

S-1 **(2104) REMOVE AND REPLACE BITUMINOUS PAVEMENT (ADA)**

Always include SP2018-143 ((2360) PLANT MIXED ASPHALT PAVEMENT (MSCR)) when using this write-up.

REVISED 03/09/18 ◀DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2018-90

This work shall consist of full depth sawing, removing, and replacing the bituminous surface adjacent to the newly constructed curb and gutter in accordance with MnDOT 2104, 2360, other Contract provisions, and the following:

S-1.1 **CONSTRUCTION REQUIREMENTS**

The Contractor shall provide a full depth bituminous sawcut at a line that is offset 2 feet from the proposed gutter face as shown in the Plans. This bituminous saw cut shall be performed radially as needed to follow the proposed curb radius. The Contractor shall then remove and dispose of the full depth bituminous between the sawcut and existing curb and gutter. The aggregate base shall be compacted to the satisfaction of the Engineer.

(A) For Full Depth Bituminous

After the curb and gutter has been constructed in conformance with MnDOT 2531.3, the 2 foot wide void between the gutter face and the existing roadway shall be filled with a bituminous mixture of the same thickness as the adjacent pavement and to a compacted level resulting in the edges/joints between the compacted bituminous and the gutter face/existing bituminous roadway are less than 1/4 inch vertically.

(B) For Concrete Base with Bituminous Overlay

After the curb and gutter has been constructed, the 2 foot wide void between the gutter face and the existing roadway shall be filled with Concrete Mix No. 3F52 from the bottom of the adjacent existing pavement, then consolidated and struck off at a point 2 inches below the finish grade of the roadway. The remaining 2 inches shall be filled with a bituminous mixture to a compacted level resulting in the edge/joint between the compacted bituminous and the gutter face/existing bituminous roadway is less than 1/4 inch vertically.

(C) Compaction

Obtain with mechanical tampers in areas not accessible to conventional rolling equipment. The final course of the bituminous patch shall be compacted using conventional rolling equipment. Compaction shall be achieved to the satisfaction of the Engineer.

(D) Surface Slope

Bituminous patch in front of the truncated domes must not exceed 5% measured perpendicular to the flow line or edge of roadway.

(E) Additional Minor Pavement Removal and Replacement

If the Engineer determines that additional pavement removal is necessary, this pay item can be utilized to complete additional minor roadway work beyond the initial 2 foot width. This work could consist of replacing damaged pavements, fixing existing drainage issues or accommodating the construction of minor curb alignment changes in order to complete ADA work.

S-1.2 **METHOD OF MEASUREMENT**

Measurement will be by the square foot.

S-1.3 **BASIS OF PAYMENT**

Payment will be under Item 2104.618 (Remove and Replace Bituminous Pavement) at the Contract bid price per square foot, which shall be compensation in full for all costs of performing the work as specified, including, but not limited to, cleanup and disposal operations.

S-2 **(2232) MILL AND PATCH BITUMINOUS PAVEMENT (ADA)**

Always include SP2018-142 ((2360) PLANT MIXED ASPHALT PAVEMENT (MSCR)) when using this write-up.

REVISED 03/09/18 ◀DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.
SP2018-122

This work shall consist of milling and patching the existing bituminous surface adjacent to the newly constructed curb and gutter in accordance with the provisions of MnDOT 2232, 2360, other Contract provisions, and the following:

S-2.1 **CONSTRUCTION REQUIREMENTS**

The bituminous surface shall be milled to a depth of 2 inches for a width of 2 feet in front of the proposed curb and gutter as shown in the Plans and in conformance with requirements of MnDOT 2232, Mill Pavement Surface. All milling must occur before the new curb and gutter is placed. After the new curb and gutter has been constructed in conformance with MnDOT 2531.3 the Contractor shall place bituminous material over the milled surface. The compacted surface shall be at a level resulting in the edges/joints between the surface and the gutter face/existing bituminous roadway are less than 1/4 inch vertically. Compaction shall be obtained with mechanical tampers in areas not accessible to conventional rolling equipment. The final course of the bituminous patch shall be compacted using conventional rolling equipment. Compaction shall be achieved to the satisfaction of the Engineer.

The surface slope of the bituminous patch in front of the truncated domes must not exceed 5% measured perpendicular to the flow line or edge of roadway.

