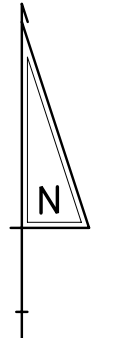


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CONTRACT T200911301
STATION 687 + 72.79**

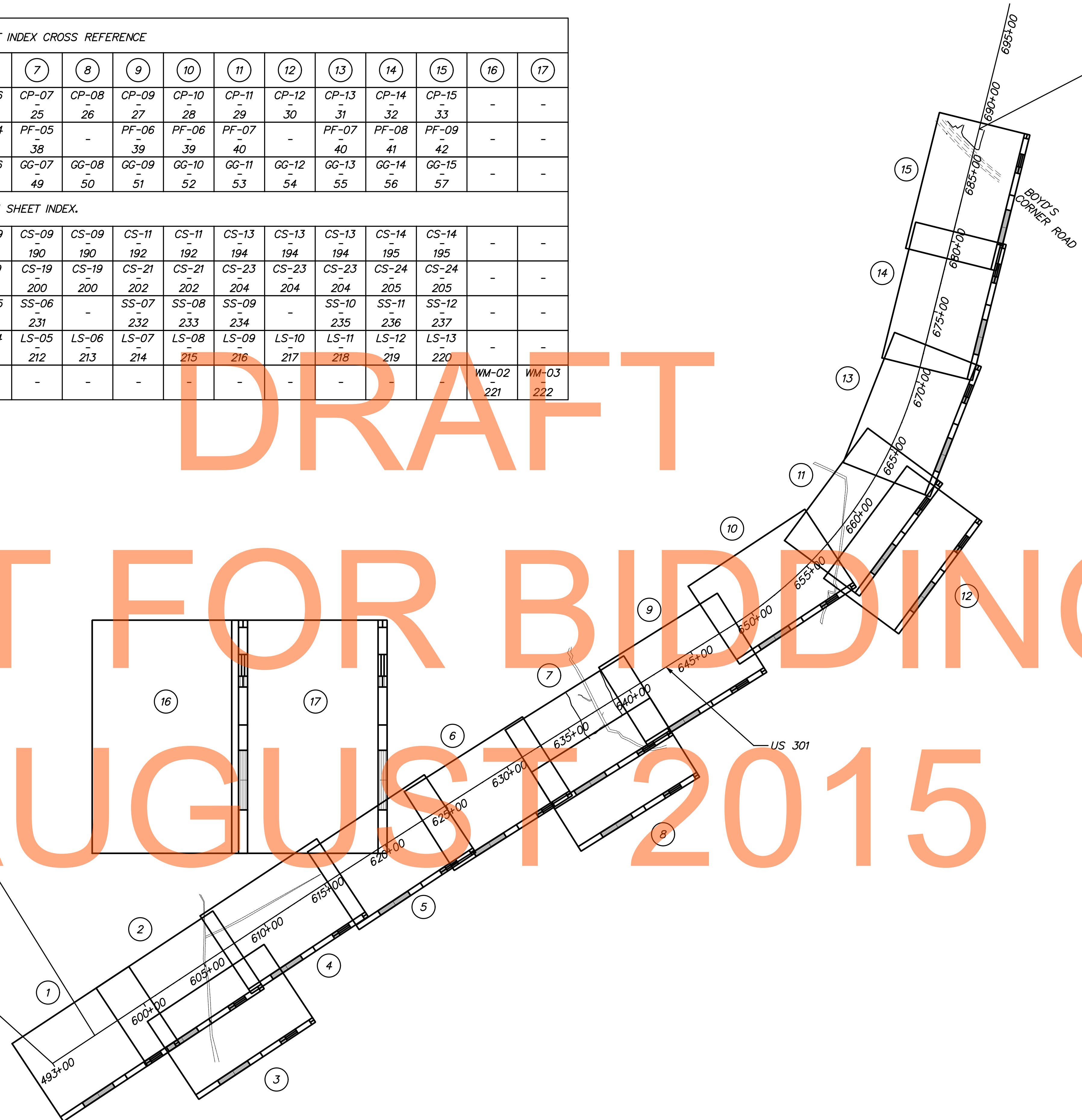


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DRAFT
NOT FOR BIDDING
AUGUST 2015

POE STA 496+50.00 US 301 (CONTRACT T200911303) BK =
POB STA 595+96.65 US 301 (CONTRACT T200911303) AH

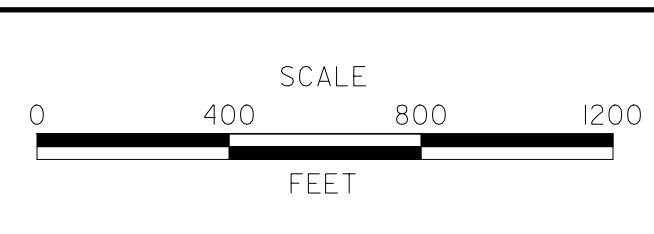
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CONTRACT T200911301
STATION 493 + 00.00**



\$FILES \$DATES



ADDENDUMS / REVISIONS



**US 301,
NORFOLK SOUTHERN RR TO SR 896**

CONTRACT T200911301	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: WJD
	CHECKED BY: MAA

PLAN SHEET INDEX

IS-01
SHEET NO. 2
TOTAL SHTS. 240

EXISTING SYMBOLS

DRAINAGE	
	DITCH OR STREAM CENTERLINE
	DIRECTIONAL STREAM FLOW ARROW
	DRAINAGE CATCH BASIN
	DRAINAGE JUNCTION BOX
	DRAINAGE MANHOLE
	DRAINAGE PIPE AND FLOW ARROW
	DRAINAGE PIPE HEADWALL
	RIPRAP - AREA FEATURE
	RIPRAP - LINEAR FEATURE

UTILITY	
	SOIL BORING LOCATION
	UTILITY TEST HOLE LOCATION
	CABLE TV DISTRIBUTION BOX
	ELECTRIC MANHOLE
	ELECTRIC METER
	ELECTRIC TRANSFORMER
	POLE MOUNTED LUMINAIRE
	GAS MANHOLE
	GAS METER
	GAS VALVE
	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
	SANITARY SEWER MANHOLE
	SANITARY SEWER VALVE
	SANITARY SEWER VENT OR CLEANOUT
	SEPTIC DRAIN FIELD
	TELEPHONE BOOTH
	TELEPHONE MANHOLE
	TELEPHONE TEST POINT
	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
	TRAFFIC - SIGNAL POLE AND BASE
	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
	WATER - FIRE HYDRANT
	WATER METER
	WATER VALVE
	WELL HEAD

MANMADE ROADSIDE FEATURES	
	CURB
	CURB AND GUTTER
	FENCE - CHAINLINK OR STRANDED
	FENCE - STOCKADE OR SPLIT RAIL
	FLAG POLE
	GUARDRAIL - STEEL BEAM
	GUARDRAIL - WIRE ROPE
	LAMP AND POST - RESIDENTIAL
	MAILBOX
	PARKING METER AND POST
	PAVEMENT - FLEXIBLE
	PAVEMENT - RIGID
	PILE - BRIDGE
	PILLAR OR MISCELLANEOUS POST
	TRAFFIC SIGN AND POST
	WALL - BRICK OR BLOCK
	WALL - STONE

NATURAL ROADSIDE FEATURES	
	GRASS LAWN
	HEDGEROW OR THICKET
	MARSH BOUNDARY LINE
	TREE - CONIFEROUS
	TREE - DECIDUOUS
	TREE STUMP
	SHRUBBERY
	DELINEATED WETLAND BOUNDARY LINE
	WOODS LINE BOUNDARY

SURVEY CONTROL & MONUMENTATION	
	SURVEY BENCHMARK LOCATION
	SURVEY TIE POINT LOCATION
	SURVEY TRAVERSE POINT
	POINT OF CURVATURE OR TANGENCY
	POINT OF INTERSECTING TANGENTS
	PROPERTY MARKER - CONCRETE MON.
	PROPERTY MARKER - IRON PIPE

UTILITY COMPANY FACILITIES	
	VERIZON COMMUNICATION
	UNKNOWN
	MCI COMMUNICATION

MISCELLANEOUS SYMBOLS	
	ORDINARY HIGH WATER
	ORDINARY HIGH WATER/WETLAND

PROPOSED SYMBOLS

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
	BIOFILTRATION SWALE
	BUTT JOINT
	CONSTRUCTION BASELINE
	CURB, TYPE 1 & TYPE 3
	CURB, TYPE 2
	CURB & GUTTER, TYPE 1
	CURB & GUTTER, TYPE 2
	CURB & GUTTER, TYPE 3
	CURB & GUTTER, TYPE 4
	CLEAR ZONE
	DRAINAGE INLET
	DITCH
	FENCE - METAL
	FENCE - WOOD
	FLARED END SECTION
	GUARDRAIL, TYPES 1 & 3
	GUARDRAIL, TYPE 2
	GUARDRAIL END TREATMENT - PARALLEL
	GUARDRAIL END TREATMENT - PARABOLIC
	HORIZONTAL CLEARANCE
	JUNCTION BOX - DRAINAGE
	LIMIT OF CONSTRUCTION
	MANHOLE
	PAVEMENT PATCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK @ 4"
	P.C.C. SIDEWALK @ 6"
	UNDERDRAIN
	UNDERDRAIN OUTLET

