

**MODIFICATIONS TO THE
STATE OF OHIO DEPARTMENT OF TRANSPORTATION
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
AND SUPPLEMENTAL SPECIFICATIONS**

**GEAUGA COUNTY
YEAR 2024**

January 8, 2024

**MODIFICATIONS TO THE
OHIO DEPARTMENT OF TRANSPORTATION'S
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR GEAUGA COUNTY – 2024**

100 GENERAL PROVISIONS

The Contractor shall follow the State of Ohio Department of Transportation Construction and Material Specifications (C&MS) published January 1, 2019 (including SS800 modification, version as identified in the project Bid Specifications) unless otherwise noted in this document. Where the "Department" is referenced in the State manual it shall be interpreted as the Public Authority or authorized agent. Where the "Director or Engineer" is referenced in the State manual, it shall mean the "Geauga County Engineer".

Section 100 - General Provisions of the C&MS shall not apply. The Standard Contract Provisions for Improvement Contracts prepared by the Geauga County Engineer's Office covers the contracting and legal provisions for county and township public improvement projects. The most recent publication shall serve as a basis of specifications, unless otherwise stated in the Plans or Description of Work, for all highway related improvements in Geauga County.

In addition to the provisions listed above, the Contractor shall follow the most current ODOT LPA Construction and Material Specifications Proposal Note 100 and ODOT LPA Template Contract Provisions for all Federal Aid Projects.

ITEM 201 CLEARING AND GRUBBING

201.03 Clearing and Grubbing

The wood from trees cut in the right of way or work limits is the property of the abutting property owner. The wood or brush with a diameter of eight inches (8") or larger shall be cut in manageable lengths, four feet (4') or less and set outside the right of way. If the property owner does not want the wood, then it will become the responsibility of the Contractor to remove and dispose of the wood.

ITEM 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

202.05 Wearing Course Removed

The existing pavement shall be ground transversely, using a self-propelled grinder as approved by the Engineer. The removal of the existing pavement and all other grinding work shall be performed and paid for under ODOT Item 202 Wearing Course Removed unless otherwise specified in the Contract Documents.

ITEM 203 ROADWAY EXCAVATION AND EMBANKMENT

203.04 (E) Pavement Widening Construction

The trenches to widen the existing pavement shall be excavated using a self-propelled grinder that removes all the material from the trench and loads it into a truck in a single operation. The Engineer shall approve the method and equipment prior to the commencement of the trenching operation. The Contractor shall locate the construction centerline per 623.08 to provide proper trench location. The work shall include removal of all material encountered. The trench shall be thoroughly cleaned and all asphalt faces tacked prior to the placement of Item 301 Asphalt Concrete Base.

ITEM 206 CHEMICALLY STABILIZED SUBGRADE

The paragraphs below replace the C&MS ODOT ITEM 206 paragraphs.

Description. This work shall consist of constructing the cement stabilized subgrade in accordance with these specifications as directed.

Materials. Portland cement shall meet the requirements of ODOT 701.04. The weight of the cement used shall be between 5 and 14 percent of the dry weight of the subgrade soil as directed by the Engineer.

The percent of cement shall be determined by using compressive strength tests performed on soil cement cylinders prepared as per ASTM D-1633. The compressive strength test shall be performed on cylinders using subgrade samples taken from a minimum of three (3) separate locations, with no less than one (1) from within the pavement area, as approved by the Engineer for a 7-day cure. The percentage by weight of the cement content of the tests shall be 5, 6, and 7 percent or as directed. Three (3) cylinders for each percentage are required, a minimum of 9 total. The soil mixtures for the tests shall be made at optimum moisture. The final mixture shall have the capability of attaining a minimum strength of two hundred (200) PSI in seven (7) days.

The data suitably presented shall be submitted to the Engineer for acceptance. The Engineer will determine the percentage to be used on the project. The percentage of cement used on the project may be varied to meet field conditions.

Moisture density curves for the percentage chosen by the Engineer shall be made in accordance with AASHTO T-99 by the soils consultant for each sample. This data shall be submitted to the Engineer three working days prior to the work.

