MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
SIDEWALK, CLAY BRICK PAVERS ON SAND BED

RSD:JN 1 of 3 APPR:TEB:JFS:03-27-20
FHWA: APPR:03-30-20

a. Description. This work consists of either preparing base, furnishing and installing a sand bed and furnishing and installing clay brick pavers (pavers) or removing clay brick pavers and the subbase materials in the areas shown on the plans. Ensure this work is performed by workers with satisfactory record of performance on completed projects of comparable size and quality. Provide references to the Engineer if requested.

Review installation procedures and coordinate this work with other contractors or subcontractors working in the area. Furnish and install temporary barricades and warning lights, as required, for public safety and protection of work. Protect adjacent work from damage, soiling, or staining during paving operations.

Before starting this work, construct a 20 square foot (approximately) sample panel using bedding depth, materials, pattern, and joints shown on the plans. Construct the sample panel using the range of clay paver color, texture, and workmanship, proposed for the work. Correct and rebuild sample panel until it is acceptable to the Engineer. Retain the sample panel during construction as a standard for completed paving work.

b. Materials. Provide materials in accordance with standard specifications and this special provision. Store granular materials in a well-drained area on a solid surface to prevent mixing with foreign materials. Do not use frozen materials or materials mixed or coated with ice or frost.

1. Pavers. Provide pavers in accordance with *ASTM C902, for Class SX, Type I*, Application PS and the dimensions shown on the plans. Supply pavers that are uniform in dimension, color, and texture. Provide manufacturer's product data and installation instructions for pavers.

Tactile pavers, if required, must meet the requirements of the section 803 of the Standard Specifications for Construction and this special provision.

A. Provide only sound pavers free of defects that could interfere with proper installation or reduce the service life of the finished work. Minor cracks and minor chipping incidental to methods of manufacture or handling are subject to visual inspection and the Engineer's acceptance. Excessive cracks and chips will be cause for rejection.

There must be no efflorescence evident upon visual inspection of the pavers at the project site.

B. Provide manufacturer's test data certification, according to the MDOT Quality Assurance Procedures Manual, documenting that the pavers meet these specifications when tested as specified in *ASTM C902*. Conduct freeze - thaw tests not more than 12

months prior to delivery.

If sampling and testing is required, sampling frequency and sample size will be as stated for concrete brick in Section G of the Materials Quality Assurance Procedures Manual.

C. Submit a minimum of five full size samples for each paver color. Include the full range of style, size, exposed finish, color, and texture proposed for the work.

D. Protect pavers from damage, chipping, and soiling during delivery and storage. Store off the ground on pallets or wood platforms. Do not use pavers with chips, cracks, voids, discoloration, or other visible defects exceeding the limits in *ASTM C902*.

E. The pavers listed here are acceptable for this project. An alternate source of pavers may be submitted to the Engineer for approval provided they meet all requirements of this special provision. Do not change source of pavers during the course of the work.

Provide red clay brick pavers as indicated on the plans or as directed by the Engineer.

2. Base Material. Use granular material Class II or as specified for base material under adjacent roadway or driveway(s).

3. Bedding and Leveling Material. Use 2NS or 2SS meeting section 902 of the Standard Specifications for Construction or blast furnace slag sand meeting the gradation shown in Table 1 (commercially known as 30A Blast Furnace Slag):

Table 1: Grading Requirements for 30A Blast Furnace Slag

Sieve Analysis (*ASTM C136/C136M*) Total Percent Passing								
U.S. Sieve	3/8"	#4	#8	#16	#30	#50	#100	#200
% Passing	100	95-100	70-95	45-75	25-55	15-35	0-20	-

4. Paver Joint Filler. Use 2MS meeting section 902 of the Standard Specifications for Construction.

5. Edge Restraints.

Paver Units (Soldier Course). Fill gaps at the edge of the paved surface with standard edge pieces or with paver units cut to fit.

c. Construction. Maintain pedestrian and vehicular traffic per the contract, in the area during installation of pavers. Do not build on frozen, wet, saturated, or muddy sub-grade. Protect partially completed paving against weather damage when work is not in progress. Remove and replace completed work damaged by frost or freezing.

1. Base Course. Place base course materials only on an approved surface. Spread base course material in layers which when compacted will not exceed 4 inches. Compact each layer to 95 percent of maximum unit weight. Screed, level, and shape base course surface to required grade and cross section within a tolerance of 1/4 inch.

2. Bedding and Leveling Course. Spread bedding and leveling course materials evenly over the entire area to be paved, screed to a level that will provide a minimum 1 inch thickness

when the pavers are placed and vibrated. Protect completed bedding and leveling course from damage until covered with paver units. Do not pre-compact bedding and leveling course.

3. Pavers. Correct any unsatisfactory substrate or installation conditions prior to placing any pavers. Use full pavers wherever possible. Where cutting is required, use the largest size pavers possible. Cut pavers to provide required pattern and to neatly fit adjoining work. Cut pavers with block splitter or other equipment designed to cut masonry with clean, sharp unchipped edges. Ragged cuts will not be accepted. Cut through the full thickness of the pavers. Do not cut more than 1 inch of the 4 inch dimension of a soldier course.

Lay paver units in the pattern shown on the plans. Set all pavers flush to existing adjacent concrete curbs and adjoining work. Maintain uniform 1/16 inch to 1/8 inch joints between pavers.

Vibrate pavers to final grade with three or more passes of a vibrating plate compactor. After the first pass, brush joint filler material over the surface and vibrate into the joints with additional passes. Completely fill joints. After final vibrating, the surface must be true to grade and not vary by more than 1/4 inch when tested with a 10-foot straightedge at any location on the surface.

Remove and replace pavers that are broken, chipped, stained, or otherwise damaged. Provide new matching pavers, install as specified and to minimize evidence of replacement.

Clean pavers during installation and upon completion of the work. Repair damage to adjacent areas resulting from paver installation operations, as directed by the Engineer.

Remove and properly dispose of all excess material and debris upon completion of paver installation.

d. Measurement and Payment. The completed work, as described, will be measured and paid for at the contract unit price for the following pay items:

Pay Item	**Pay Unit**
Sidewalk, Clay Brick Pavers	Square Foot
Sidewalk, Clay Brick Pavers, Rem	Square Foot

1. **Sidewalk, Clay Brick Pavers** includes removal, storage and disposal of waste materials per subsection 205.03.P of the Standard Specifications for Construction.

Furnishing and installing tactile pavers, if required, will be measured and paid for separately.

2. **Sidewalk, Clay Brick Pavers, Rem** includes removing all pavers and subbase materials, and disposal per subsection 205.03.P of the Standard Specifications for Construction.