306 Typical Sections

306.1 General

Typical Section sheets provide detailed cross section depictions of the principal roadway elements that are standard between certain station or milepost limits. These sections are the basis for construction details and information shown on the plan sheets.

306.2 Typical Section Sheet

Typical sections should only show typical conditions that are found within the limits applicable to that section. Non-standard conditions that prevail for short distances should not be shown. Typical sections are to show existing elements that are to be incorporated into the final roadway section, along with the proposed elements.

Show the station limits or milepost of each section below the typical section title. Typical section stationing must cover the entire project. Include transitions from one typical to another in the stationing of one or the other typical section. Sheets that feature more than one typical section should read from the top down, with the sections in the order in which they occur within the project.

Place Typical Section sheets in the plans in the following order:

(1) Project mainline
(2) Ramps and service roads (for projects which include an interchange)
(3) Crossing side roads
(4) Minor side streets

The FDOT CADD Software contains a number of typical sections that can be used and adjusted to suit the conditions of a particular project. Usually typical sections are not created to scale, but the horizontal dimensions should be proportionate.

For illustrations of various typical sections, see Exhibits 306-1 through 306-12.

306.2.1 Half Sections and Details

Half sections and details supplement or support typical sections. They should be placed on the same sheet as the typical section to which they apply. In the event that this is not
possible, additional sheets for details should be placed behind the typical section sheet(s).

Half sections are necessary when changes occur that affect several typical section elements (e.g., number of lanes, border width, ditch or drainage features, clearing and grubbing, R/W width).

Details and partial sections are necessary for the clarification of construction techniques or sequence and to show alternates (e.g., the placement of shoulder gutter in high fill areas, changes in sidewalk location). Judgment is necessary in making decisions about when and where details should be shown.

306.3 Typical Section Information

Include the following information on the typical sections:

1. Cross Slopes
   a. Express cross slopes of roadway pavement, shoulder surfaces, sidewalks and bridge decks as a decimal part of a foot vertical per foot horizontal. These cross slopes should be rounded to two decimal places, i.e., 0.02, 0.06. Three decimal places may be used when required.
   b. Show median and outer slopes by ratio, vertical to horizontal, i.e., 1:4, 1:2.
   c. Include either feathering details or notes (or both) when resurfacing without milling in urban curb and gutter sections is specified or when milling depth is less than the overlay thickness.
   d. When cross slope correction is necessary, include special milling and layering details showing the method of correction in the plans.

2. Location of profile grade point.

3. Depict pavement construction in a clear, precise manner by indicating the LBR requirement and the thickness of the subgrade stabilization, subbase or base, as well as thickness for structural course, friction course and shoulder pavement. Use 4 inches for both base extension on rural sections and for stabilization extension on curbed sections.

4. Limits of grassing.

5. Sidewalk location and width.

6. Curb and gutter location and type (show Type E or F, not the dimension).
(a) On new construction curb and gutter projects which include Asphalt Base, Type B-12.5 only, indicate the asphalt curb pad on the typical section and provide a detail.

(7) Limits of standard clearing and grubbing.
(8) R/W line and limits of construction.
(9) Pavement dimensions.
(10) For widening projects, provide a dimension for total pavement width (existing and proposed). Show the pavement widening width with an asterisk. Show Note 3, of **FDM 306.5**, as near to this noted asterisk as possible.
(11) Shoulder dimensions; paved and total width
(12) Label shoulder treatment on RRR projects (See **FDM 210.4.4**)

### 306.4 Required Data

Include the following data for each typical section:

(1) Traffic data consistent with the data used for pavement design.
   (a) Current Year and AADT
   (b) Estimated Opening Year and AADT
   (c) Estimated Design Year and AADT
   (d) K, D, T (24 hour) and T (Design Hour) factors.
   (e) Design Speed: The estimated opening and design year traffic data is not required for skid hazard projects.

(2) Approved pavement designs described in the order of construction:
   (a) For new construction start with Option Base Group and end with friction course.
   (b) For resurfacing projects start with milling depth, then list the structural courses and end with friction course.

(3) Standard notes. Refer to **FDM 306.5** for standard notes for typical sections.

