GREEN INFRASTRUCTURE GRANT PROGRAM
DESIGN SUBMITTAL CHECKLIST

Meeting #1 - Project Kickoff

The first meeting will include an overview of the Grant Award and introduction to the project. The first meeting should be scheduled after Grant Award and should include key stakeholders, for example: property owner, grant manager, and key site representatives. For school sites, this should include school principal and/or vice principal.

Site Investigation and Studies

Site investigations and studies are to be completed as early as possible during design development and submitted with the 35% Design Submittal. SFPUC should be made immediately aware of study outcomes that result in significant changes to the submitted concept design (e.g., changes to soil type, BMP selection, or total DMA).

- ☐ **Site Survey**: if no site survey exists, complete a topographical survey of the project area; existing utility information should be obtained, sufficient to design and construct the project, through as-builts, record drawings, and/or underground utility field locating
- ☐ **Infiltration Test**: if infiltration BMPs are proposed, perform an infiltration test using an SFPUC approved infiltration testing method [🔗]
- ☐ **Structural Feasibility Study**: if structural BMPs are proposed on an existing facility (e.g., vegetated roof), have the structural loading capacity assessed by a structural engineer to confirm feasibility

Meeting #2 - Concept Development Meeting

During the second meeting, the Grantee will present how the results of initial community engagement activities, geotechnical investigation, and engineering survey have further informed or updated the project concept design that was included with the application. The second meeting should be scheduled during the initial design phase. The following members must be present at this meeting:

- ☐ SFPUC GI Grants team
- ☐ property owner representative(s)
- ☐ grant manager
- ☐ lead designer
- ☐ key community stakeholders

35% Design Submittal (100% DD)

The 35% design drawings define the preliminary site layout and design schemes, including key details and calculations to explain the overall stormwater management plan.

- **General**: draft notes, abbreviations, legend, location map, sheet index/key map (if necessary)
- **Existing Conditions Plan**: site survey including all available/known utility information
- **Demolition Plan**: preliminary plan delineating demolition area and significant elements (e.g. structures, utilities) to be demolished
- **Site Plan**: overall site plan showing existing and proposed facilities and limit of work
- **Facility Layout Plan**: existing vegetation, structures, and utilities; drainage facility locations and critical dimensions (width, length, area)
- **Grading and Drainage Plan(s)**: existing site contours and drainage structures to remain, important spot elevations (FG, TC, FL, HP/LP, RIM, INVs), surface drainage routing, stormwater pipe locations and routing, drainage structures with detail references, connections to existing storm drain/combined sewer pipes
- **Site Utility Plan**: utility points of connections at buildings, alignments on site, and lateral connections to existing storm drain or combined sewer infrastructure
- **Civil Details**: preliminary details; green infrastructure components to be customized using SFPUC GI Typical Details [🔗] , or equivalent
- **Landscape Plans**: site materials plan, planting areas, and draft plant schedule
- **Landscape Details**: preliminary details, illustrative sections that show the integration of landscape and site-specific green infrastructure components based on SFPUC GI Typical details [🔗]
- **Stormwater Management Plan**: stormwater management plan drawing; Calculation Summary Table showing management areas, facility sizes, and performance; preliminary details; and updated GI BMP Sizing Calculator [🔗]
- **Specifications**: table of contents or outline specifications (see SFPUC specifications for bioretention and permeable pavements in the SMR documents [🔗])
- **Construction Cost Estimate**: estimate of probable construction cost based on 35% design (AACE class 3) with appropriate design/estimating contingency included (recommended 10% to 30%)
- **Supporting Documentation (if applicable)**: infiltration test results using an SFPUC approved infiltration testing methods [🔗] ; structural feasibility assessment; manufacturer cut sheets and relevant O&M materials
- **Community engagement summary**: varies by project, please include SFPUC GI Grants team on workshops or community meetings as appropriate
- **Co-benefit submittal**: varies by project, please include SFPUC GI Grants team on workshops or community meetings as appropriate

Meeting #3 - Design Stage

Following the 35% design submittal, schedule a meeting with SFPUC to review the proposed design and a summarize how prior feedback was incorporated. The property owner, grant manager, lead designer, maintenance or operations staff, and key community stakeholders must be present.

Permitting Milestone: After you have completed 35% design, begin the environmental review process and visit the San Francisco Permit Center for initial permit review. Refer to the Permitting Tips below for more information on permitting.