Two cores shall be taken each day to determine the actual strength of the stabilized subgrade. Compressive strength tests shall be performed on the cores at a 7-day cure. The Engineer shall be satisfied the soil has reached a 200 PSI strength prior to allowing the asphalt paving work. The design and quality control testing as described shall be paid for under Item 206 Subgrade Material Testing.

**MODIFICATIONS TO THE
OHIO DEPARTMENT OF TRANSPORTATION'S
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR GEAUGA COUNTY – 2024**

General. Cement stabilization work shall be performed when the air temperature is 40° F or above and the material to be treated is not frozen. Winds should be minimal. No work shall be done during unsuitable weather.

The subgrade shall be prepared and test rolled prior to the addition of cement, in accordance with ODOT 204.06. The cost of test rolling shall be paid for under the bid price per hour of Item 206 – Test Rolling.

The subgrade shall be reshaped to the plan lines prior to mixture of cement so as to permit the construction of a uniform compacted course of cement treated soil at the thickness shown on the Typical Section for the project.

After twenty-four (24) hours written notice to residents, the roadway shall be closed along short sections as approved by the Engineer and the cement stabilization work completed as further detailed below. Both lanes shall be completed at the same time in order to assure proper grading. At all times the Contractor shall keep residents notified of closure locations and keep the dust to a minimum.

Subgrade Preparation. The existing subgrade shall be graded to the tolerances specified in ODOT 203.08. The Contractor may be required to use scarifying or other grinding-type equipment to properly loosen material of the existing road surface and base for the grading work. If a pre-grind item is specified in the plans or specifications, the Contractor shall scarify the existing road surface, base and subbase at the depth specified and distributes the material generated to provide grades, widths and depths as directed by the Engineer. This work may require the moving of materials for a distance up to one-quarter mile as described in the Description of Work. Pre-grind work is used in conjunction with the excavation and embankment work and not the stabilization work. Pre-grind work will usually require a separate mobilization in addition to the mobilization required to perform the subgrade preparation and stabilization work.

Spreading. A minimum of three days prior to the spreading operation, the Contractor shall submit the proposed rate of application of the Portland cement mixture to obtain the cement percentage approved by the Engineer. This information shall include but not be limited to the following calculations: rate of pure Portland cement applied and the speed of the spreading operation.

The cement shall be applied at the rate approved by the Engineer using dry methods, as specified. The cement shall be spread uniformly on the subgrade by means of distributors or tanks. Bulk cement shall be pneumatically spread by way of a tube or mechanical spreader approved by the Engineer. Dry cement must be uniformly spread at a constant slow rate of speed. It is acceptable to use a dozer or motor grader to tow the cement mixture truck in order to maintain this slow rate of speed. No cement mixture shall be spread on standing water.

The Contractor shall provide a square yard canvas to check the amount of cement spread on grade ahead of the spreading operation. The canvas and cement shall be carefully picked up and weighed after the spreader has passed to assure conformance with the contract requirements.

The dry cement shall be spread in such a manner as to minimize a dust nuisance. The distribution bar shall be at a maximum height of three (3) feet above the subgrade. A canvas shroud shall surround the distribution bar and shall extend to the subgrade. The dry cement shall not be applied when wind conditions, in the opinion of the Engineer, are such that airborne particles become objectionable.

Mixing. The initial mixing operation shall immediately follow spreading of the cement by an consisting of the use of approved power-driven transverse type mixer equipped with computer controlled volumetric water read out. Mixing shall be continued until the cement has been thoroughly incorporated into the mix and is a uniform color. **No water shall be added during this initial mixing operation.** At the completion of initial mixing, eighty (80) percent of the soil cement mixture must pass a No.4 sieve and one hundred (100) percent must pass the one (1) inch sieve, exclusive of gravel or stone.

Following the initial mixing, a re-mixing of the soil shall take place by introducing water through the approved transverse mixer to bring the mixed material to optimum moisture. Moisture must be uniformly distributed in sufficient quantity to hydrate the cement. The Contractor shall restrict the addition of water when the moisture content of soil exceeds optimum. All moisture must be added to a construction section in less than two (2) hours after the initial mixing.

The depth of the loose cement mixture may vary from the depth shown on the Typical Section as determined by the Engineer. The mixture must maintain the minimum depth shown on the Typical Section after compaction. To verify the uniformity of the mix, the Contractor may be required to dig trenches or a series of holes at regular intervals for the full depth of treatment to inspect the color and depth of the exposed material.

