# CLASS A PATCHES (SPECIAL)

*Effective: February 8, 2021*

Description. This work shall consist of the removal of the existing pavement, the necessary excavation and the replacement with the class and type of patch specified at designated locations.

This work shall be according to Section 442 of the Standard Specifications for Class A.

Materials. Materials shall be according to Article 442.02 of the Standard Specifications. CONSTRUCTION REQUIREMENTS

Pavement Removal. Pavement removal shall be according to Article 442.05 of the Standard Specifications and as modified herein.

Revise Article 442.05(a) to read:

(a) Class A Patches. Two transverse full depth saw cuts shall be made perpendicular to the centerline at each end of the patch, except that the saw cuts may be skewed slightly if necessary to maintain a minimum distance of 18 inches from the end of the patch to the nearest transverse crack in the pavement to remain in place. When approved by the Engineer, this minimum distance may be reduced to 6 inches in areas of close crack spacing where the pavement otherwise appears to be sound. The longitudinal edges of the patch shall be formed by full-depth saw cuts. Saw cut extensions into pavement which is to remain in place will not be permitted. All saw cuts shall be made with an approved concrete saw. After the transverse saw cuts have been made, intermediate cuts as shown on plan details may be made to make pressure relief cuts or to reduce the pavement length to a size that accommodates removal and hauling operations. The saw cutting operations shall be controlled to limit subbase penetration to a maximum of 1/2 inch.

The shoulder between the full-depth saw cut and the pavement edge shall be removed using a hand held hammer and hand tools prior to pavement removal. If available, the Contractor may use an approved wheel saw to make the shoulder cut and removal.

When the patch is adjacent to a Portland cement concrete shoulder, a saw cut shall be made at the shoulder-pavement joint sufficiently deep to sever the tie bars. A second full-depth saw cut shall be made in the pavement a minimum of 4 inches from the edge of the shoulder. The pavement between the full-depth saw cut and the shoulder edge shall be removed using a hand held hammer and hand tools prior to the removal of the remaining pavement.

The pavement between the saw cuts shall be removed by lifting. Sufficient care shall be taken to minimize subbase disturbance and prevent spalling of the pavement that is to remain in place. Any subbase or stabilize subbase material disturbed during pavement removal operations or determined unsuitable by the Engineer shall be removed and replaced with patch material.

If the Engineer determines that the concrete has deteriorated to the extent that it is not practical to lift, the pavement may be broken into small pieces and removed. The breaking equipment shall not transfer impact energy than 3,000 foot-pound per blow to the pavement surface.

Should the Contractor’s operation cause a spall having a width or depth greater than 1 inch in the pavement to remain in place or cause excessive shattering or underbreaking of the existing slab to remain in place or cause excessive shattering or underbreaking of the existing slab to remain in place, a new saw cut shall be made extending the patch to remove the spall or underbreaking. After pavement removal, the pavement structure will be inspected by the Engineer to determine if it is sufficiently sound. If determined unsound, the Contractor shall extend the patch as directed by the Engineer.

Revise Article 442.06(a) to read:

1. Reinforcement, Dowel Bars, and Joints. Reinforcement, dowel bars, joints shall be according to the following.
	1. Class A Patching. The reinforcement shall be constructed according to Articles 508.03 through 508.09.

Patch reinforcement (longitudinal) shall be tied to No. 6 epoxy coated tie bars, 32 inch long drilled and grouted into existing pavement at 12 inch centers.

Patches more than 20 feet in length shall be tied to the adjacent pavement, portland cement concrete shoulders, and curb and gutter with No. 6 transverse epoxy coated tie bars, 24 inches long, embedded 8 inch at 36 inch centers according to Article 420.05(b).

The Contractor shall tie the steel together, using at least two secure ties for each lap splice according to Article 508.08(a)(1).

Reinforcement steel shall be placed and supported on chairs according to Article 508.06, and the placement tolerance for individual reinforcement bars shall be +/- 1 inch horizontally and vertically.

Revise the first paragraph of Article 442.06(d) to read:

(d) Concrete Placement. The patch material shall match the elevation of the existing concrete pavement or hot-mix asphalt surface. Concrete shall be placed according to Article 420.07 of the Standard Specifications except a mechanical spreader will not be required. Placement shall be governed by the limitations set forth in Article 1020.14.

Method of Measurement. This work will be measured according to Article 442.10 and as modified herein.

Revise the table and the third paragraph of the article to read:

|  |  |
| --- | --- |
| % change of thickness | % change of quantity |
| 0 to less than 15 | 0 |
| 15 to less than 20 | 10 |
| 20 to less than 30 | 15 |
| 30 to less than 50 | 20 |

If the thickness of the existing pavement varies by 50 percent or more from that shown on the plans, the character of the work will be considered significantly changed and an adjustment to the contract will be made according to Article 104.02.

Basis of payment. This work will be measured according to Article 442.11 and as modified herein.

Revise second paragraph to read:

Where the Department requires a specific class of patch used, this work will be paid for at the contract unit price per square yard (square meter) for CLASS A PATCHES (SPECIAL), of the type and thickness specified. When a patch is adjacent to a wide flange beam terminal joint, this work will be paid for at the contract unit price per square yard (square meter) for PAVEMENT PATCHING (SPECIAL).