

JBM & R
ENGINEERING, INC.

Sheriff's Office Training Facility

Skid Pad Milling and Resurfacing

Specifications and Drawings

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DRAWING LIST

- C-1: Cover Sheet
- C-2: Overall Site Plan
- C-3: Resurfacing Plan

1. **GENERAL SPECIFICATIONS**

These specifications are for the Hillsborough County Sheriff's Office Training Facility Skid Pad Milling and Resurfacing Project located at 14063 S Highway 39, Lithia, Florida. 33547. Additional general notes and specifications regarding this project may be found on the referenced drawings.

A. Hillsborough County Contact

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C. General Specifications

All work for the Skid Pad Milling and Resurfacing Project shall be done in accordance with the referenced drawings, the specifications provided herein, and with the following Hillsborough County (HC) and Florida Department of Transportation (FDOT) specifications or requirements.

- Hillsborough County Transportation Technical Manual, Sections 8 and 12
- FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways (Green Book)
- FDOT Standard Specifications for Road and Bridge Construction (Purple Book).

2. **MILLING OPERATIONS**

Milling of the existing skid pad will be performed in accordance with the applicable Hillsborough County and FDOT standards as well as noted on the referenced construction plans and as noted herein.

A. Milling Description

Milling operations will remove existing asphalt concrete pavement. ~~Per the referenced construction plans 1 inch (1") of the existing asphalt concrete pavement will be removed from the existing skid pad.~~ Milling shall be tapered from 4-inch **existing elevations** to 1-1/2 inches (4" **0"** to 1½") beginning ~~20~~ **25** feet from each drainage inlet structure. Milling operations will be performed in accordance with section 327 of the FDOT Standard Specifications for Road and Bridge Construction, latest edition.

B. Equipment

Contractor shall provide a milling machine capable of maintaining a depth of cut and the current skid pad cross slope as specified herein. Machine must have built-in automatic grade control system that can control the traverse slope and longitudinal profile to match the existing skid pad contours. The milling machine must include a means to effectively limit the amount of dust escaping the removal operations.

C. Construction

Milling construction operations to be in accordance with all applicable Hillsborough County and FDOT specifications

Both milling and resurfacing operations shall be constructed in a longitudinal direction from east to west.

Contractor shall maintain positive drainage of the milled surface and the adjacent pavement.

~~All milled surfaces will be repaved no later than the day after the surface was milled.~~

Contractor shall sweep the milled surface with a power broom or street sweeper capable of removing excess milled materials and dust immediately after the milling operations and prior to the placement of any asphalt concrete.

D. Final Milled Surface and Tolerance

Contractor shall provide a milled surface with a reasonably uniform texture, clean of debris or milling waste.

~~Milling surface must average 1 inch (1") in depth with no greater than ¼ inch deviation from the true profile grade (excepted as noted around the drainage inlets). The Engineer may require, at no additional expense to the owner, additional milling or asphalt concrete build up for any areas exceeding the ¼ inch tolerance.~~

E. Milling Material

~~The Contractor shall indicate as part of the bidding process the intention of disposal of the milling material. The Contractor shall provide dispose of, or stockpile the milled material as agreed to as part of the accepted bid.~~

F. Existing Milled Surface Repairs

~~If at any time the milling operations expose the base material, revealing an area in which the existing asphalt of the skid pad is less than 1 inch (1") thick, the area of exposed base shall be squared off by saw cutting the existing milled surface a minimum of 5 feet from the exposed area. The base material will be removed 1 inch below the milled surface and the area will be compacted with a plate compactor to a minimum of 98% based on the maximum dry density of the base material. 1 inch of FC 9-5 asphalt concrete will be placed and compacted in the repaired area prior to general resurfacing operations. If base material was exposed by the contractor exceeding the specified milling tolerance, these specified repairs will be at the Contractor expense.~~

G. Inspection

Milling inspections will be performed in accordance with all applicable Hillsborough County and FDOT requirements, and as outlined herein.