(4) Template dimensions:
   For widening projects, show the existing pavement width as a ± dimension, and show the base widening width with an asterisk. Show Note 3, of **FDM 306.5**, as near to this noted asterisk as possible.
NOTE: For typical sections with varying dimensions, clearly indicate the dimensions on the plan-profile sheets.

(5) Identify shoulder treatment where applicable on RRR projects (See FDM 210.4.4)

306.5 Standard Notes for Typical Section Sheets

Show the following standard notes on typical section sheets as applicable:

(1) For details and limits of selective clearing and grubbing see _______.

(2) (Under paved shoulders):

This area may be constructed of base material at no additional compensation.

(3) (On widening projects):

Actual width of base widening may vary due to actual existing pavement width. A uniform width base widening strip may be constructed at no additional compensation.
TYPICAL SECTION

I-10 (SR 8)
STA. 567+25.67 TO STA. 1056+84.35

TRAFFIC DATA

CURRENT YEAR = 2018 AADT = 22300
ESTIMATED OPENING YEAR = 2020 AADT = 23300
ESTIMATED DESIGN YEAR = 2040 AADT = 35500
K = 3 % D = 36 % T = 12 % (24 HOUR)
DESIGN HOUR T = 5 %
DESIGN SPEED = 70 MPH

TRAVERSE LANES

OPTIONAL BASE GROUP 9 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (4") AND
FRICITION COURSE FC-5 (1/2") (PG 76-22)

SHOULDER PAVEMENT

OPTIONAL BASE GROUP 1 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 1/2")
TRAFFIC DATA

CURRENT YEAR = 2018 AADT = 22300
ESTIMATED OPENING YEAR = 2020 AADT = 22300
ESTIMATED DESIGN YEAR = 2040 AADT = 35000
K = 9%, D = 16%, T = 10% (24 HOUR)
DESIGN SPEED = 70 MPH

TYPICAL SECTION

1-75 (SR 93)
STA. 1342+25.00 TO STA. 1950+85.75

WIDENING

OPTIONAL BASE GROUP 9 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (2 1/2")
FRICITION COURSE FC-5 (1") (PG 76-22)

EXISTING TRAVEL LANCES

MILL EXISTING ASPHALT PAVEMENT (2 1/2" DEPTH)
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (2 1/2") AND
FRICITION COURSE FC-5 (1")

EXISTING OUTSIDE SHOULDER PAVEMENT

MILL EXISTING ASPHALT PAVEMENT (1 1/2" DEPTH)
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 1/2")

NEW INSIDE SHOULDER PAVEMENT

OPTION BASE GROUP 1 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC D) (1 1/2")
TYPICAL SECTION
RAMP "C"
STA. 623+28.64 TO STA. 629+13.78

TRAFFIC DATA
CURRENT YEAR = 2018 AADT = 8,000
ESTIMATED OPENING YEAR = 2020 AADT = 8,800
K = 10% D = 100% T = 8% (24 HOUR)
DESIGN SPEED = 30 MPH

SELECTIVE CLEARING AND GRUBBING

TYPE B STABILIZATION LBR 40

SHOULDER PAVEMENT DETAIL

OPTIONAL BASE GROUP 9 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC B) (1 1/2') AND
FRICITION COURSE FC-12.5 (1 1/2')

SHOULDER PAVEMENT DETAIL

OPTIONAL BASE GROUP 1 WITH
FRICITION COURSE FC-12.5 (1 1/2')

SHOULDER PAVEMENT DETAIL

EXHIBIT 306-3
RAMP "C"
DATE: 1/1/18

NOTES:
1. For details and limits of selective C&G see sheet 106.
TYPICAL SECTION

SR 22

STA. 98+40.00 TO STA. 202+33.00

TRAVEL AND BIKE LANES

OPTIONAL BASE GROUP 9 WITH

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")

AND FRICITION COURSE FC-12.5 (TRAFFIC B) (1 1/2")

TRAFFIC DATA

CURRENT YEAR = 2018 AADT = 22800
ESTIMATED OPENING YEAR = 2020 AADT = 25800
ESTIMATED DESIGN YEAR = 2040 AADT = 30600
K = 6% D = 53% T = 2% (24 HOUR)

