
TRANSPORTATION AND TRAFFIC

This chapter of the Draft SEIR evaluates the Project's potential impacts on freeways, local roadways, transit, as well as motor vehicle, bicycle, and pedestrian safety. Significance thresholds for transportation systems would be reached if the Project would result in an increased traffic demand that cannot be met by existing or planned transportation infrastructure or if the Project conflicts with adopted policies supporting transportation alternatives to the single-occupant automobile.

EXISTING SETTING

TRANSPORTATION NETWORK

The Project study area includes freeways surrounding or leading to the Project site. The freeways included are I-80, I-580, I-880, I-980, and State Route (SR) 24. Other potentially affected regional state routes include SR 123 (San Pablo Avenue). The regional roadway system is shown in **Figure 3-1**. The study area was selected to encompass areas within the regional transportation network that could be potentially affected by Project traffic. The transportation study area also includes local access routes as more fully discussed below.

Regional Highway System

Interstate-80 (I-80) is an eight- to ten-lane freeway serving San Francisco and the West Bay as well as East Bay destinations in West Contra Costa County, Sacramento, and points north and east. I-80 provides access to the Project site by freeway ramps that terminate at the West Grand Avenue/I-880 frontage road intersection. I-80 east has High Occupancy Vehicle (HOV) lanes and HOV ramp connections to I-580 and the Bay Bridge.

Interstate-880 (I-880) is an eight-lane freeway that serves West Alameda County, the South Bay and southern peninsula, and San Jose. I-880 connects to west I-80 at the Bay Bridge Toll Plaza. Interchange ramps connect I-880 to Maritime, 7th, Union, Adeline, and Market Streets. A connection to I-80 east is provided at the north end of a frontage road that extends from 7th Street to West Grand Avenue.

Interstate-580 (I-580) is an eight-lane freeway serving Northern Alameda County, Livermore, Stockton, Marin County north and I-5 south. Access to the Project Area is provided via interchanges at West MacArthur Boulevard and Market Street. The City of Oakland has placed a heavy truck (over 4.5 tons) restriction on I-580 between Grand Avenue and 106th Avenue.

Interstate-980 (I-980) is a six- to eight lane freeway that provides access to the Oakland downtown area. I-980 becomes State Route 24 (SR-24) at the northern end, providing access to

Contra Costa County via the Caldecott Tunnel, and provides a direct connection between I-580 and I-880.

State Routes

State Route 24 (SR 24) is an eight-lane freeway that connects the East Bay area with central and east Contra Costa County. SR 24 extends from I-980 to I-680 through the Caldecott tunnel.

State Route 123 (SR 123 - San Pablo Avenue) is a four-lane arterial roadway that extends from West MacArthur Boulevard north to Cutting Boulevard in El Cerrito. San Pablo Avenue is not designated as a State Route beyond MacArthur Boulevard on the south and Cutting Boulevard on the north. On the south, San Pablo Avenue extends into downtown Oakland; on the north end it extends through El Cerrito, Richmond, San Pablo, Pinole, and Hercules to its termination in unincorporated Contra Costa County.

Freeway Conditions

The following discussion of regional freeway conditions was taken from the 2004 Level of Service Monitoring Report prepared by the Alameda County Congestion Management Agency (CMA 2004). The CMA monitors congestion on freeways in the region by measuring the average travel speed during the p.m. peak period (4:00 to 6:00 p.m.). Freeway traffic conditions are then described in terms of level of service (LOS), a standard measure for traffic operations defined by the average number of seconds of delay per vehicle, with LOS A representing free-flow conditions and LOS F representing gridlocked conditions.

According to the CMA, traffic speeds of 49 miles per hour (mph) or higher on the freeway indicate LOS A through C. At LOS D, traffic operating conditions become unstable and speeds can drop as low as 41 mph. At LOS E, there are virtually no usable gaps in the traffic stream and speeds can drop as low as 30 mph. Below 30 mph, stop-and-go traffic operations often occur and the LOS is F.

As shown in **Table 3-1**, in 2004 during the p.m. peak hour, traffic congestion occurred on most routes leading away from the major employment centers. During the p.m. peak hour I-80 is congested in both directions. During this same time period, eastbound I-580 and eastbound SR 24 are congested and southbound I-880 is congested south of I-980.

During the a.m. peak period (7:00 to 9:00 a.m.), bottlenecks occur on many of the freeways leading to the major employment centers. Congestion regularly occurs on westbound I-80 at the I-580 split and on the approach to the Bay Bridge toll plaza. I-880 is congested northbound north of I-980 and I-980 is congested southbound. SR-24 is congested at its southbound connection to I-580.

Local Setting

This section describes the local transportation setting within the transportation study area.

Local Roadway System

Local vehicular access to the project site is provided primarily by West Grand Avenue, Maritime Street and 7th Street, as shown in **Figure 3-1**.



- Legend**
- Signalized intersection
 - All-way stop controlled intersection
 - ▣ Two-way stop controlled intersection
 - Intersection with one stop sign

Note: Intersections No. 26 through No. 35 do not currently exist. They will be created as part of the Proposed Project and/or Option B.

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Figure 3-1
Traffic Study Intersections

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**TABLE 3-1
FREEWAY OPERATIONS IN 2004**

Freeway Segment	A.M. Peak Hour ^a		P.M. Peak Hour	
	LOS	Speed (mph)	LOS	Speed (mph)
I-80 at the Bay Bridge				
Eastbound	-	-	D	43.2
Westbound	F	19.7	F	28.7
I-80 East of I-80/I-580 Split				
Eastbound	-	-	F	23.5
Westbound	D	47.6	F	20.9
I-580 East of I-980/SR-24				
Eastbound	-	-	F	29.6
Westbound	C	54.1	C	50.2
I-580 West of I-980/SR-24				
Eastbound	-	-	E	39.2
Westbound	B	58.3	E	33.3
I-880 south of I-980				
Northbound	D	43.9	C	54.8
Southbound	-	-	F	20.2
I-880 north of I-980				
Northbound	E	24.7	A	63.8
Southbound	-	-	B	57.3
I-980				
Northbound	-	-	D	45.3
Southbound	-	-	C	50.2
SR-24 East of I-580				
Eastbound	E	33.1	E	39.9
Westbound	B	55.9	B	58.7

Source:: Alameda County Congestion Management Agency 2004 Level of Service Monitoring Report.

Note:: Missing values (designated with a dash "-") were not reported in the source document from the Alameda County Congestion Management Agency.

West Grand Avenue is an east/west arterial providing direct access to the downtown and San Francisco Bay Bridge. This four to six-lane facility has a median island and left-turn lanes.

Maritime Street is a four-lane arterial with a center two-way left-turn lane. It is heavily used by trucks and other traffic accessing the Oakland Army Base (OARB), the Port's Outer Harbor terminal, and the Union Pacific (UP) railyard. It is a primary access route to the Port of Oakland. On its north end Maritime Street is connected to the Cypress Freeway system at its intersection with West Grand Avenue, where freeway ramps provide access to I-80 west and I-580 east. On its south end, it connects to 7th Street where access to I-880 is provided.

7th Street is a public four-lane arterial that provides access to the Middle Harbor marine terminals and Port View Park. 7th Street also serves local and cross-town traffic for West Oakland between Middle Harbor Road and I-980/I-880. Freeway ramps connect 7th Street to I-880 south. A frontage road connects 7th Street to points north. Between the Port and the freeway, a substantial amount of traffic along 7th Street consists of truck traffic. 7th Street is designated as a local transit arterial.

Level of Service (LOS) Analysis

The efficiency of traffic operations at study area intersections was evaluated for existing conditions. Twenty-five existing intersections, identified as having the greatest potential for redevelopment traffic impacts, were selected for study (**Figure 3-1**). Additional intersections that would be created by the Proposed Project and/or Option B were also studied.

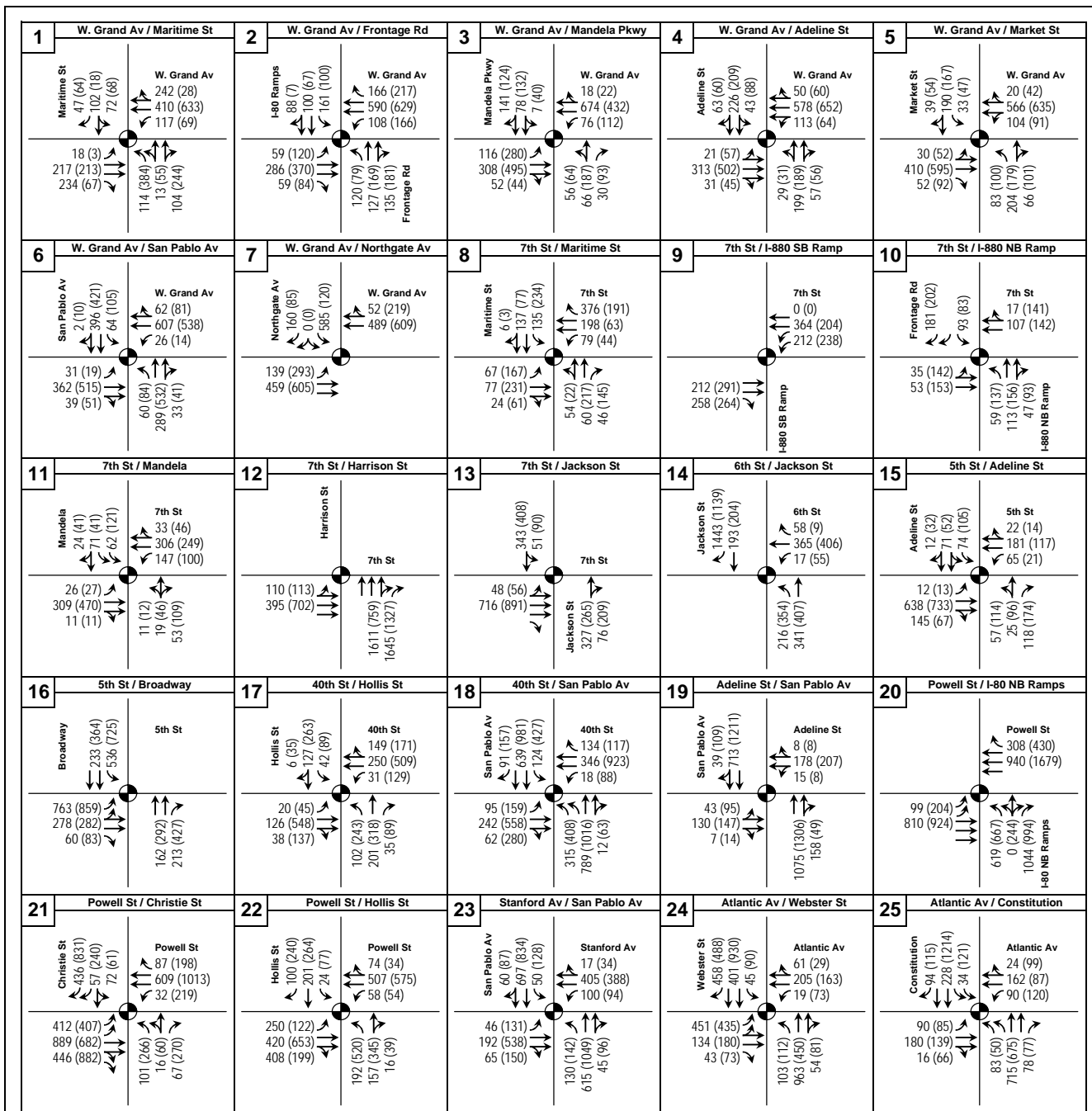
The LOS at study area intersections was analyzed for the a.m. and p.m. peak hours for all study intersections, using methodologies described in the Highway Capacity Manual (Transportation Research Board 1998). The intersections created by the project were also evaluated to determine potential traffic operations impacts during the Saturday peak hour.

