

ITEM SPECIAL - RAIL ITEM, MISC.: BALLAST

MATERIAL FOR BALLAST SHALL BE CLEAN CRUSHED STONE WITH A MINIMUM DEPTH OF 12 INCHES. CRIBS (SPACING BETWEEN THE CROSSTIES) SHALL BE FILLED WITH BALLAST TO THE TOP OF THE TIES.

STONE FOR USE AS BALLAST ON TRACKS, OR PORTIONS OF TRACKS, TO BE OWNED BY THE RAILWAY COMPANY, SHALL BE FURNISHED BY RAILROAD APPROVED QUARRY, AND SHALL BE CRUSHED STONE (GRANITE) CONFORMING TO THE REQUIREMENTS OF NS RAILWAY CHIEF ENGINEER.

BALLAST UNDER TEMPORARY TRACKS IS TO BE SUPPLIED BY NSRR AND PLACED BY NSRR IN PHASE 1. TEMPORARY BALLAST SHALL NOT BE MODIFIED UNLESS APPROVED BY NSRR. AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE BALLAST AS DIRECTED BY THE CITY, WHO WILL TAKE OWNERSHIP OF THE TEMPORARY BALLAST.

OTHER BALLAST IS SUPPLIED AND PLACED BY THE RAILROAD.

BALLAST GRADATION SHALL CONFORM TO THE FOLLOWING TABLE:

SIEVE DESIGNATION	SIEVE OPENING	#3 BALLAST (MODIFIED) % PASSING SIEVE	#5 BALLAST % PASSING SIEVE
2-1/2"	2.5"	100	-
2"	2"	95-100	-
-	1.5"	30-65	-
1"	1"	0-15	90-100
-	0.75"	-	40-75
-	0.5"	0-5	15-35
3/8"	0.375"	-	0-15
NO. 4	0.187"	-	0-5
NO. 200	0.0029"	0.5 MAX	0.5 MAX

ITEM SPECIAL - RAILROAD FLAGGING

FLAGGING FOR WORK ON RAILROAD RIGHT OF WAY SHALL BE COORDINATED, OBTAINED AND PAID FOR BY THE CONTRACTOR. FLAGGING SHALL BE PROVIDED BY THE CONTRACTOR WHENEVER REQUIRED BY THE NORFOLK SOUTHERN SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS (SECTION 7.A.2). NORFOLK SOUTHERN SHALL APPROVE THE FLAGGING SERVICE PROVIDER AND THEIR STAFF.

NORFOLK SOUTHERN HAS THE SOLE AUTHORITY TO DETERMINE THE NEED FOR PROTECTIVE SERVICES TO PROTECT ITS OPERATIONS. IN GENERAL, THE REQUIREMENTS OF SUCH SERVICES WILL BE WHENEVER THE CONTRACTOR'S PERSONNEL OR EQUIPMENT ARE OR ARE LIKELY TO BE, WORKING ON THE RAILROAD'S RIGHT-OF-WAY, OR ACROSS, OVER, ADJACENT TO, OR UNDER A TRACK, OR WHEN SUCH WORK HAS DISTURBED OR IS LIKELY TO DISTURB A RAILROAD STRUCTURE OR THE RAILROAD ROADBED OR SURFACE AND ALIGNMENT OF ANY TRACK TO SUCH EXTENT THAT THE MOVEMENT OF TRAINS MUST BE CONTROLLED BY FLAGGING.

THE TOTAL DAYS IN THE ESTIMATED QUANTITIES IS BASED UPON AN ESTIMATE OF TOTAL FLAGGING DAYS NEEDED TO COMPLETE THE PLANNED WORK.

ONLY THE FOLLOWING CERTIFIED FLAGGING PROVIDERS ARE ACCEPTABLE BY NORFOLK SOUTHERN:

RAILROAD CONSULTANTS
STEVE LLOYD
VP BUSINESS DEVELOPMENT
(615) 542-8901

RAILPROS
1320 GREENWAY DR., SUITE 490
IRVING, TX 75038
(877) 315-0513
<https://railpros.com/contact-field-services/>

PAYMENT PER DAY FOR ITEM 690 99500 - SPECIAL - RAILROAD FLAGGING SHALL INCLUDE ALL COSTS OF THE FLAGGING SERVICE FOR THE DAYS USED, INCLUDING ANY CONTRACTOR OVERHEAD FOR ADMINISTERING THE CONTRACT WITH THE FLAGGING SERVICE.

