

**FIRST ADDENDUM TO THE
SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT
FOR THE OAKLAND ARMY BASE AUTO MALL
PROJECT**

STATE CLEARINGHOUSE NUMBER: #2006012092

**ADDRESSING PROJECT CHANGES RELATED TO SITE LAYOUT AND
ADDITIONAL INFORMATION ON TRAFFIC AND WASTEWATER**

**PREPARED FOR:
CITY OF OAKLAND**

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GENERAL PROJECT INFORMATION

PURPOSE

This Addendum analyzes project changes to site layout under the existing framework of the Oakland Army Base Auto Mall SEIR and provides additional supporting information for traffic and wastewater.

SUBJECT

The first Addendum to the Supplemental Environmental Impact Report for the Oakland Army Base Auto Mall Project (SCH# 2006012092) certified 12/06/06.

CASE NUMBER

City of Oakland ER06-002

LEAD AGENCY

City of Oakland
Community and Economic Development Agency (CEDA)
250 Frank H. Ogawa Plaza, Suite 3315
Oakland, CA 94612

PROJECT TITLE

First Addendum to the Oakland Army Base Auto Mall Project Supplemental Environmental Impact Report Addressing Project Changes Related to Site Layout and Additional Information on Traffic and Wastewater.

PROJECT LOCATION

The Project is located on an approximately 30-acre site at the former Oakland Army Base (OARB) and within the OARB Redevelopment Area, bounded by West Grand Avenue on the south, by the Union Pacific Railroad right-of-way on the east, and by the EBMUD main wastewater treatment facility to the north. The site is specifically described as the North Gateway Development Sub-area (“North Gateway”). See location map, **Figure 1**.

SEIR ADDENDUM PROJECT DESCRIPTION

The proposed project involves allowing for use of the North Gateway portion of the Redevelopment Plan Area (approximately 30 acres) for automobile dealerships, with plans to develop 6 separate, approximately 2 to 6-acre sites into automobile dealerships plus associated roadways and infrastructure improvements.

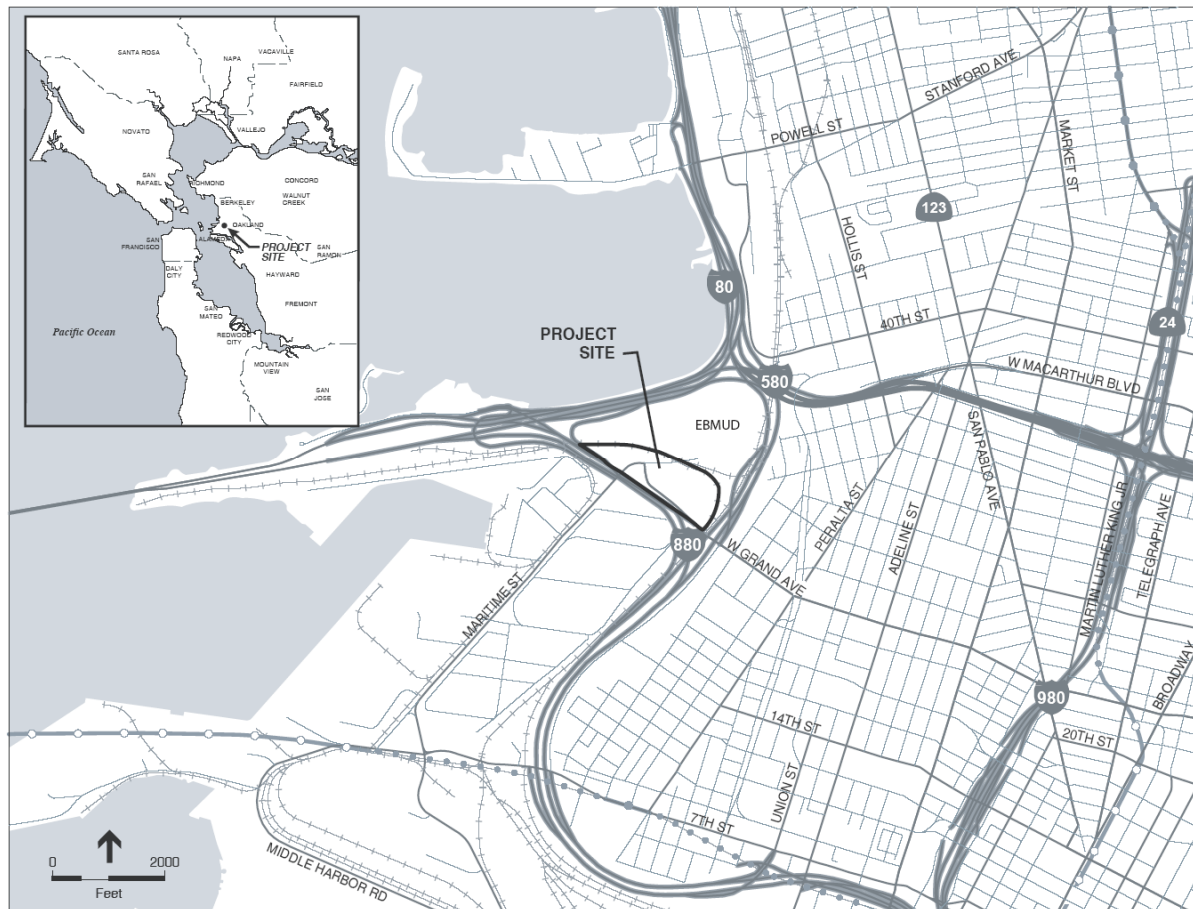


Figure 1: Project Location

PREVIOUS ENVIRONMENTAL REVIEW

The EIR for the Oakland Army Base Redevelopment Area Redevelopment Plan and Reuse Plan (OARB Redevelopment EIR, SCH #2001082058) was certified by the City of Oakland and the Oakland Base Reuse Authority in July of 2002. It was subsequently and independently adopted by the Port of Oakland in September of 2002 and also independently adopted by the City of Oakland Redevelopment Agency in October of 2002.

A Supplemental Environmental Impact Report (SEIR) for the Oakland Army Base Auto Mall Project (Auto Mall SEIR) was certified by the City of Oakland in December 2006 (SCH# 2006012092).

These documents are available at the Planning Division office or at the following website link:

<http://www.oaklandnet.com/government/ceda/revised/planningzoning/MajorProjectsSection/environmentaldocuments.html>

DETERMINATION

The City of Oakland has made the following determinations leading to preparation of this Addendum rather than a Supplemental or Subsequent EIR:

APPLICABLE	NOT APPLICABLE	STATEMENT
	<input checked="" type="checkbox"/>	Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
	<input checked="" type="checkbox"/>	Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects
		New information of substantial importance, which was not known at and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
	<input checked="" type="checkbox"/>	The project will have one or more significant effects not discussed in the previous EIR or negative declaration.
	<input checked="" type="checkbox"/>	Significant effects previously examined will be substantially more severe than shown in the previous EIR.
	<input checked="" type="checkbox"/>	Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce on or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative.
	<input checked="" type="checkbox"/>	Mitigation measures or alternatives which are considerable different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative
	<input checked="" type="checkbox"/>	If any of the above items are applicable to the current situation, the City must find that a Subsequent or Supplemental EIR should be prepared.
<input checked="" type="checkbox"/>		If some changes or additions to the original EIR are necessary but none of the above items that would warrant preparation of a Subsequent or Supplemental EIR are applicable, an Addendum should be prepared pursuant to CEQA Guidelines Section 15164.

The City of Oakland recognizes that this EIR Addendum incorporates information obtained and produced after the SEIR was certified and that this Addendum contains additions, clarifications and other minor modifications. The City has reviewed this Addendum as well as the SEIR and has concluded that this Addendum does not add significant new information to the SEIR that would require preparation of a Supplemental or Subsequent EIR under CEQA. The new information added to the SEIR with this Addendum does not involve a new significant environmental impact, a substantial increase in the severity of a previously identified environmental impact, or a feasible mitigation measure or alternative considerably different from others previously analyzed that the project sponsor declines to adopt and that would clearly lessen the significant environmental impacts of the project. There is no information to indicate that the SEIR was inadequate or inconclusive, or that the public was deprived of a meaningful opportunity to review and comment on the SEIR.

Based on the above, the City finds that the additions, clarifications and minor modifications to the SEIR presented in this Addendum do not individually or collectively constitute cause to prepare a Subsequent or Supplemental EIR under CEQA Guidelines Sections 15162 or 15163.

Approved by: _____

Date: _____

Claudia Cappio

Director of Community and Economic Development Agency

City of Oakland

INTRODUCTION

PURPOSE OF THE ADDENDUM

This document is the First Addendum (“Addendum”) to the Supplemental Environmental Impact Report (SEIR) for the Oakland Army Base Auto Mall Project (SCH# 2006012092) prepared for the City of Oakland by Lamphier-Gregory and sub-consultants Dowling Associates (traffic section only). This Addendum assesses project changes relating to site layout and access to the neighboring EBMUD property under the existing framework of the Oakland Army Base Auto Mall SEIR and provides additional supporting information for traffic and wastewater. The additions, clarifications and minor modifications addressed in this Addendum do not change the original conclusions of the SEIR nor would they be considered conditions that would trigger the requirement to prepare a subsequent EIR (as outlined in CEQA Guidelines section 15164).

BACKGROUND AND CONTEXT

In 1995, the Base Realignment and Closure (BRAC) Commission recommended closure and realignment of the Oakland Army Base (OARB). The Oakland Base Reuse Authority (OBRA) was formed and designated as the Local Reuse Authority primarily responsible for negotiating conveyance of the Base from the Department of the Army, and for implementing the plan for reuse. On July 11, 2000, the City adopted and approved, via Ordinance No. 12259 C.M.S., the *Redevelopment Plan for the Oakland Base Redevelopment Project* (“Redevelopment Plan”, City of Oakland 2000), and established a Redevelopment Project Area. The Redevelopment Plan provides the Oakland Redevelopment Agency (ORA) with powers, duties, and obligations to implement and further a program of redevelopment, rehabilitation, and revitalization of the redevelopment area as broadly defined in the Plan.

While the Redevelopment Plan includes the OARB, the OARB is only a part of the Redevelopment Area. As a separate component of the Redevelopment Plan, the OBRA published the *Final Reuse Plan for the Oakland Army Base* (“Reuse Plan”, Oakland Base Reuse Authority April 2001, as amended in July 2002) as a plan for reuse of the Base. The Reuse Plan provides an estimate of buildout of the former OARB by 2020. The Reuse Plan involves replacing existing uses within the OARB, some in derelict condition, with a variety of new uses termed the “Flexible Alternative” which included office/research and development, light industry, warehouse/distribution and retail use.

The Environmental Impact Report for the Oakland Army Base Redevelopment Area Redevelopment Plan and Reuse Plan (“OARB Redevelopment EIR”) was certified by the City and OBRA in July of 2002 and subsequently independently adopted by the City of Oakland Redevelopment Agency in October of 2002 (SCH# 2001082058).

In 2006, a Supplemental Environmental Impact Report (SEIR) was prepared to analyze the potential changed impacts of developing an Auto Mall on a portion of the OARB. Auto Mall land uses were not specifically anticipated in the OARB Reuse Plan or the OARB Redevelopment EIR. Implementation of an Auto Mall project would require amendments to the Reuse Plan and could potentially result in different environmental impacts than were analyzed in the OARB Redevelopment EIR. Specifically, Auto Mall land uses could result in higher levels of traffic than assumed under the previous OARB Redevelopment EIR, and some of the assumptions regarding development of the surrounding areas had changed. Therefore, it was determined that the Auto Mall Project would meet the circumstances requiring a Supplemental EIR to be prepared to address the topic areas of traffic and air quality.

The Supplemental Environmental Impact Report for the Oakland Army Base Auto Mall Project (“SEIR”) was prepared by the City and certified in December 2006 (SCH# 2006012092).

As a result of project changes subsequent to certification of the SEIR relating to site layout and EBMUD access options, it was determined that an addendum should be prepared, which would also include additional information on traffic and wastewater.

PROJECT DESCRIPTION

SEIR AUTO MALL PROJECT DESCRIPTION

The Project proposed in the SEIR involved allowing for use of the North Gateway portion of the Gateway Development Area (approximately 30 acres) for automobile dealerships, with plans to develop four or five separate, approximately 5-acre sites into four or five automobile dealerships plus associated roadways and infrastructure improvements. The Final SEIR also included an analysis of a “Compact Design Alternative” for the North Gateway subarea that would allow greater economic and job activities within the same area ¹ (see **Figure 2**).

¹ This SEIR Alternative also included partial AMS uses in the expanded Option B area. The full name of this alternative including the project area and the expanded Option B area was “Partial AMS and Compact Design Alternative” discussed on pages 8-7 to 8-11 of the Final SEIR. This addendum is focusing only on the Project area, not the expanded Option B area and so discusses only the “Compact Design Alternative”.

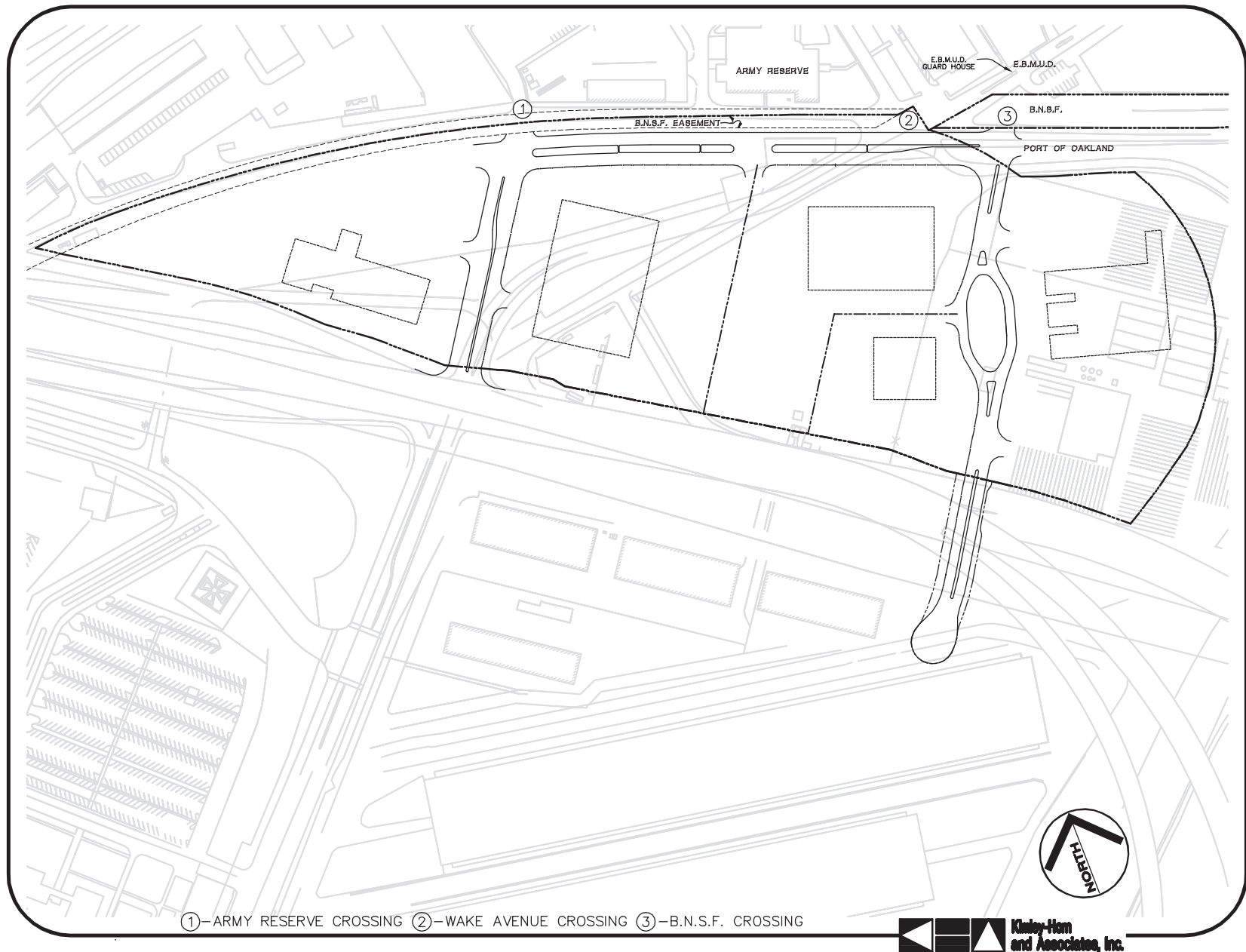


Figure 2: SEIR Compact Design Alternative with Mitigated EBMUD Driveway

SEIR ADDENDUM PROJECT DESCRIPTION

At this time, City staff is recommending that the Redevelopment Agency consider approval of an Auto Mall project that is generally consistent in its layout and design with the Compact Design Alternative as presented in the Final SEIR. The current staff-recommended Auto Mall Project (see Chapter 2: Project Description) has a total of 6 separate automotive dealerships with sales and service operations on separate parcels of approximately 2 to 6 acres each. The buildings within each parcel may be up to four stories in height and may include small auxiliary restaurant uses. The total building square footage for the Auto Mall would remain at approximately 390,000 square feet. This recommended Project includes the possibility of a modified traffic circle or median, subject to the approval of the City of Oakland's Transportation Services Division. Additional details to formalize shared access to the Auto Mall parcels and limit driveways have been included.