EROSION & SEDIMENT CONTROL	
	DEWATERING BASIN
	EROSION CONTROL BLANKET
	EARTH DIKE
	INLET SEDIMENT CONTROL
	PERIMETER DIKE/SWALE
	PORTABLE SEDIMENT TANK
	REINFORCED SILT FENCE
	RESOURCE PROTECTION FENCE
	SANDBAG DIKE
	SANDBAG DIVERSION
	STONE CHECK DAM
	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE
	SUMP PIT, TYPE 1
	SUMP PIT, TYPE 2
	SEDIMENT TRAP
	SEDIMENT TRAP WITH INLET AS OUTLET
	SKIMMER DEWATERING DEVICE
	SEDIMENT TRAP PIPE OUTLET
	STILLING WELL
	TEMPORARY SWALE
	TEMPORARY SLOPE DRAIN

PAVEMENT SECTION(S)	
	P.C.C. PAVEMENT (SEE TYPICAL SECTIONS)
	HOT-MIX PAVEMENT (SEE TYPICAL SECTIONS)

RIGHT-OF-WAY SYMBOLS	
	PROPOSED RIGHT-OF-WAY MONUMENT
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING RIGHT-OF-WAY
	PROPOSED DENIAL OF ACCESS
	PROPOSED PERMANENT EASEMENT
	PROPOSED RIGHT-OF-WAY
	PROPOSED R/W & DENIAL OF ACCESS
	TEMPORARY CONSTRUCTION EASEMENT
	PROPOSED RIGHT-OF-WAY BASELINE
	HISTORIC RIGHT-OF-WAY BASELINE

TRAFFIC	
	ITMS CONDUIT
	SIGNAL CONDUIT
	CONDUIT JUNCTION WELL
	LUMINAIRE
	PAVEMENT MARKINGS
	PAVEMENT STRIPING
	TRAFFIC SIGN

MISCELLANEOUS SYMBOLS	
	REMOVAL OF EXISTING PAVEMENT
	PROPOSED ORDINARY HIGH WATER
	UNDERDRAIN OUTLET
	INFILTRATION TRENCH
	VEHICULAR ACCESS AREAS
	CONSTRUCTION SAFETY FENCE
	INFILTRATION TRENCH
	STORMWATER POND ACCESS ROAD

UTILITY COMPANY FACILITIES	
	ARTESIAN WATER COMPANY

CONSTRUCTION PHASING SYMBOLS	
	BARRICADE, TYPE 3
	CONCRETE SAFETY BARRIER - PORTABLE
	CONSTRUCTION WARNING SIGN LOCATION
	CONSTRUCTION WARNING SIGN
	CRASH CUSHION ARRAY
	DRUM - TRAFFIC CONTROL
	PHASING TRAFFIC FLOW ARROW

LANDSCAPING	
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

IDENTIFIERS	
	ADJUST BY CONTRACTOR
	ADJUST BY OTHERS
	CONCRETE SAFETY BARRIER
	CURB OR CURB & GUTTER
	CONVERT TO JUNCTION BOX
	CONVERT TO DRAINAGE MANHOLE
	CURB OPENING
	CURB RAMP / TYPE
	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
	DRAINAGE INLET
	DO NOT DISTURB
	FLARED END SECTION
	FILTRATION STRUCTURE
	GUARDRAIL
	JUNCTION BOX
	LANDSCAPE PLANTINGS
	MANHOLE
	MONUMENT - RIGHT-OF-WAY
	PIPE
	RELOCATE BY CONTRACTOR
	RELOCATE BY OTHERS
	REMOVE BY CONTRACTOR
	REMOVE BY OTHERS
	SEDIMENT TRAP
	SILT FENCE
	UNDERDRAIN

\$FILES \$DATES

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

EROSION POTENTIAL FOR THIS PROJECT	CONTRACTOR ESC SUPERVISOR REQUIREMENT
() INSIGNIFICANT	NONE
() MINOR	CONTRACTOR TRAINING PROGRAM, AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
() MEDIUM	CONTRACTOR TRAINING PROGRAM, AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MAJOR	CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 6.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.

3. ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR, INCLUDE:

()	NONE
(X)	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	ALL PLAN SHEETS, IN PDF FORMAT.
(X)	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
(X)	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
(X)	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

4. PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR, INCLUDE:

(X)	CROSS SECTIONS
(X)	RIGHT-OF-WAY PLANS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)

5. AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 743000.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR SHALL BE PAID FOR UNDER ITEM 743031.

6. THE DISTURBED AREA FOR THIS PROJECT IS 205.57 ACRES.

7. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS ARE VALID FOR A THREE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE THREE YEARS, THE CONTRACTOR WILL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS. THE STORMWATER ENGINEER WILL REVIEW THE CURRENT SEDIMENT AND STORMWATER MANAGEMENT PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

PROJECT NOTES

SECTION 100

1. ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

2. PRIOR TO PERFORMING ANY WORK ON THE PROJECT, THE CONTRACTOR AND THE ENGINEER'S REPRESENTATIVE SHALL JOINTLY PERFORM SUFFICIENT FIELD SURVEYS TO VERIFY THE ADVERTISED CROSS SECTIONS AND ELECTRONIC PROJECT FILES AND AGREE ON THE RESULTS TO ESTABLISH INITIAL GROUND ELEVATIONS THAT SHALL BE USED IN CALCULATING QUANTITIES. ANY DISCREPANCIES FOUND SHALL BE AGREED UPON PRIOR TO BEGINNING EARTHWORK OPERATIONS. ALL COSTS SHALL BE INCLUDED IN ITEM 763501 - CONSTRUCTION ENGINEERING.

3. PRIOR TO PERFORMING ANY WORK IN AREAS WHERE ADVANCE GRADING HAS BEEN PERFORMED UNDER OTHER CONTRACTS, THE CONTRACTOR AND THE ENGINEER'S REPRESENTATIVE SHALL JOINTLY PERFORM FIELD SURVEYS AND AGREE ON THE RESULTS TO ESTABLISH INITIAL GROUND ELEVATIONS THAT SHALL BE USED IN CALCULATING QUANTITIES. ALL COSTS SHALL BE INCLUDED IN ITEM 763501 - CONSTRUCTION ENGINEERING.

4. DELETE IN ITS ENTIRETY STANDARD SPECIFICATION SUBSECTION 104.10 "RIGHTS IN AND USE OF MATERIALS FOUND ON THE WORK" AND REPLACE WITH THE FOLLOWING: THE CONTRACTOR CAN EXPECT TO ENCOUNTER HORIZONTAL AND VERTICAL DEPOSITS OF MATERIAL IN THE ON-SITE BORROW SITES, ROADWAY EXCAVATIONS, OR EXCAVATION FROM OTHER WORK ITEMS THAT WILL MEET THE REQUIREMENTS FOR BORROW TYPES A, C, D, F AND/OR FURNISHING BORROW, TYPE C AS WELL AS UNSUITABLE MATERIALS. ALL REFERENCES TO THESE VARIOUS BORROW TYPES IN THE PLANS AND SPECIAL PROVISIONS SHALL BE INTERPRETED TO MEAN MATERIALS OBTAINED FROM ON-SITE EXCAVATIONS MEETING THE GRADATION REQUIREMENTS OF THE BORROW TYPE STATED IN THE PLANS OR SPECIAL PROVISIONS. THE CONTRACTOR SHALL PERFORM THE EXCAVATIONS IN A METHOD APPROVED BY THE ENGINEER SO THAT THESE DEPOSITS OF MATERIAL ARE MADE AVAILABLE TO MEET THE PROJECT NEEDS. EXCESSIVE OR INSUFFICIENT MOISTURE CONTENT SHALL NOT BE CRITERIA FOR CLASSIFYING MATERIAL AS UNSUITABLE FOR USE. PAYMENT FOR ALL OF THESE BORROW TYPES INCORPORATED INTO THE PROJECT WILL BE MADE USING THE BID ITEM UNDER WHICH THE MATERIAL WAS ORIGINALLY EXCAVATED ON SITE. UNLESS APPROVED OR SPECIFIED OTHERWISE, BORROW, TYPE B IS INTENDED TO BE FURNISHED FROM A SOURCE OUTSIDE OF THE PROJECT LIMITS AND PAID FOR UNDER ITEM 209002. PLACEMENT, HAULING, STORING, AND COMPACTING OF ALL BORROW MATERIAL EXCAVATED ON SITE TO BE USED AS THE STATED BORROW TYPES A, C, D, F, AND/OR FURNISHING BORROW, TYPE C AS NOTED IN THE PLANS OR SPECIAL PROVISIONS IS INCIDENTAL TO THE ITEM UNDER WHICH IT WAS EXCAVATED (FOR EXAMPLE, ITEMS 202000, 207000, 208000, OR OTHERS AS APPLICABLE). THE MATERIALS SHALL BE PLACED IN ACCORDANCE WITH THEIR INTENDED USE BUT NO PAYMENT WILL BE MADE UNDER THE ITEMS FOR WHICH THE EXCAVATED MATERIALS ARE USED. THE CONTRACTOR IS RESPONSIBLE FOR MANAGING THE ON-SITE EXCAVATIONS TO INCLUDE LOCATING THE TYPES OF BORROW REQUIRED TO MEET THE PLAN NEEDS, STOCKPILING, HAULING, WETTING OR DRYING THE MATERIAL TO MEET STANDARD SPECIFICATION 202.05(F), AND MULTIPLE HANDLING IF NEEDED, WITH ALL COSTS INCIDENTAL TO THE ITEM UNDER WHICH THE MATERIAL WAS INITIALLY EXCAVATED. ALL REQUIRED EROSION AND SEDIMENT CONTROL WILL BE PAID SEPARATELY USING THE APPLICABLE BID ITEMS.

