B. TRANSPORTATION, CIRCULATION, AND PARKING

SETTING

EXISTING STREET AND HIGHWAY SYSTEM

Regional Access

The project area is primarily served by four regional roadways, i.e., Interstate 980 (I-980), Interstate 580 (I-580) and Interstate 880 (I-880) and State Route 24 (SR 24).

I-980 is the closest freeway to the project site. This roadway extends from I-880 to I-580/SR 24, and has three lanes in each direction in the general vicinity of the project area. Average daily traffic on I-980 between 18th Street and I-580 is about 121,000 vehicles (Caltrans, 2004). To reach the project site, vehicles can exit I-980 at the 17th/18th Streets interchange, which is five blocks from the project site. Additional access from I-980 in the study area is provided at 27th Street / Grand Avenue and 12th/14th Streets.

State Route 24 runs from Walnut Creek in the east to Oakland in the west, and is the continuation of I-980 east of I-580. This roadway has four lanes in each direction near downtown Oakland. Average daily traffic on SR 24 northeast of the I-580/I-980 junction is about 141,000 vehicles (Caltrans, 2004).

I-580 is a regional freeway located east of the project site, extending between I-5 near the City of Tracy and U.S. Highway 101 in San Rafael. Four lanes are generally provided in each direction on this freeway near the project area. Trucks are prohibited on I-580 in the downtown Oakland area. Average daily traffic on I-580 between the Grand Avenue/Van Buren Avenue interchange and the Oakland Avenue/Harrison Street interchange is about 141,000 vehicles (Caltrans, 2004). The closest ramps from I-580 to the project site are at the Harrison Street/Oakland Avenue interchange, which is approximately nine blocks from the project site. Additional access from I-580 is provided at Broadway (off-ramp in the eastbound direction only) and Grand Avenue (full interchange).

I-880 is a major north-south regional freeway located west of the project site, extending between I-80 in Emeryville and I-280 in San Jose. Four lanes are generally provided in each direction on this freeway near the project area. Average daily traffic on I-880 north of Broadway is about 229,000 vehicles (Caltrans, 2004).

Local Access

Broadway is a major arterial that runs in a north-south direction from Jack London Square in the south, past I-580, to SR 24 to the north. In the vicinity of the project, Broadway consists of two through lanes in each direction. There are traffic signals at most of the major intersections, and separate left and right turn lanes at some key intersections. Broadway borders the east side of the project site.

Grand Avenue runs from I-80 in the west to beyond I-580 to the east. It generally has two lanes and a bike lane in each direction. Grand Avenue borders the south side of the project site.

Telegraph Avenue is a major north-south arterial, beginning at its intersection with Broadway in downtown Oakland and continuing north into Berkeley. Generally, there are two through lanes in each direction.

Harrison Street has four lanes southbound and five lanes northbound between 20th Street and Grand Avenue. There are three lanes in each direction on Harrison Street between Grand Avenue and 27th Street, with two lanes in each direction north of 27th Street and south of 20th Street. Harrison Street is connected to the Posey Tube (from the City of Alameda) and is one-way northbound south of 10th Street. Harrison Street forms a one-way couplet with Oakland Avenue north of 29th Street, with traffic traveling southbound on Harrison Street and northbound on Oakland Avenue.

23rd Street is an east-west local road that passes through the project site, and extends between Harrison Street and Martin Luther King Jr. Way in Oakland.

24th Street is an east-west local road that borders the north side of the project site, and extends between Telegraph Avenue and Harrison Street.

27th Street is an east-west arterial that provides access to I-980, and extends between San Pablo Avenue and Broadway. In general, 27th Street has three lanes in each direction.

Valley Street is a narrow local two-lane north-south road, extending between 22nd Street and 24th Street.

EXISTING TRAFFIC CONDITIONS

The traffic conditions in urban areas are affected more by the operations at the intersections than by the capacities of the local streets because traffic control devices (signals and stop signs) at intersections control the capacity of the street segments. The operations are measured in terms of level of service (LOS), which is based on average vehicle delay experienced at the intersections. That delay is a function of the signal timing, intersection lane widths and configuration, hourly traffic volumes, pedestrian volumes, and parking and bus conflicts. Weekday traffic counts were collected in 2000 from a number of different studies, and additional counts were completed in May 2003. Using traffic volumes from two or three years ago will likely yield an overestimate of existing volume because traffic volumes were actually higher during the period prior to the current economic recession. Both the current, year 2003 and conservative, year 2000 counts are used in the analysis.

Level of Service Analysis Methodologies

The operation of a local roadway network is commonly measured and described using a grading system called Level of Service (LOS). The LOS grading system qualitatively characterizes traffic conditions associated with varying levels of vehicle traffic, ranging from LOS A (indicating free-flow traffic conditions with little or no delay experienced by motorists) to LOS F (indicating congested conditions where traffic flows exceed design capacity and result in long queues and delays). This LOS grading system applies to both signalized and unsignalized intersections. LOS A, B, and C are generally considered satisfactory service levels, while the influence of congestion becomes more noticeable (though still considered acceptable) at LOS D. LOS E and F are generally considered to be unacceptable, though LOS E is considered acceptable in the downtown area of Oakland.[1]

Signalized Intersections

At the signalized study intersections, traffic conditions were evaluated using the 2000 *Highway Capacity Manual* operations methodology. The operation analysis uses various intersection characteristics (e.g., traffic volumes, lane geometry, and signal phasing/timing) to estimate the average control delay experienced by motorists traveling through an intersection.[2] **Table IV.B-1** summarizes the relationship between control delay and LOS.

Unsignalized Intersections

For the unsignalized (all-way stop-controlled and side-street stop-controlled) study intersections, traffic conditions were evaluated using the 2000 *Highway Capacity Manual* (HCM) operations methodology. With this methodology, the LOS is related to the total delay per vehicle for the intersection as a whole (for all-way stop-controlled intersections), and for each stop-controlled movement or approach only (for side-street stop-controlled intersections). Total delay is defined as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line. This time includes the time required for a vehicle to travel from the last-in-queue position to the first-in-queue position. **Table IV.B-1** summarizes the relationship between delay and LOS.

Freeways

Table IV.B-2 presents the criteria for the freeway level of service based on volume-to-capacity ratio and vehicle density based on the *1985 Highway Capacity Manual*. Freeway conditions are reported herein on the basis of both criteria because the City of Oakland uses the volume-to-capacity ratio methodology for their analyses, whereas Caltrans uses the density methodology. The volume-to-capacity ratio methodolgy required by the City of Oakland is the criteria used to determine if the project has a significant traffic impact.

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1 Downtown is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bound 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. The three intersections on West Grand / Grand Avenue, analyzed herein, are located within the Downtown area.

2 Control delay, which is the portion of total delay attributed to traffic signal operation for signalized intersections, includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The use of control delay as the basis for defining LOS differs from earlier versions of the *Highway Capacity Manual* methodology, which used "stopped delay" (i.e., a portion of the total control delay) to define LOS.

TABLE IV.B-1
DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE

Unsignalized Intersections		Level	Signalized Intersections	
Description	Average Total Vehicle Delay (Seconds)	of Service Grade	Average Control Vehicle Delay (Seconds)	Description
No delay for stop-controlled approaches.	≤10.0	A	≤10.0	Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	>10.0 and ≤15.0	B	>10.0 and ≤20.0	Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	>15.0 and ≤25.0	C	>20.0 and ≤35.0	Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>35.0 and ≤55.0	Approaching Unstable or Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>55.0 and ≤80.0	Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>80.0	Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

SOURCE: Transportation Research Board, *Highway Capacity Manual*, updated 2000.

TABLE IV.B-2
CRITERIA FOR FREEWAY LEVEL OF SERVICE (LOS)

Volume-to-Capacity Ratio [a]	LOS Grade	Vehicle Density (pc / mile / lane) [b]
≤0.35	A	≤12
>0.35 and ≤0.54	B	>12 and ≤20
>0.54 and ≤0.77	C	>20 and ≤30
>0.77 and ≤0.93	D	>30 and ≤42
>0.93 and ≤1.00	E	>42 and ≤67
>1.00	F	>67

[a] Free-flow speed is assumed to be 70 mile/hour.
[b] Passenger car equivalents per mile per lane.

SOURCE: Transportation Research Board, Special Report 209, *Highway Capacity Manual*, 1985.

Existing Intersection Traffic Operating Conditions

To identify intersections that could potentially be adversely affected by Project traffic, a "screening criteria" was developed, based on the significance criteria of the City of Oakland. All intersections that satisfy the following two criteria were evaluated in detail in the DEIR analysis:

- Intersections to which the project would add 50 or more peak hour trips; and
- Inside the downtown area, the intersection was identified as operating at LOS D or worse, or, outside the downtown area, the intersection was identified as operating at LOS C or worse.

It is at these intersections where the Project could result in a significant adverse impact. It should also be noted that this screening approach is similar to criteria and methodology commonly employed by other Bay Area jurisdictions.

Based on the City's significance criteria, a significant impact is identified when an intersection deteriorates to worse than LOS E inside the downtown area and worse than LOS D outside the downtown area. The addition of fewer than 50 trips to an intersection can not reasonably be expected to degrade a service level from LOS D or better to worse than LOS E (inside the downtown area) or to degrade a service level from LOS C or better to worse than LOS D (outside the downtown area).

On arterial roadways in the project study area, fewer than 50 trips are within daily traffic fluctuations. Daily and peak hour traffic fluctuations of 5 percent or more are commonplace on these types of roadway facilities. For comparison purposes, 50 trips would comprise roughly 1.9 percent of a.m. peak-hour traffic at the intersection of Telegraph and West Grand Avenue, and approximately 1.6 percent of total traffic during the p.m. peak hour. This is less than typical daily fluctuations in traffic, and less than the 3.0 percent increase necessary to constitute a significant impact on the CMA Metropolitan Transportation System (for facilities operating at LOS F in the baseline condition).

Analysis of peak-hour traffic conditions was conducted at eight intersections in the project vicinity. The signalized intersections were selected on the basis of the above-described screening. Unsignalized intersections abutting the project site are also included in the analysis. The eight analysis intersections are listed below and shown in **Figure IV.B-1**.

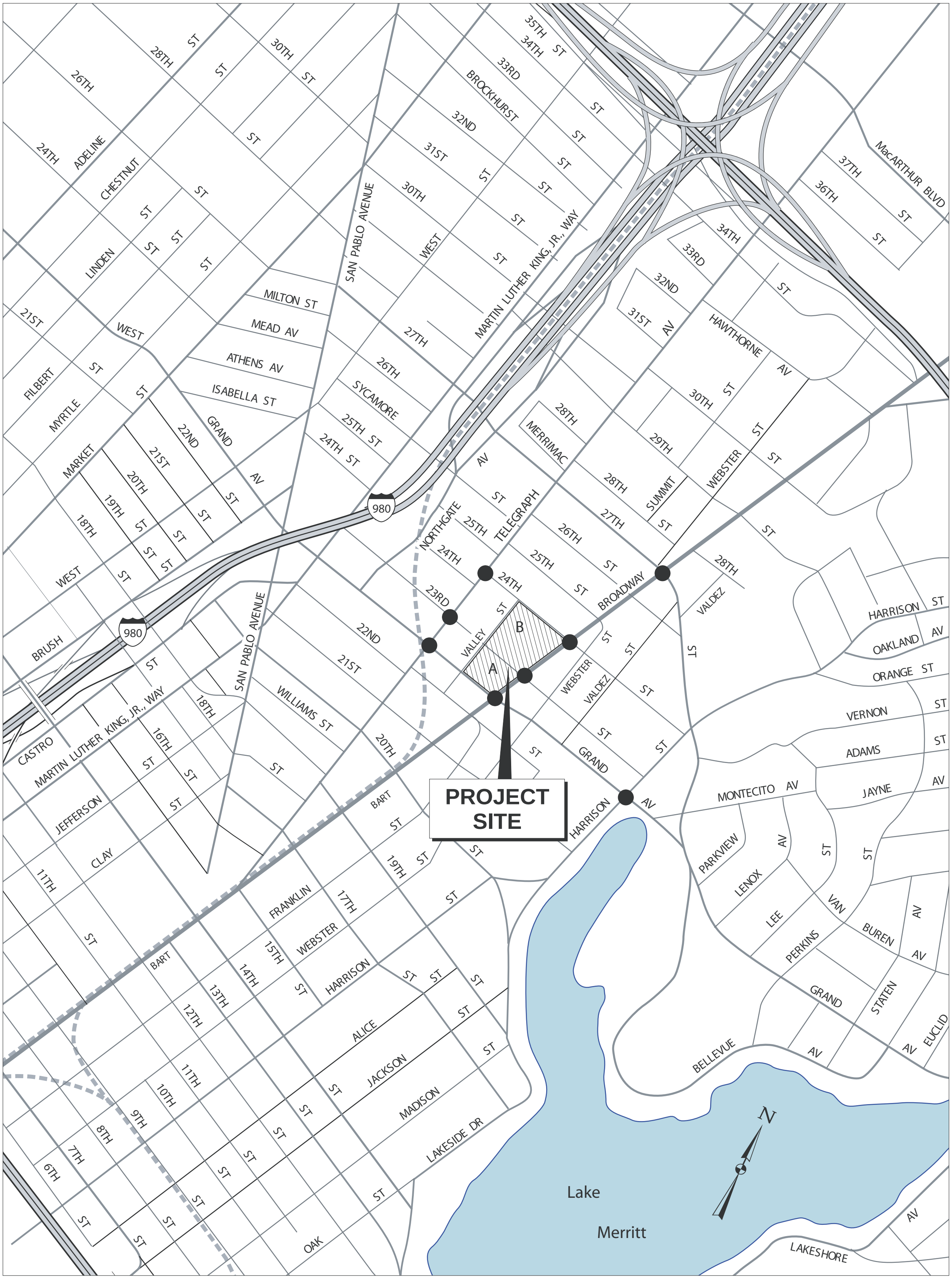
West Grand Avenue / Telegraph Avenue (*signalized*)
West Grand Avenue / Broadway (*signalized*)
Grand Avenue / Harrison Street (*signalized*)
23rd Street / Telegraph Avenue (*unsignalized*)
23rd Street / Broadway (*unsignalized*)
24th Street (east leg) / Telegraph Avenue (*unsignalized*)[3]
24th Street / Broadway (*unsignalized*)
27th Street / Broadway (*signalized*)

Figure IV.B-2 illustrates the existing lane geometry and traffic control at the study intersections. Existing a.m. and p.m. peak-hour traffic volumes are presented in **Figure IV.B-3**. The existing a.m. and p.m. peak-hour intersection LOS and delays are summarized in **Table IV.B-3**. All of the study intersections currently operate under acceptable conditions (at LOS D or better).

Existing Freeway Traffic Operating Conditions

Table IV.B-4 summarizes the existing level of service (LOS) on key freeway segments near the project, based on both the density and volume to capacity ratio methodologies. As indicated in the table, in some cases, a somewhat different LOS is calculated based on the two different analysis methodologies. I-580 currently operates at LOS F in the westbound direction during the morning peak hour and at LOS F in the eastbound direction during the evening peak hour near Grand Avenue based on both analysis methodologies. Based on the density criteria, the other freeway segments operate at LOS D or better during the peak hours. However, based on the volume to capacity criteria, some of the freeway segments along I-880 and I-580 currently operate at LOS E.

[3] The 24th Street (west leg) / Telegraph Avenue intersection is signalized, located approximately 125 feet south of the 24th Street (east leg) / Telegraph Avenue intersection.



Broadway & West Grand / 203468 ■

SOURCE: Korve Engineering, 2004

Figure IV.B-1
Study Intersections

TABLE IV.B-3
EXISTING PEAK-HOUR INTERSECTION LEVELS OF SERVICE (LOS)

Intersection	Traffic Control	AM Peak		PM Peak	
		LOS[a]	Delay	LOS[a]	Delay
West Grand Avenue & Telegraph Avenue	Signal	C	25.2	B	20.0
West Grand Avenue & Broadway	Signal	C	25.0	D	38.4
Grand Avenue & Harrison Street	Signal	C	28.5	C	25.7
23rd Street & Telegraph Avenue	TWSC	C	16.4	D	30.8
23rd Street & Broadway	TWSC	C	24.1	D	30.0
24th Street & Telegraph Avenue	TWSC	B	11.6	C	19.5
24th Street & Broadway	TWSC	C	18.8	C	17.5
27th Street & Broadway	Signal	C	27.7	C	33.3

TWSC = Two-way stop controlled intersection
[a] The LOS and delay for two-way stop controlled intersections represent the worst movement or approach. The LOS and delay for signalized intersections represent the overall intersection.