Compaction. The mixture shall be brought to optimum moisture content during the final mixing and the mixture shall then be shaped and compacted. Compaction shall start immediately after final mixing. Final rolling shall be performed using a steel-wheeled roller meeting the requirements of ODOT 401.13. The compacted cement mixture subgrade shall be shaped to plan lines within the tolerances for subgrade as per ODOT 203.08. A road grader shall be used for final grading to meet longitudinal and cross slope requirements. A bulldozer may only be used to establish rough grading not final grade.

The maximum dry density shall be based on the moisture density curves. The field one-point Proctor tests can supplement these curves, as directed by the Engineer. All stabilized subgrades shall be compacted to ninety-six (96) percent of the laboratory maximum dry density. Testing by a certified lab shall be included in this item.

**MODIFICATIONS TO THE
OHIO DEPARTMENT OF TRANSPORTATION'S
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR GEAUGA COUNTY – 2024**

The soil cement mixture shall obtain ninety-six (96) percent of the maximum dry density at optimum moisture content within six (6) hours from spreading to testing operations. Compaction must be completed in two (2) hours from start to finish. Moisture content at time of compaction shall be within three (3) percent of the optimum moisture content.

The use of a vibratory sheepfoot roller or rollers with additional ballast to give greater unit pressure may be required. Use must be made of the greatest contact pressure that will not exceed the bearing capacity of the soil-cement mixture and that will still “walkout” in a reasonable number of passes. Scarifying and additional compacting may be necessary to enhance compaction.

Dust Control. A dust palliative shall be applied to the subbase following the completion of the construction of the stabilized subbase to alleviate a dust nuisance. A second application may be required during the curing period if the dust remains a problem if initial asphalt course is not placed immediately following the 7-day curing period. The dust palliative shall consist of an emulsified petroleum (such as SS-1) or petroleum resin product diluted in water as approved by the Engineer.

One part of the emulsified petroleum shall be diluted with three parts water or one-part emulsified petroleum resin additive shall be diluted with four parts water. It is the desire of the Engineer to open the road to traffic one hour after the application of the dust control. Application rates and/or the ratio of the dilution mixture may be adjusted by the Engineer to achieve this goal.

Curing. The compacted cement soil stabilized subgrade shall be cured for at least seven (7) days and no more than ten (10) days before the placement of the overlaying course and after the compressive strength exceeds 200 psi.. The Contractor shall protect the stabilized subgrade and all construction traffic shall refrain from using the stabilized subgrade during the cure period. Contractor shall be responsible for protecting the stabilized subgrade from freezing until after the cure period.

Project Cleanup. In accordance with Sections B 1.07, B 2.11, B 4.35 and B 6.09 of the Standard Contract Provisions, the Contractor shall at all times keep all streets, curbing and lawns clean and remove all rubbish, excess materials and other debris as a result of the work.

ITEM 301 ASPHALT CONCRETE BASE

301.01 Description

The Contractor shall provide proper access to driveways and mailbox approaches as part of this work. Driveway aprons shall be feathered to meet existing drive grades. The maximum length of an apron placed with the wing of a paver shall be two-feet (2.0'). All asphalt and concrete drives shall be swept thoroughly and then tacked with Item 407 Tack Coat prior to paving the apron.

When Item 301 Asphalt Concrete Base (Driveways) is specified, the Contractor shall pave the driveway approaches as a separate operation.

ITEM 304 AGGREGATE BASE

304.02 Materials

No ACBFS (Air Cooled Blast Furnace Slag), GS (Granulated Slag), OH (Open Hearth Slag), EAF (Electric Arc Furnace Slag), BOF (Basic Oxygen Furnace) Slag or RPCC (Recycled Portland Cement Concrete) materials will be permitted.

**MODIFICATIONS TO THE
OHIO DEPARTMENT OF TRANSPORTATION'S
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR GEAUGA COUNTY – 2024**

ITEM 401 ASPHALT CONCRETE PAVEMENTS - GENERAL

401.01 Mix Design and Quality Control

Prior to or at the pre-construction conference, the Contractor shall submit a Job Mix Formula in a format approved by the Engineer showing the design of all mixes, source and gradation of aggregate and proposed asphalt content for the asphalt course or courses proposed to be used for a project

The proposed source (asphalt plant) of the asphalt mix must have an approved quality control program on file with the Geauga County Engineer.