SECTION 200

5. UNLESS OTHERWISE INDICATED IN THE PLANS, UNDER ITEM 201000-CLEARING AND GRUBBING, ALL VEGETATION, TREES, STUMPS, ROOTMAT, ETC. SHALL BE REMOVED IN THEIR ENTIRETY WITHIN THE LIMITS OF CONSTRUCTION REGARDLESS OF THE EMBANKMENT HEIGHT EXCEPT SUCH OBJECTS AS ARE DESIGNATED TO REMAIN OR ARE TO BE REMOVED IN ACCORDANCE WITH OTHER SECTIONS OF THE CONTRACT DOCUMENTS. WORK UNDER ITEM 201000 IS TO BE PERFORMED IN ITS ENTIRETY EITHER BY THE PRIME CONTRACTOR OR AN APPROVED SUB CONTRACTOR. CUTTING OF FIREWOOD BY PRIVATE CITIZENS OR OTHER PARTIES SHALL NOT BE PERMITTED.

6. RIGHT-OF-WAY FENCING IS TO BE INSTALLED ALONG THE DENIAL OF ACCESS THROUGH THE PROJECT LIMITS AS SHOWN ON THE PLANS, CLEARING OUTSIDE OF THE LIMITS OF CONSTRUCTION LINE FOR INSTALLATION OF THE RIGHT-OF-WAY FENCE, UTILITY RELOCATIONS DESCRIBED IN THE UTILITY STATEMENT, OR OTHER NECESSARY CONSTRUCTION SHALL BE KEPT TO A MINIMUM AND SHALL BE INCLUDED IN ITEM 201000 - CLEARING AND GRUBBING. THERE SHALL BE NO GRUBBING OUTSIDE THE LIMITS OF CONSTRUCTION.

7. APPROVED COVERS SHALL BE INSTALLED OVER ALL LOADED TRUCKS OR TRAILERS HAULING BORROW, EXCAVATED MATERIALS, AGGREGATES, ETC. TO OR FROM THE PROJECT SITE OVER STATE MAINTAINED ROADS. THE COVERS SHALL BE INSTALLED TO PREVENT MATERIAL FROM LEAVING THE TRUCKS OR TRAILERS. THE MATERIAL SHALL BE FULLY COVERED AND THE COVERS TIED ON THE REAR AND BOTH SIDES. ANY MATERIALS DELIVERED, TRANSPORTED, OR REMOVED IN UNCOVERED TRUCKS OR TRAILERS WILL BE INCORPORATED INTO THE PROJECT, OR REMOVED FROM THE SITE, WITH NO PAYMENT TO THE CONTRACTOR FOR FURNISHING, REMOVING, OR PLACING THE MATERIALS.

8. WHEN PERFORMING ANY EXCAVATION OR BACKFILLING OPERATION, THE CONTRACTOR SHALL PROVIDE DEWATERING MEASURES AT ALL TIMES TO KEEP THE GROUNDWATER LEVEL AT LEAST ONE FOOT BELOW THE EXCAVATION ELEVATION. THE CONTRACTOR SHALL ALSO PROVIDE NECESSARY DEWATERING TO STABILIZE EXCAVATED SLOPES DURING CONSTRUCTION AND UNTIL THE SLOPES ARE STABILIZED AS DETERMINED BY THE ENGINEER. ALL COSTS SHALL BE INCIDENTAL TO THE APPLICABLE EXCAVATION OR BACKFILLING ITEM. DEWATERING OPERATIONS SHALL BE IN CONFORMANCE WITH SECTION 111 DELDOT'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

9. AS NOTED IN THE CONTRACT DOCUMENTS AND DIRECTED BY THE ENGINEER, MATERIALS ARE TO BE STOCKPILED FOR LATER USE IN THE PROJECT. THE TOPSOIL FROM THESE STOCKPILE AREAS SHALL BE REMOVED IN ITS ENTIRETY AND STOCKPILED FOR REPLACEMENT IN THE AREA WHERE IT WAS EXCAVATED. THE EXCAVATION AND STOCKPILING OF THE TOPSOIL SHALL BE MEASURED FOR PAYMENT UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT. THE TOPSOIL SHALL BE REPLACED IN REASONABLY CLOSE CONFORMITY TO THE ORIGINAL LINES, GRADES AND ELEVATIONS AS DIRECTED BY THE ENGINEER. ALL COSTS ASSOCIATED WITH REPLACING THE FULL DEPTH OF THE TOPSOIL REMOVED SHALL BE PAID UNDER ITEM 733002-TOPSOILING, 6". THE AREA OF TOPSOIL REPLACED SHALL ONLY BE MEASURED ONCE FOR PAYMENT UNDER ITEM 733002 TOPSOILING, 6" REGARDLESS OF THE FULL DEPTH OF TOPSOIL PLACED. SEEDING OF THE REPLACED TOPSOIL SHALL BE PERFORMED UNDER THE APPLICABLE BID ITEMS.

10. DELETE THE FIRST SENTENCE OF STANDARD SPECIFICATION SUBSECTION 202.03 (C) AND REPLACE WITH THE FOLLOWING: "ALL TOPSOIL, IF PRESENT, SHALL BE REMOVED IN ITS ENTIRETY IN BOTH CUT AND FILL SECTIONS, REGARDLESS OF EMBANKMENT HEIGHT."

11. FOR ESTIMATING PAYMENT FOR ALL EARTHWORK ITEMS, TWO-THIRDS OF THE FACTORY RATED CAPACITY OF THE EARTHWORK MOVING EQUIPMENT SHALL BE USED. FOR TEN-WHEEL DUMP TRUCKS, TEN (10) CUBIC YARDS SHALL BE USED.

12. STORMWATER MANAGEMENT POND EXCAVATION:

A. CLEARING AND GRUBBING OF STORMWATER POND AREAS IS TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 201000.

B. ALL EXCAVATION AND EMBANKMENT REQUIRED FOR CONSTRUCTION OF STORMWATER PONDS WILL BE PERFORMED, MEASURED AND PAID FOR UNDER ITEM 202000, EXCAVATION AND EMBANKMENT. THE WORK WILL INCLUDE MEASUREMENT FOR:

a. GENERAL POND EXCAVATION TO THE LINES AND GRADES SHOWN ON THE PLANS, INCLUDING THE INITIAL OVEREXCAVATION FOR USE OF THE SWM FACILITY AS A SEDIMENT BASIN IF INDICATED ON THE PLANS.

b. EXCAVATION FOR FOREBAYS, CUT-OFF TRENCHES, AND / OR CORE TRENCHES AS SHOWN ON THE PLANS.

C. EXCAVATION BELOW THE DESIGNED POND FINISHED GRADE OR SUBGRADE ELEVATION FOR RIP-RAP PLACEMENT AND OUTLET STRUCTURE FOUNDATIONS WILL BE INCIDENTAL TO THOSE RESPECTIVE PAY ITEMS.

PROJECT NOTES (CONT.)

SECTION 200 (CONT.)

D. INITIAL EXCAVATION OF SWM PONDS THAT FUNCTION AS INFILTRATION BASINS SHALL ONLY BE COMPLETED TO TWO (2) FEET ABOVE THE PERMANENT BOTTOM OF THE INFILTRATION BASIN. AFTER ALL AREAS CONTRIBUTING DRAINAGE TO THE INFILTRATION BASIN HAVE BEEN STABILIZED AS APPROVED BY THE ENGINEER, EXCAVATION TO THE PERMANENT BOTTOM ELEVATION OF THE INFILTRATION BASIN SHALL BE PERFORMED.

E. EXCEPT AS NEEDED FOR CONSTRUCTION OF DAM FOUNDATIONS, CUTOFF TRENCHES, AND OUTLET STRUCTURES, EXCAVATED SUBGRADES WITHIN THE SWM PONDS SHALL NOT BE TEST ROLLED PER SUBSECTION 202.02 OR COMPACTED PER SUBSECTION 202.06.A.

F. ALL REQUIREMENTS OF STANDARD SPECIFICATION SECTION 271 FOR CONSTRUCTION OF THE SWM FACILITY SHALL APPLY. IF THERE ARE CONFLICTS BETWEEN THE REQUIREMENTS IN STANDARD SPECIFICATION SECTION 271 AND STANDARD SPECIFICATION SECTION 202, THEN THE MORE STRINGENT REQUIREMENT SHALL BE FOLLOWED.

13. SEDIMENT BASIN CONSTRUCTION AND MAINTENANCE :

A. CLEARING AND GRUBBING OF SEDIMENT BASIN POND AREAS IS TO BE INCLUDED IN THE LUMP SUM PRICE FOR ITEM 201000.

B. ALL EXCAVATION AND EMBANKMENT REQUIRED FOR CONSTRUCTION OF SEDIMENT BASINS WILL BE PERFORMED, MEASURED AND PAID FOR UNDER ITEM 202000, EXCAVATION AND EMBANKMENT.

