City & County of San Francisco

Street Design Review Manual

Fiscal Year 2025-2026

SFMTA

SAN FRANCISCO MUNICIPAL TRANSPORTATION AGENCY

SAN FRANCISCO FIRE DEPARTMENT

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1. Purpose of this Document

The San Francisco Municipal Transportation Agency (SFMTA) designs and proposes street design projects. The San Francisco Fire Department (SFFD) reviews street design projects to ensure that projects do not interfere with clearance requirements and necessary SFFD emergency response and fire ground operations.

In 2024, the Office of Mayor London Breed requested the Controller's Office, City Performance team undertake a project to help improve the efficiency and predictability of the street design review process. In coordination with the SFFD and SFMTA, City Performance developed a project scope. Through this effort, City Performance conducted staff interviews, developed a process map of the interdepartmental review process, facilitated workshops, and researched design standards and best practices to develop this manual.

This manual details the current street design and review process, guidelines, and requirements for common streetscape projects. In drafting this manual, SFMTA and SFFD have improved the street design review process by ensuring that a clear understanding of the process and standard design specifications is shared between the two departments. These guidelines will enhance the efficiency of the street design review process ensuring that projects get delivered timely and effectively.

This manual will be updated whenever any of the following instances occur:

- SFMTA and SFFD establish or alter policy affecting the street design process or approved street design element specifications and locations
- SFMTA introduces new street design elements that affect SFFD operations that were not originally considered when this document was drafted
- SFFD introduces apparatuses that were not originally considered when this document was drafted
- New technology (i.e., Opticom) is implemented that may provide additional benefits to emergency response operations

SFFD and SFMTA liaisons will coordinate to update the manual when needed.

Agreed to and Approved on January 27, 2026 by:

Dean Crispen
Chief of Department
San Francisco Fire Department

Julie Kirschbaum
Director Of Transportation
San Francisco Municipal Transportation Agency

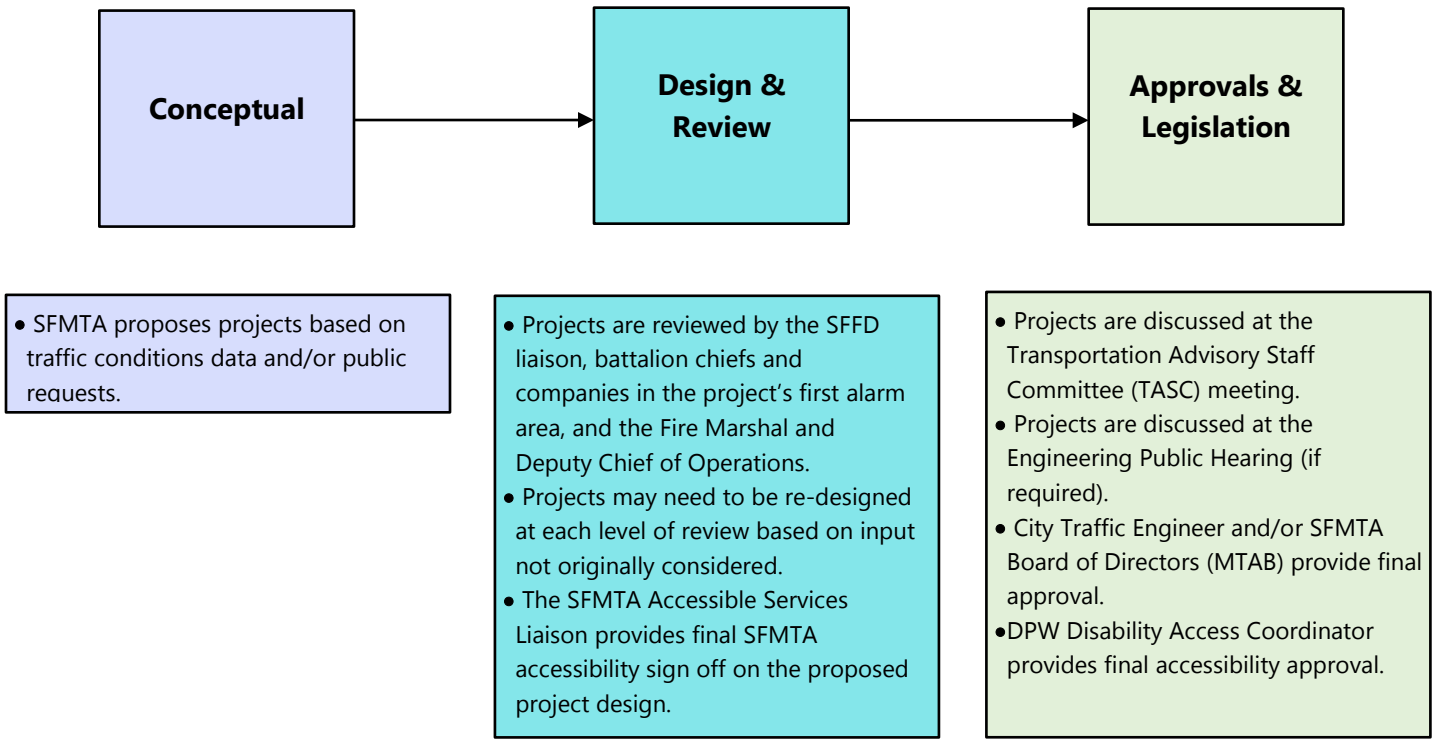
2. Roles and Responsibilities

Title	Description	Street Design/Review Responsibilities
City Traffic Engineer	Leads the Transportation Engineering subdivision, which oversees traffic engineering reviews, transit roadway improvements, traffic permits, construction support, and traffic signal operations, design, and maintenance.	Oversees project proposals at a high level.
SFMTA Liaison	Engages with SFFD Liaison to ensure SFMTA priorities are understood. Works to ensure awareness within SFMTA of process and presentation requirements for engaging with SFFD.	Lead communications with SFFD Liaison regarding project review and logistics.
SFMTA Project Manager or Livable Streets Engineer	Plans, organizes, directs, and controls all or parts of an engineering project from concept through design review. Projects are proposed through the SFMTA Livable Streets Subdivision and Transit Division.	SFMTA Project Managers design projects and collaborate with the SFFD Liaison to review projects. The Senior Engineer leads the design and review for Livable Streets.
SFMTA Accessible Services Liaison	Ensures compliance with Americans With Disabilities Act (ADA) regulations for all types of SFMTA projects.	Reviews SFMTA project designs to ensure adherence to ADA regulations.
SFFD Deputy Chief of Operations	Oversees: Command and control, fire suppression, emergency medical services, disaster operations, mitigation of hazardous materials, weapons of mass destruction, and mass casualty incidents.	Along with the Fire Marshal, provides the final level of project review for small-scale and large-scale projects.
Fire Marshal	Oversees: Continuous and efficient fire prevention practices, code enforcement, fire investigation, and public education.	Along with SFFD Deputy Chief of Operations, provides the final level of project review.
SFFD Liaison	Leads the initial street design project review and communications with SFMTA.	Collaborates with SFMTA Project Managers to review projects and facilitates internal SFFD project review.
Battalion Chief	Oversees multiple fire stations in their battalion.	Included in project review for certain projects that require an enhanced level of review. See Section 8 for additional details.

3. Street Design and Review Project Phases

The map below is a high-level description of the street design and review phases that involve SFMTA and SFFD for most projects. Certain steps in this process may not appear in the process map, as they do not involve SFMTA or SFFD. The full step-by-step process is in Appendix B.

Figure A) Street Design and Review Process Map[1]



[1] This is a high-level summary, and a detailed checklist on project design, review, and approvals is in 4. Project Design and Review Checklist.

3.1 Process Differences by Project Type

The matrix below details aspects of the project design and public engagement process that are specific to certain project types.[2]

Figure B) Process Differences by Project Type

Project type	Common Projects	Initiation Process	Public Engagement	Design Completion Upon Legislation

Traffic Calming[3]	**Block-By-Block Installation:**
	• Vertical deflection
	  ○ Speed humps, speed cushion, speed tables, asphalt raised crosswalk
	• Horizontal deflection
	  ○ Chicane, traffic island, traffic circle
	• Speed limit enhancement
	  ○ Vehicle Speed Feedback Signs (i.e. speed radar sign)
		Residents, elected officials, or other SFMTA projects or programs (e.g. Slow Streets, Quick Build) submit applications/requests for traffic calming to be implemented. SFMTA may also implement Traffic Calming as an emergency response to specific incidents.	Discussed at multiple Open Houses or Public Hearings, often in-person.	• Designs are 100% complete. Public Works or a private contractor will complete construction typically within 18-24 months of the public hearing date, followed closely by installation of permanent striping, pavement markings, and signs by SFMTA Operations

Quick Build/Near-term Changes	**Multi-Block Installation:** • Transit Only Lane Quick Build or Transit Stop Upgrade • Bicycle Safety Quick Build & Bicycle Toolkit • Slow Street/Neighborway • Road Diet • Crosswalk upgrades/longer walk times • Pedestrian Toolkit • Lower Speed Limit • Curb Management	SFMTA proposes projects based on studied traffic conditions.	Discussed at multiple Open Houses or Public Hearings, often in-person.	• Designs are 100% complete. • SFMTA or Public Works will complete the project's installation. • SFMTA Vision Zero Safe Streets Evaluation Program will analyze the project outcomes post-implementation and will typically provide an informational report to MTAB 24 months after the project has been implemented.

