

TRANSPORTATION IMPACT ANALYSIS GUIDELINES

LOADING MEMO APPENDICES



Existing and Proposed Project Figure and Table Examples

Introduction

Appendix A represents typical figures necessary to illustrate conditions that could result in loading impacts included in a transportation study. All figures should include basic elements (e.g., north arrow, title, legend, references, acronyms, etc.). Symbology should reflect that documents may be printed in black and white. All figures and tables should include all the information the reader would need to understand the information presented. Some of the figures presented below were from previous transportation studies and are illustrative only and may not include all the basic elements.

FIGURE 1

Potential Loading Locations

Figure 1 is an example of convenient loading locations. As shown, this generally includes up to 250 feet from the project site.

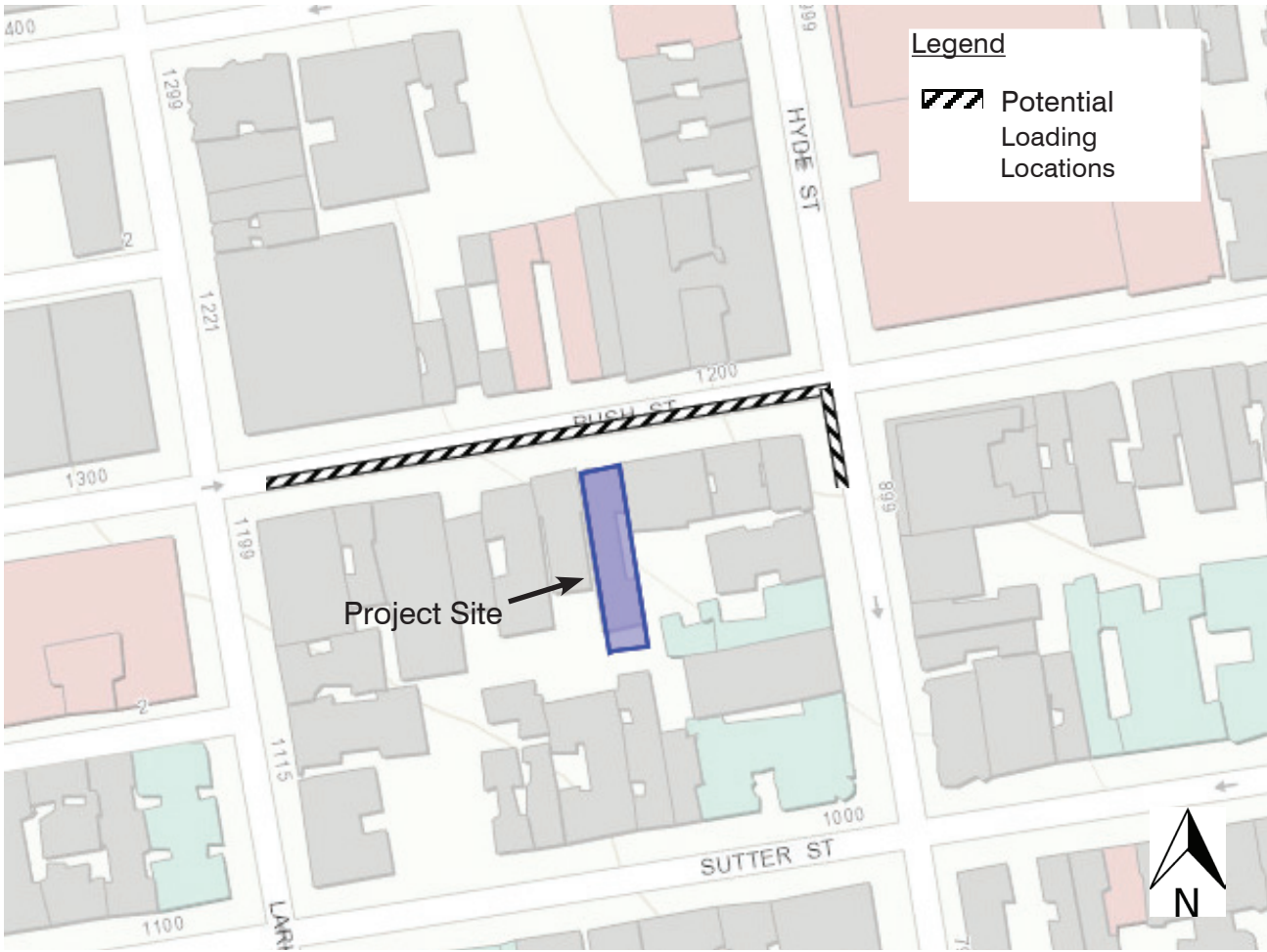
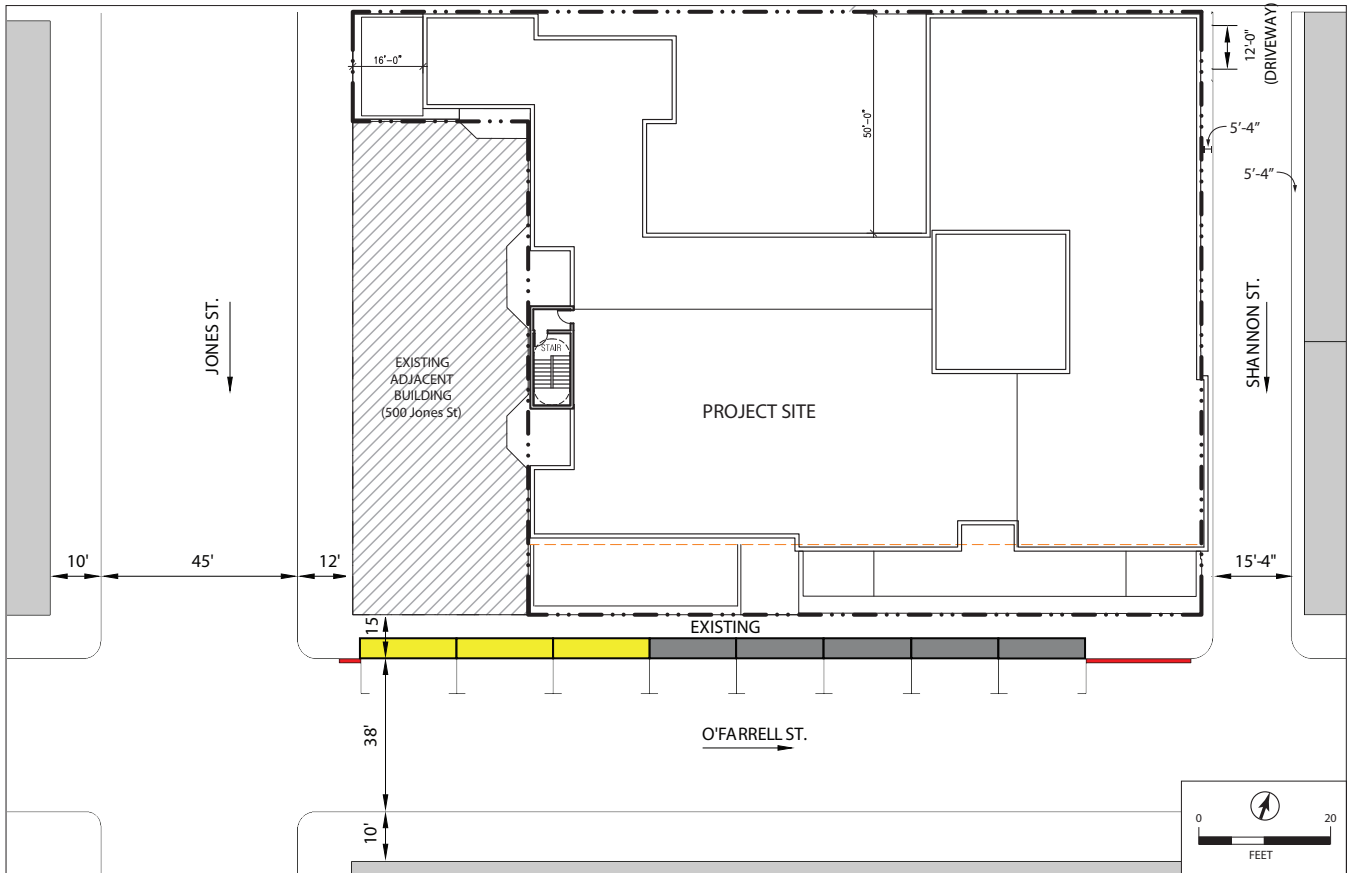


