

## Construction and Maintenance

### 5.1 Introduction

This chapter includes information and links to other resources that must be considered when working in the street right-of-way including:

- Pre-Construction Activities
- Inspection and Testing Procedures
- Creating an Accessible and Safe Work Site
- Traffic Control Requirements for In Street Work
- Locating Underground Utilities
- Protection of Survey Monuments
- Construction Stormwater Control
- Demolition and Grading During Construction
- Hazardous Materials Contamination
- Shoring, Excavation, and Safety Systems During Construction and Inspection
- Street and Sidewalk Pavement Opening Restoration Rules
- Acceptance and Warranty Period
- Record Drawings
- Annual Permits and Maintenance Responsibilities
- Contact Information

### 5.2 Pre-Construction Activities

Before work permitted under a Street Improvement Permit can begin, the Permittee must submit pre-construction materials for review and approval. The Pre-Construction materials may include:

- Construction Contact Form – This form identifies the billing party and general contractor for the construction phase of the project
- Construction Schedule – Provides the sequencing and duration of the work in the right-of-way.
- Request for Approval of Material Sources (RAMS) Form and Submittals – This form identifies all materials to be placed in the right-of-way, and provides specific information on the materials including mix designs, material certifications, catalog cuts, and material samples.
- Notice of Construction in the Public Right-of-Way – This is the notification required to be distributed to businesses and residents potentially affected by the upcoming construction. Additional information on notifications relative to contractor activities can be found in [Seattle Standard Specification 1-07.28 Notifications Relative To Contractor's Activities](#).
- Proof of Insurance – Shows that the Permittee or General Contractor has sufficient insurance and names the City of Seattle as an additional insured.
- Traffic Control Plan – Identifies temporary traffic revisions required during construction.

The assigned SIP project manager will identify the specific pre-construction materials that will need to be submitted for review and approval based on the location and scope of work at the time of permit issuance.

Once all of the pre-construction materials have been reviewed and approved, a pre-construction meeting will be held either at the project site or at SDOT offices, depending on the size and scope of

the project, to review the contractor or subcontractor schedules and confirm other construction-related information.

Refer to [CAM 2216](#) for more information regarding the pre-construction process.

### 5.3 Construction Inspection and Testing Procedures

The owner of the project, owner's representative, and/or General Contractor is responsible for scheduling all required inspections for their work and the work of their sub-contractors. Street Use Inspector will coordinate all inspections required by other City Inspectors such as electrical, landscaping, structural components, etc.

The Street Use Inspector will conduct the scheduled inspection and document the inspection. Results of the inspection will be forwarded to the owner, owner's representative, and/or General Contractor. Any corrective action and additional inspection will be coordinated through the appropriate parties as noted above.

Any deviations from the approved permit and plans will be documented. All significant changes and revisions of the permits shall be submitted to Street Use for review and approval. The contractor is responsible for all required corrective actions.

Street Use Inspectors are responsible for ensuring that work completed under Street Use permits is constructed in accordance with the rules and regulations of the City of Seattle such as: approved plans, permit requirements, City Municipal Code, Ordinances, Director's Rules, Traffic Control Manual, and the [City Standard Plans and Specifications](#).

Additional Special Inspectors (such as geotechnical engineers, structural inspectors, or material testing labs) may be required to be available during construction to provide reports and recommendations to the contractor and Street Use Inspectors. Street Use inspectors may also rely on other City inspectors (SDOT Urban Forestry, SDOT Signal Operations, SPU) for certain inspections.

### 5.4 Creating an Accessible and Safe Work Site

In general, Seattle's Standard Specifications contain baseline requirements addressing Safety Rules and Standards, Protection and Restoration of Property, Public Convenience and Safety, Notifications Required of Contractor Activities, Temporary Traffic Control (see [Standard Specifications 1-07.1\(2\)](#), [1-07.16](#), [1-07.23](#), [1-07.28](#), and [1-10](#)), and other General Requirements that may apply to a specific construction. These Standard Specifications may be amended by permit, by the Seattle City Council, or other legal authority for a site or project specific application.

