

# ENVIRONMENTAL CONSEQUENCES

## *Transportation and Circulation*

### 4.5 TRANSPORTATION AND CIRCULATION

#### 4.5.1 METHODOLOGY

The analysis of transportation impacts is based on information included in the 1994 Presidio Transportation Planning and Analysis Technical Report NPS 1994b which analyzed the potential environmental effects from implementation of the GMPA. The analysis of potential effects that would result from the PTMP is summarized in this section, based upon the PTMP Background Transportation Report (Wilbur Smith Associates, 2002). In general, transportation impact assessment is based on the ability of the proposed transportation system to adequately accommodate the expected number of parked vehicles, vehicular traffic, transit passengers, pedestrians, bicyclists, and construction vehicles in the Presidio.

To estimate future traffic conditions for the year 2020, key assumptions had to be developed, and then incorporated into estimates of travel demand and trip generation to determine potential transportation impacts. These key assumptions are summarized below.

#### ***PRESIDIO LIVE/WORK MODEL***

Based on the Trust's live/work model and the mix of land uses provided for each alternative, it was assumed that:

- Most of the employed residents living in the Presidio would also work within the Presidio;
- Persons employed within the Presidio could walk, bike, or ride the internal shuttle service to destinations within the Presidio; and
- Trips internal to the Presidio would be more likely to be made by non-automobile modes.

#### ***TRANSPORTATION DEMAND MANAGEMENT PROGRAM***

Implementation of a Transportation Demand Management (TDM) program would improve transit, pedestrian, and bicycle conditions and would thereby

reduce auto usage to Presidio destinations. The transportation demand management strategies that are assumed to be common for all alternatives include:

- Mandatory participation and commitment to trip-reduction requirements by all non-residential tenants;
- A clean-fuel shuttle bus serving the entire Presidio with direct connections to San Francisco Municipal Railway (Muni) and Golden Gate Transit (GGT) routes, including connections at a centrally-located transit hub;
- On-site sale of transit passes;
- Transit and ridesharing information disseminated on kiosks within the Park, the Trust's website, and employee orientation programs;
- Mandatory event-specific TDM programs for all special events;
- Periodic monitoring of traffic volumes and mode choice among Presidio residents and employees;
- Express bus service to regional transit connections (e.g., BART, Transbay Terminal);
- Secured bicycle parking; and
- Parking Management Program.

In addition, as part of the TDM Program, a series of additional parking management measures would be implemented to reduce parking demand in the Presidio under the action alternatives (Final Plan, Final Plan Variant, Resource Consolidation, Sustainable Community, and Cultural Destination). These measures would, in part, avoid adverse parking conditions in adjacent city neighborhoods by further reducing the number of vehicles in need of parking. These additional measures would include:

- A constrained supply of parking spaces within the Presidio; and
- A parking regulation and fee program.

The TDM program consists of components that can be implemented and meet or exceed the intended traffic reductions. Expected reductions were used in calculating the potential impact of future vehicular traffic in the park and surrounding areas. The TDM traffic reductions used in the transportation analyses reflect the Trust's minimum performance standards. Since traffic

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reductions are likely to exceed what has been incorporated here, the traffic forecasts can be considered somewhat conservative. Furthermore, additional TDM actions will be instituted to achieve additional automobile trip reductions as transit service and other alternative transportation is expanded.

### ***FUTURE TRAVEL DEMAND FORECASTS***

The San Francisco County Transportation Authority (SFCTA) countywide travel demand forecasting model was used to develop the travel forecasts for cumulative development and growth through the years 2020 in the region, as well as to determine travel demand to and from the Presidio for the various alternatives. This approach results in a cumulative impacts assessment for year 2020 conditions that takes into account both the future development expected at the Presidio, as well as the expected growth in housing and employment for the remainder of San Francisco and the nine-county Bay Area.

The most up-to-date version of the SFCTA countywide model estimates future traffic and transit travel demand for the entire nine-county Bay Area region based on land use and employment forecasts prepared by the San Francisco Planning Department for the County plus regional growth estimates developed and adopted by the Association of Bay Area Governments (ABAG) in 1998 (Projections '98) for the remainder of the Bay Area region. The SFCTA model divides the entire Bay Area region into approximately 1,750 geographical areas, known as Transportation Analysis Zones (TAZs); about 800 of them are within San Francisco, 30 in the Presidio.

The SFCTA model estimates the future travel demand for each TAZ, determines the origin and destination and mode of travel (auto, transit, or other) for each trip, and assigns those trips to the transportation system (roadway network and transit lines). The SFCTA model was used to characterize the “without project” condition, by identifying the future background (non-Presidio related) growth in travel demand, plus the potential for travel growth that might occur in Area A of the Presidio, as well as possible changes in travel patterns for pass-through (or cut-through) traffic.

The SFCTA model has been developed as a tool to forecast future traffic volumes on major regional traffic facilities such as the Golden Gate Bridge,

Lombard Street, Park Presidio Boulevard, or on major local streets. It is not designed to provide accurate traffic forecasts on local streets at the block-by-block level, nor to forecast turning movements at intersections, which are necessary to determine future intersection operating conditions. Therefore, a subsequent step was undertaken to derive future travel related to Area B of the Presidio.

In the second step, the land use components of the various alternatives were quantified by planning district, and used as input to estimate the Area B transportation impacts on the surrounding transportation network on a daily basis, as well as during typical weekday a.m. and p.m. peak commute hours. Travel demand associated with each land use was calculated for each of the 26 TAZs within Area B, based on standard daily, a.m. and p.m. trip generation rates. Person trips generated and attracted by Area B were distributed to eight different geographical origin/destination areas, including four San Francisco areas and three other regions in the Bay Area based on information supplied by the San Francisco Planning Department or obtained from the SFCTA model. The mode split analysis then determined the portion of these trips made via automobile, transit, or other mode of transportation, based upon the origin/destination of the trips, their purpose, and the availability of various travel modes. Finally, automobile occupancy rates were applied, to yield the average number of individuals in a vehicle, and thus, determine the number of vehicles that would be traveling to and from Area B of the Presidio.

Based upon the future traffic conditions in the vicinity of the Presidio (as estimated by the SFCTA model) and the additional vehicle trips that would result for a given Area B alternative (based on trip generation for each land use), vehicles were then assigned to individual streets within and adjacent to the Presidio. These future traffic volumes were used in the analysis of future traffic operating conditions for each alternative.

### ***TRAVEL DEMAND***

Table 44 presents the projected daily, a.m. peak hour and p.m. peak hour travel demand estimates for typical weekday conditions for the seven alternatives being analyzed for transportation impacts. Daily and peak hour travel demand would vary by alternative, depending on the land use elements contained in the alternatives and the intensity of use. The number of weekday

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daily person-trips would range from 64,221 person-trips for the No Action Alternative (GMPA 2000) to 104,011 person-trips for the Sustainable Community Alternative. In general, approximately nine percent of the daily trips generated by each alternative occur during the a.m. peak hour, and about twelve percent occur during the p.m. peak hour.

The projected travel demand shown in Table 44 represents typical weekday daily, a.m. peak hour and p.m. peak hour conditions. Special events that may take place at the Presidio would attract additional visitors and would result in a greater travel demand than estimated in Table 44.

The transportation modal split for the alternatives reflects implementation of improvements to encourage transit, pedestrian and bicycle modes and discourage single-occupant vehicle travel. The overall modal split (which is the percentage of total trips that would occur via a private vehicle, transit, bicycle, or as a pedestrian) would vary by alternative. For the action alternatives, the modal split would be approximately 64 percent by auto, 19 percent by transit, and 17 percent by walking and bicycle. All of the alternatives assume that mode split would vary by location within the Presidio. For example, persons living or working in the Letterman or Main Post Planning District are more likely to use transit than those living or working at the Fort Scott or the South Hills Planning Districts, because of proximity to better transit. For the No Action Alternative (GMPA 2000), the modal split would be 67 percent by auto, 16 percent by transit, and 17 percent by walking and bicycle, while the modal split for the Minimum Management Alternative would be 73 percent by auto, 13 percent by transit, and 14 percent by walking and bicycle.

During the a.m. peak hour, the number of Area B vehicle-trips generated by the alternatives would range from between 3,383 vehicle-trips for the No Action Alternative (GMPA 2000) to 5,267 vehicle-trips for the Minimum Management Alternative. During the p.m. peak hour, vehicle-trips would range from 3,684 vehicle-trips under the No Action Alternative (GMPA 2000) to 5,962 vehicle-trips for the Sustainable Community Alternative. Tables 1 and 2 of Appendix G show a.m. and p.m. peak hour person trips by mode of travel and by planning district.

## **4.5.2 ROADWAY NETWORK**

In general, the existing roadway network within the Presidio would be maintained. Minor improvements to the roadway network were assumed, including opening the 14<sup>th</sup> Avenue gate, and converting the 14<sup>th</sup> Avenue and 15<sup>th</sup> Avenue gates to a one-way couplet, with 14<sup>th</sup> Avenue accommodating inbound traffic and the 15<sup>th</sup> Avenue gate accommodating outbound traffic. In addition, as outlined in the GMPA Background Transportation Report (Peccia 1994), Halleck Street was assumed to be realigned at its southern end so that it connects with Lincoln Boulevard at Anza Avenue.

There have been a number of studies conducted by the City and County of San Francisco and Caltrans on the need for reconstructing Doyle Drive. These efforts include the Doyle Drive Task Force Study (February 1991), a Caltrans Project Study Report (Caltrans 1993), and the Doyle Drive Intermodal Study (San Francisco Guideway Associates 1996), which identified need and developed design alternatives and preliminary cost estimates for the reconstruction of Doyle Drive. Preliminary concepts include the replacement of the current structure with a parkway built to Caltrans standards that would provide direct vehicular access to the Presidio. In addition, multimodal access into and out of the Presidio was proposed through a “transit center” that would be accessed by GG, Muni, and the Presidio internal shuttle. An Environmental Impact Statement (EIS)/ Environmental Impact Report (EIR) is currently underway, with publication of the draft document planned for the fall of 2001 for preliminary engineering and design documents representing 30 percent design completion. The current schedule calls for selection of a preferred alternative in late 2002. For the purposes of this analysis, it is assumed that, as part of the proposed Doyle Drive Environmental and Design Study, a grade-separated interchange with Doyle Drive would provide access to and from the Presidio at Girard Road, near the Main Post and Letterman Planning Districts under all alternatives. The direct connection to Doyle Drive would relieve some of the congestion at the Lombard Street gate. Due to the limited capacity of the left-turn movement from Lombard Street to Lombard Street, the Doyle Drive access would become a primary entrance into the Presidio, with the Lombard Gate generally serving as a secondary entrance. The Girard Road interchange is included in all Doyle Drive alternatives.