65% Design Submittal (50% CD)

The 65% design drawings address 35% comments, refine the layout and drainage plan, add detail to the grading of the facilities and project site, add irrigation plans, refine the cost estimate, and confirm demo and utility work.

- ☐ **General**: refine notes and legend/abbreviation information
- ☐ **Existing Conditions Plan**: refine site survey including all available/known utility information
- ☐ **Demolition Plan**: add detail on type of demolition, identifying removal of on-site and adjoining infrastructure including concrete, pavement, curbs, site furnishings, and utilities
- ☐ **Site Plan**: refine project layout
- ☐ **Facility Layout Plan**: refine and add detail to drainage facility dimensioning, add notes on all site improvements, dimension key setbacks to buildings, property lines, and utilities
- ☐ **Grading and Drainage Plan(s)**: add all spot elevations, refined project grading including proposed contours, stormwater pipe attributes (size, length, inverts), drainage structure attributes (size, rim, inverts) ; if connecting to or modifying existing structure, identify interior size, grate/cover size, rim elevation, and inverts
- ☐ **Site Utility Plan**: add utility pipe sizes, invert elevations, materials, and structure attributes
- ☐ **Civil Details**: add specific details for all drainage structures, utilities, and site features
- ☐ **Landscape Plans**: refine materials plan, finalize plant schedule, and develop quantities
- ☐ **Landscape Details**: add specific landscape details and draft signage (if included), develop coordinated (civil and landscape) sections that show the integration of landscape and site-specific green infrastructure components
- ☐ **Irrigation Plans**: include points of connection, meters, backflows, pipes, valves
- ☐ **Stormwater Management Plan**: update stormwater management plan to match current design configuration; update stormwater performance calculator
- ☐ **Specifications**: draft full specifications
- ☐ **Construction Cost Estimate:** updated estimate of probable construction cost based on 65% design (AACE class 2) with appropriate design/estimating contingency included (recommended 10% to 20%)
- ☐ **Supporting Documentation (if applicable)**: updated infiltration test results; updated structural assessment; include manufacturer cut sheets and relevant O&M manuals
- ☐ **Community engagement summary**: varies by project, please include SFPUC GI Grants team on workshops or community meetings as appropriate
- ☐ **Co-benefit submittal**: varies by project, please include SFPUC GI Grants team on workshops or community meetings as appropriate

95% Design Submittal (90% CD)

The 95% design drawings address 65% comments and provide details for all materials and structures and specificity for locating all project elements necessary to build the project.

- ☐ **General**
- ☐ **Existing Conditions**
- ☐ **Demolition Plan**
- ☐ **Site Plan**
- ☐ **Facility Layout Plan**
- ☐ **Grading and Drainage Plan(s)**: add enlarged plans as required
- ☐ **Site Utility Plan**
- ☐ **Civil Details**
- ☐ **Erosion and Sediment Control Plan**: plan view of project site, nearby storm drains and/or catch basins, footprints of green infrastructure features, existing and proposed drainage patterns, and proposed sediment and erosion control measures including those for protecting green infrastructure facilities with notes and details
- ☐ **Landscape Plans**
- ☐ **Landscape Details**: final signage (if included)
- ☐ **Irrigation Plans**
- ☐ **Stormwater Management Plan**: updated SMP with final calculations
- ☐ **Specifications**: final full specifications
- ☐ **Construction Cost Estimate**: updated estimate of probable construction cost based on 95% design (AACE class 2) with appropriate design/estimating contingency included (recommended 10%)
- ☐ **Community engagement summary**: varies by project, please include SFPUC GI Grants team on workshops or community meetings as appropriate
- ☐ **Co-benefit submittal**: varies by project, please include SFPUC GI Grants team on workshops or community meetings as appropriate

Design Tips

Consider the following design tips in developing your GI Grant project.