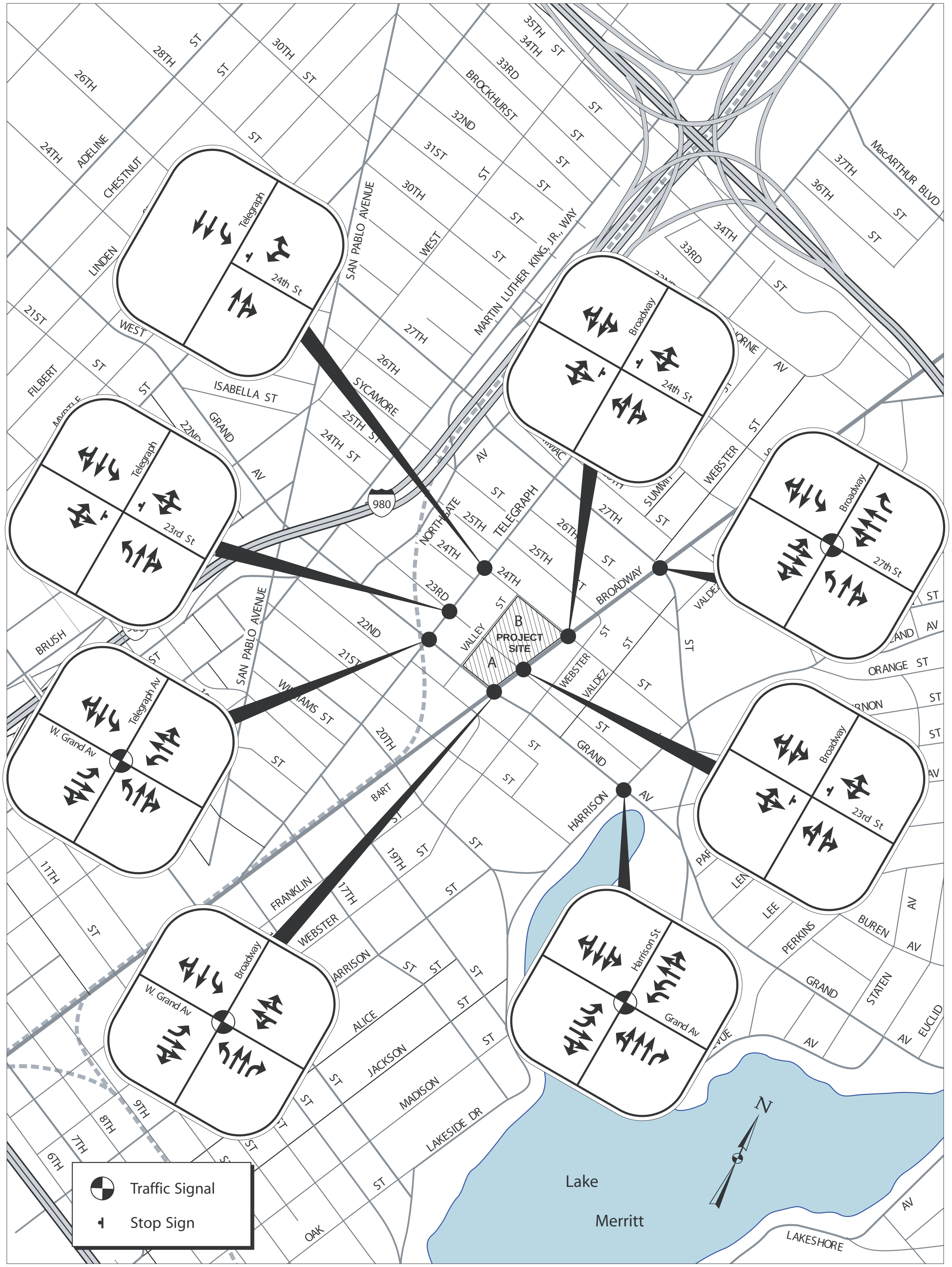
SOURCE: Korve Engineering

TRANSIT SERVICES

Existing transit service near the project site includes bus service provided by the Alameda-Contra Costa Counties Transit District (AC Transit) and rail service provided by Bay Area Rapid Transit (BART). Each of these services is described below, and shown in **Figure IV.B-4**.

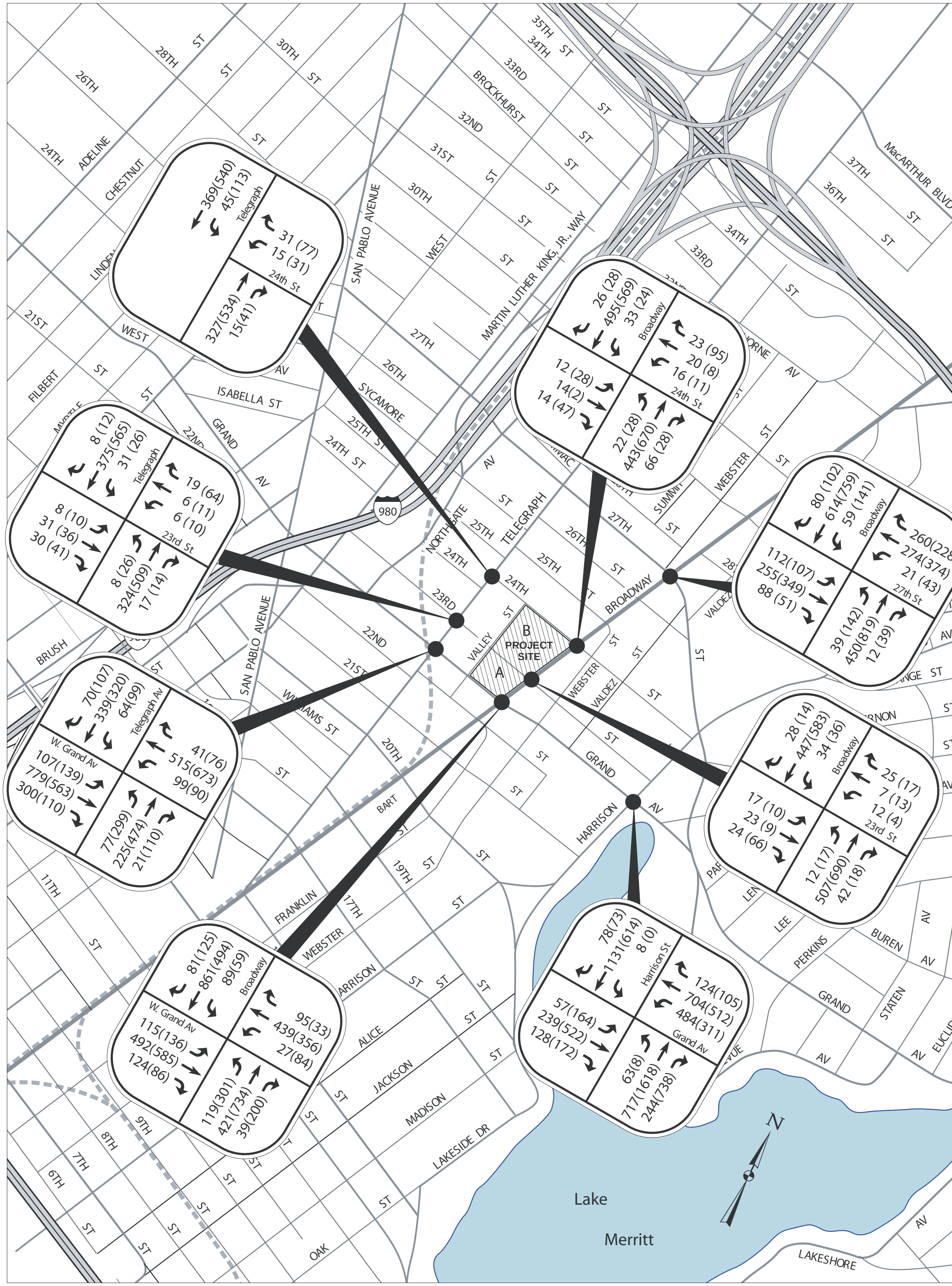
AC Transit

The project site is served by several AC Transit bus lines running through major north-south corridors: Telegraph Avenue (Lines 40, 40L and 43) and Broadway (Lines 51, 59 and 59A). **Table IV.B-5** summarizes the bus routes and service schedules for the AC Transit lines located within easy walking distance from the project site. Line 12 is the closest east-west bus line, running on Grand Avenue, on the southern edge of the project site. Lines 11, 15, 72, 72M and 72R run on 20th Street, three blocks south of the project site. Most of the buses run every 5 to 15 minutes during the peak periods and 20 to 30 minutes during non-peak periods. As of June 27, 2004, Line 59/59A operates between the 51st Street / Broadway intersection and the Lake Merritt BART Station only.



SOURCE: Korve Engineering, 2004

Figure IV.B-2
Existing Lane Geometry
and Traffic Control



SOURCE: Korve Engineering, 2004

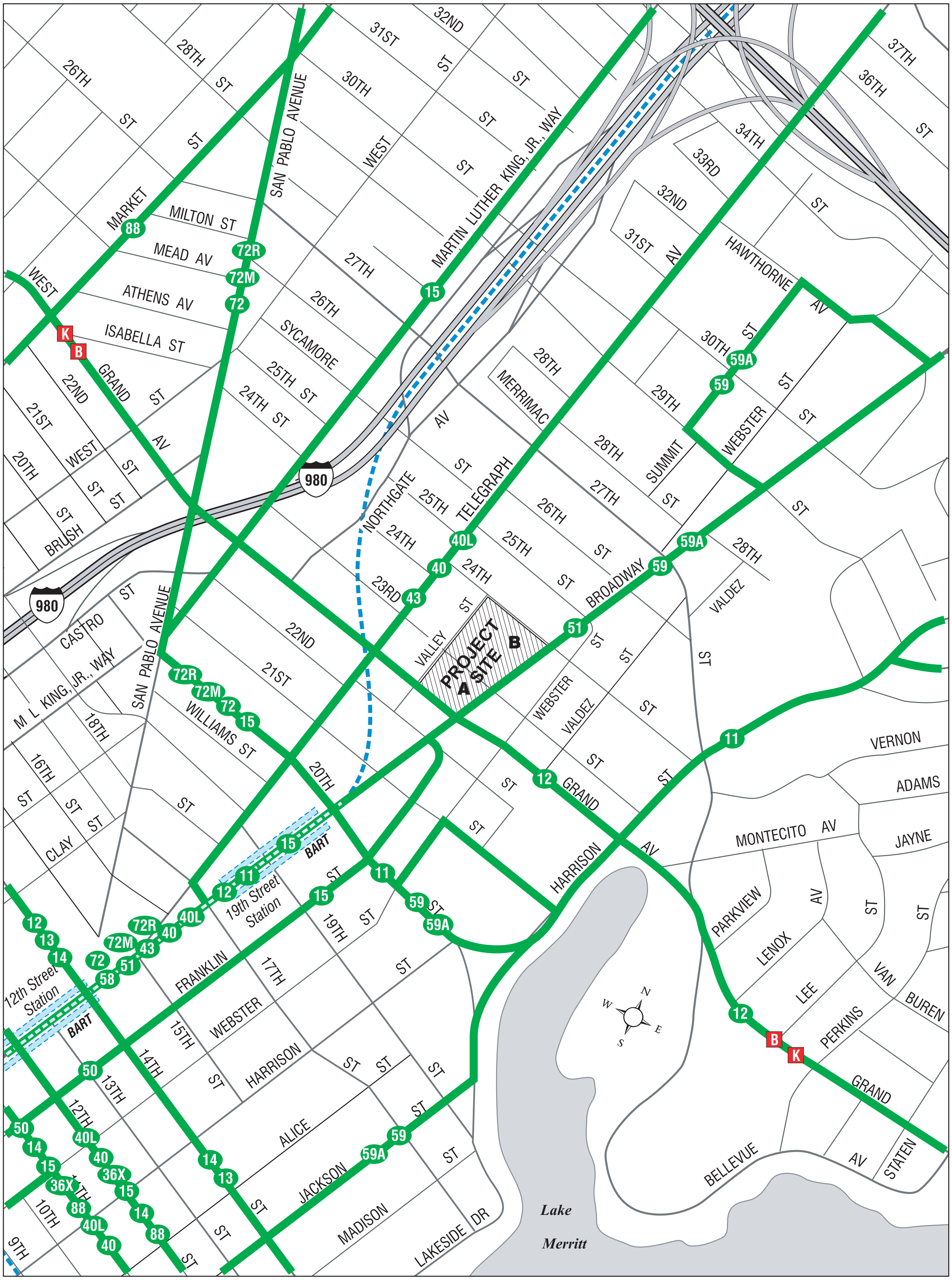
Broadway & West Grand / 203468 ■

Figure IV.B-3
Existing Peak Hour Traffic Volumes
AM (PM) Peak Hour

TABLE IV.B-4
EXISTING FREEWAY LEVEL OF SERVICE (LOS)

Location	Direction	Peak Hour	Density Method [a] (pc/mi/ln) [b]	Density Method [a] LOS	Volume-to-Capacity Method [a] (Vehicles/lane)	Volume-to-Capacity Method [a] V/C [c]	Volume-to-Capacity Method [a] LOS
Interstate 980							
Junction with I-880	EBd	AM	25.5	C	1,334	0.72	C
		PM	32.5	D	1,616	0.88	D
	WBd	AM	20.5	C	1,038	0.61	C
		PM	17.0	B	928	0.53	B
18th Street	EBd	AM	9.5	A	518	0.29	A
		PM	21.0	C	1,222	0.63	C
	WBd	AM	23.0	C	1,121	0.69	C
		PM	12.0	A	619	0.34	A
State Route 24							
Junction with I-580	EBd	AM	15.0	B	968	0.42	B
		PM	31.5	D	1,632	0.83	D
	WBd	AM	39.5	C	1,395	0.92	C
		PM	17.0	C	1,205	0.51	C
Interstate 580							
Grand Avenue	NBd	AM	24.0	C	1,334	0.68	C
		PM	N/A	**F**	2,516	1.22	**F**
	SBd	AM	N/A	**F**	2,400	1.28	**F**
		PM	27.0	C	1,450	0.74	C
Harrison Street	NBd	AM	18.0	C	1,026	0.51	C
		PM	47.0	**E**	1,934	0.96	**E**
	SBd	AM	60.0	**E**	1,845	1.00	**E**
		PM	19.0	C	1,115	0.55	C
Interstate 880							
Oak/Madison Streets	NBd	AM	N/A	**F**	1,853	1.05	**F**
		PM	31.5	D	1,407	0.81	D
	SBd	AM	31.0	D	1,430	0.80	D
		PM	N/A	**F**	1,830	1.04	**F**
Broadway	NBd	AM	N/A	**F**	1,984	1.13	**F**
		PM	42.0	**E**	1,296	0.94	**E**
	SBd	AM	27.0	C	1,653	0.74	C
		PM	39.5	D	1,627	0.92	D
Junction with I-980	NBd	AM	N/A	**F**	1,882	1.07	**F**
		PM	25.0	C	918	0.71	C
	SBd	AM	18.0	B	1,246	0.52	B
		PM	35.0	D	1,554	0.80	D

[a] Caltrans requires the use of the “density” calculation while the City of Oakland requires the “volume to capacity ratio” methodology. Project impacts are assessed based on the “volume to capacity” ratio methodology.
[b] Passenger car equivalents per kilometer per lane.
[c] Roadway capacities assumed to be 2,000 vehicles per hour per lane for freeways.
Bold = Unacceptable LOS
SOURCE: Korve Engineering and Caltrans



40 AC Transit
BART Station

SOURCE: AC Transit, June 2004

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Figure IV.B-4
Existing Transit Network

TABLE IV.B-5
BUS SERVICE SUMMARY FOR PROJECT AREA

Line	Route Name	Service Frequency
40/ 40L	Berkeley – Oakland – Bay Fair BART (on Telegraph Avenue)	40L provides limited stop service. Weekdays: 5-20 minutes (*depending on stops*) Weekends: 20-30 minutes
43	El Cerrito – Eastmont Transit Center (on Telegraph Avenue)	Weekdays: 5-20 minutes (*depending on stops*) Weekends: 20-30 minutes
51	Alameda – Oakland – Berkeley (on Broadway)	Weekdays: 10 to 15 minutes peak and 20 minutes off-peak Weekends: 15 to 20 minutes
59/ 59A	Lake Merritt BART – Oakland – Piedmont/Linda Ave (peak) Lake Merritt BART – Oakland – Rockridge BART (others) (on Broadway)	Weekdays: 60 minutes peak and 1 hour off-peak Weekends: 1 hour
12	MacArthur BART to Downtown Oakland (on Grand Avenue)	Weekdays: 20 minutes peak and 30 minutes off-peak Weekends: 30 minutes
w11	Diamond District – Downtown Oakland – Piedmont (on 20th Street)	Weekdays: 20 minutes peak and 30 minutes off-peak Weekends: 1 hour
15	Montclair Transit Center – Downtown Oakland – El Cerrito BART (alternate trips to Berkeley BART only) (on 20th Street)	Weekdays: 15 minutes before 7:30 p.m. 30 minutes afterwards Weekends: 20-30 minutes
72/ 72M	Hill Top Mall – Oakland (72) Richmond – Oakland (72M) (both on 20th Street)	Weekdays & weekends: 15 to 18 minutes (frequency of 72 and 72M combined)
72R	Along San Pablo Avenue from Contra Costa College in San Pablo to Jack London Square (on 20th Street)	Weekdays only: 12 minutes (6 a.m. to 7 p.m.)