FIGURE 2

Existing On-Street Loading Plan

Figure 2 below is an example of a site plan that includes a detailed description of existing on-street commercial loading zones and existing parking. When developing a map similar to the one shown, include the linear dimensions of the existing loading zones, match the color of the zones to those used in the SFMTA Color Curb Program, and make existing changes explicit.

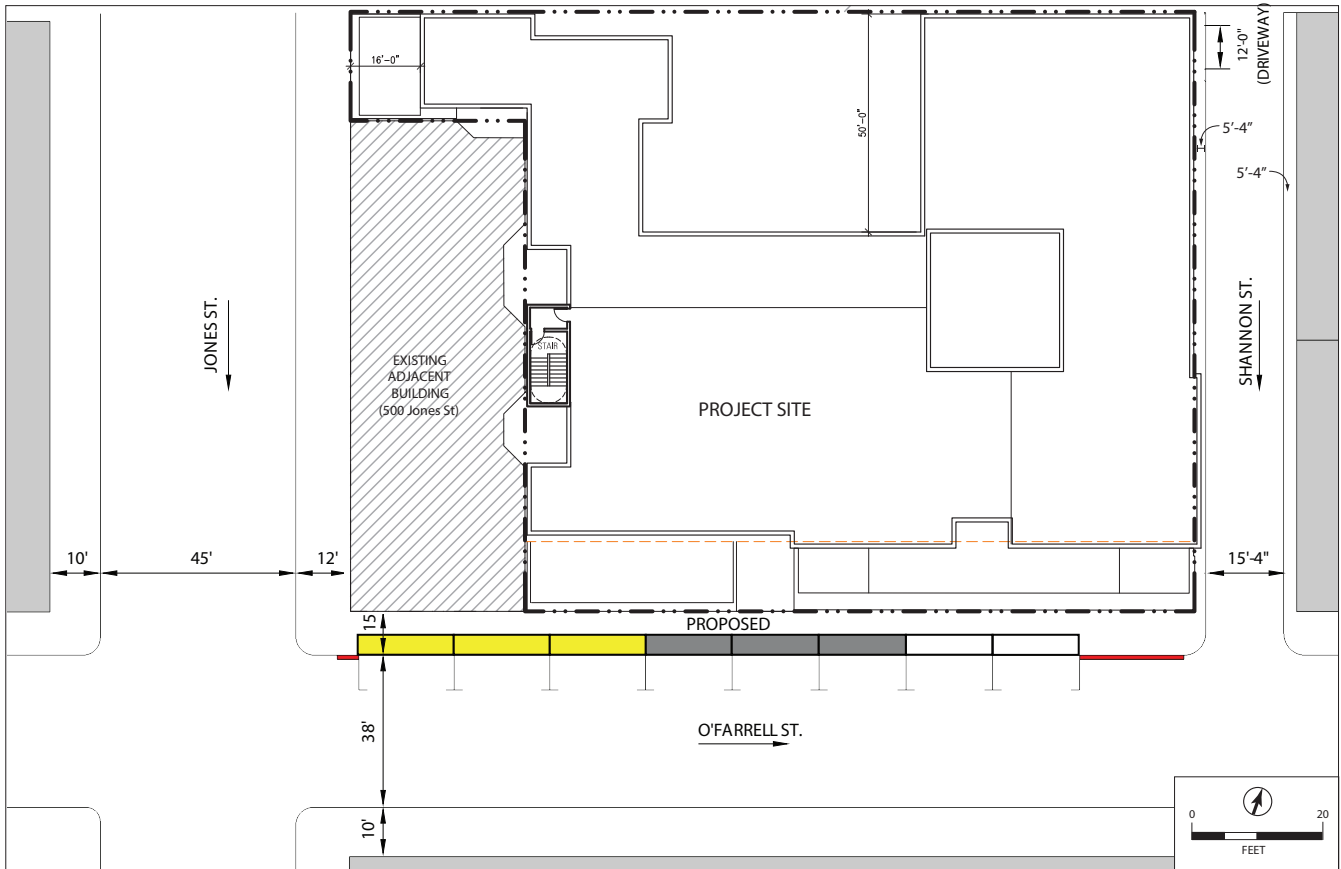


- PARKING SPACE KEY
- YELLOW ZONE - COMMERCIAL LOADING SPACE (METERED M-F 9AM-4PM)
 - GENERAL PARKING SPACE (METERED)
 - RED ZONE - NO PARKING

FIGURE 3

Proposed On-Street Loading Plan

Figure 3 below is an example of a site plan that includes a detailed description of proposed on-street commercial and passenger loading zones. When developing a map similar to the one shown, include the linear dimensions of the proposed loading zones, match the color of the zones to those used in the SFMTA Color Curb Program, and make proposed changes explicit.