At the end of each day's milling and brushing operation and prior to start of resurfacing operations a visual inspection will be performed by the Owner. Any areas found to be outside of specified tolerances will be repaired at the contractor's expense.

If during the milling operations or as part of the inspection any area of the milled surface appears to lack adequate support of the resurfacing operations the Contractor and/or Owner shall contact the Engineer to determine what, if any corrective actions may be necessary.

3. **ASPHALT CONCRETE PAVEMENT RESURFACING**

Asphalt Concrete Pavement Resurfacing of the existing skid pad will be performed in accordance with the applicable Hillsborough County and FDOT standards as well as noted on the referenced construction plans and as noted herein.

A. Description

Following the milling operations, the skid pad will be resurfaced with two (2) 1-inch (1") lifts: the first lift shall be SP-9.5 and the top lifts shall be FC-9.5 asphalt concrete pavement meeting all applicable FDOT specifications. The resurfacing operations include the application of tack coat, two lifts of asphalt concrete pavement and all associated preparation, consolidation, and final clean-up.

All asphalt concrete pavement operations shall be in accordance with the Hillsborough County Transportation Technical Manual and with the applicable sections of the FDOT Standard Specifications for Road and Bridge Construction, latest edition, specifically Division I, Division II, Sections 300-339 and Division III, Sections 901-919.

B. Tack Coat

Tack coat will be applied to the **existing asphalt, repaired areas and** milled surface and between two asphalt concrete lifts in accordance with the FDOT Standard Specifications for Road and Bridge Construction, latest edition, Section 300.

C. Asphalt Concrete Pavement

All asphalt concrete pavement construction shall meet the requirements of sections 320, 330 and 337 of the FDOT Standard Specifications for Road and Bridge Construction. Asphalt concrete pavement shall meet the requirements of FDOT base course SP-9.5 and friction course FC-9.5 asphalt concrete pavement.

Asphalt concrete pavement shall be plant-mixed hot bituminous mixture meeting the applicable FDOT requirements. The contractor shall provide a copy of the mix design to the Engineer for approval prior to construction.

D. Paving Equipment

The Contractor shall perform resurfacing operations with paving equipment that meets the applicable FDOT specifications. The paving equipment shall provide mechanical spreading and screeding that is self-propelled, steered; have a receiving and distribution hopper and a screed that is capable of adjustment to regulate depth of material and width of spread to meet the specified requirements.

Rolling equipment shall be able to provide compaction meeting the density requirements of the applicable FDOT specifications. Hand tools and plate style compactors may be required for any areas of the milled surface requiring repairs or for detail pavement operations around drainage structures.

E. Resurfacing Construction

***Repair Prior to Resurfacing:* Contractor shall repair the existing asphalt areas as shown on the Construction Plans. Repair will include saw-cutting and removal of the existing asphalt; scarifying and inspection by the OWNER or ENGINEER of the base; compaction of the base and the placement of a single 2" lift of SP-9.5 to bring the repaired area back to the original elevations. Density testing of the compacted base shall take place for every 1000 sf (one test every 100' feet of the 10' wide repair areas) with the minimum requirement of the base to be 98% of the maximum dry density. Any other areas identified in the pre-construction inspection that are determined to be in inferior condition shall be repaired as indicted above: the minimum saw-cut area for repairs shall be 5' square. If during the repairs any area of the base appears to lack adequate support of the resurfacing operations the Contractor and/or Owner shall contact the Engineer to determine what, if any corrective actions may be necessary.**

Asphalt concrete pavement resurfacing operations shall be in accordance with all applicable Hillsborough County and FDOT specifications.

Resurfacing operations constructed in a longitudinal direction from east to west.

Two 1-inch lifts of asphalt concrete (base course of SP-9.5 and friction course of FC-9.5) shall be installed to resurface the existing skid pad. Each lift shall be installed only after the milling operations and any required repairs have been performed and approved, and following the application of the required tack coat. All asphalt concrete placement shall be installed on the same day as tack coat.