[2] This matrix applies to most small-scale and large-scale projects. SFFD also reviews private property projects that may involve the installation of required street design elements on public streets or sidewalks. This manual does not provide a detailed process for ensuring SFMTA's involvement during such reviews. However, SFFD should routinely engage SFMTA in these situations to maintain clear communication and coordination.

[3] Small-scale projects only involving high-visibility crosswalks, advance limit lines, leading pedestrian intervals, extended pedestrian signal crossing times, and/or traffic signal timing typically do not require SFFD review.

Large-Scale	• Capital-intensive bicycle and major streetscape projects • Capital-intensive transit corridor improvements • Capital-intensive pedestrian projects	SFMTA proposes projects based on traffic studies that identify corridors appropriate for transit, bicycle, or streetscape improvement projects.	Projects are discussed at multiple Open Houses or Public Hearings, often in-person.	• Conceptual designs complete. • SFMTA may utilize Quick Build tools or methods to install preliminary versions of legislated projects. ○ Post-implementation review of Quick Build designs may lead to adjustments in projects' final detailed designs. • SFMTA will conduct street surveys for utilities and will coordinate with other agencies to finalize the project design.

4. Project Design and Review Process

This process details the design and review process that the SFMTA Project Manager and the SFFD Liaison follow to ensure efficient, effective, and predictable collaboration.
As demonstrated in Figure A and discussed below, projects should move through the conceptual phase and design phase prior to recommended designs being introduced at public, decision-making meetings or appearing at TASC.

SFMTA Project Managers may also find it helpful to review the internal tracking checklist used by the SFFD Liaison (Appendix H) to understand the specific questions or items they may be asked about.

4.1 Conceptual Phase

The Conceptual Phase is when the SFMTA Project Manager explores different design options for a project. At this stage, no blueprints have been developed and SFMTA has not yet engaged the public for their input on a proposed design.

If the SFMTA Project Manager is new to working with the SFFD Liaison, the SFMTA Liaison first orients the Project Manager to the street design review process. The SFMTA Liaison then introduces the Project Manager to the SFFD Liaison before entering the Conceptual Phase for a project.

Below are the steps SFMTA and SFFD staff follow when projects are in the Conceptual Phase:

Figure C) Conceptual Phase Process Steps

Step 1	SFMTA Project Manager reviews the project with the SFMTA Accessible Services Liaison to identify the accessibility requirements for the project design. (see 4.4.1 Accessibility Considerations)
Step 2	SFMTA Project Manager notifies the SFFD liaison of the project before it is introduced to the public (or appears at the Transportation Advisory Staff Committee (TASC)).
	• Notification may include briefing SFFD Liaison at Office Hours, via email, or phone/video call, or in some cases, at a site visit. The SFMTA Liaison and SFMTA Accessible Services Liaison are included in this notification.
	• Notification includes the type of project, estimated completion date/deadlines, as well as the measures the Project Manager is taking to address known SFFD considerations (see 4.4.1 Fire Code Requirement and 4.4.2 SFFD Review Considerations) flagged below.[4] The notification indicates whether the proposed project is on a priority emergency response route identified on the SFFD Priority Routes Map (see Appendix F).
	• Notification includes a graphic diagram of the street design element's placement on the road where possible[5]. This diagram includes the following, if applicable: ○ Clear widths

[4] For SFFD project design preferences, reference the Street Design Specifications & Appropriate Locations section.
[5] For examples of street design element diagrams, reference Appendix C. A diagram will help speed up the review process, especially for non-engineers.

	○ Bikeway + Buffer widths ○ Parking lanes ○ Hydrant locations and whether they are low or high pressure ○ Fire Department Connection (FDC) locations and the distance from the fire apparatus staging area to the FDCs
Step 3	SFFD Liaison provides high-level feedback and flags any concerns.
	• SFFD Liaison highlights specific areas or streets where the installation of the proposed street design element would be inappropriate.
	• SFFD Liaison highlights the areas or streets that would be most used for SFFD emergency response operations.

4.2 Design Phase

The Design Phase is when the SFMTA Project Manager collaborates with the SFFD Liaison to design the project. Both parties will design and review multiple iterations of project blueprints before determining a final design. Below are the steps SFMTA and SFFD staff follow when projects are in the Design Phase:

Figure D) Design Phase Process Steps

Step 1	SFMTA Project Manager collaborates with the SFFD Liaison to ensure that the project meets minimum clearance requirements before it is discussed at the SFMTA Pre-Staff meeting.
	• SFMTA Project Manager collaborates with SFFD well in advance of the Pre-Staff meeting as project design is often an iterative approach and certain project types (e.g., capital-intensive projects and new project designs) may require longer review times.
Step 2	SFMTA Project Manager sends final project design to SFFD Liaison, including cross-section view and Fire Department Access document (a template of this document will be developed and included in an update of the document in 2026) . The cross-section view includes: • Lanes of traffic • Sizing • Spacing The Fire Department Access document includes: • SFFD response route • Lane/Street width • Hydrants • SFFD connections • Typical building heights represented in stories, e.g. "2-3 stories" • Distance from frontage of building to street (fire aerial truck access)
Step 3	SFFD Liaison acknowledges receipt and informs SFMTA Project Manager of the project's estimated review time.
Step 4	Necessary SFFD stakeholders review the project.

	• The SFMTA Streets and/or Transit Director must be included/CC'd in communications when the SFFD Fire Marshal or Deputy Chief of Operations make project review decisions. • This may include site visits, which SFMTA may be asked to join.
Step 5	If SFFD stakeholders have no objections to the project, SFMTA Project Manager presents the project at the next Pre-Staff meeting.
	• If SFFD stakeholders object to the project, the SFMTA Project Manager will either re-design the project to address SFFD's objections or meet with the SFMTA Liaison and division director to discuss the next steps.
	• If project changes are made in the time between Pre-Staff and TASC, the project manager will promptly communicate the change to the SFFD liaison.
Step 6	• If the project is large in scale, SFMTA & SFFD will notify MYR/BOS that the project is progressing to the Approvals & Legislation phase once review is complete.
Step 7	SFMTA Project Manager confirms with the SFFD Liaison that the project has met minimum clearance requirements/agreements during the steps 2-6 before it is discussed at the TASC meeting.[6]

4.3 Legislation Phase

Once the SFMTA Project Manager and SFFD Liaison have determined an appropriate final design, projects are discussed at TASC and are finalized during the Legislation Phase. SFMTA and SFFD staff ensure that the above steps have all been completed before progressing to the final step below:

Figure E) Legislation Phase Process Steps

Step 1	SFMTA ensures that all projects to be discussed at TASC have been reviewed by SFFD.

4.4 Project Design & Review Considerations & Requirements

4.4.1 Accessibility Considerations

The SFMTA Project Manager also considers their project's effect on street and sidewalk accessibility. Because accessibility requirements may differ on a case-by-case basis, the SFMTA Project Manager contacts their SFMTA Accessible Services Liaison to understand all accessibility considerations and requirements. The SFMTA Project Manager may also reference the accessibility resources listed in Appendix D.

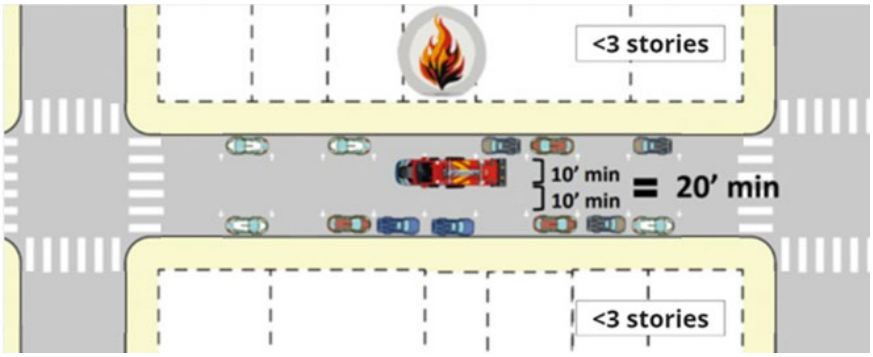
[6] Occasionally, projects discussed at TASC do not meet SFFD's minimum requirements. In such cases, the departments either reach an agreement on mitigation measures or allow the project to proceed without concurrence, with both departments fully aware of the decision.

The SFFD Liaison only collaborates with the SFMTA Project Manager to ensure that projects meet emergency response requirements. 4.4.1 Fire Code Requirement

Projects should adhere to the Fire Code clearance requirement to ensure that SFFD apparatuses have adequate space on streets to traverse to or stage at the scene of an emergency.

- **20' Clear Width** – Required for one- to three-story buildings not requiring aerial access for emergency operations (SF Fire Code Section 503.2.1).

Figure F) 20' Clear Width Diagram[7]



4.4.2 SFFD Review Considerations

These are the factors that will guide the SFFD Liaison's project review. When developing an initial project concept, the SFMTA Project Manager may want to account for the below considerations in the project design, which may be part of the general SFMTA design process already.

- **Existing Street Design Elements:** Interacting with multiple street design elements during an emergency response may slow down SFFD response times and affect emergency response operations.
- **SFFD Priority Emergency Response Routes:** SFMTA Project Managers generally avoid proposing projects on SFFD priority response routes (see Appendix F: SFFD Priority Emergency Response Routes). Projects proposed for priority response routes will likely require more extensive field testing and engagement with local battalions.

