To increase road capacity to accommodate the movement of private automobiles will only contribute to encouraging more private motor vehicle use, and further deterioration of air quality and other negative effects of pollution. This is known as "induced traffic".

Caltrans Chokepoints
On June 21, 2006 the San Francisco Chronicle published an article on the "Bay Area's long and grinding roads". The article quoted a newly released report by Caltrans and the MTC that Bay area freeway traffic congestion climbed 9% in 2005. The report attributed the rise to the creation of 26,000 jobs in the region. The article asked Bijan Sartipi, Caltrans' District Four Director to identify the 2005 chokepoints. State Route 24 and the Caldecott Tunnel were not named as chokepoints by Sartipi. However, the article mentioned that people who backed building the fourth bore could benefit from a proposed State transportation bond measure proposed for the November 2006 ballot. I assume this benefit could occur because the tax that Contra Costa County levied on its taxpayers to build the bore must be supplemented with funds from other sources including State sources.

Congestion on State Route 24
The draft EA/EIR (*Hereafter referred to as* DEIR) on the Caldecott Improvement Project describes the need for the proposed improvement project on page 5 (1.1.4). The document states that State Route 24 is the major connector between Interstate 580 in Alameda County and Interstate 680 in Contra Costa County and that most of the congestion is at the tunnel and at the I 580 junction. (*Note: the 580 junction is not included in the Caldecott project area and it should be included.*) During the morning and afternoon peak periods, the average level of service (LOS) for eastbound and westbound State Route 24 is "E" (*Vehicles are closely spaced...with significant delays)* The report concludes that "<u>any increase in demand will add directly to the queue and lengthen the duration of the peak periods.</u> Alternative 2N would cause incremental demand growth. Alternative 3 N would only cause marginal demand increased compared to Alternative 2N. Christina Ferrez, Project Director has stated at two public meetings that **the fourth bore will not improve peak period congestion for westbound traffic**, but will ease non-peak eastbound traffic congestion because the direction of existing bores will no longer need to be changed during peak periods. (DEIR p.61 and on) The bore, according to Geoffrey Horner , EIPO Associates is designed to allow people to drive at faster speeds than the 50 mph limit in the old, more curvy bores.

METROPOLITAN TRANSPORTATION COMMISSION 2001 STUDY OF THE SR 24 CORRIDOR:

- The Metropolitan Transportation Commission (MTC) (info@mtc.ca.gov) conducted a study in <u>2001.</u> MTC performed a land use and pricing sensitivity analyses on the transportation packages to assess impacts on forecasted corridor travel behavior. The findings:

- When compared to other corridors, Route 24 has a comparatively large transit share with about 33% taking BART during westbound morning commute…
  MTC *recommended an increase feeder bus to/from BART during peak periods for both directions, establishment of a new inter-county bus service through the Tunnel during the morning and evening peak periods using west bound auxiliary lane between Orinda and Tunnel, using freeway median shoulders, or using movable barriers to capture unused reverse capacity. BART should reduce parking charges and institute fare reductions in off-peak hours. BART feeder bus fares should be reduced.*
  CENA Recommendation: *Caltrans should facilitate increased usage of BART.* 2

- 15% of commuters region wide use vanpools, but only 10% of commuters on SR 24 are in vanpools.
  MTC Finding: *A vastly improved feeder bus service to Bart and new inter-county express bus would provide general relief to key employers in the corridor.*
  CENA Recommendation: *Since the University of California is unique in the number of people it employs that commute from Contra Costa county, UC and Caltrans should jointly plan a vanpool program that could include exterior parking with shuttle service to the campus and to the Lab. (See Memo of Understanding re Satellite Parking p.4)* 3

- Tunnel queues can impede traffic entering the freeway from local on-ramps and R 13. 4
  MTC *suggests meters, relocation of merges, installation of HOV lanes and movable barriers to capture unused reverse commute capacity.*
  CENA Recommendation: *Caltrans should implement MTC recommendations*

- MTC analyzed the construction of a new Fourth Bore.
  MTC Finding: *A new two lane fourth bore would not affect westbound A. M. traffic and eastbound P. M. traffic, but a new northerly 2-lane bore with a third auxiliary land between Orinda and Route 13 would move the westbound A.M. queue through the Tunnel but the congestion would reoccur at the subsequent merge with 24/980/580. Tolls, including HOV lane tolls, would be needed to pay for new 4th Bore.* 5
  CENA recommendation: *Adapt the MTC Corridor Improvement Strategy regarding tunnel operations, route 13/24 auxiliary lanes, BART and transit improvements, additional parking and transit interface at BART stations, provide long-term bicycle/pedestrian access by improving bike travel between both sides of the tunnel.* Tolls should be used to pay for the Corridor Improvement strategies.

- MTC has provided a cost analysis for the solutions it has suggested. These costs are available at the website.

DESTINATION OF COMMUTERS AND INDUCED TRAFFIC DEMANDS

Presently, the majority of the auto commuters traveling through the Caldecott Tunnel are coming from Central Contra Costa County accounting for 56% of the total auto traffic during the AM peak hours. Among all auto commuters, 70% are traveling to Oakland and San Francisco, and while only 9% (Approximately 10,000 vehicles) state that their destination is Berkeley, an unmeasured portion of the San Francisco commuters use SR 13 to reach the flyover on I 80 that cuts the 580 maze out of their trip to San Francisco. By 2030, the traffic volume patterns within the corridor are forecast to change dramatically as a result of the significant increase in demand. Caltrans forecasts that there will be a 55% increase between 2003 and 2032. (*MTC Study using*

year 2000 data for Caldecott Improvement Project) Caltrans also states on page 57 that "Increased mobility through the tunnel will likely cause slight increases in trip making, which could cause some increase in congestion on connecting streets such as Ashby Avenue and Broadway." *Therefore the problem is vaguely recognized, but no mitigations were suggested.* 6

Combine Caltrans statements on demand growth with the fact that the University of California at Berkeley is building a new football stadium that has plans for fifteen full capacity events (formerly 8 events were held) and High Performance Sports Complex that will employ 660 people, new additions to house new programs in the connection building at the law school and business school and will increase the capacity of the garage to park nine hundred and eleven (911) vehicles, it is obvious that Berkeley will be faced with induced traffic and its arterial streets that already exceed capacity will become overburdened. See Southeast Campus Integrated Projects: http//:www.cp.berkeley.edu/SCIP DEIR.html

Mitigations and Enhancements for Induced Traffic Demand

- The issue of induced traffic demand needs to be recalculated using current data and planning must be done to resolve this problem either through redirection of traffic or by satellite parking lots with shuttle service from these lots or BART to the University and Lawrence National Laboratory. The 2006 EIR written by the University has one plan to alleviate traffic and that is to add two parking signals on Piedmont. This will do little to reduce traffic of the magnitude that UC will attract. *The 1990 Long Range Development Plan of the City of Berkeley contained a Memo of Understanding between UC and the COB for satellite parking. This plan needs to be implemented.* 7

- Berkeley favors non-automobile solutions such as increased use of public transportation and vanpools.

- The City of Berkeley has clearly stated that "Any actions which may increase the volume of through traffic on the Ashby Avenue Tunnel Road corridor in Berkeley must be resisted" (*Berkeley City Manager's Letter to the Alameda County Congestion Management Agency re Recommendations on Caldecott Tunnel EIR, 7.22.2002).*

- The City wants through traffic to be encouraged to stay on the freeway network and the community wants the above solutions as well as other solutions yet to be determined for traffic reduction and diversion. *(Arterial Streets Mitigation, See signage)*

Resources:

- Transportation for Livable Communities (TLC), MTC ABAG Library, August 1,2005. TLC is an MTC program to support development plans and projects that strengthen the link between transportation investments and community needs.

- Chen, Kwon, Rice, Skabardonis, Varaiya (Defects in) Single Loop Measurements: Loop detectors cover most California freeways and are used to collect real time freeway data. The data contain many holes (missing values) or bad (incorrect) values and require careful 'cleaning' to produce reliable results. Presentation to Transportation Research Board, January 2003. http://www.sci.csuhayward.edu/jkwon/papers/loops_asv2.pdf http://www.ccta.net/PM/SR24/SR24FinalRpt.pdf.

ARTERIAL STREETS

The DEIR discussion of arterial streets is devoid of data because the heavily used residential arterial streets are not on the Caltrans maps. Revised maps should include these streets: Roble Road, Alvarado Road, Telegraph, Claremont, The Uplands, Roanoke, Patton, Miles, Tunnel Road, Ashby, Derby, Warren, Piedmont, and College. *(See Berkeley Land Use Study Area below)* ***These streets must be included in the DEIR and mitigations must be designed to alleviate current and induced traffic.*** 8

Mitigations and Enhancements for Arterial Streets

- The current congestion on arterial streets could be immediately reduced by proper **signage** on SR 24 that directs cars off of HWY. 13 and encourages auto traffic to use the freeway network and commercial Berkeley streets. CENA conducted an experiment to determine what was the fastest way to get from the Tunnel Road exit to the intersection of Highway 80 and Highway 13 (Ashby Avenue). The first trip was made on Ashby Avenue, the second trip was made using Highway 24 to Highway 80. The latter trip took 9 minutes less time without the stop and go traffic experienced on Ashby Avenue. (*Dean Metzger, President of CENA and a former Chair of the Berkeley Transportation Commission.*) 9

- UC should be required to provide shuttle service from BART stations and satellite parking lots located in Contra Costa County (*CC county is where a great portion of UC employees reside*) and along I 80 where there is access to University Avenue for rapid shuttle service on a re-instated landscaped median strip for busses only that was well-utilized by the Key System until the 1960's when BART caused the system's demise. *See Memo of Understanding between COB and UC re satellite parking in City of Berkeley's 1990 General Plan.*

- A revised EIS/EIR using updated data must include technical information on traffic controlled intersections in Berkeley that assesses level of service (LOS), the effect traffic projections will have on the normal operation of streets including pedestrian & bike traffic, and a traffic analysis that reflects data in other recent EIRs. 10

- Proposed improvements for SR 13, Tunnel Road and Ashby must reflect the fact that these are residential streets and increased car volume or speed on SR 13 is not acceptable. 11

- New **signage** should be posted that informs drivers that Tunnel Road and Ashby are residential streets with speed limits of 25 mph and traffic signals are not coordinated because many intersections require extra lights for left turns. Any road improvements should comport to context sensitive solutions with the goal of improving the quality of life for residents. 12

- SR 13 should be returned to the City of Berkeley and Tunnel Road should be taken off maps as an access road to the University and Lawrence Lab including maps on UC's and Lawrence Lab's literature and websites. 13

- The needs, problems and interests of commercial and residential areas that may be designated as transportation corridors need to be considered.