C. REMOVAL OF SEDIMENT FROM THE SEDIMENT BASIN SHALL BE PERFORMED WHEN THE CLEANOUT ELEVATION IS REACHED AS NOTED ON THE PLANS.

D. SEDIMENT REMOVAL FROM THE SEDIMENT BASIN SHALL BE MEASURED FOR PAYMENT UNDER ITEM 202000. ONLY REMOVAL OF SEDIMENT FROM A SEDIMENT BASIN SHALL BE MEASURED FOR PAYMENT UNDER ITEM 202000.

E. REMOVAL OF SEDIMENT FROM ALL OTHER EROSION AND SEDIMENT CONTROL DEVICES AND REMOVAL OF SEDIMENT THAT HAS BYPASSED OR OTHERWISE NOT BEEN TRAPPED BY ANY SEDIMENT CONTROL DEVICE SHALL BE INCLUDED IN THE PAYMENT FOR THE SEDIMENT CONTROL ITEM PER SECTION 900.

SECTION 300

14. A. THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM 302007

- GRADED AGGREGATE BASE COURSE, TYPE 'B':
- a. CRUSHED STONE (PER STANDARD SPECIFICATION 821)
- b. CRUSHED CONCRETE (PER STANDARD SPECIFICATION 821)
- c. HOT-MIX MILLINGS (PER SPECIAL PROVISION 302514 MILLED HOT-MIX BASE COURSE)

THE CONTRACTOR WILL NOT BE ALLOWED TO MIX DIFFERENT MATERIALS (OR SIMILAR MATERIALS FROM DIFFERENT SOURCES) TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

ALL OF THE ABOVE LISTED MATERIALS ARE PERMITTED FOR USE ON THE JOB, PROVIDED THEY ARE SEPARATED INTO APPROVED AREAS. EACH AREA OF BASE COURSE MUST BE CONSTRUCTED USING MATERIALS FROM A SINGULAR SOURCE, FULL DEPTH, IN ORDER THAT PROPER TESTING MAY BE ACCOMPLISHED. THE CONTRACTOR AND DELDOT'S PROJECT ENGINEER SHALL AGREE ON THE LIMITS OF EACH SOURCE OF MATERIAL PRIOR TO PLACEMENT.

B. THE QUANTITY USED FOR BASE OF EACH OF THE ABOVE LISTED MATERIALS WILL BE THE CONTRACTOR'S CHOICE, WITH THE TOTAL MEETING THE ADVERTISED QUANTITY OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

C. THE CONTRACTOR MAY ALSO ELECT TO RECYCLE MILLINGS FOR USE IN HOT-MIX AS PERMITTED BY THE STANDARD SPECIFICATIONS. THE CHOICE OF THE QUANTITY OF MILLINGS USED FOR THIS PURPOSE, OR FOR BASE COURSE, LIES WITH THE CONTRACTOR. ALL MILLING MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR.

D. HOT-MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:

- a. MATERIAL MADE AVAILABLE WHEN MILLED ON THIS CONTRACT UNDER ITEM 760502.
 - b. MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 202000.
 - c. MILLED MATERIAL FURNISHED ON THE JOB FROM THE CONTRACTOR'S YARD OR OTHER OUTSIDE SOURCE.
- ALL MILLED MATERIALS SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM 302514 - MILLED HOT-MIX BASE COURSE.

E. PAYMENT CLARIFICATION:

a. SHOULD THE CONTRACTOR ELECT TO MILL PORTIONS OF HOT-MIX SHOWN ON THE PLANS TO BE REMOVED UNDER ITEM 202000 - EXCAVATION AND EMBANKMENT THE COST OF MILLING THIS HOT-MIX WILL BE PAID AS ITEM 202000 - EXCAVATION AND EMBANKMENT. THE MILLINGS GENERATED MAY BE RECYCLED INTO HOT-MIX, UTILIZED FOR BASE COURSE, OR DISPOSED OF TO AN APPROVED SITE. HAULING COSTS FOR DISPOSAL AND/OR RECYCLING ARE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.

b. MILLINGS GENERATED UNDER ITEM 760502 - PAVEMENT MILLINGS, TAPERCUT MAY BE RECYCLED INTO HOT-MIX, UTILIZED FOR BASE COURSE OR DISPOSED OF BY THE CONTRACTOR TO AN APPROVED SITE. NO SEPARATE PAYMENT WILL BE MADE FOR TRANSPORTING MILLINGS ON SITE OR TO AN APPROVED DISPOSAL SITE.

c. SHOULD THE CONTRACTOR ELECT TO TEMPORARILY STOCKPILE MILLINGS ON THE JOB SITE FOR LATER USE, ALL COSTS FOR STOCKPILING AND SUBSEQUENT REHANDLING SHALL BE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.

d. MILLINGS USED FOR BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE. NO SEPARATE PAYMENT WILL BE MADE TO FURNISH MILLINGS FROM AN OUTSIDE SOURCE OR TRANSPORT MILLINGS WITHIN THE PROJECT LIMITS. MILLINGS USED FOR BASE COURSE WILL BE PAID IN PLACE AT THE UNIT BID PRICE FOR ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'.

e. ALL COSTS TO UTILIZE MILLINGS IN RECYCLED HOT-MIX WILL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE HOT-MIX ITEM USING THE RECYCLED MATERIAL.

f. SPECIAL PROVISION 302514 - MILLED HOT-MIX BASE COURSE IS PROVIDED TO SPECIFY THE MEANS OF LAY DOWN AND COMPACTION AS WELL AS THE MATERIAL REQUIREMENTS FOR MILLINGS USED AS BASE COURSE. ALL COSTS TO BRING THE MILLINGS INTO COMPLIANCE WITH THE REQUIREMENTS OF ITEM - 302514 MILLED HOT-MIX BASE COURSE ARE INCIDENTAL TO ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. NO PAYMENT WILL BE MADE FOR ITEM 302514 - MILLED HOT-MIX BASE COURSE. THE QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE.

\$DATES

\$FILES



ADDENDUMS / REVISIONS

NOT TO SCALE

US 301,
NORFOLK SOUTHERN RR TO SR 896

CONTRACT	BRIDGE NO.	
T200911301		
COUNTY	DESIGNED BY:	WJD
NEW CASTLE	CHECKED BY:	MAA

NOTES

PN-01

SHEET NO.

4

TOTAL SHTS.

240

PROJECT NOTES (CONT.)

SECTION 400

- 15. MEASURES FOR MAINTAINING PUBLIC TRAFFIC, SUCH AS TEMPORARY ROADS, DETOURS, RUN-AROUNDS, ETC. SHALL BE CONSTRUCTED UTILIZING THE APPLICABLE STANDARD BID ITEMS, NOT TEMPORARY ROADWAY MATERIAL (TRM). TRM IS INTENDED FOR MAINTAINING INGRESS AND EGRESS TO PROPERTIES OR BUSINESSES AS WELL AS MAINTENANCE OF EXISTING PUBLIC ROADWAYS. TRM SHALL ALSO BE USED TO MAINTAIN DETOUR ROADS, ETC. AFTER THEIR INITIAL CONSTRUCTION.
- 16. PRIOR TO PLACEMENT OF ANY SECTION OF PCC PAVEMENT, THE UNDERLYING BASE COURSES OF SOIL CEMENT AND PERMEABLE TREATED BASE SHALL BE COMPLETED TO THEIR FULL WIDTH (OUTSIDE OF SHOULDER TO OUTSIDE OF SHOULDER) AND THE UNDERDRAIN AND UNDERDRAIN OUTLETS INSTALLED FOR THE ENTIRE SECTION OF PAVING BEING CONSIDERED BY THE CONTRACTOR.
- 17. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO THAT ALL PERMEABLE TREATED BASE (PTB) PLACED DURING ANY ONE CONSTRUCTION SEASON IS COVERED WITH PCC OR HOT MIX PAVEMENT, AS APPLICABLE, BY THE END OF THE CONSTRUCTION SEASON. ANY PTB WHICH HAS NOT BEEN PAVED OVER AT THE END OF THE SEASON MUST BE ENTIRELY COVERED WITH POLYETHYLENE SHEETING, PROPERLY ANCHORED AND OVERLAPPED AT LEAST EIGHTEEN INCHES FOR THE WINTER AND UNTIL PAVING OPERATIONS RESUME. NO CONSTRUCTION TRAFFIC OF ANY KIND WILL BE PERMITTED TO TRAVERSE OVER PTB AT ANY TIME, EITHER UNCOVERED OR COVERED WITH POLYETHYLENE, EXCEPT FOR NECESSARY EQUIPMENT UTILIZED DURING PAVING OPERATIONS. THE COST OF FURNISHING, INSTALLING AND MAINTAINING THE POLYETHYLENE SHEETING SHALL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE PTB.
- 18. EXCEPT FOR NECESSARY EQUIPMENT UTILIZED DURING PAVING OPERATIONS, NO CONSTRUCTION TRAFFIC OF ANY KIND SHALL BE PERMITTED TO RUN ON THE SOIL CEMENT BASE COURSE.