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**Table 44: Estimated Trip Generation (a) by Travel Mode Weekday Daily, A.M. and P.M. Peak Hour**

	<b>GMPA 2000</b>	<b>Final Plan</b>	<b>Final Plan Variant</b>	<b>Resource Consolidation</b>	<b>Sustainable Community</b>	<b>Cultural Destination</b>	<b>Minimum Management</b>
Daily Person Trips (b)							
Auto	43,154	59,396	48,161	56,903	66,920	63,506	61,498
Transit	10,340	17,300	13,556	17,062	19,054	19,092	11,213
Other(c)	10,727	16,421	12,761	15,511	18,037	18,398	11,575
<b>Total Person-Trips</b>	<b>64,221</b>	<b>93,117</b>	<b>74,478</b>	<b>89,476</b>	<b>104,011</b>	<b>100,996</b>	<b>84,286</b>
Vehicle-Trips(d)	33,822	44,407	36,451	44,204	50,331	47,999	49,519
A.M. Peak Hour							
Person-Trips							
Auto	4,142	4,909	4,267	5,281	5,530	5,349	6,284
Transit	997	1,432	1,231	1,603	1,591	1,603	1,196
Other	986	1,362	1,144	1,430	1,485	1,525	1,202
<b>Total Person-Trips</b>	<b>6,125</b>	<b>7,703</b>	<b>6,642</b>	<b>8,314</b>	<b>8,606</b>	<b>8,477</b>	<b>8,682</b>
Vehicle-Trips	3,383	3,849	3,401	4,341	4,371	4,250	5,267
P.M. Peak Hour							
Person-Trips							
Auto	4,676	7,151	5,750	6,745	7,895	7,584	7,030
Transit	1,122	2,097	1,621	2,037	2,259	2,293	1,284
Other	1,154	1,979	1,518	1,835	2,122	2,195	1,316
<b>Total Person-Trips</b>	<b>6,952</b>	<b>11,227</b>	<b>8,889</b>	<b>10,617</b>	<b>12,276</b>	<b>12,072</b>	<b>9,630</b>
Vehicle-Trips	3,684	5,367	4,373	5,266	5,962	5,754	5,722

Source: Wilbur Smith Associates, 2002.

Notes:

- (a) Includes inbound and outbound trips
- (b) Person-trips refer to trips made by all modes
- (c) Other includes walk, bicycle and other modes
- (d) Vehicle trips calculated by dividing the auto person trips by the average number of persons per vehicle.

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It should be noted that, as an interim improvement prior to the completion of the Doyle Drive Reconstruction Project, access to the Letterman Planning District will be improved by reconfiguring the existing intersection on Richardson Avenue in the vicinity of the Presidio's Gorgas Gate. The Trust has prepared and submitted to Caltrans a combined Project Study report/Project report (PSR/PR) for their review and approval. The recommended alternative in the PSR/PR calls for the intersection of Gorgas Avenue and Richardson Avenue to be reconfigured to provide outbound movements. A northbound left-turn movement will be accommodated by a left-exit slip ramp from Richardson Avenue passing beneath the marina Viaduct southbound exit ramp structure and intersecting with Gorgas Avenue. The existing roadway between Gorgas Avenue and Lyon Street would be reconstructed as a one-way roadway heading towards Lyon Street.

### **POTENTIAL IMPACTS**

#### ***Increased Congestion on Local Roadways***

Future 2020 traffic volumes were developed for each of the alternatives at all study intersections, which include the gateways to the Presidio. In addition to anticipated growth in vehicles traveling to and from the Presidio, regional growth throughout San Francisco and the greater Bay Area is expected to contribute to increase traffic on roadways near the Presidio. As traffic volumes on these roadways increase and the roadways surrounding the Presidio become more congested, more drivers are expected to choose to drive through the Presidio to get to and from other parts of San Francisco and Marin County. One of the primary pass-through routes in the Presidio today is between the Presidio Boulevard and Lombard Street gates. A substantial change in this particular pass-through traffic volume is not expected. However, due to the expected growth in regional traffic volumes, pass-through traffic would increase between the Golden Gate Bridge and the 25<sup>th</sup> Avenue, Arguello Boulevard and Presidio Boulevard gates.

Table 45 presents the p.m. peak hour traffic volumes at the Presidio gates for existing (2000) and future (2020) conditions, which includes both entering and exiting traffic. Weekday p.m. peak hour volumes through the gateways would increase from 5,967 vehicles per hour in 2000, to between

8,369 (No Action Alternative) and 10,536 (Sustainable Community Alternative) vehicles per hour, an increase of between 41 and 77 percent.

The Presidio Avenue, Lincoln Boulevard/25th Avenue, Arguello Boulevard, Lombard Street, Mason Street, and Plaza East gates would have the greatest traffic volumes during the p.m. peak hour. The greatest increase in traffic volumes from existing conditions is anticipated to occur at the Presidio Avenue, Lincoln Boulevard/25th Avenue, and the Plaza East gates. The new gateway provided as part of the reconstruction of Doyle Drive would also accommodate a substantial portion of the additional trips generated by the alternatives.

Based on the future projected traffic conditions, and the estimated traffic volumes for each of the alternatives, the future 2020 traffic operating conditions were calculated for the study intersections, as show in Tables 46 and 47 for a.m. and p.m. peak hour conditions, respectively.

#### ***No Action Alternative (GMPA 2000)***

The No Action Alternative (GMPA 2000) would generate 33,822 daily vehicle trips. The growth in traffic would increase congestion at study intersections. As shown in Tables 46 and 47, of the 37 studied intersections, seven would operate at unacceptable levels (LOS E or F) under the No Action Alternative (GMPA 2000) during the a.m. peak hour, and 13 during the p.m. peak hour. The poor operating conditions at these intersections reflect the increase in traffic volumes traveling to and from the land uses in Area B of the Presidio, as well as relatively modest increases in traffic traveling to and from Area A and expected increases in pass-through traffic resulting from regional traffic growth.

The intersections that would operate at an unacceptable level of service under the No Action Alternative (GMPA 2000) are:

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Intersection	LOS E or F	
	A.M. Peak	P.M. Peak
	Hour	Hour
Lyon/Lombard	X	X
Lombard/Presidio	X	X
Presidio/Pacific		X
Lincoln/25 <sup>th</sup> /El Camino del Mar	X	X
Lincoln/Bowley/Pershing		X
Lincoln/Merchant		X
Lincoln/Golden Gate Bridge Viewing Area	X	X
Park Presidio/Lake		X
Park Presidio/California		X
14 <sup>th</sup> /California		X
Lincoln/Girard	X	X
Presidio/Jackson	X	X
Presidio/Washington	X	X

All of these study intersections, except for the three intersections of Park Presidio Boulevard/Lake Street, Park Presidio Boulevard/California Street and Lincoln Boulevard/Bowley Street/Pershing Drive, could be mitigated to an acceptable level of service (LOS D or better) through improvements identified in the GMPA EIS, or additional mitigation measures identified for this analysis, as described in the mitigation section of this chapter and summarized in Table 48.

The intersections of Park Presidio Boulevard/Lake Street and Park Presidio Boulevard/California Street are expected to operate at LOS E and F, respectively, during the p.m. peak hour. The No Action Alternative (GMPA 2000) would be expected to contribute less than two percent to the total p.m. peak hour traffic volumes at these two intersections, well within the range of daily traffic variations, which would indicate that the anticipated poor operating conditions at these two intersections would be primarily due to overall regional traffic growth. Both intersections are currently signalized, and left turns are restricted from both directions of Park Presidio Boulevard. Neither intersection could be feasibly mitigated as an at-grade intersection. Due to regional growth, an 11 percent increase in p.m. peak hour traffic volumes is expected at these intersections between now and 2020. If this level of growth does not occur because of traffic flow constraints at the Golden Gate Bridge or improvements to Doyle Drive

resulting in the diversion of traffic from Park Presidio Boulevard to Doyle Drive, the intersections may operate at a better LOS. These potential traffic flow constraints are being evaluated in the Doyle Drive EIS/EIR.

The intersection of Lincoln Boulevard/Bowley Street/Pershing Drive would experience a decrease in traffic volumes as a result of the removal of Wherry housing; however, approximately 18 vehicles per hour would still travel on the intersection minor (STOP sign controlled) approaches during the p.m. peak hour. These vehicles would experience substantial delays as a result of the higher volume of vehicles traveling along Lincoln Boulevard, which are not required to stop. Because of the relatively low volume of traffic on Bowley Avenue (approximately one percent in the p.m. peak hour) compared to Lincoln Boulevard, the intersection does not meet the minimum warrants for signalization. The intersection could still be signalized because of other considerations such as pedestrian movements or accident rates.

It should be noted that the intersections of 14<sup>th</sup> Avenue with California Street, Presidio Avenue with Pacific Avenue, Lyon Street with Lombard Street, Lincoln Boulevard with 25<sup>th</sup> Avenue, Presidio Avenue with Jackson Street, and Presidio Avenue with Washington Street are in the City of San Francisco, so improvements at these six intersections would be beyond the jurisdiction of the Trust.

This alternative also includes implementation of a TDM program, an internal shuttle system, coordination with local transit providers and other strategies intended to reduce automobile use, which could decrease the actual number of daily trips generated by this alternative, so that the impacts on local intersections would be reduced.