BERKELEY'S EXISTING AND FUTURE LAND USE

DEIR Chapter Two, 2.1.1. (Page 37) describes Existing and Future Land Use. It states that "the Berkeley study area includes the southern portion of the City of Berkeley that would be directly affected by the proposed project", and "The Berkeley study area is located in the City of Berkeley, south of Dwight Way." This ill-defined statement is accompanied by maps on pages 38 and 39 that omit many of the arterial streets that are directly affected by traffic to and from SR 24, the tunnel, and to 580 both north and south. (*Please note that several other DEIR maps are unreadable and it is inexcusable that readers are forced to source their own maps in order to understand the DEIR. Ex: DEIR maps on pp.49 & 65*) 14

Berkeley Study Area and Project Study Area are Discordant -,Mitigations are Required

- The City of Berkeley Planning Areas that would be most affected by the project according to Caltrans, are "South Berkeley and South Shattuck, due to their proximity to Ashby Avenue, the major arterial connecting the City of Berkley to State Route 24, the Caldecott Tunnel, and Contra Costa County". *(DEIR p.55) CENA challenges this vague study area that does not focus on the major areas affected by the project.* 15

- It is also interesting that the study area for Berkeley is mostly outside the Caltrans project area and focuses on SR 13 (referred to above as Ashby Avenue). The project area, on the other hand, appears to end at Broadway and stays on the 24 corridor. The Broadway boundary was achieved after discussions with Caltrans when it was noted that the original western boundary was Hwy. 13 just outside the western entrance to the Caldecott Tunnel. *CENA requests that new maps be executed and a new study area defined that focus on the portions of Berkeley that are omitted. CENA also wants Caltrans to recognize that there are areas on the 24 corridor where Berkeley and Oakland occupy the same block. Thus, there are issues, especially on the Hillcrest Ridge, where the problems must be treated as a joint problem and not given to one city to resolve one way and another cityto come up with their own resolutions. (We already have two sets of refuge trucks- one set for Berkeley and one set for Oakland.).* 16

- Expanded Project Area Needed. In order to obtain accurate data on land use and on traffic-caused noise and air pollutants, *the study area needs to be expanded to include communities along the corridor to the Interstate 580 junction.* In addition to poor quality air and noise, some residents in this section of the SR 24 corridor report that they often have debris from the freeway around their houses or yards and in their streets. That is indicative of a severe problem that Caltrans needs to resolve. 17

- When Caltrans extends the Project Area, the Berkeley Study Area in the DEIR can be attached to a revised Study Area, but the tables need revision and a table should be inserted that charts real estate values and the impact this tunnel is going to have on the investments residents on the 24 corridor have made in their homes. The table should include the deleterious effect that a drop in value will have for people on retirement incomes. An expanded area might also explain why the West Berkeley Bowl construction project is sited as a possibly affected community facility. 18

Impacts to Community Facilities and Public Services

The Land Use descriptions (2.1.1-2) omit many important land uses on the SR 24 corridor such as parks, playgrounds, tennis courts, and baseball fields and it omits historic buildings (including the Claremont Hotel), a cemetery, and a golf course that will be affected by increased noise, air pollution and traffic during the construction period and upon completion of the project. Because the land uses were improperly evaluated, Caltrans has stated that "Impacts to community facilities and public services would be negligible; therefore, no mitigation measures are proposed." (DEIR 2.1.3.3, p.57) *(The impact on fire, police and emergency medical services will be covered later in this letter under comments on HR 24 as a Lifeline Highway.)* 19

Community Facilities and Public Service Mitigations

- The impact the project will have on the schools, cultural facilities and religious institutions mentioned on p. 57 should also be included in the presentation of data resulting from measurement studies of these issues listed above and should be conducted by experts in their fields for a revised EIS/EIR. 20
- The community facilities mitigations should include the projects planned in Sibley Park, the building plans of Children's Hospital, the use (and acquisition?) of the Albertson's site and the use of the old Safeway site and potential use of the DMV site.

Disruption of Community Character and Cohesion

The DEIR states on page 55 that "Community character and cohesion is defined as the degree to which residents have a sense of belonging to their neighborhood or experience attachment to community groups and institutions as a result of continued association over time". Caltrans then states "The new transportation facilities would not constitute any new physical or psychological barriers that would divide, disrupt, or isolate neighborhoods, individuals, or community focal points in the corridor." Since the 1960's, SR 24 has caused a major disruption that needs to be ameliorated. Now, the clogging of arterial streets is disruptive and isolating. Residents cannot get out of their driveways or access their homes during rush hours. Non-clogged arterial streets such as The Uplands become raceways as commuters Can access 13, 24, and 580 from this street. These speeding trucks and SUVs that do Hollywood stops at stop signs are treacherous to walkers and the small children nearby. Barriers may be needed that except local residents. 21

Existing and Future Land Use Mitigations

- The DEIR on page xiv states under the heading *Growth Inducement/Community Impact* that "the Caldecott Improvement Project is consistent with local planning goals and policies to improve traffic circulation along State Route 24." *CENA disagrees with this statement.*
- The revised EIS/EIR must reflect consultations with the Planning Departments of Berkeley and Oakland to obtain correct data, corrected land use, correct identification of community facilities and public services, measurements for noise and air pollution that comply with local ordinances and corrected traffic impacts. The revised EIS/EIR should include the effect of increased pollutants and traffic will have on air cleaning and noise reducing vegetation. Environmental Justice Communities and local Health and Environment Departments should be interviewed. 22

NOISE ABATEMENT

DEIR p. 151 states that the Department's Traffic Noise Analysis Protocol (TNAP) sets forth the criteria for determining when an abatement measure is reasonable and feasible. Other factors used in determining feasibility of noise reduction include: topography, access requirements, other noise sources, **opinions of residents**, environmental effects of abatement, and **public and local agency input.** (p.152)

Caltrans did a noise analysis for a mere 88 residences that all were in the first row north of State Route 24 and, in general, have a direct view of the freeway. Caltrans noted that the second row residences would not be affected by a substantial noise increase, but realized that the 22 residential united currently planned, but not constructed on Caldecott Lane where predicted future noise levels would range from 69-76 dBA would be affected. Also mention as affected are Temescal Park and playing fields. Caltrans has concluded, "there would be no increases or barely perceptible noise increases because the average human ear can barely perceive noise level changes of 3 dBA. *CENA finds that the noise tests were limited and inaccurate. There are hundreds of residences & community facilities along the 24 corridor that will be affected. See mitigations below.* 23

Noise Levels on the Hillsides of the Canyon

Caltrans does not plan any sound abatement plans other than sound walls or berms near the western entrance to the Tunnel. (*Note that a primary reason for these barriers is to block the view of back-up traffic (xxii See architecture p.17)*. In addition, the Caltrans summary of technical data does not include noise studies from all sections of SR 24 as well as for residences on the hillsides of this canyon that will be harmed by bouncing sound from the proposed road level sound walls and berms that also cause air pollution to rise. (xix) Noise assessments must be taken and proper mitigations and enhancements must be designed to improve the quality of life for residences on the canyon corridor. Even now, residents have been forced to triple pane the windows in their homes to achieve livability and many are unable to use their outdoor space. Caltrans admits that the noise level will significantly increase during construction. 24

Mitigations for Noise

- The increase in noise level using as a baseline existing SR 24 noise levels that are intolerable for many residents is not a context-sensitive solution. The baseline for noise levels must be sourced from tolerable noise levels in residential areas without freeways, the condition that existed here pre SR 24. Now SR 24 cuts through the heart of residential areas and is not a roadway in an industrial section. The residences preceded the freeway and enhancements must be utilized that rectify the construction of the 1960's that lacked community sensitivity. 25

- Caltrans needs to place their receptors in all areas along the 24 corridor from the west entrance to the 580 junction taking into account the topography of a canyon and its affect on sound, the amount of road pavement and structural concrete and access, 26

- Caltrans needs to consult with local agencies and adhere to local noise ordinances, 27

- Caltrans needs to differentiate between noise sources and the hours that are noisier than others. Single noise events also need to be measured. 28

- BART train tracks are in the median between opposing sides of SR 24. Therefore, *Caltrans needs to coordinate with BART on sound reduction measures.* 29

- Caltrans needs to consider a wide variety of sound abatement measures that include, but are not limited to: rubberized pavement, rubberized structural columns, extensive planting, Jake brakes on trucks, enforcement of noise emissions from motorcycles and modified vehicles – particularly muffler noise. These noise abatement measures should include the arterial streets used for freeway access and egress. (See construction p. 18+) 30

Resources:

- **The Cities of Berkeley and Oakland have posted Noise Ordinances on their websites** www.ci.berkeley.ca.us/planning/landuse/plans/generalPlan/1977masterplan/77htm/nse-77.htm

- California Department of Health Services, Guidelines for the Preparation and Content of the Noise Element of the General Plan, http://ceres.ca.ogv/planning/genplan/appendix_a.html.

