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**SECTION 4(D)
Field Tested Materials
Guide**

HOW TO USE THE FIELD TESTED MATERIALS ACCEPTANCE GUIDE

This guide summarizes the testing requirements for various materials used in the construction of ODOT projects. It indicates what tests must be performed, who must perform them, and how frequently they must be performed. It includes materials which are sampled and tested in the field and materials which are field sampled but sent elsewhere for testing. When a contract requires Quality Control (QC) by the Contractor, samples that must be sent elsewhere for testing are delivered to the Project Manager along with the Sample Data Sheet (Form 734-4000). Examples of this and other test report forms are in Section 3 of this manual.

Materials in this guide are listed in the numerical order of the Standard Specifications and the project special provisions. To find the testing requirements for a particular material, first determine what it will be used for and then refer to the appropriate Specifications Section for that product. For example, to look up testing requirements for aggregate to be used in asphalt concrete paving, refer to Section 00745.

Definitions

SOURCE REVIEW/PRODUCT COMPLIANCE TESTING – Refer to Section 4(A) for additional explanation. Certain QC tests on aggregates fall into this category. They are identified in this section by the words “Product Compliance.”

SAMPLE SIZES – Refer to Section 4(C) for guidance on material sample sizes, containers, and labeling. Although designed for the ODOT Central Materials Laboratory (ODOT-CML), it is a good guide for samples being sent to any laboratory.

ASPHALT CONCRETE MIX DESIGNS – If the ODOT-CML is preparing the AC mix design, submit samples of the materials shown in Section 4(C) of this manual.

TYPES OF TESTS

The following types of tests will be performed by the Contractor or Engineer on materials and products required for contract work:

1. **Source Review** – This test type is addressed in Section 4(A) of this Manual.

The Engineer will test unprocessed material from an aggregate source, if requested by the Contractor, to provide information about the quality of material. Tests will involve degradation, soundness, and abrasion, but may involve other tests. Favorable test results do not imply that processed material from the source will comply with specifications after it is processed as required for the project.

2. **Product Compliance** – This test type is addressed in Section 4(A) of this Manual. The Engineer will test processed material if process control testing indicates that the processed material meets the contract quality requirements. Tests will involve degradation, soundness, abrasion, and lightweight pieces, but may involve other tests. The material shall not be incorporated into the project unless Product Compliance tests show favorable results.

3. **Quality Control** – The Contractor will perform quality control testing as described in Section 2 and specified in 4(D) of this Manual or as modified by the Special Provisions or Supplemental Standard Specifications.

4. **Verification** – The Engineer will perform Verification testing as described in Section 2 and specified in Section 4(D) of this Manual. **Note: The required 1 per 10 subplot testing of Quality Control by the Region QA is considered a minimum frequency and testing may be increased when deemed necessary by the engineer.** These tests provide the basis for the Engineer's decision on acceptance of materials and products. If Independent Assurance is to be done on a material, a split of the Verification sample will be given to the Contractor for testing.

5. **Independent Assurance** – Where Independent Assurance involves testing, the Engineer will evaluate test results from split samples to assure that Contractor test results meet required parameters.

6. **Visual** – Visual Inspection: Examination and assessment of construction materials, by **OBSERVATION**, to determine if the materials appear to meet the contract requirements and are acceptable for incorporation into ODOT construction projects. Visual inspection, when stated in the contract, is a method generally used by the Project Inspector in lieu of normal sampling and testing of field tested materials as defined in section 00165.00 of the Standard Specifications to document quality. Supporting documentation for visual acceptance is, at a minimum, a field inspection report. Consult the construction contract for other acceptance document requirements.

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00330 - EARTHWORK											
Establishing Maximum Density (for Compaction)	Density Curve			T 99	3468						
	Bulk Specific Gravity			T 85	3468			1/Soil type		1/Project	
	Family of Curves			R 75	3468FC						
	Deflection Testing	TM 158			1793S			1 test per 3 ft. in depth			1 test per 10 QC Tests per Table 00330-1
	Nuclear Gauge Coarse Particle Correction Deflection Testing			T 310 T 99	1793S 1793S			See Table 00330-1 Below			
Compaction											
TABLE 00330-1 Frequency of Quality Control Testing (English)											
Individual Areas											
Under 3500 yd² or yd³											
Existing Ground Surface											
1 test per 1000 yd ²											
Embankments											
1 test per 500 yd ³											
Excavations and Finished Subgrade											
1 test per 1000 yd ²											
Over 3500 yd² or yd³											
1 test per 3000 yd ²											
1 test per 3000 yd ³											
1 test per 3000 yd ²											
Stone Embankment Material (See Sec. 330.16(a))	Gradation								Visual See Section 00330.16(b)		
	Deflection Testing	TM 158			1793S			1 per Layer			
Compaction											
Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.											
Imported Topsoil (See Section 01040.14(b))	Compliance				4000	See Section 4C 1/Source & 1/Type of Soil			Submit to Lab		

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00331 - SUBGRADE STABILIZATION Aggregate backfill	Material must meet the requirements of Section 00331.10								
						Visual			
Water	Material must meet the requirements of Section 00340								
Compaction	Material must meet the requirements of Section 00331								
						Visual			
SECTION 00332 - SURFACING STABILIZATION Aggregate Base	Material must meet the requirements of Section 00332.10								
						Visual			
Compaction	Material must meet the requirements of Section 00332								
						Visual			
SECTION 00333 - AGGREGATE DITCH LINING Aggregate	Sampling Reducing Sieve Analysis								
					R 90 R 76 T 27/T 11				
						1/Project or 1/Source			
				1792					

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00344 - TREATED SUBGRADE											
Granular Quicklime	Sieve Analysis Calcium Hydroxide Content in lime			T 27 T 219	4000	1/Project or 1/Source	Submit to Lab			1/Project or 1/Source	
Hydrated Lime Calcium Chloride Sodium Chloride	Materials must meet the requirements of Section 00344.10 and Test Results Certificate provided according to Section 00165.35(a)										
Portland Cement Water	Material must meet the requirements of Section 02010 Material must meet the requirements of Section 00340										
Establishing Maximum Density	Density Curve Maximum Specific Gravity			T 99	3468	See Table 00344-1 Below for Testing Frequency					1/Project and 1 Test per 10 QC tests per Table 00344-1
	Deflection Testing				1793S						
Compaction	Deflection Testing Nuclear Gauge Coarse Particle Correction	TM 158 TM 158		T 310 T 99	1793S						
	TABLE 00344-1 Frequency of Quality Control Testing										
Individual Areas					Under 3500 yd²			Over 3500 yd²			
Finished Subgrade					1 test per 1000 yd ²			1 test per 3000 yd ²			

FIELD TESTED MATERIALS ACCEPTANCE GUIDE

(Revised November 2020)

Same Frequency for all Tests (Minimums)

MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	Contractor Quality Control	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO			Project Manager	Region Quality Assurance	Materials Laboratory	
SECTION 00360 - Drainage Blankets										
Granular Drainage Blanket	Sampling Reducing Sieve Analysis			R 90 R 76 T 27/T 11	1792	1/sublot minimum 1/Source per Project	A sublot equals 1000 Tons			
					1792					
Sand Drainage Blanket	Sampling Reducing Sieve Analysis			R 90 R 76 T 27/T 11						
					1792					
Establishing Maximum Density	Density Curve			T 99	3468	1/Source and Type			1/Project	
					3468					
Compaction	Bulk Specific Gravity			T 85						
					1793S					
					1793S					
	Deflection Testing	TM 158			1793S	1 test per 3 ft. in depth				
					1793S					
	Deflection Testing Nuclear Gauge Coarse Particle Correction	TM 158		T 310 T 99	1793S	See Table 00360-1 Below				1 Test per 10 QC Tests per Table 00360-1
					1793S					

TABLE 00360-1 Frequency of Quality Control Testing

Individual Areas	Under 3500 yd ²	Over 3500 yd ²
Existing Ground Surface	1 test per 1000 yd ²	1 test per 3000 yd ²
Finished Surfaces	1 test per 1000 yd ²	1 test per 3000 yd ²

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00390 - RIPRAP PROTECTION											
Fill Material & Riprap											
Gradation See 00390.11(c-1)	Degradation Soundness Apparent Specific Gravity & Absorption	TM 208		T 104 T 85	4000 1825	See Section 4(A)	Submit to Lab				See Section 4(A)
Filter Blanket											
Gradation See 00390.13											
Grouted Riprap											
Sand	Sampling Reducing Sieve Analysis			R 90 R 76 T 27/T 11	1792	1/Project					
	Soundness Lightweight Pieces			T 104 T 113	4000	See Section 4(A)	Submit to Lab				See Section 4(A)
Portland Cement	Material must meet the requirements of Section 02010										