SECTION 500

- 19. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTRUCT THE JOINTS ACCORDING TO THE STANDARD DETAILS AND THESE GENERAL NOTES.
 - A. TYPICAL TRANSVERSE JOINT SPACING IS 15'.
 - B. THE MAXIMUM SLAB WIDTH IS 14' UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER.
 - C. THE MINIMUM SLAB WIDTH IS 4'.
 - D. THE MINIMUM TRANSVERSE JOINT SPACING IS 12". THE MAXIMUM TRANSVERSE JOINT SPACING IS 17". THE SPACING ON CURVES SHALL BE MEASURED ALONG THE LONGEST CHORD. THE MAXIMUM AND MINIMUM SPACING FOR CURVES ON THE US 301 MAINLINE SHOULD BE CALCULATED FOR FUTURE LANE EXPANSION INTO THE MEDIAN WHERE APPLICABLE.
 - E. PAVEMENT CROSS SLOPES AND TRANSITION LENGTHS SHALL BE ADJUSTED AS NEEDED PER LOCATION AND TO MEET DESIGN CRITERIA.

SECTION 600

- 20. THE DEPARTMENT AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES AND DRAINAGE STRUCTURES TO BE USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION PRIOR TO THE START OF CONSTRUCTION. EXISTING PIPES AND DRAINAGE STRUCTURES DAMAGED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE. THE DEPARTMENT WILL VIDEO INSPECT NEW PIPE RUNS TO CONFIRM CONDITION PRIOR TO ACCEPTANCE. PIPE CLEANING PRIOR TO VIDEO INSPECTION AND MAINTENANCE OF TRAFFIC DURING THE VIDEO INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE PIPE ITEM THAT IS BEING VIDEO INSPECTED.
- 21. ITEM 602002-P.C.C. MASONRY, CLASS B SHALL BE USED TO CONSTRUCT MISCELLANEOUS TYPES OF STRUCTURES SUCH AS PADS, BOLLARDS, ENCASEMENTS, ETC. AS DIRECTED BY THE ENGINEER UNLESS THE WORK IS TO BE PAID OTHERWISE AS INDICATED IN THE CONTRACT DOCUMENTS. THESE MISCELLANEOUS TYPES OF STRUCTURES ARE ANTICIPATED TO INVOLVE LESS THAN FIVE CUBIC YARDS PER SITE. THE VOLUME MEASURED FOR PAYMENT SHALL BE THE VOLUME OF P.C.C. MASONRY, CLASS B ACTUALLY PLACED TO CONSTRUCT THE MISCELLANEOUS STRUCTURE WITHIN THE LIMITS APPROVED BY THE ENGINEER. ALL COSTS ASSOCIATED WITH FURNISHING ALL LABOR, EQUIPMENT, TOLLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK INCLUDING CONCRETE, REINFORCING STEEL, EXCAVATION, BACKFILL, BACKFILLING, ETC. SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 602002 - P.C.C. MASONRY, CLASS B.

SECTION 700

- 22. ALL UNDERDRAIN OUTLETS, CATCH BASINS, PIPES, CONDUITS, JUNCTION WELLS, ETC. IN GUARDRAIL AREAS OR NEAR OTHER CONSTRUCTION YET TO BE PERFORMED SHALL BE VISIBLY MARKED BY THE CONTRACTOR AT THE TIME OF INSTALLATION IN ORDER TO AVOID FUTURE DAMAGE DURING DRIVING OF THE GUARDRAIL POSTS OR PERFORMANCE OF OTHER CONSTRUCTION. THE LOCATION OF GUARDRAIL POSTS AND OTHER CONSTRUCTION SHALL BE STAKED IN THE FIELD PRIOR TO PLACING THESE ITEMS. THE LOCATION OF THESE ITEMS SHALL BE ADJUSTED TO AVOID CONFLICTS WITH THE GUARDRAIL OR OTHER CONSTRUCTION. ALTERATIONS TO THE GUARDRAIL POST SPACING WILL NOT BE ALLOWED. ANY WORK REQUIRED TO RELOCATE THESE ITEMS DUE TO CONFLICTS WITH GUARDRAIL OR OTHER CONSTRUCTION SHALL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER AND SHALL BE AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REMOVAL AND REPLACEMENT OF PAVEMENT.
- 23. DELDOT OR ITS REPRESENTATIVE SHALL FURNISH AND INSTALL RIGHT-OF-WAY MONUMENTS AFTER THE COMPLETION OF THE PROJECT. LOCATIONS OF RIGHT-OF-WAY MONUMENTS ARE PROVIDED ON THE PLANS FOR INFORMATION ONLY.
- 24. THE COST OF ANY FLOODLIGHTING NECESSARY DUE TO WORK BY THE CONTRACTOR ON ANY ITEM OCCURRING AFTER DARK SHALL BE INCIDENTAL TO THE BID PRICE OF THE ITEM BEING CONSTRUCTED AFTER DARK. DURING NIGHT WORK, ALL PERSONS WITHIN THE WORK ZONE SHALL HAVE SAFETY WEAR IN ACCORDANCE WITH THE DEMUTCD.
- 25. ITEM 727000 - RIGHT-OF-WAY FENCE SHALL BE INSTALLED BY HAND IN SENSITIVE AREAS. SENSITIVE AREAS INCLUDE WOODS, WETLANDS, STREAMS, CULTURAL RESOURCE AREAS AND OTHER AREAS AS SHOWN ON THE PLANS AND AS DETERMINED BY THE ENGINEER. THERE SHALL BE NO VEHICLE ACCESS AND GRUBBING FOR THE PURPOSES OF INSTALLING RIGHT-OF-WAY FENCE IN SENSITIVE AREAS. CLEARING OF VEGETATION FOR THE PURPOSE OF INSTALLING RIGHT-OF-WAY FENCE SHALL BE KEPT TO A MINIMUM IN SENSITIVE AREAS. IF REMOVAL OF VEGETATION CANNOT BE AVOIDED, THE VEGETATION SHALL BE CUT FLUSH WITH THE GROUND SURFACE (I.E. NO DISTURBANCE OF THE ROOT MAT). HAND-MIXED CONCRETE SHALL BE USED FOR CONCRETE FOOTINGS IN SENSITIVE AREAS. POST SPACING SHALL BE ADJUSTED AS APPROVED BY THE ENGINEER TO COMPLY WITH THE MINIMUM AND MAXIMUM CLEARANCE OF THE BOTTOM OF THE FABRIC. NO EXCAVATION OR BACKFILLING OF THE EXISTING GROUND SHALL BE CONDUCTED TO COMPLY WITH THE MINIMUM AND MAXIMUM CLEARANCE OF THE BOTTOM OF THE FABRIC OVER GROUND IN SENSITIVE AREAS. EXCAVATIONS FOR POSTS AND FOOTERS WITHIN SENSITIVE AREAS THAT WILL BE USED FOR BACKFILLING OF THE POSTS AND FOOTERS SHALL BE PLACED ON PLASTIC AND ANY EXCESS EXCAVATIONS SHALL BE REMOVED AND DISPOSED OF IN NON-SENSITIVE AREAS AS APPROVED BY THE ENGINEER.
- 26. NO LESPEDEZA, ERAGROSTIS CURVULA, OR CORONILLA VARIA SHALL BE SEEDED. SECTION 734 - SEEDING HAS BEEN MODIFIED TO REMOVE LESPEDEZA, ERAGROSTIS CURVULA, AND CORONILLA VARIA.

SECTION 700 (CONT.)

- 27. STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732, 734 AND 735, FOR TOPSOIL, SEED AND MULCH RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 28. STATION, OFFSET AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED ALONG THE FLOWLINE FOR INLETS, AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.
- 29. RAISED/RECESSED PAVEMENT MARKERS (RPM) SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL TITLED "DELAWARE DEPARTMENT OF TRANSPORTATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS" (PART 3) AND THE LATEST RPM GUIDELINES. PAYMENT FOR RPM INSTALLATION SHALL BE MADE UNDER ITEM 748502 - RAISED/RECESSED PAVEMENT MARKER.
- 30. INSTALLATION OF RIPRAP OUTLET PROTECTION (ITEMS 712005 AND 712006) SHALL BE IN ACCORDANCE WITH DIMENSION AND QUANTITIES INDICATED ON THE CONSTRUCTION PLANS. THE SPECIFIED DIMENSIONS ARE MINIMUM DIMENSIONS NECESSARY TO PROVIDE SUFFICIENT EROSION CONTROL. THE QUANTITY LISTED REPRESENTS THE SQUARE YARDAGE BASED UPON THE PLAN DEPICTION OF THE RIPRAP. DUE TO THE IRREGULAR CONFIGURATION OF SOME RIPRAP PADS, THE NOTED QUANTITY MAY NOT BE ACHIEVED BY A NOMINAL AMOUNT NOT TO EXCEED 5% LESS THAN THE NOTED QUANTITY. THE ENGINEER SHALL APPROVE ALL RIPRAP INSTALLATION.