[Chapter 49.17 RCW](#) Washington Industrial Safety and Health Act addresses the responsibilities of the employer to ensure safe working conditions. [Washington Administrative Code \(WAC\) Title 296](#) addresses the responsibilities of the Washington State Department of Labor and Industries as it relates to safe working conditions. [WAC Chapter 296-155](#) addresses most, but not all, construction safety elements typical of construction in the street right-of-way.

Other entities, including regulatory entities, may have additional requirements for safe and accessible work sites. The project applicant shall become familiar with working clearances and other safety requirements as applicable.

It is the responsibility of the contractor to ensure the safety of all persons and the protection of all property.

### 5.5 Traffic Control Requirements for In-Street Work

The [Traffic Control Manual for In-Street Work](#) defines the basic principles and standards to be observed by all those who perform work within a street right-of-way so that:

- Work areas are safe and congestion is minimized;
- Motorized and non motorized traffic is warned, controlled and protected; and
- All traffic is expedited through the work zone to the extent possible.

Consistent with the standards defined in the [Federal Highways Administration's Manual of Uniform Traffic Control Devices \(MUTCD\)](#), the Traffic Control Manual defines the following:

- required components of a traffic control plan;
- the circumstances under which a traffic control plan is required as a permit condition for work that takes place in or adjacent to the street right-of-way;
- the appropriate type and location of traffic control devices;
- procedures for obtaining permission to work in the street right-of-way;
- requirements for pedestrian access, control and protection;
- requirements for curb space management including loading, transit and special parking;
- detours and street closures;
- emergency work;
- constraints on time of construction to accommodate time of day and special event traffic volumes; and
- standard barricades and signing illustrations.

The Traffic Control Manual is produced and maintained by SDOT's Traffic Management Division.

Refer to the [Traffic Control Manual website](#) for more information.

SDOT requires a traffic control plan be submitted for review and approval prior to the commencement of work in the public right-of-way when:

- The project will impact pedestrian or vehicle movements on an arterial street; or
- The project will impact pedestrian or vehicle movements in a high impact area as defined by the City Traffic Engineer
- Traffic control cannot be made to match exactly sketches within the [City of Seattle Traffic Control Manual for In-Street Work](#) (Traffic Control Manual); or
- Other special circumstances exist as determined by the City Traffic Engineer.

When working near King County Metro facilities (trolley wires, bus stops, etc) the Permittee must also coordinate with King County Metro. Metro can be contacted at

[Construction.Coordination@kingcounty.gov](mailto:Construction.Coordination@kingcounty.gov) or (206) 684-2732. Additional information regarding King County Metro requirements can be found in the [Traffic Control Manual](#).

Additional information regarding traffic control plans can be found in [CAM 2110](#), [CAM 2111](#), and [CAM 2112](#).

## 5.6 Locating Underground Utilities

The locations of underground utilities can be obtained by calling the One Number Locator Service (ONLS) hotline (1(800) 424-5555) of the Utility Underground Location Center and requesting the location of underground utilities except side sewers. Staff from the center will mark the locations of all known public and private utilities in the right-of-way. The applicant can learn the location of a side sewer through SDOT's Street Use Section. Knowing these locations in advance will save time and money during design and construction. Information on existing utilities and new utilities required for the project must be included on the street improvement plans submitted to Street Use.

## 5.7 Protection of Survey Monuments

A Washington State Department of Natural Resources ([DNR](#)) permit is required ([WAC 332-120-040](#) and [RCW 58.04.015](#)) for any work that would remove, adjust, destroy or otherwise make a Survey Point or

Monument no longer visible or readily accessible. In addition, coordination with SPU Survey Unit, 206-684-4674, regarding street monument will be required prior to any work impacting existing survey point or monuments in the right-of-way. For more information on monuments, refer to the [Seattle Public Utilities Survey website](#) (especially [CAM 1401](#) Notes 4 and 21 and [CAM 1402](#)).

## 5.8 Construction Stormwater Control

The primary focus of construction stormwater planning is to prevent sediment and other pollutants associated with construction activity from impacting soil, air, and water quality. Such impacts can increase project costs through regulatory and legal fines, and through repair of site damage and delays to project delivery.

