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## 1120.01 General

This chapter provides information specific to preservation project types.

This chapter identifies those elements and features to be evaluated and potentially addressed during the course of a preservation project. The elements listed here may be in addition to the project need identified in the Project Summary or Basis of Design (see [1120.03\(8\)](#)). Preservation projects may also provide opportunities for project partnering and retrofit options involving additional elements (for example see [1231.06](#)).

Preservation projects are funded in three sub-program areas:

- **Roadway Preservation (P1) projects** preserve pavement structure, extend pavement service life, and restore the roadway for reasonably safe operations of the travel modes accommodated by the facility.
- **Structures Preservation (P2) projects** preserve the state’s bridge network through cost-effective actions. There are numerous types of bridge preservation actions including: deck rehabilitation, seismic retrofit, painting steel bridges, scour repair, and others.
- **Other Facilities (P3) projects** preserve the function of guardrail and signing, major drainage, major electrical, unstable slopes and other assets.

For required design elements in these programs see [Exhibit 1105-1](#).

For more information on these programs see the Planning & Programming – Scoping website:  
<http://wwwi.wsdot.wa.gov/Planning/CPDMO/PlanProgScoping.htm>

## 1120.02 Structures Preservation (P2) and Other Facilities (P3)

For Structures Preservation (P2) and Other Facilities (P3) projects see the scoping instructions specific to the sub-program and type of work to determine the likely design elements to be addressed by the project.

See [Chapter 300](#) for documentation requirements. If the project changes a geometric design element, replaces an existing bridge or installs a new bridge additional documentation may be required; contact your ASDE to discuss appropriate documentation.

## 1120.03 Roadway Preservation (P1)

This section applies to features and design elements to be addressed on Roadway Preservation (P1) projects. See [1120.03\(8\)](#) for instructions on using the Basis of Design to document design elements that are changed by the project.

### **1120.03(1) Adjust existing features**

- Adjust existing features such as monuments, catch basins, and access covers that are affected by resurfacing.
- Evaluate drainage grates and gutter pans, and adjust or replace as needed to address bicycle safety (see Drainage Grates and Manhole Covers in [Chapter 1520](#)).
- For guidance on existing curb see [Chapter 1239](#).
- Replace rumble strips if they are removed through project actions, or if their average depth is less than 3/8", unless there is a documented justification for their removal (see [Chapter 1600](#)).

### **1120.03(2) ADA requirements**

- Address ADA requirements according to WSDOT policy (see [Chapter 1510](#) and any active project delivery memorandums or design memorandums).

### **1120.03(3) Cross slope lane**

- Rebuild the cross slope to a minimum 1.5% when the existing cross slope is flatter than 1.5% and the steeper slope is needed to provide adequate highway runoff. See [Chapter 1250](#) for more information about cross slope.

### **1120.03(4) Cross slope shoulder**

- When rebuilding the lane cross slope, evaluate shoulder cross slope in accordance with [Chapter 1250](#).

### **1120.03(5) Vertical clearance**

- Paving projects, and seismic retrofit projects, may impact vertical clearances (see [Chapter 720](#) for bridge clearances and [Chapter 1020](#) for overhead sign assemblies.)
- If vertical clearance will be changed by the project, evaluate this in accordance with [Chapter 720](#). Include this design element and any other affected geometrics in the Basis of Design, the Design Parameters sheets and the Design Documentation Package.
- Contact the Commercial Vehicle Services Office when changes to vertical clearance are planned.

### **1120.03(6) Delineation**

- Install and replace delineation in accordance with [Chapter 1030](#) (this includes pavement markings, guideposts, and barrier delineation).

### 1120.03(7) **Barriers and terminals**

- When the preservation project design, other than a chip seal or BST, will affect the elevation of the pavement adjacent to a guardrail, terminal, and/or transition, measure the height of those systems within the project limit and adjacent to pavement edges, curbs, or sidewalks prior to construction. Measure the height to the top of the rail element from the outside paved shoulder edge when no curb is present, from the gutter line when guardrail is set above a curb, or from the sidewalk elevation if set behind a sidewalk. Guidance for this situation:
  - When the height of Type 1 guardrail, terminals, and/or transitions will be outside the height range from 26.5" to 31" after the project is finished; the guardrail, terminals, and/or transitions must be adjusted to a minimum height of 28" up to a maximum height of 31". Guardrail posts cannot be raised. See Section 1610.04(4) for acceptable options for raising the rail. Otherwise replace with a Type 31 guardrail system.
  - When the height of Type 31 guardrail, terminals, and/or transitions will be outside the height range from 28" to 32" after the project is finished; the guardrail, terminals, and/or transitions must be adjusted to a height of 31". Guardrail posts cannot be raised. See Section 1610.04(4) for acceptable options for raising the rail. Otherwise replace.
  - When terminals need to be raised, replace them with crash worthy terminals. Provide replacement terminals in accordance with 1610.04(5)(a or b). Terminals and anchors that are effectively shielded by another barrier are not in the Design Clear Zone, and thus do **not warrant** replacement.
  - When guardrail needs to be raised, evaluate the guardrail length of need in accordance with Chapter 1610. Notify Region Program Management if the length of need extension is longer will be longer than 250 feet. Extending length of need further than 250 feet is beyond the scope of the pavement preservation.
  - Note that removal is an option if guardrail is no longer needed based on the guidance in Chapters 1600 and 1610. Document the location of removal and the reasoning for removal in the Design Documentation Package.
  - When adjusting terminals that are equipped with CRT posts, the top-drilled holes in the posts need to be at the surface of the ground.
  - Pre-cast concrete barrier sections (either New Jersey or "F" shape) are normally installed at a 32" height, which includes provision for up to a 3" overlay. A 29" minimum height for this type of barrier must be maintained following an overlay.
  - Single slope concrete barrier may be pre-cast or cast in place, and is installed new at a height of 42", 48", or 54". A 30" minimum height must be maintained for this type of barrier following an overlay.

### **1120.03(8) Pavement Edge Treatment**

Adding a pavement edge treatment is a low-cost feature to improve safety performance for errant vehicles that depart and try to reenter the roadway. A pavement edge treatment can also help maintain the structural integrity of the roadway and pavement performance at the edge of the roadway by resisting the start of pavement cracking and/or pavement raveling.

Where practicable, install a pavement edge treatment at locations where asphalt concrete pavement is applied to the outside edge of the existing pavement. Examples where pavement edge treatment may not be practicable include, locations with roadside barrier and/or curb. After installing the pavement edge treatment, trim shoulders with material that is graded back over the edge treatment and flush with the paved roadway surface.

- For more information about pavement edge treatment, contact the HQ Design Office, and visit the FHWA website at:

<https://www.fhwa.dot.gov/innovation/everydaycounts/edc-1/safetyedge.cfm>

### **1120.04 Documentation**

For Roadway Preservation (P1) projects, use the Basis of Design to document decisions when the project changes any design elements that are not listed in [1120.03\(1\)](#) through [1120.03\(7\)](#). Document any changes to dimensions on the Design Parameter Sheets.