- Helping Our Peninsula's Environment (HOPE) – Maximum Noise vs. Average Noise (Community Noise Equivalent Levels –CNEL) Hearing Damage and Noise Pollution

- School Site Approval Guide

- Noise Free America

- The Straight Dope Science Advisory Board, What are "jake brakes" and why are they prohibited in some locations?, April 1999 www.straightdope.com/mailbag/mjake.html

- Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners of the City of Oakland, 91 Cal.App.4th 1344 (2001), the First District Court of Appeal invalidated the Port of Oakland's certification of an EIR for the Airport Development Plan. The court found that **the EIR had failed to adequately address the noise impacts from nighttime cargo operations. Specifically, the court made clear that the EIR's reliance on the CNEL metric as the sole criterion to evaluate the significance of the project's noise impacts inappropriately excluded consideration of the potential sleep disturbance impacts on area residents resulting from nighttime flights**. (The court recognized CEQA standard of significance, which recognize a site-sensitive threshold for evaluating noise impacts.)

- Noise Pollution Clearinghouse, http://www.nonoise.org/index.htm

Resources: Pavement Materials

- University of California, Institute of Transportation Studies
- Wlad Wlassowsky, Supervising Civil Engineer, PWA. ww.lassowsky@oaklandnet.com
- Roads from Plastic Waste, www.sactaqc.org/Resources/Literature/archive/2005/21/roads
- Arizona Department of Transportation, Intermodal Transportation Division www.azdot.gov/Highways/EEG/QuietRoads/what_i
- Superstition Freeway Construction Update, Fall 2002. www.superstitionfreeway.com This Arizona Highway has effectively used temperature sensitive rubberized asphalt by limiting the work to the spring or fall. Arizona believes that rubberized asphalt is more durable than regular asphalt and helps to eliminate a major environmental problem – used tires. **In areas where US 60 cross over the railroad track, the underlying concrete is capped with rubberized asphalt. Throughout the project, the combination of earthen berms, sound walls and bridge panels will reduce freeway noise affecting adjacent neighborhoods.**
- Sacramento County Department of Environmental Review and Assessment and Gollard and Brennan, Inc., Consultants in Acoustica and Noise Control Engineering, Asphalt Rubber as Noise Mitigation Nov. 1999 www.asphaltrubber.com/noisestudy.htm
- Dominick, Dick, Oregon Department of Highway, Conversation: July 2005 503.986.3071) Dick said" Oregon uses open graded porous pavement because the water goes directly into the pavement and solves drainage problems. It is also quieter and the trucks don't spin fine spray. Oregon does not use rubberized surfaces. Dick said that particulates get lost on sides of the road and that elevated roadways have to have good drainage. He suggested that Carl Monismith, Dept. of Civil Engineering at the University of California, Berkeley is the international expert on paving. Summaries of results of 1995 field evaluations of durable pavement marking materials
- National Asphalt Center (www.hotmix.org),and the National Center for Asphalt Technology
- The Advantages of Rubberized Asphalt Concrete, www.rubberizedasphalt.org/advan.htm.
- Wayne Jones, Asphalt Institute Field Engineer, Highway Noise Control with HMA Sound and Vibrations/December 2002. Research in the U. S. and Europe show that a SMA or OGFC mixes will reduce highway noise by 3-5 dBA. To the average person, this reduction is the same as doubling the distance between the source of the noise and his location. Studies show that the general ranking from the quietest to the loudest pavement surface is: OGFC, SMA, Dense-graded asphalt, Broom-finished PCC, Transverse-tined PCC. The quietest OGFC can be as much as 7 or more dBA quieter than a transverse-tined PCC. For worst-case situations, a French product called Twinlay ® can be as much

as 7-12 dBA quieter than PCC pavements. The product won an environmental award for quiet pavements.

Questions and Answers: Rubberized Asphalt Concrete, integrated Waste Management Board, http://www.ciwmb.ca.gov/Tires/Grants/RAC/Fys200305

INFLUENCING SPEED, ITS ENVIRONMENTAL BENEFITS AND CONGESTION PRICING

- Charles Seigel, Slow is Beautiful, Speed Limits as Decisions on Urban Form, A Preservation Institute Policy Study, 1996, 1997 http://www.preservenet.com/
  In the United States freeway construction is based on the amount of time it takes to travel the projected distances. Mark Hansen of the University of California said his studies of highway expansion in California showed a 10% increase in highway lane-miles induced an immediate 2%increase in traffic at the county level, and a 6% increase within two years. When he counted induced traffic in neighboring counties, Hansen found that a 10% increase in highway capacity induced a 9% increase in distance traveled. Higher speeds do not save people time. They just encourage people to travel longer distances. Speed creates distance. Some economists say we should have "Congestion Pricing". If drivers who use the bridges or freeways during peak hours are charged extra, we make them pay for the congestion and we give them an incentive to use alternative transportation and make the entire transportation system function more efficiently.

Mitigations for speed and the environmental benefits

- Set a goal that the price of a roundtrip BART ticket from say, Rockridge BART station to Civic Center in San Francisco will not cost twice as much as the bridge toll. 31

- Adapt European traffic calming procedures including a ban on freeway expansion, phasing out all truck traffic and utilization rail for freight.

- Comprehensive regional planning should include political limits on large-scale development that creates additional traffic.

Resources:

- Peter Newman and Jeffrey Kenworthy, "The Use and Abuse of Driving Cycle Research: Clarifying the Relationship between Traffic Congestion, Energy and Emissions, Transportation Quarterly, vol.30#4, October 1984, pp.615-635

- Dyett & Bhatia, DRAFT Environmental Impact Report, State Clearinghouse No.2004022131, Prepared for Metropolitan Transportation Commission, October 2004

- Southwest Area Transportation Committee **SWAT**(Danville, Lafayette, Moraga, Orinda, San Ramon and the County of Contra Costa) www.co.contra-costga.ca.us/depart/cd/transportation/committee/swat
  Check SWAT's agenda and goals for transportation planning.

Claremont Elmwood Neighborhood Association 12
Comments to D-EA/EIR for the Caldecott Improvement Project on State Route 24

TRUCK USAGE ON LOCAL FREEWAYS AND ON SR 24

Recent air quality studies done on the I 80 corridor reported alarming rates of air pollutants caused by truck emissions, freight trains idling, cargo ships spewing diesel and construction equipment. The Pacific Institute reports the emission rate is 40 times higher than in other parts of California. Diesel exhaust has 40 toxic compounds, including formaldehyde, benzene and particulate matter. A copy of the 57 page study is at:
www.pacinst.org/reports/west_county_diesel

While I 80 presently has more truck traffic than SR 24, use of the Port of Oakland is expanding and recent news articles point out a need for congestion alleviation and relocation of storage facilities. Sacramento and Stockton have built storage facilities and, since 580 forbid trucks in key sections and 238 is overburdened. SR 24 could, but shouldn't, be used for truck access to these cities. however, it has become noticeable that more trucks are using 24 even though the DEIR reports minimal truck use. The proposed transportation bond dedicates $2 billion to build **cargo lanes** for I 580 which is a key route for carrying good from the Port of Oakland to the U.S.

Truck Usage Mitigations

- The Oakland Port has new cranes that can unload ships carrying up to 8,000 containers. This has significantly increased truck traffic to carry to containers away from the port. Communities is southern California are thinking of leveling a surcharge for trucks going to and from ports during rush hours. Some are encouraging nighttime travel, but nighttime travel increases single noise events that are very noticeable to sleepers. The noise level of truck s going eastward has to be measured since they must gun up to make the upward grade on 24 while the westward headed trucks use jake brakes to compensate for the downward slope. *Caltrans should compare notes with the Port of Oakland. It surely has predicted traffic routes and number of trucks needed from the Port to facilitate delivery of goods. (See Goods Movement Project p.14)* 32

  Notes from the Trucking Message Board at Class A. Drivers.com re jake brakes:
  1. "When you go down a hill, and it makes all that noise, it makes me feel like a REAL man".
  ibid: re Stacks
  2. Down a hill and make all that noise? nah… going through a tunnel with it goin … we recently removed the aerodyne off the top of our mobile home here and cut her stack down too. Now she really hollers under them overpasses and goin through tunnels."

- Check on SB1601 targeted at local and regional air pollution generated by trucks etc. at ports. 33

- Prohibit trucks from traveling through residential neighborhood. SR 24 has residential neighborhoods on both sides of the freeway. 34

- Reduce engine idling time on construction equipment 35

- In addition to a realistic assessment of the disruption that presently occurs, a realistic assessment of the impact of construction trucks on arterial streets as well as a projection of the effect of induced traffic must be included in a revised. EIR. Businesses will be affected and the economy will be affected. 36

- See also truck use in construction projects p.18+

Claremont Elmwood Neighborhood Association
Comments to D-EA/EIR for the Caldecott Improvement Project on State Route 24 13

Resources:

- State of California Truck Restriction Procedures, www.dot.ca.gov/hq/traffops/trucks/truckside/fs-res

- Top Bay Area GOOD MOVEMENT PROJECTS: The list represents the Metropolitan Transportation Commission's (MTC) top nine projects included in both MTC's 2030 Regional Transportation plan and the State's Goods Movement Plan (Phase I) released in March 2005. Examples: Project to improve I-880 interchanges in Alameda County – various locations, & Freight ITS Public/Private Partnership Project – I-880/580 truck travel times, Smart Corridor expansion, incident response, container reservation system.

ENVIRONMENTAL JUSTICE COMMUNITIES (EJC'S)

The DEIR states on page 59 that there would be minimal impacts to environmental justice communities in the Berkeley study, (thus) no mitigation is required. Since there is no information provided on contacts with environmental justice communities, studies are needed and mitigations are required. 37

Mitigation for EJCs

- Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations and policies. The OEJ coordinates the Agency's efforts to integrate environmental justice into all policies, programs and activities. **EPA's environmental justice mandate extends to reviewing proposed actions by the federal agencies.** OEJ works with all stakeholders to constructively and collaboratively address environmental and public health issues and concerns.

- Therefore, the Environmental Assessment of the U. S. Department of Transportation and the Federal Highway Administration should review all environmental impacts that are raised and will be raised by the Caldecott Improvement Project.