- **26 foot clear-width**: The SFFD often requests projects to include **26' clear-width** for streets with multi-story buildings needing aerial access for emergency operations. However, including 26' clearance is **not** currently a mandatory requirement in the Fire Code. When project priorities conflict on this, SFFD and SFMTA will need to engage in an

[7] In certain situations, SFFD may deem a passenger loading zone as part of the clear width if there is a reasonable expectation that the space will not be parked.

extended collaboration process to determine appropriate designs that do not include 26' clear width. See the escalation process in Section 7: Project Escalation

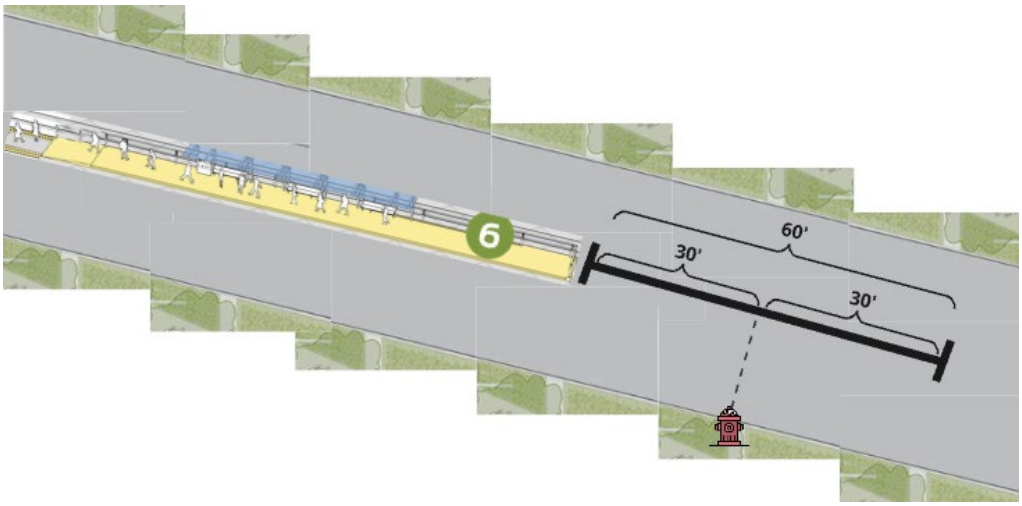
- **Building Clearance**: Locating an apparatus within 15-30' of the face of a building improves safety for emergency responders by allowing aerial ladders to be deployed at an angle that avoids telephone lines and reduces the risk of responders falling between ladder gaps due to poor climbing angles.
- Aerial apparatus need to be able to position themselves so that ladders are more than 10' from Overhead Contact System (OCS) lines used by trolley buses.

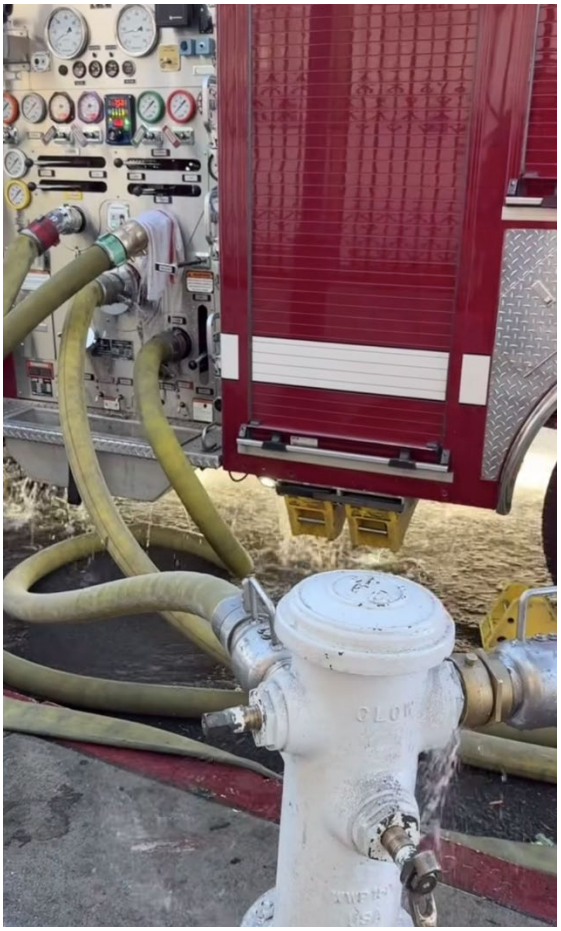
Figure G) Building Clearance Diagram and Related Images

- **Fire Hydrants**: Street design elements located close to fire hydrants may affect apparatuses' ability to connect hoses to the hydrants during firefighting operations.

- **Mid-Block Fire Hydrants** - SFFD apparatuses need 30' of clear width on both sides of the midblock element (such as a mid-block boarding island) that faces a fire hydrant (60' total clear-width). This is standard operating procedure for response and fire rig placement. SFFD needs this both for the use of the hydrant and for staging fire ground operations.

Figure H) Mid-Block Fire Hydrant Clearance Diagram[8]; Hydrant Access and Staging Images





[8] Figure H's diagram depicts a transit boarding island that is providing 30' of clear width ahead of the midblock fire hydrant. Transit boarding island image sourced from NACTO.

***Note**:

- **Fire Department Connections (FDCs)** – SFFD apparatuses need access to FDCs on buildings

SFMTA has ensured that all projects to be discussed at TASC have been reviewed by SFFD beforehand. Occasionally, there may be instances where projects are brought to TASC even though they face objections from SFFD.

5. Expected Project Review Times

The table below details the expected SFFD review time and required level of review based on the type of project proposed.

Figure I) Expected Project Review Times by Project Type

Project Type	Level of Review	Estimated Review Time
Small-Scale - Projects confined to one block that only utilize Approved Street Design Elements.*	SFFD liaison, Fire Marshal, & Chief of Operations	Around 1 week
Large-Scale - Projects involving multi-block pre-approved street design element installation.	SFFD liaison, Battalion Chiefs and affected companies, Fire Marshal, & Chief of Operations	Around 4 weeks
Large-Scale - Projects involving street design elements that are not pre-approved.	SFFD liaison, Battalion Chiefs and affected companies, Fire Marshal, & Chief of Operations	Around 4 weeks
* Approved street design elements are listed in 8. Street Design Elements Matrix.		

6. Review Prioritization

The SFMTA manages many projects, while the SFFD has one project reviewer. The purpose of this section is to offer guidelines for the SFMTA on best practices for identifying and communicating project review priorities.

By default, the SFFD liaison reviews projects on a **first in, first out** basis, meaning they are prioritized for review in the order they are submitted to the SFFD liaison. When a project is **higher priority**, it **bypasses** the first in, first out review process. This section outlines factors and considerations for raising a project's priority for review.

Priority Project Factors

Factors impacting a project's priority:

- Paving schedule
- Funding sources/opportunities
- Alignment with mayoral/executive leadership priorities
- Elevated community safety concern

SFMTA priority project types (as of May 2024):

- Projects on the Vision Zero High-Injury Network
- Biking/Rolling Plan projects, especially those in school zones
- Muni Forward Transit Priority Projects

Project Prioritization – SFMTA

When a project is higher priority, the **SFMTA project manager**:

- Confirms project's priority relative to other projects with SFMTA leadership and other PMs (e.g., during pre-staff meeting)
- Communicates elevated priority to SFFD liaison as early as possible (e.g., during conceptual phase) while including/CC-ing the SFMTA liaison

Project Prioritization – SFFD

When a project is higher priority, the **SFFD Liaison**:

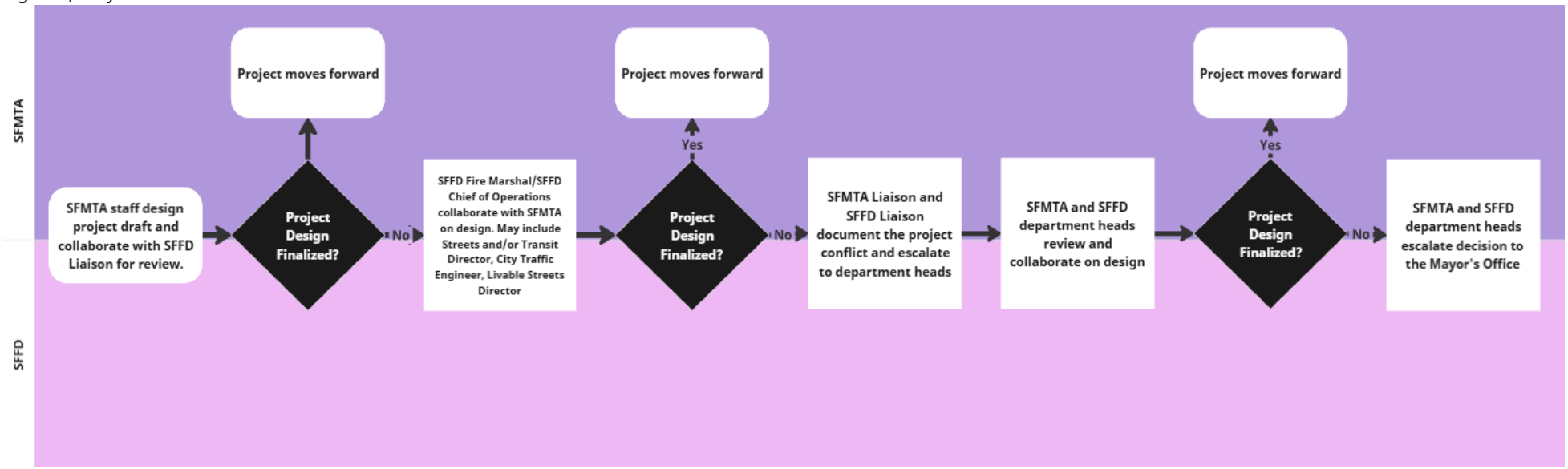
- Moves the project to the front of the review queue
- Communicates the project's priority to other SFFD project reviewers
- Continues to communicate on review timeline and progress with SFMTA Project Manager
- Informs SFMTA Project Manager on impacts to other projects' review timelines, if any

Note that generally, prioritization becomes less effective the more projects get simultaneously flagged as priority. Non-priority projects in the queue may experience delays as priority projects are reviewed first. If other factors are to inform a project's priority in the future, this section of the manual will be updated and reviewed by both SFMTA and SFFD.

