

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338/IL 59	2011-035-1	DUPAGE		
			CONTRACT 60P42	
FED.ROAD.DIST.NO.	ILLINOIS	FED. AID PROJECT		

FOUNDATION AGGREGATE
ILLINOIS DEPARTMENT OF TRANSPORTATION
(CAB OR CA9)

1. SCOPE
- 1.1 THIS SPECIFICATION COVERS FOUNDATION AGGREGATE CONSISTING OF CRUSHED STONE OR GRAVEL FOR USE IN STABILIZING OR SUSTAINING POLES AND STRUCTURES.
2. GENERAL
- 2.1 AGGREGATE SUPPLIED UNDER THE SPECIFICATION SHALL COMPLY WITH ILLINOIS DEPARTMENT OF TRANSPORTATION SPECIFICATION, FOR GRADE CAB (OR GRADE CA9 COARSE AGGREGATE) LATEST REVISION.
3. PHYSICAL PROPERTIES
- 3.1 GRADATION - THE AGGREGATE SHALL BE MIXED UNIFORMLY, SHALL BE WELL GRADED FROM THE MAXIMUM TO MINIMUM SIZE BETWEEN THE LIMITS SPECIFIED, AND WHEN TESTED WITH LABORATORY SIEVES (SQUARE OPENINGS), SHALL CONFORM TO THE GRADATION GIVEN IN THE FOLLOWING TABLE, WHICH SHOWS THE TOTAL PERCENTAGE PASSING EACH SIEVE.

	PERCENTAGE BY WEIGHT PASSING SIEVE				
	1"	1/2"	#4	#16	#200
CAB	97±3	55±10	10±5	3±3	-
CA9	97±3	60±15	30±15	10±10	6±6

4. SAMPLING
- 4.1 SEPARATE SAMPLES SHALL BE TAKEN FROM DIFFERENT PARTS OF THE STOCK PILE. THIS SHOULD BE DONE TO OBTAIN A COMPOSITE SAMPLE REPRESENTING THE AVERAGE OF THE PILE. AFTER THOROUGHLY MIXING THE COMPOSITE SAMPLE, IT SHALL BE Poured THROUGH THE SAMPLE CUTTER TO REDUCE ITS SIZE TO THAT REQUIRED FOR THE TESTS. THE BALANCE SHALL BE DISCARDED.
5. TESTING
- 5.1 THE PROPERTIES SPECIFIED IN THIS SPECIFICATION SHALL BE DETERMINED BY TESTS LISTED IN ASTM SPECIFICATION C33 OF LATEST ISSUE.
6. PACKAGING
- 6.1 THIS MATERIAL WILL BE PURCHASED EITHER IN BULK OR WEATERPROOF BAGS. "50 LBS. BAGS".
7. SUPPLEMENTARY SPECIFICATIONS
- 7.1 ASTM SPECIFICATION C33-90 OR LATEST REVISION.
8. ACCEPTANCE
- 8.1 ALL PROVISIONS OF THE PURCHASE ORDER SHALL APPLY.
9. CONSTRUCTION INFORMATION
- 9.1 THE CONTRACTOR SHALL FURNISH ALL ITEMS ON THIS SPECIFICATION.

INSTRUCTION FOR INSTALLING
AND FURNISHING RIP-RAP

THE CONTRACTOR SHALL FURNISH, INSTALL, REMOVE AND REPLACE RIP RAP OF THE TYPE AND SIZE AT THE LOCATION SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER. PROPOSED RIP RAP SHALL BE GRADATION #3, 1/2" MINIMUM THICKNESS. RIP RAP SHALL BE IN ACCORDANCE WITH SECTION 201 OF THE HDT STANDARD SPECIFICATIONS OF LATEST ISSUE.

RIP RAP INSTALLATION REMOVAL AND REPLACEMENT WILL BE MEASURED FOR PAYMENT IN PLACE, AND THE AREA COMPUTED IN SQUARE YARDS.

THE WORK FOR RIP RAP IN PLACE OF THE TYPE SHOWN ON THE PLANS AND SPECIFIED HEREIN OR AS SHOWN ABOVE SHALL INCLUDE ALL MATERIAL, LABOR, EQUIPMENT RESTORATION AND APPURTENANCES REQUIRED FOR A COMPLETE ITEM PLUS LEVELING AND GRADING.