Since Caltrans failed to contact local environmental justice communities located in the communities affected by the project. CENA has listed some of the communities located in Berkeley and Oakland such as:

- The Intertribal Council on Utility Policy, Berkeley, California
- Battling Diesel in Oakland
- Filipino/American Coalition for Environmental Solidarity, Berkeley
- Asian Pacific Environmental Network
- Ecology Center, Berkeley, Ca.
- West Coast for the Environmental Working Group, Oakland
- California Toxic Release Inventory (pending.)

There are several other environmental justice communities listed on the web that should be contacted.

Resources:

Cypress Freeway Replacement Project : An excellent example of a justice community. www.fhwa.dot.gov/environment/ejustice/case/case5htm (See p. 15 – Cypress Link)

AIR POLLUTION

- The central valley has formed an air quality coalition composed of 50 groups to lobby for Operation Clean Air and Clean Air Now. They valley has some of the smoggiest air in the nation. Mountains limit airflow into and out of the valley. The valley is taking measures to reduce pollutants such as reducing the use of diesel engines on farm equipment, adding electric pumps and purchasing hybrid vehicles for public use, and promoting green goats or hybrid diesel/ electric locomotives. EPA Soot limits must be met by 2010. *Caltrans should be certain that the Tunnel that cuts through a canyon with similar topographic problems as the valley will use every measure at its disposal to reduce pollutant.* 38

- John Tagliabue, "Trucks Soil Mont Blanc's Sparking Slopes". First came the town and then the tunnel. The tunnel has become a ogre, spewing pollution on Alpine landscapes and tarnishing the beauty…The tunnel creates noise and vibrations, the trucks spew diesel fumes and fine particulates that accumulate in the steep Alpine valley and contribute to global warming. The town would like to see containers loaded onto rail cars for long distance shipping for the rails produce less pollution than diesel and they have fewer accidents. (Fires are a problem in the tunnel.) New York Time, 7.8.06 A9

- Studies by the Children's Hospital of Oakland and the California Department of Health Services indicate that West Oakland residents suffer higher than expected rates of hospitalization for asthma and certain forms of cancer. (1993, 1994) Such concern played a role in solidifying the community's opposition rebuilding the Cypress Freeway in the existing location. Caltrans and the community worked out a new route and a Freeway Performance Agreement was signed with the City of Oakland identifying goals for minority and local participation in the freeway construction. Negotiations led to additional community benefits including disallowing heavy transport trucks traveling to and from the Port to traverse residential neighborhood streets. Mitigations included landscaping in front of sound barriers, densely planted trees and shrubs, and compensations for 30 homeowners and businesses whose property was located within the right-of-way selected for the new freeway. The Cypress/Madala Training Center was established. Sixty-five of its graduates were employed on the project. A Project Information Office was set up to answer community questions and a quarterly newsletter, Cypress Link, was published.
  http://www.fhwa.dot.gov/environment/ejustice/case/case5.htm.
  Using the Cypress Freeway Agreement as one contest-sensitive model, Caltrans must Negotiate and sign a Freeway Performance Agreement with the Cities of Berkeley and Oakland. 39

- Studies at the University of California at Los Angeles (UCLA) show that proximity to a major freeway or highway increases exposure to "ultrafine" particles – tiny particles less than 0.1 micrometers in diameter, which are linked to neurological changes, mild pulmonary inflammation and cardiovascular problems. The EPA regulates particles less than 2.5 micrometers in diameter, and ultrafines represent the very smallest particles inhaled by the public. Motor vehicle emissions represent the most significant source of ultrafine particles. Ultrafine particles are more toxic than larger particles. The studies focused on Interestate 405 with 93% of the traffic gasoline powered cars. The second study looked at 710 freeway that has more than 25% of its traffic derived from heavy-

duty diesel trucks. Both studies concluded that the number of ultrafine particles downwind near both freeways was about 25-30 times greater than the number upwind. The study also examined the concentrations of carbon monoxide, black carbon and particle mass. Like ultrafines, CO and BC confirmed the notion that vehicular exhaust is a major source of these pollutants near a major roadway. (Environmental News Service, October 18th, 2002. *Caltrans should devise a system for reducing the emission of these particulates. Slower traffic? Free tunnel trips for hybrids and electric cars? See also below and see Caldecott Tunnel Fire.* 40

- Diesel exhaust is a major source of particulate pollution that can trigger respiratory and heart problems; the state air board say diesel soot is responsible for 70% of the state's cancer risk from airborne poisons. *Caltrans should work with other state agencies to lower risks for diesel exhaust. Caltrans should also work with adjoining states where trucks fill up with fuel that has a higher pollutant allowance than California. Meanwhile, Diesel trucks should be prohibited from using SR 24.* 41

- Researchers The University of Southern California found that youths in smoggy cities who competed in three or more sports during the school year were more than three times as likely to develop asthma as those who didn't play sports. Schools ask the question, "How do you balance the benefits of exercise with the health risk of breathing dirty air? *Caltrans air measurements should adhere to the Air Quality Indexes that protect the health of the children in the area including the five schools on western SR 24 corridor.* 42

- Berkeley was named the most sustainable city (green city) in the U. S. and special measures need to be taken to adhere to these standards. Along with careful measurements, the report should include mitigations such as increased planting, better standards for diesel particulates, better methods for trapping the particulates, requirements for truck exhaust stacks so they aren't cut off to make more noise, requirements that motorcycle and modified vehicle emissions be reduced and that these vehicles be included in noise reduction programs. www.ci.berkeley.ca.us/sustainable/business/greanleaders.html

- The community goal that Caltrans should include in its contextual planning re air and noise pollution is improved and addition community facilities and playgrounds that children and adults can enjoy without fear of illness caused by pollution and noise.

Resources:

- Office of Environmental Health Hazard Assessment, "Air Pollution from Nearby Traffic and Children's Health: Information for Parents" http://www.oehha.ca.gov or www.estbaykids.com

- Journal article of OEHHA study "Proximity of California Public Schools to Busy Roads", http://ehpnet1.niehs.nih.gov/members/2003/6566/6566.html

- American Lung Association, Air Quality Index, www.saclung.org

- Holtzclaw, Dr. John, Motor Vehicle Emissions, 1989. The paper includes Traffic Calming Successes in Europe, North American and the U.K. http://www.sierraclub.org/sprawl/articles/warming.asp

TELECOMMUNICATIONS

Telecom companies should be consulted and they should be encouraged to place fiber or wire through a tunnel for general use as well for accommodating tunnel surveillance. In he past companies have refused to serve communities west of the tunnel because of the difficulty of getting fiber over the mountain. Obstacles must be removed. 43

Telecommunication Mitigations

This equipment must be able to withstand high heat and movement from earthquakes.

ARCHITECTURAL FEATURES

The tunnel portals are land marked. (See Caltrans EIR on Historic Sites that lists the portals as the only historic site in the project area.) However, two options are under consideration for the portal structures: (1) Contemporary and (2) Art Deco. Also, no mention of design standards has been made about the new electrical equipment building and the two new substations that will be built behind sound walls.(DEIR xxiii, pp. 17, 25 and 195) A new control room also maybe needed for the jet fans. 44

Architectural Mitigations

- The design of the portals, outbuildings, berms and sound walls should conform to the existing historically land marked art deco design.

IMPORTANCE OF HR 24 AS AN EMERGENCY LIFELINE HIGHWAY

Caltrans has designated State Route 24 to be used in disaster response activities because, among other reasons, it serves as the most effective of several routes for emergency relief access; it provides direct or nearby access to and from major emergency supply centers; and it links various modes of transportation. (DEIR p.18)

Caltrans refers to "nearby access" as part of the lifeline system. I assume this nearby access refers to **Fish Ranch Road**. Caltrans plans to use the eastern portion of Fish Ranch as a construction site and as a disposal site for excavation materials. This will severely limit the use of Fish Ranch Road for emergencies.

Lifeline routes require project specific design criteria for each component along the route, **CALTRANS NEEDS TO PREPARE AND DISTRIBUTE AN EMERGENCY EVALUCATION PLAN TO COVER THE CONSTRUCTION PERIOD AND THEREAFTER.** 45

Mitigations and Enhancements Needed for a Lifeline Highway

1.Emergency Vehicles
Caltrans needs to request written statements of need from the emergency services using Route 24 to access emergencies. (*My home has a view of 24 from about Claremont to the bend near the tunnel. I have observed emergency vehicles on eastbound 24 during rush hour pleading with their sirens to have vehicles move so that they can reach an emergency. The vehicles either don't move or don't have a place to go. The emergency vehicles are stuck in traffic.)* Route 24 needs designated lanes for emergency vehicles so that Caltrans can meet the performance criteria for a lifeline route. These lanes should be on the exposed areas of 24 as well as through the tunnel. 46

2. Major Emergencies
There have been two major disasters in and around the tunnel in recent years and a major quake along the Hayward fault is expected within 30 years.

i. **Caldecott Tunnel Fire:** The first disaster was in 1982 when a double tanker truck carrying gasoline overturned and caught on fire in the tunnel. Gasoline leaked into the gutters and small fires erupted in the gutters. The valves that should have been used to divert the drainage outfalls to a hazardous materials sump were rusted stuck and the gasoline went into a nearby lake. People trying to escape the tunnel on foot couldn't find emergency exits to escape the fire. Others were overcome by smoke. The tunnel ventilation system was not switched on and wasn't triggered on until the level of carbon monoxide exceeded the trigger level. The intensity of the fire affected the integrity of the tunnel fire main and the water pressure was insufficient to support a hose stream. The fire was allowed to burn out. In all six people died. *(Wikipedia, 6.14.06)*

Mitigation: ***Are these technical problems solved in all tunnels so that the tunnels meet Lifeline standards?*** *(The emergency walkways in the DEIR seem inadequate).* 47

Resource:

- The Federal Highway Administration, May 1984 and Dipl. Ing. Frank Peter, 1998 note that the main problems with fires are the speed at which the fire spread, the intensity of heat, and the lack of information about the number of vehicles involved in the incident. Video systems and radio systems break down. The ventilation system must be set to a maximum extraction mode and information must be available on the escape routes, ventilations systems and safety facilities.