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)				
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-734-	QUALITY ASSURANCE				
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory	
SECTION 00396 - SHOTCRETE SLOPE STABILIZATION										
Aggregate Production and Mixture										
⁽¹⁾ QAE may waive after 5 sublots/shifts	Sampling Reducing	TM 225		R 90 R 76 T 27/T 11 T 27/T 11	1792	1/Sublot & Start of Production	Submit to Central Lab	1 per 10 Sublots		See Section 4(A)
⁽²⁾ Coarse Aggregate (See Section 02690.20)	⁽¹⁾⁽²⁾ Wood Particles ⁽³⁾ Sand Equivalent	TM 208		T 176	4000	See Section 4A	Submit to Central Lab			
⁽³⁾ Fine Aggregate (See Section 02690.30)	Soundness Abrasion Degradation Lightweight Pieces Organics			T 104 T 96						
Portland Cement Admixtures	⁽²⁾ Dry Rodded Unit Weight ⁽²⁾⁽³⁾ Bulk Specific Gravity & Absorption			T 19 T 84 & T 85	1825 1825C 1825	Start of production and				
Mixing Water	Material must meet the requirements of Section 02010 Material must meet the requirements of Section 02040									
Production Testing (See Section 00396.14)	^(S) Test Panel					Two Test Panels per Mix Design & Two Panels per days Production See Section 00396.14(a)2				
^(S) 3 Cores minimum per Panel Compression Test Cores	Strength			T 22	4000C	1/Set Cores per Test panel	Submit to Central Lab			

FIELD TESTED MATERIALS ACCEPTANCE GUIDE					Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance
SECTION 00405 - TRENCH EXCAVATION, BEDDING, AND BACKFILL								
TRENCH FOUNDATION (Excavation Below Grade Only)								
Selected general backfill							Visual	
Selected granular backfill							Visual	
Selected stone backfill							Visual	
Other approved material							Visual	
Establishing Maximum Density	Density Curve			T 99	3468		1/Soil Type or Aggregate Gradation	
	Bulk Specific Gravity			T 85	3468			
	Family of Curves			R 75	3468FC			
	Nuclear Gauge Coarse Particle Correction			T 310 T 99	1793S		1 test per 300 ft. of Trench	
<p>Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.</p>								

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00405 - TRENCH EXCAVATION, BEDDING, AND BACKFILL (CONTINUED)									
Pipe Zone Material		Use the Listed Material requirements under Bedding							
Flexible Pipe	Rigid Pipe: Aggregate Base 1" - 0 or 3/4" - 0 Aggregate (See Section 02630.10)	Sampling							
		Reducing Sieve Analysis			R 90 R 76 T 27	1792	1/Source or Gradation		
Rigid Pipe: Commercial 1" - 0 or 3/4" - 0 Aggregate							Visual		
Establishing Maximum Density	(1) Method "A" & ODOT TM 223 for Dense Graded Base Aggregate	Density Curve			(1) T 99	3468	1/Source or Aggregate Gradation		
		Bulk Specific Gravity			T 85	3468			
Compaction		Coarse Particle Correction			T 99				
		Nuclear Gauge			T 310	1793B	1 Test per 300 ft. of Trench and every 1.5 ft. of Fill		
<p>Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.</p>									

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MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00405 - TRENCH EXCAVATION, BEDDING, AND BACKFILL (CONTINUED)									
Trench Backfill									
Class A Backfill - Native or common Material									
Class B Backfill - 1"-0 or 3/4"-0 Granular Material									
Class C Backfill - Clean sand with 100% minus 1/4" material							Visual		
Class D Backfill - Pit run or bar run material with 3" maximum dimension and well graded from coarse to fine							Visual		
Class E Backfill - Controlled Low Strength Material (CLSM)									
Establishing Maximum Density									
⁽¹⁾ Method "A" & ODOT TM 223 for Dense Graded Base Aggregate	Density Curve					(¹) T 99			
	Bulk Specific Gravity					T 85		1/Soil Type or Aggregate Gradation	
	Family of Curves					R 75			
Compaction	Nuclear Gauge Coarse Particle Correction					T 310 T 99			
						1793S or 1793B		(^C) 1 test per 300 ft. of Trench and every 1.5 ft. of Fill	
^(C) Density testing is based on cumulative lineal feet of pipe placement.									
Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.									

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MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-734-	QUALITY ASSURANCE				
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory	
SECTION 00430 - SUBSURFACE DRAINS										
Granular Drain Backfill Material	Sampling Reducing Sieve Analysis	R 90 R 76 T 27	TM 208	See section 405 for compaction requirements	1792	A Sublot equals 1000 Tons	1/Sublot (Minimum 1/ Project)	Submit To Lab	See Section 4A	
					4000					
Special Filter Material See Section 00430.46(a)	Compaction								See Section 4A	
SECTION 00440 - COMMERCIAL GRADE CONCRETE										
Mixture	Sampling Air Content Density (Unit Weight) Yield Slump Concrete Temperature	TM 2	T 152 T 121 T 121 T 119 T 309	See section 405 for compaction requirements	3573WS or 4000 C		(S) 1 per each set of cylinders			
Modifiers										
Admixtures										
Portland Cement										
Structural Items	Strength	T 22 & T 23		See section 405 for compaction requirements	4000C		(M)(S) 1 Set / Day Minimum			
Except Visual Acceptance Items (See section 00440.14(a))	Strength	T 22 & T 23		See section 405 for compaction requirements	4000C		(M) (S) 1 Set/20 yd ³ Cumulative (Maximum 1 Set/day)			
(S) 1 Set Represents a minimum of 3 Cylinders										
(M) Per Mix Design & Source										

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)					
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-734-	Contractor Quality Control	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO			Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00442 - CONTROLLED LOW STRENGTH MATERIALS (CLSM)									
CLSM Mixture	Mix Proportions Trial Batch Strength					1/Project or Source			
				T 22 & T 23	4000C				
Modifiers									
Admixtures									
Portland Cement									
SECTION 00445 - SANITARY, STORM, CULVERT, SIPHON, AND IRRIGATION PIPE - INCLUDED WITH SECTION 00405									
Trench Work									
Excavation, bedding, pipe zone and trench backfill									
Excavation, bedding, pipe zone and trench backfill									
Concrete Blocks									

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE	
		ODOT	WAQTC		AASHTO	Contractor Quality Control
SECTION 00450 - STRUCTURAL PLATE SHAPED STRUCTURES						
Commercial Grade Concrete in appurtenances		<i>Material must meet the requirements of Section 00440</i>				
Trench Work						
Excavation and Backfill		<i>Operations must meet the requirements of Section 00510</i>				
Trenches in Unstable Areas						
Granular Structural Backfill		<i>Material must meet the requirements of Section 00510</i>				
Establishing Maximum Density (¹) Method "A"	Density Curve			(¹) T 99	3468 B	1/Aggregate Gradation and Source
	Bulk Specific Gravity Coarse Particle Correction	TM 223		T 85		
	Nuclear Gauge			T 310	1793 B	1 Test per 100 ft. and 1 ft. of fill
Compaction		<i>Material and Operation must meet the requirements of Section 00510.48(d)</i>				
Structure Backfill (Section 00450.46)						
SECTION 00459 - CAST IN PLACE CONCRETE PIPE						
Concrete		<i>Material must meet the requirements of Section 00540, with acceptance in accordance with Section 00540.17</i>				
Backfill Material		<i>Material must meet the requirements of Section 00405.14 and be incorporated into the project in accordance with Section 00405.46</i>				

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	Contractor Quality Control	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO			Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00460 - PAVED CULVERT END SLOPES									
Commercial Grade Concrete		<i>Material must meet the requirements of Section 00440</i>							
SECTION 00470 - MANHOLES, CATCH BASINS AND INLETS									
Commercial Grade Concrete		<i>Material must meet the requirements of Section 00440</i>							
Base Drain Backfill		<i>Material must meet the requirements of Section 00470.17</i>							
Excavation, Backfill and Foundation Stabilization		<i>Material must meet the requirements of Section 00405</i>							
SECTION 00480 - DRAINAGE CURBS									
Commercial Grade Concrete		<i>Material must meet the requirements of Section 00440</i>							
Dense Graded ACP Mixture Level 2, (1/2")		<i>Material must meet the requirements of Section 00744</i>							

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00490 - WORK ON EXISTING SEWERS AND STRUCTURES									
Commercial Grade Concrete		Material must meet the requirements of Section 00440							
High Early Strength Concrete		Material must meet the requirements of Section 00440, but cement contents adjusted according to 00490.11							
Backfill Operations		Backfill Excavations according to section 405							
Filling Abandoned Pipes, Manholes and Catch Basins (See section 00490.44)									
Backfill Operations (Roadway)		Material must meet the requirements of Section 2630							
Establishing Maximum Density (¹) Method "A"	Density Curve				(¹) T 99				
	Bulk Specific Gravity Coarse Particle Correction	TM 223			T 85			1/Aggregate Gradation and Source	
Compaction	Nuclear Gauge				T 310			1 Test per 100 ft. and every 1.5' of Fill	
Backfill Operations Landscaped or Unimproved Roadways		Material must meet the requirements of Section 00330.13							
Top 1.0' of Backfill Region		Material must meet the requirements of Section 00330.11							
SECTION 00495 - TRENCH RESURFACING									
Resurfacing Materials		See Section 00495.40 for Material Requirements							