401.02 Materials

Gravel shall not be permitted in any ODOT Item 441 surface courses. Aggregate gradation for all mixes shall meet ODOT C&MS requirements.

401.03 D Compaction

The number and type of rollers required when compacting the asphalt courses shall be as specified in the specifications.

401.04 Reclaimed Asphalt Pavement

Asphalt Mix Application	Percent RAP by Dry Weight of Mix
Surface Course	10%

Reclaimed asphalt shingles, tires or other materials are not permitted.

401.05 Weather Limitations

Bituminous plant mixtures shall not be placed when the air temperature is below the minimum established in the following table:

<u>Course Thickness</u>	<u>Air Temperature</u>
3.0 inches and over	40° F
1.5 to 2.9 inches	45° F
1.0 to 1.4 inches	50° F
Less than 1.0 inches	60° F

Polymer modified surface courses shall not be placed when the air temperature is less than 60° F.

401.07 Hauling

No loads of any material shall be accepted if the trucks are overloaded. Maximum allowable net loads shall be in accordance with State and/or Local regulations regarding weight limits. Certification documenting the allowable gross weight for all vehicles working on the project shall be available at all times for inspection by the Engineer.

401.08 Placement Operations

When Asphalt Concrete Surface (or Intermediate) Course (Driveways) is specified, the Contractor shall pave all side road and driveway approaches after the placement of the intermediate asphalt course, but before the application of the final asphalt surface course. The maximum length of an apron placed with the wing of a paver shall be two-feet (2.0').

If existing mailbox approaches are to be paved, the Contractor shall resurface the approaches in general conformance with Figure 1 for all courses of asphalt.

The Contractor shall place a minimum apron while performing the mainline work, as needed, for access during construction, as directed by the Engineer. Payment for this item shall be included with the mainline item.

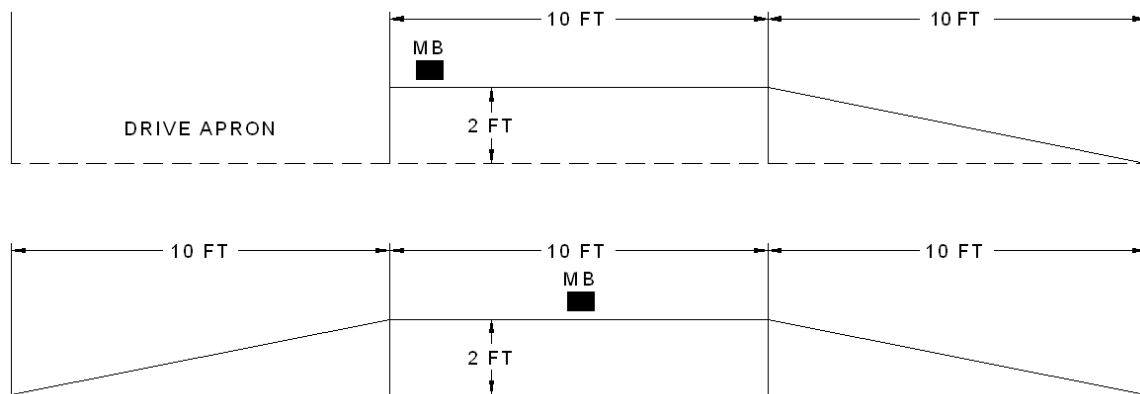


Figure 1

All pavement to pavement, pavement to concrete, and/or pavement to curb joints or feathered edges shall be sealed with a six inch (6") band of liquid asphalt cement.

401.08 D Joints

The Contractor shall schedule paving work to complete or close all longitudinal centerline joints prior to the end of each work day, unless otherwise specified in the Bid Specifications.

Seal all transverse and longitudinal surface course joints per 401.17.