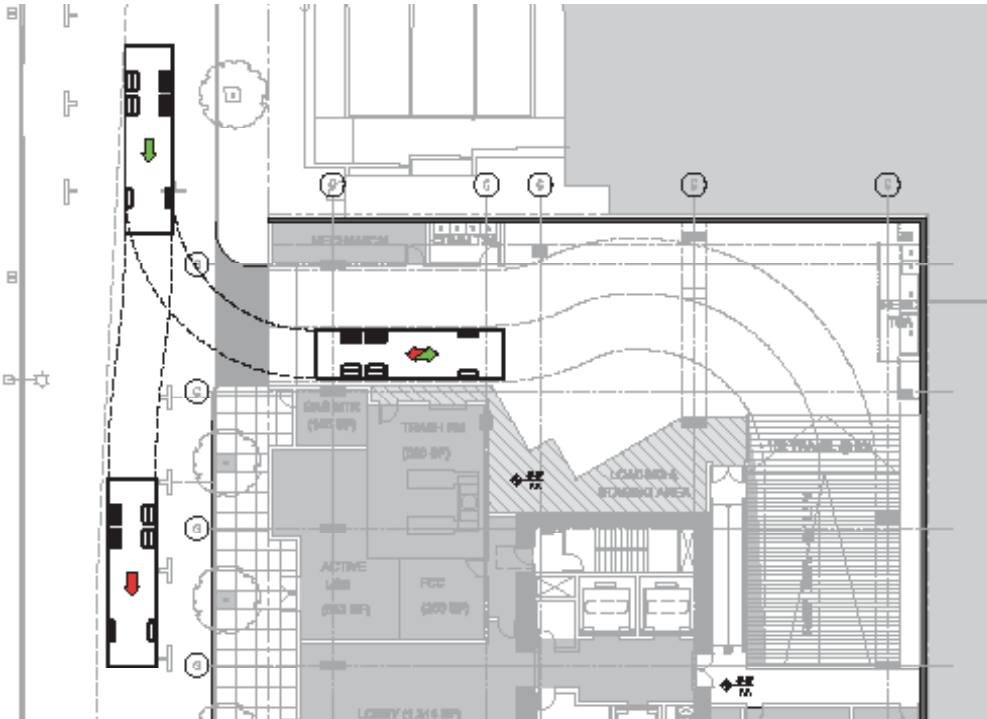


- PARKING SPACE KEY**
- YELLOW ZONE - COMMERCIAL LOADING SPACE (METERED M-F 9AM-4PM)
 - GENERAL PARKING SPACE (METERED)
 - PASSENGER LOADING/UNLOADING AT ALL TIMES
 - RED ZONE - NO PARKING

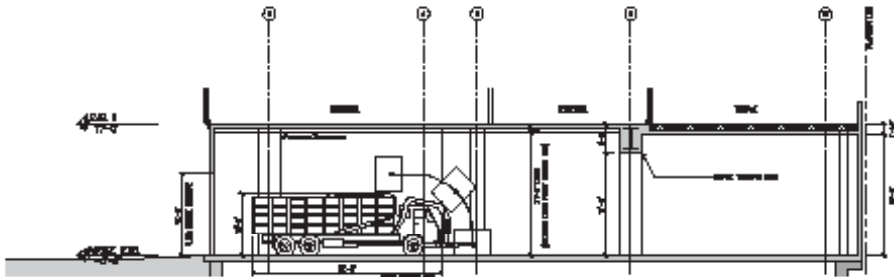
FIGURE 4

Loading Dimensions and Turn Template Into Garage

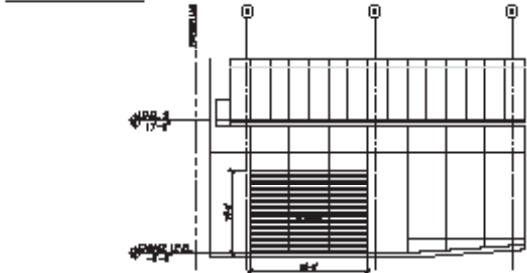
Figure 4 below shows the typical format to present off-street freight loading dimensions, including vertical clearance, width of driveway entry, and turn templates into the garage.



**Truck Turning Road
32' x 8' Truck**



SECTION



ELEVATION

Legend
 entry route
 exit route

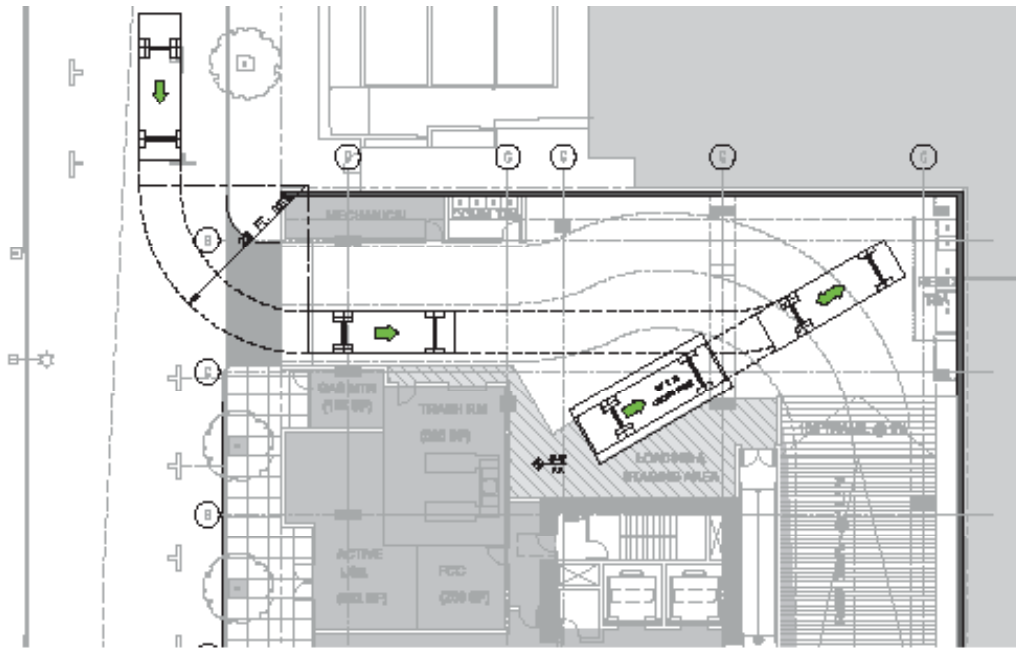
Garage Entry Diagrams

TRASH/DRAWINGS
 SCALE: 1/8" = 1'-0"