ITEM 203 - EXCAVATION, AS PER PLAN

EXCAVATION SHALL BE IN CONFORMANCE WITH NS STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION. IF BENCHING OF SLOPES CARRYING RAILROAD LIVE LOAD IS REQUIRED, THE HEIGHT SHALL NOT EXCEED 2'-0". BENCHING EXCAVATION QUANTITIES ARE NOT TABULATED HEREIN. IF BENCHING IS REQUIRED, THE QUANTITY AND COST OF EXCAVATING THE BENCH IS TO BE CONSIDERED INCIDENTAL TO THIS PAY ITEM.

PAYMENT FOR THE REMOVAL OF THE GRANULAR FILL BETWEEN THE TIED SHORING WALLS AT THE TEMPORARY BRIDGE IS TO BE INCLUDED WITH THIS PAY ITEM.

PRIOR TO PLACING THE FIRST LIFT OF EMBANKMENT FILL, PROOF ROLL THE PROPOSED LIMITS OF THE EMBANKMENT IN ACCORDANCE WITH ITEM 204 PROOF ROLLING. WHERE PROOF ROLLING INDICATES AREAS OF UNSTABLE OR UNSUITABLE SOILS, THE CONTRACTOR SHALL UNDERCUT THE FOUNDATION MATERIAL PER THE DETAILS SHOWN ON THE TYPICAL SECTION AND REPLACE WITH SUITABLE MATERIAL. THIS WORK IS INCIDENTAL TO ITEM 203 EMBANKMENT.

ITEM 611 - 36" CONDUIT, TYPE B, 707.19, AS PER PLAN

ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE NORFOLK SOUTHERN STANDARD SPECIFICATIONS FOR MATERIALS AND CONSTRUCTION. THIS WORK SHALL INCLUDE THE INSTALLATION OF ALUMINIZED STEEL TYPE 2 CORRUGATED PIPE USING THE OPEN CUT METHOD. THE ALUMINIZED STEEL TYPE 2 COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M 274 OR ATSM A929. THE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M 36 OR ASTM A760 AND SHALL HAVE CORRUGATIONS OF 2-2/3 INCHES BY 1/2 INCHES WITH A GAGE THICKNESS STRUCTURALLY DESIGNED FOR COOPER E-80 LOADING. COUPLING BANDS SHALL BE MADE OF THE SAME BASE METAL HAVING A MINIMUM GAGE OF ONE GAGE LESS THAN THE PIPE GAGE AND SHALL BE TWO (2) FEET WIDE. THE ENDS OF THE PIPE SHALL BE ROLLED WITH ANNUALR CORRUGATIONS FOR PROPER INDEXING. THE CONTRACTOR SHALL INSTALL AT LEAST THREE GALVANIZED OR STAINLESS STEEL FASTENERS PER COUPLING BAND. UNLESS OTHERWISE SUPERSEDED, PRESCRIBED OR INDICATED BY THE NORFOLK SOUTHERN STANDARD SPECIFICATIONS FOR MATERIALS AND CONSTRUCTION OR HEREIN THIS NOTE, THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATION, ITEM 611 SHALL APPLY, IN PARTICULAR BUT NOT LIMITED TO: SUBMITTALS WHICH INCLUDES: SHOP DRAWINGS (INCLUDING SEALED STRUCTURAL DESIGN CALCULATIONS TO INCLUDE BUT NOT LIMITED TO PIPE GAGE, EXTERNAL RIBS / STRUTS, TRENCH, BACKFILL, ETC.), INSTALLATION PLAN, CONSTRUCTION INSPECTION FORMS, AND PERFORMANCE REPORTS; AS WELL AS PERFORMANCE INSPECTIONS, CONDUIT EVALUATION, AND METHOD OF MEASUREMENT. THIS WORK SHALL ALSO INCLUDE THE REMOVAL OF SAID CONDUIT IN ACCORDANCE WITH ODOT ITEM 202 PIPE REMOVED FOR REUSE OR STORAGE. THE CONTRACTOR SHALL STORE THE REMOVED PIPE AT AN ON-SITE LOCATION AS DIRECTED BY THE ENGINEER FOR ODOT

TO PICKED UP AND HAULED OFF-SITE TO AN ODOT FACILITY TO A LOCATION TO BE DETERMINED. NO ADDITIONAL PAYMENT SHALL BE MADE FOR REMOVAL AND STORAGE OF THE PIPE. ALL COSTS ASSOCIATED WITH THE WORK PRESCRIBED IN THIS NOTE SHALL BE INCLUDED IN THE UNIT BID PRICE PER FOOT FOR ITEM 611 - 36" CONDUIT, TYPE B, 707.19 AS PER PLAN.