Surface Correction

If the Engineer determines that additional milling and patching is necessary, this pay item can be utilized to complete additional minor roadway work beyond the initial 2 foot width. This work could consist of correcting surface deterioration, vertical discrepancies, drainage, or similar activities in order to provide an ADA compliant street crossing.

S-2.2 **METHOD OF MEASUREMENT**

Measurement will be by the square foot.

S-2.3 **BASIS OF PAYMENT**

Payment will be under Item 2232.618 (Mill and Patch Bituminous Pavement) at the Contract bid price per square foot, which shall be compensation in full for all costs of performing the work as specified, including, but not limited to, cleanup and disposal operations.

S-3 **(2301) DRILL AND GROUT REINFORCEMENT BAR (EPOXY COATED)**

SP2018-126

This work shall consist of drilling, grouting, and inserting No. epoxy coated reinforcement bars in accordance with the provisions of MnDOT 2301 and the following:

S-3.1 **MEASUREMENT AND PAYMENT**

Measurement will be by the number of epoxy coated reinforcement bars that are furnished, installed, and grouted in place as specified. Payment will be under Item 2301.602 (Drill and Grout Reinforcement Bar (Epoxy Coated)) at the Contract bid price per each, which shall be payment in full for all work included under this section.

S-4 (2521) CONCRETE WALK (ADA)

Only use when the pay item 2521.618 (Concrete Walk) is on the plan.

SP2018-189

This work shall consist of constructing Concrete Walk, including necessary Subgrade Preparation, Aggregate Base, and Grading as indicated in Standard Plan Sheet No.5-297.250 (Sheet 2 of 6) and in accordance with the provisions of MnDOT 2112, 2211, 2521, other Contract provisions, and the following:

S-4.1 CONSTRUCTION REQUIREMENTS

(A) **Concrete Walk** – The walk shall be constructed as detailed in the Plan and conform to the requirements of MnDOT 2521, Walks.

The minimum continuous and unobstructed clear width of a pedestrian access route shall be 4.0 ft. All new or reconstructed sidewalk widths shall match or exceed in place sidewalk and in no case shall it be less than 5.0 ft. in width except at locations where obstructions cannot be moved or at driveways where slopes exceed the maximum allowable grades. The cross slope of the sidewalk or trail shall not exceed 2%, and shall be measured across the entire surface width of the sidewalk or trail. Curb ramps shall meet or exceed existing sidewalk and trail widths, and the curb openings. Any architectural elements that do not maintain a consistent flat smooth surface shall not be used within the PAR.

In areas where the sidewalk is to be constructed around fixed structures and the grade has been changed, the sidewalk shall be finished around these structures to the satisfaction of the Engineer at no additional cost.

When greater than 50 ft. of continuous sidewalk runs are constructed the contractor shall saw cut all joints.

To avoid corner breaks, all walk edges shall be formed and constructed perpendicular to the back of curb and gutter sections and concrete structures for a one foot minimum distance.

All existing signs shall be salvaged and reinstalled as directed by the Engineer or as indicated in the Plan.

(B) **Grading** – If not otherwise detailed in the Plan, all fill sections shall be graded flush with the top of walk for a minimum 18 inches from the edge of walk and then down at a maximum 1:3 slope to existing terrain. The Contractor shall blend in the toe of fill slope and adjacent areas so as not to adversely affect drainage.

(C) **Landings** – An initial landing is the first required landing of a pedestrian ramp. All initial landings required at the top of a ramped sloped surface (>2% longitudinal slope), shall be formed and placed separately in an independent concrete pour. This does not include initial landings placed at roadway grade such as depressed corners, parallel ramps, rural flat landings, or flat cut-throughs. Secondary landings consist of all landings beyond the initial landing. These secondary landings do not require a separate landing pour.

Whenever possible the entire landings should be placed in a single concrete placement, and shall be constructed as a single plane surface having no grade breaks. If single concrete placement is not possible due to construction staging, follow requirements for dowel bar placement and tie adjacent landings together. Architectural elements such as brick pavers, concrete stamping, and multiple colored concrete placements shall be kept outside the curb ramps and curb ramp landings.

Wet casting or drill and grouting of reinforcement bars will be required in accordance with the details shown in Standard Plan 5-297.250 Sheet 6 of 6. If wet casting of reinforcement the bars shall be installed through holes in the forms, with a form height at least equal to the walk thickness of the formed concrete shown in the plans. These bars shall be deformed and shall be installed with 2" minimum concrete cover.