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00510 - STRUCTURE EXCAVATION AND BACKFILL									
Soils, Soil/Aggregate Mixtures and Graded Aggregates									
Granular Structure Backfill (See Section 02630.10) (¹) Perform a minimum of 3 tests QL's required	Sampling Reducing			R 90 R 76					
	(¹) Sieve Analysis Fracture (Method 1) Sand Equivalent			T 27 T 335 T 176	1792		1/Sublot (Minimum 1/Project)		
	Abrasion			T 96					
	Degradation Plasticity Index Sieve Analysis	TM 208		T 90 T 11	4000		See Section 4C 1/Source	Submit to Lab	Minimum 1/Project or 1/Source
	Density Curve			(²) T 99	3468		1/Soil type or Aggregate Gradation		
Establishing Maximum Density (²) Method "A" & ODOT TM 223 for Dense Graded Base Aggregate	Bulk Specific Gravity			T 85					
	Coarse Particle Correction			T 99	3468				
Compaction	Nuclear Gauge			T 310	1793B		1/100 yd ³ minimum 1/project		
Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.									

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)									
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE										
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory							
SECTION 00510 - STRUCTURE EXCAVATION AND BACKFILL (CONTINUED)																
Soils, Soil/Aggregate Mixtures and Graded Aggregates																
Granular Wall Backfill (See Section 02630.11) (1) Perform a minimum of 3 tests QL's required	Sampling Reducing (1) Sieve Analysis Fracture (Method 2)	TM 208	R 90 R 76 T 27 T 335		1792	1/Sublot (Minimum 1/Project)										
										Product Compliance	TM 208	T 96	4000	See Section 4C 1/Source	Submit to Lab	Minimum 1/Project or 1/Source
Note: Compaction must meet the requirements of section 00330.43C																
Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.																

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MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00512 - DRILLED SHAFTS									
Aggregate Production									
(1) QAE may waive after 5 sublots/shifts	Sampling Reducing			R 90 R 76					
	(2)(3)(4) Sieve Analysis			T 27/T 11 T 27/T 11	1792	1/Sublot & Start of Production	1 per 10 Sublots		
(2) Perform a minimum of 3 tests, QL's required	(4) Fineness Modulus			T 176	1792				
	(1)(3) Wood Particles	TM 225							
(3) Coarse Aggregate (See Section 02690.20)	(4) Sand Equivalent								
	Soundness Abrasion			T 104 T 96	4000				See Section 4(A)
(4) Fine Aggregate (See Section 02690.30)	Degradation Lightweight Pieces	TM 208		T 113 T 21	4000	See Section 4A	Submit to Lab		
	Organics								
Portland Cement Modifiers Admixtures	(3) Dry Rodded Unit Weight			T 19	1825 1825C				
	(3)(4) Bulk Specific Gravity & Absorption			T 84 & T 85	1825	Start of production and when changes in aggregate occurs			
Drilling Slurry		Materials must meet the requirements of Section 02001.10							
		Slurry material must meet the requirements of Section 00512.14 & 00512.43(g)							
Grout		Material must meet the requirements of Section 02080							
		Material must meet the requirements of Section 02020							
Mixing Water									

FIELD TESTED MATERIALS ACCEPTANCE GUIDE

(Revised November 2020)

Same Frequency for all Tests (Minimums)

MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE		
		ODOT	ASTM	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance
SECTION 00535 - POST-INSTALLED ANCHOR SYSTEMS								
Resin Bonded Anchor System								
Anchor Bolts, reinforcing steel and resin (Polyester, vinyl ester or epoxy)								
<i>Materials must meet the requirements of Section 00535.10(a)</i>								
Anchor Installation								
Demonstration Testing (See Section 00535.45(a))	Strength of Anchors in Concrete Elements		E 488		5189		Visual	One demonstration Test includes 3 anchors (Resin shall be from same lot)
Production Testing (See Section 00535.45(b))	Strength of Anchors in Concrete Elements		E 488		5189		Visual per Sublot	^(A) 1 Anchor/Sublot or portion thereof (Minimum 1/Shift)

^(A) Anchor testing is required per critical element identified in the Special Provisions or Plan Drawings.

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	Contractor Quality Control	QUALITY ASSURANCE		
		ODOT	ASTM	AASHTO			Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00535 - POST-INSTALLED ANCHOR SYSTEMS (continued)									
Mechanical Anchor System									
Mechanical Anchors							A Sublot equals 50 Anchors		
Anchor Installation									
Demonstration Testing (See Section 00535.45(a))	Strength of Anchors in Concrete Elements	E 488			5292	One demonstration Test includes 3 anchors	Visual		
Production Testing (See Section 00535.45(b))	Strength of Anchors in Concrete Elements	E 488			5292	(A) 1 Anchor/Sublot or portion thereof (Minimum 1/Shift)	Visual per Sublot		
(A) Anchor testing is required per critical element identified in the Special Provisions or Plan Drawings.									

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00540 - STRUCTURAL CONCRETE									
Aggregate Production									
(1) QAE may waive after 5 sublots/shifts	Sampling Reducing			R 90 R 76					
	(2)(3)(4) Sieve Analysis			T 27/T 11 T 27/T 11	1792	1/Sublot & Start of Production		1 per 10 Sublots	
(2) Perform a minimum of 3 tests, QL's required	(4) Fineness Modulus			T 176	1792				
	(1)(3) Wood Particles	TM 225							
(3) Coarse Aggregate (See Section 02690.20)	(4) Sand Equivalent								
	Soundness Abrasion			T 104 T 96	4000		Submit To Lab		See Section 4A
(4) Fine Aggregate (See Section 02690.30)	Degradation	TM 208		T 113 T 21	4000		See Section 4A		
	Lightweight Pieces Organics								
Portland Cement Modifiers Admixtures	(3) Dry Rodded Unit Weight			T 19	1825 1825C				
	(3)(4) Bulk Specific Gravity & Absorption			T 84 & T 85	1825		Start of production and when changes in aggregate occurs		
Materials must meet the requirements of Section 02001.10									
Mixing Water									
Material must meet the requirements of Section 02020									

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)										
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-734-	QUALITY ASSURANCE										
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory							
SECTION 00540 - STRUCTURAL CONCRETE (CONTINUED)																
Portland Cement Concrete	Sampling Air Content Slump Concrete Temperature Density (Unit Weight) Yield Water/Cement Ratio Strength	TM 2	T 152 T 119 T 309 T 121 T 121 T 121	3573WS or 4000C	4000C	QA Testing	Projects under 100 yd ³ all classes 1/Project representing all classes of PCC	Projects over 100 yd ³ all classes 1/500 yd ³ per class minimum 1/class								
									(M) (S) Test at minimum frequencies according to table 00540-1. Review specs.							
<p>(S) 1 Set Represents a minimum of 3 Cylinders</p> <p>(M) Per Mix Design & Source</p>																
<p>TABLE 00540-1 Frequency of Quality Control Testing</p> <p><u>Minimum frequencies per Class of concrete based on daily production records.</u></p> <table border="1"> <thead> <tr> <th><u>Production</u></th> <th><u>Frequencies</u></th> </tr> </thead> <tbody> <tr> <td>0 to 100 yd³ on a single day</td> <td>1 Set each day</td> </tr> <tr> <td><u>Quantity Over 100 yd³</u> 100 to 600 yd³ on a single day</td> <td>1 Set per each 100 yd³ or portion thereof</td> </tr> <tr> <td>over 600 yd³ on a single day</td> <td>1 Set per each 200 yd³ or portion thereof after reaching 600 yd³</td> </tr> </tbody> </table>									<u>Production</u>	<u>Frequencies</u>	0 to 100 yd ³ on a single day	1 Set each day	<u>Quantity Over 100 yd³</u> 100 to 600 yd ³ on a single day	1 Set per each 100 yd ³ or portion thereof	over 600 yd ³ on a single day	1 Set per each 200 yd ³ or portion thereof after reaching 600 yd ³
<u>Production</u>	<u>Frequencies</u>															
0 to 100 yd ³ on a single day	1 Set each day															
<u>Quantity Over 100 yd³</u> 100 to 600 yd ³ on a single day	1 Set per each 100 yd ³ or portion thereof															
over 600 yd ³ on a single day	1 Set per each 200 yd ³ or portion thereof after reaching 600 yd ³															

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	Contractor Quality Control	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO			Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00556 - MULTI-LAYER POLYMER CONCRETE OVERLAY									
Aggregate Production									
	Moisture Content			T 255/265	1792	At time of mixing the polymer resin. See 00556.10-b			
Polymer Resin	Material must meet the requirements of section 00556.10								