RAIL ITEM, MISC.: TRACK REMOVED

THE CONTRACTOR SHALL REMOVE THE TRACK AT THE DIRECTION OF THE NS SUPERVISOR. THE CONTRACTOR WILL RETAIN OWNERSHIP OF THE TRACK AND IS RESPONSIBLE FOR ITS DISPOSAL. THE CONTRACTOR'S REMOVAL RESPONSIBILITIES ARE 1) REMOVAL OF EXISTING TRACK 1 & 2 ONCE REALIGNMENT ONTO THE SHOOFLY HAS OCCURED AND 2) REMOVAL OF TEMPORARY TRACKS AFTER REALIGNMENT TO THE PERMANENT ALIGNMENT OCCURS.

RAIL ITEM, MISC.: TRACK LINING AND GRADING

TRACK LINING AND GRADING SHALL BE IN CONFORMANCE WITH NS STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION. WORK SHALL BE PERFORMED BY NSRR FORCES. ESTIMATED QUANTITY GIVEN FOR INFORMATION ONLY.

RAIL ITEM, MISC.: TIE AND RAIL

ALL RAILWAY TIES WILL BE IN ACCORDANCE WITH THE NORFOLK SOUTHERN RAILWAY QUALITY ASSURANCE SPECIFICATIONS FOR TIES AND TIMBERS. WORK SHALL BE PERFORMED BY NSRR FORCES. ESTIMATED QUANTITY GIVEN FOR INFORMATION ONLY.

RAIL ITEM, MISC.: CUT AND THROW

TRACK CUT AND THROW SHALL BE IN CONFORMANCE WITH NS STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION. WORK SHALL BE PERFORMED BY NSRR FORCES. ESTIMATED QUANTITY GIVEN FOR INFORMATION ONLY.

ITEM 203 - EMBANKMENT, AS PER PLAN

EMBANKMENT SHALL BE IN CONFORMANCE WITH NS STANDARD SPECIFICATIONS FOR DESIGN AND CONSTRUCTION. IF BENCHING OF SLOPES CARRYING RAILROAD LIVE LOAD IS REQUIRED, THE HEIGHT SHALL NOT EXCEED 2'-0". FILL QUANTITIES DUE TO BENCHING ARE NOT INCLUDED IN THE VALUES TABULATED HEREIN. IF BENCHING IS REQUIRED, THE QUANTITY AND COST OF PLACING

FILL IN THE BENCHED EXCAVATION IS TO BE CONSIDERED INCIDENTAL TO THIS ITEM. ITEM 204 SUBGRADE COMPACTION, APP AND ITEM 204 - PROOF ROLLING, APP ARE CONSIDERED INCIDENTAL TO THIS ITEM.

PLACEMENT OF GRANULAR FILL BETWEEN THE TIED SHORING WALLS AT THE TEMPORARY BRIDGE ARE INCLUDED FOR PAYMENT WITH THE TEMPORARY BRIDGE QUANTITIES.

STAGED CONSTRUCTION

THESE PLANS SHOW STAGED TRACK WORK/CONSTRUCTION. CONTRACTOR SHALL INTEGRATE, STAGE, AND COORDINATE ALL WORK WITH ADJACENT BRIDGE AND ROADWAY PROJECTS AS NECESSARY. SEE THE BRIDGE PLANS FOR PHASED CONSTRUCTION NOTES RELATED TO THE RAILROAD STRUCTURES AND THE ROADWAY'S MAINTENANCE OF TRAFFIC PLANS FOR PHASING NOTES RELATED TO THE CONSTRUCTION OF US 36 AND SR 37. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING THE CONSTRUCTION FROM THE TOP OF SUB BALLAST DOWN PRIOR TO NS RAILROAD FORCES SCHEDULING THE TRACK WORK.