The LOS for signalized and unsignalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, and lost travel time. Delay is a complex measure and is dependent upon a number of variables, including the number of vehicles in the traffic stream. For signalized intersections, delay is also dependent on the quality of signal progression, the signal cycle length, and the "green" ratio for each approach or lane group. For intersections with one or two stop signs, delay is dependent on the number of gaps available in the uncontrolled traffic stream. All the study intersections except seven of the intersections created by the project are controlled by traffic signals.

Existing a.m. and p.m. peak-hour traffic turning movement counts were collected at all of the study intersections within the last three years. New traffic counts were conducted in the fall of 2005 for intersections close to the project and intersections where the only data available were more than three years old. New Saturday traffic data were collected during the afternoon peak hour at the following intersections:

- West Grand Avenue / Maritime Street
- West Grand Avenue / I-880 Frontage Road

The intersection traffic volumes are shown in **Figure 3-2**.



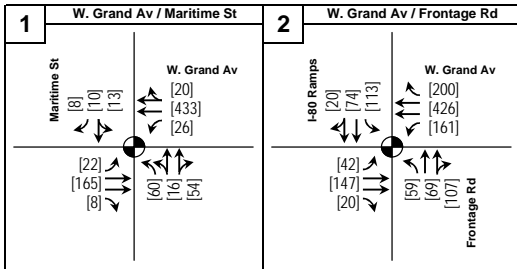
KEY
 31 (27) = AM (PM) peak hour traffic volume
 ● = Signalized intersection
 ✓ = Intersection approach lane

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Figure 3-2
 Existing Traffic Volumes,
 Lanes, and Traffic Controls

Saturday Traffic Volumes



KEY
 [44] = Saturday peak hour traffic volume
 = Signalized intersection
 = Intersection approach lane



Figure 3-2
 Existing Traffic Volumes,
 Lanes, and Traffic Controls

Existing Conditions

The existing levels of service at study area intersections were determined for the a.m. and p.m. peak hours. Additionally, because the proposed uses as well as others in the immediate area would generate weekend traffic, Saturday afternoon peak hour levels of service were evaluated for the two study intersections closest to the project to determine that project impacts on Saturday would not be more severe than during the weekday. Other intersections farther from the project site are expected to experience worst levels of service during weekday peak hours and not be impacted on Saturday. The existing levels of service are shown in **Table 3-2**. Detailed LOS calculation worksheets are available on file with the City of Oakland. Three intersections would operate below the City of Oakland's LOS standard (LOS D outside of downtown and LOS E within downtown).

**TABLE 3-2
INTERSECTION LEVELS OF SERVICE - EXISTING CONDITIONS**

Intersection	AM Peak Hour		PM Peak Hour		Saturday Peak Hour	
	LOS ¹	Delay ²	LOS ¹	Delay ²	LOS ¹	Delay ²
1. West Grand Avenue / Maritime Street	C	32.4	C	33.2	C	26.7
2. West Grand Avenue / I-880 Frontage Road	C	29.8	C	28.7	C	27.9
3. West Grand Avenue / Mandela Parkway	B	11.4	B	13.4	na	na
4. West Grand Avenue / Adeline Street	B	12.2	B	11.9	na	na
5. West Grand Avenue / Market Street	B	12.8	B	12.6	na	na
6. West Grand Avenue / San Pablo Avenue	B	13.0	B	13.9	na	na
7. West Grand Avenue / Northgate Avenue ³	B	18.4	C	20.1	na	na
8. 7th Street / Maritime Street	C	29.2	C	32.8	na	na
9. 7th Street / I-880 Southbound Ramp	A	6.2	A	7.4	na	na
10. 7th Street / I-880 Northbound Ramp	B	18.8	B	19.7	na	na
11. 7th Street / Mandela Parkway	B	18.0	B	20.0	na	na
12. 7th Street / Harrison Street ³	B	12.0	A	9.8	na	na
13. 7th Street / Jackson Street ³	B	11.8	B	13.7	na	na
14. 6th Street / Jackson Street ³	B	11.1	B	12.6	na	na
15. 5th Street / Adeline Street	C	21.0	C	32.9	na	na
16. 5th Street / Broadway ³	C	25.0	E	59.6	na	na
17. 40th Street / Hollis Street	C	27.8	C	33.8	na	na
18. 40th Street / San Pablo Avenue	C	28.8	E	55.5	na	na
19. Adeline Street / San Pablo Avenue	B	14.8	B	16.7	na	na
20. Powell Street / I-80 Northbound Ramps	C	24.3	E	66.2	na	na
21. Powell Street / Christie Street	C	28.4	E	60.8	na	na
22. Powell Street / Hollis Street	C	25.2	C	32.8	na	na
23. Stanford Avenue / San Pablo Avenue	C	28.0	C	31.8	na	na
24. Atlantic Avenue / Webster Street	C	33.8	C	33.9	na	na
25. Atlantic Avenue / Constitution Way	B	19.3	B	18.3	na	na

Notes: Shaded values indicate traffic operations below the City of Oakland's LOS standard.

¹ LOS = Level of Service na = Not applicable. No analysis was performed as intersection is not expected to be impacted on Saturday.

² Average control delay in seconds per vehicle

³ Defined as a downtown intersection

⁴ The worst approach control delays and LOS are reported for side street stop-controlled intersections.

EXISTING TRANSIT SERVICE

Public Transit. Transit service in the study area is provided primarily by the Alameda-Contra Costa Transit District (AC Transit), Bay Area Rapid Transit (BART), the Oakland-Alameda Ferry, and Amtrak.

AC Transit provides bus service to residents and visitors along the east shore of the San Francisco Bay Area with an extensive network of local transit lines (Dowling Associates and GBA 1998). AC Transit Route 13 provides local service between the Oakland-Piedmont City Limits, Lake Merritt and OARB through downtown Oakland. The route generally follows Lakeshore, 14th, Mandela, 7th, and Maritime Streets. Weekday service is provided about every 20 minutes during peak periods and 30 minutes off peak, from 6:00 a.m. to 10:00 p.m. On weekends, buses operate once hourly between 10:30 a.m. to 6:00 p.m.

Route 19 connects North Berkeley BART with Fruitvale BART via downtown Oakland. This bus route travels along Peralta Street in the vicinity of the project. Daily service is provided about every 30 minutes throughout the day from 6:00 a.m. to 9:00 p.m.

Route 62 connects West Oakland with Fruitvale BART via downtown Oakland. Weekday service is provided about every 20 minutes during peak periods and every 30 minutes after 7:00 p.m. On weekends, buses operate every 30 minutes between 5:30 a.m. and midnight.

Route NL provides Transbay service from Eastmont Transit Center in Oakland, to Transbay Terminal in San Francisco, with a bus stop on West Grand Avenue at Mandela Parkway. Weekday service for eastbound is provided about every 30 minutes from 6:00 a.m. to 8:00 a.m., about every 15 minutes from 8:00 a.m. to 9:00 p.m., and once about every 30 minutes until midnight. For the westbound service, frequency is about 30 minutes from 5:00 a.m. to 6:00 a.m., and increases to every 15 minutes from 6 a.m. to 8:00 p.m., then reduces back to every 30 minutes until midnight. On weekends, services frequency is about 30 minutes on both directions with the eastbound to operate between 6:00 a.m. to midnight, and between 5:30 a.m. to 11:30 a.m. for the westbound service.

The **BART** system provides the West Oakland area with direct links to San Francisco and the metropolitan areas of Contra Costa and Alameda counties. BART operates between 4:00 a.m. and midnight Monday through Friday; 6:00 a.m. to midnight on Saturdays; and 8:00 a.m. to midnight on Sundays and major holidays. The West Oakland and 12th Street BART stations are the two BART stations closest to the OARB. The West Oakland BART station is located approximately 2 miles east of the Port's maritime area at the intersection of Mandela Parkway and 7th Street.

The Oakland-Alameda Ferry provides ferry service between Oakland and San Francisco. This service was initiated in October of 1989 after the Loma Prieta earthquake damaged the Bay Bridge. During the 1997 BART strike, the ferry served as a reliever for displaced transit riders. The MTC, the City of Alameda, and the Port of Oakland continue to plan routes for and fund the ferry service. Trip time between Oakland and San Francisco Ferry Building is 35 minutes during morning commute hours, and reduces to 30 minutes during midday and weekend trips. There are five service ferries from Oakland to San Francisco in the morning, and Ferry terminals are located along the Inner Harbor. On weekdays, the ferries currently make 25 trips between Oakland, Alameda, and San Francisco. Westbound, the ferries operate between 6:00 a.m. and 8:55 p.m. Eastbound, the service runs between 6:30 a.m. and 8:25 p.m. Additional service from

Oakland and Alameda is provided for Giants games during the baseball season. For weekday night and weekend games, these ferries go directly to PacBell Park. For weekday games, the ferries go to the Ferry Building on the San Francisco side, and passengers transfer to the streetcar for access to the park.

Amtrak uses UP's northern route through the project area to operate twelve daily round-trip "Capitol" and four daily "San Joaquin" passenger trains between the Bay Area and Sacramento and the Central Valley. An Amtrak maintenance facility is located in the study area near the 7th Street/Maritime Street intersection.