- The Fire Dynamics Simulator code maintained by the National Institute of Standards and Technology to determine the thermal environment in tunnels.

- The National Fire Protection Agency Journal. www.nfpa.org

ii. **The Oakland-Berkeley Hills Fire:** In 1991 the worst fire involving loss of life and property since the Great San Francisco Earthquake of 1906 started on a steep hillside in the box canyon above state Highway 24 near the entrance to the Caldecott Tunnel. The fire established four fronts, west downhill to the Rockridge District, north toward the Claremont Hotel (located between Fish Ranch Road and Tunnel Road), south toward Broadway Terrace and km. away, and the east toward Contra Costa County. Three hundred and seventy fire engines needed to reach the site via 24, Fish Ranch Road, Tunnel Road and a few small, residential streets in the Oakland Hills in front of the burn. Accessibility was extremely limited and the water supply was very low. Twenty-five people died and 3,469 living units were destroyed. *(Captain Donald R. Parker, Oakland Office of Fire Services, January 1992)*

3. Earthquakes

The California Division of Mines and Geology, Earthquake Planning Scenario for a Magnitude 7.5 Earthquake on the Hayward Fault 1986

Claremont Elmwood Neighborhood Association 18
Comments to D-EA/EIR for the Caldecott Improvement Project on State Route 24

The Hayward earthquake of October 1868 of a Richter magnitude of 7 was one of the largest earthquakes to occur in this area causing widespread damage throughout the Bay area. The assumed characteristics of the next Hayward quake would result in a rupture of the entire length of the fault from San Pablo Bay to east of San Jose. The surface faulting would produce horizontal offsets of up to 10 feet, shakes will be felt 25 km. away, and the aftershocks of M6 or larger will continue for many weeks. Seismically induced landslides are expected in the East Bay Hills. Secondary ground failure, notably differential settlements and shifting of the land surface due to liquefaction will be common. Utilities will be disrupted, trans-bay bridges will be closed, and roadway, train bridge etc. will be closed. All major freeway routes from east and south either cross the fault or are vulnerable to damage including Route 24 west of the tunnel and most of Route 13. Travel will be limited to emergency vehicles. Airports constructed over mudflats that will liquefy will be unusable. Most will be closed. BART will shut down due to lack of electrical power. The Port of Oakland will be nonfunctional and the filled land areas will settle disrupting both rail and streets. Damage to oil pipeline and storage facilities at the Richmond and Carquinez facilities pose a threat of contamination and fire. Note, there is a pipeline from the Richmond refinery that goes under Berkeley and Oakland directly to the Oakland airport. The water supply will be crippled. Wastewater will have to be carried in open trenches because the pipelines will be sheared. Treatment plants will shut down. **The Berkeley Hills Tunnels will be closed indefinitely as a result of a fault rupture. (*Thus the need for Fish Ranch Road.*)** The article goes into more gruesome details.

Weather is unpredictable. Earthquakes are unpredictable. What measures is Caltrans taking to insure accessibility of emergency vehicles to emergencies and what measures is Caltrans taking to shore up utilities, pipelines etc that cross Caltrans installations? 48

Resources:

- California Department of Conservation, Six East Bay Seismic Hazard Aone Maps re: Liquefaction, Landslide Potential during Quakes, February 2003, http://gmw.consrv.ca.gov/shmp

- Dames and Moore, Earthquake Engineering Group, The Loma Prieta Earthquake, Impact on Lifeline Systems, Disaster Recovery Journal, Vol. 3, No.2 1999.

4. Fish Ranch Road
Since many people lost their lives in the Berkeley/Oakland Hills fire because the roads were impassable, it incumbent on Caltrans to make every effort to avoid the tragedies of the past and keep Fish Ranch Road open as a Lifeline Roadway.

CONSTRUCTION IMPACTS

DEIR p. 195. "The Department is committed to working with the various communities within the project vicinity to address issues that pertain to the construction activities for the Caldecott Improvement Project. Construction activities such as phased clearing, grubbing, grading, and the construction of the tunnel in general will typically result in increased levels of truck traffic, noise, dust and visual impacts."

Construction Staging DEIR 2.4.1` and on)

Stage One

- Phase One: The construction of **staging areas** at the east and west portals*, portal cuts and grading, constructing temporary walls at each portal, and installing additional slope support as required. Also cut and cover tunnels 50-98 feet long at each end of the portals that will be replaced with permanent cut and cover wall of cast in-place concrete walls that will be integrated into the façade. During portal development work may be limited to one shift. (p.202)

  Note: The **staging areas will be located on the west at Caldecott Lane and on the east by the Fish Ranch road exit ramp. The areas will be used to store heavy equipment and other construction needs, shotcrete batch plants, groundwater retention facilities, warehouse, equipment maintenance shops, muck handling and stockpile areas, and field offices. The staging area will also house a ventilation plant sized to assure fresh air in the tunnel, & a bank of compressors sized to provide compressed air for tunneling operations. A Quality Assurance/Quality Control lab for material testing and various miscellaneous facilities will be housed at the launching site.*

- Phase Two:
  1. Excavation of tunnel and cross passages,
     A rotating head claws at the rock head and soil. The spoils is loaded onto a conveyor and discharged to a truck for removal. Limited reaches of the excavation will require drill and blast operations with explosive charges. The area will be monitored for Peak Particle Vibrations (PPV) high enough to warrant special considerations.
  2. Constructing final tunnel lining, (Sprayed on shot-crete to be batched on site) Steel arches, rock anchors, and rock pre-support members (spilling and canopy tubes) will be stored on site.
  3. Constructing ventilation,
  4. Installing lighting and control system,
  5. Constructing portals and electrical substations (These will be over the cut and cover tunnels and not visible from the road. (*How about from above?),* and
  6. Constructing berm at Caldecott Lane

Stage Two

- Constructing retaining walls and potential sound walls (*A Caltrans consultant told me at an Caltrans Open House that some of the sound walls will be metal!)*
- Constructing all ramp modifications
- Constructing Portal approaches

Stage Three

- Open fourth bore to traffic
- Constructing median concrete barrier (More reflected noise SW)
- Paving and striping bore 2 approaches
- Paving emergency crossovers at the portals

Construction Mitigations

- Caltrans needs a construction management plan that is worked out with the communities and posted online so residents can know what to expect during this five year construction period. 49

Claremont Elmwood Neighborhood Association 20
Comments to D-EA/EIR for the Caldecott Improvement Project on State Route 24

- What will be the footprint of the staging areas? There will be an a lot of large equipment stored and used in the area as well as a lot of activity. 50

- **Non-transportation Projects** within the project area are mentioned in the DEIR p. 213. These are: The East Bay Regional Park District Vegetation Management Projects, the Claremont Tunnel Seismic Upgrade Project and the Robert Sibley Volcanic Regional Preserve Land Amendment Project, which includes the construction of a group camp, two staging areas, and conducting vegetation management. All projects would produce air pollutants during construction, grading, filling and other earthwork. Automobile traffic and occasional prescribed burn would also cause air pollutants. Also see Children's Hospital Expansion Plan, the nine MTC freeway expansion projects and the Claremont Tunnel Seismic Upgrade Project. (DEIR p. 213) (See p.24, Seismic Retrofits) *How is Caltrans cooperating with these projects?* 51

- Which public streets will be used to store contractors equipment when not in use? What kind of equipment will be stored on public streets? Will it be parked where residents *normally park?* Will orange cones and construction signage be used for personal use as is being done at the UC construction site? *Will the residents be compensated for the equipment parked in their community and their loss of parking spaces?* 52

- How many workers will be on the job each shift? 53

- Where will the workers park their private vehicles? Will they be encouraged to car pool? 54

- Where will workers eat and rest? 55

- Will residents above the *blasting* areas have their homes inspected prior to blasting so they will have a record if damage occurs? 56

- What steps will be taken to quiet the loading of spoils that include rocks into the trucks from the conveyer? Can this be done inside the tunnel? 57

- Will strobe lights be used a night? How will homes within range of the lights be protected? 58
  DEIR p. 202: Strobe light or spotters in lieu of backup alarms during nighttime operations is a standard industrial practice for equipment noise.

- How will ventilator and air compressor noise be suppressed? 59
  DEIR p.202: Enclosures will be constructed for compressors and a sound wall between the west portal staging area and nearby residences. The eastern launching area will have enclosures built for batch plants and ventilation plants as well. Will these merely hide the equipment or will they reduce sound?

- **DEIR P. 205: NO SOUND MITIGATION MEASURES OTHER THAN BLASTING RESTRICTIONS AND ISUAL BARRIERS WILL BE NECESSARY DUE TO THE TOPGRAPHY WHERE NOISE LEVELS ARE LIKELY TO BE HIGH DUE TO EXISTING TRAFFIC ON STATE ROUTE 24.**

  DEIR p. 205: NOISE GENERATED WHILE CONSTRUCTING COULD AT TIMES REACH LEVELS HIGHER THAN THE EXISTING TRAFFIC NOISE (p. 205)

Proposed noise mitigation by Caltrans: Construct noise barrier where feasible, erect temporary noise barriers if necessary and keep the community informed of upcoming noisy construction, and establish a field office to handle noise complaints. This field office should also link the community to all aspects of the project and information should be online with an e-mail address. 60

- Will clean up of dirt and spills of shot-crete be constant? This kind of spoil can cause skids and must be kept off the roadway and off arterial streets. 61

- Will residences in Parkwoods and other homes affected by excessive construction dust etc. be given air filtering machines during the construction phase? 62

- Clean up should be done with pressure hoses equipped with spray nozzles to prevent dust. The run-off should be captured and disposed of appropriately since it cannot go into the sewer system. Piles of spoils should be covered with plastic until they are removed. Street sweeping trucks should be employed to clean up large spills. 63

- Will trucks, generators, cranes, compressors, road headers, conveyor belts, strobe lights etc. have all of the required pollution-control devices installed and functioning properly? (Diesel and gasoline exhaust are both known carcinogens. ***This work is being performed in a canyon where the exhaust is captured and will rise up to the residences on the canyon hillsides unless properly controlled.***) 64