Additionally, the SEIR Addendum Project Description and its analysis in the following Traffic chapter of this Addendum includes greater detail regarding roadway designs and options for providing access to the neighboring EBMUD facility to ensure reasonable and safe access.

SCOPE OF THE ADDENDUM

This Addendum includes additions, clarifications, and modifications to the Oakland Army Base Auto Mall SEIR in response to changes in the project layout and EBMUD access options and additional information relating to traffic and wastewater.

TRANSPORTATION AND CIRCULATION

This Addendum reiterates traffic assumptions made in the SEIR and provides additional supporting data and analysis to confirm conclusions drawn in the SEIR that there will be less than significant traffic and circulation-related impacts. This includes more in-depth data regarding existing and projected conditions at the EBMUD access intersection including truck stacking and rail usage.

While the SEIR identified one option for a possible intersection configuration that would address the potential design hazards at the EBMUD access intersection, other possible intersection design options are now being considered that may be more feasible while still addressing potential design hazards. This Addendum analyzes the proposed intersection designs to ensure that, like the design option presented as a mitigation measure in the SEIR, they would reduce potential impacts related to design hazards at this intersection to a less than significant level.

WASTEWATER

EBMUD has raised concerns about the plan for wastewater. The overall plan and its impacts were unchanged from the original OARB Redevelopment EIR so wastewater was not further studied in detail in the SEIR. The analysis and conclusions from the OARB Redevelopment EIR have been reiterated in this Addendum and supporting data presented to confirm consistency with the original plan and conclusions. While not legally required, clarification of these plans will be presented and analyzed to ensure they will not cause changes in the project's already identified less-than-significant impacts.

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PROJECT DESCRIPTION

SEIR PROJECT DESCRIPTION

SEIR PROJECT DESCRIPTION – SITE LAYOUT AND DESIGN

The Project proposed in the SEIR involved allowing for use of the North Gateway portion of the Redevelopment Plan Area (approximately 30 acres) for automobile dealerships, with plans to develop four or five separate, approximately 5-acre sites into four or five automobile dealerships plus associated roadways and infrastructure improvements.

SEIR COMPACT DESIGN ALTERNATIVE – SITE LAYOUT AND DESIGN

The SEIR also included an analysis of a “Compact Design Alternative” for the North Gateway subarea that would allow greater economic and job activities within the same area. The Compact Design Alternative would add an additional dealership in the North Gateway, for a total of five or six separate automotive dealerships with sales and service operations on five or six separate parcels of approximately two to six and a half acres each. To accommodate the dealerships on smaller sized parcels, the buildings could have smaller footprints than those proposed in the original Auto Mall Project and could be taller, up to four stories compared to the maximum two stories anticipated under the Project. Despite the addition of one dealership, the total building square footage for the automotive dealers under this alternative would remain unchanged. This alternative also included the possibility of a modified traffic circle or median, and could also include small auxiliary restaurant uses that would be targeted to employees and customers of the Auto Mall. The SEIR found that the Compact Design Alternative with potentially smaller parcels and taller buildings would have similar environmental impacts as compared to the original Auto Mall Project. The SEIR Compact Design Alternative is shown in **Figure 2** (at the end of Chapter 1).

SEIR CIRCULATION PLAN

Under either the SEIR Project or the Compact Design Alternative, access to the dealership sites would be provided via new road construction. Existing Wake Avenue, which bisects the North Gateway in a northeast/southwest direction, would be abandoned. Existing Maritime Street from south of West Grand Avenue would be extended northerly from the intersection of West Grand Avenue. The North Gateway Access Road (or “North Access Road”) would then continue at an approximately right angle to the east and then as the East Gateway

Access Road (or “East Access Road”) after another right angle to the south. This road would carry traffic and provide access to auto dealership sites in the North Gateway. The access road would end in a cul-de-sac near the raised portion of West Grand Avenue.

To the north of the North Gateway is the EBMUD wastewater treatment facility. EBMUD access to this site is currently via Wake Avenue, which crosses the existing railroad spur track and becomes the EBMUD main entrance. As presented in the SEIR as a discussion under Impact Traf-3 (p.3-24):

“The angle of the [existing] EBMUD driveway as it would connect to the new North Gateway Access Road appears to be between 30 and 35 degrees – a very acute angle. Good design practice requires intersection angles to be as close to 90 degrees as practicable. Otherwise, safety may be compromised. Acute angles at intersections and driveways are typically associated with higher than normal collision rates. The acute angle could obstruct the line of sight of motorists exiting the driveway who would essentially have to look over their shoulder to see oncoming traffic. This could result in conflicts with oncoming traffic or might cause exiting traffic to stop suddenly, resulting in rear-end collisions. The acute angle also would create a wide driveway that would not provide adequate access control. The driveway angle would make right turning movements into the driveway difficult.”

This access design was identified as a **potentially significant** impact. To address this **potential** impact, the SEIR recommended the mitigation measure below:

“**Traf-3:** The Project Sponsors shall work with the property owners to develop an access design that provides adequate levels of safety.

- **One option** [emphasis added] would be to relocate the EBMUD driveway to connect as the north leg of the North Access Road/East Access Road intersection. If the driveway were relocated, the North Access Road/ East Access Road intersection would operate in compliance with the City’s level of service standards with all-way stop traffic control.

Design plans for the project and all public facilities shall be consistent with City standards and are subject to the approval of the City of Oakland Transportation Services Division.

Phasing of the demolition of Wake Avenue and construction of the Maritime Street extension and North Access Road must occur such that reasonable access to the EBMUD facilities is maintained at all times.”

A preliminary design of this access option is shown in **Figure 2**, combined with the SEIR Compact Design Alternative. This mitigation measure was found to reduce potential design hazard impacts to a less than significant level.

ADDENDUM PROJECT DESCRIPTION

SITE LAYOUT AND DESIGN

At this time, City staff is recommending that the Redevelopment Agency consider approval of an Auto Mall project that is generally consistent in its layout and design with the Compact Design Alternative as presented in the Final SEIR. The current staff-recommended Auto Mall Project has a total of 6 separate automotive dealerships with sales and service operations on 6 separate parcels of approximately 2 to 6 acres each. The buildings within each parcel may be up to four stories in height and may include small auxiliary restaurant uses. The total building square footage for the Auto Mall would remain at approximately 390,000 square feet. This recommended Project also includes the possibility of a modified traffic circle or median and formalizes shared access to the dealerships to limit driveways. The SEIR Addendum Project Description is shown on **Figure 3**.

Internal reconfiguration of the lots is possible to accommodate final dealership plans but will substantially conform to the project description. Lot reconfiguration could lead to slight shifting of the driveways from that shown in Figure 3. Access to/from these driveways will be shared among the dealerships in the central lots (those labeled Lots 2, 3, 4 and 5 in Figure 3) and will be limited to one on the western boundary with the Maritime Street extension, one on the northern boundary with the North Access Road, and one on the eastern boundary with the East Access Road. To simplify traffic movements, turning movements will be limited to right in/right out only for three of the Auto Mall driveways, as indicated on Figure 3, but otherwise it is anticipated no other turning movements will be prohibited. The specific location of driveways and final designs of the roadways are subject to approval of the City of Oakland's Transportation Services Department.

CIRCULATION PLAN AND EBMUD ACCESS OPTIONS

The SEIR Addendum Project Description includes more detailed design options for providing access to the neighboring EBMUD facility to ensure reasonable and safe access.

While the SEIR identified one optional intersection configuration as mitigation to address the **potential** design hazards at the EBMUD access intersection, other possible intersection design options are now considered as more feasible. These other possible options are shown in **Figure 4: EBMUD Access - Dedicated Left Turn Lane Option** and **Figure 5: EBMUD Access - Left Turn Pocket Option**. The following Traffic chapter of this Addendum includes analysis of these options for providing access to the neighboring EBMUD facility to ensure reasonable and safe access.

A small portion of the planned North Access Road encroaches into a parcel currently owned by the Port of Oakland (the northeastern bend in this road). While negotiations are underway to allow for construction on this parcel (likely involving a land swap between the City and the Port), an alternative roadway alignment that would not involve rights to build on this Port-owned parcel has been presented and analyzed in this Addendum, as shown in **Figure 6: Non-Port-Dependent Roadway Alignment Option**. In the event negotiations fall through or cannot be finalized in the timeline of the Auto Mall project, this roadway alternative would be considered. This alternative alignment of the North Access Road is an option independent from the EBMUD access options shown in Figures 4 and 5, and could be used in conjunction with either of these access options.

Additionally, the current ownership status of Wake Avenue has been clarified. Wake Avenue had been discussed in the Final SEIR as a private road, yet portions of this private road (particularly where it crosses the railroad tracks) overlap with public right-of-way. A portion of Wake Avenue aligns with the 34th Street public right-of-way at the railroad crossing just south of EBMUD main entrance, as shown in **Figure 7**. However, the entirety of Wake Avenue is a more circuitous route that does not wholly align with the public right-of-way nor does it meet city standards for public streets. Clarification of the issue of ownership does not change any impacts identified under the OARB Auto Mall SEIR, or the mitigation which specifies that the final design of the roadway and intersection with EBMUD access must provide adequate levels of safety, meet city standards, and that reasonable access to the EBMUD facilities must be maintained at all times. A separate process for street vacation of all or part of the 34th Street Easement (and thereby Wake Avenue) will need to be undertaken by the City, pursuant to the Streets and Highways Code.