- **Design Coordination**: Civil and landscape details should be fully coordinated and illustrate site-specific conditions
- **Collaboration**: A collaborative team approach that includes a design professional will result in the design of stormwater features that maximize co-benefits and placemaking opportunities
- **Pedestrian Path through Planters**: Within in-ground rain gardens and bioretention basins, plant layout and palette should take into account the paths of travel pedestrian may take, e.g., desire paths
- **Washed Rock**: Aggregate used in green infrastructure systems should be identified as washed aggregate in details and specifications
- **Class II Permeable Aggregate**: Class II Perm should not be used in projects located in the SFPUC combined sewer system service area
- **Educational Signage**: The educational signage co-benefit should be implemented in creative ways, e.g., consider murals on building walls, planter walls, and other structures; engage students in educational art; etc.
- **Vehicle Protection**: Green infrastructure facilities should be protected from damage from vehicles; consider how cars will interact with proposed structure; include wheel stops around curbless planters and adjacent to above grade structures
- **Stormwater Overflow Structures**: Design of overflow structures should be project specific and take into account the space the overflow structure occupies within the facility, e.g., if a 12-inch overflow structure occupies a large portion of the planter considering designing a smaller overflow that can still convey the 100-year storm event from the drainage management area
- **Underdrains**: In non-infiltrative green infrastructure underdrain pipes should be a maximum of 2 inches above the bottom of the system to minimize standing water which can create anaerobic conditions and habitat for mosquitos; ensure underdrain pipes can connect to the overflow structure while maintaining a maximum 2-inch separation from the bottom of the system

Permitting Tips

All projects must comply with applicable local, state, and federal permit requirements. If you are unsure of what permits your project may require, check out our Green Infrastructure Permit Process Guidebook [🔗]

- **California Environmental Quality Act (CEQA)**: Construction funds will not be issued issued until the project has undergone environmental review in compliance with CEQA. The first step is to complete the planning/CEQA application checklist. The project application can be downloaded here: [🔗]. CEQA should be completed following 35% design. Reach out to the SFPUC Grant Administrator before beginning the CEQA review process and SFPUC will coordinate the application process with SF Planning.
- **San Francisco Permit Center**: All projects must submit for in-person intake review and obtain all appropriate permits from the San Francisco Permit Center [🔗]. Construction funds will not be issued until all permits have been approved. Most projects can be issued an over-the-counter permit. The formal permit application process can begin after 100% design, however we recommend coordinating with SFPUC and the Permit Center early in the project design. We recommend visiting the Permit Center after 35% design to meet with Permit Center staff and the Department of Building Inspection Technical Services desk to confirm project permit requirements. The Permit Center also offers pre-application meetings, which the GI Grant will pay for by request.
- **San Francisco Department of Building Inspection**: Most projects will require a plumbing permit from San Francisco Department of Building Inspection. Reach out to the SFPUC Grant Administrator before beginning the plumbing permit process. The GI Grants team will coordinate initial review with the San Francisco Chief Plumbing Inspector on a project-by-project basis.
- **Water Efficient Irrigation Ordinance**: Projects that construction >500 sq ft of new landscape area will have to comply with the SFPUC Water Efficient Irrigation Ordinance [🔗]
- **Construction Site Runoff Ordinance**: Projects that disturb >5,000 sq ft will have to comply with the SFPUC Construction Site Runoff Ordinance [🔗]

Resources

- **Infiltration Testing Guidance**: [🔗]
- **Criteria for Infiltration-based BMPs**: [🔗]
- **SFPUC Green Infrastructure Typical Details**: [🔗]
- **SFPUC Green Infrastructure Typical Details (AutoCAD)**: [🔗]
- **SFPUC Green Infrastructure Typical Specifications**
    - **Bioretention Specification - October 2024 update**: [🔗]
    - **Modified Permeability Testing Procedure**: [🔗]
    - **SFPUC Temporary Protection of Green Infrastructure Facilities**: [🔗]
    - **Bioretention Soil Mix Submittal Checklist**: [🔗]
    - **Permeable Unit Paver Specification - October 2024 update**: [🔗]
    - **Pervious Concrete Specification - October 2024 update**: [🔗]
- **Vegetation Palette for Bioretention BMPs**: [🔗]
- **SFPUC Utility Asset Protection Standards**: [🔗]
- **GI BMP Sizing Calculator**: [🔗]
- **BMP Fact Sheets**: [🔗]
- **SFUSD & SFPUC Schoolyard Design Workshop Presentation Slides**: [🔗] Content developed by SFPUC and SFUSD from a 'lessons learned' workshop in January 2025 to inform design of the AP Giannini Green Schoolyard Project
- **Example Stormwater Management Plan**: [🔗]
- **SFPUC Green Infrastructure Construction Guidebook**: [🔗]
- **SFPUC Green Infrastructure Maintenance Guidebook**: [🔗]