- Will the trucks and construction equipment including shops and ventilators and air compressers be prevented from idling diesel engines? 65

- Will sound walls and enclosures be built of material that will muffle or absorb sound rather than reflecting sound? 66

Disposal (DEIR 2.3.2.3)
296,905 – 375,000cubic yards of material will need to be hauled away to disposal sites. At a Caltrans Open House, a Caltrans consultant told me that this amounts to hauling six truckloads of material (*also called spoils*) per hour, 24 hours a day, five-six days a week for three years. He also said that one disposal site will be in the old quarry above the tunnel and will be used to build berms, and the other would probably be at the Port of Oakland, but it is the contractor's responsibility to locate disposal sites. (*CENA response to UC EIR, May 2006)*

Disposal Mitigations

- The DEIR is not clear regarding potential negative impacts of waste soils to be dumped in environmentally sensitive areas above the tunnel or used to build berms along side residential areas. 67

- The Devil's Slide Final Second Supplemental to the 1986 EIR noted that similar types of tunnels normally require 15,000 trucks to haul 150,000 cubic yards of soil and that these trucks as well as boring and trenching cause vibrations that have the potential of doing harm. *CENA feels this is of particular concern in a residential neighborhood.*
  Devils Slide supplemental: www. dot.gov/dist4/dslide/
  Community response: www.montara.comtunnel/Johnson/FEIS

- Will the trucks be covered? 68

- What routes will the trucks use? ,Will they be kept off residential streets? 69
  (DEIR: It does not appear that residential routes will be used for construction traffic. p.202) CENA would like assurances in writing.

- Will they have noise inhibitors? 70

Impact (DEIR p.198)

Noise and Vibration
1.Noise will be generated from drilling, excavation equipment and installation of support system.

2. Noise will be generated outside the tunnel by construction equipment engines, the ventilation system, batch plant activities and equipment maintenance operations.

Dust, Dirt and Construction Traffic
1.Muck handling and rehandling out of the portal and dust from shotcrete batching operations will be significant contributors to the generation of dust.

2.Construction traffic exiting the site will track dirt on pavement

3.Delivery of equipment and material will contribute to dust, dirt and construction traffic

4. A Traffic Management Plan (TMP) will be prepared to address traffic delays during construction. The Dept. will work with local agencies. (P. 203)

Air Quality (2.4.7.p.204)
1.Air pollutants will be generated during construction. Trucks and equipment emit hydrocarbons, oxides of nitrogen, carbon monoxide and particulates.

2. Most pollutants will consist of wind-blown dust and the level of pollution will vary from day to day. (See studies on pollutants p.16) . Unpaved areas will be tested for lead. *Is that all?* 71

3. Vegetation and Wildlife management are of great concern to the Fourth Bore.

<u>Construction Mitigations</u>

- **Blasting:** The noise mitigations need to include blasting noise and vibrations problems on affected homes. *The community would like Caltrans to hire competent noise experts that understand and adhere to the noise ordinances of the cities of Berkeley and Oakland. The community would like to meet with Caltrans discuss noise level numbers and to discuss mitigations.* 72

- **Noise Related Work Hours, Construction Practices and Pavement Materials**
  This discussion is necessary because it is apparent that Caltrans contractors failed to protect and enhance the environment when it rubberized parts of the surface of SR 24 and the paving material fell apart. When the roadbed was repaved, only parts of the roadbed were repaved, the community was left with an increase in noise levels because of the change in pavement materials from asphalt to corrugated concrete, and the failure to deal

with quieting the underside of overpasses and off ramps. (Do-able. See Arizona Superstition Highway.)

- **Night-time Construction – Community Input Required**
  It is also apparent that Caltrans failed to meet community needs when it allowed the construction to go on all night long with continuous backup truck alarms sounding all night. The DEIR mentions that these back-up horns can be replaced with back-up warning lights. Caltrans admitted that the back-up horns did not prevent the death of three workers. (*Telephone & in-person conversations between Caltrans staff and Sally Williams in June 2006)* The community would like to contribute its expertise to help Caltrans find solutions to some of these problems. For example, many new vehicles with blind spots have a rear camera that sends photos of 'behind the truck' obstructions to a screen in the driver's cab. In the long run, this could be less expensive than a flag person. *The community would like meet with Caltrans to discuss night-time construction issues.* 73

- **Seismic Retrofits**
  1. It is also critical that Caltrans works with BART on Seismic retrofits that will commence in 2007. BART plans to wrap the support columns in steel "jackets". (Rockridge News, June 3, 2006, p.3) If BART finds seismic retrofits near fault lines necessary, retrofits should be in Caltrans plans too. Since the jackets will more than likely increase the noise level, both BART and Caltrans can execute the work at the same time and they can wrap these columns in sorely needed soundproofing material. 74

  2. BART is retrofitting the tunnel that goes under the Bay. Caltrans should consult BART and be certain that the Caldecott lives up to the standards that BART has established for its tunnels. 75

  3. The Claremont Tunnel Seismic Upgrade Project is mentioned on p.213, but not described. What is it? Where is it? Who is doing the upgrade? 76

- Assuming that the Design-at-Risk strategy will be put into play, What is the realistic start up date for the project, how long will it take to complete each phase – especially the tunnel bore – and what is the projected completion date? 77

CONCLUSION

CENA, representing most of the 13,000 voters of Berkeley's District 8, supports the comments submitted by other Fourth Bore Coalition participants relating to, but not limited to, the following: bike and pedestrian alternatives, study of toll road alternative to fund public transportation, study of future governance and administration of the tunnel, assuring legal compliance with freeway agreements, and other mitigations and enhancement requested by communities such as a community center at the Albertson's site near the Rockridge Bart station and a park at the DMV because the current playgrounds and school yards suffer from severe noise and air pollution.

Please refer to the comments submitted by the City of Berkeley, the City of Oakland, City of San Francisco, Korve Engineering, Gordon Piper, Richard Grassetti, Antonio Rossman, Esq. and the Fourth Bore Coalition. All participating groups agree that an EIS/EIR comply with the requirements of NEPA and CEQA. 78

1- Please see the essay on “Cumulative Impacts/Enhancements” in Chapter 1.

2- Please see essays on “Scope of the Project” and “Transit” in Chapter 1.

3- Please see essay on “Scope of the Project” in Chapter 1.

4- Please see responses #5 and #8 in the essay on “Traffic Operations” and the essay on “Construction Impacts” in Chapter 1. MTC recommendations were intended as short-term mitigation that would not address long-term demand growth. This project will address the long-term demand growth in the off-peak direction.

5- Please see response #9 in the essay on “Traffic Operations”, the essays on “Transit”, “Scope of the Project”, and Bicycle and Pedestrian Access/Improvements” in Chapter 1.

6- Please see response #2 in the essay on “Traffic Modeling/Forecasting” in Chapter 1.

7- Please see response #2 in the essay on “Traffic Modeling/Forecasting” in Chapter 1.

Projects to address the added traffic caused by UC Berkeley expansion are separate projects, sponsored by others, that do not affect the need for or merit of the Caldecott Improvement Project.

8- A number of intersections along local arterial streets in Berkeley/Oakland area - Ashby Avenue, Broadway, Claremont Avenue, College Avenue, Martin Luther King Jr. Way, Telegraph Avenue, and Tunnel Road - were included in the intersection study to assess the impact of a fourth bore. The study recognizes that the increased capacity of a fourth bore would result in a slight increase of freeway demand. This would lead to similar slight overall demand increases that could have local impacts. Of course, the LOS impact would vary among intersections and in some cases would even improve. Collectively, the intersection LOS would not change significantly.

9- Without getting the details for the travel time comparison, we can only surmise the trip was made from the State Routes 24/13 Interchange to the State Routes 80/13 Interchange.

Not all the traffic exiting from State Route 24 to State Route 13 North goes to the Routes 80/13 Interchange. Therefore, the travel time comparison may apply only to a very small percentage of the traffic.

10- We believe that the traffic studies including intersection analysis conducted for the Caldecott Improvement Project are fair and adequate. Please see response #1 in the “Traffic Operations” essay and the essay on “Bicycle and Pedestrian Access/Improvements” in Chapter 1.

As for the request to provide a study that reflects data in other recent EIRs, it should be recognized that due to the different character of project proposals, the nature and magnitude of impact analyzed would not always be the same.

11- There are no improvements proposed for State Route 13, Tunnel Road, or Ashby Avenue as part of the Caldecott Improvement Project.

12- State Route 13 North terminates in Berkeley and is the shortest route to reach Berkeley from State Route 24. We must include a destination on the overhead signs for State Route 13 North and "Berkeley" is the appropriate message. Omitting the "Berkeley" message from the signs for State Route 13 North would cause motorist confusion, especially for those who planned their trip by consulting a map.

Caltrans does not place signs indicating a street is a residential street with a 25 MPH speed limit.

13-There are no plans to relinquish State Route 13 to the City of Berkeley. Removal of Tunnel Road from published maps and existing websites is beyond the Department’s control.

14- Different maps are designed for different purposes. The purpose of the maps on pages 38 and 39 is to delineate the boundaries of the study areas for community impact, not to illustrate all the streets within the study areas. The map on page 49 is designed to show the general location of areas tested for growth within the region in relationship to the freeways, while the traffic map on page 65 refers to the corridor limits.

15- The additional study areas for community impact were chosen to focus on the areas most affected by traffic as shown by the traffic studies. See the essay on "Project Study Area Boundaries" in Chapter 1 regarding the definition of project study area boundaries. The Claremont, Elmwood, Vicente Canyon, and Hillcrest Ridge neighborhoods cited by CENA as being their primary interest were included in the combined study areas shown in the environmental document and the expected project impacts to these areas were specifically analyzed. For example, see Figures 2.1.1-1, Existing Land Use in the Project Study Area, and 2.1.1-2, Existing Land Use in the Berkeley Study Area, in Section 2.1.1.1, Existing and Future Lane Use.