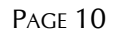


Figure 3: Addendum Project Description

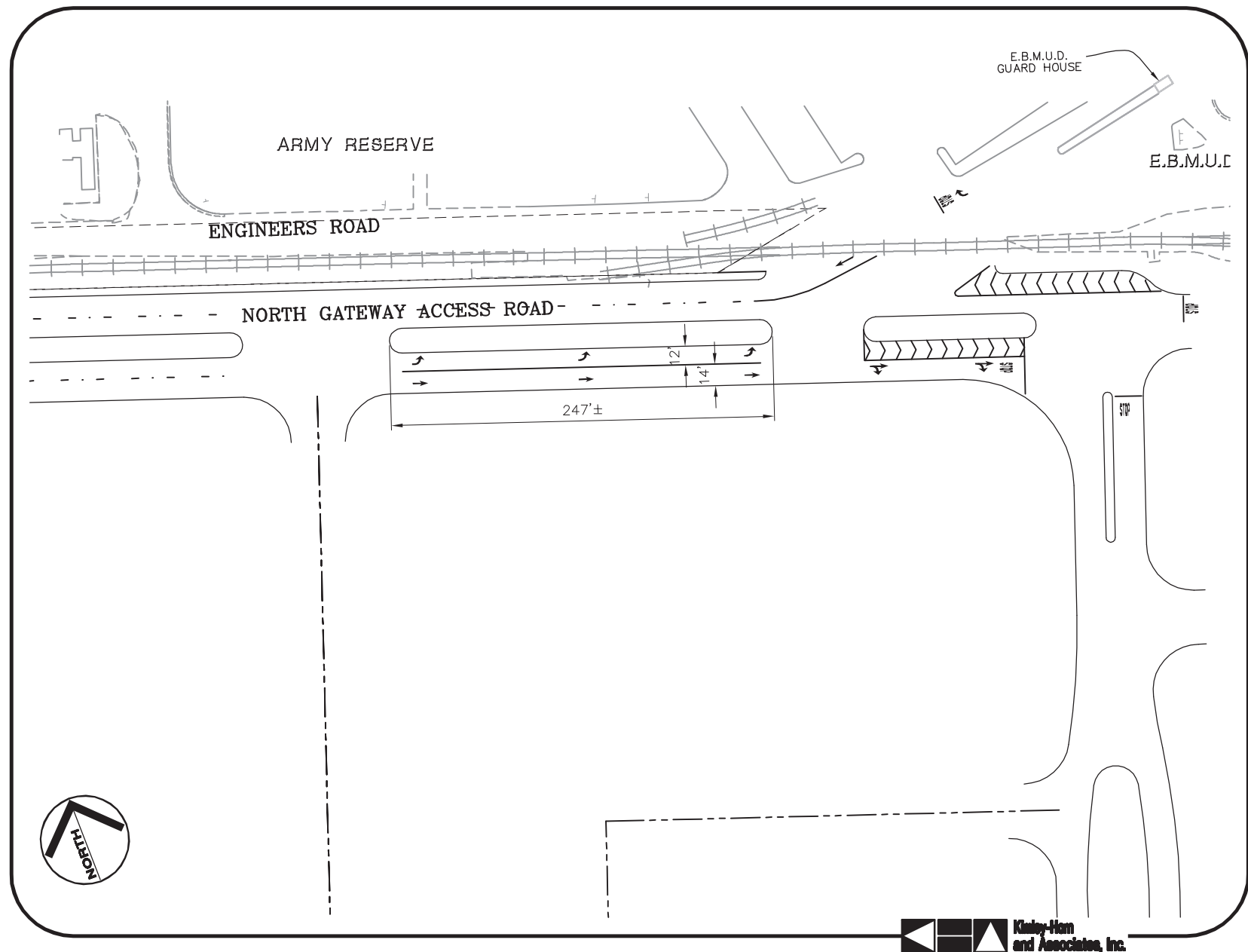


Figure 4: EBMUD Access - Dedicated Left Turn Lane Option

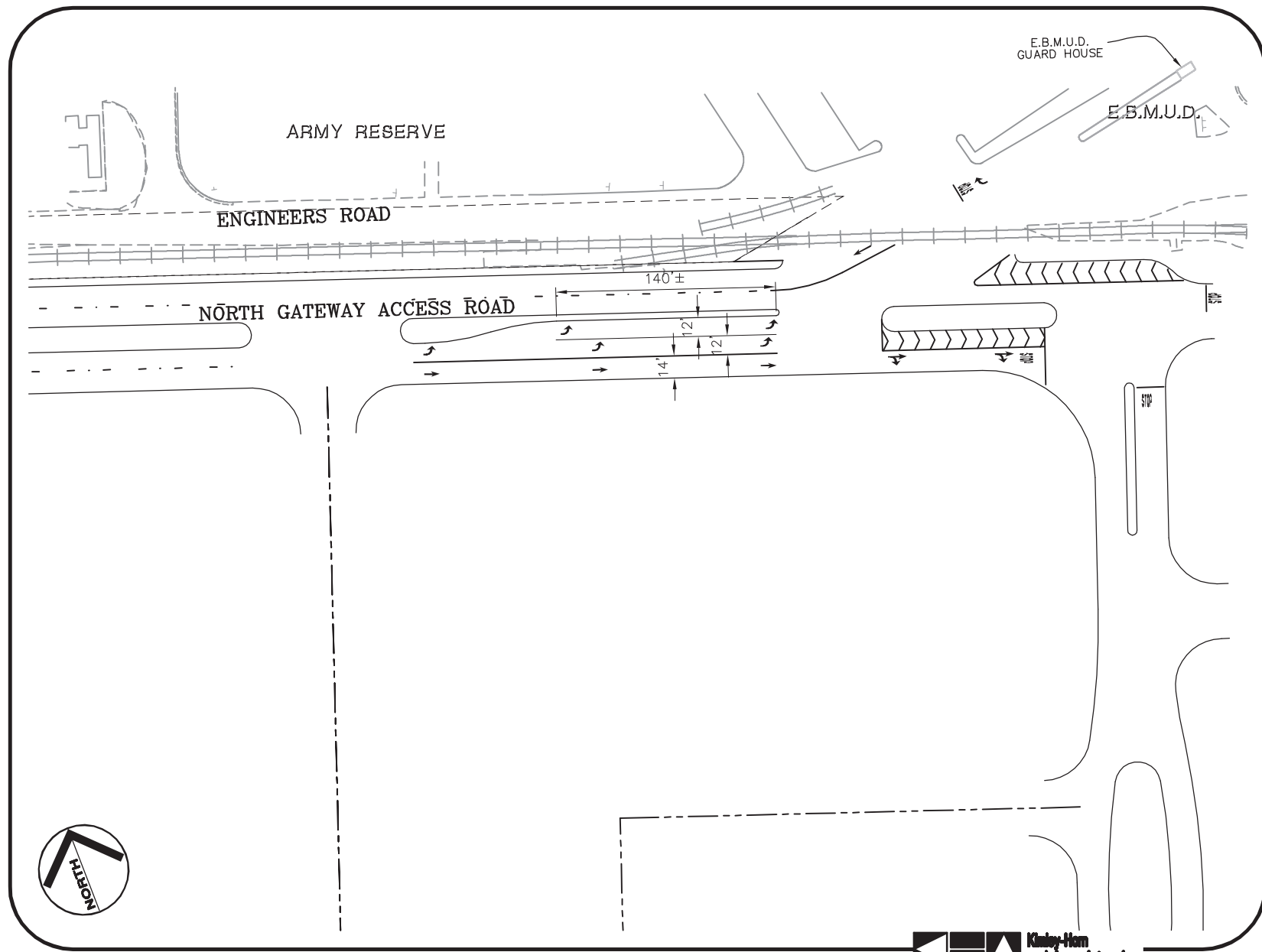


Figure 5: EBMUD Access - Left Turn Pocket Option

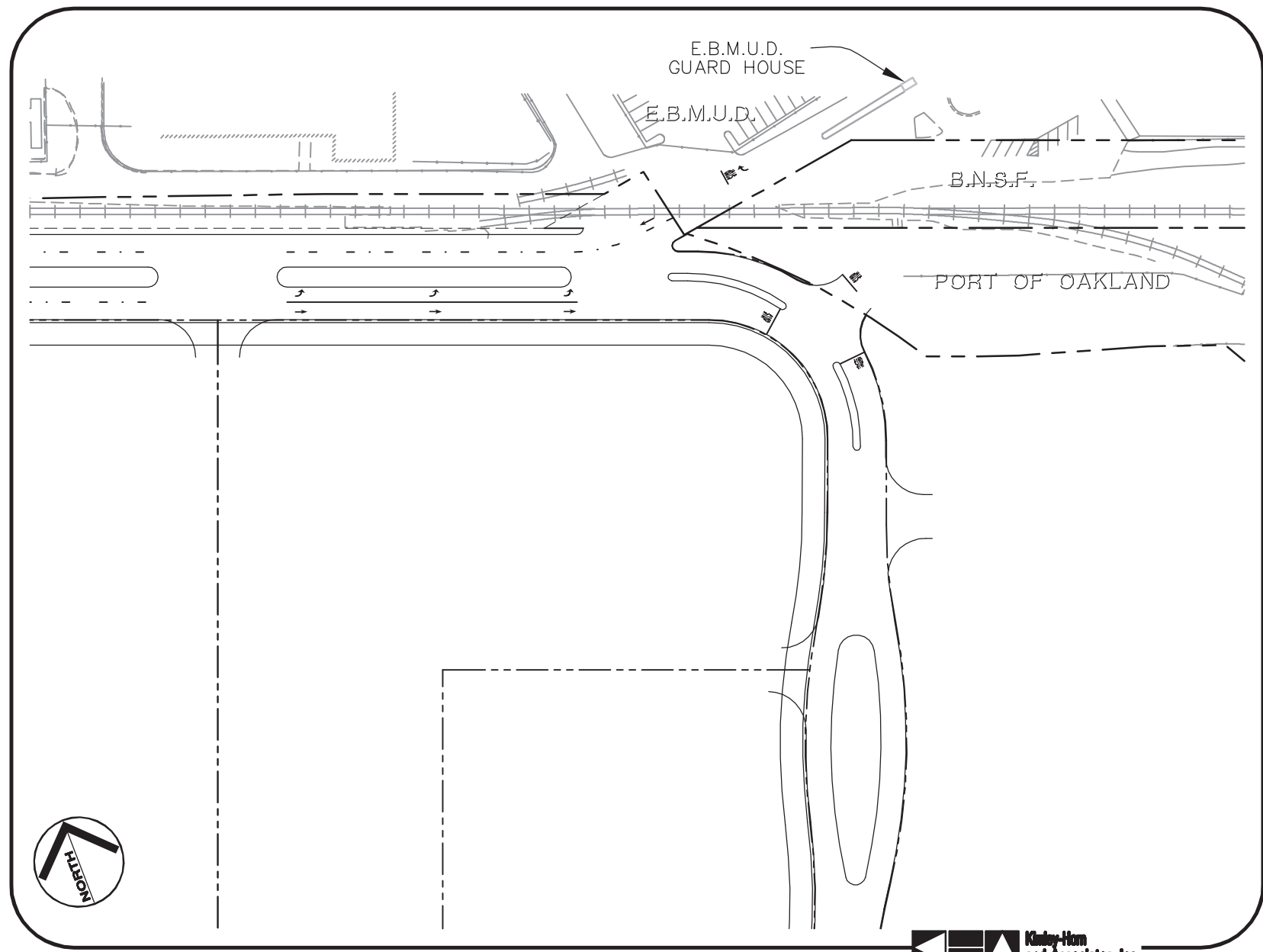


Figure 6: Non-Port-Dependant Roadway Alignment Option

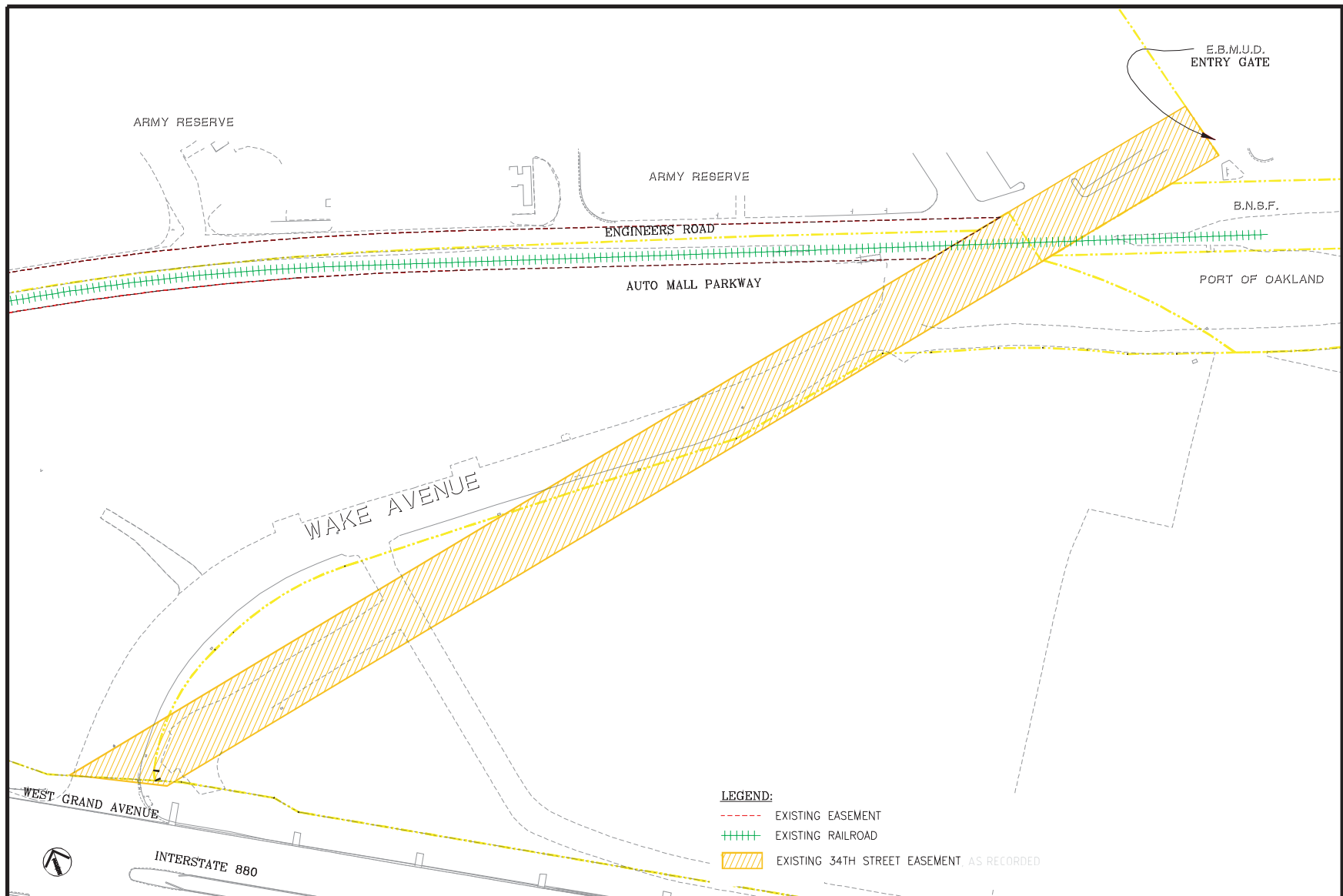


Figure 7: Wake Avenue and 34th Street Easement

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TRAFFIC AND CIRCULATION

PRIOR AUTO MALL SEIR ANALYSIS AND CONCLUSIONS

The EIR for the Oakland Army Base Redevelopment Area Redevelopment Plan and Reuse Plan (OARB Redevelopment EIR) was adopted by the City of Oakland and the Oakland Base Reuse Authority in July of 2002, and independently adopted by the Port of Oakland in September of 2002 and by the City of Oakland Redevelopment Agency in October 2002 (SCH2001082058). A Supplemental Environmental Impact Report (SEIR) for the Oakland Army Base Auto Mall Project was certified by the City of Oakland in December 2006 (SCH#2006012092). The Auto Mall SEIR included an analysis of traffic impacts, as the proposed Auto Mall land uses were not specifically anticipated in the OARB Reuse Plan or the OARB Redevelopment EIR and these land uses could potentially result in different traffic impacts than were analyzed in the OARB Redevelopment EIR. The following is a summary of the methodology and assumptions used for the SEIR traffic study.

ASSUMPTIONS AND METHODOLOGY

Project Impact Analysis Methods

The SEIR traffic study included an analysis of both the Project and Option B's impacts on local streets, public transit, freeway operations and pedestrians and bicyclists for existing and future conditions. Option B was the name given to an expanded project alternative fully analyzed in the SEIR. The SEIR also analyzed potential design hazards and emergency access issues associated with either alternative.

The SEIR study assumed that the existing land uses on the project site would be replaced by the project. The assessment of traffic impacts was performed by first removing trips from existing land uses that would be displaced and then adding trips from the proposed land uses. A portion of the Project site, the Subaru Lot, had been used for truck parking at the time traffic counts were performed, so it was considered an existing use.

The efficiency of traffic operations at study area intersections was evaluated for both existing and future cumulative conditions. A total of 35 intersections were analyzed, 25 existing intersections and 10 additional intersections that would be created by the Proposed Project and/or Option B. The LOS at study area intersections was analyzed for the a.m. and p.m. peak hours using methodologies described in the Highway Capacity Manual (Transportation

Research Board 1998). The intersections created by the project were also evaluated to determine potential traffic operations impacts during the Saturday peak hour.

The SEIR traffic study also included detailed analysis of the cumulative impacts to the transportation system and the extent to which the Project and Option B would contribute to these impacts. The cumulative growth scenario for the City of Oakland considered all approved, proposed, and reasonably foreseeable development projects expected by the year 2020 within city boundaries. This included a worst-case scenario using the highest-traffic-generating proposals for the remainder of the Gateway Area and is considered a conservative analysis. The growth projections outside of the City of Oakland are based on ABAG projections.

Data Collection

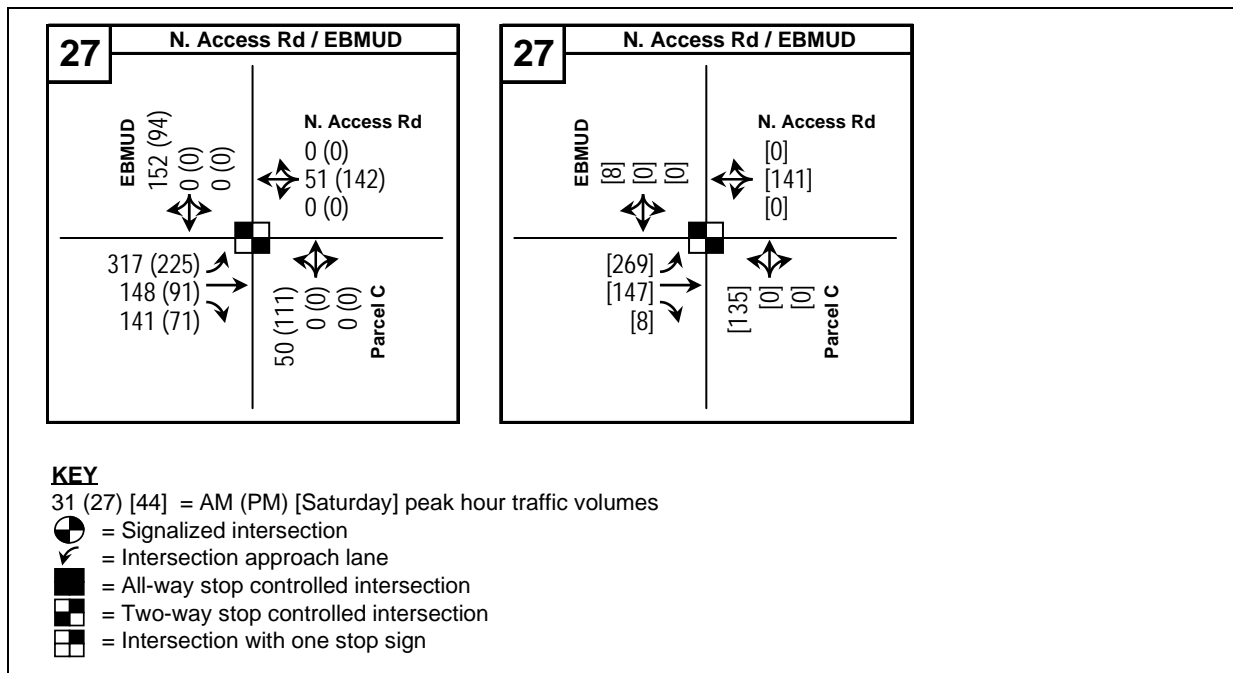
Existing a.m. and p.m. peak-hour traffic turning movement counts were collected at all of the existing study intersections within three years prior to the issuance of the Draft SEIR. New traffic counts were conducted in the fall of 2005 for intersections close to the project and intersections where the only data available was more than three years old. New Saturday traffic data were collected during the afternoon peak hour at the intersections of West Grand Avenue and Maritime Street, and West Grand Avenue and I-880 Frontage Road.

For the SEIR, no new traffic data were collected directly at the EBMUD driveway because traffic volumes at the driveway were estimated to be relatively low and the intersection of the EBMUD access and the North Access Road was expected to operate at a high level of service. Traffic data were collected for the SEIR at the nearby intersection of West Grand Avenue and Maritime Street, of which Wake Avenue forms the northern leg (identified as intersection #1 in the SEIR). Only three uses were served from Wake Avenue: the EBMUD facility, the Army Reserve facility, and the now relocated truck parking site (Subaru Lot). EBMUD and the Army Reserves both utilize the Wake Avenue rail crossing for access to their facilities. Because the Army Reserves facility generates little traffic, this Wake Avenue rail crossing is referred to as the “EBMUD driveway”. Background traffic volumes at the EBMUD driveway were developed from traffic data collected at the West Grand Avenue and Maritime Street intersection with adjustments (based on ITE trip generation procedures) to account for truck parking traffic generated at the Subaru site.

