

WFL Sample Plan Sheets

C Sheets

Typical Section Sheets

Revised: October 2022

GENERAL

This document contains three examples of Typical Section presentation:

- 1. Normal Typical Section used for most projects with few complexities
- 2. **Typical Section with multiple end conditions** used for a typical project with multiple end conditions, such as retaining wall with guardrail.
- 3. **Typical Section with many variations** used on complex projects with multiple templates, along with curb and gutter, and sidewalk.

Typical sections show complete geometric information on the roadway cross section from the subgrade up to proposed surface and general information left and right of centerline.

Show both cut and fill situations in the typical sections, unless the section for that station range is 'fill only' or 'cut only,' in which case only one needs to be shown.

The location of dimension lines on the Typical Section sheets needs to match the location of those same lines in the Plan view on the Plan and Profile sheets.

NUMBER OF TYPICAL SECTIONS – The typical sections need to match the roadway templates used in the corridor modeling. A separate typical section is required for every combination of surfacing and paving depths used on the main line, approaches roads, detours, parking areas, etc. Start at the beginning station of each alignment and identify all stationing to the end of the line without gaps or overlaps.

SCALING – Draw the typical sections to actual size. If vertical exaggeration is needed to make the pavement structure layers legible, modify the x:y ratio.

UNITS – Show widths in feet [meters] and show thickness or depth in inches [millimeters]. Draw sections to reflect how the work is expected to be performed.

VARIABLE DIMENSIONS – Variable dimensions may be used to represent differences in shoulder or lane widths if there is a plan or table that shows, by station, the actual widths desired. Show the widths or slopes that they vary between (ex. Varies 10'-12', Varies 1:2 to 1:6).

SUPERELEVATION – Show the most common or typical cross slope that applies to each section. Variances in cross slope for transition sections and superelevation on curves do not need to be shown in the typical section.

BRIDGES / GAPS IN STATIONING – Provide a generic section for bridges or reference to the appropriate bridge plan sheet to avoid gaps in stationing. When an alignment has a structure within the project limits that is not included in the project, indicate the exception station range on the typical section.

CURVE WIDENING – Do not place any curve widening notes on the Typical Section sheets. Show curve widening on the alignment plan sheets using callouts along the alignment (preferred method), or in tabulated form if the callouts create too much clutter.

END CONDITIONS – Use pop-out details to show different end conditions for a typical section. Identify stations ranges where each end condition applies. Standard practice is to design transitions from one end condition to another on even stations for simplicity in callouts and labeling the Typical Sections.

GUARDRAIL – Provide a detail for shoulder widening for guardrail, if applicable. For complex projects with several runs of guardrail and varying terminal treatment types, provide a table with stationing for the limits of each guardrail item and type in the guardrail sheets. Example 2 shows a typical section with guardrail.

SLOPE ROUNDING – WFL standard practice is to use cut slope rounding to smooth or soften the brow (top of the cut slope). Therefore, include a cut slope rounding detail, except where project constraints or partner request mean the detail should not be used. Fill slope rounding is less important because time will eventually accomplish fill slope rounding naturally, however include the fill slope rounding detail unless it is not required.

When there are multiple Typical Section sheets in a Plan set, only show the cut and fill slope rounding on the first page. But on all Typical Sheets, include a "See Fill Slope Rounding" and "See Cut Slope Rounding" callout on the typical section.

RETAINING WALLS – For projects with retaining walls, include a typical section with a retaining wall end condition. Include a callout with the item name, and a reference to the Plan sheets where the retaining wall details are located. Do not place any retaining wall details on the typical section. Example 2 shows a typical section with a retaining wall.

TURF ESTABLISHMENT – Verify the turf establishment limits with the partner and place the dimension lines to properly reflect the needs for the project. Many NPS projects will have the turf establishment extend to the top of the aggregate layer (Example 3), whereas as non-NPS projects will typically stop turf establishment at the top of subgrade (Examples 1 and 2). If the project has both placing topsoil (as a bid item) and turf establishment, show both on the typical sections.

TIE-IN TO EXISTING ROAD – Do not show the tie-in to the existing road on the Typical Section sheets. Show the tie-in on the first Plan & Profile sheet.

R/W LIMITS – Do not show the R/W limits on the Typical Sections. The distance from centerline (or other points) varies too much and showing the R/W line doesn't provide helpful information. The R/W line is better shown on the Plan view sheets.

Notes

Place notes as applicable in the blank area at the bottom of the page.

Footnotes

Only use footnotes to denote information specific to an isolated callout when insufficient room is available for all information.

Quantities

Do not show any quantities on the Typical Section sheets.

Dimension Notes

Dimension Units - words vs. symbols, i.e., 8" or 8-inch?

For dimensioned distances or depths, i.e., those detailed with a <u>dimension line</u>, use the feet and inch symbols. For even foot dimensions, **do not add the zero inches dimension**:

- **1**2' (not 12'-0")
- 8"

For dimensions (usually depths) associated with a **pay item label**, **spell out** the word and put a hyphen between the number and the word:

- 10-inch
- 6-inch



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TYPICAL	SECTION	

(EXAMPLE 1)





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Section X for details		

TYPICAL SECTION

(EXAMPLE 2)