SECTION 900

- 31. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERALPERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

MISCELLANEOUS


- 32. ANY CHANGES TO OR DEVIATIONS FROM THESE PLANS REQUESTED BY THE CONTRACTOR MUST BE REVIEWED AND APPROVED BY THE ENGINEER AND ENVIRONMENTAL MONITOR PRIOR TO CONDUCTING ANY WORK. APPROVAL MAY TAKE A SIGNIFICANT AMOUNT OF TIME TO COMPLETE AND ALL CHANGES MAY NOT BE APPROVED. THE CONTRACTOR SHALL HAVE NO CLAIM AGAINST THE DEPARTMENT FOR COSTS OR DELAYS ASSOCIATED WITH THE APPROVAL OR REJECTION OF REQUESTED CHANGES OR DEVIATIONS FROM THESE PLANS.
- 33. RESTORATION OF TEMPORARY IMPACTS
 - A. PRIOR TO PERFORMING ANY WORK ASSOCIATED WITH TEMPORARY IMPACTS TO DELINEATED WETLANDS, THE CONTRACTOR SHALL STAKE THE LIMITS OF TEMPORARY DISTURBANCE WITHIN THE WETLANDS AND ALLOW 14 CALENDAR DAYS FOR DELDOT TO OBTAIN EXISTING TOPOGRAPHY SURVEY WITHIN THE TEMPORARY DISTURBANCE. THIS EXISTING SURFACE SHALL BE PROVIDED TO AND ACCEPTED BY THE CONTRACTOR BEFORE ANY WORK IS PERFORMED WITHIN THE WETLANDS. THE CONTRACTOR SHALL HAVE 5 CALENDAR DAYS TO RESPOND TO THE EXISTING SURFACE INFORMATION OR OTHERWISE IT SHALL BE CONSIDERED ACCEPTED. THE EXISTING SURFACE PLAN SHALL BE PROVIDED IN BOTH DIGITAL AND PAPER COPIES CONFORMING TO DELDOT CADD STANDARDS AT THE SAME SCALE AS THE CONTRACT PLANS.
 - B. UPON MUTUAL ACCEPTANCE OF THE EXISTING SURFACE TOPOGRAPHY PLAN, THE CONTRACTOR SHALL FIRST INSTALL THE RESOURCE PROTECTION FENCE AND THEN INSTALL THE NECESSARY EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE PLANS AND DIRECTED BY THE ENGINEER. THE AREA OF THE TEMPORARY DISTURBANCE MAY BE CLEARED OF VEGETATION AS NECESSARY. VEGETATION SHALL NOT BE GRUBBED, AND SHALL BE CUT FLUSH WITH THE GROUND (I.E., NO DISTURBANCE OF THE ROOT MAT).
 - D. WHEN THE CONTRACTOR HAS COMPLETED THE WORK REQUIRING THE TEMPORARY WETLAND DISTURBANCE, ALL MATERIALS THAT WERE PLACED BY THE CONTRACTOR SHALL BE REMOVED IN THEIR ENTIRETY. ONCE ALL MATERIALS HAVE BEEN REMOVED, THE CONTRACTOR SHALL ALLOW 14 CALENDAR DAYS FOR DELDOT TO OBTAIN EXISTING SURFACE ELEVATIONS OF THE DISTURBED AREA FOLLOWING THE SAME PROCEDURE DESCRIBED ABOVE FOR OBTAINING ORIGINAL ELEVATIONS. THESE EXISTING SURFACE ELEVATIONS SHALL BE PROVIDED TO THE CONTRACTOR AND INCLUDE A PLAN SHOWING THE ELEVATION DIFFERENCES BETWEEN THE ORIGINAL AND EXISTING SURFACES.
 - E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE TEMPORARY DISTURBED AREA TO ORIGINAL ELEVATIONS. RESTORATION OF THE DISTURBED AREA SHALL BE ACCOMPLISHED IN THE FOLLOWING MANNER:
 - I. TILL THE GROUND WITHIN THE DISTURBED AREA TO LOOSEN UP THE SOILS DUE TO COMPACTION DURING CONSTRUCTION IN ACCORDANCE WITH THE SPECIFICATION OF ITEM 202555 - SUBSOIL TILLAGE. MINIMUM VERTICAL TILLAGE DEPTH SHALL BE 24 INCHES AS MEASURED BY FIELD PERFORMANCE.
 - II. PLACE TOPSOIL TO FILL DEPRESSIONS TO THE ORIGINAL GROUND ELEVATIONS. MAXIMUM DEPTH OF A SINGLE LIFT OF TOPSOIL PLACED SHALL BE 6 INCHES AND SHALL BE PLACED IN ACCORDANCE WITH SECTION 732.
 - III. DISK THE FINAL TOPSOIL SURFACE WITHIN THE DISTURBED AREA TO PREPARE THE AREA FOR SEED. USE A MAXIMUM OF 3 PASSES OF A DISK USING LOW GROUND PRESSURE EQUIPMENT TO A MINIMUM DEPTH OF 4 INCHES.
 - IV. WHEN THE CONTRACTOR BELIEVES THAT RESTORATION OF THE ORIGINAL ELEVATIONS HAS BEEN ACHIEVED, 7 CALENDAR DAYS SHALL BE ALLOWED FOR THE AREA TO AGAIN BE SURVEYED BY DELDOT UNDER THE SAME CONDITIONS DESCRIBED ABOVE AND THE SURVEY PLAN OF THE RESTORED ELEVATIONS WILL BE PROVIDED TO THE CONTRACTOR. DELDOT SHALL ADVISE THE CONTRACTOR IF ADDITIONAL RESTORATION WORK IS REQUIRED AND THE CONTRACTOR SHALL ADDRESS THOSE AREAS AND ALLOW FOR 7 CALENDAR DAYS FOR NEW SURVEY INFORMATION TO BE OBTAINED UNTIL THE RESTORATION IS APPROVED BY DELDOT.
 - F. UPON ACCEPTANCE OF THE RESTORED ELEVATIONS, CONTRACTOR SHALL APPLY SEED TO THE DISTURBED WETLAND. SEEDING SHALL VARY BASED ON SLOPE TO BE SEEDED. ON SLOPES 5:1 OR FLATTER SEEDING SHALL BE CONDUCTED UNDER ITEM 734552 - WET GROUND EROSION CONTROL GRASS SEEDING - FLATS. ON SLOPES GREATER THAN 5:1 SEEDING SHALL BE CONDUCTED UNDER ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND.

MISCELLANEOUS (CONT.)

- 33. RESTORATION OF TEMPORARY IMPACTS (CONT.)
 - G. THE RESTORED AREAS WITHIN THE LIMITS OF THE DELINEATED WETLANDS SHALL BE PLANTED UNDER ITEM 737523 - PLANTING. SMOOTH ALDER SHALL BE PLANTED 10 FOOT ON CENTER ON SLOPES FLATTER THAN 5:1 AND SOUTHERN ARROWWOOD SHALL BE PLANTED 10 FOOT ON CENTER ON SLOPES STEEPER THAN 5:1. PLANTS SHALL BE INSTALLED DURING THE FIRST AVAILABLE PLANTING WINDOW PER THE STANDARD SPECIFICATIONS. SHRUBS SHALL NOT BE PLANTED UNDER BRIDGES. BEGIN SHRUB PLANTING 10' OUTSIDE OF THE BRIDGE PARAPETS.
 - H. UPON FINAL ACCEPTANCE OF THE PLANTING, THE CONTRACTOR SHALL REMOVE THE RESOURCE PROTECTION FENCING AND THE EROSION AND SEDIMENT CONTROL MEASURES.
- 33. RESTORATION OF TEMPORARY IMPACTS
 - A. PERMANENT IMPACTS TO CLEARED AND GRUBBED WETLANDS THAT HAVE NOT BEEN GRADED SHALL BE RESTORED WITH SEEDING AND SHRUB PLANTING AS INDICATED ON THE PLANS. SEEDING AND PLANTING SHALL BE CONDUCTED BETWEEN THE LIMITS OF GRADING AND THE LOC IN LOCATIONS DESIGNATED ON THE PLANS.
 - B. SEEDING SHALL VARY BASED ON SLOPE TO BE SEEDED. ON SLOPES 5:1 OR FLATTER, SEEDING SHALL BE PAID FOR AND CONDUCTED UNDER ITEM 734552 - WET GROUND EROSION CONTROL GRASS SEEDING - FLATS. ON SLOPES GREATER THAN 5:1, SEEDING SHALL BE PAID FOR AND CONDUCTED UNDER ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND.
 - C. SHRUBS SHALL BE PLANTED IN THE PERMANENT IMPACT RESTORATION AREA. THE SHRUB PLANTING WILL VARY BASED ON SLOPE OF THE PLANTED AREA. ON SLOPES 5:1 OR FLATTER, SHRUB PLANTING SHALL CONSIST OF CONTAINERIZED 3 TO 5 FOOT TALL SMOOTH ALDER (ALNUS SERRULATA) LOCATED 10 FOOT ON CENTER. ON SLOPES GREATER THAN 5:1, SHRUB PLANTING SHALL CONSIST OF CONTAINERIZED 3 TO 5 FOOT TALL SOUTHERN ARROWWOOD (VIBURNUM DENTATUM) LOCATED 10 FOOT ON CENTER. PERMANENT IMPACT RESTORATION SHRUB PLANTING SHALL BE PAID FOR AND CONDUCTED UNDER ITEM 737523 - PLANTING.
 - 35. STREAM BOTTOM AND SLOPE RIPRAP TREATMENT
 - A. RIPRAP IN STREAMS IN THE FOLLOWING LOCATIONS SHALL BE TREATED AS SPECIFIED IN THE ENVIRONMENTAL COMPLIANCE NOTES:
 - I. RIPRAP AT STATION 604+60, 110' RT
 - II. RIPRAP AT STATION 605+70, 102' LT
 - III. RIPRAP AT STATION 656+80, 83' RT
 - IV. RIPRAP AT STATION 656+80, 108' RT
 - 36. THE CONTRACTOR SHALL FOLLOW ALL STATE AND LOCAL ORDINANCES CONCERNING CONSTRUCTION NOISE DURING THE DURATION OF THE CONSTRUCTION ACTIVITIES.
 - 37. REFER TO THE CONSTRUCTION PLAN SHEETS FOR THE LOCATION OF THE CLEAR ZONE AREA LIMITS.