SOURCE: AC Transit. Route and Bus Schedules, Effective June 27, 2004

Information on maximum load points was obtained from various sources compiled by the AC Transit Long Range Planning & Data Analysis Department.[4] In the morning peak hour, Lines 40/40L, 43, 51 and 72/72M have high maximum loads, ranging between 103 and 224 percent of seated capacity. The bus lines with the lowest loads are in the northbound direction, with maximum loads of less than 20 percent. In the evening peak hour, Lines 40/40L in both directions, Line 72/72M in the southbound direction, and Lines 43 and 51 in the

[4] Howard Der, Associate Transportation Planner of AC Transit, compiled the data file from the following sources:
- Fall 1997-Winter 1998 Systemwide Boarding & Alighting Survey
- Summer 2002-Spring 2003 APC Data Collection Units
- April 2001 Line 72 Boarding & Alighting Survey

northbound direction have high maximum loads, ranging between 102 and 245 percent of seated capacity. Southbound Line 12 has the lowest load, at approximately 30 percent. The ridership data suggests that bus lines running along major arterials near the site have high maximum demand/capacity ratios and overcrowding may occur. However, new routes and service schedules were implemented in July and December 2003 to improve bus services. The establishment of the new 72R rapid bus, together with other modifications enhancing the services, has eased some crowding issues.

In the vicinity of the proposed project site, AC transit bus stops are located on Telegraph Avenue at 24th Street (Lines 40, 40L and 43), on Telegraph Avenue at Grand Avenue (Lines 40, 40L and 43), on Broadway at Grand Avenue (Lines 51, 59, and 59A) and on Grand Avenue at Webster Street (Line 12).

BART

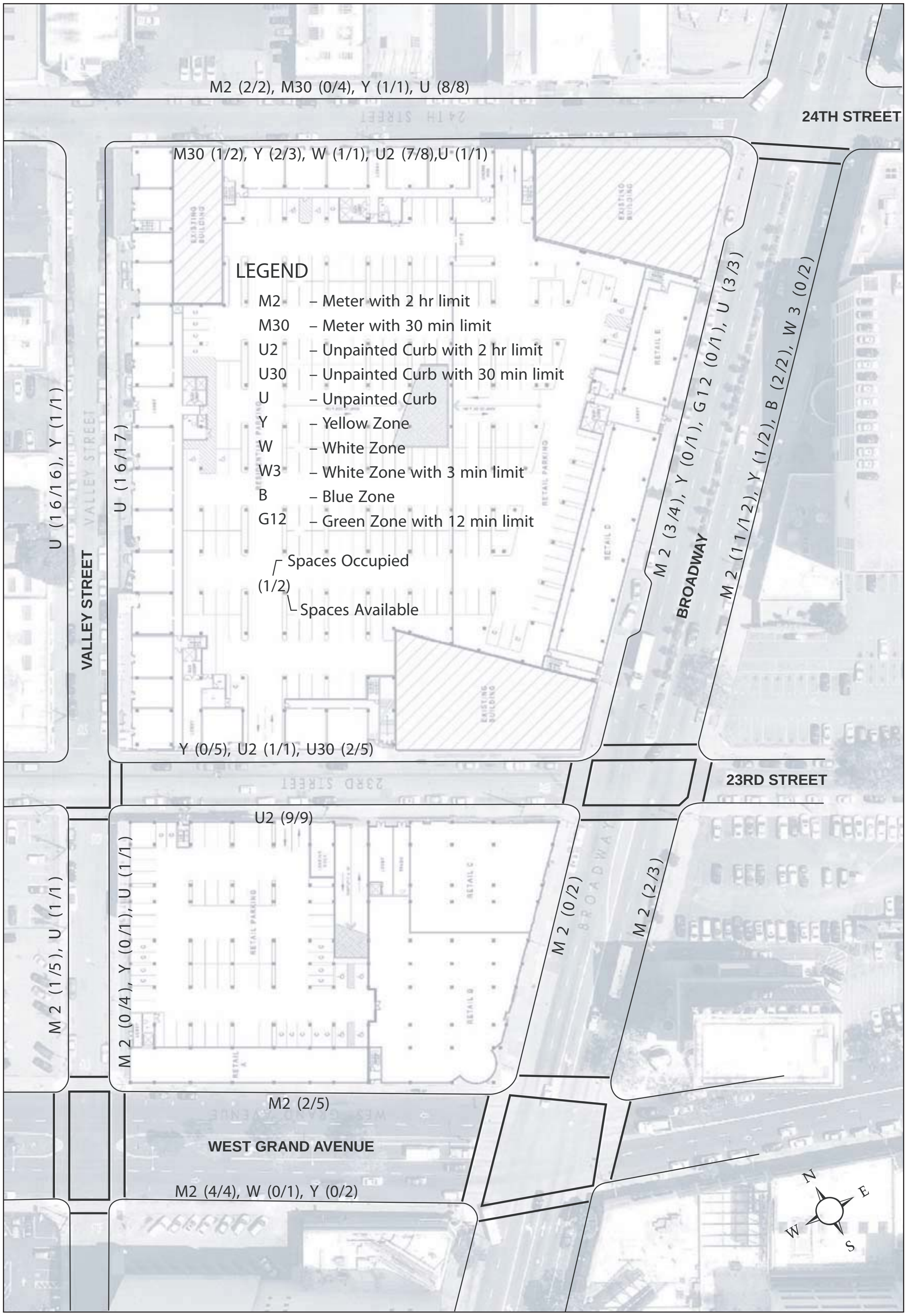
The Bay Area Rapid Transit (BART) is an automated rapid transit system serving the three BART counties of Alameda, Contra Costa, San Francisco as well as northern San Mateo County. The 19th Street BART Station is the closest station to the project site (about three blocks away), with three of the five BART lines serving that station (i.e., the Richmond – Fremont; Richmond – Millbrae / San Francisco International Airport (SFO); and Pittsburg / Bay Point – SFO/Millbrae).

The 19th Street BART station is the closest to the project site, with access at the Broadway / 20th Street intersection, three blocks from the proposed project site. April and May 2003 weekday entry/exit data was obtained from BART. Although the BART ridership data represent conditions before the opening of the BART extension to SFO (which started service in June 2003), BART staff indicates that ridership in the study area has not changed substantially with the new extension.

At the 19th Street Station, there were approximately 7,700 riders entering and 7,550 riders exiting the station on an average weekday. The morning peak hour of entries and exit at the station occurs between 8:00 and 9:00 a.m., and the evening peak hour is between 5:00 and 6:00 p.m. In general, queues at the entry/exit gates are longest when trains arrive because passengers alight and leave the station at the same time. Because passengers entering the station typically do not create long queues due to the more random arrival pattern, the morning exiting data was examined to judge levels of congestion in the station. Richmond-Fremont trains have the most passengers leaving at the 19th Street station in the morning peak hour, with an average of 102 and a maximum of 170 alighting passengers per train. Currently, there are ten exit gates during the morning peak, and all passengers can pass through the exit gate in less than one minute, which is one of the BART service standards.

Parking

<u>On-Street Parking</u>. An inventory of on-street parking in the two blocks bounded by West Grand Avenue, Broadway, Valley Street and 24th Street was conducted in November 2003. As shown in **Figure IV.B-5** and **Table IV.B-6**, the majority of on-street parking spaces in



SOURCE: Korve Engineering, November 2003

Broadway & West Grand / 203468 ■

Figure IV.B-5
On-Street Parking

TABLE IV.B-6
INVENTORY OF EXISTING ON-STREET PARKING SPACES

Location	Meters	Non-metered: Time Limit	Non-metered: No Time Limit	Yellow Zone	White Zone	Blue Zone	Green Zone	Total
West Grand Ave. (Valley Street to Broadway)	9	0	0	2	1	0	0	12
Broadway (24th Street to 23rd Street)	16	0	3	3	2	2	1	27
Broadway (23rd Street to West Grand Avenue)	5	0	0	0	0	0	0	5
24th Street (Valley Street to Broadway)	8	8	9	4	1	0	0	30
23rd Street (Valley Street to Broadway)	0	15	0	5	0	0	0	20
Valley Street (24th Street to 23rd Street)	0	0	33	1	0	0	0	34
Valley Street (23rd Street to West Grand Ave.)	9	0	2	1	0	0	0	12
Total	**47**	**23**	**47**	**16**	**4**	**2**	**1**	**140**

SOURCE: Korve Engineering

the study area are metered (generally two-hour limit), free parking with a time limit (generally two-hour limit), or free parking spaces (no time limit). Other types of available on-street spaces include service loading (yellow zone), passenger loading (white zone), handicapped accessible parking (blue zone), and short-term parking (green zone). As summarized in **Table IV.B-7**, the parking occupancy rate on individual blocks ranges from 25 to 97 percent, while spaces in the overall study area are about 70 percent occupied.

Off-Street Parking. A part of the project site (Parcel A) was recently[5] converted to a privately-owned public parking lot with valet service, providing 111 parking stalls. The parking occupancy survey was conducted during the midday period on Wednesday June 9, 2004. The parking occupancy rate was 115 percent. All other off-street parking spaces on the project site serve existing site uses. These lots would be eliminated with the construction of the proposed project.

5 According to the project sponsor, the parking lot replaced an auto dealership on a portion of Parcel A, effective March 22, 2004. This was subsequent to the publication of the Notice of Preparation for this EIR and subsequent to the time that intersection traffic counts were taken for use in the EIR analysis.

TABLE IV.B-7
EXISTING ON-STREET PARKING OCCUPANCY

Location	Total Spaces	Occupied Spaces	Percent Occupancy
West Grand Avenue (Valley Street to Broadway)	12	6	50%
Broadway (24th Street to 23rd Street)	27	20	74%
Broadway (23rd St. to West Grand Ave.)	5	2	40%
24th Street (Valley Street to Broadway)	30	23	77%
23rd Street (Valley Street to Broadway)	20	12	60%
Valley Street (24th Street to 23rd Street)	34	33	97%
Valley Street (23rd St. to West Grand Ave.)	12	3	25%
Total	**140**	**99**	**71%**

SOURCE: Korve Engineering

PEDESTRIAN AND BICYCLE FACILITIES

Sidewalks are provided on all streets in the vicinity of the project site. Crosswalks are provided at all approaches at the West Grand Avenue / Broadway, West Grand Avenue / Telegraph Avenue and 23rd Street / Broadway intersections. In addition, pedestrian crosswalks are located on the northbound approach at the 24th Street / Broadway intersection, the southbound approach at the 24th Street / Telegraph Avenue intersection, and the southbound approach at the 23rd Street / Telegraph Avenue intersection.

Currently, there are bicycle facilities in proximity of the proposed project on Grand Avenue and Broadway north of 25th Street. The types of bicycle facilities range from a Class II bike lane to a Class III bike route along different stretches of those roadways.[6] The facility surrounding Lake Merritt is a discontinuous Class I bike path, which also serves as a pedestrian walkway.

[6] A Class I bike path provides a completely separate right-of-way for exclusive use of bicycles and pedestrians. A Class II bike lane provides exclusive usage for bicyclists with "BIKE LANE" marking and solid white striping on the roadway. A Class III bicycle route is established by placing Bike Route signs along the roadway and pavement markings are typically not installed; bicyclists and motorists share the available road pavement.

Figure IV.B-6 illustrates the proposed bicycle facilities near the project site that are in the City of Oakland's Bicycle Master Plan, adopted in July 1999. This plan recommends Class II bike lanes along San Pablo Avenue, Martin Luther King Jr. Way southwest of San Pablo Avenue, Clay Street southwest of San Pablo Avenue, and 20th Street northeast of San Pablo Avenue. Class II bike lanes are shown on Telegraph Avenue and portions of 16th and 17th Streets. The City of Oakland plans to reconfigure Telegraph Avenue between 16th Street and 20th Street from two travel lanes in each direction with parking along each side of the street to a single travel lane in each direction with a center left turn lane and a Class II bike lane on each side. No proposed bicycle facilities from the Alameda Countywide Bike Program are located near the project site.

According to the City of Oakland's *Pedestrian Master Plan* (August 2002), a landscape project is proposed on Telegraph Avenue between 16th Street and Aileen Street. In addition, pedestrian and crosswalk improvements are proposed on (West) Grand Avenue between Elwood Avenue and Adeline Street.

PROJECT IMPACTS AND MITIGATION MEASURES

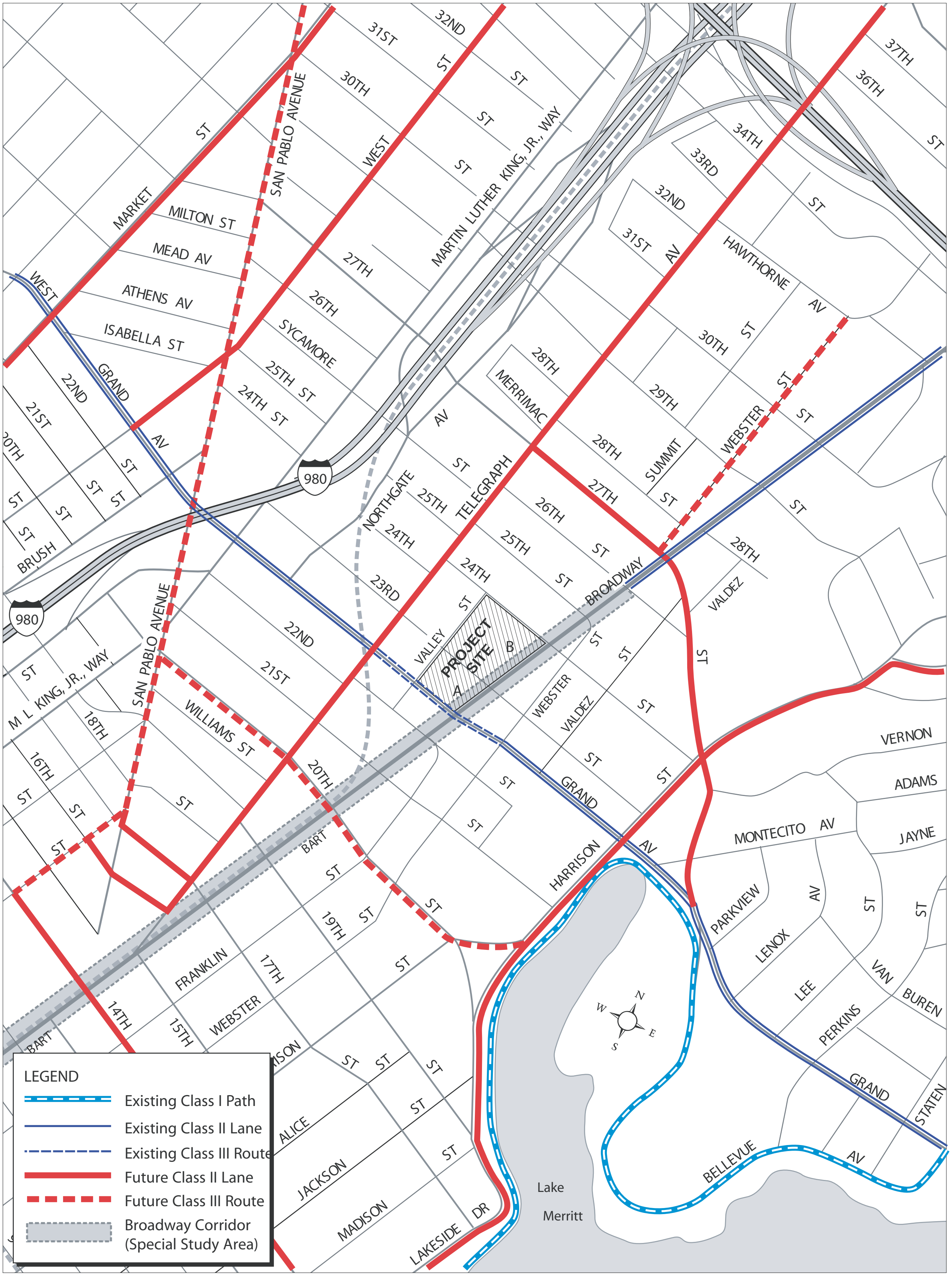
APPROACH TO ANALYSIS

The transportation analysis was conducted for typical weekday a.m. and p.m. peak commute hour conditions at local intersections and on the regional roadway facilities. Those time periods are the most relevant for this analysis because traffic volumes are generally the highest in downtown Oakland during those periods, and therefore, traffic and circulation conditions during the weekday morning and evening commute hours are considered the most critical to evaluate in determining potentially significant impacts. In addition, standard traffic analytical tools focus on the weekday peak hours.