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COARSE AGGREGATE

1. SCOPE
- 1.1 THIS SPECIFICATION COVERS COARSE AGGREGATE CONSISTING OF CRUSHED STONE OR GRAVEL FOR USE IN CONCRETE.
2. GENERAL
- 2.1 COARSE AGGREGATE SUPPLIED UNDER THIS SPECIFICATION SHALL COMPLY WITH ASTM SPECIFICATION C33-90 OF LATEST REVISION.
3. PHYSICAL PROPERTIES
- 3.1 GRADING - THE COARSE AGGREGATE SHALL BE WELL GRADED BETWEEN THE FOLLOWING LIMITS:

SIZE NO.	NOMINAL SIZE	PERCENTAGE BY WEIGHT PASSING SIEVE							
		1"	3/4"	1/2"	3/8"	#4	#8	#16	#20
8	3/8" to #8	-	-	100	85 TO 100	10 TO 30	0 TO 10	0 TO 5	0 TO 5
7	1/2" to #4	-	100	90 TO 100	40 TO 70	0 TO 15	0 TO 5	-	-
67	3/4" to #4	100	90 TO 100	-	20 TO 55	0 TO 10	0 TO 5	-	-

- 3.2 DELETERIOUS SUBSTANCES (CLASS JS) - THE AMOUNT OF DELETERIOUS SUBSTANCES IN COARSE AGGREGATE SHALL NOT EXCEED THE FOLLOWING ITEM.

ITEM	MAXIMUM PERMISSIBLE PERCENTAGE BY WEIGHT OF TOTAL SAMPLE
CLAY LUMPS AND FRABLE PARTICLES	5.0
SUM OF CLAY LUMPS, FRABLE PARTICLES AND CHERT	7.0
COAL AND IGNITE	0.5
MATERIAL FINER THAN #200 SIEVE	1.0

- 3.3 OTHER PROPERTIES - COARSE AGGREGATE SUPPLIED UNDER THIS SPECIFICATION SHALL BE CAPABLE OF PASSING THE REQUIREMENTS FOR SOUNDNESS, RESISTANCE TO ABRASION, FREEZING AND THAWING AND LACK OF EXCESSIVE REACTIVE MATERIALS AS LISTED IN ASTM SPECIFICATION C33. THESE TESTS WILL BE ORDERED ON COARSE AGGREGATE OF QUESTIONABLE QUALITY ONLY WHEN THE SIZE OF THE SOURCE OF THE AGGREGATE AND THE POSSIBILITY OF IDENTIFYING FUTURE DELIVERIES FROM THIS SOURCE JUSTIFY SUCH TESTS.
- 3.4 WEIGHT - THE QUANTITY IS IN TONS. UNIT OF ISSUE IS POUNDS. THE WEIGHT SHOULD BE DETERMINED AS LOADED IN THE HAULING UNIT, INCLUDING ANY NATURAL MOISTURE PRESENT. DO NOT ADD WATER.

4. SAMPLING
- 4.1 SEPARATE SAMPLES SHALL BE TAKEN FROM DIFFERENT PARTS OF THE STOCK PILE. THIS SHOULD BE DONE TO OBTAIN A COMPOSITE SAMPLE REPRESENTING THE AVERAGE OF THE PILE. AFTER THOROUGHLY MIXING THE COMPOSITE SAMPLE, IT SHALL BE Poured INTO A PILE AND QUARTERED IN FOUR EQUAL PARTS, OPPOSITE QUARTERS SHALL BE DISCARDED, AND THE QUARTERING REPEATED UNTIL THE DESIRED SAMPLE REMAINS.
5. TESTING
- 5.1 THE PROPERTIES SPECIFIED IN THIS SPECIFICATION SHALL BE DETERMINED BY TESTS LISTED IN ASTM SPECIFICATION C33 OF LATEST REVISION.
- 5.2 ALL TEST RESULTS AND SAMPLES SHALL BE DELIVERED TO THE DEPARTMENT OF PUBLIC UTILITIES (ELECTRIC) 1392 AURORA AV, NAPERVILLE, IL 60540.
6. SUPPLEMENTARY SPECIFICATIONS
- 6.1 ASTM SPECIFICATION C33-90 OR LATEST REVISION.
7. ESTIMATED WEIGHT
- 7.1 WEIGHT PER CUBIC FOOT.
- COARSE AGGREGATE - 90 LBS. - 95 LBS. LOOSE
130 LBS. DRY COMPACTED
140 LBS. WET COMPACTED
OPTIMUM MOISTURE
- NOTE: THE ABOVE WEIGHTS ARE FOR ESTIMATING PURPOSES ONLY. FOR EXACT WEIGHTS USE LABORATORY TEST RESULTS.
8. ACCEPTANCE
- 8.1 ALL PROVISIONS OF THE PURCHASE ORDER SHALL APPLY.
9. CONSTRUCTION INFORMATION
- 9.1 THE CONTRACTOR SHALL FURNISH ALL ITEMS ON THIS SPECIFICATION.

INSTRUCTION FOR INSTALLING, REMOVAL AND REPLACEMENT
OF BITUMINOUS PAVEMENT (TYPE-II)

THIS ITEM SHALL CONSIST OF SAW CUTTING THE EXISTING PAVEMENT, THE REMOVAL OF EXISTING BITUMINOUS PAVEMENT (12" TO 18" MINIMUM ABOVE THE FINISH SURFACE) THE INSTALLATION OF BITUMINOUS SURFACE MIX THAT MATCHES THE EXISTING TYPE-A SECTION OF THE ROADWAY IN CONFORMANCE WITH PROVISIONS SET FORTH IN THESE DOCUMENTS, AT LOCATIONS WHERE THE PROPOSED IMPROVEMENT CROSSES OR PARALLELS BITUMINOUS ROADWAYS, AS DETAIRED IN THESE PLANS.