The Stormwater Code ([SMC 22.800-22.808](#)) and associated [Directors' Rules](#) have been revised to account for advances in urban stormwater runoff management practices. These regulations are in place to protect life, property, public health and the environment from the adverse impacts of urban stormwater runoff. Adverse impacts can include flooding, pollution, landslides and erosion.

Construction Stormwater and Erosion Control Plans (CSECP) are required to adequately and systematically identify and minimize project risk. The CSECP is needed to satisfy the construction stormwater pollution prevention requirements for all projects that require stormwater site plans.

All projects must apply appropriate best management practices (BMPs). Small projects (projects with less than 5,000 square feet of new plus replaced impervious surface) must implement the BMPs listed as conditions of the permit. It is the Permittee's responsibility to evaluate the eighteen elements listed in [SMC 22.805.020](#) to mitigate the project impacts. Large projects (projects with over 5,000 square feet of new plus replaced impervious surface) must have a CSECP, prepared by a licensed engineer, reviewed and approved as part of the Street Improvement plan set.

Additional resources for standard details include Standard Plans for tree protection [132](#), [132a](#), [133](#), and [134](#), as well as [DPD plan template](#) for small project construction stormwater control.

## 5.9 Demolition and Grading During Construction

Demolition, grubbing (removing material from the project site such as soil, pavement or vegetation), and grading (changing the surface of the ground) generally are the first activities that occurs during construction. Typically, the following requirements are needed before demolition, grubbing, and/or grading:

1. Installation and approval of [erosion and sediment control](#) Demolition, grubbing (removing material from the project site such as soil, pavement or vegetation), and grading (changing the surface of the ground) generally are as outlined in the Stormwater codes [SMC 22.800-22.808](#); and
2. Providing a survey to establish the designed elevations of the sub grade or surface of the improvement.

Excavating and placing soils may also require soils to be transported to an acceptable disposal site and/or importing soils from an approved source.

All work in the right-of-way, including demolition activities must be conducted with minimum impacts to existing trees; refer to [Ch. 4.14 Street Trees and Landscape Architectural Standards](#) and any other existing infrastructures.

## 5.10 Hazardous Materials Contamination

If suspected contamination is discovered during construction activities, work shall cease and the Street Use inspector shall be notified. Upon consultation with SDOT Environmental Services, the inspector may require the contractor to sample for contaminants and report the results to the City. The City may then require additional sampling to determine potential impacts to the right-of-way.

## 5.11 Excavation, Shoring, and Safety Systems During Construction

Excavation as defined in [RCW Ch 19.122](#), whether by open cut or trenchless technology method, shall not damage underground installations, surface improvements, or adjacent structures. Excavations that are classified as trenches are required to have a safety system (refer to the requirements defined in the [WAC 296-155 Part N](#). Additional requirements for safety systems apply to underground construction refer to the requirements defined in [WAC 296-155 Part Q](#).

Shoring is a means of supporting the earth in a trench or vertical cut for building and roadway construction or other underground installation activities. There are many types of shoring and ground support techniques for earth reinforcement or support of excavations. Properly installed shoring system for excavations is critical for maintaining the structural integrity of the adjacent roadway structures and underground utility infrastructure. The WAC has a number of regulations addressing shoring and excavations that depend on site specific site and subsurface conditions. Refer to the [Standard Specification 2-04](#) for more specific information on general trench shoring requirements, and for trench shoring regarding water mains.

Shoring review, approval and inspection of Utility and Street Improvement Permits are performed by SDOT through the permitting process. During building permit applications, DPD reviews the stability of the adjacent private property while SDOT reviews the plans to ensure stability of the right-of-way. For more information, refer to the [Street Use Shoring Review website](#).

## 5.12 Street and Sidewalk Pavement Opening Restoration Rule

The Pavement Opening and Restoration Rule (PORR) describes the requirements that applicants, contractors, and city crews shall meet when making or restoring openings within the street right-of-way. The rule describes the extent and type of restoration required for different street classifications and pavement types.