Traffic impacts are assessed at eight critical intersections in the study area for the following five scenarios:

- Existing Conditions;
- Existing plus Project Conditions;
- Near-Term (2010) Baseline Conditions;
- Near-Term (2010) Conditions with the Project; and
- Cumulative (2025) Conditions

Intersection traffic volumes for Year 2010 Baseline conditions were derived through the use of the Alameda County Congestion Management Agency's (ACCMA) Countywide Transportation Demand Model, with land uses within Oakland modified by the Hausrath Economic Group to reflect the City's updated growth scenario for 2010. Intersection traffic volumes for cumulative (2025) conditions are derived using ACCMA's Countywide Transportation Demand model with land uses reflecting the City's updated growth scenario for 2025. Traffic associated with both the Uptown and Thomas L. Berkley Square projects are included in Year 2010 and 2025 conditions.



SOURCE: City of Oakland Bicycle Master Plan, July 1999

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Figure IV.B-6
Existing Bicycle Facilities

SIGNIFICANCE CRITERIA

Intersection Peak-Hour Level of Service

The project would have a significant effect at analysis intersections if it would cause an increase in traffic which is substantial in relation to the baseline 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 affect access or traffic load and capacity of the street system. Specifically, the project would have a significant impact if it would:

- Cause the baseline level of service (LOS)[7] to degrade to worse than LOS E (i.e., LOS F) at a signalized intersection that is located within the Downtown area;
- Cause the baseline LOS to degrade to worse than LOS D (i.e., LOS E) at a signalized intersection that is located outside the Downtown area;
- Cause the total intersection average vehicle delay to increase by four or more seconds, or degrade to worse than LOS E (i.e., LOS F) at a signalized intersection outside the Downtown area where the baseline level of service is LOS E;
- Cause an increase in the average delay for any of the critical movements of six seconds or more, or degrade to worse than LOS E (i.e., LOS F) at a signalized intersection for all areas where the baseline level of service is LOS E;
- At a signalized intersection for all areas where the baseline level of service is LOS F, cause:
  - (a) The total intersection average vehicle delay to increase by two or more seconds,
  - (b) An increase in average delay for any of the critical movements of four seconds or more, or
  - (c) An increase in the volume-to-capacity (“V/C”) ratio that exceeds three percent (but only if the delay values cannot be measured accurately);
- At an unsignalized intersection for all areas, the project would add ten or more vehicles and after project completion satisfy the Caltrans peak hour volume warrant; and
- Make a considerable contribution to cumulative impacts (the City of Oakland considers a project’s contribution to cumulative impacts to be “considerable” when the project contributes five percent or more of the cumulative traffic increase as measured by the difference between existing and cumulative [with project] conditions).

Roadway Segments

The project would have a significant effect on regional roadways if it would cause a roadway segment on the Metropolitan Transportation System to operate at LOS F or increase the V/C ratio

[7] LOS and delay are based on the *2000 Highway Capacity Manual*, Transportation Research Board, National Research Council, 2000.

by more than three percent for a roadway segment that would operate at LOS F without the project.

Parking

Because a recent Court of Appeal decision (regarding a challenge to San Francisco's treatment of parking as a social, not physical, effect) held that parking is not part of the permanent physical environment, and that parking conditions change over time as people change their travel patterns, unmet parking demand created by the project is not considered a significant environmental effect under CEQA unless it would cause significant secondary effects. However, the City of Oakland wants to ensure that the provision of parking spaces in conjunction 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) will be minimized. Thus, although not mandated by CEQA, for purposes of this EIR, project effects on parking will be evaluated.

Transit

The project would have a significant effect on transit services if it would generate added transit ridership that would:

- Increase the average ridership on AC Transit lines by three percent where the average load factor with the project in place would exceed 125 percent over a peak 30-minute period;
- Increase the peak hour average ridership on BART by three percent where the passenger volume would exceed the standing capacity of BART trains;
- Increase the peak hour average ridership at a BART station by three percent where average waiting time at fare gates would exceed one minute.

Other Considerations

The project would have a significant effect if it would 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 due to the introduction of incompatible uses.

The project would have a significant effect if it would fundamentally conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

Construction Period

Potential short-term construction impacts generated by the proposed project would include the impacts associated with the delivery of construction materials and equipment, construction staging in vehicle lanes, removal of construction debris, and parking for construction workers. Construction traffic levels would be substantially below project traffic levels. Thus, the project's traffic analysis contemplates all construction traffic impacts.

The project would have a significant effect on the environment if it would result in interim significant impacts based on the above-cited criteria during the construction period. For purposes of this analysis, the potential impacts resulting from project construction activity have been assessed.

PROJECT TRIP GENERATION

The number of vehicle trips that would be generated by the proposed project was estimated through a trip generation analysis. Trip generation rates and inbound/outbound splits for the land uses under consideration were taken from the Institute of Transportation Engineers' *Trip Generation* (ITE, 1997). **Table IV.B-8** presents the results of the project's trip generation analysis.

Based on the mode split developed for this project, the manual's trip generation rates were discounted to account for transit trips.[8] The project trip generation takes into account that vehicle trips are approximately 83 percent of all the trips generated by the proposed project's residential land uses. In addition, five percent of the project-related retail trips are estimated to be linked trips due to the project's mixed-use nature. Recently, the portion of the Negherborn auto dealership on Parcel A was converted to a privately-owned public parking lot and a car rental office. However, this study's traffic counts were conducted while the Negherborn auto dealership was in operation. Thus, the trip generation analysis considers the existing land use as an auto dealership.[9]

Taking into account the traffic generated by existing uses that would be displaced[10] from the project, in the morning peak hour, the proposed project would result in net increase of about 41 vehicle trips (-73 inbound and 114 outbound). In the evening peak hour, the project would generate 137 net new vehicle trips (124 inbound and 13 outbound).

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8 The modal split for trips generated by the proposed project was developed based on information from the ACCMA model, updated to reflect the cumulative land use forecasts of the City of Oakland. Approximately 83 percent of all trips would be vehicular trips. BART and AC Transit are expected to serve 62 and 38 percent of the transit trips, respectively.

9 According to the project sponsor, subsequent to the March 5, 2004, publication of the Notice of Preparation (NOP), a public parking lot commenced operation on a portion of Parcel A (on March 22, 2004) and an auto rental agency began operations on another part of Parcel A on June 1, 2004. Auto dealerships remained operational on Parcel B. Because all traffic counts conducted for this study were taken when auto dealerships operated on both Parcels A and B, the auto dealers are considered existing uses for the purposes of this analysis, and traffic generated by those uses is deducted from the anticipated new residential and commercial traffic to arrive at net new trip generation. No deduction is taken for the parking lot and car rental agency that began operations after publication of the NOP.

10 No deduction taken for vacant buildings at 440 23rd Street or 2398 Valley Street.

TABLE IV.B-8
PROJECT WEEKDAY TRIP GENERATION

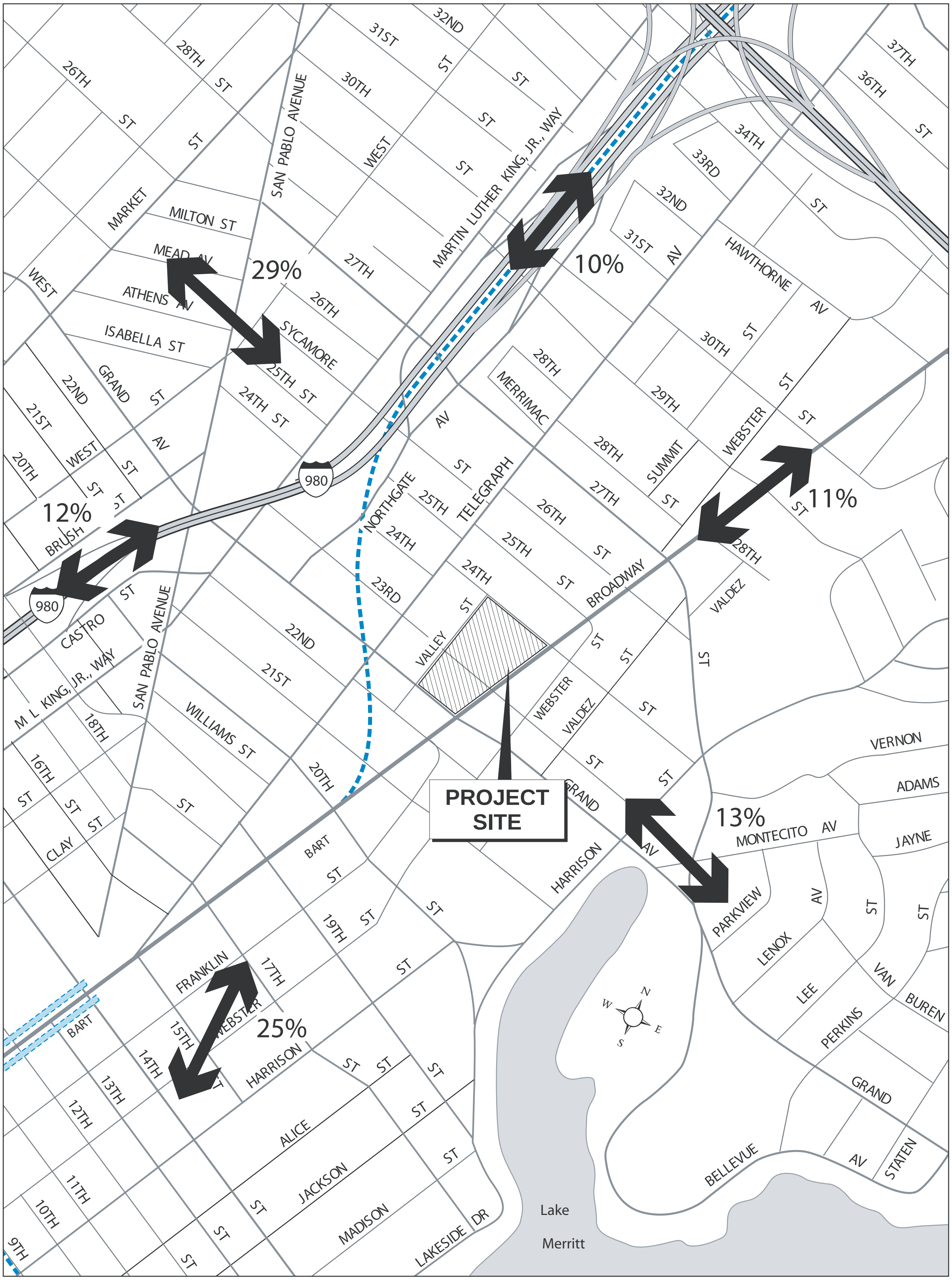
Land Use	Size	Daily Total	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Proposed Uses								
Condominiums (units)	475	2,782	35	173	208	171	85	256
Retail (1,000 sq. ft.)	40	1,718	25	16	41	72	78	150
Subtotal (All Trips)		*4,500*	*60*	*189*	*249*	*243*	*163*	*406*
BART Trips [a]		(276)	(4)	(17)	(21)	(17)	(8)	(25)
AC Transit Trips [a]		(170)	(2)	(11)	(13)	(10)	(5)	(15)
Linked Trips [b]		(86)	(1)	(1)	(2)	(4)	(4)	(8)
Subtotal (Vehicle Trips)		*3,968*	*53*	*160*	*213*	*212*	*146*	*358*
Existing Uses to be Removed								
Auto Dealership (1,000 sq. ft.)	68.8	(2,577)	(111)	(41)	(152)	(77)	(116)	(193)
Auto Repair (1,000 sq. ft.)	3	(100)	(6)	(3)	(9)	(5)	(5)	(10)
Retail (1,000 sq. ft.)	3	(129)	(2)	(1)	(3)	(5)	(6)	(11)
Office (1,000 sq. ft.)	3	(55)	(7)	(1)	(8)	(1)	(6)	(7)
Subtotal (Existing Vehicle Trips)		*(2,861)*	*(126)*	*(46)*	*(172)*	*(88)*	*(133)*	*(221)*
Net New Project Trips		**1,107**	**(73)**	**114**	**41**	**124**	**13**	**137**

[a] Transit trips are estimated to be 16 percent of the residential trips. BART and AC transit are estimated to serve 62 and 38 percent of project transit trips, respectively, based on the ACCMA's model, updated to reflect the cumulative land use forecasts of the City of Oakland.
[b] Five percent of the retail trips are assumed to be internal linked trips.
[c] Assumes that p.m. peak-hour trips represent 10 percent of daily trip generation.

SOURCE: Korve Engineering; ITE, *Trip Generation*, 6th Edition, 1997.