Traffic volumes were estimated for Existing Plus Project conditions using procedures described in Trip Generation, 7th Edition (Institute of Transportation Engineers 2003) and the trip distribution described on pages 3-15 through 3-18 of the SEIR.

Under Existing Plus Project conditions, the EBMUD driveway was estimated to serve 317 inbound vehicles and 152 outbound vehicles in the a.m. peak hour and 225 inbound vehicles and 94 outbound vehicles during the p.m. peak hour (see Figure 8). This information can be found in Figure A.1 in Appendix C of the SEIR and is shown below in **Figure 8**.

Figure 8: Existing Plus Project Traffic Volumes at N. Access Road & EBMUD Driveway Evaluated in the SEIR



Rail Usage Assumptions

No rail usage data were collected at the EBMUD driveway for the SEIR because there was no reason to think that the project would significantly change traffic volumes across the rail crossing or that the rail operations would be a significant factor in traffic operations on the roadways proposed as part of the project design concept.

SEIR CONCLUSIONS

The SEIR did not identify any significant intersection operations impacts at the North Access Road/EBMUD driveway intersection. The SEIR analysis showed this intersection would have adequate traffic capacity and would operate at acceptable levels of service.

The SEIR identified a **potentially** significant impact (Impact Traf-3, page 3-24) caused by construction of the North Gateway Access Road and the resulting non-perpendicular configuration of the EBMUD intersection with this new road. Without mitigation, such an intersection was identified as **potentially** causing a safety hazard, discussed in the SEIR (p.3-24) as follows:

“The angle of the intersection at the EBMUD driveway appears to be between 30 and 35 degrees – a very acute angle. Good design practice requires intersection angles to be as close to 90 degrees as practicable. Otherwise, safety may be compromised. Acute angles at intersections and driveways are typically associated with higher than normal collision rates. The acute angle

could obstruct the line of sight of motorists exiting the driveway who would essentially have to look over their shoulder to see oncoming traffic. This could result in conflicts with oncoming traffic or might cause exiting traffic to stop suddenly, resulting in rear-end collisions. The acute angle also would create a wide driveway that would not provide adequate access control. The driveway angle would make right turning movements into the driveway difficult.”

This access design was identified as a **potentially significant** impact. The following mitigation measure was proposed in the SEIR and adopted as part of the mitigation monitoring and reporting program:

“Traf-3: The Project Sponsors shall work with the property owners to develop an access design that provides adequate levels of safety.

- **One option** [emphasis added] would be to relocate the EBMUD driveway to connect as the north leg of the North Access Road/East Access Road intersection. If the driveway were relocated, the North Access Road/East Access Road intersection would operate in compliance with the City’s level of service standards with all-way stop traffic control.

Design plans for the project and all public facilities shall be consistent with City standards and are subject to the approval of the City of Oakland Transportation Services Division.

Phasing of the demolition of Wake Avenue and construction of the Maritime Street extension and North Access Road must occur such that reasonable access to the EBMUD facilities is maintained at all times.”

This mitigation measure was found to reduce potential design hazard impacts to a less-than-significant level.

ADDITIONAL TRAFFIC INFORMATION, POST SEIR

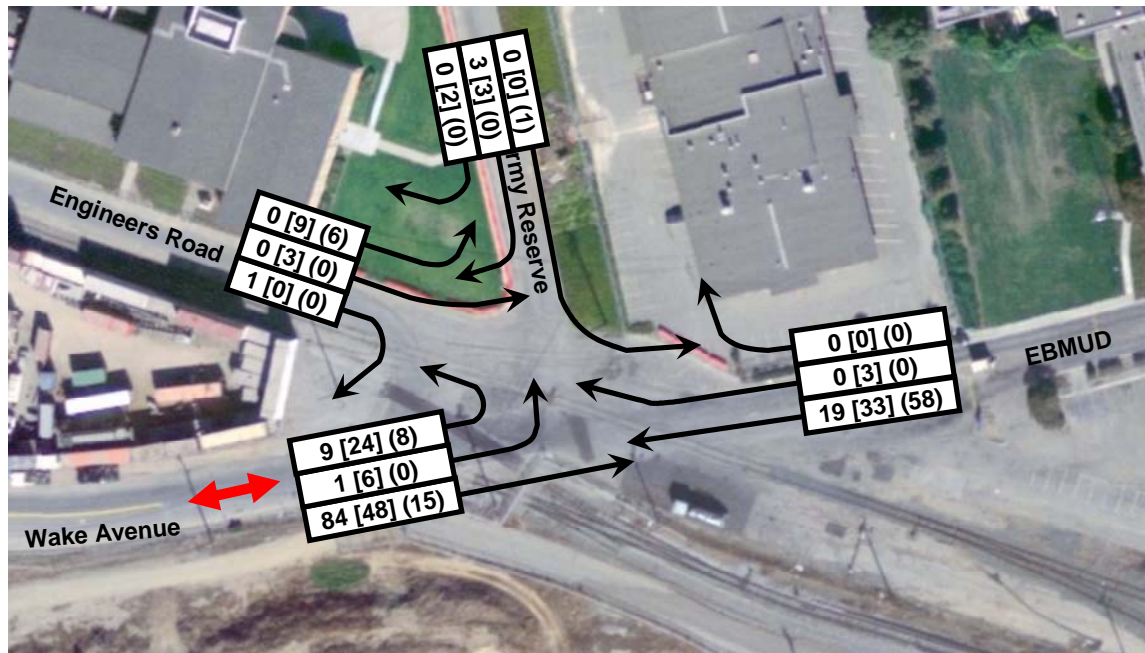
Since certification of the SEIR, additional data collection and traffic analysis have been conducted for the proposed new site layout and access options to the EBMUD Main Wastewater Treatment Plan (MWWTP). One central concern is that trains using the rail spur line may block the entry to the MWWTP for an unacceptable period of time. Another concern is that there won’t be sufficient stacking capacity for trucks as they queue up at the entry gate.

ADDITIONAL TRAFFIC DATA

Additional traffic data were collected to provide additional data for the design of access options. During the week starting Saturday March 31, 2007 through Friday April 6, 2007, 24-

hour machine traffic counts were collected on Wake Avenue just west of Engineer Road to measure hourly traffic volumes and determine peak traffic demand over a 7-day period. (See **Figure 9** for count locations and peak hour turning movement traffic volumes and see the appendix for additional traffic volume data. Note that both EBMUD and Army Reserve traffic use the route labeled Army Reserves on this figure.)

Figure 9: Supplemental Traffic Data Collection Locations and Peak Hour Turning Movement Traffic Volumes



Key

= Location of 24-hour 7-day machine counts

= AM [Midday] (PM) traffic volumes

From the 7 days of machine count data, the peak activity period at the EBMUD driveway was determined to be from 5:30 a.m. to 5:30 p.m. during the work week (Tuesday through Thursday). On April 25, 2007, turning movement counts, including vehicle classifications, and visual observation of truck queues were conducted for the 12-hour period beginning at 5:00 a.m. at the EBMUD driveway including turning movements to/from Wake Avenue/Army Reserves/Engineer Road/EBMUD main entrance. The locations of the traffic movements observed are shown in Figure 9 and the data are provided in the Appendix to this Addendum. No train movements across the EBMUD driveway were observed during the 12-hour observation. The machine count data and field observations are representative of existing conditions, though minor daily variations would be expected.

Traffic volumes counted at the EBMUD driveway were then compared to the assumed traffic volumes reported in the SEIR (from the SEIR Appendix C, Figure A.1, Intersection #27). The vehicles counted crossing the rail tracks at the EBMUD driveway during the a.m. peak

hour (before 9:00 a.m.) was 94 inbound vehicles and 33 outbound vehicles, in comparison to the 317 inbound vehicles and 152 outbound vehicles assumed in the SEIR. The vehicles counted crossing the tracks during the p.m. peak hour (after 3:00 p.m.) was 23 inbound vehicles and 79 outbound vehicles in comparison to 225 inbound vehicles and 94 outbound vehicles assumed in the SEIR.

This comparison revealed that the actual observed traffic volumes were significantly lower than those assumed in the SEIR for both the a.m. and p.m. peaks. Thus the potential intersection operation impacts of the Auto Mall project should be less than was predicted in the SEIR.

The mix of inbound vehicles crossing the rail tracks at the EBMUD driveway during the peak arrival period (6:15 to 7:15 a.m.) included 87 autos, 1 single-unit truck, and 6 semi-trailer trucks (94 total vehicles). This is an average of approximately 1.6 vehicles per minute and 1 semi-trailer every 10 minutes.

The peak number of inbound trucks crossing the tracks was 22 trucks during the hour beginning at 10:15 a.m. During this time period there were a total of 11 semi-trailer trucks, 11 single-unit trucks, and 28 autos for a total of 50 vehicles crossing the tracks. This is an average of less than one vehicle per minute and approximately one truck every 5 minutes.

Additional data were provided by EBMUD for a 30-day period in the fall of 2005. However, the data did not include EBMUD vehicles and only provided counts for traffic entering the EBMUD main entrance. That information was not considered useful for assessing the adequacy of the proposed design options because it did not include all traffic that would use the north leg of the North Access Road/EBMUD driveway intersection. The data from EBMUD showed an average daily traffic volume of 338 vehicles with 527 vehicles on the peak day. The additional data collected for this Addendum showed an average daily traffic volume of 1,200 vehicles with 1,624 vehicles on the peak day of the seven-day observation period. A comparison of the two sets of data indicate that less than one-third of the vehicles crossing the rail tracks are non-EBMUD vehicles that enter the EBMUD main entrance. The data provided by EBMUD is included in the Appendix for informational purposes.

EBMUD also provided a letter to the City of Oakland on July 25, 2007, that transmitted truck queuing and tracking documentation for the period from May 17 to June 29, 2007. The data transmitted did not provide sufficient, relevant information from which to engage in reasoned analysis or to draw any meaningful conclusions. Insufficient information was provided regarding the type of incidents listed, the duration of each train blockage, and the number of vehicles blocked during each incident. The location (north or south of the railroad tracks, at the guard house or pulled out of the way of traffic) and direction of queues (entering or exiting) were not indicated, nor was the reason for the stoppage indicated. These data are included in the Appendix for informational purposes.

Finally, EBMUD provided data collected from March 18 through April 28, 2007 that recorded vehicle movements into and out of the EBMUD facility. The highest number of vehicles arriving during the period took place between 6:00 and 7:00 a.m. on April 17, 2007, and included a total of 107 vehicles, including 10 semi trucks. The average number of vehicles arriving during the peak hour of a typical weekday (Tuesday through Thursday) was 65 vehicles, including 6 semi trucks. This data compares with the number of vehicles observed to be arriving during the peak hour on April 25, 2007: a total of 94 vehicles including 6 semi trucks. The data provided by EBMUD indicates that the data observed during the field observation and used in this Addendum represents higher than typical peak hour conditions and is reasonably consistent with the highest peak hour observed by EBMUD.

The March-April, 2007, data provided by EBMUD also included information on truck queuing but only indicated the length of queue for a limited number of observations during which the maximum queue was indicated to be 2 trucks.

EXISTING RAIL USAGE

During the day of the visual data collection, there were no observed train blockages at the EBMUD driveway. Information was provided by Oakland Terminal Railway (OTR) staff² on train operations at the EBMUD driveway. Trains currently use the Burlington Northern Santa-Fe (BNSF) spur to supply reconstruction of the east span of the Bay Bridge. This operation is expected to end soon with the completion of materials deliveries to the Bay Bridge project. In addition, the OTR maintains a small yard with two tracks in the yard under the elevated portions of the I-880 freeway. OTR sometimes moves as many as 10 cars per day across the EBMUD driveway. OTR operations are limited by the capacity of the wooden trestle bridge located east of the EBMUD driveway and by other constraints along the rail tracks they use. The capacity of the bridge limits OTR operations to one 60-foot loaded car pulled by a 60-foot locomotive or four 60-foot empty cars pulled by a locomotive. The operating speed of OTR trains at the EBMUD crossing is 10 mph. At that speed a maximum 300-foot train would block traffic at the EBMUD driveway for approximately 60 seconds, including time for the brakeman to stop traffic prior to the blockage and time for traffic to start moving again after the blockage ends.

FUTURE RAIL USAGE

Neither the 2002 Redevelopment Plan EIR nor the Auto Mall SEIR specifically addressed potential impacts of future rail usage at the EBMUD driveway. Rail usage across this intersection/driveway was not thought to be a significant impact because of the infrequency

² Personal communication from Dave Buccolo (OTR) to John Monetta (City of Oakland) and Mark Bowman (Dowling Associates) on July 9, 2007.

of rail operations, even with construction of a new Joint Intermodal Terminal (JIT) including a wye across the EBMUD driveway.

The Port of Oakland has indicated that they are continuing to plan for a new intermodal facility within the Port Development Area as described in the 2002 Redevelopment Plan EIR. One of the conceptual plans for this facility includes development of a locomotive service area at the north end of the facility. This locomotive service area would include a wye, which would utilize the existing OTR track that crosses the EBMUD driveway and connections to the new intermodal facility. This wye, if constructed, would allow the freight railroad operators to turn around arriving locomotives for departing moves in the opposite direction. The new intermodal facility development is subject to on-going negotiations with railroads, Port financial planning, and market conditions. Port of Oakland staff were not able to provide information on when the facility would be constructed, nor specific details such as how frequently the wye track across the EBMUD driveway might be used upon completion.³

Nevertheless, even without detailed plans from the Port for the new intermodal facility, this document, as explained below, conservatively assumes the new intermodal facility will be developed with the proposed locomotive service area for purposes of the Addendum's traffic analysis.

Other future conditions could result in changes in the OTR's train operations at the EBMUD driveway. OTR staff has indicated their future operations could involve movement of trains consisting of 10 empty cars (maximum length) pulled by a locomotive operating at 10 mph.⁴ At that speed a maximum 660-foot train would block traffic at the EBMUD driveway for approximately 85 seconds, including time for the brakeman to stop traffic prior to the blockage and time for traffic to start moving again after the blockage ends. However, non-passenger rail doesn't run on a schedule, but rather is a function of the market demand, which can vary significantly. The railroads are generally protective of any proprietary information that could be an advantage to their competitors. The railroads are not subject to state, regional or local jurisdiction, and cannot be compelled to provide information or dictate the number of trains they could run on an existing track.