DESIGN HOUR T = 1%
DESIGN SPEED = 30 MPH

DATE: 1/1/18

Exhibit 306-4
4-Lane Curbed

Date: 1/1/18
TYPICAL SECTION

SR 22

STA. 202+33.00 TO STA. 560+50.00

TRAFFIC DATA

CURRENT YEAR = 2018 AADT = 23800
ESTIMATED OPENING YEAR = 2020 AADT = 25800
ESTIMATED DESIGN YEAR = 2040 AADT = 30600
K = 4%  D = 55%  T = 2% (24 HOUR)
DESIGN HOUR T = 1%
DESIGN SPEED = 40 MPH

TRAVEL AND BIKE LANES

OPTIONAL BASE GROUP 9 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC B) (1 ½")
AND FRICITION COURSE FC-12.5 (TRAFFIC B) (1 ½")

NOT FLATTER THAN 1:6 1:2 OR TO SUIT PROPERTY OWNER,
SOD
LEVEL
2' SOD
NATURAL GROUND
12 OR TO SUIT PROPERTY OWNER,
NOT FLATTER THAN 1:6
SOD
LEVEL
2' SOD
NATURAL GROUND
12 OR TO SUIT PROPERTY OWNER,
NATURAL GROUND
2' SOD
LEVEL
12 OR TO SUIT PROPERTY OWNER,
LEVEL
2' SOD
NATURAL GROUND
12 OR TO SUIT PROPERTY OWNER,
LEVEL
2' SOD
NATURAL GROUND
12 OR TO SUIT PROPERTY OWNER,
LEVEL
2' SOD
NATURAL GROUND
12 OR TO SUIT PROPERTY OWNER,
LEVEL
2' SOD
NATURAL GROUND
12 OR TO SUIT PROPERTY OWNER,
LEVEL
2' SOD
NATURAL GROUND
12 OR TO SUIT PROPERTY OWNER,
LEVEL
2' SOD
NATURAL GROUND
12 OR TO SUIT PROPERTY OWNER,
TYPICAL SECTION

SR 22

STA. 560+50.00 TO STA. 882+25.00

TRAVEL LANES AND SHOULDER PAVEMENT

OPTIONAL BASE GROUP 9 WITH

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2 1/2"

AND FRICITION COURSE FC-12.5 (1 1/2"

4-Lane High Speed Curbed

Date: 1/1/18
TYPICAL SECTION
SR 22
STA. 10+00.00 TO STA. 98+40.00

TRAFFIC DATA
CURRENT YEAR = 2018 AADT = 6800
ESTIMATED OPENING YEAR = 2020 AADT = 7600
ESTIMATED DESIGN YEAR = 2040 AADT = 12000
K = 6%  D = 55%  T = 2%  (24 HOUR)
DESIGN HOUR T = 1%
DESIGN SPEED = 55 MPH

TRAVEL LANE
OPTIONAL BASE GROUP B WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (2")
AND FRICITION COURSE FC-12.5 (TRAFFIC C) (1 ½")

SHOULDER PAVEMENT
OPTIONAL BASE GROUP 1 WITH
FRICITION COURSE FC-12.5 (TRAFFIC C) (1 ½")

SHOWING PAVEMENT DETAIL

Exhibit 306-7
2-Lane Flush Shoulder
Date: 1/1/18
TYPICAL SECTION
SR 22
STA. 101+21.00 TO STA. 221+44.00

TRAFFIC DATA
CURRENT YEAR = 2018 AADT = 22800
ESTIMATED OPENING YEAR = 2020 AADT = 25800
ESTIMATED DESIGN YEAR = 2040 AADT = 30600
K = 6%  D = 55%  T = 2% (24 HOUR)
DESIGN HOUR T = 1%
DESIGN SPEED = 45 MPH

TRAVEL AND BIKE LANES
MILL EXISTING ASPHALT PAVEMENT (1 1/2" AVG. DEPTH)
FRICION COURSE FC-12.5 (TRAFFIC C) (1 1/2")