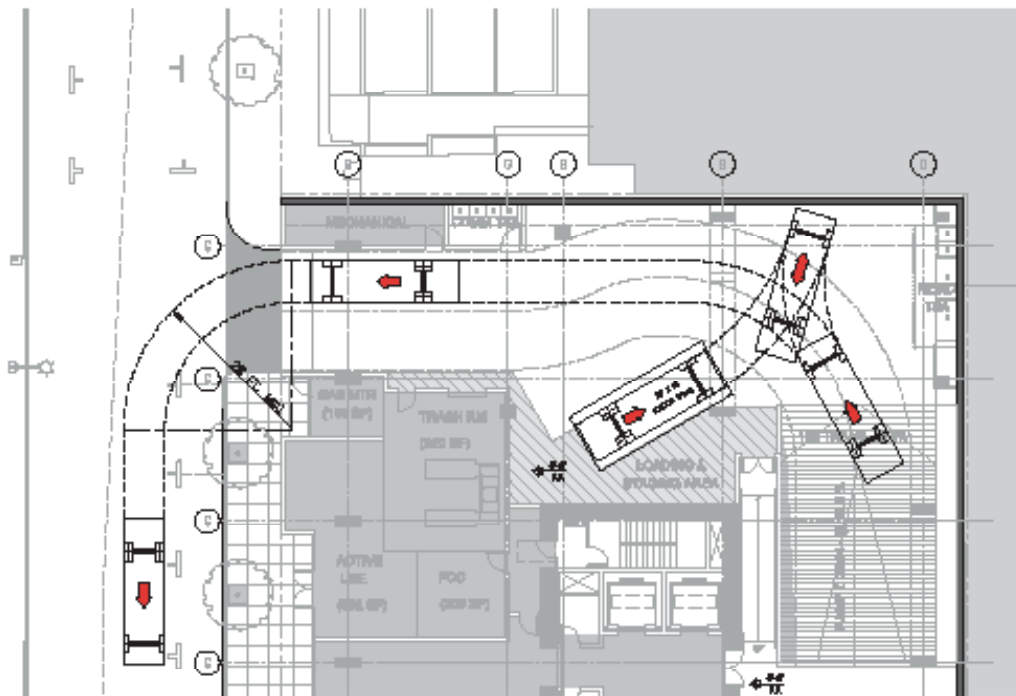
FIGURE 5

Turn Template Into/Out of Off-Street Loading Space

Figure 5 below shows the typical format to present off street freight loading turn templates into the loading space.



Loading Turning RadII
25' x 10' Vehicle INBOUND



Legend

- entry route
- exit route

Loading Turning RadII
25' x 10' Vehicle OUTBOUND

LOADING DIAGRAMS
SCALE 1/8" = 1'-0"

FIGURE 6

Loading Observation Form and Template Sample

Figure 6 below shows the typical format to present commercial and passenger loading observations. This form should be included in the appendices of the transportation study.

LOADING STUDY

Location: (fill in exact project location here)
Please fill in all white cells. Gray cells will auto-calculate.

City: San Francisco

Date:

Day & Time:

Peak Period Observations (3 consecutive hours based on maximum counts of all vehicles traveling in direction of observation)											
Vehicle No.	Passenger Car	Passenger Car Delivery	Common Delivery Service	Large Freight Truck	Extra Legal Trucks	Arrival Time (marked by the moment that the vehicle pull to a stop in the travel lane, transit lane, bike lane, or along the curb)	Departure Time (marked by the moment that the vehicle pull to a stop in the travel lane, transit lane, bike lane, or along the curb)	Stop Along Curb? (Y/N)	Is the loading event associated with the subject building? (Y/N)	Duration Time	Notes (e.g. blocked a bike lane/sidewalk/transit only lane; seemed like a potential hazard to people walking/biking)
1										0:00:00	
2										0:00:00	
3										0:00:00	
4										0:00:00	
5										0:00:00	
6										0:00:00	
7										0:00:00	
8										0:00:00	
9										0:00:00	
10										0:00:00	
11										0:00:00	
12										0:00:00	
13										0:00:00	
14										0:00:00	
15										0:00:00	
16										0:00:00	
17										0:00:00	
18										0:00:00	
19										0:00:00	
20										0:00:00	
21										0:00:00	
22										0:00:00	
23										0:00:00	
24										0:00:00	
25										0:00:00	
26										0:00:00	
27										0:00:00	
28										0:00:00	

FIGURE 6

Loading Observation Form and Template Sample (continued)

Daily total count of vehicles	
Daily passenger loading instances	
Daily passenger loading instances for subject building	
Daily freight loading instances	
Daily freight loading demand for subject building	

