

DESIGNER GUIDELINES for the 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS

SECTION 200 - EARTHWORK

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

1. **204.04 Materials:** Geogrid conforming to 712.15 is now required.
2. **204.07(B) Geogrid - *NEW***
3. **204.08 Method of Measurement:** The Department will measure the quantity of Geogrid by the number of square yards (square meters) of subgrade covered by the Geogrid. Overlaps are not to be in measurement.
4. **204.09 Basis of Payment:** *NEW* **Item 204 - Geogrid, Square Yard (Square Meter)**, has been added.

ITEM 209 - LINEAR GRADING

1. **209.06 Preparing Subgrade for Shoulder Paving:** When preparing the subgrade for a safety edge, grade an area approximately 10 inches (250mm) wide from the edge of the paved surface to remove vegetation and any high spots.

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT

1. See below for changes to section titles:

2016 CMS		2019 CMS	
SECTION NUMBER	TITLE	SECTION NUMBER	TITLE
255.04	Correction of Disturbed Subgrade	255.04	Correction of Subgrade <i>or</i> Subbase

2. **255.04 Correction of Subgrade or Subbase:** The subgrade *or subbase* shall be shaped or recompacted to the satisfaction of the Engineer. Concrete shall be used to replace any subgrade *or subbase* material removed as part of the rigid pavement replacement.

SECTION 400 - FLEXIBLE PAVEMENT

ITEM 401 - ASPHALT CONCRETE PAVEMENTS - GENERAL

1. **401.12 Spreading Equipment:** *Note:* A plan note is not required to use a safety edge.

ITEM 441 - ASPHALT CONCRETE - MIX DESIGN AND QUALITY CONTROL

1. **441.14 Basis of Payment:** A fill-in-the-blank approach is now being used with the pay item descriptions. A blank line within the pay item description indicates where different options exist for the designer. See the [2019 Item Master](#) for current pay items and the [Pavement Design Manual](#) for additional guidance for this item.

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ITEM 442 - SUPERPAVE ASPHALT CONCRETE

1. **442.08 Basis of Payment:** A fill-in-the-blank approach is now being used with the pay item descriptions. The blank line within the pay item description indicates where different options exist for the designer. See the [2019 Item Master](#) for current pay items and the [Pavement Design Manual](#) for additional guidance for this item.

****NEW**** ITEM 447 - ASPHALT CONCRETE MAT AND JOINT CORE DENSITY ACCEPTANCE

See table below for section titles:

2019 CMS			
SECTION	DESCRIPTION	SECTION	DESCRIPTION
447.01	Description	447.05	Mat Density Acceptance
447.02	Monitoring	447.06	Joint Density Acceptance
447.03	Reports	447.07	Joint Construction
447.04	Compaction and Core Procedures		

New in 2019 Construction and Material Specifications

1. **447.01 Description:** The acceptance criteria for this item replaces Supplemental Specification 806.

450 RIGID PAVEMENT

ITEM 451 - REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

1. **451.02 Materials:** Concrete Class QC 1 has changed to Concrete Class QC 1P.
2. **451.20 Method of Measurement:** The width of any safety edge is not included in the pavement width measurement.

600 INCIDENTALS

ITEM 608 - WALKS, CURB RAMPS, AND STEPS

1. **608.02 Materials:** The following materials have been added to this section:
Liquid Membrane-Forming Compounds for Curing Concrete conforming to 705.07
Concrete Sealers, non-epoxy conforming to 705.23B
2. **608.03(E) Curing and Treating:** Replaces section in the 2016 C&MS, Curing. Concrete shall be cured according to Item 451.11. After the minimum curing period and a 30-day drying time, an approved non-epoxy sealer (705.23.B) shall be applied according to Item 512. Remaining curing compounds that are incompatible with the select sealer, and all foreign materials, shall be removed prior to sealer treatment.

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3. **608.06 Concrete Steps:** Changes have been made to the following sections. See below:

SECTION NUMBER	2016 CMS	2019 CMS	NOTES
608.06(B)	Placement and Finishing	Placing and Finishing	Place and finish according to 511.15 and 511.18, except finish the treads of steps to product a sandy texture according to 511.07.
608.06(D)	Curing	Curing and Treating	Cure and treat steps according to 608.03.E.