NSRR RAILROAD FORCES

NSRR WILL PROVIDE AND INSTALL ALL MATERIALS ABOVE SUBBALLAST FOR BOTH TRACKS IN PHASE 1 AND PHASE 2. THE NS TEMPORARY TRACKWORK MATERIALS FROM PHASE 1 SHALL BECOME THE PROPERTY OF THE CITY OF DELAWARE AFTER SHIFTING TRAIN TRAFFIC TO THE FINAL ALIGNMENT POSITION IN PHASE 2.

THE ESTIMATED QUANTITIES FOR NORFOLK SOUTHERN FORCES ARE PROVIDED FOR INFORMATION ONLY.

ITEM SPECIAL - RAIL ITEM, MISC.: BALLAST OVER BRIDGE WATERPROOFING

THE CONTRACTOR SHALL SUPPLY AND PLACE AN INITIAL 6 INCHES OF BALLAST ATOP THE COMPLETED BRIDGE WATERPROOFING AT THE DIRECTION OF THE NS SUPERVISOR. THE BALLAST SHALL BE FROM A NS PREFERRED VENDOR (A LIST OF VENDORS IS AVAILABLE UPON REQUEST FROM NS). PAYMENT FOR THIS ITEM FOR THE AMOUNT OF BALLAST SUPPLIED AND PLACED ATOP THE BRIDGE PER NS REQUIREMENTS.

ITEM SPECIAL - RAIL ITEM, MISC.: BALLAST OVER BRIDGE WATERPROOFING

107 CY

US 36 AND SR 37 RAILROAD GENERAL SUMMARY

SHEET NUMBER										ITEM	TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
475	476	482	491 - 493	518	521 - 523	543	546 - 550	600						
							2			202	2	EACH	HEADWALL REMOVED	
							850			202	850	FT	PIPE REMOVED, 24" AND UNDER	
							395			202	395	FT	PIPE REMOVED, OVER 24"	
							2			202	2	EACH	CATCH BASIN REMOVED	
							1			202	1	EACH	MANHOLE REMOVED	
									1265	203	71211	CY	EXCAVATION, AS PER PLAN	476
									54937	203	58722	CY	EMBANKMENT, AS PER PLAN	476
				4	4					601	8	CY	ROCK CHANNEL PROTECTION, TYPE C WITHOUT FILTER	
				2	2					602	4	CY	CONCRETE MASONRY	
			850							611	850	FT	8" CONDUIT, TYPE E, PERFORATED	
				100	295					611	395	FT	36" CONDUIT, TYPE B, 707.19, AS PER PLAN	476
				1	1					611	2	EACH	CATCH BASIN, NO. 4A	
					1					611	1	EACH	MANHOLE, NO. 3	
4										659	4	EACH	SOIL ANALYSIS TEST	
4960										659	4960	CY	TOPSOIL	
44634										659	44634	SY	SEEDING AND MULCHING	
2231										659	2231	SY	REPAIR SEEDING AND MULCHING	
2231										659	2231	SY	INTER-SEEDING	
6										659	6.22	TON	COMMERCIAL FERTILIZER	
9										659	9.22	ACRES	LIME	
367										659	367	MGAL	WATER	
201										659	201	MSF	MOWING	
	520									SPECIAL	520	DAY	RAIL ITEM, MISC.: RAILROAD FLAGGING	476
										SPECIAL	LUMP		RAIL ITEM, MISC.: SURVEY AND LAYOUT FOR TRACKWORK ALIGNMENT AND PROFILE	475
	107									SPECIAL	107	CY	RAIL ITEM, MISC.: BALLAST OVER BRIDGE WATERPROOFING	476
						3179		2358		SPECIAL	5537	CY	RAIL ITEM, MISC.: SUB-BALLAST - 12" DEPTH	475
		9030								SPECIAL	9030	LF	RAIL ITEM, MISC.: TRACK REMOVED	476
													NORFOLK SOUTHERN RAILROAD FORCES (FOR INFORMATION ONLY)	
						5793		5615		SPECIAL	11408	CY	RAIL ITEM, MISC.: BALLAST	476
										SPECIAL	5370	LF	RAIL ITEM, MISC.: TRACK LINING AND GRADING	476
										SPECIAL	9030	LF	RAIL ITEM, MISC.: TIE AND RAIL	476
										SPECIAL	8	EACH	RAIL ITEM, MISC.: TRACK CUT AND THROW	476

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TRACK GENERAL NOTES

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