Day & Time:		Date:		Direction of travel - Daily Count (24 hours)						
Time	Did you see a vehicle in the direction of travel within the distance specified including moving and stopped? Please count here!	Did you see a vehicle you counted in the first column pick up or drop off people that arrived during this 5 minute interval? Please count here! Do not double count in subsequent intervals.	Did you see the vehicle you counted in the previous column pick up or drop off people from the subject building? Please count here!	Was a vehicle observed for longer than 5 minutes at the same location? Please count here in the interval they depart!	Did you see a vehicle you counted in the first column pick up or drop off goods (including trash/recycling) that arrived during this 5 minute interval? Please count here! Do not double count in subsequent intervals.	Did you see the vehicle you counted in the previous column pick up or drop off goods from the subject building? Please count here!	Was a vehicle observed for longer than 30 minutes at the same location? Please count here in the interval they depart!	Count of subject building Driveway In's	Count of subject building Driveway Out's	Notes
12:00:00 AM										
12:05:00 AM										
12:10:00 AM										
12:15:00 AM										
12:20:00 AM										
12:25:00 AM										
12:30:00 AM										
12:35:00 AM										
12:40:00 AM										
12:45:00 AM										
12:50:00 AM										
12:55:00 AM										
1:00:00 AM										
1:05:00 AM										
1:10:00 AM										
1:15:00 AM										
1:20:00 AM										
1:25:00 AM										
1:30:00 AM										
1:35:00 AM										
1:40:00 AM										
1:45:00 AM										
1:50:00 AM										
1:55:00 AM										
2:00:00 AM										
2:05:00 AM										
2:10:00 AM										
2:15:00 AM										
2:20:00 AM										
2:25:00 AM										
2:30:00 AM										
2:35:00 AM										
2:40:00 AM										
2:45:00 AM										
2:50:00 AM										
2:55:00 AM										
3:00:00 AM										
3:05:00 AM										
3:10:00 AM										
3:15:00 AM										
3:20:00 AM										
3:25:00 AM										
3:30:00 AM										
3:35:00 AM										
3:40:00 AM										
3:45:00 AM										

Mitigation and Improvement Measures

MITIGATION MEASURES FOR LAND USE DEVELOPMENT PROJECTS LOCATED WITHIN AN AREA PLAN

Balboa Park Station Area Plan

Improvement Measure Truck Loading at Kragen

Auto Parts site: Restrict truck access to the food market loading dock to 30 foot trucks or shorter.

- If longer trucks are needed, restrict deliveries to the early morning to avoid peak morning and peak evening commute periods.
- Schedule all deliveries to reduce the potential for trucks waiting to enter the loading dock (which may cause a back-up onto Ocean Avenue). Traffic volumes along Ocean Avenue are constantly high throughout the day; therefore, deliveries between 7:00 a.m. and 7:00 p.m. should be avoided.
- Maintain accurate truck logs to document the time and duration of truck activities.
- Station loading dock personnel at the corner of the Ocean/Lee intersection and at the loading dock to assist truck maneuvers and to manage traffic flows.
- Work with MTA to prohibit on-street parking along Lee Avenue during the peak loading periods to provide sufficient right-of-way for truck maneuvers.

Improvement Measure Truck Loading Phelan

Loop site: Restrict truck access to the loading dock to 30 foot trucks or shorter.

- Schedule all deliveries to reduce the potential for trucks waiting to enter the loading dock (which may cause a back-up onto Ocean Avenue). Traffic volumes along Ocean Avenue are constantly high throughout the day; therefore, deliveries between 7:00 a.m. and 7:00 p.m. should be avoided.
- Maintain accurate truck logs to document the time and duration of truck activities.

- Station loading dock personnel at the corner of the Ocean/Lee intersection and at the loading dock to assist truck maneuvers and to manage traffic flows.
- Work with MTA to prohibit on-street parking along Lee Avenue during the peak loading periods to provide sufficient right-of-way for truck maneuvers.

Transit Center District Plan and Transit Tower

M-TR-1f: Third/Harrison Streets Restriping: At the intersection of Third and Harrison Streets, the Municipal Transportation Agency (MTA) could convert one of the two eastbound lanes leaving the intersection into an additional westbound through lane by restriping the east (Harrison Street) leg of the intersection. In order to allow sufficient turning radius and clearance for heavy vehicles such as buses and trucks, two on-street parking spaces on the south side of Harrison Street east of the intersection would be removed.

M-TR-5: Garage/Loading Dock Attendant: If warranted by project-specific conditions, the project sponsor of a development project in the Plan area shall ensure that building management employs attendant(s) for the project's parking garage and/or loading dock, as applicable. The attendant would be stationed as determined by the project specific analysis, typically at the project's driveway to direct vehicles entering and exiting the building and avoid any safety-related conflicts with people walking on the sidewalk during the a.m. and p.m. peak periods of traffic and pedestrian activity, with extended hours as dictated by traffic and pedestrian conditions and by activity in the project garage and loading dock.

(See also Mitigation Measure M-TR-4b, above.) Each project shall also install audible and/or visible warning devices, or comparably effective warning devices as approved by the Planning Department and/or the Sustainable Streets Division of the Municipal Transportation Agency, to alert people walking of the outbound vehicles from the parking garage and/or loading dock, as applicable.