BICYCLE AND PEDESTRIAN FACILITIES

Bicycle and pedestrian access through the project area, particularly to the waterfront, has been recently improved, but remains only fair. Bay Trail spurs connect Portview Park and the Middle Harbor Shoreline Park to 7th Street and Middle Harbor Road. Bicycle access is provided to the east along 7th and 8th Streets to Mandela Parkway; however, the planned portion of the Bay Trail planned along Maritime Street has not been constructed nor has the proposed connections from Maritime Street to the Bay Bridge or Shellmound Street. The City of Oakland's *Bicycle Master Plan* (1999) is currently being updated and is expected to propose bike lanes on West Grand Avenue to connect the Maritime Street and Mandela Parkway Bay Trail corridors.

Sidewalks are available along the south side of West Grand Avenue and both sides of Maritime Street but no pedestrian facilities exist at the project site north of West Grand Avenue. Pedestrian signals and painted crosswalks are provided at the West Grand Avenue intersections with Maritime Street and the I-880 frontage road.

REGULATORY SETTING

FEDERAL

The Federal Highway Administration (FHWA) is the agency of the U.S. Department of Transportation (DOT) responsible for the federally funded roadway system, including the interstate highway network and portions of the primary state highway network. FHWA funding is provided through the Transportation Equity Act for the 21st Century (TEA-21). This act's legislation can be used to fund local transportation improvement projects, such as projects to improve the efficiency of existing roadways, traffic signal coordination, bikeways, and transit system upgrades.

STATE

The California Department of Transportation (Caltrans) is responsible for planning, design, construction, and maintenance of all state highways. Caltrans jurisdictional interest extends to improvements to roadways at the interchange ramps serving area freeways. Any federally funded transportation improvements would be subject to review by Caltrans staff and the California Transportation Commission.

LOCAL

The Metropolitan Transportation Commission

MTC is the regional organization responsible for prioritizing transportation projects in a Regional Transportation Improvement Program (RTIP) for federal and state funding. The process is based on evaluating each project for need, feasibility, and adherence to TEA-21 policies and the local Congestion Management Program (CMP). The CMP requires each jurisdiction to identify existing and future transportation facilities that would operate below an acceptable service level and provide mitigation where future growth would degrade that service level.

The Alameda County Congestion Management Agency

The Alameda County Congestion Management Agency (CMA) is responsible for ensuring local government conformance with the CMP: a seven-year program aimed at reducing traffic congestion. The CMA has review responsibility for proposed development actions expected to generate 100 or more p.m. peak-hour trips than otherwise would occur. The CMA reviews the adequacy of California Environmental Quality Act (CEQA) transportation impact analyses and measures proposed to mitigate significant impacts. The CMA maintains a Countywide Transportation Model, and has approval authority for the use of any local or subarea transportation models.

The City of Oakland

The City of Oakland has responsibility for constructing and maintaining non-state transportation facilities in West Oakland. The City has a traffic calming program in place that provides speed humps on many streets and truck prohibitions on all of the streets within an area bounded by Pine Street, 12th Street, Center Street, and 8th Street in the Prescott neighborhood.

IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The project would have a significant impact on the environment if it would:

Cause an increase in traffic which is substantial in relation to the traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections), or change the condition of an existing street (i.e., street closures, changing direction of travel) in a manner that would substantially impact access or traffic load and capacity of the street system. Specifically,

- at a study, signalized intersection which is located **outside the Downtown**¹ area, the project would cause the level of service (LOS)² to degrade to worse than LOS D (i.e., E);
- at a study, signalized intersection which is located **within the Downtown** area, the project would cause the LOS to degrade to worse than LOS E (i.e., F);
- at a study, signalized intersection **outside the Downtown** area where the level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds, or degrade to worse than LOS E (i.e., F);
- at a study, signalized intersection for **all areas** where the level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more, or degrade to worse than LOS E (i.e., F);
- at a study, signalized intersection for **all areas** where the level of service is LOS F, the project would cause (a) the total intersection average vehicle delay to increase by two (2) or more seconds, or (b) an increase in average delay for any of the critical movements of four (4) seconds or more; or (c) the volume-to-capacity (“V/C”) ratio exceeds three (3) percent (but only if the delay values cannot be measured accurately);
- at a study, unsignalized intersection for **all areas**, the project would add ten (10) or more vehicles and after project completion satisfy the Caltrans peak hour volume warrant;
- A project’s contribution to cumulative impacts is considered “considerable” when the project contributes five (5) percent or more of the cumulative traffic increase as measured by the difference between existing and future cumulative (with project) conditions;

¹ Downtown is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south and I-980/Brush Street to the west.

² LOS and delay calculations for local intersections were based on the *Highway Capacity Manual*, Transportation Research Board, National Research Council, 2000 edition.

- Cause a roadway segment on the Metropolitan Transportation System to operate at LOS F or increase the V/C ratio by more than three (3) percent for a roadway segment that would operate at LOS F without the project;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase traffic hazards to motor vehicles, bicycles, or pedestrians due to a design feature (e.g., sharp curves or dangerous intersections) that does not comply with Caltrans design standards or incompatible uses (e.g., farm equipment);
- Result in less than two emergency access routes for streets exceeding 600 feet in length;
- Fundamentally conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle routes); or
- Generate added transit ridership that would
 - Increase the average ridership on AC Transit lines by three (3) percent at bus stops where the average load factor with the project in place would exceed 125% over a peak thirty minute period;
 - Increase the peak hour average ridership on BART by three (3) percent where the passenger volume would exceed the standing capacity of BART trains; or
 - Increase the peak hour average ridership at a BART station by three (3) percent where average waiting time at fare gates would exceed one minute.

PARKING (EVALUATED AS A NON-CEQA IMPACT)

The Court of Appeal has held that parking is not part of the permanent physical environment, that parking conditions change over time as people change their travel patterns, and that unmet parking demand created by a project need not be considered a significant environmental impact under CEQA unless it would cause significant secondary effects.³ Parking supply/demand varies by time of day, day of week, and seasonally. As parking demand increases faster than the supply, parking prices rise to reach equilibrium between supply and demand. Decreased availability and increased costs result in changes to people's mode and pattern of travel. However, the City of Oakland, in its review of the proposed project, wants to ensure that the project's provision of additional parking spaces along with measures to lessen parking demand (by encouraging the use of non-auto travel modes) would result in minimal adverse effects to project occupants and visitors, and that any secondary effects (such as on air quality due to drivers searching for parking spaces) would be minimized. As such, although not required by CEQA, parking conditions are evaluated in this document.

³ San Franciscans Upholding the Downtown Plan v. the City and County of San Francisco (2002) 102 Cal.App.4th 656.

Parking deficits may be associated with secondary physical environmental impacts, such as air quality and noise effects, caused by congestion resulting from drivers circling as they look for a parking space. However, the absence of a ready supply of parking spaces, combined with available alternatives to auto travel (e.g., transit service, shuttles, taxis, bicycles or travel by foot), may induce drivers to shift to other modes of travel, or change their overall travel habits. Any such resulting shifts to transit service, in particular, would be in keeping with the City's "Transit First" policy.

Additionally, regarding potential secondary effects, cars circling and looking for a parking space in areas of limited parking supply is typically a temporary condition, often offset by a reduction in vehicle trips due to others who are aware of constrained parking conditions in a given area. Hence, any secondary environmental impacts that might result from a shortfall in parking in the vicinity of the proposed project are considered less than significant.

This Draft SEIR evaluates if the project's estimated parking demand (both project-generated and project-displaced) would be met by the project's proposed parking supply or by the existing parking supply within a reasonable walking distance of the project site. Project-displaced parking results from the project's removal of standard on-street parking, City or Agency owned/controlled parking and/or legally required off-street parking (non-open-to-the-public parking which is legally required).

PROJECT IMPACT ANALYSIS METHODS

The methods for determining traffic impacts of the Proposed Project and Option B were based on the analytical procedures described in the previous section. The analysis of traffic operations at intersections was performed using the 2000 Highway Capacity Manual methods. For freeways, the analysis was performed using the methods described in the 1985 Highway Capacity Manual, as required by the Alameda County CMA.

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. No attempt was made to assess secondary impacts associated with the potential relocation of existing land uses or from the relocation of auto dealerships to the project site from other locations.

An 11-acre portion of the Project site, the Subaru Lot, had been used for truck parking at the time traffic counts were performed so is considered an existing use for purposes of the traffic analysis because that traffic volume needs to be removed from that expected with the Project (or Option B). The truck parking lease with the Port was terminated on February 28, 2006. The 11-acre Subaru Lot lease was replaced with an 11-acre interim lease operated by the Port on West Maritime property. Further discussion of truck parking can be found in Chapter 5: Other CEQA Considerations.

TRIP GENERATION

Trip generation for the proposed project is based upon information in Trip Generation, 7th Edition (Institute of Transportation Engineers 2003). Project trip generation is shown in **Table 3-3**.

**TABLE 3-3
PROJECT TRIP GENERATION**

Parcel	Use	Source	Amount	Trips Generated											
				Daily			AM Peak Hour			PM Peak Hour			Saturday Peak Hour		
				In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Project, North Gateway															
Proposed Project															
A	Auto Dealership	ITE (841)	40 KSF	1,334	61	21	82	38	60	98	61	58	119		
B	Auto Dealership	ITE (841)	160 KSF	5,334	243	85	328	119	186	305	242	233	475		
C	Auto Dealership	ITE (841)	120 KSF	4,001	182	64	246	92	144	236	182	174	356		
D	Auto Dealership	ITE (841)	40 KSF	1,334	61	21	82	38	60	98	61	58	119		
E	Auto Dealership	ITE (841)	30 KSF	1,000	46	16	62	32	49	81	45	44	89		
Subtotal				13,003	592	208	800	319	499	818	591	567	1,158		
Existing Project Site															
Maritime Support		ITE (030)	15 Acres	1,229	45	64	109	42	56	98	17	18	35		
Net New Trips				11,774	547	144	691	277	443	720	573	550	1,123		