16- The complications of the boundary between Berkeley and Oakland are acknowledged, but have no relationship to the choice of project study area boundaries. The study areas were picked with respect to likely impacts, based on travel demand model analysis that looked at traffic volumes with and without the fourth bore project. See the essay on "Project Study Area Boundaries" in Chapter 1 concerning the definition of project study area boundaries and the response to #15 above.

17- Please see the essay on "Project Study Area Boundaries" in Chapter 1.

18- As described in the essay on "Project Study Area Boundaries" in Chapter 1, traffic and other impacts will be confined to the study areas, which were defined based on traffic volumes on arterial streets and freeway with and without the project. Consequently, the project area, which is but one of several study areas, does not need to be extended; likewise, the air quality and noise tables do not need to be revised because the study areas have been appropriately defined for the impacts.

FHWA and the Department have determined that the Caldecott Improvement Project will not cause any significant long-term impacts. Real estate values are determined by many factors including transportation facilities. The difference in future traffic with and without the project is slight. The slight increase in traffic brought about by the project would have little, if any, effect on real estate values except that by reducing congestion in the State Route 24 corridor, properties in the project area may be seen as more desirable. Thus no further discussion of property values is needed.

As stated in the text preceding the table, the Berkeley Bowl was listed in Table 2.1.1-1, Major Approved and Active Projects in the Project and Berkeley Study Areas, to show development.

19- Based on public comments, Table 2.1.1-3, Existing Park and Recreational Facilities in the Project and Berkeley Study Areas, has been revised to include the correct location of the Orinda Community Center Park. Section 2.1.1.3, Parks and Recreation, has been revised to note the location of future Orinda ball fields planned to be built by 2009. The proposed project would have a positive effect on these facilities due to improved accessibility. The other community facilities cited in the comment are either private facilities to which the general public has no access or outside of the study areas and would not be substantially affected by the proposed project. The conclusion that long-term impacts to community facilities and public services would be negligible was based on the study of traffic and other impacts anticipated to community facilities that are described in the environmental document, per the requirements of NEPA and CEQA. The study area may vary depending on the type of impact issue; see essay response on "Project Study Area Boundaries" in Chapter 1.

20- As discussed in the previous two comment responses, the long-term changes in traffic due to the proposed project are minimal and not expected to cause substantial impact to any of the community facilities listed on page 57 of the DEA/EIR. None is close enough to the project area to be directly affected by the project construction. The specific air quality and noise effects are discussed in Section 2.2.6, Air Quality, and Section 2.2.8, Noise/Vibrations and do not predict impacts to the listed facilities. In sum, there are no substantial impacts for the schools, cultural facilities, and religious institutions mentioned on page 57, and no table is needed. Because the traffic impacts are minimal, the planned projects cited in the comment would not be substantially affected by the proposed project and would not require mitigation.

21- Please see the essay on "Cumulative Impacts" in Chapter 1.

22- The Contra Costa County and Orinda general plans support a fourth bore on State Route 24. Alameda County, Berkeley, and Oakland plans take no specific position on it, so the proposed fourth bore is not inconsistent consistent with those plans.

The environmental document reflects the responses to comments by the cities of Oakland and Berkeley on data, land use, and all other subject areas of interest to them. Please see the responses to their respective letters. See also response #15, #16, and #18 above on traffic and study area, #19 on land use data and community facilities, and #37 on environmental justice. Also see response to Friends of the Rockridge—Temescal Greenbelt, July 29, 2006, #1-3, on land use and community facilities. No additional consultations are necessary.

Please see the essay on "Methodologies Used for the Impact Assessments/Local Ordinances" in Chapter 1.

23- Noise abatements are considered only at locations where noise impacts are identified within the project study area boundaries. Caltrans has no program to provide noise abatements for areas currently subject to freeway traffic noise, or where there is no new freeway, or reconstruction of an existing freeway.

24- The sound reflecting off walls is a much weaker noise source when blended in with the originating traffic noise. In addition, the sound walls are at greater distances than the freeways to the receivers that would get the reflected noise. The reflective noise would not be detectable in this environment.

With implementation of the measures listed in the essay on "Construction Impacts" in Chapter 1, construction noise is expected to be no louder than the existing typical ambient noise levels at receptors near the east and west construction staging areas.

25- The baseline for evaluating impacts is the environmental conditions that exist at the time the environmental analyses commenced. Using the suggested conditions as the baseline would not be consistent with the methodology established by FHWA and the Caltrans Traffic Noise Analysis Protocol (which ensures compliance with federal noise regulations). Please see the essay on "Cumulative Impacts/Enhancements" in Chapter 1.

26- Please see response #23 above.

27- Caltrans will consult with impacted residents and local agencies and noise abatement measures will be implemented to the extent feasible, although Caltrans is not legally mandated to adhere to local noise standards.

28- Noise impacts are assessed with freeway traffic at its noisiest hour. Due to the transitory nature of noise in single events, they cannot be used as the basis for evaluation or design, although abatement measures designed for the noisiest hourly traffic would alleviate noise in single events as well.

29- Within the limits of the project the BART tracks are underground so there is no abatement that this environmental document could possibly commit to.

30- The decision to repave the roadway with a quieter pavement will be based on the roadway surface's need for rehabilitation, in conformance with the Caltrans' pavement rehabilitation strategy. Should the Caltrans determine that repaving is required for maintenance purposes, open-graded asphalt pavement will be considered. Restriction of Jake brakes is a joint decision of the local entities within the State Route 24 corridor and the California Highway Patrol. Caltrans does not have the authority to unilaterally set restrictions and cannot commit to them within this environmental document. Likewise, the regulation of vehicle equipment involves several agencies and likely a legislative process and is outside the scope of this environmental document. Caltrans will provide landscaping to the extent possible.

Traffic noise is at its highest when vehicles are moving at relatively high speed. On arterial streets that are currently experiencing congestion on a daily basis, future growth in traffic may heighten the level of congestion, but would not raise traffic noise above the highest level already in existence.

31- Please see the essay on "Scope of the Project" in Chapter 1.

32- The Port of Oakland has done trucking studies in the past to investigate the routes taken by trucks carrying goods to and from the port. These studies show that a very small proportion of trucks use State Route 24. This truck traffic is concentrated either taking Route 880 northbound to 80 then eastward or Route 880 southbound to Route 238 to Route 580 then on east. (Phone Conversation between Phillip Cox, Caltrans Traffic Modeling and Forecasting Branch Chief, and Steve Gregory of Port of Oakland, 10/2/06)

33- Comment noted.

34- Prohibiting truck travel on residential streets is not under Caltrans' authority.

35- Noise emission limits for construction equipment will be established and engine idling times will be limited. These will be included in the specifications for the contractor. Because the project specifications will prohibit staging of construction equipment or vehicles on local streets, idling of equipment/vehicles in close proximity to residences will not be a concern. The noise levels adjacent nearby residences associated with idling construction equipment within the construction staging areas will not exceed ambient noise levels because either 1) the proposed temporary sound wall along Caldecott Lane will minimize the transmission of such noise or 2) the noise will naturally attenuate prior to reaching any residences.

36- Regarding information on the impact of construction trucks on arterial streets please see the essay on "Construction Impacts" in Chapter 1. In regards to induced traffic, please see response #2 on the essay "Traffic Modeling/Forecasting" in Chapter 1.

37- The analysis was performed consistent with EO 12898 regarding environmental justice. Based on Census data and as reported in Section 2.3.1.4, Environmental Justice, the populations adjacent to State Route 24 do not qualify as environmental justice communities based on higher than average proportions of ethnicity and/or low income. The expanded community impact study for Berkeley does contain higher percentages of ethnic minority (about 10% more) and low-income (about 3-4% higher) populations than does the City of Berkeley as a whole; however, increases in traffic congestion in the Berkeley study area were small, on the order of 0.4% increase in vehicle miles traveled. Because these traffic impacts did not constitute substantially adverse effects in any location, there is no potential for disproportionately high adverse effects on any minority or low-income populations within the study area.

38- The Preferred Alternative (Alternative 2N) of this project is included in the 2007 Transportation Improvement Program (TIP) (which conforms to the State Implementation Plan (SIP)) and the 2005 Regional Transportation Plan (RTP), and thus is in conformance with all related federal air quality requirements. Since air pollution is a regional issue, it is addressed through a statewide process (the State Implementation Plan). The plan was designed to address the issues that the commenter has stated.

39-There are no plans for the Department to sign a Freeway Performance Agreement with the cities of Berkeley or Oakland for the Caldecott Improvement Project. The Department will work with these cities and the Alameda County Congestion Management Agency to ensure that appropriate mitigation measures for impacts reported in the environmental document are implemented. Freeway Agreements are required when a Caltrans project or action entails the closure, alteration or otherwise similarly affects a city or county road. (Sts & Hwy Code secs. 100.2, et. seq.)

40- The project will not have adverse effects on microscale particulate levels since actual non-truck vehicle emissions of particulates are believed to be small and the number of heavy duty diesel trucks, the largest contributor to airborne particulates, will not be increased by the project. In regards to vehicle speeds, the setting of speed limits is a joint decision of the local entities within the State Route 24 corridor and the California Highway Patrol. Caltrans does not have the authority to unilaterally set limits and cannot commit to them within this environmental document. Currently there is no plan to charge for trips through the tunnel, so allowing free trips for hybrids is not a possibility.

41- The comment is noted, Caltrans will work with other agencies to the extent possible to lower the risks of diesel emissions. In regards to the restriction of diesel trucks, such restrictions need to be a joint decision of the local entities within the State Route 24 corridor and the California Highway Patrol. Caltrans does not have the authority to unilaterally set these and cannot commit to them within this environmental document.

42- The Preferred Alternative (Alternative 2N) of this project is included in the 2007 Transportation Improvement Program (TIP) (which conforms to the State Implementation Plan (SIP)) and the 2005 Regional Transportation Plan (RTP), and thus is in conformance with all related federal air quality requirements. The SIP is designed to be protective of human health.

Caltrans is not legally mandated to adhere to standards established by local agencies.