M-TR-7a: Loading Dock Management: To ensure that off-street loading facilities are efficiently used and that trucks longer than can be safely accommodated are not permitted to use a building's loading dock, the project sponsor of a development project in the Plan area shall develop a plan for management of the building's loading dock and shall ensure that tenants in the building are informed of limitations and conditions on loading schedules and truck size. Such a management plan could include strategies such as the use of an attendant to direct and guide trucks (see Mitigation Measure M-TR-5), installing a "Full" sign at the garage/loading dock driveway, limiting activity during peak hours, installation of audible and/or visual warning devices, and other features. Additionally, as part of the project application process, the project sponsor shall consult with the Municipal Transportation Agency concerning the design of loading and parking facilities.

M-TR-7b: Augmentation of On-Street Loading Space Supply: To ensure the adequacy of the Plan area's supply of on-street spaces, the Municipal Transportation Agency (MTA) could convert existing on-street parking spaces within the Plan Area to commercial loading use. Candidate streets might include the north side of Mission Street between Second Street and First Street, both sides of Howard Street between Third Street and Fremont Street, and both sides of Second Street between Howard Street and Folsom Street. The MTA and Planning Department could also increase the supply of on-street loading "pockets" that would be created as part of the draft Plan's public realm improvements. Increasing the supply of on-street loading spaces would reduce the potential for disruption of traffic and transit circulation in the Plan Area as a result of loading activities. However, the feasibility of

increasing the number of on-street loading spaces is unknown. Locations for additional loading pockets have not been identified, and the feasibility of adding spaces is uncertain, as any such spaces would reduce pedestrian circulation area on adjacent sidewalks. Locations adjacent to transit-only lanes would also not be ideal for loading spaces because they may introduce new conflicts between trucks and transit vehicles. Given these considerations, potential locations for additional on-street loading spaces within the Plan area are limited, and it is unlikely that a sufficient amount of spaces could be provided to completely offset the net loss in supply.

Central SoMa Plan

Mitigation Measure M-TR-6a: Driveway and Loading Operations Plan (DLOP): Sponsors of development projects that provide more than 100,000 square feet of residential, office, industrial, or commercial uses shall prepare a DLOP, and submit the plan for review and approval by the Planning Department and the SFMTA in order to reduce potential conflicts between driveway operations, including loading activities, and pedestrians, bicycles and vehicles, and to maximize reliance of on-site loading spaces to accommodate new loading demand. The DLOP shall be submitted along with a building permit and approval should occur prior to the certificate of occupancy. Prior to preparing the DLOP, the project sponsor shall meet with the Planning Department and the SFMTA to review the proposed number, location, and design of the on-site loading spaces, as well as the projected loading demand during the entitlement/environmental review process. In addition to reviewing the on-site loading spaces and projected loading demand, the project sponsor shall provide the Planning Department and SFMTA a streetscape plan that shows the location, design, and dimensions of all existing and proposed streetscape elements in the public right-of-way. In the event that the number of on-site loading spaces does not accommodate the projected loading demand for the proposed development, the project sponsor shall pursue with the SFMTA conversion of nearby on-street parking spaces to commercial loading spaces, if determined feasible by the SFMTA.

The DLOP shall be revised to reflect changes in accepted technology or operation protocols, or changes in conditions, as deemed necessary by the Planning Department and the SFMTA. The DLOP shall include the following components, as appropriate to the type of development and adjacent street characteristics:

- **Loading Dock Management.** To ensure that off-street loading facilities are efficiently used, and that trucks that are longer than can be safely accommodated are not permitted to use a building's loading dock, the project sponsor of a development project in the Plan Area shall develop a plan for management of the building's loading dock and shall ensure that tenants in the building are informed of limitations and conditions on loading schedules and truck size. The management plan could include strategies such as the use of an attendant to direct and guide trucks, installing a "Full" sign at the garage/loading dock driveway, limiting activity during peak hours, installation of audible and/or visual warning devices, and other features. Additionally, as part of the project application process, the project sponsor shall consult with the SFMTA concerning the design of loading and parking facilities.
- **Garage/Loading Dock Attendant.** If warranted by project-specific conditions, the project sponsor of a development project in the Plan Area shall ensure that building management employs attendant(s) for the project's parking garage and/or loading dock, as applicable. The attendant would be stationed as determined by the project-specific review analysis, typically at the project's driveway to direct vehicles entering and exiting the building and avoid any safety-related conflicts with pedestrians on the sidewalk during the a.m. and p.m. peak periods of traffic, bicycle, and pedestrian activity, with extended hours as dictated by traffic, bicycle and pedestrian conditions and by activity in the project garage and loading dock. Each project shall also install audible and/or visible warning devices, or comparably effective warning devices as approved by the Planning Department and/or the SFMTA, to alert pedestrians of the outbound vehicles from the parking garage and/or loading dock, as applicable.
- **Large Truck Access.** The loading dock attendant shall dictate the maximum size of truck that can be accommodated at the on-site loading area. In order to accommodate any large trucks (i.e., generally longer than 40 feet) that may require occasional access to the site (e.g., large move-in trucks that need occasional access to both residential and commercial developments), the DLOP plan shall include procedures as to the location of on-street accommodation, time of day restrictions for accommodating larger vehicles, and procedures to reserve available curbside space on adjacent streets from the SFMTA.
- **Trash/Recycling/Compost Collection Design and Management.** When designs for buildings are being developed, the project sponsor or representative shall meet with the appropriate representative from Recology (or other trash collection firm) to determine the location and type of trash/recycling/compost bins, frequency of collections, and procedures for collection activities, including the location of Recology trucks during collection. The location of the trash/recycling/compost storage room(s) for each building shall be indicated on the building plans prior to submittal of plans to the Building Department. Procedures for collection shall ensure that the collection bins are not placed within any sidewalk, bicycle facility, parking lane or travel lane adjacent to the project site at any time.
- **Delivery Storage.** the loading dock area to allow for unassisted delivery systems (i.e., a range of delivery systems that eliminate the need for human intervention at the receiving end), particularly for use when the receiver site (e.g., retail space) is not in operation. Examples could include the receiver site providing a key or electronic fob to loading vehicle operators, which enables the loading vehicle operator to deposit the goods inside the business or in a secured area that is separated from the business. The final DLOP and all revisions shall be reviewed and approved by the Environmental Review Officer or designee of the Planning Department and the Sustainable Streets Director or designee of the SFMTA. The DLOP will be memorialized in the notice of special restrictions on the project