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**Table 45: Presidio Gateways Traffic Volume Summary Year 2000 and 2020 - Weekday P.M. Peak Hour**

Gate	2020							
	Existing Conditions (2000)	No Action (GMPA 2000)	Final Plan	Final Plan Variant	Resource Consolidation	Sustainable Community	Cultural Destination	Minimum Management
Mason St.	456	519	818	606	951	957	908	856
Gorgas Ave.	196	207	221	217	238	220	222	214
Lombard St.	1,260	1,005	1,198	1,103	1,156	1,307	1,193	1,315
Presidio Ave.	1,002	1,537	1,668	1,530	1,685	1,787	1,716	1,717
Arguello Blvd.	815	968	1,334	1,149	1,240	1,553	1,378	1,472
14 <sup>th</sup> /15 <sup>th</sup> Ave.	107	231	548	314	61	343	529	536
Lincoln Blvd./25 <sup>th</sup> Ave.	1,072	1,482	1,612	1,649	1,625	1,730	1,548	1,796
Plaza West	325	555	555	555	555	555	555	555
Plaza East	734	1,074	1,074	1,074	1,074	1,074	1,074	1,074
Doyle Drive	0	791	924	799	1,050	1,010	1,002	937
<b>Total</b>	<b>5,967</b>	<b>8,369</b>	<b>9,952</b>	<b>8,996</b>	<b>9,635</b>	<b>10,536</b>	<b>10,125</b>	<b>10,472</b>
Cut through traffic (%)	35%	51%	43%	47%	44%	40%	42%	41%

Source: Wilbur Smith Associates, 2002.

Notes:

Includes inbound and outbound vehicle trips.

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**Table 46: Year 2000 and 2020 Intersection Levels of Service – A.M. Peak Hour**

		2020							
		Existing Conditions (2000)	No Action (GMPA 2000)	Final Plan	Final Plan Variant	Resource Consolidation	Sustainable Community	Cultural Destination	Minimum Management
1.	Lombard/Richardson	A	A	A	A	A	A	A	A
2.	Lyon/Lombard	E	F/B	F/B	F/B	F/B	F/B	F/B	F/B
3.	Francisco/Richardson	B	D	D	C	D	D	D	D
4.	Gorgas/Lyon/Francisco	B	D	D	D	D	D	D	D
5.	Doyle/Marina/Lyon	A	A	A	A	A	A	A	A
6.	Mason/Marina/Lyon	A	B	B	B	B	B	B	B
7.	Lincoln/Halleck	B	A	A	A	A	A	A	B
8.	Presidio/Funston	A	A	A	A	B	B	A	B
9.	Letterman/Presidio/Lincoln	A	C	C	C	D	C	C	D
10.	Lombard/Presidio	D	F/B	F/B	F/B	F/B	F/B	F/B	F/B
11.	Presidio/Pacific	B	D/B	D/B	D/B	E/B	E/B	E/B	E/B
12.	Arguello/Jackson	B	B	C/A	B	C/A	C/A	C/A	C/A
13.	Washington Boulevard/Arguello	A	B	B	B	B	B	B	B
14.	Arguello/Moraga	A	B	B	B	B	B	C	B
15.	Graham/Moraga	A	B	B	B	B	B	B	B
16.	Sheridan/Montgomery	A	A	B	A	C	C	A	B
17.	Lincoln/Sheridan	B	B	B	B	B	B	B	B
18.	Lincoln/Park/McDowell	B	B	B	B	B	C	B	B
19.	14th/Lake	C	D	E/A	D/A	C	D/A	E/A	F/B
20.	15th/Lake	B	C	C	C	C	C	C	C
21.	Lincoln/25th/El Camino del Mar	D	F/B	F/C	F/C	F/C	F/C	F/B	F/D
22.	Lincoln/Bowley/Pershing	C	D	D	D/D	D	E	D	F
23.	Lincoln/Kobbe	C	B	D/A	D/A	B/A	D/A	B/A	F/A
24.	Lincoln/Merchant	A	D/C	E/C	E/C	D/C	E/C	D/C	F/D
25.	Lincoln/Storey	B	B	C	B	B	B	C	B
26.	Lincoln/GGB Viewing Area	C	E/C	E/C	E/C	E/C	E/C	E/C	F/C
27.	Lincoln/Graham	B	A	A	A	B	B	B	C
28.	Divisadero/Lombard	B	B	B	B	B	B	B	B
29.	Park Presidio/Lake	B	B	C	B	B	C	C	D
30.	Park Presidio/California	B	B	B	B	B	B	B	B
31.	14th/California	C	D/C	D/C	D/C	D/B	D/C	D/C	F/D
32.	15th/California	C	C	C	C	C	C	C	C
33.	25th/California	B	D	E/B	E/B	E/B	E/B	E/B	F/C
34.	Presidio/Jackson	B	E/B	E/B	E/B	E/C	E/C	E/B	E/C
35.	Presidio/Washington	C	E/B	E/B	E/B	F/B	F/B	F/B	F/B
36.	Arguello/Washington Street	C	D	D/A	D	F/A	E/A	D	E/A
37.	Lincoln/Girard	B	F/B	F/B	F/B	F/C	F/B	F/B	F/B

Source: Wilbur Smith Associates, 2002.

Notes:

Unacceptable service levels are shown bold.  
Unmitigated LOS/Mitigated LOS

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Table 47: Year 2000 and 2020 Intersection Levels of Service – P.M. Peak Hour

		Existing Conditions (2000)	2020						
			No Action (GMPA 2000)	Final Plan	Final Plan Variant	Resource Consolidation	Sustainable Community	Cultural Destination	Minimum Management
1.	Lombard/Richardson	A	A	A	A	A	A	A	A
2.	Lyon/Lombard	D	F/B	F/B	F/B	F/B	F/B	F/B	F/B
3.	Francisco/Richardson	B	B	B	B	B	B	B	B
4.	Gorgas/Lyon/Francisco	B	B	B	B	B	B	B	B
5.	Doyle/Marina/Lyon	B	B	B	B	B	B	B	B
6.	Mason/Marina/Lyon	B	B	B	B	C	C	C	C
7.	Lincoln/Halleck/Anza	B	A	B	A	B	C	C	D
8.	Presidio/Funston	A	C	C	B	D	C	C	C
9.	Letterman/Presidio/Lincoln	A	C	D	C	D	E/B	D	D
10.	Lombard/Presidio	D	F/B	F/B	F/B	F/B	F/B	F/B	F/B
11.	Presidio/Pacific	B	E/A	F/B	E/A	F/B	F/B	F/B	E/B
12.	Arguello/Jackson	C	C	E/A	D	E/A	F/A	F/A	F/A
13.	Washington Boulevard/Arguello	A	B	B	B	B	B	C	B
14.	Arguello/Moraga	B	C	C	C	C	C	E/B	B
15.	Graham/Moraga	A	A	B	A	A	B	B	A
16.	Sheridan/Montgomery	A	A	D	D	C	C	A	B
17.	Lincoln/Sheridan	B	B	B	B	C	B	B	B
18.	Lincoln/Park/McDowell	B	B	B	B	B	C	C	B
19.	14th/Lake	C	D	F/A	E/A	C	E/A	F/A	E/A
20.	15th/Lake	B	B	C	B	B	B	C	C
21.	Lincoln/25th/El Camino del Mar	D	F/B	F/B	F/C	F/B	F/C	F/B	F/C
22.	Lincoln/Bowley/Pershing	C	E	E	E	E	F	E	F
23.	Lincoln/Kobbe	C	B	F/A	F/A	F/A	F/A	E/A	F/A
24.	Lincoln/Merchant	C	E/B	F/C	F/C	F/C	F/C	F/C	F/B
25.	Lincoln/Storey	B	C	C	C	B	B	C	C
26.	Lincoln/GGB Viewing Area	C	F/C	F/C	F/C	F/C	F/C	F/C	F/C
27.	Lincoln/Graham	A	A	B	B	B	C	B	C
28.	Divisadero/Lombard	B	B	B	B	B	B	B	B
29.	Park Presidio/Lake	C	E	F	F	E	F	F	F
30.	Park Presidio/California	E	F	F	F	F	F	F	F
31.	14th/California	D	E/C	F/C	F/C	E/C	F/C	F/C	F/C
32.	15th/California	C	C	D	C	C	C	D	D
33.	25th/California	B	C	E/B	E/B	D/B	F/B	E/B	F/C
34.	Presidio/Jackson	C	F/B	F/C	F/B	F/C	F/C	F/C	F/C
35.	Presidio/Washington	C	F/B	F/B	F/B	F/B	F/C	F/B	F/B
36.	Arguello/Washington Street	B	C	E/A	D	E/A	F/A	E/A	F/A
37.	Lincoln/Girard	B	F/B	E/B	F/B	F/B	F/B	F/B	E/B

Source: Wilbur Smith Associates, 2002.

Notes:

Unacceptable service levels are shown bold.  
Unmitigated LOS/Mitigated LOS

# ENVIRONMENTAL CONSEQUENCES

## Transportation and Circulation

**Table 48: Intersection Mitigation Measures and Applicable Alternatives**

Mitigated Intersection	Mitigation Number	No Action (GMPA 2000)	Final Plan	Final Plan Variant	Resource Consolidation	Sustainable Community	Cultural Destination	Minimum Management
Presidio/Pacific	TR-1	P.M.	P.M.	P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.
Arguello/Jackson	TR-2		P.M.		P.M.	P.M.	P.M.	P.M.
Lincoln/25th/El Camino del Mar	TR-3	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.
Lombard/Presidio	TR-4	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.
Lincoln/GGB Viewing Area	TR-6	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.
Lincoln/Merchant	TR-7	P.M.	A.M./P.M.	A.M./P.M.	P.M.	A.M./P.M.	P.M.	A.M./P.M.
Lincoln/Kobbe	TR-8		P.M.	P.M.	P.M.	P.M.	P.M.	A.M./P.M.
14th/Lake	TR-11		A.M./P.M.	P.M.		P.M.	A.M./P.M.	A.M./P.M.
Lyon/Lombard	TR-12	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.
Arguello/Moraga	TR-5,13						P.M.	
Letterman/Presidio/Lincoln	TR-14					P.M.		
14th/California	TR-15	P.M.	P.M.	P.M.	P.M.	P.M.	P.M.	A.M./P.M.
25th/California	TR-16		A.M./P.M.	A.M./P.M.	A.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.
Presidio/Jackson	TR-17	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.
Presidio/Washington	TR-18	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.
Arguello/Washington Street	TR-19		P.M.		A.M./P.M.	A.M./P.M.	P.M.	A.M./P.M.
Lincoln/Girard	TR-20	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.	A.M./P.M.