PROJECT TRIP DISTRIBUTION / ASSIGNMENT

Vehicle trips forecast to be generated by the proposed project were assigned to the surrounding transportation network on the basis of a distribution pattern developed specifically for this study based on information from the ACCMA Model, updated to reflect the cumulative land use forecasts of the City of Oakland. **Figure IV.B-7** illustrates the project's anticipated trip distribution pattern. Approximately 22 percent of project traffic is forecast to arrive from and depart via I-980, with 10 percent oriented north of the project and 12 percent to and from I-980/I-880 south. Approximately 29 percent of project traffic is expected to arrive from and depart to the northwest via Grand Avenue or 27th Avenue. About 13 percent of project traffic is forecast to arrive and depart to the southeast via I-580. As shown in **Figure IV.B-7**, the remainder of the project traffic is expected to be fairly evenly distributed on other streets near the project site. **Figure IV.B-8** presents the a.m. and p.m. peak-hour project traffic



SOURCES: ACCMA Countywide Transportation Demand Model; Korve Engineering, 2004

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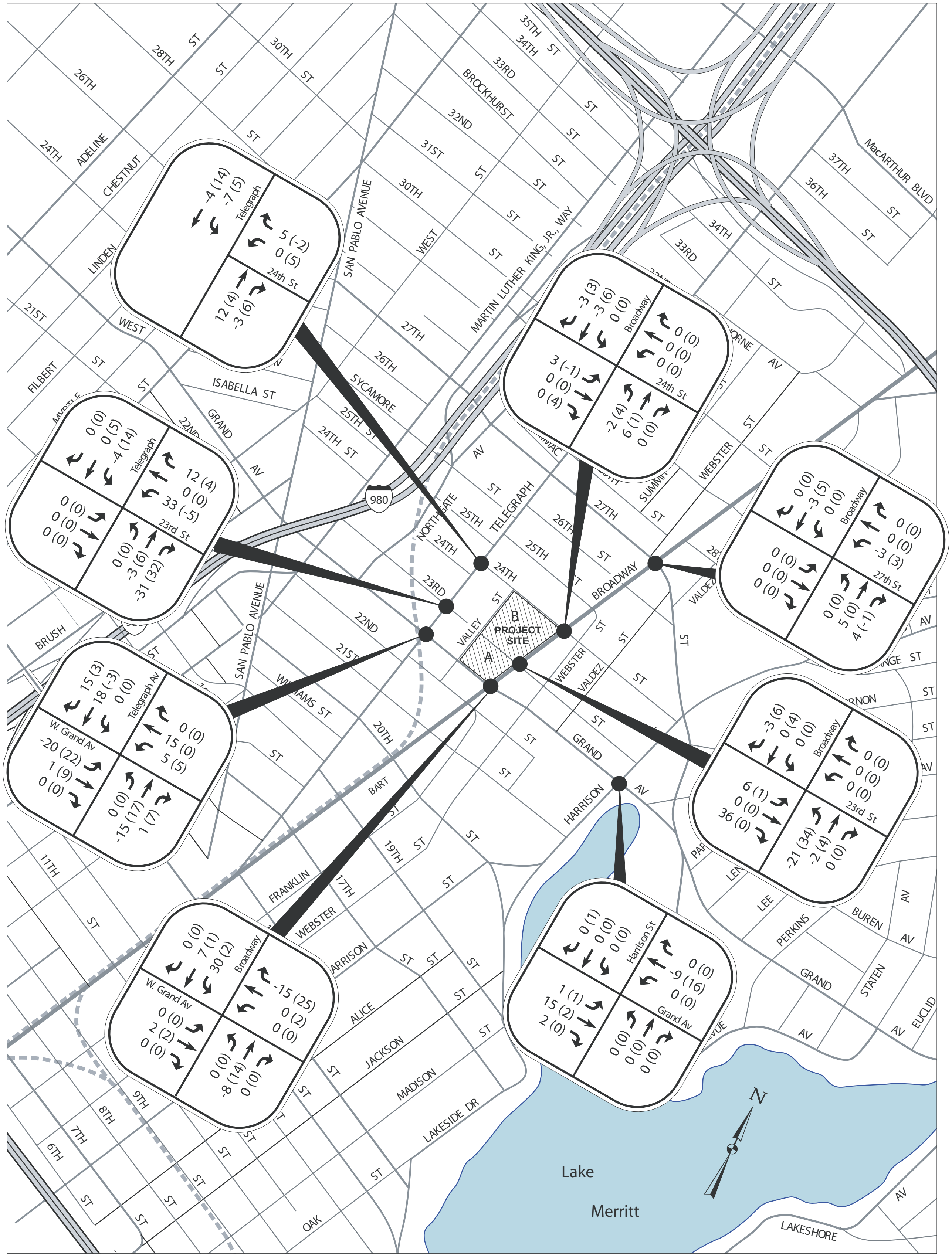
Figure IV.B-7
Project Trip Distribution



SOURCE: Korve Engineering, 2004

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Figure IV.B-8
Project Peak Hour at Intersections
AM (PM) Peak Hour

volumes at the study intersections. **Figure IV.B-9** illustrates the Existing plus Project traffic volumes.

SITE ACCESS

Parcels A and B would each provide two driveways. Driveways to the residential parking, and retail parking for Parcel A would be provided off 23rd Street, as would access to a truck loading dock (an additional loading space would be provided in the garage). For Parcel B, shared parking access to the residential and retail uses would be provided off 24th Street, in addition to a residential-only driveway that would be provided off 23rd Street. Access for truck loading would be from 24th Street (two additional loading spaces would be provided in the garage).

Pedestrian access through lobbies to the residential portion of Parcel A would be provided from Valley Street and 23rd Street. Pedestrian access to the residential units on Parcel B would be provided from Valley Street, 23rd Street, 24th Street and Broadway. The retail space would be located along the frontage of Broadway on Parcel B and along the frontage of West Grand Avenue and Broadway on Parcel A.

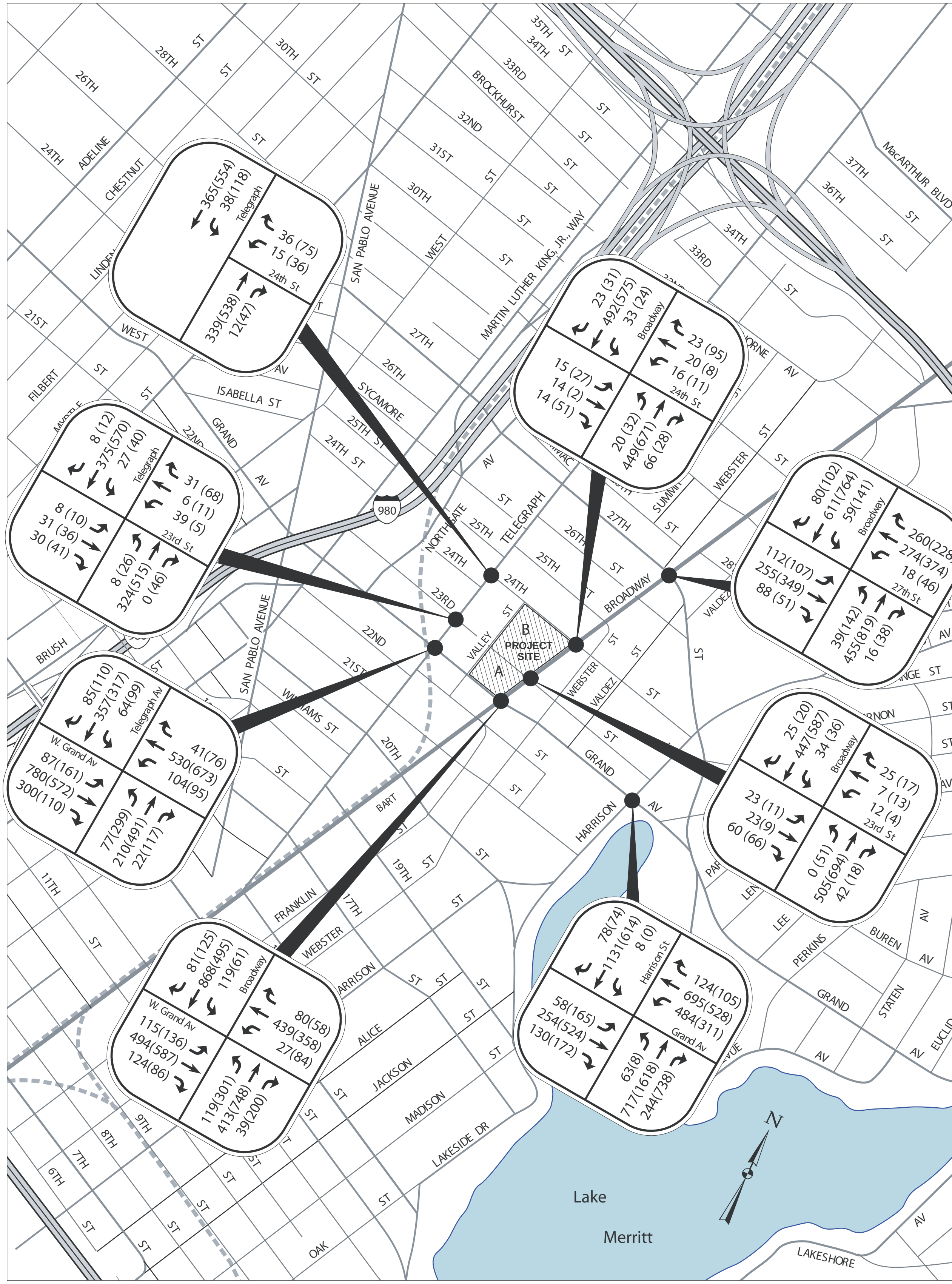
INTERSECTION IMPACTS

Existing plus Project Conditions

Impact B.1: Traffic generated by the project would affect existing traffic levels of service at local intersections. (Less than Significant)

As shown in **Table IV.B-9**, the four signalized study intersections would operate at an acceptable LOS D or better during the a.m. and p.m. peak hours with traffic associated with the project. All of the study unsignalized intersections would operate at LOS A in the Existing and Existing plus Project conditions. Addition of project-generated traffic would cause the worst service level on a side-street approach at the 23rd Street / Telegraph Avenue and 23rd Street / Broadway unsignalized intersections to degrade from LOS D to LOS E. However, these unsignalized intersections do not meet Caltrans' Peak-Hour Volume traffic signal warrant, and based on the significant impact criteria established for analyses in Oakland, the proposed project would not cause significant impacts at local intersections under the Existing plus Project scenario.

Mitigation: None required.



SOURCE: Korve Engineering, 2004

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Figure IV.B-9
Existing + Project Traffic at Intersections
AM (PM) Peak Hour

TABLE IV.B-9
EXISTING AND EXISTING PLUS PROJECT
PEAK-HOUR INTERSECTION LEVELS OF SERVICE (LOS)

			AM Peak Hour				PM Peak Hour			
		Traffic	Existing		With Project		Existing		With Project	
No.	Intersection	Control	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	West Grand Ave. & Telegraph Ave.	Signal	C	25.2	C	25.6	B	20.0	C	20.9
2	West Grand Avenue & Broadway	Signal	C	25.0	C	25.3	D	38.4	D	38.2
3	Grand Avenue & Harrison Street	Signal	C	28.5	C	28.3	C	25.7	C	25.8
4	23rd Street & Telegraph Avenue	TWSC	C	16.4	C	16.3	D	30.8	E	35.7
5	23rd Street & Broadway	TWSC	C	24.1	C	21.0	D	30.0	E	35.5
6	24th Street & Telegraph Avenue	TWSC	B	11.6	B	11.5	C	19.5	C	21.9
7	24th Street & Broadway	TWSC	C	18.8	C	18.9	C	17.5	C	17.6
8	27th Street & Broadway	Signal	C	27.7	C	27.7	C	33.3	C	33.3

[a] The LOS and delay for Side-Street Stop intersections represent the worst movement or approach. The LOS and delay for Signalized intersections represent the overall intersection.
NOTE: TWSC = Two-Way Stop-Sign Control (with Stop sign[s] on the side street approach[es] only).

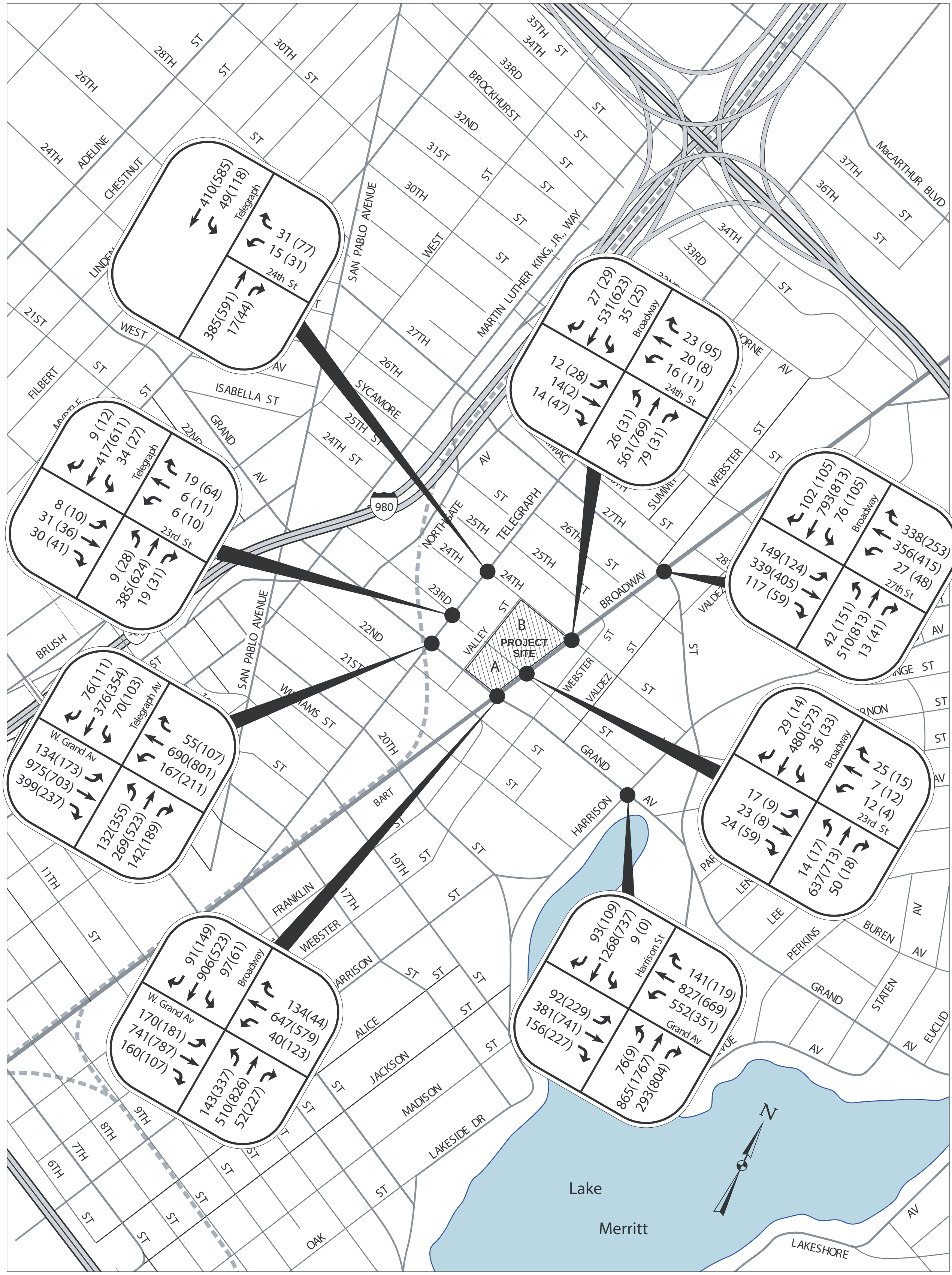
SOURCE: Korve Engineering

Near-Term Future 2010 Conditions

Impact B.2: Traffic generated by the project would affect traffic levels of service at local intersections under future (2010) conditions. (Significant)

Based on the Alameda County Congestion Management Agency's (ACCMA) Countywide Transportation Demand Model's forecasts updated to reflect the cumulative land use forecasts of the City of Oakland, increases in traffic levels at each study intersection were estimated. The Year 2010 Baseline traffic volumes were developed based on growth factors developed from the ACCMA model data, which reflected the increase in traffic from all planned development that would have an impact on the study area. **Figure IV.B-10** illustrates the Year 2010 Baseline traffic volumes without the proposed project. **Figure IV.B-11** illustrates the Year 2010 plus Project traffic volumes.