ITEM 411 STABILIZED CRUSHED AGGREGATE

411.02 Materials

Gravel, ACBFS (Air Cooled Blast Furnace Slag), GS (Granulated Slag), OH (Open Hearth Slag), EAF (Electric Arc Furnace Slag), BOF (Basic Oxygen Furnace) or RPCC (Recycled Portland Cement Concrete) materials will not be permitted under this item.

**MODIFICATIONS TO THE
OHIO DEPARTMENT OF TRANSPORTATION'S
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR GEAUGA COUNTY – 2024**

ITEM 422 CHIP SEAL

422.02 Materials

Certified material submittals shall be submitted to the engineer a minimum of 48 hours prior to placement. If material is stock piled the contractor must test the material per CMS 422.02.

422.13 Method of Measurement

Certified scale tickets for aggregate and emulsion are required for determining quantity used and shall be provided to the engineer within 24 hours of the installation of the material. The Contractor may provide certified test results, from the supplier of cover aggregate, in writing to determine the conversion factor to cubic yards of the cover aggregate approved for each application. If certified documentation is not provided, aggregate shall be measured by weight and converted to cubic yards in accordance to the following:

Aggregate	Pounds per Cubic Yard
#8 Limestone	2600
#67 Limestone	2400

422.14 Basis of Payment

The Owner will pay for accepted quantities as follows:

Item	Unit	Description
422	Gallon	Seal Coat Bituminous Material
422	Cubic Yard	Seal Coat Cover Aggregate, No. _____

ITEM 441 MARSHALL ASPHALT CONCRETE

441.02 Composition

For all asphalt surface mixtures, see Section 401.04 of this document for maximum allowable percentages of reclaimed asphalt concrete pavement.

For Type 1 Surface, Type 1 Intermediate and Type 2 Intermediate follow the Asphalt Mixture Composition Table 441.02-1 in the ODOT C&MS unless otherwise specified in the description of work.

For Type 2 Surface, follow the Asphalt Mixture Composition for Type 2 Intermediate.

ITEM 605 UNDERDRAINS

605.02.B Materials

Pipe underdrains shall meet ODOT 707.41 or approved equal.

605.03 Pipe Underdrains Construction

C. Backfilling. All granular material shall be limited to #57 size washed gravel or limestone.

ITEM 609 CURBING

609.04 Concrete Curb and Combination Curb and Gutter

The Contractor shall allow for timely access to driveways or side streets where new curb cuts have been installed. Aggregate and steel plating may be required to restore ingress and egress for the residents and public. All costs associated with access management shall be included.

ITEM 611 PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES

611.01 Description

This work shall consist of constructing conduits, and constructing and reconstructing drainage structures. Any reference to the requirements outlined in ODOT 611.04.B-D is not required, unless outlined in the project specifications. All inspections shall be performed by the Engineer's Representative.

The Contractor shall locate and protect all existing drains and sewer outlets during the clearing and grubbing operation. These facilities shall be provided with an unobstructed outlet to the newly constructed ditch or storm sewer, per the Geauga County Engineer's Standard Construction Drawings, or as directed by the Engineer.

The Contractor shall assure a positive drainage pattern at the inlet and outlet of cross culvert installations.

The Contractor shall reconstruct driveways to the same existing driveway dimensions unless shown differently on the plans, specifications or minimums stated below for the different drive types.

611.02 Materials

Gradation of the granular material for bedding shall meet the requirements of #57 sized aggregate. Gradation of the granular material for backfill placed below the top of the structure shall meet the requirements of #57 sized aggregate or ODOT 304 aggregate. Backfill above the top of the structure shall meet ODOT 304 aggregate, unless otherwise noted in the specifications.

**MODIFICATIONS TO THE
OHIO DEPARTMENT OF TRANSPORTATION'S
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR GEAUGA COUNTY – 2024**

All materials shall consist of an approved stone or gravel. No ACBFS (Air Cooled Blast Furnace Slag), GS (Granulated Slag), OH (Open Hearth Slag), EAF (Electric Arc Furnace Slag), BOF (Basic Oxygen Furnace) or RPCC (Recycled Portland Cement Concrete) shall be permitted.

For ODOT 706.05 Precast Reinforced Concrete Box sections, provide the box section conforming to ASTM C 1577, with the following modification to paragraphs 6.4 and 6.5.