**TABLE 3-3
PROJECT TRIP GENERATION**

Parcel	Use	Source	Amount	Trips Generated										
				Daily	AM Peak Hour			PM Peak Hour			Saturday Peak Hour			
					In	Out	Total	In	Out	Total	In	Out	Total	
Option B, North and East Gateway														
A	Auto Dealership	ITE (841)	40	KSF	1,334	61	21	82	38	60	98	61	58	119
B	Auto Dealership	ITE (841)	160	KSF	5,334	243	85	328	119	186	305	242	233	475
C	Auto Dealership	ITE (841)	120	KSF	4,001	182	64	246	92	144	236	182	174	356
D	Auto Dealership	ITE (841)	40	KSF	1,334	61	21	82	38	60	98	61	58	119
E	Auto Dealership	ITE (841)	30	KSF	1,000	46	16	62	32	49	81	45	44	89
F	Auto Dealership	ITE (841)	20	KSF	667	30	11	41	25	39	64	30	29	59
G	Auto Dealership	ITE (841)	15	KSF	500	23	8	31	21	34	55	23	22	45
H	Auto Dealership	ITE (841)	15	KSF	500	23	8	31	21	34	55	23	22	45
I	"Big Box" Retail	ITE (813)	150	KSF	7,382	141	135	276	285	296	581	384	368	752
Subtotal					22,052	809	370	1,179	672	901	1,573	1,050	1,009	2,059
Existing Option B Site (North and East Gateway)														
	Maritime Support	ITE (030)	15	Acres	1,229	45	64	109	42	56	98	17	18	35
F	Warehousing	ITE (150)	78	Emp.	261	25	10	34	14	26	40	5	3	8
G	Warehousing	ITE (150)	59	Emp.	196	19	7	26	11	20	30	4	2	6
H	Warehousing	ITE (150)	59	Emp.	196	19	7	26	11	20	30	4	2	6
I	Warehousing	ITE (150)	587	Emp.	1,956	186	72	258	106	196	302	37	21	59
Subtotal					3,838	294	160	453	184	318	500	67	46	114
Net New Trips					18,214	515	210	726	487	584	1,073	983	963	1,945

Notes: Average trip generation rates are from *Trip Generation, 7th Edition*, Institute of Transportation Engineers, 2003.

Regression equations were used as recommended in *Trip Generation Handbook*, Institute of Transportation Engineers, 2004.

The project would result in the relocation of the existing ancillary maritime support services currently planned in the North Gateway area (north of West Grand Avenue) and existing on a temporary basis at the time of the traffic counts, though no longer on site at the time of writing of this Draft SEIR. Relocation of the maritime support services was assumed to be in the Central Gateway but may be relocated elsewhere in the Gateway Development Area. Access to the relocated maritime support services will be consistent with City standards and are subject to the approval of the City of Oakland Public Works Agency.

TRIP DISTRIBUTION

The distribution of Project trips was based on the distribution of traffic derived from the Alameda County Congestion Management Agency Countywide Transportation Model. The distribution of Project traffic is shown in **Table 3-4**.

Route	Percent of Project Trips	
	Parcels A - H	Parcel I
I-80 West	11%	12%
I-80 East	18%	11%
SR 24	10%	12%
I-580 East	3%	2%
I-880 South	2%	4%
SR 24 Local	1%	0%
I-580 Local	20%	16%
I-880 Local	16%	24%
Grand Ave	4%	4%
7th St	1%	1%
MacArthur	4%	5%
I-80 Frontage Rd	2%	2%
San Pablo Ave	2%	2%
Ashby Ave	2%	2%
Powell St	2%	2%
Constitution	2%	2%
Webster	0%	1%
Total	100%	100%

Source: Dowling Associates and the Alameda Countywide Model 2006.

INTERSECTION OPERATIONS

Impact Traf-1: The Project and Option B would increase traffic at study area intersections but would not substantially impact access or traffic load and capacity of the street system. This is a *less-than-significant* impact.

Significance: Less than Significant.

Mitigation: None required.

The Project would generate 691 new trips during the a.m. peak hour, 720 new trips during the p.m. peak hour, and 1,123 new trips during the Saturday peak hour. Option B would generate 726 new trips during the a.m. peak hour, 1,073 new trips during the p.m. peak hour, and 1,945 new trips during the Saturday peak hour.

For both project options, the project would not cause significant impacts either because the level of service would comply with City standards or the project would not add enough new traffic to cause a significant increase in average vehicle control delay. The impact of both project options on study area intersections is summarized in **Table 3-5**. Figures showing existing plus project turning movement traffic volumes are provided in Appendix C.

TABLE 3-5
INTERSECTION LEVELS OF SERVICE - EXISTING CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing		Project		Option B	
			LOS ¹	Delay ²	LOS ¹	Delay ²	LOS ¹	Delay ²
1. West Grand Avenue / Maritime Street	Signal	AM	C	32.4	D	50.7	D	48.4
		PM	C	33.2	D	47.6	D	47.6
		Saturday	C	26.7	D	53.9	D	47.6
2. West Grand Avenue / I-880 Frontage Road	Signal	AM	C	29.8	C	31.0	C	31.4
		PM	C	28.7	C	31.2	C	33.0
		Saturday	C	27.9	C	31.5	C	34.5
3. West Grand Avenue / Mandela Parkway	Signal	AM	B	11.4	B	11.7	B	11.7
		PM	B	13.4	B	13.4	B	13.4
4. West Grand Avenue / Adeline Street	Signal	AM	B	12.2	B	12.1	B	12.1
		PM	B	11.9	B	11.8	B	11.8
5. West Grand Avenue / Market Street	Signal	AM	B	12.8	B	12.7	B	12.7
		PM	B	12.6	B	12.5	B	12.5
6. West Grand Avenue / San Pablo Avenue	Signal	AM	B	13.0	B	13.0	B	13.0
		PM	B	13.9	B	13.9	B	13.9
7. West Grand Avenue / Northgate Avenue ³	Signal	AM	B	18.4	B	18.4	B	18.4
		PM	C	20.1	C	21.1	C	21.1
8. 7th Street / Maritime Street	Signal	AM	C	29.2	D	38.4	D	36.3
		PM	C	32.8	D	43.6	D	52.8
9. 7th Street / I-880 Southbound Ramp	Signal	AM	A	6.2	A	5.7	A	5.7
		PM	A	7.4	A	7.0	A	6.6
10. 7th Street / I-880 Northbound Ramp	Signal	AM	B	18.8	B	18.9	B	18.9
		PM	B	19.7	B	19.9	B	20.0

TABLE 3- 5
INTERSECTION LEVELS OF SERVICE - EXISTING CONDITIONS

Intersection	Traffic Control	Peak Hour	Existing		Project		Option B	
			LOS ¹	Delay ²	LOS ¹	Delay ²	LOS ¹	Delay ²
11. 7th Street / Mandela Parkway	Signal	AM	B	18.0	B	18.0	B	18.0
		PM	B	20.0	B	19.9	B	19.9
12. 7th Street / Harrison Street ³	Signal	AM	B	12.0	B	12.0	B	12.0
		PM	A	9.8	A	9.8	A	9.8
13. 7th Street / Jackson Street ³	Signal	AM	B	11.8	B	11.8	B	11.8
		PM	B	13.7	B	13.7	B	13.7
14. 6th Street / Jackson Street ³	Signal	AM	B	11.1	B	11.1	B	11.1
		PM	B	12.6	B	12.6	B	12.6
15. 5th Street / Adeline Street	Signal	AM	C	21.0	C	21.0	C	21.0
		PM	C	32.9	C	32.8	C	32.8
16. 5th Street / Broadway ³	Signal	AM	C	25.0	C	25.0	C	25.0
		PM	E	59.6	E	60.6	E	61.0
17. 40th Street / Hollis Street	Signal	AM	C	27.8	C	27.8	C	27.8
		PM	C	33.8	C	33.8	C	33.8
18. 40th Street / San Pablo Avenue	Signal	AM	C	28.8	C	28.8	C	28.8
		PM	E	55.5	E	55.5	E	55.5
19. Adeline Street /San Pablo Avenue	Signal	AM	B	14.8	B	15.2	B	15.3
		PM	B	16.7	B	17.2	B	17.4
20. Powell Street / I-80 Northbound Ramps	Signal	AM	C	24.3	C	24.4	C	24.4
		PM	E	66.2	E	67.2	E	67.7
21. Powell Street / Christie Street	Signal	AM	C	28.4	C	28.4	C	28.4
		PM	E	60.8	E	61.2	E	61.3
22. Powell Street / Hollis Street	Signal	AM	C	25.2	C	25.2	C	25.2
		PM	C	32.8	C	33.0	C	33.1
23. Stanford Avenue / San Pablo Avenue	Signal	AM	C	28.0	C	28.1	C	28.1
		PM	C	31.8	C	31.9	C	32.0
24. Atlantic Avenue / Webster Street	Signal	AM	C	33.8	C	33.9	C	33.9
		PM	C	33.9	C	33.9	C	33.9
25. Atlantic Avenue / Constitution Way	Signal	AM	B	19.3	B	19.3	B	19.2
		PM	B	18.3	B	18.3	B	18.3
26. N. Access Road / Maritime Street	All-Way Stop Sign	AM	na	na	B	11.1	B	10.7
		PM	na	na	B	11.8	B	11.1
		Saturday	na	na	B	12.3	B	11.4
27. N. Access Road / EBMUD Driveway ⁴	Side Street Stop Sign	AM	na	na	D	31.4	D	28.4
		PM	na	na	D	27.5	C	23.2
		Saturday	na	na	E	35.6	D	28.6
28. N. Access Road / E. Access Road / Parcel D	All-Way Stop Sign	AM	na	na	A	7.4	A	7.4
		PM	na	na	A	7.8	A	7.7
		Saturday	na	na	A	7.9	A	7.8
29. Parcels C & D / E. Access Road ⁴	Side Street Stop Sign	AM	na	na	B	10.2	A	9.8
		PM	na	na	B	10.3	A	10.0
		Saturday	na	na	B	11.0	B	10.5
30. Parcels C & E / E. Access Road ⁴	Side Street Stop Sign	AM	na	na	A	9.4	A	9.3
		PM	na	na	A	9.5	A	9.4
		Saturday	na	na	A	9.7	A	9.7
31. Parcel G / E. Access Road ⁴	Side Street Stop Sign	AM	na	na	na	na	A	8.4
		PM	na	na	na	na	A	8.6
		Saturday	na	na	na	na	A	8.6