As shown in **Table IV.B-10**, the signalized intersections at West Grand Avenue / Telegraph Avenue (a.m. peak hour) and West Grand Avenue / Broadway (p.m. peak hour) would operate at LOS E in 2010 with and without the proposed project. As stated previously, LOS E is considered to be acceptable at intersections in the downtown area (within which those two intersections are located). However, the addition of project traffic would cause an increase in the



SOURCE: Korve Engineering, 2004

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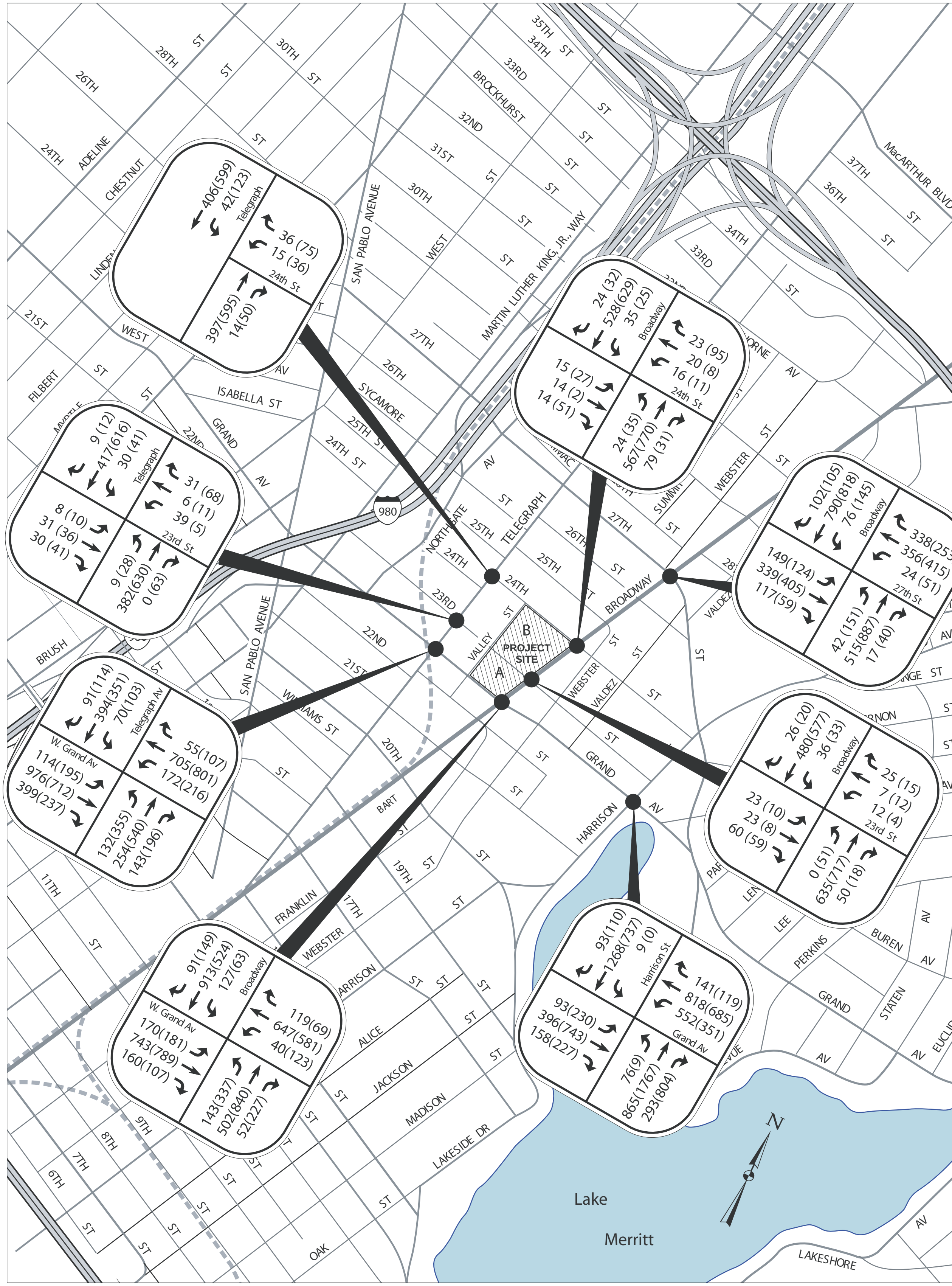
Figure IV.B-10
2010 Baseline Traffic at Intersections
AM (PM) Peak Hour



SOURCE: Korve Engineering, 2004

Figure IV.B-11
2010 Baseline + Project Traffic at Intersections
AM (PM) Peak Hour

TABLE IV.B-10
2010 PEAK-HOUR INTERSECTION LEVELS OF SERVICE (LOS) [a]

			AM Peak Hour				PM Peak Hour			
			Baseline		With Project		Baseline		With Project	
No.	**Intersection**	**Traffic Control**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**
1	West Grand Ave. & Telegraph Ave.	Signal	E	57.3	**E** [b]	**57.7** [b]	D	37.7	D	35.2
2	West Grand Avenue & Broadway	Signal	C	29.5	C	29.9	E	55.2	E	56.3
3	Grand Avenue & Harrison Street	Signal	C	27.1	C	27.1	C	33.4	C	33.5
4	23rd Street & Telegraph Avenue	TWSC	C	18.7	C	18.9	E	44.9	F	54.7
5	23rd Street & Broadway	TWSC	D	31.8	D	26.8	E	39.5	E	48.1
6	24th Street & Telegraph Avenue	TWSC	B	12.4	B	12.2	C	22.4	D	25.7
7	24th Street & Broadway	TWSC	C	21.3	C	21.4	C	20.6	C	20.7
8	27th Street & Broadway	Signal	C	30.4	C	30.3	C	34.8	C	34.8

[a] The LOS and delay two-way stop controlled intersections represent the worst movement or approach. The LOS and delay for Signalized intersections represent the overall intersection. Significant impacts are denoted in **Bold** typeface.

[b] The addition of project traffic would cause an increase in the average delay of greater than six seconds for the critical movements at West Grand Avenue / Telegraph Avenue, which would be a significant impact according to the significance criteria established by the City of Oakland. Specifically, a.m. peak-hour delay for the westbound left turn movement would grow by about 20 seconds with the addition of traffic generated by the proposed project.

SOURCE: Korve Engineering

average delay of greater than six seconds for the critical movements at West Grand/Telegraph, which would be a significant impact. Specifically, delay for the westbound left turn movement would grow by about 20 seconds with the addition of the proposed project. The increase in average delay for critical movements at West Grand Avenue / Broadway would be less than six seconds, and the project effect would be less than significant. Specifically, delay for a critical movement (westbound through movement) will grow from 33.8 seconds to 38.4 seconds (i.e., by less than six seconds), and delay for the northbound left turn movement(another critical movement) would remain the same with the project. Addition of project-generated traffic would cause the worst service level on a side-street approach at the 23rd Street / Telegraph Avenue unsignalized intersection to degrade from LOS E to LOS F. The project would add seven vehicles in the a.m. peak hour and 56 vehicles in the p.m. peak hour at the 23rd Street / Telegraph Avenue intersection. Thus, the project would add more than 10 vehicles in the p.m. peak hour and would meet the volume-based significance criterion for an unsignalized intersection. However, the unsignalized intersection would not meet Caltrans' Peak-Hour Volume traffic signal warrant, and based on the significant impact criteria established for analyses in Oakland, the project's effect on conditions at 23rd/Telegraph would be considered less than significant. The other five study intersections would operate at an acceptable LOS D or better.

Mitigation Measure B.2: The project sponsor shall contribute its fair share to alteration of the traffic signal cycle length and optimization of the traffic signal timing at the signalized intersection of West Grand Avenue / Telegraph Avenue. Optimization of traffic signal timing shall include determination of allocation of green time for each intersection approach in tune with the relative traffic volumes on those approaches, and coordination with signal phasing and timing of adjacent intersections that are part of signal systems on West Grand Avenue and Telegraph Avenue.

The project sponsor shall contribute its fair share toward the cost of optimization of all traffic signals on West Grand Avenue between San Pablo Avenue and Broadway, and on Telegraph Avenue between Broadway and West Grand Avenue. The project volumes would comprise about 0.6 percent of the total intersection a.m. peak-hour traffic volumes, and about 2.3 percent of the *increase* in traffic volume during the a.m. peak hour.

Given that the project sponsor is responsible for only a portion of this mitigation measure, implementation of this set of improvements will be funded fully by one or a combination of the following means:

a. Prior to project completion the project sponsor shall contribute to the City its fair share of the cost of signalization improvements to address cumulative impacts of the project. Prior to payment of the contributions the City will create a mechanism to receive the fair share contributions from the project sponsor. The City Public Works Agency shall implement the measures as necessary to address cumulative impacts of the project.

b. Prior to project completion the project sponsor shall fully fund the costs of the signalization improvements and shall be reimbursed through other fair-share contributions as future projects that exceed the City's thresholds of significance occur. Prior to the time the project sponsor provides these funds, the City and the project sponsor will create a mechanism for this reimbursement.

After implementation of this measure, the intersection would operate at an acceptable LOS C. The implementation of Mitigation Measure B.2 would not lead to any adverse impacts.

Significance after Mitigation: Less than Significant.

Cumulative 2025 Conditions

Impact B.3: Traffic generated by the project in combination with cumulative growth would affect traffic levels of service at local intersections under cumulative (2025) conditions. (Significant Cumulative)

Traffic increases for each study intersection were estimated based on the ACCMA Countywide Transportation Demand Model forecasts, updated to reflect the cumulative land use forecasts of the City of Oakland. This cumulative scenario includes all development contemplated in the study area. **Figure IV.B-12** illustrates the Year 2025 cumulative traffic volumes.

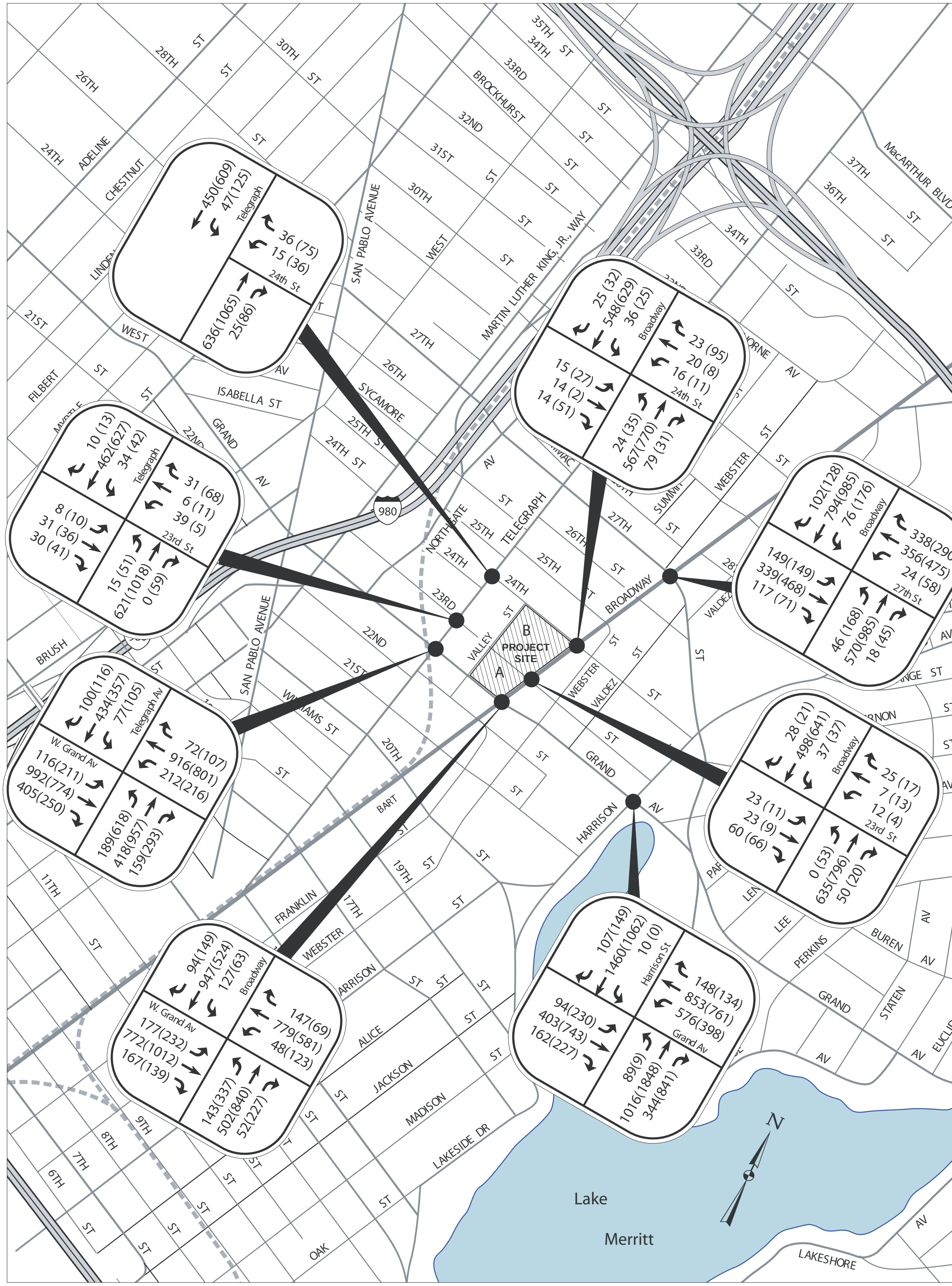
As shown in **Table IV.B-11**, the signalized intersections at West Grand Avenue / Telegraph Avenue (a.m. peak hour) and West Grand Avenue / Broadway (p.m. peak hour) would operate at LOS E in the Year 2025 cumulative conditions. The West Grand Avenue / Telegraph Avenue intersection would operate at LOS F in the p.m. peak hour in the Year 2025 cumulative conditions.

Addition of cumulative traffic would cause delays on a side-street approach at the 24th Street / Telegraph Avenue unsignalized intersection to increase within an unacceptable LOS F, and that unsignalized intersection would meet Caltrans' Peak-Hour Volume traffic signal warrant, and based on the significant impact criteria established for analyses in Oakland, the cumulative effect on conditions at 24th/Telegraph would be considered significant. Addition of cumulative traffic also would cause delays on a side-street approach at the 23rd Street / Telegraph Avenue unsignalized intersection to increase within an unacceptable LOS F, and would cause the worst service level on a side-street approach at the 23rd Street / Broadway unsignalized intersection to degrade from LOS E to LOS F. However, those two unsignalized intersections would not meet Caltrans' Peak-Hour Volume traffic signal warrant, and the cumulative effect would be considered less than significant. The other three study intersections would operate at an acceptable LOS D or better.

Mitigation Measure B.3a: The project sponsor shall contribute its fair share to alteration of the traffic signal cycle length and optimization of the traffic signal timing at the signalized intersection of West Grand Avenue / Telegraph Avenue. Optimization of traffic signal timing shall include determination of allocation of green time for each intersection approach in tune with the relative traffic volumes on those approaches, and coordination with signal phasing and timing of adjacent intersections that are part of signal systems on West Grand Avenue and Telegraph Avenue.

The project sponsor shall contribute its fair share toward the cost of optimization of all traffic signals on West Grand Avenue between San Pablo Avenue and Broadway, and on Telegraph Avenue between Broadway and West Grand Avenue. The project volume would comprise about 0.5 percent of the a.m. peak hour volume and 1.2 percent of the p.m. peak hour volume at the West Grand Avenue / Telegraph Avenue intersection in the Year 2025 cumulative conditions. The proposed project would contribute about 1.4 percent in the a.m. peak hour and 3.4 percent in the p.m. peak hour to the traffic volume increase between the existing and Year 2025 cumulative conditions.

Given that the project sponsor is responsible for only a portion of this mitigation measure, implementation of this set of improvements will be funded fully by one or a combination of the following means:



SOURCE: Korve Engineering, 2004

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Figure IV.B-12
2025 Cumulative Intersections
AM (PM) Peak Hour

TABLE IV.B-11
2025 PEAK-HOUR INTERSECTION LEVELS OF SERVICE (LOS) [a]

No.	Intersection	Traffic Control	AM Peak LOS	AM Peak Delay	PM Peak LOS	PM Peak Delay
1	West Grand Ave. & Telegraph Ave.	Signal	**E** [b]	**66.7** [b]	**F** [b]	**83.8** [b]
2	West Grand Avenue & Broadway	Signal	C	32.5	**E** [b]	**71.3** [b]
3	Grand Avenue & Harrison Street	Signal	C	31.1	D	38.4
4	23rd Street & Telegraph Avenue	TWSC	D	29.6	F	>120
5	23rd Street & Broadway	TWSC	C	24.3	E	39.9
6	24th Street & Telegraph Avenue	TWSC	B	14.8	**F** [b]	**79.3** [b]
7	24th Street & Broadway	TWSC	C	19.6	C	18.1
8	27th Street & Broadway	Signal	C	29.8	D	37.1

[a] The LOS and delay two-way stop controlled intersections represent the worst movement or approach. The LOS and delay for Signalized intersections represent the overall intersection. Significant impacts are denoted in **Bold** typeface.

[b] See text discussion on page IV.B-33 regarding the proposed project's contribution to cumulative traffic volumes (as a percent of total traffic volume, and a percent of the traffic volume increase between the existing and Year 2025 cumulative conditions).

SOURCE: Korve Engineering

a. Prior to project completion the project sponsor shall contribute to the City its fair share of the cost of signalization improvements to address cumulative impacts of the project. Prior to payment of the contributions the City will create a mechanism to receive the fair share contributions from the project sponsor. The City Public Works Agency shall implement the measures as necessary to address cumulative impacts of the project.

b. Prior to project completion the project sponsor shall fully fund the costs of the signalization improvements and shall be reimbursed through other fair-share contributions as future projects that exceed the City's thresholds of significance occur. Prior to the time the project sponsor provides these funds, the City and the project sponsor will create a mechanism for this reimbursement.

After implementation of this measure, the intersection would operate at an acceptable LOS E (with average delays lower than under 2025 Baseline conditions). The implementation of Mitigation Measure B.3a would not lead to any adverse impacts.