7. Project Escalation

Sometimes, specific project designs that may conflict with current policy or procedure may need to be escalated to the department head level. The visual below summarizes project review escalation steps.

Figure J) Project Escalation Process[9]



[9] Note that this is a simplified version to highlight the review escalation steps, thereby leaving out many of the collaborative and iterative project design steps. Please refer to Appendix B: Detailed Street Design and Review Process for the full process steps laid out in more detail. If a project should be escalated to the department head level, please use the project escalation memo template in Appendix G: Project Escalation Memo Template.

8. Street Design Elements Matrix

Below are two tables that list commonly installed street design elements.

- The first table lists the street design elements that require limited review from only the SFFD Liaison and SFFD Chiefs when the proposed project follows approved designs and is confined to one block. Reviewing these elements typically requires seven days for proposed street design elements that adhere to existing policy before progressing to TASC. Proposed street design elements that do not adhere to existing policy will require extended review.
- The second table lists the street design elements that require extra discussion and an extended review from the SFFD Liaison, Battalion Chiefs, and SFFD Chiefs. Review for these elements typically requires one month before progressing to TASC.

Figure K) Street Design Elements Review-Time Matrix

Street Design Elements Requiring Limited Review (7 days)	
Traffic Calming	
	Speed hump
	Speed table
	Asphalt raised crosswalk
	Speed cushion (3-lump, 4-lump, or 5-lump)
	Turn Safety Treatments (enhanced centerline, rubber speed bumps, or slow-turn wedges)
	Mountable Islands and Delineators
Bicycle and Major Streetscape	
	Painted safety zone with no fixed object(s)
	Paint-only projects (Class II – standard bike lane, Class III – shared lane)
Transit	
	Transit lanes

Street Design Elements Requiring SFFD Liaison, Battalion Chief, and SFFD Chief Review (1 month)	
Traffic Calming	
	Traffic circles
	Neckdowns
Bicycle and Major Streetscape	
	Significant corridor/neighborhood-wide projects involving no turn on red restrictions
	Perpendicular or angled parking that results in less than the preferred minimum street clearance
	Bicycle paths (Class I – off-street paved bikeways)
	Separated bikeways (Class IV – bicycle facilities separated from traffic)
Transit	
	Transit bulbs
	Rail/bus boarding islands

	Medians/thumbnail islands

9. Street Design Specifications & Appropriate Locations

The information below includes detailed design specifications and appropriate locations that have been reviewed by both SFMTA and SFFD according to fire response needs. Additionally, this section identifies SFMTA's most prioritized street design elements. The SFMTA Project Manager references this prioritization list when selecting proposed street design elements.

Each design in this section identifies a limited review and extended review criteria for SFFD review.

Note that this manual defines "width" and "length" in line with their historical uses at SFMTA.

- "Width" is perpendicular to the roadway.
- "Length" is parallel to the roadway (measured in the direction that vehicles travel).

9.1 Traffic Calming

Below are the most utilized Traffic Calming street design elements. Different Traffic Calming elements are appropriate based on specific street conditions. The SFMTA Project Manager references the standard design for each element to determine the most appropriate options when proposing Traffic Calming projects. The SFMTA Project Manager may choose to propose designs outside of pre-approved specifications. In such cases, project review times may be extended and could require additional discussions. The table below includes hyperlinks to each element's approved design.

Figure L) Traffic Calming Approved Designs

Midblock Elements[10]	Approved Design
Speed Hump	Speed Humps9.1.1 Speed
Speed Table	Speed Table
3-Lump Speed Cushion	3-Lump Speed Cushion
4- or 5-Lump Speed Cushion	4-or 5- Lump Speed Cushion

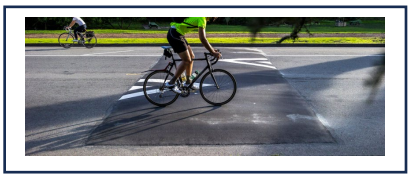
Elements at Intersections	Approved Design
Asphalt Raised Crosswalk	Asphalt Raised Crosswalk
Turn Safety Treatments	Turn Safety Treatments
Painted Safety Zones w/ No Fixed Objects	Painted Safety Zones w/ No Fixed Objects

[10] Vertical traffic calming measures, including speed humps, cushions, and tables are marked with reflective paint on both sides of the measure.

Traffic Circles	Traffic Circles

Elements at Slow Streets	**Approved Design**
Traffic Diverters	Traffic Diverters 9.1.6

9.1.1 Speed Humps



Definition: Parabolic vertical traffic calming devices intended to slow traffic speeds to the block's speed limit

Limited Review: Midblock installation on

- Blocks adjacent to a school with a passenger loading zone
- Streets that are less than 25' in curb-to-curb width that are not on an SFFD priority response route or MUNI route

Extended Review: Midblock installation on

- Streets over 13% in incline
- Priority emergency response routes

Not Appropriate for: Midblock installation on

- MUNI routes

Design Specification: See SFMTA Standard Plan Speed Hump Drawing No. STR-7687, Rev. No. 3. Approved 12/8/04, Revised 07/01/17.

Specifications Related to SFFD Emergency Response: Height: 3.25"-3.75"; Width (curb-to-curb): 12'

9.1.2 Speed Tables

Definition: Midblock traffic calming device that raises the entire wheelbase of a vehicle to reduce its traffic speed. Speed tables are longer than speed humps and are flat-topped.

Limited Review: Midblock installation on transit and emergency response routes where

- Roadway is too narrow for speed cushions
- Flagrant speeding or a crash pattern is observed that may warrant a more robust traffic calming response

Extended Review: Speed table designs that do not follow the approved design specification

> ***Note**: SFMTA is currently exploring alternative speed table designs. SFFD will analyze how apparatuses interact with the alternative designs. Based on the analysis, SFMTA and SFFD will update this section to include other standard design specifications, if applicable.

Design Specification: See SFMTA Standard Plan Speed Table Drawing No. STR-7687.1, Approved 10/02/17

Specifications Related to SFFD Emergency Response: Height: 3.25”-3.75”; Length (direction of travel): 22’

9.1.3 3-Lump Speed Cushions

Definition: Speed humps that include two-wheel cutouts to allow transit vehicles and emergency response apparatuses to pass unaffected, while reducing passenger car speeds

Limited Review: Midblock installation on all streets that do not meet the criteria for 4- or 5-lump speed cushions, including

- Transit routes that run only in one direction
- Emergency response routes that are not wide enough for 4- or 5-lump speed cushions
- Residential streets not wide enough for 4- or 5-lump speed cushions

Extended Review: 3-lump speed hump designs that do not follow the approved design specification

Design Specification: N/A

Specifications Related to SFFD Emergency Response: Height: 3.25”-3.75”

9.1.4 4- or 5-Lump Speed Cushions

Definition: Speed cushions that include three- or four-wheel cutouts to allow transit vehicles and emergency response apparatuses to pass unaffected, while reducing passenger car speeds

Limited Review: Midblock installation on

- MUNI routes
- Priority response routes
- Streets where higher vehicle volumes are anticipated

Extended Review: 4- or 5-lump speed hump designs that do not follow the approved design specification

Design Specification: N/A

Specifications Related to SFFD Emergency Response: Height: 3.25”-3.75”

9.1.5 Asphalt Raised Crosswalks

Definition: Speed tables located at intersections with crosswalk markings on the flat-topped portion of the element intended to increase pedestrian visibility and reduce car speeds at intersections.

Asphalt Raised Crosswalks vs. Traditional Raised Crosswalks:

Traditional raised crosswalks are constructed using concrete to elevate the roadway to match the height of the adjacent sidewalk, eliminating the need for curb ramps. These installations require detailed design by the SFPW Streets and Highways Division and are typically implemented as part of larger capital projects.

In contrast, the SFMTA Traffic Calming Program installs asphalt raised crosswalks, which share a similar profile to speed tables. These crosswalks are raised 3.5"-3.75" above the roadway surface but stop 2'-4' short of the curb. This design avoids potentially costly modifications to sidewalks, curb ramps, and drainage infrastructure.

Limited Review: Midblock installation on crosswalks where flagrant speeding, failure to yield, or a crash pattern is observed that may warrant a more robust traffic calming response.

Extended Review: Asphalt raised crosswalks that do not follow the approved design specification.

SFFD Has Highlighted Significant Concerns Regarding: Installation on intersections that would require apparatuses to slow down or stop twice for both raised crosswalks at the intersection

Design Specification: See SFMTA Standard Plan Asphalt Raised Crosswalk Drawing No. STR-7687.2, Approved 10/02/17

Specifications Related to SFFD Emergency Response: Height: 3.25"-3.75"; Length (direction of travel): 22'

9.1.6 Turn Safety Treatments

Definition: Combinations of waist-high vertical delineator posts, small rubber speed bumps, and painted safety zones to encourage slower, wider turns and increase drivers' awareness of other road users.