Paragraph 6.4 - Use chemical admixtures according to ODOT 705.12. Use a corrosion inhibitor unless epoxy coated reinforcing steel is used. An approved list of corrosion inhibiting admixtures is on file at the Laboratory. Manufacturers should recognize that the corrosion inhibitors and admixtures may have an effect on strength, entrained air content, workability, etc. of their concrete mixes. The manufacturer's choice of one of these corrosion inhibitors does not alleviate meeting all design requirements of this structure.

Paragraph 6.5 - Provide epoxy coated reinforcement according to ODOT 709.00, Grade 60 (Grade 420), or ODOT 709.14. In lieu of epoxy coated reinforcement, an approved corrosion inhibiting admixture may be added to the concrete at the approved dosage; and provide reinforcement according to ODOT 709.01, 709.03 or 709.05; Grade 60 (Grade 420) or ODOT 709.08, 709.10, 709.11 or 709.12. Provide epoxy or galvanized coated or stainless steel connections when connecting a precast structural unit into a cast-in-place structural component or between segments of adjacent precast structural units either manufactured as separate units or across construction joints when manufactured as one unit. Provide epoxy coated reinforcement according to ODOT 709.00 or 709.14, when these connections are designed using reinforcing steel. Provide galvanized coatings or stainless steel according to ODOT 711.02, when these connections are designed using connection plates, hardware or concrete inserts.

All support for reinforcement within the formwork that bears against an exposed face of the conduit, shall be a non-metallic material.

611.05 Excavation

Where plans indicate a proposed conduit to be installed adjacent to an underground utility, the Contractor shall locate the existing utilities before starting to lay the proposed conduit. If it is determined that the elevation of the existing utility conflicts with the proposed plan elevation, the Engineer shall be immediately notified. The Engineer shall approve any changes before the Contractor begins installation of any portion of the proposed facility which will be affected by the alteration. If the Engineer changes the flow line by more than one foot, then additional time and/or material may be subject to supplemental work.

ITEM 614 MAINTAINING TRAFFIC

614.03 General

The Contractor shall furnish and maintain all necessary safeguards such as other Traffic Control Devices so as to avoid damage and or injury to vehicles and persons using the Roadway during construction. The Contractor shall provide safe access to all residents in the area, as directed by the Engineer.

The Contractor shall notify all local schools if construction is to take place while school is in session and cooperate with bus drivers as needed.

The Contractor shall notify the local fire department, police department and other appropriate agencies, which may require use of the road during emergency situations, of the progress of the work weekly or as required. If an area becomes inaccessible to emergency vehicles, the Contractor shall immediately notify the Engineer and emergency agencies of these locations. A list of applicable agencies shall be provided in the plans and/or specifications or given to the Contractor at the preconstruction meeting.

614.04 Work Zone Marking Signs

All roadway signs and advance notification signs installed by the Public Authority or Engineer that interfere with the Work shall be carefully removed and stored within the right-of-way for retrieval by the Public Authority or Engineer.

The Contractor shall furnish and maintain BUMP signs, in both directions of travel, at all Butt Joints cut into the existing surface until the final asphalt overlay course is in place.

The Contractor shall frequently review all project signing for compliance with the plans and the Ohio Manual of Uniform Traffic Control Devices and shall immediately correct defects found to ensure the safety of the traveling public.

614.11 Work Zone Pavement Markings

The Contractor shall furnish and install Class II Markings (paint) on all milled surfaces per ODOT 614.11. Layout shall be as outlined in ODOT 614.11.D.

The Contractor shall furnish and install temporary retroreflective centerline pavement marking tape on all lifts of a resurfaced roadway. Centerlines shall consist of single, yellow twelve-inch (12") by four-inch (4") dash spaced at a maximum of twenty-five-foot (25') intervals.

**MODIFICATIONS TO THE
OHIO DEPARTMENT OF TRANSPORTATION'S
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR GEAUGA COUNTY – 2024**

ITEM 617 RECONDITIONING SHOULDERS

617.02 Materials

Gravel, ACBFS (Air Cooled Blast Furnace Slag), GS (Granulated Slag), OH (Open Hearth Slag), EAF (Electric Arc Furnace Slag), BOF (Basic Oxygen Furnace) or RPCC (Recycled Portland Cement Concrete) materials will not be permitted under this item.