Rincon Hill Plan

No applicable mitigation or improvement measures were identified.

Market and Octavia Neighborhood Plan

No applicable mitigation or improvement measures were identified.

Eastern Neighborhoods Rezoning and Area Plan

No applicable mitigation or improvement measures were identified.

Visitation Valley Redevelopment Plan

No applicable mitigation or improvement measures were identified.

Treasure Island and Yerba Buena Island Redevelopment Plan

No applicable mitigation or improvement measures were identified.

Glen Park Community Plan

No applicable mitigation or improvement measures were identified.

Western SoMa Community Plan

No applicable mitigation or improvement measures were identified.

MITIGATION AND IMPROVEMENT MEASURE EXAMPLES

The following lists the typical types of measures that can mitigate or lessen impacts to passenger and commercial loading:

Potentially Hazardous Conditions and Transit Delays

- » Appropriately place loading to maintain sightlines and visibility;
- » Provide convenient off-street or on-street loading space(s) that meet demand;
- » Relocate convenient off-street or on-street loading space(s) for intended users;
- » Relocate driveways for people away from off-street garage/loading docks;
- » Relocate entrances/exits (for people walking) away from off-street garage/loading docks;
- » Manage freight and service deliveries, and passenger loading (e.g., active loading management plan, staff monitoring);
- » Provide operations and maintenance plan for off-street loading turntable;
- » Employ queue abatement measures or pursue design modifications to off-street vehicular entrances/exits to accommodate queuing vehicles (see queue abatement language below);
- » Relocate convenient off-street or on-street loading space(s) away from travel lane which transit operates in or at a transit stop/station location; and
- » Other measures that are related to potential hazards and transit delays can be found in appendices of the other relevant modes' memos of the guidelines

QUEUE ABATEMENT SAMPLE LANGUAGE

Update the sample language, particularly in the second and third paragraphs, to reflect the conditions at the project site and the characteristics of the project. The language should provide specific proactive measures to prevent queues from taking place, as opposed to mitigating the queue after it occurs.

It will be the responsibility of the owner/operator of any off-street parking facility with more than 20 parking spaces (excluding loading and car-share spaces) to ensure that vehicle queues do not occur regularly on the public right-of-way. A vehicle queue is defined as one or more vehicles (destined to the parking facility) blocking any portion of any public street, alley, or sidewalk for a consecutive period of 3 minutes or longer on a daily or weekly basis.

If a recurring queue occurs, the owner/operator of the parking facility will employ abatement methods as needed to abate the queue. Appropriate abatement methods will vary depending on the characteristics and causes of the recurring queue, as well as the characteristics of the parking facility, the street(s) to which the facility connects, and the associated land uses (if applicable).

Suggested abatement methods include but are not limited to the following: redesign of facility to improve vehicle circulation and/or on-site queue capacity; employment of parking attendants; installation of LOT FULL signs with

active management by parking attendants; use of valet parking or other space-efficient parking techniques; use of off-site parking facilities or shared parking with nearby uses; use of parking occupancy sensors and signage directing drivers to available spaces; TDM strategies such as additional bicycle parking, customer shuttles, delivery services; and/or parking demand management strategies such as parking time limits, paid parking, time-of-day parking surcharge, or validated parking.

If the Planning Director, or his or her designee, suspects that a recurring queue is present, the Planning Department will notify the property owner in writing. Upon request, the owner/operator will hire a qualified transportation consultant to evaluate the conditions at the site for no less than 7 days. The consultant will prepare a monitoring report to be submitted to the Planning Department for review. If the Planning Department determines that a recurring queue does exist, the facility owner/operator will have 90 days from the date of the written determination to abate the recurring queue or conflict.