Limited Review: Installation on appropriate intersections

Extended Review: Turn safety treatments beyond those listed in the definition.

Design Specification: See SFMTA Left-Turn Safety Drawing No. STR-8349, Approved 6/30/23

Specifications Related to SFFD Emergency Response: N/A

9.1.7 Painted Safety Zones w/ No Fixed Objects

Definition: Painted road areas that wrap around sidewalk corners to make pedestrian crossing intersections more visible to people driving. Painted Safety Zones are often painted khaki and flanked by delineators (white plastic posts) to further reinforce that this area is to be kept clear for visibility.

Limited Review: Installation on appropriate intersections as determined by the SFMTA Livable Streets Subdivision

Extended Review: Installation of Painted Safety Zones with fixed traffic delineators not identified under limited review

Design Specification: N/A

Specifications Related to SFFD Emergency Response: N/A

9.1.8 Traffic Circles

Definition: Circular central island intended to lower speeds at minor uncontrolled intersection crossings that typically include posts indicating the correct direction of travel as well as decorative elements or landscaping features

Limited Review: Installation of a Traffic Circle with a 2" mountable apron (shown in the image to the right) on appropriate intersections as determined by the SFMTA Livable Streets Subdivision

Extended Review: Installation of a Traffic Circle that

- Reduces emergency clear width to less than 20'/26'
- Does not have a mountable apron

Design Specification: See Department of Public Works Traffic Circle Drawing No. 87,176, Approved 4/30/07

Specifications Related to SFFD Emergency Response: Distance from curb to face of Traffic Circle: 20' minimum

9.1.9 Traffic Diverters

Definition: Street design elements intended to divert traffic from a certain street and onto a different one

Limited Review: Installation of Soft-Diversion elements as defined by the Slow Streets Design Tool-kit, including soft-hit plastic post traffic diverters and signs at appropriate intersections as determined by the SFMTA Livable Streets Subdivision

Extended Review: Installation of hard traffic diversion elements that apparatuses cannot easily traverse including but not limited to

- Concrete curbs
- Traffic barriers

Design Specification: N/A

Specifications Related to SFFD Emergency Response: N/A

9.2 Bicycle and Major Streetscape

Figure M) Bicycle and Major Streetscape Approved Designs

Bike Lanes	SFMTA Priority	Approved Design
Paint-Only (Class II & Class III)	Least prioritized and is installed when a Class I or Class IV bikeway/path is not feasible.	9.2.1 Paint-Only Bikeway (Class II & Class III)
Separated Bikeway (Class IV)	Prioritized when bicycle paths are not feasible.	9.2.2 Separated Bikeway (Class IV)

Parking	SFMTA Priority	Approved Design
Parking Configuration	When appropriate (see approved design)	Parking Configuration

9.2.1 Paint-Only Bikeway (Class II & Class III)

Definition: Class II bikeways are standard bikeways reserved for the preferential or exclusive use of people biking, indicated by road markings. Class III shared bikeways are wide travel lanes shared by bicyclists and vehicles that are marked with sharrows. While a tool, Class III bikeways are not typically used by SFMTA.

Limited Review: Installation on

- Streets with high traffic volume
- Priority emergency response routes

Extended Review: N/A

Design Specification: Refer to the below resources:

- DOT Highway Design Manual
- NACTO Bicycle Design Manual
- NACTO Transit Design Manual
- California Manual on Uniform Traffic Control Devices

Specifications Related to SFFD Emergency Response: Width: 6’ (SFMTA preferred width)

9.2.2 Separated Bikeway (Class IV)

Definition: Bicycle facilities that are separated from traffic by parked cars, safe-hit posts, transit islands, or other physical barriers.

Limited Review: N/A

Extended Review: Case-by-case basis

Design Specification: Refer to the below resources[11] [12] [13] [14]:

- DOT Highway Design Manual
- NACTO Bicycle Design Manual
- NACTO Transit Design Manual
- California Manual on Uniform Traffic Control Devices

Specifications Related to SFFD Emergency Response: N/A

[11] Separated bikeway designs will adhere to the curb management policies set forth in the SFMTA Curb Management Strategy.
[12] When implementing parking protected bikeways, SFMTA shall not permit parking within 30' of corner hydrants.
[13] Bikeways that are 12-14' wide, such as two-way bikeways or wide one-way bikeways with buffers, can sometimes suffice as space for emergency vehicles to traverse a street or to stage at the scene of an emergency.
[14] Separated bikeway designs will adhere to the accessibility guidelines set forth in the Bike Lane Buffer Widths Memo.

9.2.3 Parking Configuration

Definition: SFMTA may reconfigure parking on streets for numerous reasons including creating more parking spaces, separate bicyclists from traffic, or ensure intersection daylighting. Parking measurements are based on the average vehicle size and street sizes and are set in order to maintain the required clear-width to facilitate emergency access (see Section 4.4.1 Fire Code Requirement).

Limited Review: Proposed projects that meet or exceed the following measurements will be considered Small Scale as it relates to review times agreed to in Section 5 unless the project includes other elements that would trigger a Large-Scale review. Projects proposing parking with smaller parking footprints would trigger a Large-Scale review. SFMTA staff will aim to avoid designing parking spaces with a smaller footprint (measured perpendicular from the curb-face) unless project design elements require smaller parking stalls.

Figure N) SFMTA and SFFD Preferred Parking Measurements[15]

Small Scale Review less than or equal to:	
Parallel Parking End Stall	7.84 ft
Parallel Parking Regular Stall	7.5 ft
30° Front-In Angle	13.5 ft
45° Front-In Angle	16 ft
60° Front-In Angle	17 ft
90° Front-In Angle	18 ft
45° Back-In Angle	15.5 ft
60° Back-In Angle	16.5 ft

Specifications Related to SFFD Emergency Response: See above measurements.

[15] When implementing angled parking, SFMTA should mark where the parking space ends and instruct drivers to not park outside of the markings when SFFD has concerns that improperly parked cars will impact their operations due to site specific constraints.

9.3 Transit

Figure O) Transit Approved Designs

Boarding Islands	SFMTA Priority	Approved Design
Bus Boarding Island	Prioritized on bus routes since low-floor buses with ramps can accommodate lower curbs.	9.3.1 Bus Boarding Island
Rail Boarding Island	Fully accessible boarding islands with level boarding at one or all doors is the highest priority, but if that is not feasible, a boarding island is still necessary.	9.3.2 Rail Boarding Island Rail Boarding Island with Accessible Mini-Highs

Medians	SFMTA Priority	Approved Design
Pedestrian Refuge	When appropriate (see approved design)	Pedestrian Refuge
Median Thumbnail	When appropriate (see approved design)	Median Thumbnail

Lane Adjustments	SFMTA Priority	Approved Design
Transit Lane	When appropriate (see approved design)	9.3.4 Transit Lane
Bus Bulb	When appropriate (see approved design)	9.3.5 Bus Bulb

9.3.1 Bus Boarding Island

Definition: Dedicated waiting and boarding areas for passengers that streamline transit service and improve accessibility.

Limited Review: Installation of a bus boarding island on a segment of the street where 20/26' roadway emergency clear width is maintained and SFFD does not need to traverse over enroute to an emergency or mount at the scene of a fire.

Extended Review: Installation of a boarding island on segments of the street where 20/26' roadway emergency clear width is not maintained or where SFFD must traverse enroute to an emergency or mount at the scene of a fire.

Design Specification: See Department of Public Works Boarding Island Drawing No. 87,172, Approved 4/30/07

Street Conditions: The following Bus Boarding Island heights are used based on given SFFD emergency response requirements.

- 6" (or higher) curb height:
    - A six-inch curb height is the standard height for sidewalks and transit islands. A continuous 6" curb is appropriate when the boarding island is on a segment of the street where the 20/26' roadway emergency clear width is maintained and an SFFD vehicle would not need to traverse over enroute to an emergency or mount at the scene of a fire.
- 4" curb height:
    - A four -inch curb height is appropriate where partially positioning an SFFD apparatus on the boarding island is needed for firefighting operations.
- 2" curb height:
    - A two-inch curb height is required along portions of a boarding island that provide access to private driveways, SFFD needs to traverse over enroute to an emergency, intersects with SFFD apparatuses' turn radii, the boarding island reduces the emergency clear roadway width to less than 20/26', or is within 15-30 feet of a 3-8 story building where SFFD would stage an aerial apparatus for firefighting operations.

Specifications Related to SFFD Emergency Response: Curb Height: 2"-6+"

9.3.2 Rail Boarding Island

Definition: Curb-level stop that facilitates boarding onto rail lines.

Limited Review: Installation on rail lines where

- 20/26' roadway emergency clear width is maintained
- the approved design specification is followed
- Front segment of boarding island is 2-4"

Extended Review: Installation of an island that

- does not follow the approved design specification
- Front segment of boarding island is 6-8" where 20/26' roadway emergency clear width is not maintained

Design Specification[16]: See Department of Public Works Boarding Island Drawing No. 87,172, Approved 4/30/07

Street Conditions: The front segment of Rail Boarding Islands adhere to the heights below based on whether they interfere with apparatuses' turn radii:

- 2" when:
  - Front segment of the boarding island interferes with apparatuses' turn radii
- 6" when:
  - Front segment of the boarding island does not interfere with apparatuses' turn radii

Specifications Related to SFFD Emergency Response[17]: Height: 2-6"; Length (direction of travel): 20' or shorter

[16] All new construction or alterations to Rail Boarding Islands must be accessible to the maximum extent feasible by law.