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	Contractor Quality Control	QUALITY ASSURANCE	
		ODOT	WAQTC			AASHTO	Project Manager
SECTION 00557 - PREMIXED POLYMER CONCRETE OVERLAYS							
Resin Primer							
Polyester Resin Binder Including (Initiator, Accelerators & Inhibitors)							
Material must meet the requirements of section 00557.10							
Material must meet the requirements of section 00557.12 (a-c)							
Aggregate Production							
Product Compliance (Submit 2- 50 lb. samples of blended aggregate (00557.02) during the trial overlay)	Bulk Specific Gravity & Absorption Moisture Content Fracture (Method 1)			T 84 & T 85 T 255/265 T 335	4000	1/Project or Source	Submit to Lab
⁽¹⁾ Maybe required during Production	Moisture Content			T 255/265	1792	⁽¹⁾ During the Trial Overlay Strip	
Surface Texture Sand (see section 00557.12(e))	Sieve Analysis			T 27/11	1792	1/Project or Source	
Premixed Polymer Concrete							
	Density			T 121	3573WS	^(B) 1/Batch	
	Modulus of Elasticity		TM 759		4000C	^(M) Minimum 1 set/batch	
^(M) 1 set Represents a minimum of 3 (4"x8") cylinders cast per 00557.44(e)						1 set per 10 batches placed or minimum 1 set/day	Submit to Lab
^(B) Batch is defined "Per Mixer or Portion placed".							See section 00557.44(e)

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00559 - STRUCTURAL CONCRETE OVERLAYS											
Aggregate Production											
⁽¹⁾ QAE may waive after 5 sublots/shifts	Sampling Reducing ^{(2)/(3)/(4)} Sieve Analysis	R 90 R 76 T 27/T 11	TM 229 TM 225	T 96	1792	1 per 10 Sublots	1/5 Sublot & Start of Production	Submit to Central Lab	See Section 4(A)	See Section 4(A)	A Sublot equals 500 Tons. A minimum one per shift, whichever results in the greatest sampling frequency. (For preproduced aggregates, 1 shift shall mean 500 Tons.)
⁽⁴⁾ Sand Equivalent	T 176	1792	1/5 Sublots & Start of Production								
				⁽³⁾ Coarse Aggregate (See Section 02690.20)	^{(1)/(3)} Elongated Pieces ^{(1)/(3)} Wood Particles	TM 229 TM 225	T 96	4000	See Section 4(A)	Submit to Central Lab	See Section 4(A)
⁽⁴⁾ Fine Aggregate (See Section 02690.30)	Abrasion Degradation Soundness Lightweight Pieces Organics	TM 208	T 104 T 113 T 21								
				Portland Cement Modifiers Admixtures	Materials must meet the requirements of Section 02001.10	T 19	1825 1825C 1825	Start of production and when changes in aggregate occurs	See Section 4(A)	Submit to Central Lab	See Section 4(A)
Mixing Water	Materials must meet the requirements of Section 02020	T 84 & T 85	1825								

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00559 - STRUCTURAL CONCRETE OVERLAYS (CONTINUED)											
Portland Cement Concrete	Sampling Air Content Slump Concrete Temperature Density (Unit Weight) Yield W/C Ratio	TM 2	T 152 T 119 T 309 T 121 T 121 T 121	3573WS or 4000 C	A subplot equals 1 set of tests per 50 yd ³			1 per 10 Sublots			
					Strength	T 22 & T 23	4000C		(M) (S) 1 Set Cylinders per 50yd ³ Minimum 1 set/shift	1 Set per 500 yd ³	
									(M) (S) 1 Set Cylinders per 50yd ³ Minimum 1 set/shift		
(M) Per Mix Design & Source											
(S) 1 Set Represents a minimum of 3 Cylinders											
SECTION 00590 - POLYMER MEMBRANE											
Broadcast Aggregate	Moisture Content		T 255/265	1792	Test at time of packaging and shipment. See Section 00590.10-c						
	Moisture Content		T 255/265	1792	Field Test at time of Mixing Polymer Resin. See Section 00590.10-c						

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)						
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE						
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory			
SECTION 00596A - MECHANICALLY STABILIZED EARTH RETAINING WALLS												
Aggregate Production												
Gravel Leveling Pads Backfill (See Section 02630.10)	Abrasion Degradation	TM 208		T96	4000	See Section 4A	Submit to Lab			See Section 4A		
											A Sublot equals 1,000 Tons Minimum 1/Project	
											1792	1/5 Sublots
⁽³⁾ Modular Block Core and Drainage Backfill (Product Compliance)	Soundness Abrasion Degradation Lightweight Pieces	TM 208		R 90 R 76 T 27 T 176 T 335	4000	1/5 Sublot	Submit To Lab			See Section 4C		
											Testing Frequency for Product Compliance per Source 1/5,000 Tons Minimum 1/Project	
											1792	1/5 Sublots
⁽³⁾ (See Section 2690.20(a) thru 2690.20(d) & 2690.20(f))				T 104 T 96 T 113	4000	See Section 4C & 02690	Submit To Lab			See Section 4C		
											A Sublot equals 1,000 Tons	
											1792	1/5 Sublot
⁽³⁾ Modular Block Core and Drainage Backfill ⁽¹⁾ QAE may waive after 5 sublots/shifts ⁽²⁾ Perform a minimum of 3 tests, QL's required	Sampling Reducing ⁽²⁾ Sieve Analysis ⁽¹⁾ Wood Particles Fracture (Method 2) Elongated Pieces	TM 225 TM 229		R 90 R 76 T 27/T 11 T 335	1792	1/5 Sublot				See Section 4C		
											A Sublot equals 1,000 Tons	
											1792	1/5 Sublot
Pipe Drain Backfill (Product Compliance) (See Section 00430.11)	Abrasion Degradation Sieve Analysis	TM 208		T 96 T 27	4000	See Section 4C	Submit To Lab			See Section 4C		
											A Sublot equals 1,000 Tons	
											4000	1/5 Sublot

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00596A - MECHANICALLY STABILIZED EARTH RETAINING WALLS											
Aggregate Production											
Gabion Basket Fill (Product Compliance) (See Section 00390.11(b))	Degradation Soundness Apparent Specific Gravity & Absorption Gradation	TM 208		T 104 T 85	4000 1825	See Section 4C	Submit to Lab Visual	Testing Frequency for Product Compliance per Source 1/5,000 Tons Minimum 1/Project			See Section 4C

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)				
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC		AASHTO	Contractor Quality Control	Independent Assurance/Verification	Materials Laboratory
SECTION 00596A - MSE RETAINING WALLS								
Aggregate Production								
MSE Granular Wall Backfill (Product Compliance) (Also reference 02630.10)	Abrasion Degradation Sieve Analysis Plasticity Index pH Resistivity Organic Content	TM 208		T96 T 11 T 90 T 289 T 288 T 267	4000	See Section 4C	Submit to Central Lab	See Section 4C
Testing Frequency for Product Compliance per Source 1/5,000 Tons Minimum 1/Project								
A Sublot Equals 2,000 Tons								
MSE Granular Wall Backfill (¹) Perform a minimum of 3 tests, QL's required	Sampling Reducing (¹) Sieve Analysis Sand Equivalent Fracture (Method 1)			R 90 R 76 T 27 T 176 T 335	1792 1792	1/Sublot		
Placement Establishing Maximum Density (¹) Method A	Density Curve			(¹) T 99	3468	1/Aggregate Gradation/Per Source		
	Bulk Specific Gravity			T 85	3468			
Compaction	Coarse Particle Correction	TM 223						
	Nuclear Gauge			T 310	1793B	1/ 100 yd3 (Minimum 1/day)		
	Deflection Testing	TM 158			1793B	1 per layer	Visual See section 00596A.47 (c-5)	
Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.								

