

D. Final Finish

When the concrete has hardened and standing water and moisture sheen have disappeared, give the concrete a final finish, manually or mechanically, according to requirements in Section 500 for bridge decks.

433.3.06 Quality Acceptance

The riding quality of approach slabs will be tested with the Rainhart Profilograph as part of the bridge deck according to Subsection 500.3.06.E, "Ride Quality Test".

433.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

433.4 Measurement

The quantity for payment for reinforced concrete approach slabs is the number of square yards (meters) complete in place and accepted. The pay area is computed by the overall length and width of the approach slabs as shown on the Plans, with no deductions for areas with end posts and expansion joints.

433.4.01 Limits

Curbs, barriers, and reinforcing steel are not measured for payment, but their cost is included in the price bid for the individual Contract item.

433.5 Payment

The area measured will be paid for at the Contract Unit Price per square yard (meter).

Payment will be made under:

Item No. 433	Reinforced concrete approach slab	Per square yard (meter)
Item No. 433	Reinforced concrete approach slab, including curb	Per square yard (meter)
Item No. 433	Reinforced concrete approach slab, including barrier	Per square yard (meter)
Item No. 433	Reinforced concrete approach slab, including sloped edge	Per square yard (meter)

433.5.01 Adjustments

General Provisions 101 through 150.

Section 434—Asphalt Paved Ditches

434.1 General Description

This work includes paving ditches, spillways, and other similar waterways with hot asphalt mixture.

434.1.01 Definitions

General Provisions 101 through 150.

434.1.02 Related References**A. Standard Specifications**

Section 400—Hot Mix Asphaltic Concrete Construction

Section 802—Aggregates for Asphaltic Concrete

Section 820—Asphalt Cement

Section 828—Hot Mix Asphaltic Concrete Mixtures

B. Referenced Documents

GDT 7

GDT 66

GDT 115

434.1.03

434.1.03 Submittals

General Provisions 101 through 150.

434.2 Materials

Ensure that materials meet the requirements of Section 802, Section 820, and Section 828.

434.2.01 Delivery, Storage, and Handling

General Provisions 101 through 150.

434.3 Construction Requirements

434.3.01 Personnel

General Provisions 101 through 150.

434.3.02 Equipment

Use equipment that meets the requirements in Section 400 for mixing and transporting the asphaltic concrete.

A. Hand-Operated Roller

Use a hand-operated roller that weighs at least 300 lbs (135 kg).

B. Small Power Roller

Use a small power roller satisfactory to the Engineer.

C. Vibratory Device

Use a vibratory device satisfactory to the Engineer.

D. Hand Tampers

Use hand tampers to compact areas that cannot be reached with rollers or vibrators.

E. Forms

Use forms that are satisfactory to the Engineer, if required.

434.3.03 Preparation

General Provisions 101 through 150.

434.3.04 Fabrication

General Provisions 101 through 150.

434.3.05 Construction

Use ditch paving construction methods that allow water to flow continuously and that keep the ditch unobstructed to prevent ponding or standing water. Protect the ditch paving areas under construction from flowing water, elements, and other disturbances until the materials are fully set.

A. Develop the Asphalt Mixture

Use a uniform, homogeneous asphalt mixture of aggregate and bituminous material. A job mix formula is not required; however, base the mixture on an approved design analysis that meets the requirements of either a 4.75 mm mixture or 9.5 mm Superpave mixture (Level A) as described in Section 828 except that testing for moisture susceptibility, GDT 66 and rutting susceptibility, GDT 115, will not be required. The asphalt content for ditch paving shall be set 1.0% higher than the optimum asphalt content determined during the mix design analysis. Control the mixture within the mixture control tolerances for the respective mix given in Section 828. Do not continue operation outside the mixture control tolerances.

B. Form the Subgrade

Form the subgrade as follows:

1. Form the subgrade at the required depth below and parallel to the finished surface of the ditch or waterway required by the Plans.
2. Remove soft, yielding, or otherwise unsuitable material and substitute with suitable material.

3. Compact the subgrade to 90 percent of the maximum dry density as determined by GDT 7. Finish to a smooth, firm surface.
4. If shown on the Plans, place and compact the subgrade material to the required thickness.

C. Stake the Forms

If forms are required, stake them securely into position at the correct line and elevation.

D. Place the Asphalt Mixture

Place the mixture on the prepared subgrade only when the subgrade is properly prepared and weather conditions are suitable. Place as follows:

1. Place the mixture within the temperature limits of 275 ° to 325 °F (135 ° to 160 °C).
2. Smooth the mixture by raking or screeding.
3. Thoroughly compact the mixture as follows:
 - a. Roll with a hand-operated roller, small power roller, or vibratory device satisfactory to the Engineer.
 - b. Use hand tampers to compact areas that cannot be reached with rollers or vibrators.
 - c. Compact until the surface is smooth and even and the texture is dense and uniform. The thickness, lines, grades, and cross section shall be as shown on the Plans.
4. Remove forms, if used, and replace with compacted backfill. Shape the shoulders and slopes and complete them to conform to the required section.

434.3.06 Quality Acceptance

General Provisions 101 through 150.

434.3.07 Contractor Warranty and Maintenance

General Provisions 101 through 150.

434.4 Measurement

A. Asphalt Ditch Paving

Asphalt for ditch paving is measured in tons (megagrams) as mixed, placed, and accepted. The actual weight is determined by using an approved motor truck scale to weigh each loaded vehicle as the material is hauled to the roadway. The weight measured includes all materials.

B. Incidental Items

Incidental items such as preparing the subgrade and excavating unsuitable material and backfill are not measured for separate payment, unless otherwise specified. Those costs are included in the Unit Price Bid.

434.4.01 Limits

General Provisions 101 through 150.

434.5 Payment

A. Asphalt Ditch Paving

Asphalt for ditch paving will be paid for at the Contract Unit Price per ton (megagram) complete in place and accepted. Payment is full compensation for furnishing materials, bituminous material, and equipment and for preparing the subgrade, hauling, stockpiling, mixing, spreading, and rolling.

B. Incidental Items

Unless otherwise specified, no separate payment will be made for incidental items.

Payment will be made under:

Item No. 434	Asphalt ditch paving mixture	Per ton (megagram)
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434.5.01 Adjustments

General Provisions 101 through 150.