Exhibit 306-9
6-Lane Curbed
Date: 1/1/18
## Traffic Data

**Current Year**
- Estimated opening year = 2020
- Design year = 2036

**Design Hour**
- T = 11%
- K = 11%
- D = 58%
- R = 22% (24 hour)

**Estimated Design Year**
- 2036 AADT = 38900

**Estimated Opening Year**
- 2020 AADT = 21000

**Current Year**
- 2018 AADT = 18100

**posted speed** = 55 mph

### Typical Section

**SR 22**

**Limits of Construction**
- Standard Clearing and Grubbing

**R/W Line**
- R/W Varies (100' Min.)

**Profile Grade Point**
- Match Existing

**Match Existing**
- Match Existing

**Natural Ground**
- Depth and Width Vary

**Note:** See Overbuild and Resurfacing Details for Inside Southbound Lane.

### Southbound

**Inside Travel Lane**
- Mill Existing Asphalt Pavement for Slope (3'' Avg. Depth)
- Type SP Structural Course (Traffic D) (1 1/2")
- Type SP Structural Course (Traffic D) (Varies)
- And Friction Course FC-5 (1/2") (PG 76-22)

### Southbound Outside Travel Lane

**Northbound Travel Lanes**
- Mill Existing Asphalt Pavement for Slope (1 1/2'' Avg. Depth)
- Type SP Structural Course (Traffic D) (1 1/2")
- And Friction Course FC-5 (1/2") (PG 76-22)

### Outside Shoulder Pavement

- Mill Existing Asphalt Pavement for Slope (1 1/2'' Avg. Depth)
- Type SP Structural Course (Traffic D) (1 1/2")
- And Friction Course FC-5 (1/2") (PG 76-22)

**TYPICAL SECTION**

**DATE:** 1/1/18

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**EXHIBIT 306-10A**

4-Lane Flush Shoulder

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**STATE OF FLORIDA**

DEPARTMENT OF TRANSPORTATION

**COUNTY:** BAY

**TYPICAL SECTION**

**SR 22**

**REVISIONS**

<table>
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**MANUFACTURER**
LUKE S. WALKER, P.E.
ROADWAY ENGINEERS, INC.
525 MAIN STREET
TALLAHASSEE, FL 32301

**CERTIFICATE OF AUTHORIZATION:** 12345
OVERBUILD DETAILS

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>MAX. DEPTH OF OVERBUILD (FT.)</th>
<th>AREA OF OVERBUILD (SQ. FT.)</th>
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<tr>
<td>STA. 146+00.00</td>
<td>5.1</td>
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<tr>
<td>STA. 147+00.00</td>
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<td>11.0</td>
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<tr>
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THE MINIMUM DESIRABLE CROSS SLOPE SHALL BE 12%.
NOTE: THE AREA OF OVERBUILD IS BASED ON MIN. 3/8" OVERBUILD LIFT THICKNESS.

Include the subtotals in the Summary of Pavement sheet as a line item named "Summary of Overbuild". Do not include contingency quantities associated with overbuild.

Exhibit 306-10B
Overbuild Details
Date: 1/1/19
**TYPICAL SECTION**

**SR 22 (WILLOW BEND WAY)**

STA. 122+00.000 TO STA. 210+65.000

**SHARED USE PATH**

Optional Base Group 1 with Type SP Structural Course (Traffic A) (1"")

---

**TYPICAL SECTION**

**SR 22 (WILLOW BEND WAY)**

STA. 210+65.000 TO STA. 305+15.000

**SHARED USE PATH**

Optional Base Group 1 with Type SP Structural Course (Traffic A) (1"")

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**EXHIBIT 306.11**

Shared Use Path

Date: 1/1/18
TYPICAL SECTION

MP 2.251 SR 22 = Q ALDERAAN RD.

TRAFFIC DATA

CURRENT YEAR = AADT = 22800
ESTIMATED OPENING YEAR = 2020 AADT = 25800
ESTIMATED DESIGN YEAR = 2040 AADT = 30600
K = 4% D = 55% T = 2% (24 HOUR)
DESIGN HOUR T = 1%

CIRCULATORY ROADWAY

OPTIONAL BASE GROUP 9 WITH
TYPE SR STRUCTURAL COURSE (TRAFFIC C) (1'')
AND FRICTION COURSE FC-9.5 (TRAFFIC C) (2'')

NOT TO SCALE