When not accounted for in the Plan, payment for the reinforcing steel will be made under Item 2301.602 (Drill & Grout Reinforcement Bar (Epoxy Coated)) by the Each at the Predetermined Price of \$10.00 per

bar furnished and installed. All necessary subgrade preparation and aggregate base placement for the entire ramp(s) construction limit shall be done before the initial landing is constructed at each location.

S-4.2 **METHOD OF MEASUREMENT**

Measurement of Concrete Walk will be by top surface area.

S-4.3 **BASIS OF PAYMENT**

Payment will be under Item 2521.618 (Concrete Walk) at the Contract bid price per square foot, including the area of walk under the truncated domes, which shall be compensation in full for all costs of furnishing, and installing the required material. In areas where Directional Curb is constructed, the triangular area that is behind the projected back of curb line will be paid for as Concrete Walk at the Contract bid price for Item 2521.618 (Concrete Walk). All excavation or borrow including hauling or disposal that is necessary to meet the walk grades in the Contract shall be incidental unless specifically provided for in the Plan. If common borrow requirements exceed 8 cubic yards (CV) at any individual site/quadrant, than the common borrow required at that location and not specifically accounted for in the Plan will be paid for at \$20 per cubic yard (CV).

If the Plan calls for payment of Aggregate Base and/or other Grading items for a pedestrian facility, then payment will only be made for the locations specifically provided for in the Plan. All salvaging and reinstalling of signs as a result of concrete walk construction shall be incidental unless specifically provided for in the Plan.

S-5 **(2531) CONCRETE CURB AND GUTTER (ADA)**

Only use when the pay item 2531.603 (Concrete Curb and Gutter) is on the plan.
SP2018-190

This work shall consist of constructing Concrete Curb and Gutter and the necessary Aggregate Base in accordance with the provisions of MnDOT 2531, other Contract provisions, and the following:

S-5.1 **CONSTRUCTION REQUIREMENTS**

Concrete Curb and Gutter - The curb and gutter shall be constructed to meet the details in the Plan. The transition from the existing curb and gutter section to the new curb and 24 inch gutter section should occur between 5 feet – 10 feet of the zero height curb. Curb shall be poured at 3% inflow around the radius or at a minimum distance of 10 feet from any zero height curb section when machine placed. The gutter inslope shall be constructed as detailed in the Plans. The gutter inslope transitions shall occur outside of the zero height curb area. The proposed gutter width shall be modified as necessary so as not to protrude into the adjacent travel lane with approval from the Engineer.

At all locations where new curb and gutter meets existing curb and gutter, place saw cut to leave a minimum 3 feet of in place curb and gutter between an existing joint and the proposed saw cut. If the 3 foot minimum cannot be maintained, place the saw cut over the existing joint. If construction joints are utilized within a quadrant radius Reinforcement bars shall be installed per Standard Plans 5-297.250 (Sheet 6 of 6). When not accounted for in the Plan, payment for these bars will be made under Item 2301.602 (Drill & Grout Reinforcement Bar (Epoxy Coated)) by the Each at the Predetermined Price of \$10.00 per bar furnished and installed.

The Contractor must form, at a minimum, the top 1.5 inches of the gutter face. The Contractor shall not use the existing roadway edge as a form for the top 1.5 inches of the gutter face unless approved by the Engineer.

If the gutter flow line in front of the proposed curb ramp exceeds 2.0% slope, the flow line should be adjusted to 2% or less if feasible while following the roadway criteria as per Standard Plans 5-297.250 (Sheet 6 of 6). The bituminous patch in front of the truncated domes should be 1% minimum to 5% maximum measured perpendicular to the flow line. In no case shall a newly constructed curb and gutter flow line exceed 8% unless the roadway profile exceeds 8%.

The Contractor shall not alter any existing drainage patterns unless called for in the plans or approved by the Engineer.

The Contractor shall construct a contraction joint through the curb and gutter section at the bottom of the curb height transitions where the curb height equals zero inches. If any curb and gutter joints fall within the PAR, they shall meet MnDOT 2521.3C.

When constructing directional curb where truncated domes are placed perpendicular to the path of travel, the concrete between the grade break/edge of truncated domes and the gutter toe shall be constructed integral.