Mitigation Measure B.3b: The project sponsor shall contribute its fair share to alteration of the traffic signal cycle length, optimization of the traffic signal timing, and provision of protected left turn phases on the northbound and southbound approaches, at the signalized intersection of West Grand Avenue / Broadway. Optimization of traffic signal timing shall

include determination of allocation of green time for each intersection approach in tune with the relative traffic volumes on those approaches, and coordination with signal phasing and timing of adjacent intersections that are part of signal system on West Grand Avenue.

The project sponsor shall contribute its fair share toward the cost of optimization of all traffic signals on West Grand Avenue between San Pablo Avenue and Broadway, and on Telegraph Avenue between Broadway and West Grand Avenue. The project volume would comprise about 1.1 percent of the p.m. peak hour intersection volume at the Broadway / West Grand Avenue intersection in the Year 2025 cumulative conditions. The proposed project would contribute about 4.2 percent of the cumulative traffic volume increase between the existing and Year 2025 cumulative conditions.

Given that the project sponsor is responsible for only a portion of this mitigation measure, implementation of this set of improvements will be funded fully by one or a combination of the following means:

a. Prior to project completion the project sponsor shall contribute to the City its fair share of the cost of signalization improvements to address cumulative impacts of the project. Prior to payment of the contributions the City will create a mechanism to receive the fair share contributions from the project sponsor. The City Public Works Agency shall implement the measures as necessary to address cumulative impacts of the project.

b. Prior to project completion the project sponsor shall fully fund the costs of the signalization improvements and shall be reimbursed through other fair-share contributions as future projects that exceed the City's thresholds of significance occur. Prior to the time the project sponsor provides these funds, the City and the project sponsor will create a mechanism for this reimbursement.

After implementation of this measure, the intersection would operate at an acceptable LOS E (with average delays lower than under 2025 Baseline conditions). The implementation of Mitigation Measure B.3b would not lead to any adverse impacts.

Mitigation Measure B.3c: The project sponsor shall contribute its fair share to installation of a traffic signal at the unsignalized intersection of 24th Street / Telegraph Avenue. Installation of the traffic signal shall include optimizing signal phasing and timing (i.e., allocation of green time for each intersection approach) in tune with the relative traffic volumes on those approaches, and coordination with signal phasing and timing of adjacent intersections.

The project sponsor shall contribute its fair share toward the cost of installation of the traffic signal. The project volume would comprise about 1.6 percent of the p.m. peak hour intersection volume at the 24th Street (westbound) / Telegraph Avenue intersection in the Year 2025 cumulative conditions. The proposed project would contribute about 4.8 percent of the cumulative traffic volume increase between the existing and Year 2025 cumulative conditions.

Given that the project sponsor is responsible for only a portion of this mitigation measure, implementation of this set of improvements will be funded fully by one or a combination of the following means:

a. Prior to project completion the project sponsor shall contribute to the City its fair share of the cost of signalization improvements to address cumulative impacts of the project. Prior to payment of the contributions the City will create a mechanism to receive the fair share contributions from the project sponsor. The City Public Works Agency shall implement the measures as necessary to address cumulative impacts of the project.

b. Prior to project completion the project sponsor shall fully fund the costs of the signalization improvements and shall be reimbursed through other fair-share contributions as future projects that exceed the City's thresholds of significance occur. Prior to the time the project sponsor provides these funds, the City and the project sponsor will create a mechanism for this reimbursement.

The 24th Street (eastbound) / Telegraph Avenue intersection is signalized, located approximately 125 feet south of the 24th Street (westbound) / Telegraph Avenue intersection. Due to the proximity with the existing signal, the new and existing signals would need to be interconnected and operated as a single signalized intersection. After implementation of this measure, the intersection would operate at LOS A. The implementation of Mitigation Measure B.3c would not lead to any adverse impacts.

Significance after Mitigation: Less than Significant.

FREEWAY IMPACTS

Existing plus Project Conditions

Impact B.4: Traffic generated by the project would affect existing traffic levels of service on freeway segments in the project area. (Less than Significant)

Levels of service on the freeway system were evaluated based on the volume-to-capacity (V/C) ratio methodology used by the City of Oakland and CMA, as well as the density methodology used by Caltrans. The V/C ratio methodology used by the City of Oakland and CMA is the criteria used in this EIR to determine if the project would have a significant traffic impact. **Table IV.B-12** presents peak-hour freeway levels of service with and without the proposed project based on V/C ratios, and vehicle density. As seen, the addition of project-generated traffic would not change the LOS on any freeway segment, and the project impact would be less than significant, and project traffic would represent up to 0.44 percent of traffic volumes on freeway study segments.

Mitigation: None required.

TABLE IV.B-12
EXISTING AND EXISTING PLUS PROJECT PEAK-HOUR FREEWAY LEVEL OF SERVICE (LOS)

			Volume-to-Capacity Methodology						Density Methodology				Percent
		Peak	Existing			Existing + Project			Existing		Existing + Project		Project
Location	**Direction**	**Hour**	**Veh./lane**	**V/C**	**LOS**	**Veh./lane**	**V/C**	**LOS**	**Pc/mi/ln**	**LOS**	**Pc/mi/ln**	**LOS**	**Volume**
	Eastbound	AM	1,334	0.72	C	1,334	0.72	C	25.5	D	25.5	D	0.00%
I-980 at		PM	1,557	0.85	D	1,557	0.85	D	32.5	F	32.5	F	0.00%
Junction with I-880	Westbound	AM	1,078	0.59	C	1,078	0.59	C	20.5	C	20.5	C	0.00%
		PM	928	0.50	B	928	0.50	B	17.0	C	17.0	C	0.00%
	Eastbound	AM	518	0.28	A	520	0.28	A	9.5	A	9.5	A	0.44%
I-980 at		PM	1,121	0.61	C	1,121	0.61	C	21.0	C	21.0	C	0.02%
18th Street	Westbound	AM	1,222	0.66	C	1,221	0.66	C	23.0	D	23.0	D	-0.12%
		PM	619	0.34	A	622	0.34	A	12.0	B	12.0	B	0.40%
	Eastbound	AM	815	0.42	B	817	0.42	B	15.0	B	15.0	B	0.35%
State Route 24 at		PM	1,618	0.83	D	1,618	0.83	D	31.5	D	31.5	D	0.02%
Junction with I-580	Westbound	AM	1,785	0.92	C	1,784	0.92	C	39.5	E	39.5	E	-0.10%
		PM	982	0.51	B	985	0.51	B	17.0	C	17.0	C	0.31%
	Northbound	AM	1,334	0.68	C	1,338	0.68	C	24.0	C	24.0	C	0.28%
I-580 at		PM	2,400	1.22	F	2,400	1.22	F	N/A	F	N/A	F	0.02%
Grand Avenue	Southbound	AM	2,516	1.28	F	2,513	1.28	F	N/A	F	N/A	F	-0.09%
		PM	1,450	0.74	C	1,454	0.74	C	27.0	D	27.0	D	0.28%
	Northbound	AM	1,007	0.51	C	1,010	0.52	C	18.0	C	18.0	C	0.29%
I-580 at		PM	1,873	0.96	E	1,874	0.96	E	47.0	F	47.0	F	0.02%
Harrison Street	Southbound	AM	1,953	1.00	F	1,951	1.00	F	60.0	F	60.0	F	-0.10%
		PM	1,087	0.55	C	1,090	0.56	C	19.0	C	19.0	C	0.29%
	Northbound	AM	1,853	1.05	F	1,852	1.05	F	N/A	F	N/A	F	-0.09%
I-880 at		PM	1,430	0.81	D	1,433	0.81	D	31.5	E	31.5	E	0.21%
Oak/Madison Streets	Southbound	AM	1,407	0.80	D	1,409	0.80	D	31.0	D	31.0	D	0.19%
		PM	1,830	1.04	F	1,830	1.04	F	N/A	F	N/A	F	0.02%
	Northbound	AM	1,984	1.13	F	1,984	1.13	F	N/A	F	N/A	F	0.00%
I-880 at		PM	1,653	0.94	E	1,653	0.94	E	42.0	F	42.0	F	0.00%
Broadway	Southbound	AM	1,296	0.74	C	1,296	0.74	C	27.0	D	27.0	D	0.00%
		PM	1,627	0.92	D	1,627	0.92	D	39.5	F	39.5	F	0.00%
	Northbound	AM	1,882	1.07	F	1,887	1.07	F	N/A	F	N/A	F	0.24%
I-880 at		PM	1,246	0.71	C	1,246	0.71	C	25.0	E	25.0	E	0.04%
Junction with I-980	Southbound	AM	918	0.52	B	915	0.52	B	18.0	C	18.0	C	-0.31%
		PM	1,554	0.88	D	1,559	0.88	D	35.0	F	35.0	F	0.32%

SOURCE: Korve Engineering and Caltrans

Near-Term Future 2010 Conditions

Impact B.5: Traffic generated by the project would affect traffic levels of service on freeway segments in the project area under future (2010) conditions. (Less than Significant)

Levels of service on the freeway system were evaluated based on the volume-to-capacity (V/C) ratio methodology used by the City of Oakland, as well as the density methodology used by Caltrans. The V/C ratio methodology used by the City of Oakland is the criteria used in this EIR to determine if the project would have a significant traffic impact. **Table IV.B-13** presents peak-hour freeway levels of service in 2010 with and without the proposed project based on V/C ratios, and vehicle density. As seen, the addition of project-generated traffic would not change the LOS on any freeway segment, and the project impact would be less than significant, and project traffic would represent up to 0.42 percent of traffic volumes on freeway study segments.

Mitigation: None required.

Cumulative 2025 Conditions

Impact B.6: Traffic generated by the project would affect traffic levels of service on freeway segments in the project area under cumulative (2025) conditions. (Less than Significant)

Levels of service on the freeway system were evaluated based on the volume-to-capacity (V/C) ratio methodology used by the City of Oakland, as well as the density methodology used by Caltrans. The V/C ratio methodology used by the City of Oakland is the criteria used in this EIR to determine if the project would have a significant traffic impact. **Table IV.B-14** presents peak-hour freeway levels of service in 2025 with and without the proposed project based on V/C ratios, and vehicle density. As seen, the addition of project-generated traffic would not change the LOS on any freeway segment, and the project impact would be less than significant, and project traffic would represent up to 0.38 percent of traffic volumes on freeway study segments.

Mitigation: None required.

TABLE IV.B-13
2010 PEAK-HOUR FREEWAY LEVEL OF SERVICE (LOS)

			Volume-to-Capacity Methodology						Density Methodology				Percent
		Peak	Existing			Existing + Project			Existing		Existing + Project		Project
Location	Direction	Hour	Veh./lane	V/C	LOS	Veh./lane	V/C	LOS	Pc/mi/ln	LOS	Pc/mi/ln	LOS	Volume
	Eastbound	AM	1,374	0.80	D	1,374	0.80	D	31.0	D	31.0	D	0.00%
I-980 at		PM	1,634	1.01	F	1,634	1.01	F	N/A	F	N/A	F	0.00%
Junction with I-880	Westbound	AM	1,195	0.73	C	1,195	0.73	C	26.0	C	26.0	C	0.00%
		PM	1,061	0.63	C	1,061	0.63	C	22.0	C	22.0	C	0.00%
	Eastbound	AM	542	0.33	A	545	0.33	A	11.0	A	11.0	A	0.42%
I-980 at		PM	1,229	0.72	C	1,230	0.72	C	25.5	C	25.5	C	0.02%
18th Street	Westbound	AM	1,314	0.77	D	1,313	0.77	D	28.0	D	28.0	D	-0.11%
		PM	677	0.40	B	679	0.40	B	14.0	B	14.0	B	0.36%
	Eastbound	AM	840	0.43	B	843	0.43	B	15.5	B	15.5	B	0.34%
State Route 24 at		PM	1,726	0.89	D	1,726	0.89	D	36.5	D	36.5	D	0.02%
Junction with I-580	Westbound	AM	1,946	1.00	E	1,944	1.00	E	60.0	E	60.0	E	-0.09%
		PM	1,064	0.55	C	1,067	0.55	C	19.0	C	19.0	C	0.29%
	Northbound	AM	1,465	0.75	C	1,469	0.75	C	27.5	C	27.5	C	0.25%
I-580 at		PM	2,603	1.33	F	2,604	1.33	F	N/A	F	N/A	F	0.01%
Grand Avenue	Southbound	AM	2,617	1.34	F	2,615	1.34	F	N/A	F	N/A	F	-0.09%
		PM	1,630	0.83	D	1,634	0.83	D	31.5	D	31.5	D	0.25%
	Northbound	AM	1,085	0.55	C	1,088	0.56	C	19.0	C	19.5	C	0.27%
I-580 at		PM	2,023	1.03	F	2,024	1.03	F	N/A	F	N/A	F	0.02%
Harrison Street	Southbound	AM	2,038	1.04	F	2,036	1.04	F	N/A	F	N/A	F	-0.09%
		PM	1,228	0.63	C	1,231	0.63	C	22.0	C	22.0	C	0.26%
	Northbound	AM	2,003	1.19	F	2,001	1.19	F	N/A	F	N/A	F	-0.09%
I-880 at		PM	1,653	0.96	E	1,656	0.96	E	46.0	E	46.0	E	0.18%
Oak/Madison Streets	Southbound	AM	1,637	0.89	D	1,640	0.89	D	36.5	D	36.5	D	0.17%
		PM	1,945	1.20	F	1,946	1.20	F	N/A	F	N/A	F	0.01%
	Northbound	AM	2,189	1.39	F	2,189	1.39	F	N/A	F	N/A	F	0.00%
I-880 at		PM	1,883	1.16	F	1,883	1.16	F	N/A	F	N/A	F	0.00%
Broadway	Southbound	AM	1,509	0.82	D	1,509	0.82	D	31.5	D	31.5	D	0.00%
		PM	1,730	1.07	F	1,730	1.07	F	N/A	F	N/A	F	0.00%
	Northbound	AM	2,186	1.42	F	2,191	1.42	F	N/A	F	N/A	F	0.21%
I-880 at		PM	1,552	0.92	E	1,552	0.92	E	39.5	E	39.5	E	0.03%
Junction with I-980	Southbound	AM	1,217	0.53	C	1,214	0.53	C	18.0	C	18.0	C	-0.24%
		PM	1,703	1.07	F	1,708	1.07	F	N/A	F	N/A	F	0.29%

SOURCE: Korve Engineering and Caltrans

TABLE IV.B-14
2025 PEAK-HOUR FREEWAY LEVEL OF SERVICE (LOS)

Location	Direction	Peak Hour	(Vehicles /lane)	Density Method [a] (pc/mi/ln) [b]	Density Method [a] LOS	Volume-to-Capacity Method [a] V/C [c]	Volume-to-Capacity Method [a] LOS	Percent Project Volume
Interstate 980								
Junction with I-880	EBd	AM	1,473	31.0	D	0.80	D	0.00%
		PM	1,852	N/A	F	1.01	F	0.00%
	WBd	AM	1,345	26.0	C	0.73	C	0.00%
		PM	1,163	22.0	C	0.63	C	0.00%
18th Street	EBd	AM	604	11.0	A	0.33	A	0.38%
		PM	1,322	25.5	C	0.72	C	0.02%
	WBd	AM	1,422	28.0	D	0.77	D	-0.10%
		PM	734	14.0	B	0.40	B	0.33%
State Route 24								
Junction with I-580	EBd	AM	840	14.5	B	0.41	B	0.36%
		PM	1,726	42.0	E	0.94	E	0.02%
	WBd	AM	1,946	N/A	F	1.04	F	-0.09%
		PM	1,064	20.0	C	0.58	C	0.27%
Interstate 580								
Grand Avenue	NBd	AM	1,399	25.5	C	0.72	C	0.26%
		PM	2,567	N/A	F	1.31	F	0.02%
	SBd	AM	2,739	N/A	F	1.40	F	-0.09%
		PM	1,747	36.5	D	0.89	D	0.23%
Harrison Street	NBd	AM	979	17.5	B	0.50	B	0.30%
		PM	1,991	N/A	F	1.02	F	0.02%
	SBd	AM	2,150	N/A	F	1.10	F	-0.09%
		PM	1,306	23.5	C	0.67	C	0.24%
Interstate 880								
Oak/Madison Streets	NBd	AM	2,098	N/A	F	1.19	F	-0.08%
		PM	1,693	46.0	E	0.96	E	0.17%
	SBd	AM	1,575	37.0	D	0.90	D	0.17%
		PM	2,120	N/A	F	1.20	F	0.01%
Broadway	NBd	AM	2,446	N/A	F	1.39	F	0.00%
		PM	2,041	N/A	F	1.16	F	0.00%
	SBd	AM	1,451	31.5	D	0.82	D	0.00%
		PM	1,885	N/A	F	1.07	F	0.00%
Junction with I-980	NBd	AM	2,508	N/A	F	1.42	F	0.18%
		PM	1,615	39.5	D	0.92	D	0.03%
	SBd	AM	942	18.0	B	0.53	B	-0.31%
		PM	1,886	N/A	F	1.07	F	0.26%

SOURCE: Korve Engineering and Caltrans

PARKING IMPACTS [NON-CEQA ANALYSIS]

Impact B.7: *[Non-CEQA Impact]* The proposed project would increase the demand for parking in the project area. (Less than Significant)

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.[11] 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.

