**Notes to the Designer**  
*Updated April 2021*

### 3R Typical Section Sheets - Superelevation Correction

<table>
<thead>
<tr>
<th>General Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- All graphics and text will be in the sheet model. There is a sheet model for each type (Super at CL and Super at Edge); Guardrail can be cut and paste from its own model to the desired model.</td>
<td></td>
</tr>
<tr>
<td>- Length of Project table is integrated into the sheet. Double click on the cell to edit.</td>
<td></td>
</tr>
</tbody>
</table>

- **3R Superelevation Correction Template Drawings.** Refer to the 3R+ Matrix to ensure this is the appropriate template to use for your application. Use these template drawings for locations where superelevation corrections are proposed and the lane and shoulder widths remain the same as existing. This includes any major slope corrections that would result in significant pavement surface elevation changes.

- **Road Inventory Program Milepost data.** The NPS uses the Road Inventory Program (RIP) as part of their asset management program. Include the RIP milepost data in the ‘Length of Project’ table for NPS projects only. To find this information, use VisiData (see the VisiData Route_GPS Workspace to see mileposts and GPS longitude and latitude) or ask Planning and Programming. Delete the last column in the ‘Length of Project’ table for all non-NPS projects (e.g. USFS, USFWS, IRR, etc).

- **Safety Edge.** Use the safety edge on all projects with asphalt surfacing with the following exceptions: roadways w/curb and gutter, bridges and other structures, parking areas, projects less than 1000 ft long, such as bridge approaches, pavement preservation projects.

<table>
<thead>
<tr>
<th>Applicable SCRs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- SCR's used can vary based on the project and pay items used. Ensure that SCR's provided are consistent with the pay items provided in the contract. Coordinate with the Pavements Engineer to select and edit the appropriate SCR for the project. Refer to the designer's notes in each SCR for common items needing input and editing. Remember to include in Section 152 what information is being provided to the Contractor. Recommend using 308 SCR for recycled aggregate base if the project requires regrading the subgrade.</td>
<td></td>
</tr>
</tbody>
</table>
## Typical Pay Items Used
- The pay items used for 3R projects in Sections 152, 302, 304, 305, 306, 308, 401, 402, 403 can vary per project. Refer to the CFLHD Engineer’s Estimate Manual for recommended pay items. Coordinate with the Pavements Engineer to determine the most appropriate pay items for the structural section. When the existing pavement structure needs to be removed and reused in order to regrade the subgrade, use Section 308 pay items along with earthwork pay items. When the existing pavement structure can be pulverized and reused in place, use 304 pay items; likely no earthwork pay items will be needed in this case. Evaluate the need to include a separate 302 pay item for imported aggregate as well as either 304 or 308 pay items based on volumes required to construct proposed typical section.

- Subexcavation may be included. Roadway excavation or embankment may be included.

## Other Recommendations for 3R Superelevation Correction
- Cross sections are typically provided.
- Staking Reports are typically provided. Provide blue top reports if no earthwork is required (e.g., 304 pay items are used). Provide both subgrade template report in addition to blue top report if earthwork is required (e.g., if 308 pay items are used).
- Plan/Plan Sheets or Plan/Profile sheets typically provided. Provide superelevation diagram.

## Updates
- April 2021
- Template sheet created
Note:
1. Superelevation correction areas have been identified on the plans. These areas of roadway have been identified for reshaping to reduce excessive superelevation in curves, by reducing the rate of change between consecutive curves and/or improving roadway and roadside drainage.
2. See cross sections for cut and fill slope ratios.
3. Remove XX" depth of the existing pavement structure. Mix with new aggregate and reuse according to section 308.

EXISTING TYPICAL SECTION

?? to ??

TYPICAL SECTION

?? to ??

LENGTH OF PROJECT

<table>
<thead>
<tr>
<th>Station to Station</th>
<th>Roadway (ft)</th>
<th>Bridge (ft)</th>
<th>Road Inventory Program Milepost Data (Cycle #)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>77+?? to 77+??</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Road Inventory Program data shown for information only

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
OFFICE OF FEDERAL LANDS HIGHWAY

TYPICAL SECTIONS
MAINLINE

No Scale
Note:
1. Superelevation correction areas have been identified on the plans. These areas of roadway have been identified for reshaping to reduce excessive superelevation in curves, by reducing the rate of change between consecutive curves and/or improving roadway and roadside drainage.
2. Construct a 1:4 or flatter foreslope unless otherwise directed by the CO. Steepen the foreslopes as necessary, but not steeper than 1:2, to stay on the existing bench.
MGS GUARDRAIL
TYPICAL SECTION

MGS GUARDRAIL
TYPICAL SECTION

MGS GUARDRAIL
TYPICAL SECTION

MGS GUARDRAIL
TYPICAL SECTION

MGS GUARDRAIL
TYPICAL SECTION

MGS GUARDRAIL
TYPICAL SECTION

MGS GUARDRAIL
TYPICAL SECTION