For the purposes of this Addendum, the assumption was made that existing rail operations are likely to continue and may increase according to the maximum likely use described by OTR staff and according to maximum likely operations associated with development of a locomotive service area to serve the BNSF and UP as contemplated. Specifically, it is assumed that the frequency of trains crossing the EBMUD driveway could be as high as 12 trains per day (or 1 train per hour), resulting in a blockage of motor vehicle traffic at the EBMUD driveway for approximately 90 seconds at each occurrence. In addition, it is

³ Personal communication from Pamela Kershaw (Port of Oakland) to Mark Bowman on August 20, 2007

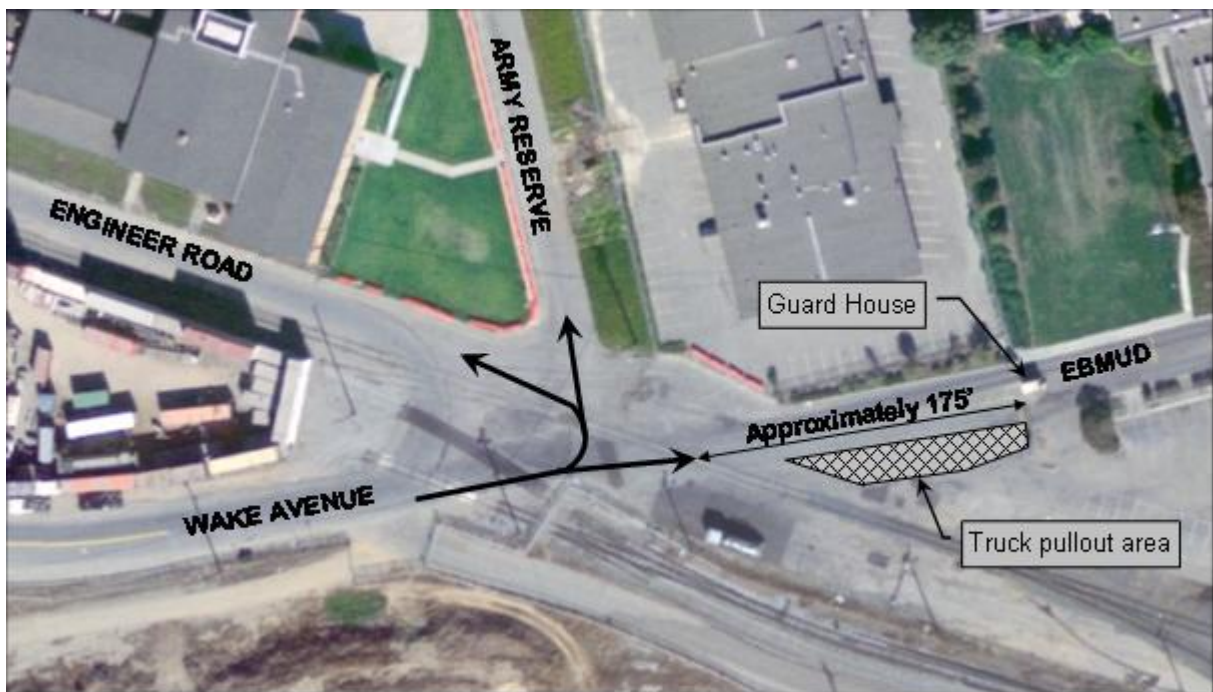
⁴ Personal communication from Dave Buccolo (OTR) to John Monetta (City of Oakland) and Mark Bowman (Dowling Associates) on July 9, 2007.

assumed that locomotives (up to a maximum of 5 linked engines) could use the wye to turn around at an increased frequency of once per hour, blocking the EBMUD driveway for 2 minutes at each occurrence. The California Public Utilities Commission, which governs public grade crossings in the state, prohibits railroads from occupying a grade crossing for more than 10 minutes. Trains would not stop in the intersection provided that there was headroom on the tracks in front of them. These are considered to be conservative assumptions.

EBMUD QUEUING

The visual observation conducted for a 12-hour period on April 25, 2007 included visual observation of truck queues in the vicinity of the EBMUD main entrance. The queuing data provided in the Appendix showed that there were a maximum of 2 trucks queued to enter the EBMUD property at the main entrance guard house at any one time during the observation period. Trucks were seen to pull to the side to wait in a casual (unstriped) wait area out of the flow of traffic. The EBMUD guard house, access to other properties, the rail crossing, and areas of truck queuing and waiting are shown in **Figure 10**. Photos showing the maximum queues during the observation period and vehicles in the wait area are shown in **Figures 11** and **12**.

Figure 10: Access to EBMUD Property



During the 12-hour period of field observations, all queues for vehicles entering EBMUD property were contained north of the rail line. Truckers who needed to check in at the EBMUD guard house typically used the paved pullout area to avoid blocking other vehicles

not required to stop at the guard house. The truckers typically left their vehicles and walked to the guard house to register. This system appeared to function adequately and kept the queues contained in the area north of the rail tracks, outside of the Auto Mall project area. The field observations are considered to be representative of existing conditions, though minor daily variations would be expected. If more than the maximum of 2 trucks seen in the 12-hour visual observation, were to arrive at the EBMUD entry, there would be room for two vehicles to park along the east edge of the driveway as they do now and room for two or three additional trucks to queue in the entry lane between the guard house and the rail tracks. Development of the Auto Mall would not affect traffic operations or queuing at the entry to the EBMUD property between the rail tracks and the guard house.

Although no train blockages were observed during the 12-hour period of field observations, trains arrive on occasion and block the rail crossing. Existing and possible future use of the rail crossing (discussed above) would cause queuing for northbound vehicles to the south of the rail tracks and for southbound vehicles to the north of the tracks when trains are present. The design of the roadways serving the Auto Mall project would need to accommodate vehicle queues caused by train blockages; however, the project would not significantly affect the length of the queues resulting from train blockages.

Figure 11: Trucks Waiting in Pullout Area at EBMUD Entry



Figure 12: Queue at EBMUD Entry Guard House

RE-EVALUATION OF SEIR CONCLUSIONS

INTERSECTION OPERATIONS

The SEIR did not identify any significant intersection operations impacts at the North Access Road/EBMUD driveway intersection. The additional traffic data collected for this Addendum show that the traffic volumes assumed at the EBMUD driveway in the SEIR were higher than are currently present. The conclusion that no significant intersection operations impacts at the intersection would occur as a function of vehicle traffic is supported by the new traffic data.

Any assumptions about future rail use due to the Port's implementation of the OHIT project or increased use by OTR are speculative and not required to be considered in an EIR. However, in an effort to provide a conservative analysis, this Addendum considers the possible impact of increased rail usage across the EBMUD driveway.

It is not expected that any reasonably foreseeable increase in train usage across this intersection would cause a significant traffic impact. Even if the frequency of trains were to increase to as many as 50 trains per day (an unlikely, worst-case circumstance), they would only block the intersection for approximately 2 minutes at each occurrence. Once each train

clears the intersection, the traffic queue would then dissipate. No prolonged congestion would occur and no intersection operation thresholds would be exceeded.

Under normal circumstances when there is no train blockage, vehicles/trucks can queue entirely to the north of the train tracks at the main entrance guard gate and pulled to the side of that area to wait, as they do under existing conditions. The Auto Mall project would not cause changes to the area north of the rail line.

POTENTIAL TRAFFIC SAFETY HAZARDS

The SEIR identified a **potentially** significant impact (Impact Traf-3, page 3-24 and reproduced in this document on p.15) caused by construction of the North Gateway Access Road and the resulting non-perpendicular configuration of the EBMUD intersection with this new road. This was considered a **potential** design hazard only because not enough detail was provided to determine if the lines of sight for all motorists would be free from obstruction.

The specific access options included in the SEIR has since been determined infeasible (see Other Access Options Considered but Rejected, below). However, new access options have been developed. The ability of these access options to provide reasonable and safe access is analyzed in the following section of this Addendum.

NEW PREFERRED ACCESS OPTIONS

While the design of the new preferred access options are generally similar to that identified in the original Project description of the SEIR, the greater detail provided in the new preferred access option enables a more detailed evaluation of potential design hazards. Where the concept plans in the SEIR were to a level of detail only allowing identification of a **potential** design hazard, considerably more detailed designs have been prepared for the current preferred access options to address and avoid the potential design hazards associated with the skewed EBMUD access and allow full analysis of these plans. Design details of the preferred access options include:

- **Location of Stop Bars/Signs.** With the stop bars for traffic exiting the EBMUD driveway located north of the BNSF spur tracks, this design would place vehicles in a position to see vehicles approaching from all directions and would provide adequate lines of sight for vehicles using the North Access Road/EBMUD driveway intersection.
- **Shared Access/Minimization of Driveways.** Shared access to the central Auto Mall lots has been formalized with only one driveway on the leg of the North Access Road shared with the EBMUD access. This limitation simplifies possible turning movements to/from the North Access Road to increase the safety and efficiency of traffic movement as drivers are better able to anticipate actions of other vehicles.

- **Designated Lane(s) for Vehicles Using the EBMUD Access.** The preferred access options analyzed in this addendum include a dedicated turn lane and/or turn pocket in which vehicles accessing EBMUD can queue if necessary, such as in the event of a train blockage.
- **Channelization of Traffic Using Roadway Striping.** To minimize the number of possible vehicle movements and reduce potential conflicts between turning and through movements, the preferred access options include a reduction in the number of lanes in certain locations near the EBMUD access using striping on the road surface that will channel traffic away from potential conflicts. Roadway striping will channel traffic while still accommodating the wider turn radius of any trucks using the roadway.

The vast majority of both EBMUD and Auto Mall traffic would be automobiles and both uses would accommodate a relatively small percentage of trucks (less than 10 percent), which is typical of urban streets serving a mix of commercial and industrial land uses. Thus, there are no impacts associated with the mixing of automobile and truck traffic for any of the access options.

Final design plans for the access options and all public facilities shall be consistent with City standards and are subject to the approval of the City of Oakland Transportation Services Division. Appropriate signage and/or signalization of the rail crossing shall be included in any final designs as consistent with CPUC standards and subject to their approval. The analysis performed in evaluating the access options would apply equally to train blockages at the EBMUD access regardless of whether the closure of the rail crossing were initiated manually by a railroad employee or by automatic control systems.

DEDICATED LEFT TURN LANE OPTION

The Dedicated Left Turn Lane option (Figure 4 on p.11) represents a refinement of the less-well-defined intersection geometry evaluated in the SEIR. The Dedicated Left Turn Lane option is described as follows:

- All existing driveways north of the BNSF rail spur (the EBMUD main entrance, the Army Reserve access, and Engineer Road) would be maintained in their current configuration. The location of the stop bar for southbound traffic exiting the EBMUD driveway would be located north of the BNSF spur tracks and would place exiting vehicles in a position to see vehicles approaching from all directions.
- The eastbound lanes on the North Access Road would include one dedicated left turn lane into the EBMUD driveway and one shared through/right turn lane. The relatively light volume of through and right turn traffic would be easily accommodated in one shared lane. A median would separate eastbound and westbound lanes. The dedicated left turn lane would provide 250 feet of storage for vehicles entering the EBMUD driveway beyond the first median break, and additional storage as far back as the Maritime

Avenue/North Access Road intersection, for a total of more than 700 feet of storage. The peak arrival rate would be 94 total vehicles during the peak-hour arrival period (6:15 to 7:15 a.m.) including 87 autos, 1 single-unit truck, and 6 semi-trailer trucks. If a train were to arrive during the peak period and block the driveway for 2 minutes, the average queue would be about 90 feet, assuming 25 feet for each auto, 40 feet for each single-unit truck, and 70 feet for each semi-trailer in a queue.⁵ The 95th percentile design queue would be approximately 200 feet. The full dedicated left turn lane would provide more than adequate storage capacity to accommodate this design queue.

- The westbound lanes on the North Access Road would include an inside lane to accommodate westbound through movements and left turns from the northbound leg of the East Access Road. An additional outside lane would accommodate southbound right turns from the EBMUD driveway. These separate lanes would minimize the potential for conflicting turn movements entering into the same lane of travel.
- At the Maritime Avenue/North Access Road intersection all northbound movements would either have to turn left into the dealership driveway or right onto the North Access Road. No northbound through or turn movements across the railroad tracks would be allowed.

The Dedicated Left Turn Lane option would include a stop location to the north of the rail line for vehicles exiting the EBMUD driveway, a location which would provide adequate lines of sight for vehicles using the North Access Road/EBMUD driveway intersection. This option would not change the existing skewed rail crossing at the EBMUD driveway. The skewed rail crossing is less than ideal in its existing state because southwest-bound drivers approaching the EBMUD driveway would have a difficult time seeing a train approaching over their left shoulder from behind. The skewed rail crossing has not been identified as a high priority for remediation due to the slow speed of trains using this rail line (maximum 10 mph), the low volume of both motor vehicle and train traffic, and the lack of any known accidents at this location under these conditions. There is no reason to believe development of the Auto Mall project would have any effect on the safety of this skewed rail crossing. The Dedicated Left Turn Lane option does not make the existing skewed crossing any safer or less safe than current conditions because it does not change the existing angle of the crossing.

The dedicated left turn lane would provide more than adequate storage capacity to accommodate the maximum anticipated design queue at the North Access Road/EBMUD driveway intersection. The dedicated left turn lane and the combination through/right turn lane would each serve fewer than 300 vehicles during the peak hour. The vast majority of both EBMUD and auto mall traffic would be automobiles and both uses would accommodate

⁵ The hourly queue would include 2175 feet for all autos, 40 feet for all single-unit trucks, and 420 feet for all semi-trailer trucks – a total of 2635 feet. In an average two minute period, one-thirtieth of the hourly queue would arrive, which would be 88 feet in length and include an average of 3.14 vehicles.

a relatively small percentage of trucks (less than 10 percent), which is typical of urban streets serving a mix of commercial and industrial land uses.

LEFT TURN POCKET OPTION

The Left Turn Pocket option (Figure 5 on p.12) represents a modification to the Dedicated Left Turn Lane option. The purpose of this modification is to consider an access design that accommodates EBMUD's stated preference for dual left turn movements into their driveway. The Left Turn Pocket option would be the same as the Dedicated Left Turn Lane option with the following exception:

- Instead of one dedicated left turn lane, the eastbound lanes on the North Access Road would include two dedicated left turn lanes, one of which would be provided in the median area. The design intent of this access option is for standard vehicles with a destination at the EBMUD facility to have access to the outside left turn lane to bypass trucks that might be queued in the left turn lane.
- Two receiving lanes would be constructed on the northbound approach to the EBMUD property and would transition to one lane prior to the guard house.

As with the Dedicated Left Turn Lane option, this design option would maintain all existing driveways north of the rail crossing and would provide adequate lines of sight for vehicles using the North Access Road/EBMUD driveway intersection. The stop location for traffic exiting the EBMUD driveway would be located north of the BNSF spur tracks and would place exiting vehicles in a position to see vehicles approaching from all directions.

The Left Turn Pocket option would not change the existing skewed rail crossing at the EBMUD driveway. As with the Dedicated Left Turn Lane option, the Left Turn Pocket option does not make the existing skewed crossing any safer or less safe than current conditions because it does not change the existing angle of the crossing.

As described above, the design intent of this access option is for trucks with a destination at the EBMUD facility to have exclusive use of the inside left turn pocket and for standard automobiles with a destination at the EBMUD facility to use the outside shared through/left lane. However, should automobiles and trucks not appropriately use their designated lane but instead find themselves in opposite lanes, the presence of a large truck in the outside lane could block the line of sight for vehicles or trucks in the inside lanes. This could be a potential safety hazard under these conditions.

The Left Turn Pocket option would provide approximately 140 feet of storage in a dedicated left turn pocket for vehicles entering the EBMUD driveway in addition to a second left turn lane with more than 700 feet of storage capacity. As stated above, the 95th percentile design queue would be approximately 200 feet to accommodate the queue that could form in the

event of a 2-minute train blockage. Thus, the Left Turn Pocket option would provide more than sufficient storage capacity to accommodate the design queue.

NON-PORT-DEPENDENT ROADWAY ALIGNMENT OPTION

The Non-Port-Dependant Roadway Alignment option (Figure 6 on p.13) represents a slight change in the alignment of the North Access Road to avoid a small Port-owned parcel of land. While negotiations are underway to allow for construction on this parcel (likely involving a land swap between the City and the Port), this roadway alignment option would be considered in the event negotiations fall through or cannot be finalized in the timeline of the Auto Mall project. This alternative alignment of the North Access Road is an option independent from the EBMUD access options shown in Figures 4 and 5, and does not preclude either of these options. The Non-Port-Dependant Roadway Alignment option is described as follows:

- The North Access Road would be realigned to avoid a currently Port-owned parcel at the northeaster corner of this roadway.
- At the relocated all-way stop controlled intersection of North Access Road and East Access Road, a single lane would serve both eastbound through traffic and left turning traffic into the driveway serving the Port property.

The Non-Port-Dependent Roadway Alignment could be combined with either of the EBMUD access options and would not change any of the analysis or conclusions in this document. The capacity of the North Access Road and East Access Road intersection would be reduced slightly by combining the two eastbound lanes into one, but the remaining capacity would be adequate. The intersection would serve fewer than 300 total through vehicles on the main roadway and fewer than 10 vehicles at the driveway and would operate at LOS A during the peak hours of operation.

OTHER ACCESS OPTIONS CONSIDERED BUT REJECTED

The preferred access options discussed above would each provide reasonable and safe access to EBMUD and result in less-than-significant impacts and therefore, there is no legal requirement to study other access options. Nevertheless, this section provides a discussion of options that were considered but rejected.

SEIR Project Access Options

Under the Project proposed in the 2006 Auto Mall Supplemental EIR, Wake Avenue (currently running approximately diagonally from the intersection of Maritime Street and West Grand Avenue to the EBMUD driveway) would be replaced by an extension of Maritime Street to the north and construction of the North Access Road along the boundary between the Auto Mall and uses to the north (EBMUD and US Army Reserve). The North

Access Road would then turn south and become the East Access Road to complete access to the Auto Mall parcels.