Refer to a full copy of the [Rule](#), as it is the best source of information on this practice.

## 5.13 Acceptance/Warranty Procedures for Improvement Projects



An SDOT Inspector will perform an acceptance inspection of the project. When there are no unresolved issues at this acceptance inspection, the project will be accepted as “complete”. If applicable, the SDOT inspector will then notify the DPD Inspector that the Permittee has complied with the Street Use requirements. A one-year bond period commences from the project acceptance date. The DPD Inspector may then issue a Certificate of Occupancy, or a temporary Certificate of Occupancy, whichever is applicable.

All surety bonds for street right-of-way improvements are kept for a year to ensure that all improvements retain functionality during that period. After one year, the SDOT Inspector returns to the project site to inspect for any apparent workmanship shortcomings that qualify as a safety hazard to pedestrian and vehicle traffic. If the area improvements meet specification standards and are performing satisfactorily, then the bond is released and the project considered closed.

## 5.14 Record Drawings

The City of Seattle is responsible for keeping records drawings on file as defined by [RCW Chapter 19.122](#). These drawings are kept in [SPU's record vault](#). Before issuance of a Street Right-of-Way Improvement Permit, a signed copy of the approved plan set is forwarded to the record vault. If any changes are made to the plan during construction, an as-built drawing is prepared and sent to the SPU record vault to be incorporated into the permanent plan set. The public has access to these plans for

future improvements and for maintenance activities

## 5.15 Annual Permits and Maintenance Responsibilities

There are numerous surface elements in the street right-of-way that require regular or periodic maintenance. Maintenance responsibility for these elements varies. Typically, the City of Seattle is responsible for the area between the curbs. With the exception of trees and other landscape improvements installed by the City of Seattle and/or otherwise recorded in the inventory maintained by the SDOT Street Use and Urban Forestry Division, the adjacent property owner is responsible for the area between the curb and property line, including the planting strip and sidewalk.

The City maintains public utilities that have been installed to serve the general public. The property owner is responsible for maintenance of service lines to their properties. Property owners are also responsible for the portion of their water service that extends from the union generally located at their property line to the shutoff valve of their residence or business. The City is responsible for the portion of the water service that extends from the union to the water main, including the meter and service line. Refer to [Figure 5-1: Water Service Responsibility Diagram](#) which illustrates City and property owner responsibilities regarding water service. For more information on [Side Sewers](#) contact Seattle Public Utilities.

If a property owner or project applicant installs or constructs a unique feature in the right-of-way that will be privately owned and maintained (e.g., rockery, street furniture, artwork), the City of Seattle requires a separate permit and indemnification. Depending on the type of encroachment the permit will either be an annual permit or a term permit (which requires City Council approval). The purpose of these permits is to clarify that the responsibilities for maintenance lie with the private property owner. In some cases, a bond may be required to deal with removal of a unique structure in the future, if necessary. Approved indemnity agreements are recorded at King County and become part of the property deed that is recorded with the King County Assessor's Office.

## 5.16 Contact Information

Organization Name/Website	Phone
<a href="#">Seattle Department of Transportation (SDOT) General Information</a>	(206) 684-7623 (ROAD)
<a href="#">SDOT Street Use Inspectors</a>	(206) 684-5253
<a href="#">SDOT Shoring Review Section</a>	
<a href="#">SDOT Street Use Division</a>	(206) 684-5283
<a href="#">SDOT Street Utility Coordination</a>	(206)684-5280
<a href="#">SDOT Pavement Opening and Restoration Rule</a>	(206) 684-5253
<a href="#">SDOT Traffic Management Division</a>	(206) 684-5111
<a href="#">Seattle Public Utilities (SPU)</a>	
<a href="#">General Information</a>	(206) 684 3000
<a href="#">Records Vault</a>	(206) 684 5132
<a href="#">SPU Land Survey Services</a>	

[King County Metro](#)

(206) 684-2732

Additional contact information and resources are located in the [City of Seattle Staff Directory](#), which is searchable by Department, Division and individual staff.