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 EIR evaluates whether 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 Redevelopment Agency-owned or controlled parking, and/or legally required off-street parking (not-open-to-the-public parking that is legally required).

The proposed project would displace a privately-owned public parking lot off Grand Avenue in Parcel A, which has been in operation as a temporary use since March 2004. In addition, as noted

[11] San Franciscans Upholding the Downtown Plan v. the City and County of San Francisco. 102 Cal.App.4th 656; 125 Cal.Rptr.2d 745 (2002).

above, the removal of the parking lot is not evaluated further because it is privately owned and not legally required parking. Although drivers of approximately 125 cars currently parked in this lot would have to find alternative parking locations or choose another means of travel, for the same reasons discussed above, this would not be considered a significant impact under CEQA.

City Off-Street Parking and Loading Requirements

A consideration when evaluating the project's proposed parking supply is how it compares to the City's Planning Code requirements for off-street parking. However, Code requirements are not used to judge parking impacts; parking supply versus estimated parking demand (discussed below) is used to judge impacts. The City's parking requirements are based on the zoning designation for the property. Parcel A of the proposed project is located in zone "C-55". Parcel B of the proposed project is located in zone "C-60" in the area not facing Broadway and zone "C-40" along Broadway. According to the Code, the proposed project would require a total of up to 529 vehicle parking spaces (see **Table IV.B-15**). The proposed project would provide 546 parking spaces for the residential units, plus 129 spaces for the commercial component, and the total of 675 onsite parking spaces would exceed the Code requirement.

According to the Code, the proposed project would require a total of seven loading berths (see **Table IV.B-16**). As currently proposed, five loading berths are proposed. On Parcel A, one off-street truck loading space would be provided, for use by both commercial tenants and residents, on 23rd Street and an additional loading space would be provided in the garage. This would necessitate a variance from both the required number of loading spaces and the height of the space in the garage. On Parcel B, an off-street loading dock would be provided on 24th Street, and two additional loading spaces would be provided in the garage. This would necessitate a variance from the required height of the spaces in the garage.[12]

According to the City's Planning Code Chapter 17.116.200, for Code-required parking, a regular parking space shall not be less than 18 feet long and 8.5 feet wide (plus an additional 3 feet required for spaces adjacent to walls or similar obstructions) for all parking patterns except for parallel parking. A compact parking space shall be no less than 16 feet long and 7.5 feet wide for all parking patterns except for parallel parking. Planning Code Chapter 17.116.210 requires that maneuvering aisles necessary for access into and out of required parking spaces shall have a minimum width of 24 feet where parking is at an angle of 90 degrees or less, but more than 60 degrees. The project would meet these minimum standards.

[12] As noted in Chapter III, Project Description, the project sponsor has submitted a development application and plans for a project that would include 409 residential units and approximately 30,390 square feet of commercial space, although, for purposes of a conservative analysis and to account for the project site to encompass an out-parcel not currently programmed, this EIR analyzes up to 475 units and 40,000 square feet of commercial space, which is the maximum feasible project. The loading requirements provided here are based on this maximum potential project; if the submitted project proceeds, six loading spaces would be required and a variance would be required for only one loading space, not two, as well as for the required size of the loading spaces proposed in the parking garages.

TABLE IV.B-15
CITY OF OAKLAND PLANNING CODE
OFF-STREET PARKING REQUIREMENTS

Land Use	Project Size[a]	Zone Requirement	Requirement at Project Buildout
Commercial (retail) – Parcel A	Up to 29,135	None Required	0
Commercial (retail) – Parcel B	Up to 10,865	1 space per 400 square feet of floor area (General Retail) or 1 space per 200 square feet of floor area (Food Sales)	Up to 54
Multi-family residential	475	1 space per dwelling unit	475
		Total	**Up to 529**

[a] Project size expressed in gross square footage (not including parking), except for Residential (in dwelling units).

SOURCE: City of Oakland, Municipal Code, Chapter 17.116, Off-Street Parking and Loading Requirements

TABLE IV.B-16
CITY OF OAKLAND PLANNING CODE
LOADING REQUIREMENTS

Land Use	Project Size[a]	Requirement at Project Buildout
Commercial (retail) – Parcel A	Up to 23,000	1
Commercial (retail) – Parcel B	Up to 17,000 sf	1
Multi-family residential – Parcel A	200,000 sf	2
Multi-family residential – Parcel B	500,000 sf	3
		7

SOURCE: City of Oakland, Municipal Code, Chapter 17.116, Off-Street Parking and Loading Requirements

Parking Demand

According to empirically-collected data, land uses similar in size and type to the proposed project generate a demand for a total of about 657 parking spaces (about 527 spaces for the residential units plus about 130 spaces for the retail component); see **Table IV.B-17** (ITE, 1987). The total proposed onsite parking supply of 675 spaces would accommodate the estimated demand.

TABLE IV.B-17
ESTIMATED PEAK PROJECT-GENERATED PARKING DEMAND

Land Use	Project Size[a]	Parking Demand Rate	Parking Demand
Retail	40,000	3.23 spaces per 1,000 square feet of floor area	130
Multi-family residential	475	1.11 space per dwelling unit	527
		Total	**657**

[a] Project size expressed in gross square footage, except for Residential (in dwelling units).

SOURCE: Institute of Transportation Engineer, *Parking Generation (Second Edition*), 1987

Mitigation: None required.

Impact B.8: *[Non-CEQA Impact]* The proposed project would contribute to the cumulative increase in parking demand in the project area. (Less than Significant)

Projected cumulative development in the project vicinity could increase parking demand in the future. If those developments displaced existing parking spaces and/or did not provide adequate off-street parking to accommodate their parking demand plus the displaced demand, then parking occupancy in the project vicinity would increase. However, because the project's peak parking demand would be fully accommodated by the proposed onsite parking supply, and thus the project's contribution to cumulative parking impacts would be less than considerable. Moreover, as previously discussed, this would not be considered a significant impact under CEQA.

Mitigation: None required.

TRANSIT IMPACTS

Impact B.9: The project would increase ridership on public transit providers serving the area. (Less than Significant)

The proposed project is forecast to result in about 274 BART trips and 168 AC Transit bus trips to and from the proposed project site on an average weekday. In the morning peak hour, the proposed project is forecast to generate approximately 21 BART trips (4 inbound, 17 outbound) and 13 AC Transit bus trips (2 inbound, 11 outbound). In the evening peak commute hour, the project would generate roughly 25 BART trips (17 inbound, 8 outbound) and 15 AC Transit bus trips (10 inbound, 5 outbound).

Project BART Ridership. The potential project-related impacts on both BART lines and the BART station by the project were investigated. The anticipated BART trips were assigned to each of the BART lines at the 19th Street BART Station on the basis of the existing ridership share of each line. The number of new project-related trips assigned to a BART line would range from one to nine, which would result in less than a one percent increase in ridership. The increases are all less than the three percent significance threshold that the City of Oakland has identified for impact on BART service. In addition, load factors would be less than 115 percent for lines in the East Bay and 135 percent for transbay lines, with the completion of the proposed project, and would be in compliance with the performance measures of BART described in the 2001 Congestion Management Program (CMP 2001) of the Alameda County Congestion Management Agency (ACCMA).

During the morning peak hour, passengers entering the 19th Street BART station would increase by approximately 2.7 percent due to the project. The project is expected to add on average less than one person per gate per minute. Because the current waiting time at fare gates is less than 15 seconds during the morning peak, the waiting time is expected to remain below one minute (the threshold of significance set by the City of Oakland concerning waiting time at BART gates) with the addition of anticipated BART riders from the proposed project. During the evening peak hour, passengers exiting the 19th Street BART station would increase by about 2.9 percent due to the project. On average, the proposed project would result in an average increase of less than one person on the busiest BART line. The current maximum wait time to pass through the exit gates is approximately 10 seconds, and therefore the project is not expected to adverse affect the operation of the 19th Street BART station.

Project AC Transit Ridership. The potential project-related impacts on AC Transit were evaluated by calculating the total number of bus trips generated by the project and then distributing the bus trips to the bus lines near the project based on their current peak hour ridership levels. The percentage increases of riders due to the project would be below the three percent threshold of significance set by the City of Oakland for all bus lines near the project.

Mitigation: None required.

PEDESTRIAN AND BICYCLE FACILITIES IMPACTS

Impact B.10: Development of the proposed project would not conflict with existing pedestrian and/or bicycle facilities. (Less than Significant)

As described in the Setting section, there is a Class II and III bicycle facility on Grand Avenue that provides access to the project area, and there are sufficient sidewalks for pedestrian circulation on all streets in the project area. Increased vehicle trips generated by the implementation of the proposed project are not anticipated to adversely affect the capacity or ability of the existing facilities to provide adequate pedestrian and bicycle access to the area.

Further, the amount of pedestrian and bicycle travel generated by the project would not require additional pedestrian or bicycle facilities beyond those included in the plan. Therefore, the proposed project would not conflict with adopted policies, plans, or programs that support alternative transportation. This is considered a less-than-significant impact.

Mitigation: None required.

CONSTRUCTION PERIOD IMPACTS [13]

Impact B.11: Project construction would affect traffic flow and circulation, parking, and pedestrian safety. (Significant)

During the construction period, temporary and intermittent transportation impacts would result from truck movements as well as construction worker vehicles to and from the project site. Construction of Parcel A and Parcel B would occur in two separate phases. Construction activity would generate about 8 average daily truck movements (i.e., about 4 truck loads leaving from, and a similar number of empty trucks returning to, the site). Trucks are anticipated to use Interstate 980 and West Grand Avenue as haul routes. The construction-related traffic would result in a temporary reduction to the capacities of project area streets because of the slower movements and larger turning radii of construction trucks compared to passenger vehicles, and because there could be intermittent, temporary closure of traffic lanes during the construction period. Given the proximity of I-980 freeway ramps, use of local roadways would be limited. Truck traffic that occurs during the peak commute hours (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.) could result in worse levels of service and higher delays at local intersections than during off-peak hours.

There may be partial closures of Valley Street, 23rd Street and 24th Street to accommodate trailers, parking, scaffolding, delivery of materials and reconstruction of roads/sidewalks.

Parking of construction workers' vehicles would temporarily increase parking occupancy levels in the area. The average number of construction workers would be about 25 workers per day, with higher numbers during peak construction periods. Parking lots/areas will be identified within the project site and at nearby parking lots, in consideration of the availability/necessity during various construction periods. Pedestrian traffic using sidewalks on the project frontages along Broadway, 24th Street, West Grand Avenue and Valley Street would be displaced to the other side of the street.

Mitigation Measure B.11: Prior to the issuance of each building permit, the project sponsor and construction contractor shall meet with the Traffic Engineering Division of the

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[13] This section was prepared on the basis of preliminary estimates of construction truck movements, construction worker staffing, and provisions for parking and staging locations provided by Signature Properties (project applicant), July 2004.

Oakland Public Works Agency and other appropriate City of Oakland agencies to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of this project and other nearby projects that could be simultaneously under construction. The project sponsor shall develop a construction management plan for review and approval by the City Traffic Engineering Division. The plan shall include at least the following items and requirements:

- **A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak traffic hours, detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes.**
- **Identification of any transit stop relocations, if necessary.**
- **Provisions for parking management and spaces for all construction workers to ensure that construction workers do not park in on-street spaces.**
- **Identification of parking eliminations and any relocation of parking for employees and public parking during construction.**
- **Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.**
- **Provisions for accommodation of pedestrian flow.**
- **Location of construction staging areas for materials, equipment, and vehicles.**
- **Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project sponsor.**
- **A process for responding to, and tracking, complaints pertaining to construction activity, including identification of an onsite complaint manager.**

Significance after Mitigation: Less than Significant.

REQUIRED CONGESTION MANAGEMENT PROGRAM EVALUATION

The Alameda County Congestion Management Program (CMP) requires the assessment of development-driven impacts to regional roadways. Because the project would generate more than 100 “net new” p.m. peak-hour trips, the CMP requires the use of the Countywide Travel Demand Forecasting Model to assess the impacts on regional roadways near the project site during the p.m. peak hour. The relevant CMP and Metropolitan Transportation System (MTS) roadways in the project vicinity include I-580, I-880, I-980, SR 24, Broadway, Brush Street, Castro Street, Grand Avenue, Martin Luther King Jr. Way, San Pablo Avenue and Telegraph Avenue.

The Countywide Model is a regional travel demand model that uses socio-economic data and roadway and transit network assumptions to forecast traffic volumes and transit ridership using a four-step modeling process that includes trip generation, trip distribution, mode split, and trip assignment. This process takes into account changes in travel patterns due to future growth and balances trip productions and attractions.

For the purposes of the CMP Analysis, the land uses of the proposed project were added to the assumptions in the Countywide Model; the land use assumptions in the Countywide Model for the rest of the City of Oakland were not modified. At this time, these land uses are different from the Oakland Cumulative Scenario that was used for the cumulative analysis. This version of the Countywide Model was based on ABAG *Projections 2002* land uses for 2010 and 2025. As shown in **Table IV.B-18**, the CMP evaluation identified no additional project-related traffic impacts or cumulative impacts.

REFERENCES – Transportation, Circulation, and Parking

ITE (Institute of Transportation Engineers), *Trip Generation*, 6th Edition, 1997.

ITE (Institute of Transportation Engineers), *Parking Generation*, 2nd Edition, 1987.

Transportation Research Board, *Highway Capacity Manual*, Special Report No. 209, 2000.

TABLE IV.B-18
PEAK-HOUR INTERSECTION LEVELS OF SERVICE (LOS) – ACCMA LAND USE

Intersection	Traffic Control	Year 2010 PM Peak				Year 2025 PM Peak			
		Baseline		With Project		Baseline		With Project	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
West Grand Ave. & Telegraph Ave.	Signal	D	36.5	D	39.5	E	76.3	E	79.7
West Grand Avenue & Broadway	Signal	D	53.8	D	54.5	E	63.9	E	67.8
Grand Avenue & Harrison Street	Signal	C	32.4	C	32.5	C	34.8	C	35.0
23rd Street & Telegraph Avenue	TWSC	E	36.7	E	43.4	F	>120	F	>120
23rd Street & Broadway	TWSC	E	39.2	E	47.6	E	39.2	E	47.6
24th Street & Telegraph Avenue	TWSC	C	21.6	C	24.6	F	80.2	F	113.4
24th Street & Broadway	TWSC	C	20.6	C	20.7	C	19.4	C	19.6
27th Street & Broadway	Signal	C	33.7	C	33.7	D	36.6	D	36.6
Castro Street & 18th Street	Signal	D	40.4	D	43.0	D	50.3	D	54.1
Brush Street & 18th Street	Signal	A	9.6	B	10.7	A	9.6	B	10.7
Martin Luther King Jr. Way & 18th St.	Signal	B	13.6	B	13.7	B	14.4	B	14.5
Castro Street & 17th Street	Signal	C	30.5	C	30.7	E	60.7	E	61.7
Brush Street & 17th Street	Signal	B	10.6	B	10.7	B	11.6	B	11.8
Martin Luther King Jr. Way & 17th St.	Signal	B	10.9	B	10.9	B	11.2	B	11.2

[a] The LOS and delay for two-way stop controlled intersections represent the worst movement or approach. The LOS and delay for signalized intersections represent the overall intersection.

SOURCE: Korve Engineering