BITUMINOUS MATERIAL USED TO COMPLETE THIS ITEM OF WORK SHALL CONFORM TO SECTION 406 OF THE STANDARD SPECIFICATIONS, MORE SPECIFICALLY THE BITUMINOUS CONCRETE SHALL BE CLASS 1 SURFACE COURSE, TYPE 2, MIXTURE O.

AFTER SAW CUTTING, ALL LOOSE AND UNSOUND MATERIAL SHALL BE REMOVED FROM THE REPLACEMENT AREA BY MEANS OF PNEUMATIC, MECHANICAL, OR OTHER TOOLS AS WILL BE ACCEPTABLE TO THE ENGINEER. MATERIALS REMOVED FROM THE REPAIR AREA SHALL BE DISPOSED OF BY THE CONTRACTOR OFF THE JOBSITE, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

AREAS OF UNSOUND BASE OR SUB-BASE SHALL BE IDENTIFIED, MEASURED, AND THE ENGINEER SHALL BE NOTIFIED. A TEMPORARY PATCH MAY BE REQUIRED.

THE OPENINGS SHALL BE PROTECTED WITH TYPE I OR TYPE B BARRICADES WITH LIGHTING FOR THE PERIOD BEGINNING IMMEDIATELY AFTER REMOVAL IS COMPLETED UNTIL THE OPENINGS HAVE BEEN FILLED WITH BITUMINOUS MIXTURE AND ALL DEBRIS IS CLEARED AWAY, OR WITH SUFFICIENT STEEL PLATING TO ALLOW TRAFFIC TO PASS. PROTECTION OF THE EXCAVATION SHALL BE IN ACCORDANCE WITH THESE SPECIAL PROVISIONS NOTED HEREIN AS TRAFFIC CONTROL.

PRIOR TO PLACING BITUMINOUS CONCRETE, ALL SURFACES OF THE REPAIR AREA SHALL BE BLOWN FREE OF DUST AND LOOSE AGGREGATE PARTICLES WITH COMPRESSED AIR, A TACK COAT CONFORMING TO SECTION 406 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL SURFACES OF THE REPLACEMENT AREA AT A RATE OF 0 TO 0.1 GAL OF RESIDUAL BITUMEN PER SQUARE YARD. THE OPENING SHALL THEN BE FILLED IN LIFTS OF SURFACE COURSE MIXTURE AND COMPACTED BY MEANS OF A SELF-PROPULLED STEEL WHEEL ROLLER TO NOT LESS THAN 95 PERCENT OF THE MODIFIED PROCTOR DENSITY.

THE FINISHED SURFACE OF THE FINAL REPLACEMENT SHALL BE FLUSH, SMOOTH AND LEVEL TO THE SURROUNDING PAVEMENT SURFACE.

THE FINISHED SURFACE OF THE FINAL REPLACEMENT SHALL MEASURE 2 INCHES IN DEPTH.

WHEN, IN THE OPINION OF THE ENGINEER, BITUMINOUS SURFACE COURSE MIXTURE DELIVERED TO THE WORK SITE FOR PACKING HAS COOLED TO THE POINT OF BEING UNSATISFACTORY, IT SHALL NOT BE USED IN THE WORK.

THE METHOD OF MEASUREMENT FOR THIS ITEM OF WORK SHALL BE IN SQUARE YARDS, WHICH WILL BE CALCULATED BY THE FIELD MEASUREMENT. MEASUREMENT SHALL BE CONSIDERED FULL COMPENSATION FOR SAW CUTTING, REMOVAL AND DISPOSAL OF EXCAVATED MATERIALS, REMOVAL AND INSTALLATION OF BITUMINOUS MATERIALS TO MATCH EXISTING PAVEMENT SECTIONS, PLACING OF TACK COAT AND BITUMINOUS SURFACE COURSE, TEMPORARY ASPHALT PATCHES, TRAFFIC CONTROL AND ANY OTHER LABOR, EQUIPMENT, TOOLS OR MATERIALS NECESSARY TO COMPLETE THIS ITEM TO THE SATISFACTION OF THE ENGINEER.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR BITUMINOUS PAVEMENT REPLACEMENT, TYPE II, WHICH SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT AND APPURTENANT NECESSARY FOR A COMPLETE JOB.

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PROJECT TITLE						ROUTE 59 ROAD IMPROVEMENTS					
PROJECT DESCRIPTION						DETAILS AND STANDARDS					
ENGINEER	BCC	DRAWING DATE	5-11-12	MAP #	4211,4212,4223	SCALE	N.T.S.				
DESIGN BY	DL	DRAFTED BY	PSM	REVISIONS DATE	N/A	PROJECT #	EU-12				
CHECKED BY		APPROVED BY		CAD FILE	00608480010155.DWG	SHEET #	55 OF 63				
Naperville						Department of Public Utilities Electric Division					
						60468					