ITEM 609 - CURBING, CONCRETE MEDIANS, AND TRAFFIC ISLANDS

- 609.02 Materials:** The following materials have been added to this section:
Liquid Membrane-Forming Compounds for Curing Concrete conforming to 705.07
Concrete Sealers, non-epoxy conforming to 705.23B
- 609.04(E) Protection:** Cure concrete according to **451.11**.
- 609.06(E) Curing and Treating:** In the 2016 C&MS, section was titled **PROTECTION**. Concrete shall be cured according to Item 451.11. After the minimum curing period and drying time and a 30-day drying time, an approved non-epoxy sealer (705.23.B) shall be applied according to Item 512. Remaining curing compounds that are incompatible with the select sealer, and all foreign materials, shall be removed prior to sealer treatment.

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

- 611.03 Definitions:**
Corrugated Metal Conduit: Deleted reference to 707.11.
Plastic Conduit: Deleted reference to 707.52
- 611.06 Bedding and Backfill:**
For installations where groundwater is probable, it is now required to wrap coarse aggregate bedding and backfill with geotextile fabric to the elevation or above the elevation of the ground water.

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEY MONUMENTS

- 623.08 Construction Layout Staking:** Construction layout stakes shall be furnished *and installed* as required to construct the project.

ITEM 630 - TRAFFIC SIGNS AND SIGN SUPPORTS

- 630.04 Sign Fabrication:** Clearview is no longer an acceptable font for this item of work. Standard Alphabets is to be used for traffic control devices on all guide signs.

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700 MATERIAL DETAILS

703 - AGGREGATE

1. **703.01 General:** The abbreviation RAP now refers to *Reclaimed* Asphalt Pavement, instead of Recycled Asphalt Pavement.

708 - PAINT

1. **708.01 Inorganic Zinc Silicate Primer Paint:** Unless the formulation or manufacturing has been changed, the Department will not require further performance testing of the paint after it has been approved by the Director. If the formulation or manufacturing process has been changed, the Department will require new certified test results.
2. **708.02 OZEU Structural Steel Paint:** Unless the formulation or manufacturing has been changed, the Department will not require further performance testing of the paint after it has been approved by the Director. If the formulation or manufacturing process has been changed, the Department will require new certified test results.

712 - MISCELLANEOUS

1. **712.15 Geogrid (NEW):** See section for details.

732 - TRAFFIC SIGNAL MATERIAL

1. **732.05 Pedestrian Signal Heads:**
 - A. **Type A1:** Furnish materials according to the Department's QPL.
 - B. **Type A2:** Furnish materials according to the Department's QPL.
2. **732.06 Pedestrian Pushbuttons:** Instead of the QPL, materials shall now be furnished according to the Department's (TAP) List.
3. **732.21 Disconnect Switch with Enclosure:** Instead of the QPL, materials shall now be furnished according to the Department's TAP List.

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MISCELLANENOUS

1. Check the 2019 [Item Master](#) for changes to pay items.
2. Information documented in [Supplemental Specification 800](#), Revisions to the 2016, Construction and Materials Specifications, have not been duplicated in the Designer Guidelines.

PROPOSAL NOTES

PROPOSAL NOTE	DESCRIPTION	COMMENT
15	Contract Provisions for Federal-Aid Construction Projects	NEW!
126	Revisions to the C&MS For Design-Build Projects	Rescinded
132	Critical Path Method Progress Schedule for Design/Build Multi-Season Projects	NEW!
137	Alternate Bids	NEW!
138	Optional Bids	NEW!

SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SPECIFICATIONS	DESCRIPTION	COMMENT
806	Asphalt Concrete With Joint Density For Multi-Lane Highways	SS 806 should <i>not</i> be used with the 2019 C&MS. It is being rescinded in the near future.
861	Geogrid for Subgrade Stabilization	Rescinded. Incorporated into the C&MS, Section 204.07(B).
879	QC/QA Embankment	Rescinded

LINKS

Complete 2019 Construction and Material Specifications (CMS):

http://www.dot.state.oh.us/Divisions/ConstructionMgt/Specification%20Files/2019_CMS_10162018%20Final%20to%20Printer.pdf

2019 Proposal Notes and Supplemental Specifications:

<http://www.dot.state.oh.us/Divisions/ConstructionMgt/Pages/ProposalNotesSupplementalSpecificationandSupplements.aspx>

2019 Item Master:

<http://www.dot.state.oh.us/Divisions/ConstructionMgt/Estimating/Pages/Item-Master.aspx?InitialTabId=Ribbon%2EDocument&VisibilityContext=WSSTabPersistence>