[17] SFMTA turn templates represent the largest SFFD engine and ladder trucks.

9.3.3 Pedestrian Refuge

Definition: A pedestrian refuge is a protected area where people may safely pause or wait while crossing a street.

Limited Review: Installation of a 2-4" Pedestrian Refuge on streets where 20/26' roadway emergency clear width is maintained

Extended Review: Installation of a 6-8" Pedestrian Refuge on streets where 20/26' roadway emergency clear width is not maintained

Design Specification: N/A

Specifications Related to SFFD Emergency Response: Height: 2-8"

9.3.4 Transit Lane

Definition: Designated portion of the street for the preferential or exclusive use of transit and emergency response vehicles.

Limited Review: Any installation of a transit lane that is at least 12' wide

Extended Review: N/A

Design Specification: N/A

Specifications Related to SFFD Emergency Response: Width: 12'

9.3.5 Bus Bulb

Definition: Curb extension that aligns the bus stop with the parking lane, allowing buses to stop and board passengers without ever leaving the travel lane.

Extended Review: Bus bulbs do not have a standard design. Final bus bulb design is dependent on multiple factors including rate of congestion, number of travel lanes, rate of left turns made at intersections, and proximity to other bus bulbs. SFMTA and SFFD will collaborate to determine appropriate bus bulb designs where necessary.

SFMTA and SFFD have proposed the below design guidelines for proposing a Bus Bulb:

- Install Bus Bulbs diagonally to each other on the street to avoid necking down the street and increasing congestion.
- Make Bus Bulbs extend a shorter distance into the street to increase the emergency access space on the street.
- Make Bus Bulbs longer in the direction of travel to increase the space for other cars and emergency vehicles to travel around the bus before arriving at the intersection.
- Avoid installing Bus Bulbs on streets with only one lane in opposing directions to keep fire apparatuses from being stuck behind a bus enroute to an emergency.

9.3.6 Rail Boarding Island with Accessible Mini High

Definition: Used as a retrofit for rail lines with high-floor boarding, using a small platform and ramp to permit accessible boarding to select vehicle doors.

Extended Review: Rail Boarding Islands with Accessible Mini Highs do not have a standard design. These types of boarding islands are required at any new or altered stop in the City to the maximum extent feasible. SFMTA and SFFD will communicate to understand each boarding island's effect on SFFD operations and make subsequent plans to mitigate this effect.

9.3.7 Median Thumbnail

Definition: A median thumbnail is a curb-level element that is typically used as an extension of a boarding island.

Design Specification: See Department of Public Works Standard Traffic and Center Island Drawing No. 87,172, Approved 4/30/07

Extended Review: Final median thumbnail designs are dependent on multiple accessibility and emergency response factors. SFMTA and SFFD collaborate to determine appropriate Median Thumbnail designs where necessary. SFMTA and SFFD have proposed the design guidelines below for proposing a Median Thumbnail:

- Design Median Thumbnails to have a 4" height when they do not interfere with apparatuses' turn radii, and a 2" height when they do interfere with apparatuses' turn radii
- Include tactile guidance on the thumbnail such as a detectable strip on the street that indicates to pedestrians that they are to turn and walk towards the sidewalk, not further into the street
- Include plastic posts at the end of the thumbnail to signal to pedestrians that they are to turn and walk towards the sidewalk, not further into the street

9.4 Street Design Elements for Future Discussion

9.4.1 New and Existing Street Design Elements

SFMTA and SFFD are collaborating to determine the standard design and review process for the street design elements below. SFMTA and SFFD will update this manual at a future date to include these elements in the above sections once a standard design is determined.

Figure P) Street Design Elements Collaboration Status

Street Design Element	Collaboration status as of 11.7.24
Asphalt Raised Crosswalks	Further discussion is needed regarding the use of asphalt raised crosswalks on both sides of an intersection, and regarding the maximum allowable street grade.
Bulb Islands (Slow Streets)	Further discussion is needed regarding how far non-mountable bulb islands can extend from the curb into the street.
Median Thumbnails	Need to define guidelines that address the goals of SFMTA, SFFD, and SFDPW.
"Pan Basher" Barricades	SFMTA and SFFD have agreed on a barricade design for Shotwell St. Further discussion is needed on whether this design can be applied to all appropriate City streets.
Neckdown Treatments (Traffic Calming)	Testing on Kirkham St beginning Fall 2024, to be followed by a 9– to 12-month evaluation period.
No Turn on Red	Standard designs/guidelines are needed for future rollouts. SFMTA and SFFD are working to implement emergency vehicle preemption for apparatuses that travel down streets with No Turn on Red.
Parking Configuration	Discussions currently in progress to determine single, agreed-upon list of parking measurements
Bus Boarding Islands	SFMTA and SFFD need to reach an agreement on approved designs for Bus Boarding Islands.

SFMTA would also like to prioritize the following items for upcoming collaboration with SFFD to determine and document design and review guidelines:

Figure Q) Prioritized Items for Collaboration

SFMTA Recommended Tool	Collaboration Needed as of 11.7.24
Traffic Diverters (Slow Streets)	SFMTA would like to pursue a knockdown test to evaluate metal signs as a standard in-roadway treatment, either in a hatched area or on a mountable concrete island.
Bikeway Buffer Upgrades	SFMTA would like to upgrade roadway striping to concrete buffers on some bikeways to reduce vehicle intrusion into

	the bikeway. SFMTA would also like to further develop design standards for curbside and separated bikeways regarding standard distances from building face, access to fire hydrants, and clear width.

9.4.2 Future Street Design Elements

Note that SFMTA will periodically introduce new street design elements to be considered for installation on City streets. Elements that do not interfere with SFFD clearance and operational requirements fall under limited review unless new findings suggest that a deeper evaluation is needed. New element designs that fall under similar design envelope/constraints as previously approved designs also follow limited review guidelines.

In these cases, the SFMTA will clearly explain how the new design fits into a previously approved design envelope to the SFFD Liaison. The SFFD Liaison will likely need to loop in SFFD's Deputy Chief of Operations and Fire Marshal. If the parties agree that the newly proposed design falls under similar design envelope/constraints as previous designs with a Limited Review period, the new design will also have a Limited Review period.

New street design elements will be added to this manual under Section 9. Street Design Specifications & Appropriate Locations.

10. Post-Implementation Change Request Process

After installation, street design elements may require changes due to either:

1. The street design element's final installation does not reflect the TASC-approved design specifications.
2. The street design element(s) have a measurable negative impact on emergency response operations.

If the street design element's final installation does not reflect the TASC-approved design, the change request process is as follows:

Figure R) Post-Implementation Change Request Process

Step 1	SFFD liaison informs the SFMTA liaison of the finding immediately.
Step 2	SFMTA liaison communicates the finding to the SFMTA project manager responsible for the street design element.
Step 3	SFMTA project manager addresses the finding in their project closeout with the contractor or city staff responsible for the project's installation.

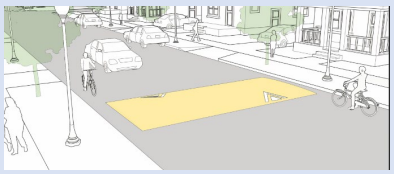
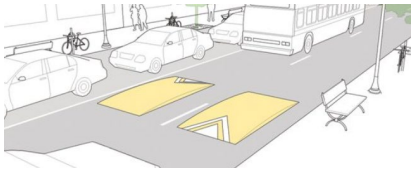
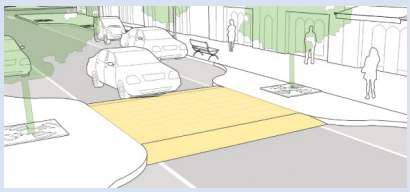
If an approved element is causing measurable negative impacts on emergency response operations, the change request process is as follows:

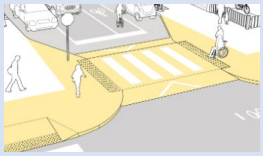
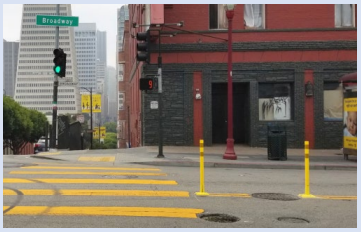
Street Design Type	Change Request Process
Traffic Calming	**SFFD** reports measurable negative impacts related to Traffic Calming street design elements to the SFFD liaison who can alert the SFMTA liaison or have further conversations with the SFFD Deputy Chief of Operations. • SFMTA considers the finding and remove the installed street design element if necessary. • SFMTA considers the finding in future street design planning.
Quick Build	The **Vision Zero Safe Streets Evaluation Program** will analyze projects pre- and post-implementation to review outcomes and determine design effectiveness. • Findings will usually be reported to the public and to the SFMTA Board of Directors within 24 months of implementation. • If the analysis proves necessary, SFMTA will remove the installed street design element.
	SFFD reports measurable negative impacts related to Quick Build street design elements to the SFFD liaison who can alert the SFMTA liaison or have further conversations with the SFFD Deputy Chief of Operations. • SFMTA considers the finding and remove the installed street design element if necessary. • SFMTA considers the finding in future street design planning.

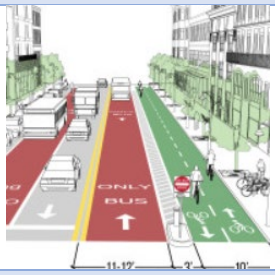
Appendix A: Street Design Elements Glossary

The table below includes definitions and visual examples of the street design elements discussed in the Street Design Elements Matrix. Definitions are sourced from the National Association of City Transportation Officials (NACTO).