S-5.2 **METHOD OF MEASUREMENT**

Measurement of Concrete Curb and Gutter will be by the linear foot measured at the face of the curb.

S-5.3 **BASIS OF PAYMENT**

Payment will be under Item 2531.603 (Concrete Curb and Gutter) at the Contract bid price per linear foot, which shall be compensation in full for all costs of furnishing and installing the required material including Aggregate Base.

S-6 **(2531) CONCRETE CURB DESIGN V (ADA)**

Only use when the pay item 2531.603 (Concrete Curb Design V) is on the plan.
SP2018-191

This work shall consist of constructing Concrete Curb Design V of varying heights up to 8 inches as detailed in the Plan and in accordance with the provisions of MnDOT 2531, other Contract provisions, and the following:

S-6.1 **CONSTRUCTION REQUIREMENTS**

The Concrete Curb Design V shall be constructed as detailed in the Plan. Concrete Curb Design V may be constructed independent of or integral to the adjacent sidewalk. The bottom elevation of the Concrete Curb Design V shall match the bottom elevation of the adjacent sidewalk slab. When the Concrete Curb Design V is constructed independent of the sidewalk, the portion of the Concrete Curb Design V that will have new concrete walk placed against it shall be clean so as to maximize bonding between the walk and Concrete Curb Design V. The joint locations in the curb shall align with the joint locations in the adjacent concrete walk.

The locations requiring the use of Concrete Curb Design V will solely be determined in the Plans or in the field by the Engineer. Any Concrete Curb Design V that is constructed without pre approval of the Engineer will be considered unauthorized work for which no compensation will be made and may be removed at the Engineer's discretion. The height and length of the Concrete Curb Design V to be constructed shall be recommended by the Contractor and approved by the Engineer before the Concrete Curb Design V is constructed.

S-6.2 **METHOD OF MEASUREMENT**

Measurement will be by the linear foot of Concrete Curb Design V constructed measured at the face of curb. Curb height shall be measured from the top of the adjacent concrete walk to the top of the curb.

S-6.3 **BASIS OF PAYMENT**

Payment will be under Item 2531.603 (Concrete Curb Design V) at the Contract bid price per linear foot, which shall be compensation in full for all costs of performing the work as specified. All pedestrian concrete approach noses adjacent to the pedestrian ramp will be paid as 2 feet of Concrete Curb Design V. The pedestrian concrete approach nose adjacent the roadway curb and gutter shall be included in the payment for linear foot curb and gutter. Any additional Concrete Curb Design V beyond the quantity provided in the Plan, will be paid for at \$20 per linear foot. Lengths of Concrete Curb Design V that never reach 3 inch height will be paid for as Concrete Walk.

S-7 (2531) TRUNCATED DOMES

Only use when the pay item 2531.618 (Truncated Domes) is on the plan.

SP2018-192

This work consists of furnishing and installing Truncated Dome Systems (detectable warning surfaces) at pedestrian curb ramps in compliance with the Public Rights-of-Way Accessibility Guidelines (PROWAG). Truncated domes shall provide a visual contrast to the concrete ramp of either dark on light or light on dark. This work shall be performed in accordance with the applicable MnDOT Standard Specifications, these Special Provisions, details in the Plan, and the following:

S-7.1 CONSTRUCTION REQUIREMENTS

The Contractor shall select a truncated dome product from the approved products list at <http://www.dot.state.mn.us/products/detectablewarningsurfaces/index.html>. The truncated domes shall be placed in concrete and shall be pressed firmly into the concrete to the point that concrete fills the vent holes on the truncated dome plates. No cutting of truncated domes will be allowed unless approved by the Engineer. No more than one cut dome per pedestrian ramp is allowed and any cut sections used shall not be less than 2 SF of surface area. All cut edges shall be ground to a smooth surface leaving no sharp edges or burrs. If using coated colored truncated domes they shall not be cut. Any swelling of the concrete that occurs around the truncated domes must be screeded off and the surrounding concrete shall be finished flush with the truncated dome plate edge. The finished installation of the truncated domes plates and the ramp surface plane shall have no surface deviations over 3/16 inches. To ensure that the truncated domes are well seated in concrete, the Contractor should provide a 3 inch minimum border around the edges of the truncated domes.