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)				
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00596B - PREFABRICATED MODULAR RETAINING WALLS											
Aggregate Production											
Gravel Leveling Pads Backfill (See Section 02630.10)	Abrasion Degradation	TM 208		T96	4000	See Section 4A	Submit to Lab			See Section 4A	
	Sampling Reducing Sieve Analysis Sand Equivalent			R 90 R 76 T 27 T 176		1/Sublot					
					T 335	1792	1/5 Sublots				
		Fracture (Method 1)									
						Testing Frequency for Product Compliance per Source 1/5,000 Tons Minimum 1/Project					
⁽³⁾ Modular Block Core and Drainage Backfill (Product Compliance)	Soundness			T 104 T 96	4000	See Section 4C & 02690	Submit To Lab			See Section 4C	
	Abrasion Degradation	TM 208			4000						
	Lightweight Pieces			T 113							
⁽³⁾ (See Section 2690.20(a) thru 2690.20(d) & 2690.20(f))											
⁽³⁾ Modular Block Core and Drainage Drainage Backfill	Sampling Reducing			R 90 R 76 T 27/T 11	1792	1/Sublot					
	⁽²⁾ Sieve Analysis										
	⁽¹⁾ Wood Particles Fracture (Method 2) Elongated Pieces	TM 225 TM 229		T 335	1792						
⁽²⁾ Perform a minimum of 3 tests, QL's required											
Pipe Drain Backfill (Product Compliance) (See Section 00430.11)	Abrasion Degradation	TM 208		T 96	4000	See Section 4C	Submit To Lab			See Section 4C	
	Sieve Analysis										
					T 27	4000	1/Sublot				
A Sublot equals 1,000 Tons											

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00596B - PREFABRICATED MODULAR RETAINING WALLS											
Aggregate Production											
Gabion Basket Fill (Product Compliance) (See Section 00390.11(b))	Degradation Soundness Apparent Specific Gravity & Absorption Gradation	TM 208		T 104 T 85	4000 1825	See Section 4C	Submit to Lab	See Section 4C	Testing Frequency for Product Compliance per Source		
									1/5,000 Tons Minimum 1/Project		
									Visual		

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	Contractor Quality Control	QUALITY ASSURANCE		Materials Laboratory
		ODOT	WAQTC			AASHTO	Project Manager	
SECTION 00596B - PREFABRICATED MODULAR RETAINING WALLS								
Aggregate Production								
Retaining Wall Granular Backfill (Product Compliance) (Also reference 02630.10)	Abrasion Degradation Sieve Analysis Plasticity Index	TM 208		T96 T 11 T 90	4000 4000	See Section 4C	Submit to Central Lab	Testing Frequency for Product Compliance per Source 1/5,000 Tons Minimum 1/Project
A Sublot Equals 2,000 Tons								
Retaining Wall Granular Backfill (¹) Perform a minimum of 3 tests, QL's required	Sampling Reducing (¹) Sieve Analysis Sand Equivalent			R 90 R 76 T 27 T 176	1792	1/Sublot		
Placement Establishing Maximum Density (¹) Method A	Fracture (Method 1) Density Curve			T 335 (¹) T 99	1792	1/5 Sublots		
Compaction	Bulk Specific Gravity Coarse Particle Correction Nuclear Gauge	TM 223		T 85 T 310	3468 3468	1/Aggregate Gradation/Per Source		
	Deflection Testing	TM 158			1793B	1 per layer	Visual See section 00596B.47(b-6)	
<p>Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.</p>								

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)										
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			Materials Laboratory								
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance									
SECTION 00596C - CAST-IN-PLACE CONCRETE RETAINING WALLS																	
Aggregate Production																	
Pipe Drain Backfill (Product Compliance) (See Section 00430.11)	Abrasion Degradation	TM 208	T 96	4000	See Section 4C	Submit To Lab			See Section 4C								
											Sampling Reducing Sieve Analysis	R 90 R 76 T 27	4000	1/Sublot			
Testing Frequency for Product Compliance per Source 1/5,000 Tons Minimum 1/Project																	
Retaining Wall Granular Backfill	Abrasion Degradation Sieve Analysis Plasticity Index	TM 208	T 96 T 11 T 90	4000 4000	See Section 4C	Submit to Central Lab			See Section 4C								
A Sublot Equals 2,000 Tons																	
Retaining Wall Granular Backfill (¹) Perform a minimum of 3 tests, QL's required	Sampling Reducing (¹) Sieve Analysis Fracture (Method 1)		R 90 R 76 T 27 T 335		1/Sublot												
											1792						
															1792	1/5 Sublots	

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	Contractor Quality Control	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO			Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00596C - CAST-IN-PLACE CONCRETE RETAINING WALLS									
Placement									
Retaining Wall Granular Backfill	Density Curve			(1) T 99	3468				
Establishing Maximum Density	Bulk Specific Gravity			T 85	3468	1/Aggregate Gradation/Per Source			
Compaction	Coarse Particle Correction	TM 223		T 310	1793B	1/ 100 yd3 (Minimum 1/day)			
	Nuclear Gauge				1793B	1 per layer			
	Deflection Testing	TM 158					Visual See section 00596C.42(f)		
<p>Contractor must demonstrate, by compaction testing or acceptable visual means, that the material, equipment, and process used for compaction achieves the specification requirements. If the material, equipment, or process changes, or if other conditions indicate a non-specification product, the Contractor must re-demonstrate that specification requirements are being achieved.</p>									

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00635 - GRID-ROLLED AGGREGATE SUBBASE											
Aggregate Subbase Grading (See 00635.10)	Abrasion			T 96	4000	A Sublot equals 1000 Tons		See Section 4(A)			
						1/Source	Submit To Central Lab				
	Sampling Reducing Sieve Analysis Sand Equivalent			R 90 R 76 T 27 T 176		1/Sublot & Start of Production					
					1792						

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)				
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC		AASHTO	Contractor Quality Control	Project Manager	Region Quality Assurance
SECTION 00641 - AGGREGATE SUBBASE, BASE, AND SHOULDERS								
Aggregate Production Aggregate Subbase Grading (See 00641.10(b))	Abrasion			T 96	4000	See Sec. 4A	Submit To Central Lab	See Section 4(A)
	Sampling Reducing Sieve Analysis Sand Equivalent			R 90 R 76 T 27 T 176		1/Project or 1/Source	Visual	
	Abrasion Degradation	TM 208		T96	4000	See Section 4A	Submit to Lab	See Section 4A
	Grading Aggregate Base (See 02630) Aggregate Shoulder (See 02640) Open Graded Aggregate Base (See 02630.11) ⁽¹⁾ Perform at least 3 tests ⁽²⁾ May be waived by QAE			R 90 R 76 T 27 T 176 T 335		1/Sublot & Start of Production 1/5 Sublots & Start of Production		1 per 10 Sublots
Placement								
Aggregate Base Plant Mix Applications Only Aggregate (Mixture)	Sampling Reducing Moisture			R 90 R 76 T 255 & T 265		1/Sublot or minimum 1/Day		1 per 10 Sublots
	Density Curve Coarse Particle Correction Bulk Specific Gravity	TM 223		⁽³⁾ T 99 T 85	3468 B 3468 B	Each Size per Source		1/Project
	Deflection Testing Nuclear Gauge	TM 158		T310	1793B 1793B	1 per Sublot ^(D) 5 Tests Per Sublot		^(D) 1 (5 Tests) per 10 Sublots
	Compaction ^(D) (Individual tests must meet Specification)							

FIELD TESTED MATERIALS ACCEPTANCE GUIDE

(Revised November 2020)

Same Frequency for all Tests (Minimums)

MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	Contractor Quality Control	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO			Independent Assurance/Verification	Region Quality Assurance	Materials Laboratory	
SECTION 00641 - AGGREGATE SUBBASE, BASE, AND SHOULDERS (Continued)										
Placement										
Aggregate Subbase										
Compaction	Deflection Testing	TM 158			1793 B	1 per Layer	Visual			

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)								
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-734-	QUALITY ASSURANCE								
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory					
SECTION 00680 - STOCKPILED AGGREGATES														
Aggregate Base and Shoulders (See Section 00641)	Abrasion Degradation	TM 208		T 96	4000	See Section 4A	Submit to Lab			See Section 4A				
					A Sublot equals 2,000 Tons									
					1792	1/Sublot & Start of Production								
					1792							1 per 10 Sublots		
					1792	1/5 Sublots & Start of Production								
(1) Perform at least 3 tests, QL's required (2) May be waived by QAE	Fracture (Method 1)			T 335	1792									
					A Sublot equals 1000 Tons									
					1792	1/Sublot & Start of Production						1 per 10 Sublots		
Aggregate (Sanding Aggregate)	Sampling Reducing Sieve Analysis (1) Cleaness Value	TM 227		R 90 R 76 T 27	1792	1/Sublot & Start of Production								
					A Sublot equals 1000 Tons									
					4000	See Section 4A	Submit to Lab					1 per 10 Sublots	See Section 4A	
					4000									
(1) May be waived by QAE	Abrasion Degradation Lightweight Pieces Fracture (Method 1) Elongated Pieces Wood Particles	TM 208 TM 229 TM 225		T 96 T 113 T 335	1792	1/5 Sublots & Start of Production								
					1792									