\$DATES

\$FILES

 <p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301, NORFOLK SOUTHERN RR TO SR 896	CONTRACT	BRIDGE NO.	NOTES	SHEET NO.		
					T200911301				5
					COUNTY		DESIGNED BY:	WJD	TOTAL SHTS.
					NEW CASTLE		CHECKED BY:	MAA	240

RIGHT-OF-WAY MONUMENT SCHEDULE				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
M100	493+28.64	185.00	542562.7692	571973.6694
M101	596+41.27	-200.00	543085.7651	572066.5921
M102	597+50.00	185.00	542824.5926	572369.6375
M103	601+00.00	-200.00	543338.7800	572449.2386
M104	602+50.00	185.00	543100.3690	572786.7075
M105	602+98.49	450.00	542906.0693	572973.3203
M106	603+85.00	185.00	543174.8287	572899.3164
M107	604+00.00	298.77	543088.2052	572974.5763
M108	604+30.00	212.14	543177.0140	572951.8192
M109	605+50.00	-200.00	543586.9788	572824.6016
M110	606+41.38	450.00	543095.1881	573259.3338
M111	607+75.11	210.00	543369.1431	573238.5140
M112	608+83.31	-200.00	543770.8193	573102.6325
M113	609+29.78	-200.00	543796.4874	573141.4713
M114	611+00.00	168.11	543582.8776	573486.2382
M115	613+50.00	-167.28	544000.4490	573511.2110
M116	616+01.04	149.26	543872.6158	573894.4690
M117	615+81.79	-150.00	544112.8957	573715.0535
M118	617+85.20	141.69	543979.1411	574044.5592
M119	618+95.14	137.01	544042.7376	574134.1644
M120	619+17.26	-175.00	544316.7637	573983.3251
M121	621+50.00	-160.00	544430.4944	574187.3817
M122	621+50.48	135.97	544181.8212	574347.8853
M123	624+05.81	134.28	544320.9047	574561.6061
M124	624+39.07	-160.00	544586.7621	574431.1206
M125	625+61.76	133.58	544405.3020	574692.5029
M126	626+50.00	-160.00	544700.3445	574609.2596
M127	630+00.00	151.54	544624.5369	575071.6663
M128	631+50.00	-160.00	544968.0817	575032.4818
M129	633+62.29	-160.00	545081.1155	575212.5744
M130	635+96.89	-200.00	545239.5213	575390.1819
M131	637+91.16	-200.00	545342.6218	575554.8365
M132	632+50.00	160.92	544749.5686	575287.9067
M133	632+96.28	211.15	544731.5673	575353.7339
M134	633+29.97	245.00	544720.7428	575400.1910
M135	634+08.07	284.18	544728.9511	575487.1082
M136	635+51.82	288.79	544801.3233	575611.3887
M137	636+53.83	80.46	545032.0368	575587.2849
M138	637+50.14	175.00	545003.0200	575719.0866
M139	638+59.71	-340.00	545497.6605	575538.6388
M140	641+00.00	175.00	545188.6943	576015.6139
M141	642+50.00	-162.22	545554.1115	575963.7830
M142	642+50.00	-340.00	545704.7914	575869.4329
M143	642+67.22	-145.00	545548.6560	575987.5142
M144	645+00.00	175.00	545400.9773	576354.6359
M145	648+22.31	175.00	545572.0297	576627.8115
M146	648+22.31	-145.00	545843.2473	576457.9851
M147	651+33.16	175.00	545760.7456	576897.1087
M148	652+00.00	-145.00	546052.6499	576749.8300
M149	654+44.01	175.00	545976.3032	577145.4422
M150	654+62.91	160.00	546000.9600	577149.3280

RIGHT-OF-WAY MONUMENT SCHEDULE				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
M151	655+00.00	-145.00	546244.0929	576961.4710
M152	656+28.07	223.23	546083.0388	577317.0337
M153	657+35.00	250.00	546151.6363	577413.5585
M154	657+40.00	275.00	546139.5475	577436.1068
M155	657+77.50	335.00	546132.5494	577508.6160
M156	657+90.00	350.00	546133.7246	577529.0508
M157	658+40.00	395.00	546149.1027	577599.3905
M158	659+20.00	430.00	546199.6330	577682.7691
M159	659+97.50	430.00	546271.0957	577735.1530
M160	661+02.50	410.00	546381.0653	577786.4676
M161	661+22.50	395.00	546408.2595	577786.3870
M162	661+70.00	335.00	546485.4928	577764.6291
M163	661+80.00	310.00	546508.1629	577749.3412
M164	661+80.00	221.23	546555.2258	577674.0738
M165	658+98.50	-145.00	546529.2378	577211.0823
M166	662+92.69	-145.00	546841.3628	577418.6838
M167	665+90.91	190.00	546956.9434	577853.1885
M168	667+17.79	-145.00	547205.2732	577594.6455
M169	668+26.48	190.00	547189.2589	577946.6702
M170	670+50.00	-145.00	547504.8068	577695.2947
M171	671+25.46	190.00	547493.4624	578038.6006
M172	671+25.46	-150.90	547575.7008	577707.7695
M173	673+00.00	190.00	547662.8429	578080.7054
M174	674+00.00	-170.00	547846.7358	577755.4618
M175	675+55.09	-140.00	547990.0052	577821.9889
M176	678+20.00	190.00	548167.4850	578206.1501
M177	680+00.00	160.00	548349.4060	578220.4593
M178	680+09.09	-140.00	548430.5977	577931.5121
M179	681+50.00	-252.81	548594.5630	577856.0234
M180	684+32.76	275.00	548741.6426	578436.4619
M181	681+00.00	275.00	548418.7100	578356.1868
M182	690+00.00	140.00	549324.6963	578442.2897
M183	694+56.04	140.00	549767.2654	578552.3042
M184	696+23.10	140.00	549932.6501	578591.5868
M185	628+54.46	-1183.91	545675.1301	574234.3627
M186	631+27.54	-1049.64	545709.0085	574539.5380
M187	634+12.02	-886.12	545722.9362	574869.3740
M188	637+00.00	-719.52	545734.5702	575201.8612
M189	638+16.22	-652.29	545739.2652	575336.0403
M190	639+54.81	-651.38	545812.0445	575453.9943
M191	640+98.85	-1276.36	546418.1905	575244.3915
M192	641+00.08	-1276.43	546418.9026	575245.3944
M193	645+25.00	-1042.43	546446.0882	575729.7231
M194	648+22.31	-878.71	546465.1095	576068.5982
M195	654+92.32	-513.72	546500.3406	576696.2616
M196	655+92.16	160.00	546098.0906	577244.7045
M197	661+80.00	190.00	546571.7830	577647.5940
M198	687+46.90	-287.28	549182.1495	577966.5706
M199	685+88.60	140.00	548925.4480	578343.0440
M200	645+50.00	-145.00	545698.7304	576227.1874
M201	684+00.00	-276.25	548840.6618	577902.3239
M202	657+47.50	290.00	546136.0901	577452.8516

DRAFT
BIDDING
AUGUST 2015

\$FILES \$DATES

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	US 301, NORFOLK SOUTHERN RR TO SR 896	CONTRACT	BRIDGE NO.	NOTES	SHEET NO.	
	T200911301				DESIGNED BY:		WJD	6
	NEW CASTLE				CHECKED BY:		MAA	TOTAL SHTS.
							240	

PN-03

TOTAL EARTHWORK SUMMARY

ROADWAY EXCAVATION

FROM CROSS SECTIONS (US 301 MAINLINE AND FARM ACCESS)	31558	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	43167	C.Y.
PLUS TOPSOIL PLACED IN CUT	7487	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	374	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	81838	C.Y.
FROM CROSS SECTIONS (RELOCATED STREAM AT STA 656+75)	2410	C.Y.
FROM CROSS SECTIONS (EXISTING STREAM AT STA 656+75)	316	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	529	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	3255	C.Y.
FROM CROSS SECTIONS (WETLAND MITIGATION SITE)	0	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	2866	C.Y.
PLUS TOPSOIL PLACED IN CUT	0	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	2866	C.Y.
FROM DTM (PLEASANTON SOUTH BORROW SITE)	92420	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	22562	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	114982	C.Y.
FROM DTM (PLEASANTON SOUTHEAST BORROW SITE)	207052	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	32025	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	239077	C.Y.
FROM DTM (PLEASANTON EAST BORROW SITE)	84865	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	14373	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	99238	C.Y.
FROM DTM (CHURCHTOWN MANOR NORTH BORROW SITE)	191779	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	30381	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	222160	C.Y.
FROM DTM (CHURCHTOWN MANOR SOUTH BORROW SITE)	43251	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	12889	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	56140	C.Y.
TOTAL ROADWAY EXCAVATION (ITEM 202000)	819556	C.Y.