Source: Wilbur Smith Associates, 2002.

Notes:

A.M./P.M. – indicates whether mitigation required in a. m. or p.m. peak hour or both.

TR-X = number of applicable mitigation measure. See “mitigation” at the end of this chapter for identified improvements.

# ENVIRONMENTAL CONSEQUENCES

## Transportation and Circulation

### Final Plan Alternative

The Final Plan Alternative is estimated to generate 44,407 daily vehicle trips in 2020, or 31 percent more trips than would be generated by the No Action Alternative (GMPA 2000). As a result, as shown in Tables 46 and 47, the Final Plan Alternative would result in unacceptable service levels (LOS E or F) at the same intersections as the No Action Alternative (GMPA 2000), which is considered the baseline condition (see above for full discussion). The Final Plan Alternative would also result in unacceptable service levels at the following additional intersections:

Intersection	LOS E or F	
	A.M. Peak Hour	P.M. Peak Hour
Arguello/Jackson		X
Lincoln/Merchant	X	
25 <sup>th</sup> /California	X	X
14 <sup>th</sup> /Lake	X	X
Lincoln/Kobbe		X
Arguello/Washington St.		X

Following mitigation, all of the study area intersections would operate at acceptable levels, except for the intersections of Park Presidio Boulevard/Lake Street, Park Presidio Boulevard/California Street and Lincoln Boulevard/Bowley Street/Pershing Drive. It should be noted that the intersections of 14<sup>th</sup> Avenue with Lake Street, Arguello Boulevard with Jackson Street, 25<sup>th</sup> Avenue with California Street and Arguello Boulevard with Washington Street are in the City of San Francisco, so improvements at these intersection would be beyond the jurisdiction of the Trust. This alternative also includes strategies for reducing single-occupancy vehicle trips, which would also further reduce vehicular delays at local intersections.

### Final Plan Variant

The Final Plan Variant is estimated to generate 36,451 daily vehicle trips in 2020, or 8 percent more trips than would be generated by the No Action Alternative (GMPA 2000). As a result, as shown in Tables 46 and 47, the Final Plan Variant would result in unacceptable service levels (LOS E or F) at

the same intersections as the No Action Alternative (GMPA 2000), which is considered the baseline condition (see above for full discussion). The Final Plan Variant would also result in unacceptable service levels at the following intersections:

Intersection	LOS E or F	
	A.M. Peak Hour	P.M. Peak Hour
Lincoln/Merchant	X	
14 <sup>th</sup> /Lake		X
Lincoln/Kobbe		X
25 <sup>th</sup> /California	X	X

Following mitigation, all of the study area intersections would operate at acceptable levels, except for the intersections of Park Presidio Boulevard/Lake Street, Park Presidio Boulevard/California Street and Lincoln Boulevard/Bowley Street/Pershing Drive. It should be noted that the intersections of 14<sup>th</sup> Avenue with Lake Street and 25<sup>th</sup> Avenue with California Street are in the City of San Francisco, so improvements at these intersection would be beyond the jurisdiction of the Trust. This alternative also includes strategies for reducing single-occupancy vehicle trips, which would also further reduce vehicular delays at local intersections.

### Resource Consolidation Alternative

The Resource Consolidation Alternative is estimated to generate 44,204 daily vehicle trips in 2020, or 31 percent more trips than would be generated by the No Action Alternative (GMPA 2000). As a result, as shown in Tables 46 and 47, the Resource Consolidation Alternative would result in unacceptable service levels (LOS E or F) at the same intersections as the No Action Alternative (GMPA 2000), which is considered the baseline condition, plus the following intersections:

# ENVIRONMENTAL CONSEQUENCES

## *Transportation and Circulation*

Intersection	LOS E or F	
	A.M. Peak	P.M. Peak
	Hour	Hour
Arguello/Jackson		X
Presidio/Pacific	X	
Lincoln/Kobbe		X
25 <sup>th</sup> /California	X	
Arguello/Washington St.	X	X

Following mitigation, all of the study area intersections would operate at acceptable levels, except for the intersections of Park Presidio Boulevard/Lake Street, Park Presidio Boulevard/California Street and Lincoln Boulevard/Bowley Avenue/Pershing Drive. It should be noted that the intersections of 25<sup>th</sup> Avenue with California Street, Arguello Boulevard with Jackson Street, Presidio Avenue with Pacific Avenue and Arguello Boulevard with Washington Street are in the City of San Francisco, so improvements at these intersections would be beyond the jurisdiction of the Trust. This alternative also includes strategies for reducing single-occupancy vehicle trips, which would also further reduce vehicular delays at local intersections.

### ***Sustainable Community Alternative***

The Sustainable Community Alternative is estimated to generate 50,331 daily vehicle trips in 2020, or 49 percent more trips than would be generated by the No Action Alternative (GMPA 2000). As a result, as shown in Tables 46 and 47, the Sustainable Community Alternative would result in unacceptable service levels (LOS E or F) at the same intersections as the No Action Alternative (GMPA 2000), which is considered the baseline condition. Under the No Action Alternative (GMPA 2000) the intersection of Presidio/Pacific would have an unacceptable LOS only in the p.m. peak hour, while under the Sustainable Community Alternative it would have unacceptable LOS in both the a.m. and p.m. peak hours. The Sustainable Community Alternative would also result in unacceptable service levels at the following intersections:

Intersection	LOS E or F	
	A.M. Peak	P.M. Peak
	Hour	Hour
14 <sup>th</sup> /Lake		X
Lincoln/Merchant	X	
Letterman/Presidio/Lincoln		X
Arguello/Jackson		X
Lincoln/Bowley/Pershing	X	
Lincoln/Kobbe		X
25 <sup>th</sup> /California	X	X
Arguello/Washington Street	X	X
Presidio/Pacific	X	

Following mitigation, all of the study area intersections would operate at acceptable levels, except for the intersections of Park Presidio Boulevard/Lake Street, Park Presidio Boulevard/California Street and Lincoln Boulevard/Bowley Avenue/Pershing Drive. It should be noted that the intersections of 14th Avenue with Lake Street, 25<sup>th</sup> Avenue with California Street, Arguello Boulevard with Jackson Street, Presidio Avenue with Pacific Avenue and Arguello Boulevard with Washington Street are in the City of San Francisco, so improvements at these intersections would be beyond the jurisdiction of the Trust. This alternative also includes strategies for reducing single-occupancy vehicle trips, to the extent of the other alternatives.

### ***Cultural Destination Alternative***

The Cultural Destination Alternative is estimated to generate 47,999 daily vehicle trips in 2020, or 42 percent more trips that would be generated by the No Action Alternative (GMPA 2000). As a result, as shown in Tables 46 and 47, the Cultural Destination Alternative would result in unacceptable service levels (LOS E or F) at the same intersections as the No Action Alternative (GMPA 2000), plus the following intersections:

# ENVIRONMENTAL CONSEQUENCES

## Transportation and Circulation

Intersection	LOS E or F	
	A.M. Peak	P.M. Peak
	Hour	Hour
Presidio/Pacific	X	
14 <sup>th</sup> /Lake	X	X
Arguello/Jackson		X
Arguello/Moraga		X
Lincoln/Kobbe		X
25 <sup>th</sup> /California	X	X
Arguello/Washington Street		X

Following mitigation, all of the study area intersections would operate at acceptable levels, except for the intersections of Park Presidio Boulevard/Lake Street, Park Presidio Boulevard/California Street and Lincoln Boulevard/Bowley Street/Pershing Drive. It should be noted that the intersection of 14<sup>th</sup> Avenue with Lake Street, Presidio Avenue with Pacific Avenue, Arguello Boulevard with Jackson Street, 25<sup>th</sup> Avenue with California Street and Arguello Boulevard with Washington Street are in the City of San Francisco, so improvements at these intersections would be beyond the jurisdiction of the Trust. This alternative also includes strategies for reducing single-occupancy vehicle trips, which would also further reduce vehicular delays at local intersections.

### **Minimum Management Alternative**

The Minimum Management Alternative is anticipated to generate 49,519 vehicle trips per day, approximately 46 percent more trips than would be generated by the No Action Alternative (GMPA 2000). As shown in Tables 46 and 47, unacceptable service levels (LOS E or F) would occur at the same intersections as the No Action Alternative (GMPA 2000). The Minimum Management Alternative would also result in unacceptable service levels at the following intersections:

Intersection	LOS E or F	
	A.M. Peak	P.M. Peak
	Hour	Hour
Presidio/Pacific	X	
Arguello/Jackson		X
Lincoln/Merchant	X	
14 <sup>th</sup> /Lake	X	X
Lincoln/Bowley/Pershing	X	
Lincoln/Kobbe	X	X
25 <sup>th</sup> /California	X	X
Arguello/Washington St.	X	X
14 <sup>th</sup> /California	X	

Traffic operations at all these intersections can be improved to acceptable levels through improvements identified under the No Action Alternative (GMPA 2000), and in mitigation that specifically addresses these intersections except for the intersections of Park Presidio Boulevard/Lake Street, Park Presidio Boulevard/California Street and Lincoln Boulevard/Bowley Avenue/Pershing Drive. It should be noted that the intersections of 25<sup>th</sup> Avenue with California Street, 14<sup>th</sup> Avenue with Lake Street, Presidio Avenue with Pacific Avenue, Arguello Boulevard with Jackson Street, Arguello Boulevard with Washington Street and 14<sup>th</sup> Avenue with California Street are in the City of San Francisco, so improvements at these intersections would be beyond the jurisdiction of the Trust. This alternative would not include strategies for reducing single-occupancy vehicle trips, to the same extent as the other alternatives.

