SECTION 15 – FINISHING SHOULDERS, DITCHES, AND SLOPES

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The final shaping and dressing of shoulders, ditches and slopes is not a pay item but is included in the cost of other bid items on the contract.

This work consists of the final shaping and dressing of shoulders, ditches and slopes by machine, by hand methods, or both, to the required smoothness, elevation, and cross section shown on the plans or as directed by the Engineer.

Shoulder construction should be in accordance with the typical sections and Standard Drawings included as a part of the contract plans. Check the typical sections and Standard Drawings for the details on shoulder slope in tangent sections and changes in shoulder slope within super-elevated curves.

The scope of shoulder construction on HMA resurfacing contracts is covered in Section 208 of the SS. In many instances the resurfacing contract specifies increasing the super elevation in the old pavement to comply with current design standards. When this situation is applicable, the additional fill dirt for shoulders on the high side of the curve may be obtained from suitable waste or excess trench widening excavation elsewhere on the contract. They may also be constructed with borrow, if specified in the contract. The use of borrow for this purpose is discussed in Section 3 of these instructions.

Due to the limited width of the available roadbed, it may not be possible to construct the high shoulder in strict accordance with the plans. Modifications will then be necessary. These modifications should be discussed with the AE unless the contract is specific with respect to the cross section at these locations. All ditches must be constructed so that they will drain and be free of water pockets. At the ends of cuts, flare the side ditches out away from the centerline to prevent ditch water from being spilled onto the fill embankment. Abrupt changes in alignment of side ditches should be avoided and any contemplated changes in ditch alignment or grade should be provided during grading operations to avoid the potential for major revision of slopes and ditches during the finishing operations.

Slopes shall be uniform. Transitions from steep slopes to flat areas shall be constructed so no abrupt changes or bulges result. To obtain a more pleasing appearance, roll back the ends of cut slopes slightly. In finishing the slopes of rock cuts, the rock face must be carefully inspected for loose or overhanging rock that might subsequently fall onto the roadway. All such rock shall be removed.

The amount of work necessary to finish the shoulders, ditches, and slopes on a contract can be materially reduced if the Contractor completes grading operations for the cross sections as work proceeds. It is neither economical nor good construction practice to incorporate fill yardage that should have been moved during the early grading operations into the finishing operations. If the Contractor’s methods result in rough or otherwise unsatisfactory shoulders, ditches, or slopes, they shall be corrected before being accepted.

If surplus soil is generated during finishing operations and it is decided to use the surplus material to widen the existing shoulders, care must be taken to verify loose material being dumped along the side of the embankment does not result in sloughing. Section 203 of the SS should be referenced for guidance when using excess material to widen existing slopes.