**TABLE 3-6
FREEWAY LEVELS OF SERVICE - EXISTING CONDITIONS**

Freeway Segment	Existing				Project				Option B			
	AM		PM		AM		PM		AM		PM	
	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²
I-80 at the Bay Bridge												
Eastbound	C	0.584	F	1.134	C	0.592	F	1.138	C	0.591	F	1.141
Westbound	F	1.098	D	0.825	F	1.100	D	0.831	F	1.101	D	0.833
I-80 between I-880 and I-580												
Eastbound	B	0.465	D	0.902	B	0.469	D	0.917	B	0.472	D	0.922
Westbound	D	0.874	C	0.656	D	0.892	C	0.666	D	0.891	C	0.672
I-80 East of I-80/I-580 Split												
Eastbound	C	0.619	F	1.221	C	0.624	F	1.230	C	0.625	F	1.240
Westbound	F	1.165	D	0.888	F	1.180	D	0.896	F	1.180	D	0.902
I-880 Connector to I-80 East												
Northbound	C	0.684	C	0.633	C	0.694	C	0.664	C	0.699	C	0.673
Southbound	C	0.677	C	0.677	C	0.716	C	0.697	C	0.714	C	0.710
I-880 Connector to I-80 West												
Northbound	B	0.507	B	0.380	B	0.524	B	0.434	B	0.532	B	0.450
Southbound	A	0.248	B	0.426	A	0.314	B	0.459	A	0.310	B	0.483
I-880 North of 7th St.												
Northbound	D	0.794	C	0.675	D	0.794	C	0.675	D	0.794	C	0.675
Southbound	C	0.616	C	0.735	C	0.616	C	0.735	C	0.616	C	0.735
I-880 South of 7th St.												
Northbound	D	0.860	D	0.797	D	0.880	D	0.807	D	0.878	D	0.818
Southbound	C	0.734	C	0.680	C	0.739	C	0.697	C	0.742	C	0.703
I-880 North of I-980												
Northbound	D	0.850	D	0.788	D	0.870	D	0.798	D	0.868	D	0.809
Southbound	C	0.725	C	0.672	C	0.730	C	0.687	C	0.733	C	0.693
I-880 South of I-980												
Northbound	F	1.201	F	1.164	F	1.214	F	1.171	F	1.213	F	1.179
Southbound	E	0.970	F	1.171	E	0.974	F	1.182	E	0.976	F	1.186

TABLE 3-6
FREEWAY LEVELS OF SERVICE - EXISTING CONDITIONS

Freeway Segment	Existing				Project				Option B			
	AM		PM		AM		PM		AM		PM	
	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²
I-880 North of I-238												
Northbound	F	1.208	F	1.171	F	1.209	F	1.172	F	1.209	F	1.173
Southbound	E	0.976	F	1.178	E	0.976	F	1.179	E	0.977	F	1.179
I-580 East of I-980/SH-24												
Eastbound	D	0.831	F	1.114	D	0.835	F	1.127	D	0.837	F	1.131
Westbound	F	1.025	D	0.919	F	1.041	D	0.927	F	1.041	E	0.933
I-580 West of I-980/SH-24												
Eastbound	C	0.760	F	1.174	C	0.765	F	1.189	C	0.767	F	1.193
Westbound	F	1.197	F	1.013	F	1.215	F	1.023	F	1.214	F	1.029
I-980												
Eastbound	B	0.415	C	0.717	B	0.415	C	0.717	B	0.415	C	0.717
Westbound	C	0.752	B	0.479	C	0.752	B	0.479	C	0.752	B	0.479
SH 24 East of I-580												
Eastbound	B	0.437	D	0.896	B	0.439	D	0.903	B	0.440	D	0.904
Westbound	F	1.077	C	0.615	F	1.084	C	0.618	F	1.084	C	0.621

Source: Dowling Associates, Inc. and 1985 Highway Capacity Manual

Notes:

¹ LOS = Level of Service

² V/C = Volume to Capacity Ratio

AIR TRAFFIC PATTERNS

The Project is not located near an airport or in an established flight path that would be affected by construction of the Project. There would be *no impact* with regard to change in any air traffic pattern.

DESIGN HAZARDS

Impact Traf-3: At the N. Access Road / EBMUD Driveway intersection, both the Project and Option B would substantially increase traffic hazards to motor vehicles and perhaps bicyclists and pedestrians due to the configuration of the intersection.

Significance: Potentially Significant.

MM Traf-3: The Project Sponsors shall work with the property owners to develop an access design that provides adequate levels of safety. One option would be to relocate the EBMUD driveway to connect as the north leg of the N. Access Road / E. Access Road intersection. If the driveway were relocated, the N. Access Road / E. 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 Public Works Agency.

Residual Significance: Less than Significant

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.

Implementation of **MM Traf-3** would reduce the potentially significant design hazard at the N. Access Road / EBMUD Driveway intersection to a *less than significant* level.

EMERGENCY ACCESS

Impact Traf-4: Construction of the access road from the northern extension of Maritime Street would end in a cul-de-sac for the Project and could result in less than two emergency access routes for streets exceeding 600 feet in length.

Significance: For the Project, Potentially Significant.
For Option B, No Impact

MM Traf-4: Construct an emergency vehicle access to the east end of the Project. Design plans shall be consistent with City standards and are subject to the approval of the City of Oakland Public Works Agency.

Residual Significance: Less than Significant.

Implementation of **MM Traf-4** would reduce the potentially significant emergency access constraint to a *less than significant* level. Option B would not include a cul-de-sac, but continuation and connection of the access road so would have adequate emergency access and no impact.

ALTERNATIVE TRANSPORTATION

The Project and Option B would be required to create a safe internal street environment for pedestrians and bicycles by providing sidewalks and crosswalks. Construction of the Project or Option B would not conflict with adopted policies, plans, or programs supporting alternative transportation. The Project would have *no impact* on alternative transportation.

TRANSIT RIDERSHIP

Impact Traf-5: The Project and Option B would increase the average ridership on AC Transit lines by more than three percent on transit lines serving the Project Area, but the average load factor with the Project would not exceed 125 percent over a peak 30-minute period.

Significance: Less than Significant.

Mitigation: None required.

The Project and Option B would increase transit ridership on existing AC transit routes serving the Project Area. The impacts of the Project and Option B on AC Transit bus service are based on the ridership estimates from the Alameda Countywide Transportation Model. A summary of AC Transit ridership is shown in **Table 3-7**. Although the Project and Option B would increase bus ridership on some routes, there is enough available capacity on the AC Transit routes to accommodate the additional demand. Because the average load factor with the Project would not exceed 125 percent over a 30-minute period, this impact would be less than significant.

Neither the Project nor Option B would generate BART ridership and would not affect BART line capacity or fare gate demand. There would be *no impact* with regard to BART operations. (See CMP analysis summary in Appendix C.)

**TABLE 3- 7
AC TRANSIT RIDERS – EXISTING CONDITIONS**

Route	Direction	Headway (Minutes)	Capacity	Existing		Project (New Riders)		Total with Project		Load Factor with Project		Ridership Increase	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Project, North Gateway													
13	Eastbound	20	60	9	8	0	1	9	9	15%	15%	0.0%	12.5%
13	Westbound	20	60	27	9	1	0	28	9	47%	15%	3.7%	0.0%
19	Southbound	30	32	12	14	0	0	12	14	38%	44%	0.0%	0.0%
19	Northbound	30	32	17	11	0	0	17	11	53%	34%	0.0%	0.0%
NL	Eastbound	15	86	27	47	1	1	28	48	33%	56%	3.7%	2.1%
NL	Westbound	15	86	36	20	1	1	37	21	43%	24%	2.8%	5.0%
Option B, North and East Gateway													
13	Eastbound	20	60	9	8	0	0	9	8	15%	13%	0.0%	0.0%
13	Westbound	20	60	27	9	0	0	27	9	45%	15%	0.0%	0.0%
19	Southbound	30	32	12	14	0	0	12	14	38%	44%	0.0%	0.0%
19	Northbound	30	32	17	11	0	0	17	11	53%	34%	0.0%	0.0%
NL	Eastbound	15	86	27	47	0	1	27	48	31%	56%	0.0%	2.1%
NL	Westbound	15	86	36	20	1	1	37	21	43%	24%	2.8%	5.0%

Sources: Howard Der, AC Transit Long-Range Planning & Data Analysis Department and Alameda Countywide Model.

Notes: The table includes AC Transit Riders during peak 30-minute periods.

CUMULATIVE IMPACTS

Cumulative Impact Analysis Methodology

The same methods of analysis as described above for the assessment of project-specific impacts were used for the analysis of transportation impacts of the Project and Option B in combination with past, other current and probable future projects. The analysis of traffic impacts reflects build-out assumptions of the Oakland, Alameda, and Emeryville General Plans, and all activities anticipated in the West Oakland Cumulative Growth Scenario Update. In addition, this analysis reflects the Port of Oakland’s Vision 2000 program, the Wood Street Project, the Oak to 9th project, and the Catellus mixed use development in Alameda. See Chapter 5 of this document for a discussion of the cumulative scenario used in this analysis including an updated list of projects (on pages 5-10 to 5-12).

Traffic forecasts were based on the 2004 version of the Alameda Countywide Model as required by the Alameda County Congestion Management Agency (CMA). The model provides forecasts of travel demand for 2010 and 2025 based on ABAG P2002 socioeconomic forecasts. Two

levels of analysis were performed for the analysis of cumulative traffic impacts using the Alameda Countywide Model. A Congestion Management Program (CMP) analysis was performed using the model with the ABAG land uses for 2010 and 2025. A summary of the CMP analysis is provided in Appendix C.

A more detailed analysis was conducted for the purposes of assessing cumulative environmental impacts to the transportation system and the extent to which the Project and Option B would contribute to cumulative impacts. In the environmental analysis, a cumulative growth approach was developed for the City, using a forecast-based approach – an approach based on regional forecasts of economic activity and demographic trends. The updated cumulative growth scenario for the City considered recent and anticipated future development projects in Oakland, as well as other changes in employment and population. Development projects and other changes in Oakland were identified based on input from City of Oakland and Port of Oakland staffs, and analysis of economic and real estate market data and trends. Future development projects were identified to include approved, proposed, and potential development projects expected by the year 2020, including buildout of the OARB area redevelopment project area.

The 2020 employment and population data developed by the method described above were compared against 2025 employment and population in the ABAG land use dataset, and the former exceeded the latter within the City. The ABAG land use data for the City of Oakland were replaced in the ABAG 2025 land use data set and were used as the basis for the analysis of cumulative conditions, because this scenario was deemed to be a worst case scenario under CEQA.

The Alameda Countywide Model was used with the land use data developed for the City to determine the traffic volumes that would be present with the Project and Option B in combination with past, other current, and probable future projects. The land uses in the model included land future land uses outside the Project and Option B sites and existing uses on the Project and Option B sites.

Traffic was added to the model forecasts using the TRAFFIX software package to reflect cumulative conditions with and without the Project and Option B. This method was used to provide greater consistency among the cumulative development scenarios than would otherwise be achieved by altering the land uses in the model.