A rail crossing currently exists along Wake Avenue near the entrance to the EBMUD facility, identified as the Wake Avenue crossing. Due to the angle of the intersection of the existing EBMUD driveway/Wake Avenue crossing with the proposed North Access Road, a **potential** design hazard was identified. Mitigation was recommended that the project sponsors work with the property owners to develop an access design that provides adequate levels of safety.

One option was identified in mitigation measure Traf-3 that would adjust the angle of the EBMUD driveway to form a perpendicular intersection and rail crossing, identified as the BNSF crossing. Construction of the perpendicular BNSF crossing as recommended in the mitigation measure would require acquisition of fee or easement rights to cross BNSF-owned property. During preliminary discussions with the City, BNSF was not interested in discussing the possibility of granting the real property rights necessary for construction of the BNSF Crossing. Thus, the access option presented in mitigation measure Traf-3 in the SEIR is infeasible and alternative access options that provide reasonable and safe access to the EBMUD facility have been pursued.

The Project also proposed addition of a second rail crossing at the intersection of the extended Maritime Road with the North Access Road that would provide direct access to Engineer Road and the Army Reserve property, identified as the Army Reserve crossing. The Burlington Northern & Santa Fe Rail Company (BNSF) and PUC are adverse to increased rail crossings, especially crossings that are close in proximity, such as the proposed Army Reserve crossing and BNSF crossing (which are about 500 feet apart) because this increases the safety risks and the attendant liability. After more than eighteen months of discussions and negotiations, the City has determined that obtaining the rights to replace the existing Wake Avenue crossing with two new crossings is infeasible due to: increased safety risks, inability to acquire third party real property interests, excessive cost and potential Public Utility Commission (PUC) disapproval, each of which provides a separate and independent basis to reject this option.

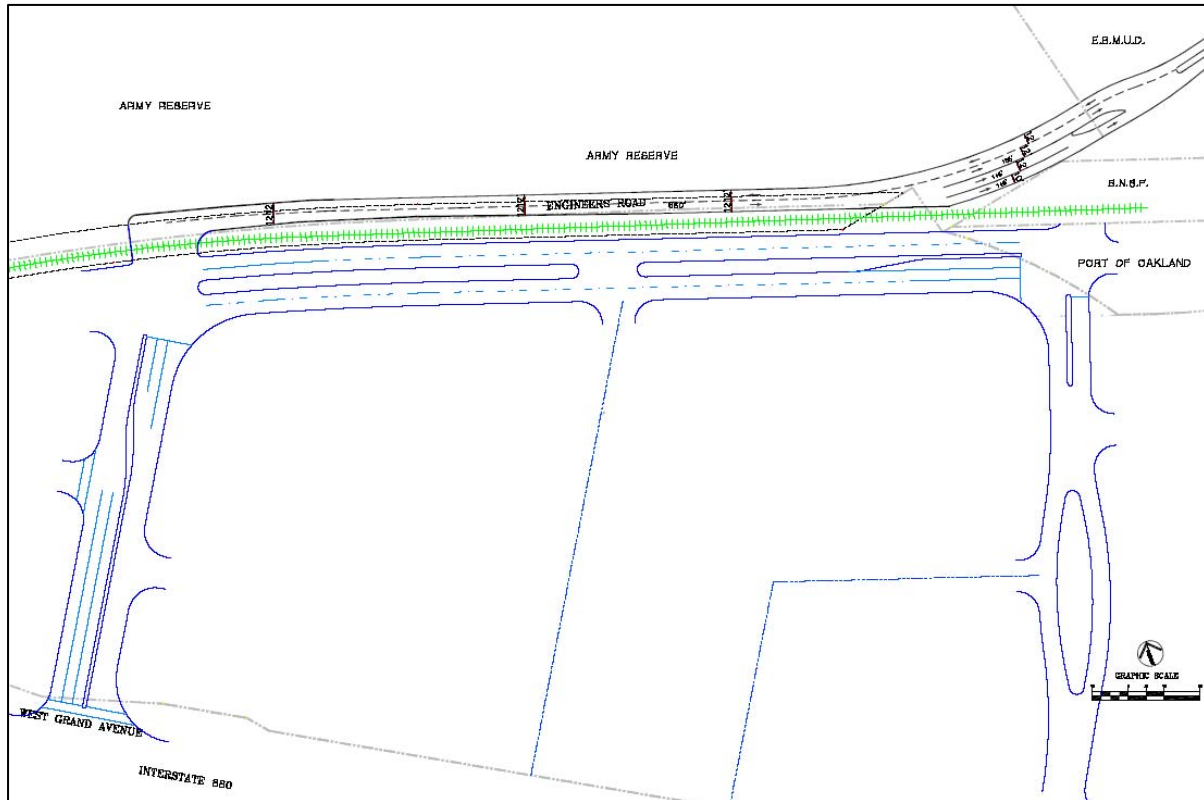
Other access options incorporating two rail crossings and/or crossing of the BNSF-owned property would also be infeasible for the above reasons.

Engineer Road Access Option

The Engineer Road access option (Figure 13) would use the parallel road along the north side of the BNSF spur track known as Engineer Road with a rail crossing around a sharp 90-degree bend at the intersection of Maritime Street and the North Access Road. The Wake Avenue rail crossing would be abandoned and EBMUD access would be via Engineer Road. It is anticipated that all Army Reserve driveways would retain access to Engineer Road. The Engineer Road access option would remove the rail crossing from the influence of

locomotive turnarounds at the wye, as this new crossing would be located to the west of anticipated locomotive turnaround movements. Train operations along the BNSF spur would still affect traffic operations at the crossing.

Figure 13: Engineer Road Alternative



Queuing for the Engineer Road access option would be provided on Maritime Street between the railroad tracks and West Grand Avenue. Similar to the other access options, a train arrival during the peak period would block the entry to Engineer Road for 2 minutes, the average queue would be about 90 feet, and the 95th percentile design queue would be approximately 200 feet. Train blockages for this access option would cause one of the northbound Maritime Street lanes to be blocked, leaving one lane to accommodate Auto Mall traffic. The distance from the rail crossing to the intersection of Maritime Street and West Grand Avenue is approximately 450 feet, leaving adequate queuing capacity without impacting that intersection.

Because of the parallel nature of Engineer Road and the rail line, drivers may not be able to see a train over their left shoulder and would only be able to use their rear view mirror. Because of the slow train speeds along the spur, the parallel design may not substantially increase traffic hazards with respect to train operations. However, at the North Access Road/Maritime Street intersection, the Engineer Road access option could substantially increase traffic hazards to motor vehicles and perhaps bicyclists and pedestrians due to the combination of a narrow Engineer Road with no clearance to adjacent buildings and the 90

degree bend in Engineer Road at the intersection with Maritime Street. This design would not comply with all City design standards.

No feasible means of mitigating the potentially significant impacts for this access option has been identified. Further design work would be necessary to fully evaluate whether a very complex and expensive set of integrated traffic signals would work for this intersection. Effective mitigation could also involve re-routing Engineer Road through the Army Reserve property or relocation or abandonment of the BNSF spur line. Additionally, the crossing of this intersection over BNSF railroad property would occur at a location without an existing easement to allow such a crossing. While it may be possible to transfer the easement crossing from the existing driveway to the Maritime Street/North Access Road intersection, such a transfer is uncertain and the process likely to be considerably time consuming. Without such an easement, this access option would be infeasible.

Relocated Rail Spur Access Options

Alternatively, both Oakland Terminal Rail (OTR) and EBMUD separately proposed alternative access options that would necessitate the relocation of the existing rail line and its users/operators. BNSF owns property at the northeastern corner of the proposed Auto Mall development site and holds a perpetual easement along the remainder of the northern boundary, and BNSF and OTR (a subsidiary of BNSF) operate on the existing line.

In negotiations with the City, BNSF has outlined necessary actions they would insist upon prior to the transfer of necessary real property rights for relocation of the rail line. While the City has not determined the actual costs for the relocation and all related actions including hazmat remediation, they approximate the total cost to be at least \$900,000 to \$1,500,000. Additionally, the relocation and related actions are likely to require an Environmental Impact Report which would take approximately 9-12 months or more to complete.

The City has determined that obtaining the rights to relocate the rail line is infeasible due to: inability to acquire third party real property interests within the timeframes necessary to complete the Auto Mall and excessive cost.

Two access options requiring relocation of the rail line were submitted as part of EBMUD's official comment letter in response to the Draft 2006 Auto Mall Supplemental EIR (included in the Final SEIR). These two access options would be considered infeasible for the above reasons as well as any other access option requiring relocation of the rail line.

CONCLUSIONS

The SEIR traffic study included an analysis of both the Project and an expanded project alternative. The SEIR also analyzed potential design hazards and emergency access issues associated with either alternative for existing and cumulative conditions. A **potentially significant** impact was identified for the non-perpendicular configuration of the EBMUD

intersection with the proposed new North Access Road because the plans were not developed in sufficient detail at the time the SEIR was conducted to determine if the lines of sight for all motorists would be free from obstruction.

This Addendum to the SEIR evaluated in detail traffic operations at the EBMUD access and the effect the Project and the alternative would have on those traffic operations as well as lines of sight. New traffic data were collected and analyzed and field conditions were observed. The effects of existing and potential future rail operations beyond those that are reasonably foreseeable at the nearby at-grade crossing were considered. The design of the EBMUD access and roadways serving the proposed Project was refined and a new assessment of potential design hazards was performed.

The study performed for this Addendum found that the Dedicated Left Turn Lane option would provide adequate lines of sight for all motorists, would have no effect on operations of the EBMUD access, and would provide more than adequate storage for vehicle queues that would result from operation of vehicle entries into EBMUD at the guard house and for vehicle queues that would result from train blockages at the at-grade crossing. A second Left Turn Pocket option would also provide adequate lines of sight, acceptable traffic operations and would accommodate all vehicle queues. This second option would require more extensive construction and the cost may not be justified.

A refinement to the new preferred access options was evaluated. The refinement changes the alignment to avoid a small Port-owned parcel of land in the event negotiations with the Port for transfer of the land fall through or cannot be finalized in the timeline of the Auto Mall project. This option could be combined with either of the EBMUD access options and would not change any of the analysis or conclusions regarding the preferred access options.

Other access alternatives were considered but were rejected as infeasible.

WASTEWATER COLLECTION, TREATMENT AND DISPOSAL

PRIOR ANALYSIS AND CONCLUSIONS

OARB REDEVELOPMENT EIR

The following summarizes and supplements the analysis and conclusions contained in that prior 2002 OARB Redevelopment EIR relating to wastewater. As indicated on page 4.9-12 of the 2002 OARB Redevelopment EIR, information for utility systems serving the OARB is summarized from the *Oakland Army Base Utility Study, Utilities Systems Review* (Earth Tec 2000).

Existing Conditions

For the entire OARB Redevelopment Area, EBMUD provides sanitary sewage transport (intercepting and lift stations), treatment and disposal services. The Redevelopment Plan Area (including the approximately 30-acre Auto Mall project site) is located within sewer collection basin 64 (Oakland North). Sewer collection basin 64 is subdivided into 15 numbered, and 1 unnumbered sewer collection sub-basins. Each numbered sub-basin encompasses a specific physical area, and its sewer flows are assigned by the City of Oakland to a single discharge point from the City's collection system to the EBMUD interceptor system, in this case EBMUD's South Interceptor. The unnumbered sub-basin, located in the northerly portion of the former OARB in the area generally defined as the City's Gateway Development Area, represents the total area within the larger sewer collection basin not located within a numbered sub-basin, and flows are not assigned to a specific discharge point along the EBMUD transport system. The City allocates each sub-basin a certain amount of sewer flow that may be discharged to the EBMUD system, and flows within a sub-basin normally may not exceed that allocation. Should a sub-basin require more flow than its allocation, allocation may be redirected between adjacent sub-basins, or allocations assigned to the unnumbered sub-basin may be redirected to a numbered sub-basin. In total, however, flows for the larger sewer basin may not exceed that basin's allocation. In this manner, the City ensures the capacity of the EBMUD wastewater transport and treatment system is adequate to serve development as planned and as proposed.

With the exception of flows from the unnumbered sub-basin within the former OARB, the EBMUD interceptor system transports sewage to the Main Wastewater Treatment Plant (MWWTP) located immediately north of the North Gateway Auto Mall project site. Within the unnumbered sub-basin at the former OARB, a separate, direct connection to the MWWTP exists via a 15-inch sewer line located in Engineers Road.

The MWWTP treats domestic, commercial, and industrial wastewater, and as of 2002 experienced an annual average flow of approximately 80 million gallons per day (mgd). The MWWTP can provide secondary treatment for a maximum flow of 168 mgd, and primary treatment for up to 320 mgd; storage basins provide plant capacity for a short-term hydraulic peak of 415 mgd.

Treated effluent is discharged from the MWWTP to San Francisco Bay south of the Bay Bridge approximately one mile from the east Bay shoreline via a 109-inch-diameter deep-water outfall pipeline. EBMUD discharges in compliance with conditions of permits granted the District by the RWQCB under the National Pollutant Discharge Elimination System (NPDES) Program.

Previously Identified Impact

The 2002 OARB Redevelopment EIR (SCH# 2001082058) identified that redevelopment, including redevelopment of the North Gateway (Auto Mall) site, would increase sewer flows to the EBMUD transport and treatment system. However, this impact was determined to be less than significant and mitigation was not warranted.

The 2002 Redevelopment EIR did not explicitly estimate baseline wastewater generation for the Redevelopment Area, the former OARB or its individual subareas. However, an estimate of this baseline can be derived from baseline water usage in 2001. Assuming a conservative ratio of 90% of the total water usage resulting in wastewater generation, the following wastewater generation baseline can be estimated:

TABLE 4-1: ESTIMATED WASTEWATER GENERATION – BASELINE (GPD, ADWF)

	<u>2001 Setting Water Use</u>	<u>Estimated 2001 Setting – Wastewater²</u>
Former OARB subarea ¹	205,400	184,900
Port Maritime subarea	760,200	684,200
16 th & Wood subarea	25,900	23,300
OARB Redevelopment Area, total	991,500	892,400

Notes: 1.From 2002 Redevelopment EIR, Appendix 4.9A. OARB subarea water use is actual demand from EBMUD records for the OARB area. Other current water use is calculated from EBMUD “Average Land Use Demands by Location”

2. Estimated at 90% of the water usage

Estimated Future Flows

Based on standard flow factors, the estimated increase in sewer flows for the entire redevelopment program as a result of redevelopment activity was estimated to be approximately 898,000 gpd average dry weather flow (ADWF), and 2.6 mgd peak weather flow (PWWF). Detailed information derived from Technical Appendix 4.9C of the 2002 Redevelopment EIR indicates the following for increased wastewater flows and total wastewater flows throughout the OARB Redevelopment Area:

TABLE 4-2: ESTIMATED INCREASE IN WASTEWATER GENERATION (GPD, ADWF)

	<u>Estimated 2001 Setting – Wastewater¹</u>	<u>Projected Increase in Wastewater Flows Resulting from Redevelopment²</u>	<u>Total Estimated Wastewater Flows – Full Redevelopment³</u>
<u>OARB Subarea:</u>			
North Gateway (Auto Mall site)		18,000	
Remainder, City Gateway Development Area		367,550	
Port Development Area		<u>102,900</u>	
Total OARB subarea	184,900	488,450	673,350
<u>Port Maritime subarea</u>	684,200	82,500	766,700
<u>16th & Wood subarea</u>	<u>23,300</u>	<u>327,050</u>	<u>350,350</u>
OARB Redevelopment Area, total	892,400	898,000	1,790,400

Notes: 1. From Table 5-1 above.
 2. 2002 Redevelopment EIR, Appendix 4.9B, "OARB Redevelopment Project Area Sewer Flows"
 3. Add 2001 Setting + Projected Increase

These projected flows were found to not exceed allowable sewer collection sub-basin allocations.⁶ The sewer basin allocation for all sub-basins that serve the Port Maritime subarea and the former OARB subarea amounts to over 3.7 million gpd ADWF.⁷

Much of the existing OARB sewerage collection system is of World War II vintage and as such has numerous cracks, loose joints and other points where outside water can seep into the

⁶ 2002 Redevelopment EIR, Appendix 4.9B: Wastewater Demand letter dated January 31, 2002 from City of Oakland Public Works Agency

⁷ City of Oakland *Sewer System Evaluation Survey*, Table 5-3, page 5-14 for sewer sub-basins 64-5-1, 64-5-2, 64-5-3 and 64-15.

system. However the Army did replace and slip-line many of the sanitary sewer lines, primarily the 6-inch, 8-inch and 10-inch lines. The 2002 Redevelopment EIR estimated that during wet weather events and in times when groundwater is at its highest level (*e.g.*, after one or more high-rain seasons), groundwater inflow and infiltration (I/I) to the sanitary sewer system could account for a significant amount of sewer flows entering the system.