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)													
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE											
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory								
SECTION 00680 - STOCKPILED AGGREGATES (CONTINUED)																	
Emulsified AC Aggregate Aggregate Production (See Sections 00705, 00706, 00710, 00711, 00712 and 00715) (1) QAE may waive after 5 sublots/shifts (2) Perform at least 3 tests (QL's required), QAE may waive wet sieve after 5 sublots/shifts if a correlation to dry sieve can be demonstrated (3) May be waived by QAE (4) Not required for Dry Key Material (5) 1/5 Sublots & Start of Production	Abrasion Degradation Soundness Lightweight Pieces Dry Rodded Unit Weight Sampling Reducing (5) Fracture (Method 1) (1) Wood Particles (1)(4) Elongated Pieces (2) Sieve Analysis (3) Cleaness Value Dry Rodded Unit Weight	TM 208 TM 225 TM 229 TM 227	T 96 T 104 T 113 T 19 R 90 R 76 T 335 T27/T 11 T 19	4000 4000 1792 1792 1825 1825C	A sublot equals 500 Tons. A minimum 1 per shift, whichever results in the greatest sampling frequency	See Section 4A 1/Sublot & Start of Production Start of production and when changes in aggregate occurs	Submit to Lab 1 per 10 Sublots	See Section 4A									
									Aggregate (Other)								
									Use sampling and testing frequencies required for proposed end product use								

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00705 - EMULSIFIED ASPHALT PRIME COAT and EMULSIFIED ASPHALT FOG COAT											
Aggregate Production											
Aggregate Cover Material	Reducing Sieve Analysis			R 90 R 76 T 27	1792	1/Sublot & Start of Production		1 per 10 Sublots			
Asphalt Prime and Fog Coat Asphalt Cement (Emulsion)	Compliance			R 66	4000	See Section 4C 1/50 Tons (Submit All)	Submit to Central Lab				1/5 QC Samples (Random)
SECTION 00706 - EMULSIFIED ASPHALT SLURRY SEAL SURFACING											
Aggregate Production											
⁽¹⁾ Perform at least 3 tests, QL's required	Sampling Reducing			R 90 R 76 T 27/T 11	1792	1/Sublot & Start of Production					
	⁽¹⁾ Sieve Analysis										
Emulsified Asphalt Cement Emulsified Asphalt Polymer Modified Emulsion	Compliance				4000	See Section 4C 1/50 Tons (Submit All)	Submit to Central Lab				1/5 QC Samples (Random)
Additives Mineral Filler	Material must meet the requirements of Section 00706.13										
Mixture	Material must meet the requirements of Section 00706.16										

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)												
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE											
		ODOT	WAQTC		AASHTO	Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory							
SECTION 00711 - PRE-COATED AGGREGATE ASPHALT SURFACE TREATMENT																
Aggregate Production																
(1) QAE may waive after 5 sublots/shifts (2) Perform at least 3 tests (QL's required), QAE may waive wet sieve after 5 sublots/shifts if a correlation to dry sieve can be demonstrated (3) May be waived by QAE (4) Not required for Dry Key Material (5) 1/5 Sublots & Start of Production	Abrasion Degradation Soundness Lightweight Pieces Dry Rodded Unit Weight Sampling Reducing (5) Fracture (Method 1) (1) Wood Particles (1)(4) Elongated Pieces (2) Sieve Analysis (3) Cleaness Value Dry Rodded Unit Weight	TM 208 TM 225 TM 229 TM 227	T 96 T 104 T 113 T 19 R 90 R 76 T 335 T27/T 11 T 19	4000 4000 1792 1792 1825 1825C 4000	A sublot equals 500 Tons. A minimum 1 per shift whichever results in the greatest sampling frequency	See Section 4A 1/Sublot & Start of Production Start of production and when changes in aggregate occurs 1/50 Tons Submit All	Submit to Central Lab 1 per 10 Sublots Submit to Lab	See Section 4A 1/5 QC Samples (Random)								
									Asphalt Cement							
									Preproduced Aggregate							
									Compliance of aggregates produced and stockpiled before the award date or notice to proceed of this contract will be determined by the following:							
									1. Continuing production records meeting the above requirements of Section 00711.10 and 711.15, Aggregate Production.							
									2. Furnish records of testing for the entire stockpile according to Section 00711.10 and 711.15 Aggregate Production except change the sampling frequency to the following:							
									a. One Per 5 sublots means "One Set of Tests Per 2500 Tons".							
									b. One Per sublot means "One Set of Tests Per 500 Tons" with a minimum of 3 sets of Sieve Analysis tests per project.							
									c. Provide one stockpile sample for each set of tests required above.							

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)				
(Revised November 2020)				QUALITY ASSURANCE				
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
		ODOT	WAQTC					
SECTION 00711 - PRE-COATED AGGREGATE ASPHALT SURFACE TREATMENT (CONTINUED)								
Mixture Acceptance					A sublot equals 500 Tons. A minimum 1 per shift, whichever results in the greatest sampling frequency			
Meter Method	Readings backed by Tank Measure & Production Records Daily	TM 321 (¹) TM 322			2277	1/Sublot or Min. 1/Day		
⁽¹⁾ Required at start of production and if meters fail to meet specification	Cold Feed Moisture		T 255/265		2043 & 2401	Daily Production		
Plant Discharge Moisture	Asphalt Mix Moist.		T 329		2277	1/Sublot or Min. 1/Day		
Asphalt Cement	Compliance		R 66		4000	1/50 Tons Submit All	Submit to Lab	1/5 QC Samples (Random)

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)									
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE								
		ODOT	WAQTC		AASHTO	Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory				
SECTION 00712 - DRY KEY EMULSIFIED ASPHALT SURFACE TREATMENT													
Aggregate Production													
Abrasion Degradation Soundness Lightweight Pieces Dry Rodded Unit Weight Sampling Reducing ⁽⁵⁾ Fracture (Method 1) ⁽¹⁾ Wood Particles ⁽¹⁾⁽⁴⁾ Elongated Pieces ⁽²⁾ Sieve Analysis ⁽³⁾ Cleaness Value Dry Rodded Unit Weight Compliance	TM 208 TM 225 TM 229 TM 227	T 96 T 104 T 113 T 19 R 90 R 76 T 335 T 27/T 11 T 19 R 66	4000 4000 1792 1792 1825 1825C 4000	A sublot equals 500 Tons. A minimum 1 per shift, whichever results in the greatest sampling frequency				See Section 4A Submit to Central Lab 1/Sublot & Start of Production Start of production and when changes in aggregate occurs Submit to Lab	See Section 4A 1 per 10 Sublots 1/5 QC Samples (Random)				
				Preproduced Aggregate									
				Compliance of aggregates produced and stockpiled before the award date or notice to proceed of this contract will be determined by the following:									
				1. Continuing production records meeting the above requirements of Section 00712.10 and 712.15, Aggregate Production.									
				2. Furnish records of testing for the entire stockpile according to Section 00712.10 and 712.15 Aggregate Production except change the sampling frequency to the following:									
				a. One Per 5 sublots means "One Set of Tests Per 2500 Tons".									
				b. One Per sublot means "One Set of Tests Per 500 Tons" with a minimum of 3 sets of Sieve Analysis tests per project.									
				c. Provide one stockpile sample for each set of tests required above.									

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE				
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Independent Assurance/Verification	Materials Laboratory
SECTION 00720 - COLD IN-PLACE RECYCLED ASPHALT CONCRETE PAVEMENT (CIR)										
SECTION 00721 - COLD RECYCLED EMULSIFIED ASPHALT CONCRETE PAVEMENT (CRP)										
Asphalt Cement (Emulsified Recycling Agent)	Compliance			R 66	4000	See Section 4C 1/50 Tons (Submit All)	Submit to Central Lab			1/5 QC Samples (Random)
Water	Compliance				4000	See Sec.00340.10				
Aggregate Production Choke Aggregate (See 00705)	Sampling Reducing Sieve Analysis			R 90 R 76 T 27	1792	1/Sublot & Start of Production		Minimum 1/Project		
SECTION 00725 - HOT IN-PLACE RECYCLED (HIR) ASPHALT CONCRETE PAVEMENT										
<i>The type of recycling agent will be listed in the Special Provisions</i>										
Recycling Agent (See 00745.11)	Compliance			R 66	4000	See Section 4C	Submit to Lab			1/5 QC Samples (Random)
Recycling Agent	Compliance			R 66	4000	1/50 Tons	Submit to Lab			
Asphalt Concrete Mixture	New Asphalt Concrete mixture will meet the requirements of Section 00744									
SECTION 00730 - ASPHALT TACK COAT										
Tack	Compliance			R 66	4000	See Section 4C 1/50 Tons	Submit to Lab			1/50 Tons or All QC Samples

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)					
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00735 - EMULSIFIED ASPHALT CONCRETE PAVEMENT											
Aggregate production											
⁽¹⁾ Perform at least 3 tests, QL's required ⁽²⁾ May be waived by QAE ⁽³⁾ QAE may waive after 5 sublots/shifts	Abrasion Degradation Soundness Lightweight Pieces	TM 208		T 96 T 104 T 113	4000 4000	See Section 4A	Submit to Lab			See Section 4A	
		A Sublot equals 1000 Tons. A minimum one per shift, whichever results in the greatest sampling frequency. (For preproduced aggregates, 1 shift shall mean 1000 Tons)									
Choke Aggregate	Sampling Reducing ⁽¹⁾ Sieve Analysis ⁽²⁾ Cleanness Value Fracture (Method 1 & 2) ⁽³⁾ Elongated Pieces ⁽³⁾ Wood Particles Sieve Analysis			R 90 R 76 T 27/T 11 T 335	1792 1792	1/Sublot & Start of Production			1 per 10 Sublots		
				T 27	1792	1/Sublot			1/Project		