Traffic was added to the model forecasts to account for the special traffic generation of truck traffic at the Port of Oakland for both the Project and Option B. For both the Project and Option B, traffic was also removed from the Project site and added to the area south of West Grand Avenue and west of Maritime Street (OARB Central Subarea) to account for the relocation of existing maritime support services.

For the assessment of cumulative impacts after development of the Project, an assumption was made that development would occur on the Option B site consistent with the OARB Redevelopment Plan. That assumption was also considered reasonable for cumulative conditions if the Project were not developed. The effects of development of the Option B site were represented by removing trips for existing land uses on the Option B site from the model derived traffic volume forecasts and adding trips for redevelopment of the Option B site consistent with the Redevelopment Plan. The resulting traffic volumes represented cumulative

conditions without development of the Project. The cumulative traffic volumes after development of the Project were derived in a similar manner to the assessment of existing plus project impacts. Trips from existing land uses that would be displaced by the Project were removed and then trips from the Project were added.

For the assessment of cumulative impacts after development of Option B, development is proposed on both the Project and Option B sites. For cumulative conditions without development of Option B, only existing land uses were assumed on both the Project and Option B sites. This assumption provided a more conservative assessment of Option B’s contribution to potential cumulative impacts. The cumulative traffic volumes for Option B were then developed by removing existing traffic for both the Project and Option B sites from the model derived traffic volume forecasts and adding trips generated by the Project and Option B sites.

This environmental impact analysis yielded more conservative results than the CMP analysis – an assessment of greater cumulative impacts.

CUMULATIVE INTERSECTION OPERATIONS

The cumulative impact of each Project scenario in combination with other foreseeable and background growth on study area intersections is summarized in **Table 3-8**. Figures showing cumulative turning movement traffic volumes are provided in Appendix C. A discussion of specific cumulative intersection operations impacts is provided below.

**TABLE 3-8
INTERSECTION LEVELS OF SERVICE - CUMULATIVE CONDITIONS**

Intersection	Traffic Control	Peak Hour	Cumulative Conditions with Project				Cumulative Conditions with Option B			
			No Project		Project		No Option B		Option B	
			LOS ¹	Delay ²	LOS ¹	Delay ²	LOS ¹	Delay ²	LOS ¹	Delay ²
1. West Grand Avenue / Maritime Street	Signal	AM	F	527.4	F	510.3	F	475.7	F	458.1
		PM	F	549.3	F	549.1	F	526.1	F	551.7
		Saturday	F	502.7	F	476.1	F	500.9	F	593.4
2. West Grand Avenue / I-880 Frontage Road	Signal	AM	F	87.6	F	122.6	F	80.5	F	111.7
		PM	F	143.6	F	172.1	F	138.1	F	180.6
		Saturday	E	68.5	F	112.7	E	68.2	F	148.3
3. West Grand Avenue / Mandela Parkway	Signal	AM	E	58.3	E	69.6	E	55.8	E	67.0
		PM	F	105.6	F	112.6	F	104.1	F	114.1
4. West Grand Avenue / Adeline Street	Signal	AM	B	12.0	B	12.1	B	12.0	B	12.1
		PM	B	12.6	B	12.7	B	12.5	B	12.7
5. West Grand Avenue / Market Street	Signal	AM	D	36.5	D	39.6	D	35.3	D	38.7
		PM	D	46.6	D	52.0 ⁵	D	46.9	D	52.5 ⁵
6. West Grand Avenue / San Pablo Avenue	Signal	AM	B	15.8	B	15.9	B	15.8	B	15.9
		PM	B	15.9	B	16.0	B	15.9	B	16.0
7. West Grand Avenue / Northgate Avenue ³	Signal	AM	C	23.6	C	24.1	C	23.4	C	23.9
		PM	C	32.3	C	33.0	C	32.3	C	33.4

TABLE 3- 8
INTERSECTION LEVELS OF SERVICE - CUMULATIVE CONDITIONS

Intersection	Traffic Control	Peak Hour	Cumulative Conditions with Project				Cumulative Conditions with Option B			
			No Project		Project		No Option B		Option B	
			LOS ¹	Delay ²	LOS ¹	Delay ²	LOS ¹	Delay ²	LOS ¹	Delay ²
8. 7th Street / Maritime Street	Signal	AM	F	429.0	F	483.7	F	403.1	F	451.6
		PM	F	409.0	F	463.0	F	385.1	F	471.1
9. 7th Street / I-880 Southbound Ramp	Signal	AM	A	5.4	A	5.5	A	5.4	A	5.7
		PM	C	22.7	C	33.6	B	18.0	C	31.6
10. 7th Street / I-880 Northbound Ramp	Signal	AM	C	27.1	C	28.4	C	26.5	C	27.6
		PM	E	57.1	E	61.2	E	57.0	E	64.4
11. 7th Street / Mandela Parkway	Signal	AM	E	72.7	E	72.5	E	72.7	E	72.9
		PM	F	209.9	F	210.7	F	209.4	F	209.9
12. 7th Street / Harrison Street ³	Signal	AM	E	73.5	E	73.4	E	73.5	E	73.5
		PM	B	13.9	B	13.9	B	13.9	B	14.0
13. 7th Street / Jackson Street ³	Signal	AM	B	13.4	B	13.4	B	13.4	B	13.4
		PM	B	16.6	B	16.6	B	16.6	B	16.6
14. 6th Street / Jackson Street ³	Signal	AM	B	11.8	B	11.8	B	11.8	B	11.8
		PM	B	13.7	B	13.7	B	13.7	B	13.7
15. 5th Street / Adeline Street	Signal	AM	F	130.6	F	130.8	F	130.6	F	130.8
		PM	F	144.2	F	143.8	F	144.4	F	143.9
16. 5th Street / Broadway ³	Signal	AM	E	60.6	E	60.9	E	60.6	E	61.0
		PM	F	131.4	F	132.7	F	131.0	F	132.7
17. 40th Street / Hollis Street	Signal	AM	C	25.5	C	25.5	C	25.5	C	25.5
		PM	D	41.6	D	41.6	D	41.6	D	41.6
18. 40th Street / San Pablo Avenue	Signal	AM	C	33.2	C	33.2	C	33.2	C	33.2
		PM	F	135.6	F	135.6	F	135.6	F	135.6
19. Adeline Street / San Pablo Avenue	Signal	AM	C	26.7	C	27.2	C	26.6	C	27.1
		PM	C	32.9	C	33.9	C	32.7	C	33.9
20. Powell Street / I-80 Northbound Ramps	Signal	AM	C	24.8	C	24.9	C	24.8	C	24.9
		PM	F	129.1	F	130.2	F	128.7	F	130.3
21. Powell Street / Christie Street	Signal	AM	C	23.7	C	23.7	C	23.7	C	23.7
		PM	F	105.8	F	106.3	F	105.5	F	106.3
22. Powell Street / Hollis Street	Signal	AM	C	29.4	C	29.5	C	29.4	C	29.4
		PM	F	83.9	F	84.5	F	83.5	F	84.4
23. Stanford Avenue / San Pablo Avenue	Signal	AM	C	29.8	C	29.9	C	29.8	C	29.9
		PM	E	60.7	E	61.4	E	60.4	E	61.3
24. Atlantic Avenue / Webster Street	Signal	AM	E	73.7	E	74.0	E	73.7	E	73.9
		PM	F	82.6	F	82.9	F	82.4	F	83.1
25. Atlantic Avenue / Constitution Way	Signal	AM	C	22.8	C	22.8	C	22.8	C	22.8
		PM	C	20.3	C	20.3	C	20.3	C	20.3
26. N. Access Road / Maritime Street	All-Way Stop Sign	AM	na	na	B	11.1	na	na	B	10.7
		PM	na	na	B	11.8	na	na	B	11.1
		Saturday	na	na	B	12.3	na	na	B	11.4
27. N. Access Road / EBMUD Driveway ⁴	Side Street Stop Sign	AM	na	na	D	31.4	na	na	D	28.4
		PM	na	na	D	27.5	na	na	C	23.2
		Saturday	na	na	E	35.6	na	na	D	28.6
28. N. Access Road / E. Access Road / Parcel D	All-Way Stop Sign	AM	na	na	A	7.4	na	na	A	7.4
		PM	na	na	A	7.8	na	na	A	7.7
		Saturday	na	na	A	7.9	na	na	A	7.8

CUMULATIVE WEST GRAND AVENUE / MARITIME STREET INTERSECTION OPERATIONS

Impact Traf-6: At the West Grand Avenue / Maritime Street intersection, Option B would increase traffic in 2025 and would cause the average vehicle delay to increase by more than two (2) seconds where the future baseline level of service would be LOS F during the p.m. peak and Saturday peak hours.

Significance: For the Project, Less than Significant.

For Option B, Potentially Significant.

MM Traf-6: As part of the cumulative growth of the OARB Area Redevelopment Plan, the Project Sponsors shall fund a fair share of the following modifications at the West Grand Avenue / Maritime Street intersection:

- Revise the northbound Maritime Street lanes to provide one left turn lane, one combination left-through lane, and two right turn lanes with overlap signal phasing (green arrow)
- Revise the southbound Maritime Street lanes to provide one left turn lane, one combination through-right lane, and one right turn lane
- Revise eastbound West Grand Avenue exit ramp to provide one left turn lane, two through lanes, and one right turn lane with a receiving third southbound lane south of the intersection (free right)
- Revise westbound West Grand Avenue to provide one left turn lane, one combination left-through lane, and one combination through-right lane
- Provide split signal phasing for east and westbound traffic movements on West Grand Avenue

Design plans for all public facilities shall be consistent with City standards and are subject to the approval of the City of Oakland Public Works Agency.

Residual Significance: For the Project, Less than Significant.

For Option B, Significant and Unavoidable.

Implementation of **MM Traf-6** would reduce the potentially significant cumulative impacts at the West Grand Avenue / Maritime Street intersection but would not reduce cumulative impacts to a level that is less than significant. The intersection improvements that are feasible are limited by the bridge piers supporting the I-880/I-80 connector roadway that passes above West Grand Avenue. To fully mitigate cumulative impacts at the intersection would require modification of the overhead structure, development of new roadways, or other measures that would require significant right-of-way and/or the development of major roadway structural elements. No feasible mitigation measures have been identified that would reduce cumulative impacts to a

level that is less than significant; therefore, residual cumulative impacts at the West Grand Avenue / Maritime Street intersection would be *significant and unavoidable*.

