

PAVEMENT SCOPE OF WORK

US-301/I-95 Interchange

Construct a concrete pavement for the mainline travel lanes, ramps, and shoulders. Remove and replace all concrete ramps and mainline US-301. In all cases, construct a plain jointed concrete pavement with the following characteristics:

Thickness:	10"
Transverse Joint Spacing:	15'
Transverse Load Transfer:	1.25" dowels, 18" long, spaced 12" c-c, first dowel placed 6" from edge of pavement, dowels may be omitted from mainline shoulders but are required full-width for ramps
Longitudinal Joint Spacing:	Maximum 15'
Longitudinal Reinforcement:	#4 deformed bar, 30" long, 30" c-c
Surface Texture:	Transverse Tine
Joint Sealant:	Silicone, 3/8" wide longitudinal and transverse
Nominal 28-day Compressive Strength:	4500 psi

Base options for the pavement structure are as follows and may be alternated throughout the project as desired, although the same structure must be used transversely at any location unless the differing options are separated by an earth median or otherwise approved by the RCE.

Option 1: 200 psy Asphalt Surface Type C, 8 inches Graded Aggregate Base

Option 2: 450 psy Asphalt Base Type A

Option 3: Fabric Interlayer, 6 inches Cement Stabilized Aggregate Base

At bridge ends and other rigid obstructions, provide three expansion joints one inch in width located at the obstruction and 75 feet and 150 feet away from the obstruction. Obtain approval of expansion joint assembly and detail from the RCE prior to construction.

The required nominal concrete compressive strength for this project is 4500 psi. SC-M-501(0308) is based on 4000 psi nominal concrete compressive strength. Consequently, SC-M-501(0308) is modified such that the required concrete strengths are adjusted upwards by 500 psi from those shown, including Table 1 and Sections 5.6 and 7.4.

Also, Section 6.3.3.1 of SC-M-501(0308) is removed and replaced with the following:

6.3.3.1 Furnish a suitable concrete compression testing machine meeting the requirements of ASTM C39. Have the machine professionally calibrated after installation in the field laboratory and prior to commencement of work. Maintain proper calibration of the equipment for the duration of the project.

To provide continuity when tying onto existing I-95 pavement, perform the following steps in whatever order is necessary to stage the construction safely and efficiently:

- Minimally micromill 3 inches from the existing mainline to remove the Open Graded Friction Course (OGFC) (approximately 1 inch thick) and the top lift of Asphalt Surface (approximately 2 inches thick). This should leave approximately 2 inches of Asphalt Surface and variable amounts of asphalt leveling over the original I-95 concrete pavement.
- Construct new concrete pavement structure for the tie-ins to the elevation of the original I-95 concrete pavement. It is not necessary to tie the new concrete to the existing or place expansion material between the old and new pavements. However, include a coating of curing compound on the side of the existing pavement at twice the required rate for new concrete to inhibit bonding prior to paving.
- Overlay the concrete in the transition with 200 psy Asphalt Surface Type B to the elevation of the mainline after micromilling.
- Overlay the I-95 mainline and transitions with 200 psy Asphalt Surface Type A and 110 psy OGFC.
- Carry the ramp asphalt to beyond the gore areas, then provide a neat transverse transition to the concrete surface. Construct two variable thickness transition slabs to provide a “step” into which the asphalt may be terminated. The first transition would terminate the Asphalt Surface Type B and the second transition would terminate the Asphalt Surface Type A and the OGFC.

Concrete surfaces that will be overlaid with asphalt as part of this work may be left roughly textured to provide a better bond with the asphalt.

To tie into existing US-301, construct the initial slab at the asphalt/concrete joint at variable thickness ranging from 15 inches at the free end to 10 inches at the first contraction joint. Mill the existing asphalt 2” and replace the milled material with 200 psy Asphalt Surface Type A.

Ltd Road/Kenlake Court Access Road

Construct either a concrete or asphalt pavement. For the concrete pavement alternative, construct a plain jointed concrete section with the following characteristics:

Thickness:	6”
Transverse Joint Spacing:	12’
Transverse Load Transfer:	None
Longitudinal Joint Spacing:	15’ maximum
Longitudinal Reinforcement:	#4 deformed bar, 30” long, 30” c-c
Surface Texture:	Transverse Tine
Joint Sealant:	None. Single cut width longitudinal and transverse
Nominal 28-day Compressive Strength:	4000 psi

Construct concrete pavement directly on subgrade. The longitudinal reinforcement may be eliminated if the transverse joint spacing is reduced to 6 feet and an additional longitudinal joint is added in the center of each lane between the wheel paths.

For the asphalt pavement alternative, construct the following:

150 psy Asphalt Surface Type C
200 psy Asphalt Intermediate Type B
8 inches Graded Aggregate Base

450 psy Asphalt Base Type B or 6 inches Cement Stabilized Aggregate Base may be used in lieu of the 8 inches Graded Aggregate Base.

SC-6

For widening of SC-6, overlay the existing pavement with at least 200 psy Asphalt Surface Type B. Construct widening and turn lanes on SC-6 with the following structure:

200 psy Asphalt Surface Type B
200 psy Asphalt Intermediate Type B
850 psy Asphalt Base Type A

8 inches of Cement Stabilized Aggregate Base may be used in lieu of the 850 psy Asphalt Base Type A. Additionally, 300 psy Asphalt Base Type A and 10 inches Graded Aggregate Base or 400 psy Asphalt Base Type A and 8 inches Graded Aggregate Base may also be used in lieu of the 850 psy Asphalt Base Type A.