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)				
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance
SECTION 00743 - POROUS ASPHALT CONCRETE (PAC)								
Aggregate Production								
(1) QAE may waive after 5 sublots/shifts (2) Not required for ATPB Mix (3) Coarse Agg (+ No. 4) (4) Fine Agg (- No. 4)	Soundness	TM 208			4000	See Section 4A	Submit to Lab	See Section 4A
	Abrasion				4000			
	Degradation				4000			
	Lightweight Pieces				4000			
	Plasticity Index							
	Sampling							
	Reducing							
	(3)(4) Sieve Analysis				1792			
	(1)(4) Sand Equivalent							
	(1)(2)(3) Elongated Pieces	TM 229						
	(3)(4) Fracture (Method 2)							
	(1)(2)(3) Wood Particles	TM 225						
Preproduced Aggregate								
Compliance of aggregates produced and stockpiled before the award date or notice to proceed of this contract will be determined by the following:								
1. Continuing production records meeting the above requirements of Section 00743.10 Aggregate Production. 2. Furnish records of testing for the entire stockpile according to Section 00743.10 Aggregate Production except change the sampling frequency to the following:								
a. One Per 5 sublots means "One Set of Tests Per 5000 Tons". b. One Per sublot means "One Set of Tests Per 1000 Tons" with a minimum of 3 sets of Sieve Analysis tests per project. c. Provide one stockpile sample for each set of tests required above.								

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC		AASHTO	Contractor Quality Control	Project Manager
SECTION 00743 - POROUS ASPHALT CONCRETE (PAC) (CONTINUED)							
Mixture Acceptance - PAC with RAP							
Gradation							
Ignition method	(1) Calibrate Incinerator	TM 323			2327IC	A Sublot equals 1000 Tons	
Ignition method	Sampling Reducing			R 97 R 47		1/JMF & Each Calendar Year.	
(Residual aggregate from AASHTO T 308)	Sieve analysis			T 30		1/Sublot or Min. 1/Day	
(1) Submit Samples a minimum of 2 Days Prior to ACP Production					2277	1/Sublot or Min. 1/day	
Asphalt Content							
Ignition Method	(1) Calibrate Incinerator	TM 323			2327IC	A Sublot equals 1000 Tons	
Ignition Method	Sampling Reducing			R 97 R 47		1/JMF & Each Calendar Year.	
Meter Method	Asphalt Content			T 308		1/Sublot or Min. 1/day	
(2) Required at start of production and if meters fail to meet specification	Readings backed by Tank measure & Production Records Daily	TM 321 (2) TM 322			2277	1/Sublot or Min. 1/day	
<u>Meter Method is required for PAC even when acceptance is by Ignition Method</u>					2043 & 2401	Daily Production	

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE				
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory	
SECTION 00743 - POROUS ASPHALT CONCRETE (PAC) (CONTINUED)										
Mixture Acceptance - PAC without RAP										
Gradation										
Cold Feed Method	Sampling Reducing Sieve Analysis				R 90 R 76 T 27/T 11					
Ignition method	(1) Calibrate Incinerator	TM 323			2277					
Ignition method	Sampling Reducing				2327IC					
(1) Not required if Asphalt Content Accepted by Meter Method										
(Residual aggregate from AASHTO T 308)	Sieve analysis				T 30					
(1) Submit Samples a minimum of 2 Days Prior to ACP Production					2277					
Asphalt Content										
Ignition Method	(1) Calibrate Incinerator	TM 323								
Ignition Method	Sampling Reducing Asphalt Content				R 97 R 47 T 308					
(2) Required at start of production and if meters fail to meet specification										
Meter Method	Readings backed by Tank measure & Production Records Daily	TM 321 (2) TM 322			2277					
Meter Method is required for PAC even when acceptance is by Ignition Method					2043 and 2401					

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC		AASHTO	Contractor Quality Control	Project Manager
SECTION 00743 - POROUS ASPHALT CONCRETE (PAC) (CONTINUED)							
Mixture Acceptance - PAC with and without RAP							
Mix Design Verification Testing							
	Cold Feed Moisture			T255/T265	2277	1/Sublot or Min. 1/Day	
Plant Discharge Moisture	Asphalt Mix Moist.			T 329	2277	1/Sublot or Min. 1/Day	
⁽¹⁾ RAP Percentage	⁽¹⁾ RAP Moisture			T 329	2277	1/Sublot or Min. 1/Day	
⁽¹⁾ If applicable	Readings backed by Tank measure & Production Records Daily	TM321 ⁽²⁾ TM 322			2401 & 2043	Daily Production	
Asphalt Cement	Compliance			R 66	4000	1/Sublot - See section 4C	Submit to Lab
⁽²⁾ Required at start of production and if meters fail to meet specification							1/5 QC Samples (Random)

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)				
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance
SECTION 00744 - ASPHALT CONCRETE PAVEMENT								
Aggregate Production								
See Specifications when Aggregate Testing is Required by the Agency								
A Sublot equals 1000 Tons								
Mixture Acceptance								
Gradation								
Ignition method	(1) Calibrate Incinerator	TM 323			2327IC	1/JMF & Each Calendar Year.		
Ignition method	Sampling Reducing			R 97 R 47		1/Sublot or Min. 1/Day		
(Residual aggregate from AASHTO T 308)	Sieve analysis			T 30	2277	1/Sublot or Min. 1/Day		
(1) Submit Samples a minimum of 2 Days Prior to ACP Production								
A Sublot equals 1000 Tons								
Asphalt Content								
Ignition Method	(1) Calibrate Incinerator	TM 323			2327IC	1/JMF & Each Calendar Year.		
Ignition Method	Sampling Reducing			R 97 R 47		1/Sublot or Min. 1/day		
	Asphalt Content			T 308	2277			
A Sublot equals 1000 Tons								
Mix Design Verification Testing								
Plant Discharge Moisture	Asphalt Mix Moist.							
Maximum Density Test G _{mm}	Max. Specific Gravity MAMD	TM 305			2277	1/Sublot		
				T 209	2050	1st Sublot Daily or Min. 1/Day		

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)			Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	Contractor Quality Control	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO			Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00744 - ASPHALT CONCRETE PAVEMENT (CONTINUED)									
Compaction	Nuclear Density			T 355	1793A				

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)					
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00745 - ASPHALT CONCRETE PAVEMENT - STATISTICAL ACCEPTANCE											
Aggregate Production	Soundness			T 104	4000						
	Abrasion			T 96							
	Degradation	TM 208		T 113	4000			Submit to Lab		See Section 4A	
	Lightweight Pieces			T 90							
	Plasticity Index										
⁽²⁾ Perform a minimum of 3 tests QL's required									A Sublot equals 1000 Tons. A minimum one per shift whichever results in the greatest sampling frequency		
⁽³⁾ Coarse Agg (+ No. 4)	Sampling			R 90							
	Reducing			R 76							
	⁽²⁾ / ⁽³⁾ / ⁽⁴⁾ Sieve Analysis			T 27/T 11	1792						
	⁽¹⁾ / ⁽⁴⁾ Sand Equivalent			T 176							
	⁽¹⁾ / ⁽³⁾ Elongated Pieces	TM 229		T 335	1792						
	⁽³⁾ / ⁽⁴⁾ Fracture (Method 2)										
	⁽¹⁾ / ⁽³⁾ Wood Particles	TM 225									
RAS Production (Reclaimed Asphalt Shingles)	Sieve Analysis	TM 335		T 27	4000			Submit to Lab			
	Deleterious Materials										
	Sampling			R 90							
	Reducing			R 76							
	Sieve Analysis			T 27							
	Deleterious Materials	TM 335			1792						
Preproduced Aggregate											

Compliance of aggregates produced and stockpiled before the award date or notice to proceed of this contract will be determined by the following:

1. Continuing production records meeting the above requirements of Section 00745.10 Aggregate Production.
2. Furnish records of testing for the entire stockpile according to Section 00745.10 Aggregate Production except change the sampling frequency to the following:
 - a. One Per 5 sublots means "One Set of Tests Per 5000 Tons".
 - b. One Per sublot means "One Set of Tests Per 1000 Tons" with a minimum of 3 sets of Sieve Analysis tests per project.
 - c. Provide one stockpile sample for each set of tests required above.