CUMULATIVE WEST GRAND AVENUE / I-880 FRONTAGE ROAD INTERSECTION OPERATIONS

Impact Traf-7: At the West Grand Avenue / I-880 Frontage Road intersection, both the Project and Option B would increase traffic in 2025 and both development options would cause the average vehicle delay to increase by more than two (2) seconds where the future baseline level of service would be LOS F during the a.m. peak, p.m. peak, and Saturday peak hours.

Significance: Potentially Significant.

MM Traf-7: The following modifications at the West Grand Avenue / I-880 Frontage Road intersection are possible mitigation measures, however, as explained below, the Mitigation Measures above are financially infeasible and will not be implemented.

- Revise the northbound Frontage Road lanes to provide one left turn lane, one combination left-through lane, one through lane, and one right turn lane with overlap signal phasing (green arrow)
- Revise the southbound I-80 East Ramp lanes to provide one left turn lane, one combination left-through lane, one through lane, and one right turn lane with overlap signal phasing (green arrow)
- Revise the eastbound West Grand Avenue lanes to provide one left turn lane, one through lane, and one combination through-right lane
- Revise the westbound West Grand Avenue lanes to provide one left turn lane, two through lanes, and one right turn lane

However, as explained below, the Mitigation Measures above are financially infeasible and will not be implemented.

Residual Significance: Significant and Unavoidable (**NEW**)

Implementation of **MM Traf-7** would reduce the potentially significant cumulative impacts at the W. Grand Avenue / I-880 Frontage Road intersection but would not reduce cumulative impacts to a level that is less than significant. To fully mitigate cumulative impacts at the intersection would require expansion of all approaches to the intersection, all of which are located on bridge structures. The mitigation measures identified in the *OARB Area Redevelopment Plan DEIR* and the *Wood Street Project DEIR* would not reduce the impacts to less than significant and would be financially infeasible. No feasible mitigation measures have been identified that would reduce cumulative impacts to a level that is less than significant; therefore, residual cumulative impacts at the W. Grand Avenue / I-880 Frontage Road intersection would be

significant and unavoidable. Therefore, the proposed mitigation measures are rejected as being infeasible, will not be implemented, and are not brought forward to the Executive Summary Table 1-1.

CUMULATIVE WEST GRAND AVENUE / MANDELA PARKWAY INTERSECTION OPERATIONS

Impact Traf-8: At the West Grand Avenue / Mandela Parkway intersection, both the Project and Option B would increase traffic in 2025 and both development options would cause the average vehicle delay to increase by more than four (4) seconds where the future baseline level of service would be LOS E during the a.m. peak hour; and where both development options would cause the average vehicle delay to increase by more than two (2) seconds where the future baseline level of service would be LOS F during the p.m. peak hour.

Significance: Less than Significant.

Mitigation: None required.

The Project and Option B would each add less than five (5) percent of the cumulative traffic increase as measured by the difference between existing and cumulative (with project) conditions. Therefore, the contribution of the Project or Option B to the cumulative impact at the West Grand Avenue / Mandela Parkway intersection would not be cumulatively considerable, and the incremental effect of the Project or Option B is considered a *less-than-significant* impact

CUMULATIVE WEST GRAND AVENUE / MARKET STREET INTERSECTION OPERATIONS

Impact Traf-9: At the West Grand Avenue / Market Street intersection, the level of service was shown to operate in compliance with City standards in 2025; however, in the Oak to Ninth Project DEIR, the intersection was shown to operate at an unacceptable level of service. Both the Project and Option B would increase traffic in 2025, but both the Project and Option B would add less than five (5) percent of the cumulative traffic increase as measured by the difference between existing and cumulative (with project) conditions. Therefore, the contribution of the Project or Option B to a potential cumulative impact at the West Grand Avenue / Market Street intersection would not be cumulatively considerable, and the incremental effect of the Project or Option B is considered a *less-than-significant* impact.

Significance: Less than Significant.

Mitigation: None required.

CUMULATIVE 7TH STREET / MARITIME STREET INTERSECTION OPERATIONS

Impact Traf-10 At the 7th Street / Maritime Street intersection, both the Project and Option B would increase traffic in 2025 and would cause the average vehicle delay to increase by more than two (2) seconds where the future baseline level of service would be LOS F during both the a.m. and p.m. peak hours.

Significance: Potentially Significant.

MM Traf-10: As part of the cumulative growth of the OARB Area Redevelopment Plan, the Project Sponsors shall fund a fair share of the following modifications at the 7th Street / Maritime Street intersection:

- Revise the northbound Maritime Street lanes to provide one left turn lane, one combination left-through lane, one through lane, and one right turn lane with overlap signal phasing (green arrow)
- Revise the southbound Maritime Street lanes to provide one left turn lane, one combination left-through lane, and one combination through-right turn lane
- Revise the eastbound 7th Street lanes to provide one left turn lane, two through lanes, and one right turn lane with overlap signal phasing (green arrow)
- Revise the westbound 7th Street lanes to provide two left turn lanes, two through lanes and one right turn lane with overlap signal phasing (green arrow)
- Provide split phasing for the north and southbound traffic movements.

Design plans for all public facilities shall be consistent with City standards and are subject to the approval of the City of Oakland Public Works Agency.

Residual Significance: Significant and Unavoidable (**NEW**)

Implementation of **MM Traf-10** would reduce the potentially significant cumulative impacts at the 7th Street / Maritime Street intersection but would not reduce cumulative impacts to a level that is less than significant. The intersection improvements that are feasible are limited by the structural supports for the elevated BART tracks that pass over Maritime Street just south of the intersection. To fully mitigate cumulative impacts at that intersection would require modification of the overhead structure, development of new roadways, or other measures that would require

significant right-of-way. No feasible mitigation measures have been identified that would reduce cumulative impacts to a level that is less than significant; therefore, residual cumulative impacts at the 7th Street / Maritime Street intersection would be *significant and unavoidable*.

CUMULATIVE 7TH STREET / I-880 NORTHBOUND RAMP INTERSECTION OPERATIONS

Impact Traf-11: At the 7th Street / I-880 Northbound Ramp intersection, both the Project and Option B would increase traffic in 2025 and would cause the average vehicle delay to increase by more than four (4) seconds where the future baseline level of service would be LOS E during the p.m. peak hour.

Significance: For the Project, Less than Significant

For Option B, Potentially Significant.

MM Traf-11: If Option B is developed, the Project Sponsors shall fund a fair share of the following modifications at the West Grand Avenue / I-880 Northbound Ramp intersection:

- Revise the eastbound 7th Street lanes to provide one left turn lane, one combination left-through lane, and one through lane.
- Provide split signal phasing for east and westbound traffic movements on 7th Street.

Design plans for all public facilities shall be consistent with City standards and are subject to the approval of the City of Oakland Public Works Agency.

Residual Significance: Less than Significant

The Project would add less than five (5) percent of the cumulative traffic increase as measured by the difference between existing and cumulative (with Project) conditions. Therefore, the contribution of the Project to the cumulative impact at the 7th Street / I-880 Northbound Ramp intersection would not be cumulatively considerable, and the incremental effect of the project is considered a *less-than-significant* impact.

Option B would add more than five (5) percent of the cumulative traffic increase as measured by the difference between existing and cumulative (with Project) conditions. Therefore, the contribution of Option B to the cumulative impact at the 7th Street / I-880 Northbound Ramp intersection would be cumulatively considerable, and the incremental effect of the Option B is considered a *potentially significant* impact.

Implementation of **MM Traf-11** would reduce the potentially significant cumulative impacts of Option B at the West Grand Avenue / I-880 Northbound Ramp intersection to a *less than significant* level.

CUMULATIVE 7TH STREET / MANDELA PARKWAY INTERSECTION OPERATIONS

Impact Traf-12: At the 7th Street / Mandela Parkway intersection, both the Project and Option B would increase traffic in 2025 and would cause an increase in the average delay for a critical movement of four (4) seconds where the future baseline level of service would be LOS F during the p.m. peak hour. Both the Project and Option B would add less than five (5) percent of the cumulative traffic increase as measured by the difference between existing and cumulative (with project) conditions. Therefore, the contribution of the Project or Option B to the cumulative impact at the 7th Street / Mandela Parkway intersection would not be cumulatively considerable, and the incremental effect of the Project or Option B is considered a *less-than-significant* impact.

Significance: Less than Significant

Mitigation: None Required

CUMULATIVE 5TH STREET / BROADWAY INTERSECTION OPERATIONS

Impact Traf-13: At the 5th Street / Broadway intersection, both the Project and Option B would increase traffic in 2025 and would cause an increase in the average delay for a critical movement of four (4) seconds where the future baseline level of service would be LOS F during the p.m. peak hour. Both the Project and Option B would add less than five (5) percent of the cumulative traffic increase as measured by the difference between existing and cumulative (with project) conditions. Therefore, the contribution of the Project or Option B to the cumulative impact at the 5th Street / Broadway intersection would not be cumulatively considerable, and the incremental effect of the Project or Option B is considered a *less-than-significant* impact.

Significance: Less than Significant

Mitigation: None Required

CUMULATIVE POWELL STREET / I-80 NORTHBOUND RAMPS INTERSECTION OPERATIONS

Impact Traf-14: At the Powell Street / I-80 Northbound Ramps intersection, both the Project and Option B would increase traffic in 2025 and would cause an increase in the average delay for a critical movement of four (4) seconds where the future baseline level of service would be LOS F during the p.m. peak hour. Both the Project and Option B would add less than five (5) percent of the cumulative traffic increase as measured by the difference between existing and cumulative (with project) conditions. Therefore, the

contribution of the Project or Option B to the cumulative impact at the Powell Street / I-80 Northbound Ramps intersection would not be cumulatively considerable, and the incremental effect of the Project or Option B is considered a *less-than-significant* impact.

Significance: Less than Significant

Mitigation: None Required

CUMULATIVE S. ACCESS ROAD / MARITIME STREET INTERSECTION OPERATIONS

Impact Traf-15: At the S. Access Road / Maritime Street intersection, Option B would increase traffic in 2025 and would cause the future baseline LOS to operate at below LOS D at this new intersection.

Significance: For the Project, Less than Significant

For Option B, Potentially Significant

MM Traf-15: If Option B is developed, the Project Sponsors shall fund a fair share of the modifications at the S. Access Road / Maritime Street intersection to add a southbound right turn lane with southbound right turn overlap phasing (green arrow). Design plans for all public facilities shall be consistent with City standards and are subject to the approval of the City of Oakland Public Works Agency.

Residual Significance: Less than Significant

Implementation of **MM Traf-14** would reduce the potentially significant cumulative impacts of Option B at the S. Access Road / Maritime Street intersection to a *less than significant* level.