The OARB Redevelopment Plan calls for all or nearly all sanitary sewer pipelines in the former OARB to be removed or plugged, and a new sewer system to be constructed as needed as redevelopment activity occurs. As shown on **Figure 14** (reproduced from Figure S-8 of the *Oakland Army Base Utility Study, Utilities Systems Review*, Earth Tec 2000, which was relied upon for information contained in the 2002 OARB Redevelopment EIR), new sewer trunk lines were anticipated to connect the unnumbered sub-basin serving the North, East and Central Gateway subareas to the existing sewer system at the existing pump station along Burma Road. From that location, a new lift station was shown to convey flows through the existing 15-inch sewer line in Engineer's Road to the MWWTP.

With significant reductions in inflow and infiltration due to construction of this new sewer collection system, the 2002 OARB Redevelopment EIR found that sewer flows from the Redeveloped Project Area would not exceed the capacity of either the sewer transport or treatment systems.

AUTO MALL PROJECT SUPPLEMENTAL EIR

The Supplemental Environmental Impact Report for the Oakland Army Base Auto Mall Project (Auto Mall SEIR) was certified by the City of Oakland in December 2006 (SCH# 2006012092). That document relied upon the data from the previous OARB Redevelopment EIR to conclude that infrastructure improvements to the sewer system within the OARB sites would be necessary to service new redevelopment activities. These improvements were included as part of the OARB Redevelopment/Reuse Plan project description as described above, and fully evaluated in the 2002 OARB Redevelopment EIR.

Engineering studies regarding public and private utility infrastructure service extensions were identified as on-going (as they continue to be). Although more detailed information had been developed by December 2006 regarding to infrastructure improvements than was known at the time of preparation of the 2002 OARB Redevelopment Plan EIR, no new impacts of a significant nature were identified as being associated with these infrastructure improvements as part of the Auto Mall SEIR.

The Auto Mall SEIR concluded that there were no changes in the project, change in circumstances, or new information that would result in new significant environmental effects related to utilities or public infrastructure. Nor would there be a substantial increase in the severity of any previously identified environmental effects on utilities and public infrastructure.

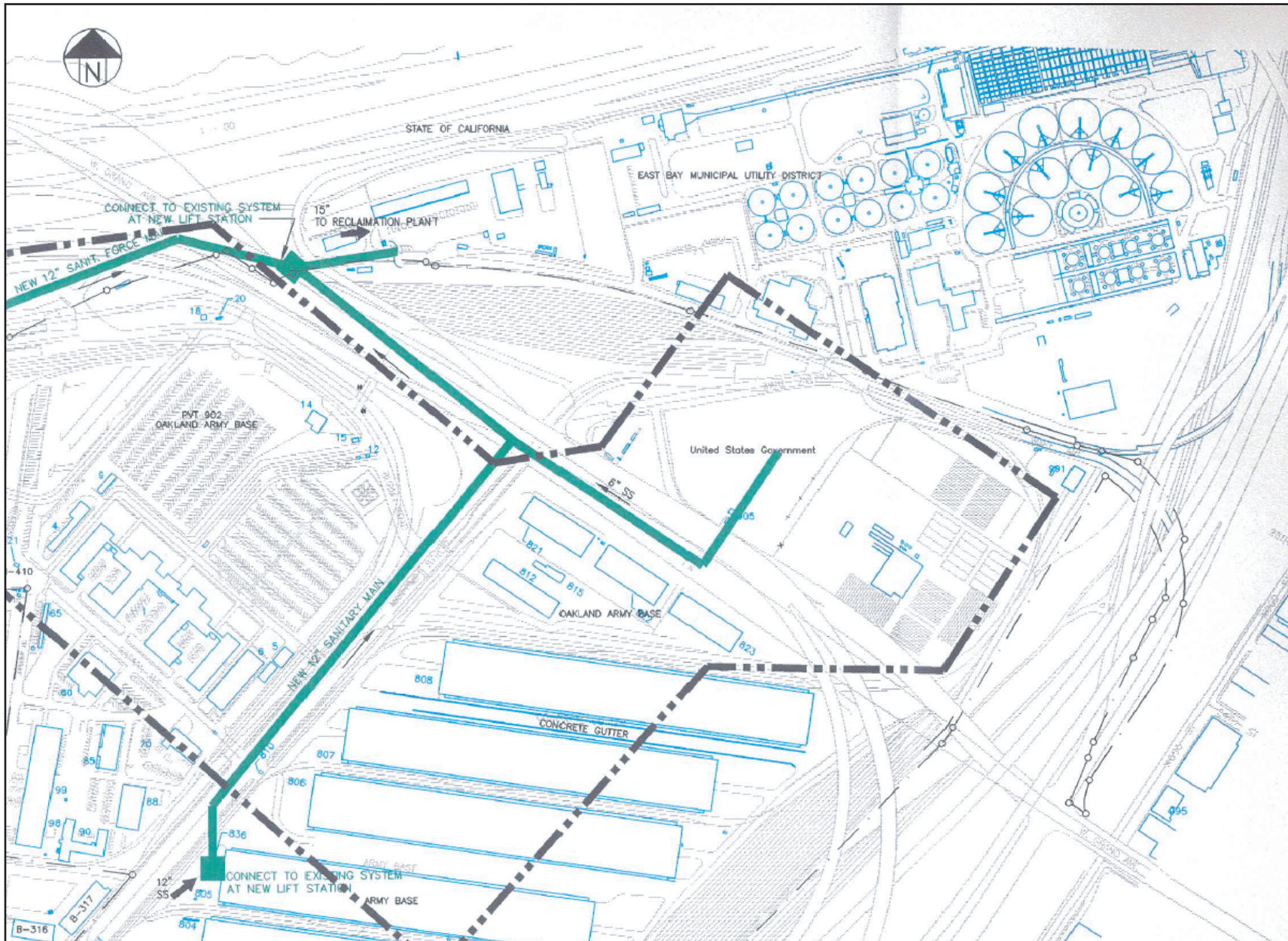


Figure 14: Sewer System for Future Base Development
(Reproduced from the *Oakland Army Base Utility Study, Utilities Systems Review*, 2000)

ON-GOING ENGINEERING STUDIES AND INVESTIGATIONS

In order to support redevelopment activities within the former OARB, engineering studies regarding public and private utility infrastructure service extensions continue to be on-going.⁸

WASTEWATER TREATMENT CAPACITY

In order to provide greater certainty about the availability of wastewater treatment capacity for the Auto Mall project and for overall redevelopment within the former OARB, the assumptions of the Initial Study for the Auto Mall SEIR regarding wastewater treatment have been reviewed.

Based on City of Oakland Public Works Agency Standards (November 2004), the amount of wastewater anticipated to be generated by the Auto Mall project is estimated to be slightly greater than 15,000 gpd ADWF, as indicated in Table 4-3 below. The volume of wastewater that was projected to be generated from ancillary maritime use and warehouse/distribution uses in the North Gateway as anticipated under the 2002 Redevelopment EIR was 18,000 gpd, ADWF. Given that the Auto Mall would generate less flow than the previous estimate from the 2002 Redevelopment EIR, this change in the project would not result in a new significant environmental effect.

⁸ URS Corporation, Field Reports from Ken Eichstaedt, P.E. with URS Corporation to Andrew Clough, Oakland Base Reuse Authority Community and Economic Development Agency, City of Oakland: Subject: *Sanitary Sewer Monitoring Former Oakland Army Base City of Oakland*, from April 10, to June 15 2007

TABLE 4-3: OARB AUTO MALL, ESTIMATED WASTEWATER GENERATION

	<u>Units</u>	<u>Flow / Unit</u> ¹	<u>Estimated Flows</u> <u>(gpd)</u>
Total Dealership Building Space	390,000 sf	25 gpd/1,000 sf	9,750
Total Repair Garages	30,000 sf	100 gpd/1,000 sf	3,000
Total Car Washes	6	412 gpd/bay	2,472
Total, ADWF			15,222 gpd, ADWF
Peaking factor		3.75	57,082
Inflow and infiltration	24 acres	1,000 gal/acre	24,000
Total, Potential PWWF			81,082 gpd, PWWF

Source: URS Corporation, June 2007 and Kimley-Horn, June 2007

1. City of Oakland Public Works Agency Standards, November 2004

As also shown in Table 4-3 above, the ADWF has been converted to a PWWF by applying the City of Oakland Public Works Agency Standards of 1,000 gallons per acre of I/I, and a conservative peaking factor of 3.75 (as compared to an average factor of 2.0). Thus, the maximum flows attributable to the Auto Mall project are approximately 81,000 gpd PWWF.

Additionally, it should be noted that the sewer basin allocation for the sub-basins overlapping the Port Maritime subarea and the former OARB amount to over 3.7 million gpd ADWF.⁹ A comparison of this allocation to the total estimated wastewater flows resulting from full redevelopment of this area (slightly less than 1.8 million gpd as shown in Table 5-2 above) indicates that sewer basin allocations for this area are significantly more than adequate to accommodate the anticipated volume of wastewater projected to be generated from redevelopment activity, including the Auto Mall project.

INFLOW AND INFILTRATION

Recent studies confirm prior conclusions that the sanitary sewer system, which was installed in the 1940s, consisted of clay pipe and reinforced Portland cement concrete manholes. A

⁹ City of Oakland *Sewer System Evaluation Survey*, Table 5-3, page 5-14 for sewer sub-basins 64-5-1, 64-5-2, 64-5-3 and 64-15.

report on the utility system was issued in 2005¹⁰ that identified many areas with defects including cracked pipes, offset joints, and root intrusion. These defects allow for inflow and infiltration, including brackish groundwater from the Bay into the system. However, the U.S. Army did slip-line and replaced many of the sanitary sewer lines in the former OARB in the late 1980s. Another recent report has identified that major portions of the sanitary sewer system within the City Gateway portion of the former OARB have been repaired or replaced in the 10 years prior to the date of the report in 1997.¹¹ The main lines in the warehouse area (Buildings 802 to 808) in the eastern portion of the site and along Maritime Street were replaced in 1987. A portion of the mainline along Burma Road was also slip-lined in 1996. This information suggests that previous assumptions regarding inflow and infiltration into the existing system as presented in the 2002 Redevelopment EIR may have been conservatively over-estimated.

Recent URS investigations have included flow measurement device installation and monitoring of the sanitary sewer trunk line at manhole MH-23A (15-inch) on Engineer Road west of Wake Avenue, on the former Oakland Army Base. The objective is to understand the flow conditions in the sanitary sewer system and to assess the level of infiltration and inflow that might be occurring. Although preliminary investigations do indicate a general correlation between flow rate at the manhole location and tidal interaction (indicative of groundwater elevation), these investigations have also found that much of the existing sewer system is in better operating condition than was previously estimated. The data from the flow studies completed by URS in April through June 2007 indicate that the volume of existing infiltration into the sewer system is, in fact, less than anticipated in the 2002 Oakland Army Base Redevelopment Area EIR. The 2002 Redevelopment EIR anticipated that the sewer system within the former OARB would be fully replaced, and that this new system would therefore have a relatively low rate of I/I. Current studies indicate that the current system does not have as high an I/I rate as previously assumed, and that portions of the system may continue to be used to serve new redevelopment activities without contributing high rates of wet weather I/I. However, monitoring of the flow conditions has continued and means for further reducing I/I into the sewer system within the former OARB have been developed, with the objective of even further minimizing the I/I flow in the piping system to further lessen the effluent volume reaching the EBMUD treatment plant. This effort includes installation of plugs in certain sewer lines no longer in use. Currently, eight laterals have been identified and plugged that formerly served warehouses and buildings no longer in use or torn down.

¹⁰ Earth Tech, *Final Report, Oakland Army Base Utility Study, Utilities Systems Review*, December 2000, supplemented by the *Pipeline Investigation Report*, September 1999, TERC II project

¹¹ Radian International LLC *Sanitary Sewer Survey Report* dated September 1997

SANITARY SEWER SYSTEM IMPROVEMENTS

Sewer Service for the Auto Mall

The City continues to conduct detailed engineering studies for the new sewer system to be installed within the former OARB, in particular within the Auto Mall project area. Consistent with the assumptions of the OARB Redevelopment EIR and the Auto Mall SEIR, a new sewer system that includes sewer laterals connecting to development sites and new collection lines, are currently contemplated. As had been shown on Figure S-8 of the *Oakland Army Base Utility Study, Utilities Systems Review* (Earth Tec 2000), the new sewer collection system serving the Auto Mall will connect to the existing pump station along Burma Road. That pump station may also need improvements. The pump station will then deliver the wastewater to the EBMUD Municipal Waste Water Treatment Plant (MWWTP) via the existing 15-inch sanitary sewer line that runs along Engineers Road and into the MWWTP. The continued use of this 15-inch sewer line to serve new redevelopment was fully contemplated and anticipated in the 2002 Redevelopment EIR.

Current planning-level studies conducted by URS Corporation indicate that the 15-inch line has a flow capacity of approximately 1.2 million gallons per day (mgd). Baseline flows from the former OARB are estimated to have been as high as approximately 185,000 gpd ADWF in year 2001, as indicated in Table 4-1. However, current flows tributary to this system have been substantially reduced due to less active use of the former OARB. Recent field investigations conducted by URS Corporation¹² have measured current flow rates in the 15-inch line, and found flows to average, at highest flow periods, approximately 17.5 to 20 gallons per minute. These measurements correlate to an average high period flow rate of approximately 30,000 gpd. When average dry weather flows from the OARB Auto Mall project (approximately 15,000 gpd as shown in Table 4-2) are added to the existing flow, the total existing-plus-project flow that is tributary to the 15-inch line amounts to approximately 45,000 gpd ADWF.

The maximum PWWF attributable to the Auto Mall project is estimated at approximately 81,000 gpd, which is less than 1% of the capacity of the 15-inch line. This estimate is based on the applicable City standards for peaking and I/I attributable to the Automall on account of the new sewer system that will serve the Auto Mall project. Even if the peaking conditions and the amount of inflow and infiltration from other portions of the existing sewer system (i.e., those portions of the system beyond the subject Project, the Auto Mall) reached a theoretical, grossly conservative and unlikely peak factor of 20:1, the resulting existing peak flows would amount to 600,000 gpd. Adding the 81,000 gpd PWWF from the Auto Mall to this highly unlikely theoretical peak from beyond the Auto Mall would generate 681,000 gpd, an amount still far less than the 1,200,000 gpd capacity of the 15-inch line.

¹² URS Corporation, Ken Eichstaedt, P.E., Technical Memorandum dated April 27, 2007; and Technical Memorandum dated May 17, 2007

As previously determined in the Auto Mall SEIR, the use of this sewer transport line does not represent a change in the project or change in circumstances. This fully contemplated and anticipated use of the 15" line to serve the Auto Mall project would not result in new significant environmental effects, or a substantial increase in the severity of previously identified environmental effect.

Sewer Service for Full Redevelopment of the OARB Gateway

As indicated above in Table 5-2, the future wastewater flows tributary to the 15-inch line (those flows emanating from the former OARB) are estimated to reach approximately 673,350 gpd ADWF under full redevelopment of the former OARB. Under the peaking factor estimates included in the 2002 OARB Redevelopment EIR (approximately 3:1, assuming new sewer system construction throughout the former OARB area), the peak wet weather flows that would be tributary to this system were estimated to be approximately 1.86 million gallons per day PWWF. These projected flows indicate that at some point in the future, after redevelopment of the Auto Mall project, the peak wet weather flows resulting from full redevelopment of the former OARB may become too great for the capacity of this 15-inch line. Improvements to the sewer transport system serving former OARB redevelopment sites will be necessary to service new redevelopment activities. These improvements include an eventual upgrade or replacement of the 15-inch line in Engineers Road.