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC		AASHTO	Contractor Quality Control	Project Manager
SECTION 00745 - ASPHALT CONCRETE PAVEMENT - STATISTICAL ACCEPTANCE (CONTINUED)							
A Sublot equals 1000 Tons							
Mixture Acceptance - ACP " With and Without RAP"							
Gradation	(1) Calibrate Incinerator	TM 323			2327IC	1/JMF & Each Calendar Year.	1/JMF & Each Calendar Year.
Ignition method	Sampling Reducing Sieve analysis			R 97 R 47 T 30		1/Sublot	1 per 10 Sublots
(Residual aggregate from AASHTO T 308)					2277		
(1) Submit Samples a minimum of 2 Days Prior to ACP Production							
A Sublot equals 1000 Tons							
Asphalt Content							
Ignition Method	(1) Calibrate Incinerator	TM 323			2327IC	1/JMF & Each Calendar Year.	1/JMF & Each Calendar Year.
Ignition Method	Sampling Reducing Asphalt Content			R 97 R 47 T 308		1/Sublot or Min. 1/day	1 per 10 Sublots
(2) RAP Percentage	Meter Method	TM 321			2277		
(2) If Applicable		(3) TM 322				1/Sublot or Minimum 1/Day	1 per 10 Sublots
(3) Required at start of production and if meters fail to meet specification	(2) RAP Moisture Cold Feed Moisture			T 329 T255/T265	2277		
<u>Meter Method is required for ACP even when acceptance is by Ignition Method</u>	Readings backed by Tank measure & Production Records Daily	TM 321 (3) TM 322				Daily Production	

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD		FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC		AASHTO	Contractor Quality Control	Project Manager
SECTION 00745 - ASPHALT CONCRETE PAVEMENT - STATISTICAL ACCEPTANCE (CONTINUED)							
A Sublot equals 1000 Tons							
Mixture Acceptance - ACP "With and Without RAP"							
Mix Design Verification Testing Fabrication Maximum Density Test	Gyratory Specimen Max. Specific Gravity	TM 326	T 209	2050GV 2050 *5068 *2560 *5069	1/Sublot & according to Section 00745.16 (b)-1-d		1 per 10 Sublots
Determination of G_{mb}	Bulk Specific Gravity		T 166				
Stripping Susceptibility	Tensile Strength Ratio		T 283	2050tsr	1/JMF See Section 00745.16 (b)-1-f		
*Cat-II complete & submit as required, See Section 745.16(b)							
Plant Discharge Moisture	Asphalt Mix Moist.		T 329	2277	1/Sublot		
Maximum Density Test G_{mm}	Max. Specific Gravity MAMD	TM 305	T 209	2050	1st Sublot Daily or Min. 1/Day		
Performing Control Strip	Control Strip	TM 306		2084 *5069	Develop Rolling Pattern See Specs.		
Compaction	Nuclear Density		T 355	1793A	(D) Average 5 tests per Sublot or Min. 1/Day, See Section 00745.49 (b)-2		(D) 1 per 10 Sublots
Asphalt Cement	Compliance		R 66	4000	1/Sublot See Section 4C	Submit to Lab	1 per 10 Sublots
(D) See T 355 Yellow Sheet for Density Test Locations							1/5 QC Samples (Random)

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)					
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE			
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory
SECTION 00754 - PLAIN CONCRETE PAVEMENT REPAIR									
SECTION 00755 - CONTINUOUSLY REINFORCED CONCRETE PAVEMENT									
SECTION 00756 - PLAIN CONCRETE PAVEMENT									
SECTION 00758 - CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR									
Aggregate Production							A Sublot equals 1000 Tons		
⁽¹⁾ QAE may waive after 5 sublots/shifts	Sampling Reducing ⁽²⁾ / ⁽³⁾ / ⁽⁴⁾ Sieve Analysis ⁽⁴⁾ Fineness Modulus ⁽⁴⁾ Sand Equivalent	R 90 R 76 T 27/T 11			1792	1/5 Sublot & Start of Production		1 per 10 Sublots	
⁽²⁾ Perform a minimum of 3 tests, QL's required	⁽¹⁾ / ⁽³⁾ Wood Particles ⁽³⁾ Fracture (Method 2) ⁽¹⁾ / ⁽³⁾ Elongated Pieces	T 176			1792	1/5 Sublots & Start of Production			
⁽³⁾ Coarse Aggregate (See Section 02690.20)	Abrasion Degradation Soundness Lightweight Pieces Organics	TM 225 TM 229			4000	See Section 4A & 02690	Submit to Central Lab		See Section 4A
⁽⁴⁾ Fine Aggregate (See Section 02690.30)	⁽³⁾ Dry Rodded Unit Weight ⁽³⁾ / ⁽⁴⁾ Bulk Specific Gravity & Absorption	T 96 T 104 T 113 T 21			1825 1825C 1825	Start of production and when changes in aggregate occurs			
		T 19 T 84 & T 85							

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)				
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance
SECTION 00754 - PLAIN CONCRETE PAVEMENT REPAIR SECTION 00755 - CONTINUOUSLY REINFORCED CONCRETE PAVEMENT SECTION 00756 - PLAIN CONCRETE PAVEMENT SECTION 00758 - CONTINUOUSLY REINFORCED CONCRETE PAVEMENT REPAIR (CONTINUED)								
Portland Cement Concrete								A Sublot equals 1000 lane feet of slip formed pavement or 100 yd ³ of non-slip formed PCC
Portland Cement Modifiers Admixtures								
Curing Compounds								
Mixing Water								
^(S) 1 Set Represents a minimum of 3 Cylinders ^(M) Per Mix Design & Source	Sampling		TM 2	T 152 T 119 T 121 T 121 T 309 T 121	3573WS or 4000C			
	Air Content							
	Slump							
	Density (Unit Weight)							
	Yield							
	Concrete Temperature							
	Water/Cement Ratio							
	Batching							
	Strength			T 22 & T 23				
								^(M) ^(S) 1 Set of Cylinders per Sublot or Minimum 1 set per Day
								See Special Provisions
								See Specs
Smoothness Certification of Profiler Equipment Determining IRI with an Inertial Laser Profiler Thickness of Pavement			TM 769 TM 772 TM 775					

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)				Same Frequency for all Tests (Minimums)			
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE					
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory		
SECTION 00850 - COMMON PROVISIONS FOR PAVEMENT MARKINGS											
Placement Evaluation "Retroreflectivity"											
In-Place Procedure evaluates Durable and High Performance Pavement Markings	Evaluation of Retroreflectivity Using Hand-Operated Instrument	TM 777									
					4101 thru 4105	See Special Provisions and Test Procedure for Testing Frequency					

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				Same Frequency for all Tests (Minimums)																
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE														
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance	Materials Laboratory											
SECTION 00921 - MAJOR SIGN SUPPORT DRILLED SHAFTS																				
Aggregate Production																				
(1) QAE may waive after 5 sublots/shifts	Sampling Reducing (2)(3)(4) Sieve Analysis (4) Fineness Modulus (1)(3) Wood Particles (4) Sand Equivalent	TM 225		R 90 R 76 T 27/T 11 T 27/T 11	1792	1/Sublot & Start of Production	1 per 10 Sublots		See Section 4(A)											
										(2) Perform a minimum of 3 tests, QL's required	TM 208	T 104 T 96 T 113 T 21	4000	See Section 4A	Submit to Lab					
																	(3) Coarse Aggregate (See Section 02690.20)	T 19	1825 1825C	Start of production and when changes in aggregate occurs
Portland Cement Modifiers Admixtures	Materials must meet the requirements of Section 02001.10																			
Drilling Slurry	Slurry material must meet the requirements of Section 00921.14 & 00921.43(g)																			
Grout	Material must meet the requirements of Section 02080																			
Mixing Water	Material must meet the requirements of Section 02020																			

FIELD TESTED MATERIALS ACCEPTANCE GUIDE				(Revised November 2020)		Same Frequency for all Tests (Minimums)		
MATERIAL AND OPERATION	DESCRIPTION OF TEST	TEST METHOD			FORM 734-	QUALITY ASSURANCE		
		ODOT	WAQTC	AASHTO		Contractor Quality Control	Project Manager	Region Quality Assurance
SECTION 00921 - MAJOR SIGN SUPPORT DRILLED SHAFTS								
Portland Cement Concrete	Sampling Slump Concrete Temperature Density (Unit Weight) Yield Water/Cement Ratio Strength		TM 2	T 119 T 309 T 121 T 121 T 121	3573WS or 4000C 4000C			QA Testing <u>Projects under 100 yd³ all classes</u> 1/Project representing all classes of PCC <u>Projects over 100 yd³ all classes</u> 1/500 yd ³ per class minimum 1/class
<i>(S)</i> 1 Set Represents a minimum of 3 Cylinders								
<i>(M)</i> Per Mix Design & Source								
TABLE 00512-1 Frequency of Quality Control Testing								
Minimum frequencies per Class of concrete based on daily production records.								
Production			0 to 100 yd ³ on a single day			1 Set each day		
Quantity Over 100 yd³			100 to 600 yd ³ on a single day over 600 yd ³ on a single day			1 Set per each 100 yd ³ or portion thereof 1 Set per each 200 yd ³ or portion thereof after reaching 600 yd ³		