Figure S) Street Design Elements Glossary

Street Design Element	Definition	Visual
Speed Humps	Speed humps are parabolic vertical traffic calming devices intended to slow traffic speeds on low volume, low speed roads. Speed humps are 3–4 inches high and 12–14 feet wide, with a ramp length of 3–6 feet, depending on target speed. Speed humps reduce speeds to 15–20 mph and are often referred to as "bumps" on signage and by the public.	
Speed Cushions*	Speed cushions are either speed humps or speed tables that include wheel cutouts to allow large vehicles to pass unaffected, while reducing passenger car speeds. They can be offset to allow unimpeded passage by emergency vehicles and are typically used on key emergency response routes. Speed cushions extend across one direction of travel from the centerline, with longitudinal gap provided to allow wide wheelbase vehicles to avoid going over the hump. *Note, use of center-running slots by private motorists is illegal because doing so requires them to drive down the middle of the road, potentially into the path of oncoming vehicles (CVC §21650). If repeated violations are observed or reported, SFMTA will consider painting a double-yellow centerline across the speed cushion to further emphasize and make clear to motorists that driving through the slots is illegal (CVC §21651).	
Speed Tables	Speed tables are midblock traffic calming devices that raise the entire wheelbase of a vehicle to reduce its traffic speed. Speed tables are longer than speed humps and flat-topped, with a height of 3–3.5 inches and a length of 22 feet. Vehicle operating speeds for streets with speed tables range from 25–45 mph, depending on the spacing. Speed tables may be used on collector streets and/or transit and emergency response routes. Where applied, speed tables may be designed as raised midblock crossings, often in conjunction with curb extensions.	
Mini Roundabout	Mini roundabouts and neighborhood traffic circles lower speeds at minor intersection crossings and are an ideal treatment for uncontrolled intersections. Mini roundabouts may be installed using simple markings or raised islands but are best applied in conjunction with plantings that beautify the street and the surrounding neighborhood. Careful attention is paid to the available lane width and turning radius used with traffic circles.	

Raised Crosswalks	Raised crosswalks create a safe, slow-speed crossing and public space at minor intersections. Like speed humps and other vertical speed control elements, they reinforce slow speeds and encourage motorists to yield to pedestrians at the crosswalk.	
Neckdown	Curb extensions may be applied at midblock to slow traffic speeds and add public space. When utilized as a traffic calming treatment, mid-block curb extensions are referred to as "pinchpoints," "chokers," or "neckdowns."	
Painted Safety Zones*	Painted safety zones are painted road areas that wrap around sidewalk corners to make pedestrian crossing intersections more visible to people driving. Painted safety zones are often painted khaki and flanked by delineators (white plastic posts) to further ensure that this area is to be kept clear for visibility. – MTA	
No Turn on Red Restrictions	Right-turn restrictions for curbside and offset transit lanes prevent transit delays from turning vehicles and may reduce the frequency of pedestrian injuries. Right-turn prohibitions are useful for intersections in downtown areas with high walking and bicycling levels, or for streets with right-side bike facilities, where permitting turns would result in long delays for transit vehicles running in the right lane.	
Enhanced Centerlines*	Waste-high delineator posts on two-way streets, both approaching and leaving the intersection. Centerlines mark the center of the roadway, dividing the two directions of traffic, and usually end before the crosswalk or edge of the intersection. Making the centerlines more visible leverages a driver's tendency to stick with the default of following lane guides and adds "friction costs" that prevent them from crossing the centerline to cut the corner. Rubber Speed Bumps "extend the centerline" on two-way streets beyond the crosswalk and into the intersection. This creates a visual cue for drivers that suggests that the turning barrier extends into the intersection, and the tactile feedback of the bump reminds drivers that they are turning the corner too sharply: less than 90 degrees: into the far crosswalk. -MTA	
Slow-Turn Wedges	Slow-Turn Wedges (also called painted safety zones) and rubber speed bumps in the "cuttable" corners (turn pockets) of one-way to one-way left turns. These make the areas drivers are to avoid during a turn more visible, and the tactile feedback reminds them they are cutting the corner and turning too early.	
Traffic Diversion	Street design elements intended to divert traffic from a certain street and onto a different one	
Bicycle Paths*	Bicycle paths (Class I) are off-street paved bikeways. They are separated from vehicle traffic, but are almost always shared with pedestrians. - MTA	

Standard bike lane (Class II)	A standard bike lane (Class II) is a portion of road reserved for the preferential or exclusive use of people biking, indicated by road markings. Those riding in a bike lane must always be aware of driveways, mixing zones, car doors and vehicles such as taxis or paratransit that may temporarily occupy the lane.	
Shared lanes (Class III)	Shared lanes (Class III - sharrows) are typically wide travel lanes shared by bicyclists and vehicles. They are commonly marked with the standard or greenback sharrows and wayfinding signs to indicate shared use. The sharrow symbol is a bicycle silhouette with two chevrons above it indicating the proper direction of travel. Those riding a bike should be cautious of the door zone, mixing zones and turning lanes.	
Separated Bikeways (Class IV)	Separated bikeways (Class IV), also commonly referred to as cycle tracks or protected bikeways, are bicycle facilities that are separated from traffic by parked cars, safe-hit posts, transit islands or other physical barriers. Always be considerate of slower-moving bicyclists, pedestrians and driveways.	
Bus Bulbs	Bus bulbs are curb extensions that align the bus stop with the parking lane, allowing buses to stop and board passengers without ever leaving the travel lane. Bus bulbs help buses move faster and more reliably by decreasing the amount of time lost when merging in and out of traffic.	
Boarding Islands, Key Stops, Medians (ADA / Accessibility stops)	In-street boarding island stops are applicable on streets with center-running transit where in-lane stops are desirable. Especially on streets with high transit ridership or service frequency, center-boarding islands enhance service for bus or rail.	
Transit Lanes	Transit lanes are a portion of the street designated by signs and markings for the preferential or exclusive use of transit vehicles, sometimes permitting limited use by other vehicles. Transit lanes, unlike on-street transitways, are not physically separated from other traffic.	
* Definitions sourced from SFMTA.		

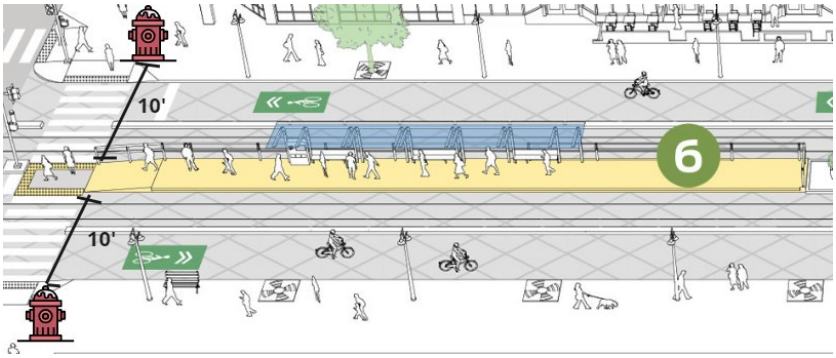
Appendix B: Detailed Street Design and Review Process Map

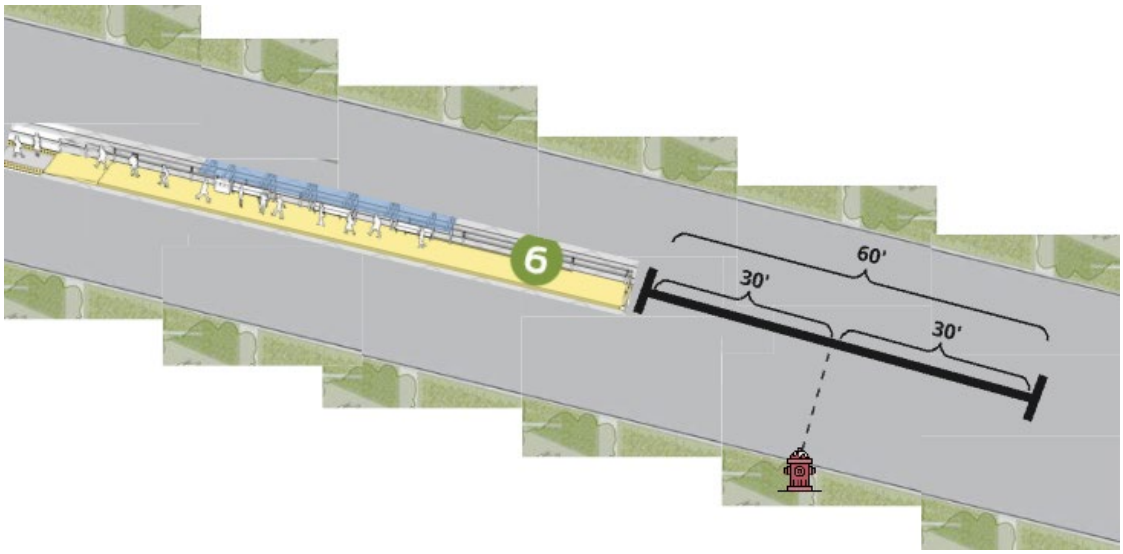
1. Click this link to access the detailed street design and review process map.

Appendix C: Examples of Street Design Diagrams

The below images are examples of street design diagrams that the SFFD liaison would prefer when initially reviewing projects in the Conceptual Design Phase. These images allow for all SFFD stakeholders to understand the location of the street design element and its effects on emergency response operations, regardless of their experience in reviewing street design projects.