CUMULATIVE PARCEL I / MARITIME STREET INTERSECTION OPERATIONS

Impact Traf-16: At the Parcel I / Maritime Street intersection, Option B would increase traffic in 2025 and would cause the future baseline LOS to operate at below LOS D at this new intersection. This is a *potentially significant* impact.

Significance: For the Project, Less than Significant

For Option B, Potentially Significant

MM Traf-16: If Option B is developed, the Project Sponsors shall fund a fair share of the modifications at the Parcel I / Maritime Street intersection to add a southbound right turn lane with southbound right turn overlap phasing

(green arrow). Design plans for all public facilities shall be consistent with City standards and are subject to the approval of the City of Oakland Public Works Agency.

Residual Significance: Less than Significant

Implementation of **MM Traf-16** would reduce the potentially significant cumulative impacts of Option B at the Parcel I / Maritime Street intersection to a *less than significant* level.

CUMULATIVE FREEWAY OPERATIONS

Impact Traf-17: Both the Project and Option B would increase traffic on study area freeways in 2025 and would cause freeway segments to operate at LOS F.

Significance: Potentially Significant

MM Traf-17: As part of the cumulative growth of the OARB Area Redevelopment Plan, the Project Sponsors shall fund a fair share of a transportation demand management program established by the City for the Redevelopment Area to reduce the demand for single-occupant, peak hour trips, and to increase access to transit opportunities.

Residual Significance: Significant and Unavoidable

In 2025, both the Project and Option B would degrade traffic operations to LOS F at the following freeway segments:

- I-80 westbound between I-880 and I-580 during the a.m. peak hour
- I-80 westbound east of the I-80/I-580 split during the p.m. peak hour.

In addition, Option B would degrade traffic operations to LOS F on I-880 northbound south of the I-80/I-580 split during the p.m. peak hour.

The cumulative impacts of both project options on study area freeway segments are summarized in **Table 3-9**.

Implementation of **MM Traf-17** would reduce the potentially significant cumulative impacts on study area freeways but would not reduce cumulative impacts to a level that is less than significant. Increasing freeway capacity by adding lanes would not be feasible because of the high cost, negative impacts to air quality, and other factors. Moreover, adding lanes is inconsistent with the policies of the responsible regional agencies. No feasible mitigation measures have been identified that would reduce cumulative impacts to a level that is less than significant; therefore, residual cumulative impacts on study area freeways would be *significant and unavoidable*.

**TABLE 3-9
FREEWAY LEVELS OF SERVICE - CUMULATIVE CONDITIONS**

Freeway Segment	Cumulative Conditions with Project								Cumulative Conditions with Option B							
	No Project				Project				No Option B				Option B			
	AM		PM		AM		PM		AM		PM		AM		PM	
	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²
I-80 at the Bay Bridge																
Eastbound	C	0.604	F	1.448	C	0.612	F	1.452	C	0.601	F	1.448	C	0.609	F	1.455
Westbound	F	1.518	F	1.094	F	1.520	F	1.100	F	1.518	F	1.091	F	1.521	F	1.100
I-80 between I-880 and I-580																
Eastbound	B	0.470	F	1.006	B	0.475	F	1.021	B	0.469	F	1.001	B	0.476	F	1.020
Westbound	E	0.996	C	0.719	F	1.015	C	0.729	E	0.990	C	0.719	F	1.008	C	0.735
I-80 East of I-80/I-580 Split																
Eastbound	C	0.713	F	1.253	C	0.718	F	1.265	C	0.713	F	1.248	C	0.719	F	1.265
Westbound	F	1.260	E	0.994	F	1.276	F	1.002	F	1.255	E	0.994	F	1.270	F	1.007
I-880 Connector to I-80 East																
Northbound	F	1.007	D	0.834	F	1.018	D	0.866	F	1.006	D	0.823	F	1.021	D	0.863
Southbound	D	0.820	D	0.848	D	0.859	D	0.867	D	0.808	D	0.847	D	0.845	D	0.880
I-880 Connector to I-80 West																
Northbound	C	0.693	B	0.501	C	0.710	C	0.555	C	0.691	B	0.481	C	0.715	C	0.551
Southbound	A	0.323	C	0.620	B	0.389	C	0.653	A	0.301	C	0.619	B	0.363	C	0.676
I-880 North of 7th St.																
Northbound	E	0.964	C	0.759	E	0.964	C	0.759	E	0.964	C	0.759	E	0.964	C	0.759
Southbound	C	0.633	D	0.820	C	0.633	D	0.820	C	0.633	D	0.820	C	0.633	D	0.820
I-880 South of 7th St.																
Northbound	F	1.215	E	0.980	F	1.235	E	0.990	F	1.206	E	0.980	F	1.224	F	1.001
Southbound	D	0.858	E	0.957	D	0.864	E	0.973	D	0.858	E	0.949	D	0.866	E	0.972
I-880 North of I-980																
Northbound	F	1.232	E	0.967	F	1.252	E	0.978	F	1.222	E	0.967	F	1.240	E	0.988
Southbound	D	0.874	D	0.895	D	0.879	D	0.909	D	0.873	D	0.887	D	0.881	D	0.908
I-880 South of I-980																
Northbound	F	1.531	F	1.314	F	1.544	F	1.321	F	1.524	F	1.314	F	1.536	F	1.328
Southbound	F	1.112	F	1.385	F	1.115	F	1.396	F	1.111	F	1.379	F	1.117	F	1.395

**TABLE 3-9
FREEWAY LEVELS OF SERVICE - CUMULATIVE CONDITIONS**

Freeway Segment	Cumulative Conditions with Project								Cumulative Conditions with Option B							
	No Project				Project				No Option B				Option B			
	AM		PM		AM		PM		AM		PM		AM		PM	
	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²	LOS ¹	V/C ²
I-880 North of I-238																
Northbound	F	1.380	F	1.296	F	1.381	F	1.297	F	1.379	F	1.296	F	1.380	F	1.298
Southbound	F	1.241	F	1.410	F	1.241	F	1.412	F	1.241	F	1.410	F	1.241	F	1.411
I-580 East of I-980/SH-24																
Eastbound	D	0.836	F	1.178	D	0.840	F	1.191	D	0.835	F	1.173	D	0.841	F	1.190
Westbound	F	1.138	F	1.058	F	1.155	F	1.066	F	1.133	F	1.058	F	1.149	F	1.071
I-580 West of I-980/SH-24																
Eastbound	C	0.766	F	1.265	D	0.770	F	1.280	C	0.765	F	1.259	D	0.772	F	1.279
Westbound	F	1.356	F	1.089	F	1.374	F	1.099	F	1.349	F	1.089	F	1.367	F	1.105
I-980																
Eastbound	B	0.481	D	0.875	B	0.481	D	0.875	B	0.481	D	0.875	B	0.481	D	0.875
Westbound	D	0.876	C	0.619	D	0.876	C	0.619	D	0.876	C	0.619	D	0.876	C	0.619
SH 24 East of I-580																
Eastbound	B	0.482	F	1.031	B	0.484	F	1.037	B	0.482	F	1.029	B	0.485	F	1.037
Westbound	F	1.180	C	0.722	F	1.188	C	0.725	F	1.178	C	0.721	F	1.185	C	0.728

Source: Dowling Associates, Inc. and 1985 Highway Capacity Manual

Notes:

Shaded values indicate a potential significant impact.

¹ LOS = Level of Service

² V/C = Volume to Capacity Ratio

CUMULATIVE TRANSIT RIDERSHIP

Impact Traf-18: The Project and Option B would increase the average ridership on AC Transit lines in 2025 by more than three percent on transit lines serving the Project Area, but the average load factor with the Project would not exceed 125 percent over a peak 30-minute period.

Significance: Less than Significant.

Mitigation: None required.

The Project and Option B would increase transit ridership on existing AC transit routes serving the Project Area in 2025. The impacts of the Project and Option B on future AC Transit bus service are based on the ridership estimates from the Alameda Countywide Transportation Model. A summary of AC Transit ridership is shown in **Table 3-10**. Although the Project and Option B would increase bus ridership on some routes, there would be enough available capacity on the AC Transit routes to accommodate the additional demand. Because the average load factor with the Project would not exceed 125 percent over a 30-minute period, this impact would be less than significant.

Neither the Project nor Option B would generate BART ridership and would not affect BART line capacity or fare gate demand in 2025. There would be *no impact* with regard to BART operations. (See CMP analysis summary in Appendix C.)

**Table 3-10
AC TRANSIT RIDERS - CUMULATIVE CONDITIONS**

Route	Direction	Headway (Minutes)	Capacity	Existing		Project (New Riders)		Total with Project		Load Factor with Project		Ridership Increase	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Project, North Gateway													
13	Eastbound	20	60	15	14	0	1	15	15	26%	25%	0.0%	7.3%
13	Westbound	20	60	46	15	2	0	48	15	81%	26%	4.3%	0.0%
19	Southbound	30	32	21	24	0	1	21	25	64%	78%	0.0%	4.2%
19	Northbound	30	32	29	19	1	0	30	19	94%	59%	3.4%	0.0%
NL	Eastbound	15	86	46	81	1	2	47	83	55%	96%	2.2%	2.5%
NL	Westbound	15	86	62	34	1	1	63	35	73%	41%	1.6%	2.9%
Option B, North and East Gateway													
13	Eastbound	20	60	15	14	0	0	15	14	26%	23%	0.0%	0.0%
13	Westbound	20	60	46	15	0	0	46	15	77%	26%	0.0%	0.0%
19	Southbound	30	32	21	24	0	0	21	24	64%	75%	0.0%	0.0%
19	Northbound	30	32	29	19	0	0	29	19	91%	59%	0.0%	0.0%
NL	Eastbound	15	86	46	81	0	0	46	81	54%	94%	0.0%	0.0%
NL	Westbound	15	86	62	34	0	0	62	34	72%	40%	0.0%	0.0%

Sources: Howard Der, AC Transit Long-Range Planning & Data Analysis Department and Alameda Countywide Model.

Notes: The table includes AC Transit Riders during peak 30-minute periods.

PARKING ANALYSIS

All parking for both the Project and Option B would be accommodated on the project site, and the estimated parking demand would be met by the proposed parking supply. All existing (at the time of the traffic counts) parking including truck parking and container storage would be or already has been relocated to another site within the Gateway Development Area; therefore, no project-displaced parking would affect the parking supply in other areas. See Chapter 5: Other CEQA Considerations for a fuller discussion of truck parking issues.