At the existing drainage structures the Contractor shall taper each lift of asphalt concrete from 1 inch to ¾ inch beginning 25 feet from the edge of the structure. The final resurfacing grade shall match the existing structure grade at all drainage structures.

The Contractor shall maintain the resurfacing operations in a continuous placement, with the temperature of spreading as required by the FDOT Standards for Road and Bridge Construction, latest edition, section 330-6.3. Any load, or portion of a load of asphalt mix that has a temperature outside the master range shall be rejected.

Transverse Cold Joints: No transverse cold joints are allowed – the contractor shall end each day's paving operations at the end of the pad such that no cold transverse joint will be created. If weather or other unforeseen natural condition requires suspension of paving operations within the mat, the joint shall be cut back to the full depth of the lift a minimum of 6-inches past where the Engineer has determined adequate lift placement and compaction has occurred. Tack coat shall be applied to the edge of the joint prior to continuation of the paving operations. Prior to continuing paving operations any existing asphalt material in the hopper that does not meet the mater temperature range will be removed.

Longitudinal Cold Joints: The longitudinal joint in the friction course shall offset the longitudinal joint in the base course immediately below by at least one-foot (1')

Longitudinal joints that are irregular, damaged, uncompacted, cold (less than 175 °F at the time of placing the adjacent pass), or otherwise ineffective, shall be cut back a minimum of two-inches (2") from the edge with a cutting wheel to expose a clean, sound vertical surface for the full depth of the course. All cutback material shall be removed from the project. All contact surfaces shall be given a tack coat prior to placing any fresh mixture against the joint. The contractor will be allowed to use an alternate method if it can be demonstrated that density, smoothness, and texture requirements can be met.

Joint Densities: Joint Densities: For determining in-place density, one random 4" cores will be taken from each transverse or longitudinal joint in the **Friction Course Layer** (immediately over joint). After air-drying per ASTM D 2726 for laboratory prepared, thoroughly dry specimens, cores obtained from the mat and from the joints will be used for in-place density determination. The average in-place joint densities shall not be less than 2% below the specified density for the asphalt as specified per FDOT

If at any time the resurfacing operations are delayed or suspended due to weather, rejected loads, or any other reason, thus requiring a transverse joint, the existing mat will be cut back on the previous run to expose the full depth of the mat.

F. Resurfacing Tolerance

Asphalt resurfacing shall be tested using a rolling straight edge test in accordance with the FDOT Standards for Road and Bridge Construction sections 330 and 337. The final thickness tolerance for any lift shall be a total of 3/16" with the total resurfacing tolerance of no greater than 1/4". No core taken shall be less than the specified total thickness for the total resurfacing project.

G. Finished Pavement Surface

The finished pavement surface shall be smooth pavement with good surface texture and proper cross slopes. Specifically the finished surface will be of uniform texture and compaction with no pulled, torn, raveled, crushed or loosened portions and free of segregation, bleeding, flushing, sand streaks or spots, or ripples. Any areas of the pavement that do not meet the requirements of this specification or the referenced Hillsborough County or FDOT specifications will be addressed at the Contractor's expense.

H. Inspections and Testing

Inspections and testing will be performed in accordance with all applicable Hillsborough County and FDOT requirements, and as outlined herein.

All aggregate analysis, design mix, bitumen content, maximum specific gravity and other testing indicated within the FDOT Standards for Road and Bridge Construction, latest edition will be performed in the frequency and manner indicated therein. Density testing for each lift and total thickness core samples shall be performed and meet the tolerances of the FDOT specifications at a minimum of 500 feet for each longitudinal placement (minimum of two per pass).

Any material or placement that does not meet the minimum specifications outlined herein shall be addressed and repaired or replaced at the Contractor's expense.

All testing shall be contracted via an independent testing agency, acceptable to the Owner and paid for by the Contractor.