Figure T) Examples of Interpretable Street Design Diagrams




6
60'
30'
30'

Appendix D: Accessibility Resources

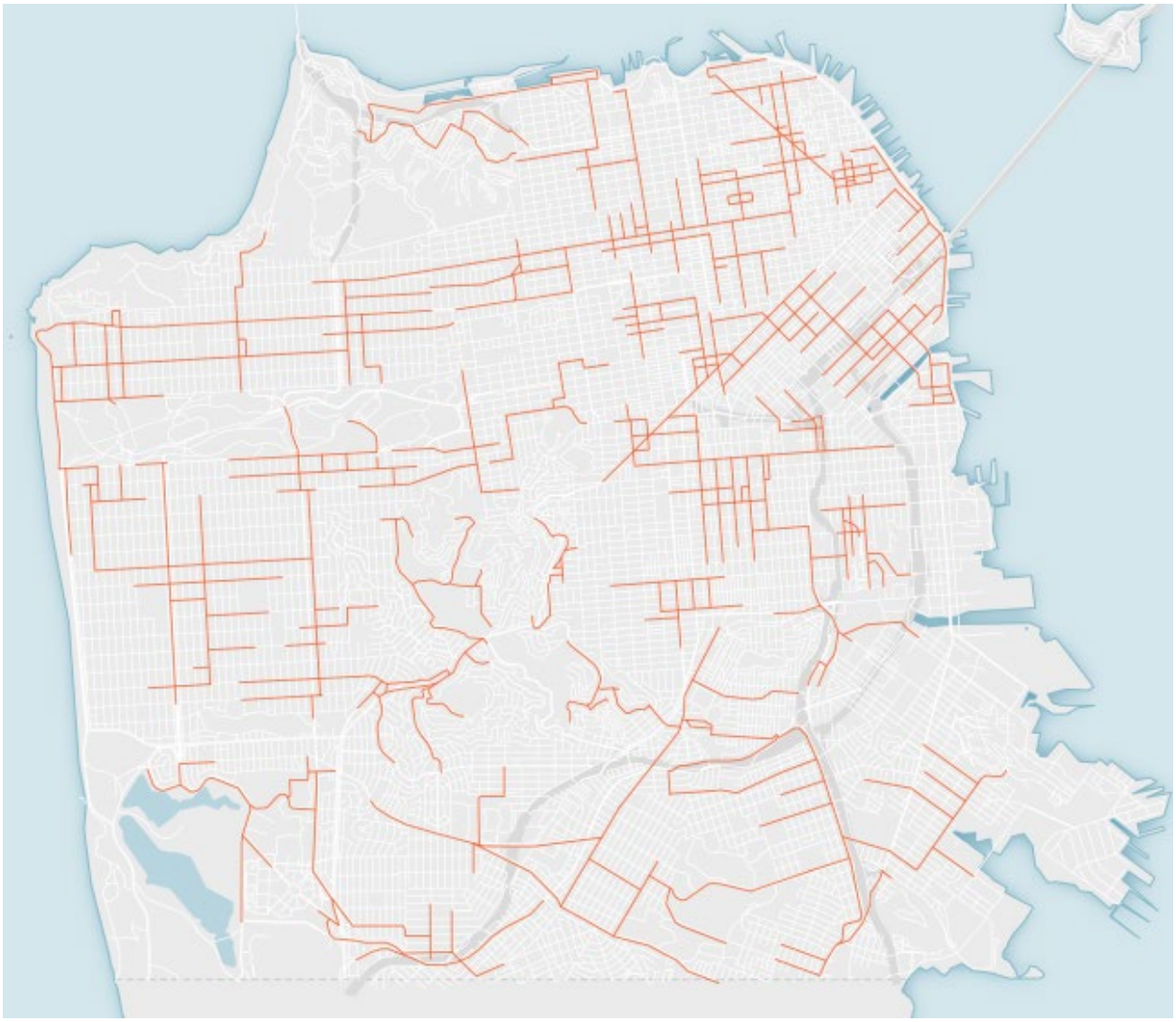
1. PROWAG
2. California Building Code, Chapter 11B
3. Guidelines for Accessible Building Blocks for Bicycle Facilities
4. Getting to the Curb
5. Shared Spaces Manual

Appendix E: References

1. California Department of Transportation Traffic Calming Guide
2. NACTO Contextual Guidance for Selecting All Ages & Abilities Bikeways.
3. SFMTA Curb Management Strategy
4. SF Planning Code Section 138.1 Streetscape and Pedestrian Improvements
5. Slow Streets Design Tool-Kit
6. NACTO – Pittsburg: Creating a Process to Prioritize Projects
7. DOT Highway Design Manual
8. NACTO Bicycle Design Manual
9. NACTO Transit Design Manual
10. California Manual on Uniform Traffic Control Devices

Appendix F: SFFD Priority Emergency Response Routes

Figure U) SFFD Priority Response Route Map



Received from SFMTA on December 12, 2024

This appendix section is to be updated and clearly communicated to SFMTA when priority routes are updated.

Appendix G: Project Escalation Memo Template

The SFMTA Project Manager and SFFD Liaison can use the template below to outline the policy or design conflict and provide relevant information to their respective department heads before a project progresses to the MTAB Legislation Phase. The department heads engage the Mayor's Office if a decision still cannot be made. Please see Appendix B: Detailed Street Design and Review Process for a flow chart summarizing the escalation process.

Request for Review or Decision on [Project Name]

To: Recipient's Name

FROM: Author's Name
Title (if not on the letterhead)

CC:

SUBJECT: **Title Here (i.e., Request for Review or Decision on [Project Name]**

Purpose: The first paragraph states the purpose of the memorandum, or why the issue requires a decision and is being brought to the attention of the recipient.

Background or Context: This is a summary of factors to be considered in making the decision, the issue's historical background, and its current status. Identify legislative or other underlying requirements.

Please present options for resolution and explain the implications of those options. Include internal input, accessibility considerations, and clearance requirements. If the issue is particularly complex, additional background, diagrams, or maps may be provided as numbered attachments.

Timelines: Is there a key action that is awaiting this decision or required by a certain date (i.e., upcoming MTAB hearing, policy directive, voter mandate)? If so, please explain. Do not include this section if it is not relevant.

SFMTA Staff Recommendation: Please provide SFMTA's recommendation of specific action(s) requested or a clear set of options.

SFFD Staff Recommendation: Please provide SFFD's recommendation of specific action(s) requested or a clear set of options.

Decision: Leave this section blank. The recipient details their decision on the above recommendation(s) and signs their signature on the associated signature line below.

Approve/date_____ Disapprove/date_____

Modify/date_____ Needs discussion/date_____

Appendix H: SFFD Liaison Tracking Checklist

This Checklist is for the sole use of the SFFD Liaison and included here for the awareness of SFMTA Project Managers. Project Managers may wish to review this document to be aware of the information that the SFFD Liaison will be looking for during their internal review and tracking. It is expected that the SFFD Liaison may use this as a tool to facilitate conversations with SFMTA Project Managers. SFMTA Project Managers may find it useful to review this checklist in advance of meetings with the SFFD Liaison.

Project information

Information from SFMTA. Updated as needed throughout project duration	
Project Name:	**Included elements:** ☐ Traffic Calming ☐ Bicycle or Major Streetscape ☐ Transit
Project Address:	
Project Manager:	
Date:	
Proposal/Request: *(including planned number of elements).*	
Background information / Comments:	

Conceptual Phase

Information from SFFD Liaison
Conceptual Phase site visit recommended? ☐ Yes ☐ No
Is this project part of the San Francisco Fire Department Priority Route Map? (Appendix F) ☐ Yes ☐ No
Is Fire Department access verified? ☐ Yes ☐ No
Is the SFFD Emergency Access Summary sheet included? ☐ Yes ☐ No ☐ Not necessary- only SFFD Liaison review needed

Information from SFFD Liaison	**Information from SFMTA**
SFFD recommended/requested changes (Include action item and date as needed)	**SFMTA approach to address requested changes** (Include action item and date as needed)
Item 1:	Item 1:
Item 2:	Item 2:
Item 3:	Item 3:
Item 4:	Item 4:

Information from SFFD Liaison

Expected materials for Design Phase: ☐ Cross section view ☐ SFFD Emergency Access Summary ☐ Fire apparatus turn radius document

Design Phase

Information from SFMTA
Attached materials include: ☐ Final project plan ☐ Cross section view ☐ SFFD Emergency Access Summary ☐ Fire apparatus turn radius ☐ Others:

Information from SFFD Liaison	
Reviewers: ☐ SFFD Liaison ☐ Fire Marshal ☐ Chief of Operations ☐ Battalion Chiefs: (list) ☐ Affected Companies: (list)	Design Phase site visit required? ☐ Yes ☐ No
	Hydrant locations verified ☐ Yes ☐ Not needed
	Fire lane dimensions and access confirmed ☐ Yes ☐ Not needed
Building heights and setbacks confirmed ☐ Yes ☐ Not needed	Fire department access points verified ☐ Yes ☐ Not needed
Streets, parking, and fire lane signage approved ☐ Yes ☐ Not needed	

Information from SFFD Liaison	**Information from SFMTA**
SFFD recommended/requested changes. (Include action item and date as needed)	**SFMTA approach to address requested changes or concerns** (Include action item and date as needed)
Item 1:	Item 1:
Item 2:	Item 2:
Item 3:	Item 3:
Item 4:	Item 4:

Completed by SFFD Liaison
SFFD confirms project ready for pre-staff meeting and TASC? ☐ Yes