### **4.5.3 PARKING**

Table 49 presents a summary of parking demand, as compared to the supply for each alternative. A parking demand and supply summary by planning district is shown in Table 3 of Appendix G. With the exception of the Minimum Management Alternative, each alternative would decrease the existing number of parking spaces within the Presidio to an amount only five percent greater than expected demand, as part of the parking management strategy to discourage single-occupant auto use. Different land uses

# ENVIRONMENTAL CONSEQUENCES

## Transportation and Circulation

**Table 49: Parking Supply and Demand by Alternative<sup>1</sup>**

	No Action (GMPA 2000)	Final Plan	Final Plan Variant	Resource Consolidation	Sustainable Community	Cultural Destination	Minimum Management
Supply	7,807	9,165	7,830	8,978	9,790	9,582	11,210
Average Demand	7,436	8,729	7,457	8,550	9,324	9,126	10,354
+Surplus/(Deficit)	371	436	373	428	466	456	856

Source: Wilbur Smith Associates, 2001.

<sup>1</sup> Existing parking supply is estimated to be 11,210 spaces.

Notes:

Average demand is defined as the average parking demand during a peak use time.

Supply was defined as 5% greater than demand for all alternatives except the Minimum Management Alternative, and would be reduced as TDM measures prove effective as part of future site-specific and/or area-wide planning.

experience peak parking demand at different times of the day. Thus, parking demand is based on the highest value of average weekday midday demand, average evening demand and average weekend demand in each planning area. Parking supply for all alternatives except the Minimum Management Alternative reflects 105% of average parking demand. The parking demand estimates and supply account for shared use of parking within a given planning area.

### ***No Action Alternative (GMPA 2000)***

The No Action Alternative (GMPA 2000) would provide approximately 7,807 parking spaces, and is estimated to have a demand for about 7,436 spaces, resulting in a surplus of 371 spaces, or five percent. The parking demand would be accommodated within the proposed supply.

Under this alternative, special events would be scheduled and coordinated based on parking availability, and events would be regulated to ensure that supply meets expected demand including demand from Area A of the Presidio. Events requiring large amounts of parking would not be scheduled concurrently with other events or Presidio peak-parking demand periods, if combined parking demand would exceed the available supply within Area B of the Presidio.

### ***Final Plan Alternative***

The Final Plan Alternative would generate a demand for about 8,729 parking spaces in 2020, or 17 percent greater than the estimated parking demand generated by the No Action Alternative (GMPA 2000). The Final Plan Alternative would provide approximately 9,165 spaces. The result would be a surplus of 436 spaces, or 5 percent more than the estimated parking demand. The Final Plan commits to reduce the overall supply of parking as part of future site-specific proposals, area-wide planning, which would be subject to additional analysis.

As with the No Action Alternative (GMPA 2000), this alternative would accommodate special events, which could generate periodic additional demand for parking. Mitigation identified in this EIS would ensure that events would be coordinated so that demand would not exceed parking supply.

### ***Final Plan Variant***

The Final Plan Variant would generate a demand for about 7,457 parking spaces in 2020, or about the same as the estimated parking demand generated by the No Action Alternative (GMPA 2000). The Final Plan Variant would provide approximately 7,830 spaces. The result would be a surplus of 373 spaces or 5 percent more than the estimated parking demand.

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## *Transportation and Circulation*

As with the No Action Alternative (GMPA 2000), this alternative would accommodate special events, which could generate periodic additional demand for parking. Mitigation identified in this EIS would ensure that events would be coordinated so that demand would not exceed parking supply.

### ***Resource Consolidation Alternative***

The estimated parking demand for the Resource Consolidation Alternative would be about 8,550 parking spaces, which would be about 15 percent greater than the estimated parking demand for the No Action Alternative (GMPA 2000). The Resource Consolidation Alternative would provide approximately 8,978 parking spaces. This alternative would generate a surplus of 428 spaces, or 5 percent more than demand.

As with the No Action Alternative (GMPA 2000), this alternative would accommodate special events, which could generate periodic additional demand for parking. Mitigation identified in this EIS would ensure that events would be coordinated so that demand would not exceed parking supply.

### ***Sustainable Community Alternative***

The estimated parking demand for the Sustainable Community Alternative would be about 9,324 parking spaces, which would be 25 percent greater than the estimated parking demand for the No Action Alternative (GMPA 2000) in 2020. The Sustainable Community Alternative would provide approximately 9,790 parking spaces, a surplus of 466 spaces, or 5 percent more than demand.

As with the No Action Alternative (GMPA 2000), this alternative would accommodate special events, which could generate periodic additional demand for parking. Mitigation identified in this EIS would ensure that events would be coordinated so that demand would not exceed parking supply.

### ***Cultural Destination Alternative***

The estimated parking demand for the Cultural Destination Alternative would be about 9,126 parking spaces, which would be 23 percent greater than the estimated parking demand for the No Action Alternative (GMPA 2000) in 2020. The estimated demand would be less than the proposed supply of approximately 9,582 spaces, resulting in a surplus of about 456 spaces, or 5 percent more than demand.

As with the No Action Alternative (GMPA 2000), this alternative would accommodate special events, which could generate periodic additional demand for parking. Mitigation identified in this EIS would ensure that events would be coordinated so that demand would not exceed parking supply.

### ***Minimum Management Alternative***

The Minimum Management Alternative would generate a demand for approximately 10,354 parking spaces, (about 39 percent greater than the estimated parking demand for the No Action Alternative) and would maintain existing supply (11,210 spaces), providing an excess of approximately 856 spaces, or 8.3 percent more than demand, which could result in additional vehicle trips traveling to and from the Presidio.

## **4.5.4 BICYCLE AND PEDESTRIAN CIRCULATION**

Implementation of the alternatives would result in an increase in pedestrian and bicycle activity within the Presidio and on streets adjacent to the key gates. Based on the expected modal split for Presidio residents, employees and visitors (see Travel Demand section), under all alternatives, approximately 14 to 18 percent of all trips generated by the land uses are anticipated to occur by walking and bicycling as the primary mode. In addition, persons accessing the Presidio by auto or transit would also walk from transit stops and parking areas.

All of the alternatives, except Minimum Management, assume improvements to the pedestrian and bicycle circulation network throughout the Presidio, consistent with the Presidio Bikeways and Trails Master Plan.

# ENVIRONMENTAL CONSEQUENCES

## *Transportation and Circulation*

### ***No Action Alternative (GMPA 2000)***

The No Action Alternative (GMPA 2000) would generate about 10,700 pedestrian and bicycle trips per weekday, increasing pedestrian and bicycle activity within the Presidio and on streets adjacent to key gates of the Presidio. The increase in pedestrian and bicycle activity would generally be accommodated within the existing pedestrian and bicycle network. Planned improvements to the pedestrian and bicycle network throughout the Presidio would enhance the pedestrian and bicycle environment, and facilitate the safe and direct flow of pedestrians and bicyclists to and from the different parts of the Presidio. These planned improvements will be outlined in the Bikeways and Trails Master Plan, which will guide development of a comprehensive pedestrian and bicycle network throughout the Presidio. Implementation of the Bikeways and Trails Master Plan should ensure that bicycle and pedestrian facilities are adequate to meet the demand generated by this alternative.

### ***Final Plan Alternative***

Under the Final Plan Alternative, there would be 16,400 bicycle and pedestrian trips per weekday, 53 percent more trips than under the No Action Alternative (GMPA 2000). The Bikeways and Trails Master Plan would ensure that facilities were developed to accommodate the bicycle/pedestrian demand generated by this alternative.

### ***Final Plan Variant***

Under the Final Plan Variant, there would be 12,800 bicycle and pedestrian trips per weekday, 20 percent more trips than under the No Action Alternative (GMPA 2000). The Bikeways and Trails Master Plan would ensure that facilities were developed to accommodate the bicycle/pedestrian demand generated by this alternative.

### ***Resource Consolidation Alternative***

Under the Resource Consolidation Alternative, there would be 15,500 bicycle and pedestrian trips per weekday, which is 45 percent more trips than the No Action Alternative (GMPA 2000). The Bikeways and Trails Master Plan

would ensure that facilities were developed to accommodate the bicycle/pedestrian demand generated by this alternative.

### ***Sustainable Community Alternative***

Under the Sustainable Community Alternative, there would be up to 18,000 bicycle and pedestrian trips per weekday, which is 68 percent more trips than the No Action Alternative (GMPA 2000). The Bikeways and Trails Master Plan would ensure that facilities were developed to accommodate the bicycle/pedestrian demand generated by this alternative.

### ***Cultural Destination Alternative***

In the case of the Cultural Destination Alternative, there would be about 18,400 bicycle and pedestrian trips per weekday, which is 72 percent more trips than the No Action Alternative (GMPA 2000). The Bikeways and Trails Master Plan would ensure that facilities were developed to accommodate the bicycle/pedestrian demand generated by this alternative.

### ***Minimum Management Alternative***

As shown in Table 44, the Minimum Management Alternative would generate approximately 11,600 daily bicycle and pedestrian trips as the primary mode of access, which is 8 percent more trips than the No Action Alternative (GMPA 2000). The increase in pedestrian and bicycle activity would generally be accommodated within the existing pedestrian and bicycle network. Because the Minimum Management Alternative would not include implementation of new programs such as the Bikeways and Trails Master Plan, improvements to the pedestrian and bicycle network would not be made, and the use of non-auto modes of travel would not be promoted.

## **4.5.5 TRANSIT SERVICES**

In addition to the assumed changes to the roadway network within and adjacent to the Presidio, all of the alternatives assume minor modifications to Muni and GGT routes to connect to the Presidio shuttle. Muni routes that currently enter the Presidio through the Lombard gate were assumed to continue on Doyle Drive and enter the Presidio via the proposed ramps near

# ENVIRONMENTAL CONSEQUENCES

## *Transportation and Circulation*

Girard Road, where the buses would share a common stop with the Presidio shuttle route and GGT routes. A transit hub in the Main Post Planning District that would facilitate transfers between Muni buses and the Presidio shuttle buses is also assumed. The Main Post transit hub will be located at the foot of the Main Post planning area, within walking distance to Crissy Field and the Letterman area.