When specified in the plans, Compacted Aggregate material shall consist of limestone or Recycled Asphalt Pavement (RAP) meeting the gradation of ODOT 703.18.

617.03 Prosecution

If reconditioning shoulders in connection with a resurfacing project, place shoulder material as soon as possible after the paving operation. The material placement shall not take place within a twenty-four-hour (24hr) period of time, but not more than seventy-two hours (72hrs), after the completed placement of the surface course.

The Contractor shall widen the stabilized shoulder at mailbox locations, as directed by the Engineer, to provide for safe approaches for mail delivery vehicles. The Contractor shall extend shoulder material into and along driveway approaches to serve as a shoulder to the drive apron. The driveway backup shall extend to the drive pipe alignment, ditch line, end of new drive apron or as directed by the Engineer. For existing gravel driveways, this item shall also serve as the transition from the new apron to the existing gravel drive.

ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEY MONUMENTS

623.05 Placement, Protection and Restoration of Survey Monuments.

Boxless monuments shall be installed, by an Ohio Registered Professional Surveyor, per the Geauga County Engineer's Construction Drawings, or as directed by the Engineer. The new monument locations shall be marked with four (4) PK nails by the Registered Surveyor. Once the monument locations are marked, the Contractor shall notify the Engineer for review and approval. Upon approval the monuments shall be set.

Existing monuments shall be adjusted including all hardware, risers, and lids necessary to complete the adjustment and set one-quarter to one-half inch (1/4"-1/2") below the grade of the final course. The Contractor shall use an approved material to attach risers to monument assemblies when monuments are adjusted. Payment for the adhesive material shall be included in the price of Item 623 Monument Box, Adjusted to Grade.

623.08 Construction Layout Staking

An Ohio Registered Professional Surveyor shall furnish and install all construction layout stakes as required for proper construction as determined by the Engineer. The Surveyor shall properly reference any property pins or roadway monuments that may become disturbed as a result of the work. While the property pins or other monuments may be shown on plans, it is not to be assumed that there are no other monuments located within the project limits. It is the Contractor's legal responsibility to locate pins and properly reference them if the Work may disturb them. If the subsequent work does disturb the monuments or property pins, the Contractor's Surveyor shall replace the monuments.

ITEM 659 SEEDING AND MULCHING

659.13 Mulching Operation

For any seeding period between June 15 and August 15 or seeding period between October 31 and March 14, the Contractor shall use straw mulch with tackifier in addition to any mulch that has been incorporated into a hydro seeding mixture. The straw mulch shall be applied at the rates specified in ODOT 659.14.

**MODIFICATIONS TO THE
OHIO DEPARTMENT OF TRANSPORTATION'S
2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS
FOR GEAUGA COUNTY – 2024**

SS 832 TEMPORARY SEDIMENT AND EROSION CONTROL

All temporary sediment and erosion control Best Management Practices (BMP) shall be in accordance with ODOT Supplemental Specification 832 or as shown on the plans.

ITEM SPECIAL - MAILBOX ASSEMBLY, REMOVED AND RESET

This work shall consist of removing and resetting existing mailbox assemblies, as directed by the Engineer, in accordance with the Geauga County Mailbox Post Detail.

If the Engineer determines the existing support unusable, a new support will be provided, by others. Attachment hardware (plates, bolts, etc.) shall be made of commercial-grade steel. Coated deck screws shall be used. Posts shall be set in accordance with the first paragraph of ODOT 606.03. Support hardware shall accommodate either a single or a double mailbox installation. No more than two boxes may be mounted on a single post. The Contractor shall securely attach the mailbox to the new support. The Contractor shall furnish all necessary attachment hardware (screws, nuts, bolts, plates, spacers, and washers) as necessary to accommodate the complete installation. In the absence of a new box supplied by the resident, or by others, the Contractor shall salvage the existing box and place it on the new support.

Due care shall be exercised in such an operation, and the Contractor shall be responsible for repairing or replacing any assembly damaged by improper handling by the Contractor with an equal assembly as directed by the Engineer. The Contractor shall be responsible for coordinating with the local postmaster regarding the timing of the movement of any mailbox to a new location.