The Contractor will be allowed to interchange 9 foot 5 inch and 10 foot radial truncated domes when either is called for in the Plan. If the Contractor does make a substitution, the Contractor will be required to modify the curb line radius to match the truncated domes and meet the detectable edge requirements shown on Standard Plan Sheet No. 5-297.250 (Sheet 4 of 6). The Contractor will be allowed to adjust plan locations of zero inch height curb up to 6 inches laterally to make field fit adjustments for radial truncated domes placement.

S-7.2 METHOD OF MEASUREMENT

Square or rectangular truncated dome area will be measured by the square foot. Radial Truncated domes will be measured along the long cord and multiplied by 2 feet to compute S.F.

S-7.3 BASIS OF PAYMENT

Payment will be under Item 2531.618 (Truncated Domes) at the Contract bid price per square foot, which shall be compensation in full for furnishing and installation of truncated domes. If additional radial domes are required and not called for in the plans they will be paid for at 4 square feet per each additional plate.

S-8 (2575) SITE RESTORATION (ADA)

District to choose whether sodding or seeding is to be used where noted in this write-up.

REVISED 03/09/18 ◀DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.

SP2018-245

This work consists of site grading and establishment of a perennial vegetative cover as detailed in the Plans and in accordance with the provisions of MnDOT 2575 and **Designer select either 3876 (if design specifies seed) 3878 (if design specifies sod)**. Site restoration shall include the re-establishment of turf in all areas disturbed by Contractor operations and any cleanup of eroded soil. This provision only pertains to grading, topsoil, and turf establishment operations.

This Special Provision is required for areas where pedestrian ramps, sidewalks, trails, driveways and curb & gutter, are being constructed, and in Boulevard Drainage Restoration areas required to restore positive sidewalk drainage to the roadway see designated areas in the Plan.

S-8.1 CONSTRUCTION REQUIREMENTS

(A) **Site Grading** – All disturbed areas shall be graded flush with the top of walk, top of curb, driveways or utilities. All stockpiled topsoil must be replaced within the same area from which it was stripped. The minimum depth of topsoil shall be 4 inches which shall be achieved using common topsoil borrow if necessary.

If not otherwise detailed in the Plan, all cut section side slopes shall be finished graded flush from the top of concrete surface at a maximum 1:6 slope up to 5 feet from the edge of walk or back of curb, or straight graded to the existing ground elevation 5 feet from the edge of the walk or back of curb. At the Engineer's sole discretion, Concrete Curb Design V may be utilized along with the above stated grading techniques to reduce excessive ground slopes and better match adjacent surface terrain within the 5 foot incidental grading area.

Boulevard Drainage Restoration consists of establishing positive flow from top of walk to top of curb, while maintaining 4" min. top soil and establishing turf. Essentially this is a straight line grade from top of walk to top of curb. Exclude areas where damage to tree roots could occur and protect trees from Contractor operations.

All sites shall be restored to as good or better condition than the pre-construction condition.

(B) **Turf Establishment** – All areas that are disturbed as described above shall be **Designer choose either seeded or sodded** and stabilized in accordance with the Plans, Specifications, and Special Provisions. Each site must be stabilized in accordance with the requirements of MnDOT 1717. Seed bed preparation shall be performed in accordance with MnDOT 2574 utilizing appropriate methods, to include handwork as necessary.

S-8.2 METHOD OF MEASUREMENT

Measurement will be by each site that is restored in accordance with the Plans, Specifications, and Special Provisions. Each site consists of the area that is disturbed as a result of the adjacent walk, trail and/or curb and gutter construction.

S-8.3 BASIS OF PAYMENT

Designer to choose only one payment type per project.

Payment will be under Item 2575.602 (Site Restoration) at the Contract bid price per EACH (if pedestrian ramp only jobs), which shall be compensation in full for all work described in this Special Provision. Boulevard Drainage Restoration shall not be included under this payment. Any topsoil borrow that is required and not accounted for in the Plan shall be screened and pulverized Common Topsoil Borrow paid at \$40 per cubic yard (LV).

OR

Payment will be under Item 2575.618 (Site Restoration) at the Contract bid price per SQUARE FOOT (if sidewalk, or driveways are included with pedestrian ramp work), which shall be compensation in full for all work described in this Special Provision. Any topsoil borrow that is required and not accounted for in the Plan shall be screened and pulverized Common Topsoil Borrow paid at \$40 per cubic yard (LV).