The land uses associated with the EIS alternatives would generate additional transit trips on Muni, GGT, and on the Presidio's internal shuttle based on the expected mode split for Presidio residents, employees and visitors as explained in the Travel Demand section. Table 44 summarizes the number of total transit trips per day for each alternative, while Table 50 summarizes the a.m. and p.m. peak hour transit trips by service provider by alternative based on the geographic distribution of passengers. Under all alternatives, approximately 18 percent of all trips generated by the land uses are anticipated to occur by transit. About 74 to 81 percent of the transit trips would be on Muni, 8 percent on GGT and 11 to 19 percent on the internal Presidio shuttle. Tables 4, 5 and 6 in Appendix G summarize the predicted a.m. and p.m. peak hour ridership for Muni by route and GGT.

### ***No Action Alternative (GMPA 2000)***

In 2020, the No Action Alternative (GMPA 2000) is expected to generate about 10,340 transit trips on a weekday daily basis, 997 transit trips during the a.m. peak hour, and 1,122 transit trips during the p.m. peak hour. Some of these transit trips would be made on more than one transit service (e.g., Muni, and Internal Shuttle). Table 50 and Tables 4, 5, and 6 in Appendix G reflect the ridership that would occur on GGT, Muni and the Internal Shuttle). Overall, the projected increase in transit ridership would be accommodated by the existing transit providers serving the Presidio and the internal Presidio shuttle. Planned improvements to transit service to and within the Presidio, as called for in this alternative, would also serve to accommodate the increase in transit demand. The increase in ridership on Muni lines would be distributed among the thirteen bus lines serving the Presidio and its vicinity, according to the expected geographic distribution of trips to and from the Presidio. The 82X-Presidio and Wharves Express, 43-Masonic, 29-Sunset and 28-19th Avenue are expected to carry the greatest portion (about 73 percent) of the

Muni trips (see Appendix G, Tables 4 and 5). In general, these bus lines currently have available capacity in the vicinity of the Presidio and at the maximum load point, and the maximum load points occur a substantial distance from the Presidio. Adapted GMPA EIS mitigation measures supporting increased Muni frequencies would enhance transit service to the Presidio, and would increase the capacities available on these lines.

The increase in ridership on GGT would be distributed among the 26 GGT routes that serve the Presidio, and would increase the utilization of these lines. Because most GGT buses currently operate with capacity available for additional passengers, the addition of new riders to the bus routes would not substantially affect capacity utilization. However, five GGT routes currently operate at a capacity utilization of 90 percent or greater, and substantial increases on these lines would result in a significant impact unless GGT service on these lines is increased in the future.

The No Action Alternative (GMPA 2000) would include an internal Presidio shuttle, which would accommodate the transit trips that occur within the Presidio and between Muni and GGT bus stops and internal locations. The service (routing, frequency, and vehicle size) would be structured to encourage use of the shuttle as a travel mode within the Presidio and would accommodate peak passenger demands. Mitigation calling for monitoring of transit demand and capacity, and coordination with GGT would reduce the potential impacts of this alternative on GGT.

### ***Final Plan Alternative***

The Final Plan Alternative would generate about 17,300 daily transit trips, 67 percent more trips than the No Action Alternative (GMPA 2000). Under this alternative, there would be approximately 1,432 a.m. peak hour and 2,097 p.m. peak hour transit trips in 2020. The number of a.m. and p.m. peak hour transit trips expected under the Final Plan Alternative would exceed the number of No Action Alternative (GMPA 2000) a.m. peak hour and p.m. peak hour transit trips by 44 percent and 87 percent, respectively. As with the No Action Alternative (GMPA 2000), capacity on the Muni system should be adequate to serve the increased ridership, but the GGT routes are already operating near capacity. New mitigation, calling for increased frequency on

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**Table 50: Transit Bus Peak Hour Presidio Ridership**

Time Period & Service Provider	No Action (GMPA 2000)	Final Plan	Final Plan Variant	Resource Consolidation	Sustainable Community	Cultural Destination	Minimum Management
<b>A.M. Peak Hour</b>							
Muni	755	1,117	997	1,334	1,315	1,233	973
Golden Gate Transit	77	114	102	138	134	127	100
Internal Shuttle	193	242	169	183	190	289	160
<b>Total</b>	<b>1,025</b>	<b>1,473</b>	<b>1,268</b>	<b>1,655</b>	<b>1,639</b>	<b>1,649</b>	<b>1,233</b>
<b>P.M. Peak Hour</b>							
Muni	783	1,621	1,285	1,651	1,824	1,723	1,019
Golden Gate Transit	78	165	130	169	185	176	104
Internal Shuttle	287	269	259	277	315	456	198
<b>Total</b>	<b>1,148</b>	<b>2,055</b>	<b>1,674</b>	<b>2,097</b>	<b>2,324</b>	<b>2,355</b>	<b>1,321</b>

Source: Wilbur Smith Associates, 2001.

Note:

Total transit trips presented in this table may be greater than the number of employees, residents and visitors choosing to ride transit shown in Table 44 because some transit passengers may ride more than one transit service.

Muni lines, the planned internal shuttle, and mitigation calling for monitoring of GGT routes and coordination with GGT would reduce the effects of this alternative on transit service.

### ***Final Plan Variant***

The Final Plan Variant would generate about 13,556 daily transit trips, 31 percent more trips than the No Action Alternative (GMPA 2000). Under this alternative, there would be approximately 1,231 a.m. peak hour and 1,621 p.m. peak hour transit trips in 2020. Some of these transit trips would be made on more than one transit service (e.g., Muni, and Internal Shuttle). Table 50 and Tables 4, 5, and 6 in Appendix G reflect the ridership that would occur on GGT, Muni and the Internal Shuttle). The number of a.m. and p.m. peak hour transit trips expected under the Final Plan Variant would exceed the number of No Action Alternative (GMPA 2000) a.m. peak hour and p.m. peak hour transit trips by 23 percent and 35 percent, respectively. As with the No

Action Alternative (GMPA 2000), capacity on the Muni system should be adequate to serve the increased ridership, but the GGT routes are already operating near capacity. New mitigation, calling for increased frequency on Muni lines, the planned internal shuttle, and mitigation calling for monitoring of GGT routes and coordination with GGT would reduce the effects of this alternative on transit service.

### ***Resource Consolidation Alternative***

The Resource Consolidation Alternative would generate about 17,062 daily transit trips, or 65 percent more trips than the No Action Alternative (GMPA 2000). Under this alternative, there would be approximately 1,603 a.m. peak hour transit trips and 2,037 p.m. peak hour transit trips in 2020. Some of these transit trips would be made on more than one transit service (e.g., Muni, and Internal Shuttle). Table 50 and Tables 4, 5, and 6 in Appendix G reflect the ridership that would occur on GGT, Muni and the Internal Shuttle). The

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number of a.m. and p.m. peak hour transit trips expected under the Resource Consolidation Alternative would exceed the number of No Action Alternative (GMPA 2000) a.m. peak hour and p.m. peak hour transit trips by 61 percent and 70 percent, respectively. As with the No Action Alternative (GMPA 2000), capacity on the Muni system should be adequate to serve the increased ridership, but the GGT routes are already operating near capacity. The adapted GMPA EIS measure, calling for increased frequency

on Muni lines, the planned internal shuttle, and new mitigation, calling for monitoring of GGT routes and coordination with GGT would reduce the effects of this alternative on transit service.

### ***Sustainable Community Alternative***

The Sustainable Community Alternative would generate about 19,054 daily transit trips, or 84 percent more trips than the No Action Alternative (GMPA 2000). Under this alternative, there would be approximately 1,591 a.m. peak hour transit trips and 2,259 p.m. peak hour transit trips in 2020. Some of these transit trips would be made on more than one transit service (e.g., Muni, and Internal Shuttle). Table 50 and Tables 4, 5, and 6 in Appendix G reflect the ridership that would occur on GGT, Muni and the Internal Shuttle). The number of a.m. and p.m. peak hour transit trips expected under the Sustainable Community Alternative would exceed the number of No Action Alternative (GMPA 2000) a.m. peak hour and p.m. peak hour transit trips by 60 percent and 89 percent, respectively. As with the No Action Alternative (GMPA 2000), capacity on the Muni system should be adequate to serve the increased ridership, but the GGT routes are already operating near capacity. The GMPA EIS measure calling for increased frequency on Muni lines, the planned internal shuttle, and new mitigation, calling for monitoring of GGT routes and coordination with GGT would reduce the effects of this alternative on transit service.

### ***Cultural Destination Alternative***

The Cultural Destination Alternative would generate about 19,092 daily transit trips, or 85 percent more trips than the No Action Alternative (GMPA 2000). Under this alternative, there would be approximately 1,603 a.m. peak hour transit trips and 2,293 p.m. peak hour transit trips in 2020. Some of these

transit trips would be made on more than one transit service (e.g., Muni, and Internal Shuttle). Table 50 and Tables 4, 5, and 6 in Appendix G reflect the ridership that would occur on GGT, Muni and the Internal Shuttle). The number of a.m. and p.m. peak hour transit trips expected under the Cultural Destination Alternative would exceed the number of No Action Alternative (GMPA 2000) a.m. peak hour and p.m. peak hour transit trips by 61 percent and 92 percent, respectively. As with the No Action Alternative (GMPA 2000), capacity on the Muni system should be adequate to serve the increased ridership, but the GGT routes are already operating near capacity. The adapted GMPA EIS measure calling for increased frequency on Muni lines, the planned internal shuttle, and new mitigation, calling for monitoring of GGT routes and coordination with GGT would reduce the effects of this alternative on transit service.

### ***Minimum Management Alternative***

The Minimum Management Alternative would generate about 11,213 daily transit trips on Muni, GGT, and the Presidio's internal shuttle, approximately 8 percent more transit trips than those that would be generated under the No Action Alternative (GMPA 2000). Under this alternative there would be approximately 1,196 in the a.m. peak hour and 1,284 in the p.m. peak hour. Some of these transit trips would be made on more than one transit service (e.g., Muni, and Internal Shuttle). Table 50 and Tables 4, 5, and 6 in Appendix G reflect the ridership that would occur on GGT, Muni and the Internal Shuttle). The number of a.m. and p.m. peak hour transit trips expected under the Minimum Management Alternative would exceed the number of No Action Alternative (GMPA 2000) a.m. peak hour and p.m. peak hour transit trips by 20 percent and 7 percent, respectively. As with the No Action Alternative (GMPA 2000), capacity on the Muni system should be adequate to serve the increased ridership, but the GGT routes are already operating near capacity. The GMPA EIS measure calling for increased frequency on Muni lines, the planned internal shuttle, and new mitigation measures calling for monitoring of GGT routes and coordination with GGT would reduce the effects of this alternative on transit service.