City staff, in collaboration with Kimley-Horn Engineers and URS Corporation, has been exploring options for providing alternative sewer connections from the former OARB Redevelopment Area to the EBMUD WWTF.

One option is to upgrade the existing 15-inch line to a larger pipe size, with adequate capacity to convey all flows tributary to this system. This larger pipe would then connect to the MWWTF at the existing connection.

Another option is to construct a new bypass sewer line that would connect to the existing pump station north of Burma Road (where all Gateway Redevelopment Area flows will eventually connect). This bypass line would then generally follow within the existing right-of-way of the frontage road between I-80 and the EBMUD treatment plant, to a new connection with EBMUD's North Interceptor.

A third option would be to construct a new sewer line parallel to the existing 15-inch line in Engineers' Road, but continue this new line further to the east, where it would connect with EBMUD's South Interceptor.

Any of these options could require acquisition of new utility easements, and detailed engineering design would need to fully consider and address issues such as avoiding conflicts with existing infrastructure (i.e., existing underground sewer lines, gas mains and storm drain pipes). However, all options would occur in fully developed and urbanized settings, and in

areas where paving already covers the surface. No additional impacts related to aesthetics, agricultural resources, biological resources, known historic or cultural resources, geology and soils, land use, mineral resources, population and housing, public services, or transportation systems would occur.

Construction activity necessary to implement either option could have potentially significant environmental effects. However, all such effects have been previously studied and addressed in the 2002 Redevelopment EIR, as discussed below:

- Air Quality: Construction activities associated with a larger connection to the EBMUD WWTF or a new sewer connection to the EBMUD Interceptor system would have the potential to generate fugitive dust and increase levels of NO_x, ROG, CO and PM₁₀ concentrations. This impact was previously identified in the 2002 Redevelopment EIR (Impacts 4.4-1 and 4.4-2). The 2002 EIR identified Mitigation Measures 4.4-1 and 4.4-2, requiring implementation of fugitive dust control measures and exhaust control measures during construction activity. These measures were determined capable of reducing this impact to a less than significant level. These mitigation measures would apply to contemplated sewer system construction activities.
- Cultural Resources: A larger capacity connection to the EBMUD WWTF or a new sewer connection to the EBMUD Interceptor system would involve subsurface construction activities, which has the potential to encounter previously unknown cultural resources. This impact was previously identified in the 2002 Redevelopment EIR (Impacts 4.6-1). The 2002 EIR identified Mitigation Measures 4.6-1, requiring construction activity to halt, any discovered resource to be assessed, and a mitigation plan to be developed for any significant resource that may be discovered. This measure was determined capable of reducing this impact to a less than significant level. This mitigation measures would apply to contemplated sewer system construction activities.
- Hazardous Materials: Construction activities associated with a larger connection to the EBMUD WWTF or a new sewer connection to the EBMUD Interceptor system that may occur in areas that contain contaminated soil and groundwater could expose workers and others to contaminated conditions. Such impacts were previously identified in the 2002 Redevelopment EIR (Impacts 4.7-4, 4.7-8, and 4.7-11). The 2002 EIR identified Mitigation Measure 4.7-3 requiring implementation of the RAP/RMP, Mitigation Measures 4.7-4 requiring site investigations for areas not previously studied, and remediation of any contaminants found; Mitigation Measure 4.7-11 requiring sampling of suspect soil or paved areas for lead-based paint, asbestos, or PCB contamination; and Mitigation Measure 4.7-15 requiring any PCB-contaminated equipment to be removed and contained in accordance with applicable laws and regulations. These measures were determined capable of reducing this impact to a less than significant level. These mitigation measures would apply to contemplated sewer system construction activities.

- Hydrology and Water Quality: Construction of a larger connection to the EBMUD WWTF or a new sewer connection to the EBMUD Interceptor system would disturb soils during construction, potentially resulting in erosion and increased sediment loads in surface waters. Construction may also encounter contaminated groundwater that could enter nearby receiving waters. Such impacts were previously identified in the 2002 Redevelopment EIR (Impacts 4.15-2 and 4.15-3). The 2002 EIR identified Mitigation Measure 4.15-3 requiring implementation of a Storm Water Pollution Prevention Plan, and Mitigation Measure 4.7-4 requiring site investigations and remediation. These measures were determined capable of reducing this impact to a less than significant level. These mitigation measures would apply to contemplated sewer system construction activities.
- Noise: Construction activities associated with a larger connection to the EBMUD WWTF or a new sewer connection to the EBMUD Interceptor system could generate significant noise from construction activities. This impact was previously identified in the 2002 Redevelopment EIR (Impact 4.5-1). The 2002 EIR identified Mitigation Measures 4.5-1 requiring implementation of site-specific noise reduction plans during construction activity to reduce this potential impact to a less than significant level. This mitigation measure would apply to contemplated sewer system construction activities.
- Circulation: During construction activities associated with a larger connection to the EBMUD WWTF or a new sewer connection to the EBMUD Interceptor system, it is likely that streets and roadways could be closed, potentially causing temporary, localized circulation impacts on the street system. This impact was identified in the previous 2002 Redevelopment EIR (Impact 4.3-11). The 2002 EIR identified Mitigation Measure 4.3-13 requiring a Traffic Control Plan to be implemented prior to commencing construction activity. This measure was determined capable of reducing this impact to a less than significant level. This mitigation measure would apply to contemplated sewer system construction activities.

The City of Oakland has committed to implementing of one of these optional sewer transport system connections to the MWWTF or the EBMUD Interceptor system (or a similar improvement), at such time as these improvements are necessary to adequately serve new redevelopment activity within the OARB Redevelopment Area, and prior to exceeding the capacity of the existing 15-inch line.

Construction of a larger capacity connection to the EBMUD WWTF or a connection of the OARB sewer system to the EBMUD Interceptor system represents a minor change in the Project Description of the 2002 Redevelopment Plan. This change in the Project Description does not involve any new significant environmental effects that were not discussed in the 2002 EIR, or a substantial increase in the severity of previously identified environmental effect.

EBMUD CONCERNS REGARDING THE SEWER SYSTEM DESIGN

Non-Conforming Connection

EBMUD claims that the existing 15-inch sanitary sewer line that runs along Engineers Road and connects to the MWWTP, which is a portion of the sewer system serving the former OARB, is a non-conforming connection. EBMUD asserts that all connections to their collection system must enter the MWWTP through either the North or South Interceptors. However, the history of ownership and operation of the sewer system in this area indicates the following:

- The former OARB sanitary sewer system, including the pump station and the 15-inch line along Engineers Road was constructed by the U.S. Army circa 1941. It was operated by the Army from the time of its construction until August 2000 when OBRA took over operational control.
- OBRA, and now the Oakland Redevelopment Agency has operated and maintained the sanitary sewer system, including the 15 inch line along Engineers Road, from August 2000 to the present.
- The August 8, 2003 Economic Development Conveyance (EDC) recorded document for the former Oakland Army Base property transferred fee title of the 15-inch sanitary sewer line that runs along Engineers Road and the entire sanitary system at the former OARB to the Oakland Base Reuse Authority (OBRA).¹³
- The 2005 U. S. Army Reserves Utility System contract reserves a right of entry for the Oakland Redevelopment Agency to maintain and operate the 15-inch sanitary sewer line that runs along Engineers Road and is on property owned by the U.S. Army Reserve.
- The planned future use of the 15-inch line by the Auto Mall project is consistent with prior use, will result in less discharge to the MWWTF than prior Army use, and will not create any new impacts.

This information indicates that even if this 15-inch line is not a typical connection for the EBMUD system, it has been in use for over 60 years and its ownership and operational control has been transferred to the City of Oakland Redevelopment Agency.

As provided for under CEQA Guidelines Section 15229, the 2002 OARB Redevelopment EIR determined that the Reuse Plan/Redevelopment Plan would not have a significant effect on wastewater conveyance or treatment, given that the projected impacts would not exceed the capacity of the baseline physical conditions which were present at the time that the

¹³ Economic Development Conveyance Document; Exhibit B, dated August, 2003

federal decision for the closure of the OARB became final. These baseline physical conditions include the use of the existing 15-inch sewer line in Engineers' Road for conveyance of wastewater flows to the MWWTP. As determined in the Auto Mall SEIR, continued use of this portion of the sewer system to serve redevelopment activity associated with the OARB Auto Mall project does not represent a new use of this facility, nor a change in the project. EBMUD assertions that the 15-inch line is a non-conforming connection to the MWWTP do not represent a change in circumstances, or a change in the baseline physical conditions which exist. The continued use of this sewer main to serve the Auto Mall would not result in new significant environmental effects, nor a substantial increase in the severity of previously identified environmental effect.

Surcharging

EBMUD has also indicated that this 15-inch sanitary sewer line sometimes surcharges (back flows) and that this surcharge results in flooding and related damage to the Main Waste Water Treatment Plant (MWWTP).

URS Inc., a consultant to the City Redevelopment Agency, completed a flow study of the 15-inch sanitary sewer line.¹⁴ This study found that there are three tributary lines that flow into the 15-inch main sanitary sewer line at the north end of the OARB. Flow monitoring has been conducted on this main 15-inch line since April 10, 2007, with the monitoring occurring at manhole #MH-23A. This manhole is located upstream of the line discharging into the EBMUD treatment plant near the intersection of Engineer's Road and Wake Avenue, and is where flows from each of these sub-basins connect.

The flow studies confirm that the 15-inch sanitary sewer line does sometimes surcharge. However, the study also concludes that the current surcharging does not correlate with existing flow volumes within the 15-inch line. Instead, the study documents conversations with EBMUD field personnel indicating that the surcharging is likely caused by operations within the MWWTP including the discharge of 6,000 gallon tanker trucks.

Furthermore, data from recent flow studies indicate that the volume of inflow and infiltration into the former OARB sewer system is less than estimated in the 2002 Redevelopment EIR, so less peak wet weather flows are now anticipated to occur. The City continues to monitor flow conditions tributary to the 15-inch line in Engineers Road, and is implementing I/I reduction measures to even further minimize the wet weather I/I flow into its tributary system. These measures serve to further lessen the volume of effluent flows within this 15-inch line. Thus, the surcharging in the system is not caused by existing uses or by I/I, nor would it be caused by Auto Mall flows. Based on this information, the continued use of this

¹⁴ URS Inc., associated *Field Reports* dated from April 10 to June 15, 2007 and Technical Memorandum titled *Sanitary Sewer Monitoring, Former Oakland Army Base, City of Oakland*, May 17, 2007

15-inch sewer line to serve the Auto Mall would not result in new significant environmental effects, nor a substantial increase in the severity of previously identified environmental effect.

NON-CEQA RECOMMENDATIONS

Although not legally required to address any significant environmental effect, the following conditions of approval are recommended to further clarify the City of Oakland's intent with respect to wastewater collection and conveyance, to specifically describe improvements that were fully anticipated under the 2002 Redevelopment EIR's Project Description, to clarify the City of Oakland's intent with regard to future connections to the EBMUD Interceptor system, and to even further reduce anticipated, less than significant wastewater flows. If these recommendations are accepted, they will be made conditions of approval for the Auto Mall project and subsequent projects pursuant to the OARB Reuse and Redevelopment Plan for the former OARB.

The following are recommended conditions of approval specific to the Auto Mall project:

Recommended Condition of Approval: Auto Mall Project

Wastewater 1: New Sewer System Design and Construction. The City of Oakland shall continue to conduct detailed engineering studies for a new sewer system to serve the Auto Mall site, and shall construct new improvements as necessary and needed. Consistent with the assumptions of the OARB Redevelopment EIR and the Auto Mall SEIR, this new sewer system may include new sewer laterals connecting to auto dealership sites, new collection and conveyance lines, and other new system facilities such as a pump station. To the extent that portions of the existing sewer system formerly installed and improved by the US Army are found to be in good operating condition and are located appropriate to serve the Auto Mall, these portions of the existing system may continue to be used.

Recommended Condition of Approval: Auto Mall Project

Wastewater 2: Implementation of BMPs for Auto Mall Uses. Future auto dealerships within the OARB Auto Mall shall implement, to the maximum feasible extent and consistent with Oakland's standard practices and policies, applicable Best Management Practices (BMPs) to reduce water demand and wastewater generation. Such BMPs should include, without limitation:

- Installation of low-, ultra-low, waterless and/or dual flush flow toilets; water efficient irrigation systems that include drip irrigation and efficient sprinkler heads; evapotranspiration (ET) irrigation controllers; drought-resistant and native plants for landscaping; and minimization of turf areas.

- Reductions in car rinse frequency for cars on the lot, with a maximum of two (2) rinses per week. Any hose fittings used for car rinsing shall be high water efficiency fittings.
- Installation of on-site water recycling systems for all car wash operations, and not connecting the car wash systems to the wastewater system when recycled car wash water is used on-site.

The following are recommended conditions of approval applicable to other future redevelopment activities throughout the remainder of the OARB Redevelopment Area:

Recommended Condition of Approval: Subsequent OARB Redevelopment

Wastewater 3: Monitoring of Sewer Sub-basin Allocations. Consistent with City of Oakland standard procedures and practices, wastewater flows projected to result from redevelopment activities within the former OARB shall be regularly monitored and compared against applicable sewer sub-basin allocations to ensure that the capacity of the wastewater transport and treatment system is adequate to serve redevelopment as planned and proposed. Should a sub-basin require more flow than its allocation, allocation shall be redirected between adjacent sub-basins, or allocations assigned to the unnumbered sub-basin shall be redirected to a numbered sub-basin. In total, however, flows for the larger sewer basin shall not exceed that basin's allocation.

Recommended Condition of Approval: Subsequent OARB Redevelopment

Wastewater 4: Field Monitoring of Sewage Flows Tributary to the 15-Inch Sewer Line. The City of Oakland shall continue to monitor wastewater flows emanating from the OARB Gateway area. Specifically,

1. Wet weather flow monitoring shall occur at manhole #23A, and shall occur over a 45 to 60 day period during the 2007/2008 wet weather period. Monitoring results shall be used to develop and refine wet weather to dry weather flow ratios. Specifically, results of the monitoring and I/I reduction efforts shall be used to refine and improve the estimates of wastewater flows projected to emanate from redevelopment activities that are tributary to the 15-inch sewer line. These refined and improved flow rates shall be used to more accurately estimate the demand for wastewater conveyance as compared to available capacity within the 15-inch line to serve new redevelopment.
2. The City of Oakland shall continue to monitor and shall implement inflow and infiltration reduction measures throughout the former OARB. The objective of these I/I reduction efforts shall be to even

further minimize the I/I flow in the piping system to further lessen the effluent volume reaching the conveyance system and the EBMUD treatment plant.

Recommended Condition of Approval: Subsequent OARB Redevelopment

Wastewater 5: Increased Conveyance Capacity. The City of Oakland shall construct a larger-capacity connection to the EBMUD WWTF, or shall connect the OARB sewer system to the EBMUD Interceptor system, when such improvements are necessary to adequately serve new redevelopment activity within the OARB Redevelopment Area, and prior to exceeding the capacity of the existing 15-inch line.

Recommended Condition of Approval: Subsequent OARB Redevelopment

Wastewater 6: New Sewer System Design and Construction. The City of Oakland shall continue to conduct detailed engineering studies for a new sewer system within the former OARB, and shall construct new improvements as necessary and needed to serve redevelopment activity. Consistent with the assumptions of the OARB Redevelopment EIR and the Auto Mall SEIR, this new sewer system may include new sewer laterals connecting to development sites, new collection and conveyance lines, and other new system facilities such as pump stations. To the extent that portions of the existing sewer system formerly installed and improved by the US Army are found to be in good operating condition and are located appropriate to serve new redevelopment activity, these portions of the existing system may continue to be used.

Recommended Condition of Approval: Subsequent OARB Redevelopment

Wastewater 7: Implementation of BMPs. Future redevelopment projects within the OARB Redevelopment Area shall implement, to the maximum feasible extent and consistent with Oakland's standard practices and policies, Best Management Practices (BMPs) to reduce water demand and wastewater generation.