43- Telecom companies can apply to place their lines through the Caldecott Tunnels using the State's Encroachment Permit process.

44- Caltrans is currently developing the architectural and aesthetic treatments for the east and west portals, electrical equipment buildings, the Operations and Maintenance Center (OMC) sound walls and retaining walls. Although currently in the conceptual stage, facility design will be based on the premise that the appearance of the entire complex should be unified and share some of the common Art Deco forms of the existing structures. Computer simulations of the proposed facilities and more detailed discussion are included in section 2.1.6 Visual /Aesthetics of the Final EA/EIR.

Residents of the Parkwoods condominium complex collectively preferred Option B, i.e. 2.4-meter (8-foot)-high soundwall on top of a variable 6-meter (19-foot)-high berm. Caltrans considers this option as being the preferred alternative and is moving forward in developing aesthetic wall treatments.

45- The local jurisdictions, such as the local fire department, ambulance services and police, are responsible for responding to any emergencies. Caltrans will facilitate "coordinated" emergency responses by closely working with all local jurisdictions during an event. Caltrans will also make every effort to maintain local access via its facilities. Caltrans has various emergency response plans in place, and periodically performs "emergency response mock drills" with various local entities, such as the MTC. As part of the coordinated effort with local jurisdictions, if required, Caltrans will close portions of the tunnel to provide emergency vehicle access only. Caltrans does not prepare and maintain emergency response maps or escape routes for each local jurisdiction, within the local boundaries. However, Caltrans will coordinate and support the local plans and emergency responses by maintaining access via its facilities.

46- The Department has no plans to request written statements of need from the emergency service providers using State Route 24. The lifeline criteria require that the designed lifeline route be open to emergency vehicles within 72 hours after a major event that requires the closure of the route. There is no need to designate lanes for emergency vehicles to meet the performance criteria for a lifeline route. Currently, the Oakland and Orinda Fire Departments and other emergency response vehicles may respond using the reverse lane. Since the proposed fourth bore of the Caldecott will have a 10-foot shoulder, emergency vehicles will have better access through the tunnel, and therefore should be able to respond to emergencies in less time.

47- The tunnel is being designed to meet seismic standards specified for lifeline facilities. Such facilities are required to be clear for emergency vehicle traffic 72 hours after a major earthquake.

48- See response #45 above.

There are no known "high risk" utilities existing within the project study area boundaries. During a natural or man-made disaster, as part of the utility encroachment agreement with the State, the utility owners are required to report to the site immediately after an event and be responsible for securing the site to safety. This response and the responsibility is the same throughout the State Highway System.

49- Please see the essay on "Construction Impacts" in Chapter 1.

50- For a proposed footprint of the staging areas, please see Volume I, Chapter 2, Figures 2.4.2-1, 2.4.2-2, and 2.4.2-3. Tunnel excavation activities will take place in the staging areas. Equipment storage, vehicle storage, batch plant location, contactor and state employee trailers will also be utilizing these staging areas within the state right-of-way.

51- All projects listed are not expected to be constructed at the same time and are diffuse in their locations. As such there is no need to cooperate with these other projects.

52- The construction specifications will prohibit the use of public streets for storing of construction equipment. In addition, the contract specifications will prohibit parking of construction worker vehicles and the staging of trucks on Caldecott Lane.

53- Depending on the stage of construction, the number of workers working at each staging area will range between approximately 10 to 30 per shift.

54- The construction specifications will prohibit construction workers from parking on nearby streets and will stipulate that the Contractor shuttle workers to the site from remote parking locations.

55- Workers will eat meals and take breaks on the construction site.

56- Please see the essay on "Construction Impacts" in Chapter 1.

57- Loading of the highway trucks that will remove the excavated material from the site will be performed outside the tunnel because given the limited space within the tunnel, this operation would have an adverse impact on other tunnel construction activities. Off hauling of excavated material will occur only during daylight hours to help mitigate the noise impacts associated with this operation.

58- Strobe lights or flag persons will be used in lieu of backup alarms at night. Screening of the strobe lights for all residences will not be possible given the topography adjacent to the construction staging areas. However, the temporary noise barrier adjacent to Caldecott Lane will help screen nearby residences from the strobe lights.

59- The ventilation fans used during construction will be enclosed in a sound dampening structure to help mitigate noise associated with this equipment. Air compressors will be subject to the noise limitations that will be stipulated in the contract specifications.

60- Please see the essay on "Construction Impacts" in Chapter 1.

61- Streets immediately adjacent to construction sites will be swept on a regular basis. No shotcrete spills are expected to occur offsite. Should shotcrete spills occur, the contract specifications will require the spill to be cleaned up immediately.

62- Parkwoods residences will not be exposed to excessive dust. Dust filtration machines are not necessary. In addition to Caltrans standards dust abatement measures, the BAAQMD recommendations for dust mitigation will be used to the extent possible. With the implementation of these measures, any construction air quality impacts will be less than significant.

63- Construction staging areas will be wet down on a regular basis. No runoff will occur as a result of this planned wetting down of the construction staging areas. However, runoff could occur during storms and this runoff will be treated in accordance with the project specific Storm Water Prevention Plan. Spoil piles will also be wetted down to control dust prior to removal of the spoils. Street sweeping will be performed on a regular basis to clean up dirt tracked onto local streets.

64- The contract specifications will require that all construction equipment be properly maintained such that pollution control devices are functioning properly.

65- Noise emission limits for construction equipment will be established and engine idling times will be limited on local streets. These will be included in the specifications for the contractor. Because the project specifications will prohibit staging of construction equipment or vehicles on local streets, idling of equipment/vehicles in close proximity to residents will not be a concern. The noise levels adjacent nearby residences associated with idling construction equipment within the construction staging areas will not exceed ambient noise levels because either 1) the proposed temporary sound wall along Caldecott Lane will minimize the transmission of such noise or 2) the noise will naturally attenuate prior to reaching any residences.

66- Absorptive materials are used on sound walls in certain situations to lessen reverberation between walls. Those conditions are not present in this project. Hypothetically, a perfect surface that can reflect 100% of the sound energy would raise the noise level by 3dBA. In a real situation, the sound reflecting off the walls is much weaker than the originating traffic noise and would be masked by it. The reflective noise would not be detectable in this environment.

67- Waste soils cannot be placed in defined environmentally sensitive areas, and when they are reused within a highway construction project, waste soils are isolated under several feet of "clean" soil or under pavement, thereby precluding exposure of the material to the environment. Please also see response #71 below.

68- All trucks hauling material offsite will be covered.

69- The Contractor will be responsible for selecting the disposal site and therefore the Contractor will select the route to the disposal site. However, contract specifications will prohibit disposal trucks from using Tunnel Road, Claremont Avenue and College Avenue.

70- The contract specifications will require that the mufflers on the disposal trucks are functioning properly.

71- Site investigations will screen for all contaminants whose presence is suspected. For example, polychlorinated biphenyls (PCBs) are suspected if electrical equipment, such as transformers, are thought to have been in a particular area. Obviously, with the past use of leaded gasoline and the resulting exhaust from vehicles, lead is a primary contaminant of concern alongside nearly all freeway facilities.

Please see the essay on "Construction Impacts" in Chapter 1.

72- Caltrans is not legally mandated to abide by local noise ordinances, however, an analysis was done on the ambient noise levels and measures will be taken to abate the noise below the ambient at affected residences. Blasting during nighttime hours will be prohibited and charges will be limited to avoid any damage to local residences. Prior to any blasting a survey will be done to identify properties that would potentially be affected by the blasting and monitoring of those properties will be done.

73- Caltrans personnel will be available to meet with members of the community. In order to coordinate with those in close proximity to the project site, Caltrans will implement a construction information/community outreach program. There will be a construction public information phone number for community members to call to ask questions, voice concerns or to make a comment. A project website with construction information will also be updated on a regular basis. The Caltrans construction Resident Engineer (RE) will coordinate closely with the Contractor to ensure there are responses to comments/concerns, and to make sure that the Contractor is following contract requirements to mitigate and/or abate and minimize construction impacts. The Contractor will be required to implement abatement procedures and to work closely with the RE to minimize disturbance to the community.

74- The tunnel is being designed to the latest seismic standards. Retrofits to existing bridges within the project study area boundaries are not included in this project. This project is separate from retrofit projects that BART has planned.

75- The seismic motions used for the design of the fourth Bore are very similar to the seismic motions that are being used in the seismic retrofit of the BART tubes.

76- Additional information regarding the Claremont Tunnel Seismic Upgrade Project has been added to the FEA/EIR.

77- Tunnel excavation will utilize New Austrian Tunneling Method (NATM). The nature of tunnel construction necessitates around the clock construction activity to control cost and schedule. When constructing a tunnel, construction work can proceed only in limited areas. For example, tunnel excavation can only occur at one location for each portal. Because of this limitation, the cost and schedule of a tunnel project will increase dramatically if the hours of construction are limited. In addition when the advance of a tunnel is delayed, additional support measures are required to assure that the face of the tunnel remains stable. Under the current plan, which involves tunnel construction 5 days per week, 24 hours per day, these additional support measures will be required only over the weekend. However, if tunnel construction were limited to one shift per day, these additional support measures would have to be installed every day, which would have significant cost implications. The estimated duration for the work hours for each major stage of construction is summarized by Activity, Duration, and Shifts: Mobilize/Portal Development - 8 months, 10 hour shifts. Tunnel Excavation - 18 months, 24 hour shifts. Final Lining - 8 months, 10 hour shifts. Tunnel Systems - 7 months, 10 hour shifts. Tunnel Approaches - 7 months, 10 hour shifts. Other activities-6 months. The schedule does not include risks, and the contractor could elect to work more shifts. The project duration would be lengthened by approximately 14 months if tunnel construction were performed only from the east portal and the majority of this added schedule would be 24 hour per day tunnel excavation. The proposed start date of construction is June 2009. The proposed end date is December 2013.

78- Please see the essay on "The Environmental Process; Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) Versus an Environmental Assessment/Environmental Impact Report (EA/EIR); and Criteria for Significance" in Chapter 1.