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### 4.5.6 CONSTRUCTION TRAFFIC

#### *No Action Alternative (GMPA 2000)*

Under the No Action Alternative (GMPA 2000), approximately 1.12 million square feet (sf) would be demolished, and 170,000 sf would be newly constructed. Construction activities at the Presidio would include reconstruction of existing roadways, buildings, structural improvements and other seismic work, utility upgrades, and other infrastructure enhancements. For construction of new structures, the following phases would generally be included: demolition, excavation, installation of foundations, building structure, finishes, and landscaping. Construction vehicles would include trucks hauling construction debris and delivering construction materials and supplies, as well as construction worker vehicles. The volume of construction vehicles accessing the Presidio would vary, depending on the specific construction activity and the schedules of the various building elements of each of the alternatives. For individual projects, the duration of demolition and construction would be relatively short term.

Construction vehicles would generally access the Presidio via Lombard Street (through the Lombard gate), the Golden Gate Bridge Toll Plaza, Doyle Drive/Richardson Avenue, and Doyle Drive (via the proposed access at Girard Road). Construction traffic leaving the Presidio would generally use Lombard Street, the Golden Gate Bridge Toll Plaza, and Doyle Drive via the Marina Boulevard gate. Due to city traffic restrictions, construction traffic would not travel on Marina Boulevard. After completion of the Doyle Drive project, construction vehicles (depending on their origins and destinations) would be able to access the Presidio via the future Girard Road interchange.

Construction-related traffic could create some conflicts with local and regional traffic, especially from the larger construction vehicles. However, because construction vehicle trips traveling to and from the Presidio would be dispersed through the Bay Area, the vehicle trips on other regional roadways would not be substantial and would generally fall within the normal fluctuations of traffic. A comprehensive Construction Traffic Management Plan would be developed to provide specific routes and other measures to minimize potential traffic impacts.

#### *Final Plan Alternative*

The Final Plan Alternative would result in 1.07 million sf of demolition and 710,000 sf of new construction. The construction activities anticipated under this alternative would be similar to those described under the No Action Alternative (GMPA 2000), although there would be more construction traffic, due to the increase in demolition and construction activities. Trucks would be expected to use the same access points and routes as described above. A comprehensive Construction Traffic Management Plan would ensure that construction traffic impacts were minimized.

#### *Final Plan Variant*

The Final Plan Variant would result in 1.25 million sf of demolition and no new construction. Construction-related traffic would be limited to activities related to renovation and demolition. The frequency of such trips would be minor compared to trips associated with grading and construction, all of which would likely require hauling large amounts of material to the Presidio.

#### *Resource Consolidation Alternative*

The Resource Consolidation Alternative would result in 1.91 million sf of demolition and 1.25 million sf of new construction. The construction activities anticipated under this alternative would be similar to those described under the No Action Alternative (GMPA 2000), although there would be more construction traffic, due to the increase in demolition and construction activities. Trucks would be expected to use the same access points and routes as described above. A comprehensive Construction Traffic Management Plan would ensure that construction traffic impacts were minimized.

#### *Sustainable Community Alternative*

The Sustainable Community Alternative would result in 890,000 sf of demolition and 620,000 sf of new construction. The construction activities anticipated under this alternative would be similar to those described under the No Action Alternative (GMPA 2000), although there would be somewhat more construction traffic, due to the increase in construction activities. Under the Sustainable Community Alternative there would be less demolition

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activity than the No Action Alternative (GMPA 2000). Trucks would be expected to use the same access points and routes as described above. A comprehensive Construction Traffic Management Plan would ensure that construction traffic impacts were minimized.

### ***Cultural Destination Alternative***

The Cultural Destination Alternative would result in 1.37 million sf of demolition and 1.37 million sf of new construction. The construction activities anticipated under this alternative would be similar to those described under the No Action Alternative (GMPA 2000), although there would be more construction traffic, due to the increase in demolition and construction activities. Trucks would be expected to use the same access points and routes as described above. A comprehensive Construction Traffic Management Plan would ensure that construction traffic impacts were minimized.

### ***Minimum Management Alternative***

There would be no new or additional demolition or new construction under this alternative, so construction-related traffic would be limited to activities related to renovation. The frequency of such trips would be minor compared to trips associated with grading, demolition, and construction, all of which would likely require hauling large amounts of material to and from the Presidio.

## **MITIGATION MEASURES**

### ***Mitigation Adapted from the GMPA EIS***

#### *Roadway Network*

Some of the improvements recommended in the GMPA EIS were assumed as part of the baseline conditions in this analysis such as the realignment of Halleck Street to intersect with Lincoln Boulevard and Anza Street, and configuration of a one-way couplet at the 14<sup>th</sup> Avenue and 15<sup>th</sup> Avenue gates. In addition to these improvements, the following mitigation measures identified in the GMPA EIS, if adopted, would generally improve the operating conditions at the intersections to acceptable levels of service. Table

48 indicates which intersections require mitigation by alternative. It should be noted that mitigation measures TR-4 and TR-12 were identified and included in the Letterman Complex EIS.

TR-1 *Presidio Avenue/Pacific Avenue Intersection.* When needed (i.e., prior to the level of service deteriorating to LOS E or F), install a traffic signal. Signalization of the intersection of Presidio Avenue/Pacific Street, when required to provide acceptable LOS, as recommended in the GMPA EIS would adequately mitigate the impacts of any alternative, and no additional mitigation measures would be necessary. No additional turning lanes would be needed to mitigate the operation of the intersection to an acceptable LOS. The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-2 *Arguello Boulevard/Jackson Street Intersection.* Signalize the intersection prior to the level of service deteriorating to LOS E or F to improve LOS operation during the p.m. peak hour. Signalization of the intersection of Arguello Boulevard/Jackson Street to provide an acceptable level of service as recommended in the GMPA EIS would adequately mitigate the impacts of any alternative, although additional turning lanes would not be necessary. No additional mitigation measures would be required. The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-3 *Lincoln Boulevard/25th Avenue/El Camino del Mar Intersection.* Prior to the level of service deteriorating to LOS E or F, install a traffic signal, and remove parking on the east side of 25<sup>th</sup> Avenue just south of Lincoln Boulevard in order to add a right turn lane to the northbound approach.

The GMPA EIS recommended removing parking at the intersection in order to add a lane to both the northbound and southbound approaches on 25<sup>th</sup> Avenue and the eastbound approach on El Camino del Mar, adding an exit lane to both the east and south legs of the intersection (Lincoln Boulevard and 25<sup>th</sup> Avenue), and installing a traffic signal to improve intersection operations to an acceptable LOS condition during the p.m. peak hour.

The extent of improvements recommended in the GMPA EIS for the intersection of Lincoln Boulevard/25<sup>th</sup> Avenue would not be required to

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mitigate the effects of any of the alternatives in 2020. A traffic signal would be needed to yield an acceptable level of service during the a.m. peak hour and p.m. peak hour, but an additional lane would only be needed on the northbound approach. Removing on-street parking on the east side of 25<sup>th</sup> Avenue just south of Lincoln Boulevard in order to provide a right-turn lane in combination with the signal would adequately mitigate operation of the signal to an acceptable level of service during both the a.m. peak hour and p.m. peak hour.

The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-4 *Lombard Street/Presidio Boulevard Intersection.* When needed (i.e., prior to the level of service deteriorating to LOS E or F), signalize the intersection and widen the south leg of the intersection to add a right-turn lane to the northbound approach.

The GMPA EIS recommended signalizing the intersection, and widening all three legs of the intersection to add turn lanes to the northbound and westbound approaches and provide two exit lanes on the east and north legs of the intersection. These improvements would adequately mitigate the impacts of any alternative, and no additional mitigation measures would be necessary for either the a.m. peak hour or p.m. peak hour.

The Letterman Complex EIS recommended the re-striping of the northbound approach only, in order to provide an exclusive right-turn lane.

TR-5 *Arguello Boulevard/Moraga Avenue Intersection.* When needed (i.e., prior to the intersection level of service deteriorating to LOS E or F), signalize this intersection and provide an additional lane on the eastbound approach, as recommended in the GMPA EIS. Although these measures would improve the operation of the intersection, the resulting level of service would not be LOS D or better. Mitigation Measure TR-13 describes the additional improvements required at this intersection to provide acceptable operating conditions.

TR-6 *Lincoln Boulevard/Golden Gate Viewing Entrance Intersection.* Prior to the level of service deteriorating to LOS E or F, install stop signs on

the Lincoln Boulevard approaches, and install an eastbound left-turn lane and westbound right-turn lane. If direct Presidio access to Doyle Drive is not provided, signalization of the intersection may be necessary to mitigate the operation of the intersection to LOS D or better.

The GMPA EIS recommended installing a left-turn lane on the southbound approach from the Golden Gate Viewing area as an interim improvement. The final recommendation was to signalize the intersection. These improvements would adequately mitigate the impacts of any alternative, and no additional mitigation measures would be necessary.

This intersection is located at the boundary between Area A and Area B. Therefore, the Trust would coordinate with the NPS and the Golden Gate Bridge Highway and Transportation District to determine the contribution of each party to the cost of the improvements.

TR-7 *Lincoln Boulevard/Merchant Road Intersection.* Prior to the intersection operation deteriorating to LOS E or F, realign the intersections of Lincoln Boulevard/Merchant Road and Lincoln Boulevard/Storey Avenue to create a single signalized intersection and widen Lincoln Boulevard to add a northbound left-turn pocket. If direct Presidio access to Doyle Drive is not provided, an exclusive right-turn lane may also be needed to mitigate the operation of the intersection to LOS D or better.

The GMPA EIS recommended realigning the intersections of Lincoln Boulevard/Merchant Road and Lincoln Boulevard/Storey Avenue to create a single signalized intersection with added left-turn lanes on both the eastbound and westbound approaches. These improvements would adequately mitigate the impacts of any alternative, and no additional mitigation measures would be necessary.

This intersection is located at the boundary between Area A and Area B. Therefore, the Trust would coordinate with the NPS to determine the contribution of each party to the cost of the improvements.

This mitigation measure may not be warranted for several years. The Trust plans to implement interim changes to improve the safety of this intersection.

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TR-8 *Lincoln Boulevard/Kobbe Avenue Intersection.* Prior to the intersection operation deteriorating to LOS E or F, realign Washington Boulevard to form a perpendicular intersection with Lincoln Boulevard, signalize the intersection and convert Kobbe Avenue to a one-way eastbound street. If direct Presidio access to Doyle Drive is not provided, a southbound left-turn pocket may also be needed to mitigate the effects of PTMP alternatives.

The GMPA EIS recommended realigning Washington Boulevard to form a perpendicular intersection with Lincoln Boulevard, adding left-turn lanes and signalizing the intersection. In coordination with this recommendation, the GMPA EIS recommended converting Kobbe Avenue to a one-way eastbound street. The improvements recommended in the GMPA EIS for the intersection of Lincoln Boulevard/Kobbe Avenue/Washington Boulevard would adequately mitigate the impacts of any alternative, although left-turn lanes would not be necessary for the intersection to operate at LOS D or better with PTMP alternatives.

## *Parking*

The GMPA included a reduction in the total number of parking spaces that would be provided within the Presidio in order to encourage transit use and non-auto modes of travel. Monitoring of the long-term and short-term parking demand and implementation of TDM measures were required prior to removing major parking areas. For newly proposed mitigation see below.

## *Bicycle and Pedestrian Circulation*

The following measure would apply to all alternatives, except Minimum Management.

TR-9 *Bicycle and Pedestrian Amenities.* Provide bicycle and pedestrian amenities such as shelters, benches, water fountains, secure bicycle racks, route lighting, and other facilities throughout the Presidio to encourage travel by foot and bicycle. This mitigation measure combined with the PTMP Planning Principles would provide a pedestrian and bicycle network that would adequately accommodate pedestrians and bicycles without creating hazards, barriers or access restrictions for pedestrians and bicyclists. No additional mitigation measures would be required.

## *Transit*

TR-10 *Support Increased Muni Frequencies.* Increase frequency of service on existing Muni lines as warranted.

Increased frequency on existing Muni lines with or without any extensions of these lines would increase the transit peak hour capacity, and consequently reduce passenger load factors on these lines.

## *New Mitigation*

### *Roadway Network*

The mitigation measures discussed above do not address all of the intersections that would be affected by implementation of the PTMP. Although the PTMP Planning Principles would reduce the effects of automobile traffic on the study intersections, additional improvements would still be required to mitigate impacts at some of the study intersections.

TR-11 *14<sup>th</sup> Avenue/Lake Street Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E or F), designate the 15<sup>th</sup> Avenue gate for outbound traffic, and open the 14<sup>th</sup> Avenue gate for inbound traffic. Install a traffic signal at the intersection of 14<sup>th</sup> Avenue/Lake Street, and restripe the westbound approach to provide a left-turn lane.

The GMPA EIS recommended designating the 15<sup>th</sup> Avenue gate for outbound traffic, and opening the 14<sup>th</sup> Avenue gate for inbound traffic, without any change to two-way traffic patterns on the City portions of the streets. However, the intersection of 14<sup>th</sup> Avenue/Lake Street currently operates with two-way STOP-control, and the additional traffic volumes through this intersection that would result from the opening of the gate would cause the average delay and worst approach level of service at the intersection to reach unacceptable levels. The close proximity of this intersection to the signalized intersection of Park Presidio Boulevard/Lake Street would require a signal at the intersection of 14<sup>th</sup> Avenue/Lake Street. All-way STOP-control at this location would not result in an acceptable level of service, and could potentially result in queues on the westbound approach that could extend into

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## *Transportation and Circulation*

the intersection of Park Presidio Boulevard/Lake Street, requiring installation of a traffic signal.

The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-12 *Lyon Street/Lombard Street Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E or F), signalize the intersection and restripe the eastbound approach to provide an exclusive left-turn lane and a shared right-through lane. Without direct Presidio access to Doyle Drive, a southbound right-turn lane may also be needed at this intersection to mitigate the intersection operation to LOS D or better.

The same mitigation measure was identified and adopted in the Presidio Letterman Complex EIS.

It should be noted that there is an estimated width of 30 feet between the historic columns of the Lombard Street gate. While it would be possible to achieve three 11-foot wide lanes between the columns, large trucks may not be able to negotiate left or right turns at the gate without encroaching into the adjacent lane. Turn prohibitions for large vehicles could be implemented if necessary.

The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-13 *Arguello Boulevard/Moraga Avenue Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E or F), signalize and restripe the intersection to provide right-turn lanes on the northbound and eastbound approaches, and provide a left-turn lane on the westbound approach. Signalization and the provision of an additional through lane on the eastbound approach were identified in the GMPA EIS, and are described in Mitigation Measure TR-5.

TR-14 *Letterman Drive/Presidio Boulevard/Lincoln Boulevard Intersection Improvements.* When needed (i.e., prior to the intersection operations

deteriorating to LOS E or F), install a signal, widen Presidio Boulevard and restripe the northbound left-turn lane to a shared left-through lane. An additional northbound lane would be needed on Lincoln Boulevard north of Presidio Boulevard to accommodate this improvement.

TR-15 *14th Avenue/California Street Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E or F), install STOP signs on the California Street approaches to this intersection and restripe to add a right-turn lane to the northbound approach. This improvement could require removal of some on-street parking spaces. The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements. Although installing STOP signs on California Street would improve the operation of this intersection to an acceptable level of service, queues on the westbound approach could potentially extend into the intersection of Park Presidio Boulevard/California Street. Therefore, if queues on the westbound approach to this intersection are determined to affect the operation of Park Presidio Boulevard/California Street, a traffic signal may be warranted at the intersection of 14th Avenue/California Street. A traffic signal at this location would adequately mitigate the operation of the intersection to an acceptable level of service.

TR-16 *25th Avenue/California Street Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E or F), restripe to add a left-turn lane to both the eastbound and westbound approaches of the intersection. This improvement may require removal of some on-street parking spaces. The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-17 *Presidio Avenue/Jackson Street Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E or F), signalize the intersection. The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-18 *Presidio Avenue/Washington Street Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E

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or F), signalize the intersection. The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-19 *Arguello Boulevard/Washington Street Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E or F), signalize the intersection. The Trust would coordinate with City and County of San Francisco to determine the contribution of each party to the cost of the improvements.

TR-20 *Lincoln Boulevard/Girard Road Intersection Improvements.* When needed (i.e., prior to the intersection operations deteriorating to LOS E or F), signalize the intersection.

## *Parking*

TR-21 *Presidio-Wide Parking Management.* In order to reduce impacts of fee parking in Area B on parts of the Presidio outside the Trust's jurisdiction (Area A), the NPS is encouraged to implement parking regulations, time-limits and/or parking fees in potentially affected parking areas under its administration (notably, Crissy Field). The Trust would provide assistance to the NPS to ensure coordination and consistency of parking management within both Areas A and B. Should the NPS choose not to adopt or enforce this measure, or is otherwise opposed to it, implementation of parking management control in Area B would impact parking for Crissy Field. This measure would apply to all alternatives except No Action (GMPA 2000).

TR-22 *TDM Program Monitoring.* The Trust has agreed to implement a TDM Program to reduce automobile usage by all tenants, occupants and visitors as summarized at the beginning of this section (see Appendix D of the Final Plan for a full description). The Trust would monitor implementation and effectiveness of the TDM program on an ongoing basis. If the TDM performance standards as described in the Final Plan (Appendix D) are not being reached, the Trust would implement more aggressive TDM strategies or intensify components of the existing TDM Program, such as requiring tenant participation in more TDM program elements, and more frequent and/or extensive shuttle service.

TR-23 *Reduce Parking Supply.* In order for the parking supply to meet, but not exceed, demand, the parking supply would be reduced in the future as decisions are made about future building uses and landscape treatments to between 7,810 (No Action Alternative (GMPA 2000)) and 9,790 (Sustainable Community Alternative) parking spaces. This measure would apply to all alternatives except the Minimum Management Alternative.

## *Special Event Parking*

The following measure would apply to all alternatives.

TR-24 *Special Event Parking Management.* The TDM Program includes a comprehensive array of strategies to be implemented through Trust administration of park-sponsored activities and special event permitting processes including coordination with the NPS. These TDM measures are recommended to discourage single-occupant automobile usage, encourage alternative modes of travel, and maximize use of available parking resources. Special events that could result in overflow parking would be coordinated to ensure that parking supply is not exceeded. Special events would be scheduled based on parking availability, would be regulated to ensure that supply meets expected demand including demand from Area A of the Presidio. Events requiring large amounts of parking would not be scheduled concurrently with other events or Presidio peak parking demand periods if combined parking demand would exceed the available supply within Area B of the Presidio. Sponsors may be required to provide special transit and bicycle services during their events to reduce expected parking demand and promote use of public transit, biking, walking, and remote parking lots.

## *Transit*

The following measure would apply to all alternatives.

TR-25 *Transit Service Monitoring Program.* The Trust currently monitors Muni operations and passenger loads within the Presidio. Continued monitoring of Muni service in the Presidio, and similar monitoring of GGT service at the Presidio would indicate any capacity problems, particularly on northbound GGT bus service during the p.m. peak hour. If the monitoring were to reveal insufficient capacity for northbound Presidio-generated

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passengers during the p.m. peak hour, coordinate potential improvements with the Golden Gate Bridge Highway and Transportation District.

### *Construction Traffic*

TR-26 *Construction Traffic Management Plan*. During pre-construction activities, the contractor(s) of individual projects would work with of the Trust

to develop a Construction Traffic Management Plan. The plan would include information on construction phases and duration, scheduling, proposed haul routes, permit parking, staging area management, visitor safety, detour routes, and pedestrian movements on adjacent routes.