STORMWATER MANAGEMENT POND EXCAVATION

FROM DTM (SWM FACILITY 700)	14443	C.Y.
PLUS TOPSOIL REMOVED IN FILL	2348	C.Y.
LESS ROOTMAT REMOVED IN CUT	610	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	16181	C.Y.
FROM DTM (SWM FACILITY 704)	1214	C.Y.
PLUS TOPSOIL REMOVED IN FILL	871	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	2085	C.Y.
FROM DTM (SWM FACILITY 705)	5390	C.Y.
PLUS TOPSOIL REMOVED IN FILL	2111	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	7501	C.Y.
FROM DTM (SWM FACILITY 711)	18016	C.Y.
PLUS TOPSOIL REMOVED IN FILL	2177	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	20193	C.Y.
TOTAL STORMWATER MANAGEMENT POND EXCAVATION (ITEM 202000)	45960	C.Y.

SURCHARGE EXCAVATION

BRIDGE 1-467 NORTH ABUTMENTS	
SURCHARGE VOLUME (BR 1-467 N. ABUT.)	5660 C.Y.
LESS EXCAVATION FOR ABUTMENT (ITEM 207000)	1054 C.Y.
SUBTOTAL:	4606 C.Y.
BRIDGE 1-467 SOUTH ABUTMENTS	
SURCHARGE VOLUME (BR 1-467 S. ABUT)	5912 C.Y.
LESS EXCAVATION FOR ABUTMENT (ITEM 207000)	1054 C.Y.
SUBTOTAL:	4858 C.Y.
BRIDGE 1-468 MSE WALL	
SURCHARGE VOLUME (BR 1-468 N. ABUT.)	0 C.Y.
LESS EXCAVATION FOR ABUTMENT (ITEM 207000)	0 C.Y.
SUBTOTAL:	0 C.Y.
TOTAL SURCHARGE EXCAVATION (ITEM 202000)	9464 C.Y.

TOTAL EXCAVATION AND EMBANKMENT (ITEM 202000)

ROADWAY EXCAVATION	819556	C.Y.
PLUS STORMWATER MANAGEMENT EXCAVATION	45960	C.Y.
SURCHARGE EXCAVATION (NOT INCLUDED IN 207000)	9464	C.Y.
TOTAL EXCAVATION AVAILABLE FOR BORROW TYPE F	874980	C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT

TOTAL EXCAVATION (ITEM 202000)	874981	C.Y.
LESS SURCHARGE EXCAVATION	9464	C.Y.
PLUS EXCAVATION FROM STRUCTURES (ITEM 207000)	3960	C.Y.
LESS EXCAVATION FOR ABUTMENT ABOVE EXISTING GROUND	2108	C.Y.
PLUS EXCAVATION FROM PIPE TRENCHES (ITEM 208000 AND VAR. PIPE ITEMS)	5240	C.Y.
PLUS EXCAVATION FROM CHANNELS (ITEM 203000)	0	C.Y.
PLUS EXCAVATION FROM UNDERDRAIN INSTALLATION	2167	C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	178217	C.Y.
LESS TOPSOIL REMOVED IN STORMWATER MANAGEMENT PONDS	7507	C.Y.
LESS UNSUITABLE MATERIAL (5% OF TOTAL EXCAVATION)	43749	C.Y.
LESS MATERIAL USED FOR BORROW TYPES A, B, C AND D	70673	C.Y.
TOTAL EXCAVATION AVAILABLE FOR BORROW TYPE F	574630	C.Y.

BORROW TYPE A REQUIRED

BORROW TYPE A FOR CAPPING	35948	C.Y.
PLUS ADJUSTMENT FACTOR (20%)	7190	C.Y.
SUBTOTAL	43138	C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE A	43138	C.Y.
TOTAL ADJUSTED BORROW TYPE A REQUIRED	0	C.Y.

BORROW TYPE B REQUIRED

BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVAL UNDER FILLS	7401	C.Y.
PLUS EXISTING STREAM BACKFILL	316	C.Y.
PLUS UNDER TEMPORARY PIPES	175	C.Y.
PLUS ADJUSTMENT FACTOR (20%)	1578	C.Y.
SUBTOTAL	9471	C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE B	5192	C.Y.
TOTAL ADJUSTED BORROW TYPE B REQUIRED	4279	C.Y.

BORROW TYPE C REQUIRED

BACKFILL FOR STRUCTURES	2335	C.Y.
PLUS BACKFILL FOR DRAINAGE PIPES	4354	C.Y.
PLUS BACKFILL FOR DRAINAGE STRUCTURES	248	C.Y.
PLUS ADJUSTMENT FACTOR (20%)	1387	C.Y.
SUBTOTAL	8325	C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE C	8325	C.Y.
TOTAL ADJUSTED BORROW TYPE C REQUIRED	0	C.Y.

BORROW TYPE D REQUIRED

BORROW TYPE D REQUIRED FOR 70087 SY OF SOIL CEMENT BASE COURSE	11682	C.Y.
PLUS ADJUSTMENT FACTOR (20%)	2336	C.Y.
SUBTOTAL	14018	C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE D	14018	C.Y.
TOTAL ADJUSTED BORROW TYPE D REQUIRED	0	C.Y.

BORROW TYPE F REQUIRED

EMBANKMENT REQUIRED BELOW CAPPING	463265	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	43167	C.Y.
PLUS ROOTMAT REMOVED UNDER FILL (NOT BACKFILLED WITH BORROW TYPE B)	9341	C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0	C.Y.
PLUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
PLUS RELOCATED STREAM BACKFILL	308	C.Y.
PLUS EMBANKMENT REQUIRED FOR WETLAND MITIGATION BERMS	3710	C.Y.
LESS TOPSOIL PLACED IN STREAM BACKFILL	76	C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	*	C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	32533	C.Y.
LESS STRUCTURE AND PIPE BACKFILL	8324	C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0	C.Y.
SUBTOTAL	478858	C.Y.
PLUS ADJUSTMENT FACTOR (20%)	95772	C.Y.
SUBTOTAL	574630	C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE F	574630	C.Y.
TOTAL ADJUSTED BORROW TYPE F REQUIRED	** 0	C.Y.

*TOPSOIL PLACED ON FILL SLOPES NOT INCLUDED IN END-AREA CALCULATIONS
** ADJUST BORROW SITE GRADING AS NECESSARY TO BALANCE.

TOPSOIL SUMMARY

TOPSOIL SALVAGED FROM CUT AND FILL (US 301 MAIN LINE AND FARM ACCESS)	53425	C.Y.
PLUS TOPSOIL SALVAGED FROM RELOCATED STREAM AT 656+75	626	C.Y.
PLUS TOPSOIL SALVAGED FROM WETLAND MITIGATION SITE	2866	C.Y.
PLUS TOPSOIL SALVAGED FROM PLEASANTON SOUTH BORROW SITE	22561	C.Y.
PLUS TOPSOIL SALVAGED FROM PLEASANTON SOUTHEAST BORROW SITE	32025	C.Y.
PLUS TOPSOIL SALVAGED FROM PLEASANTON EAST BORROW SITE	14412	C.Y.
PLUS TOPSOIL SALVAGED FROM CHURCHTOWN NORTH BORROW SITE	30381	C.Y.
PLUS TOPSOIL SALVAGED FROM CHURCHTOWN SOUTH BORROW SITE	14414	C.Y.
PLUS TOPSOIL SALVAGED FROM SWM FACILITY 700	2348	C.Y.
PLUS TOPSOIL SALVAGED FROM SWM FACILITY 704	871	C.Y.
PLUS TOPSOIL SALVAGED FROM SWM FACILITY 705	2111	C.Y.
PLUS TOPSOIL SALVAGED FROM SWM FACILITY 711	2177	C.Y.
LESS TOPSOIL PLACED ON MEDIAN AND SIDESLOPES (US 301 MAIN LINE)	25969	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (RELOCATED STREAM AT 656+75)	605	C.Y.
LESS TOPSOIL PLACED ON BACKFILLED SLOPE (RELOCATED STREAM)	76	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (WETLAND MITIGATION SITE)	2485	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (PLEASANTON SOUTH)	22562	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (PLEASANTON SOUTHEAST)	32025	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (PLEASANTON EAST)	14373	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (CHURCHTOWN NORTH)	30381	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (CHURCHTOWN SOUTH)	12889	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (SWM FACILITY 700)	733	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (SWM FACILITY 704)	894	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (SWM FACILITY 705)	1677	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (SWM FACILITY 711)	995	C.Y.
SUBTOTAL:	32533	C.Y.
LESS EXCESS TOPSOIL PLACED IN BERMS	0	C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENT	32533	C.Y.
TOTAL EXCESS TOPSOIL	0	C.Y.

NOTES:
1) THE VALUES LISTED IN THE EARTHWORK SUMMARY ARE APPROXIMATE AND ARE NOT TO BE USED AS A BASIS OF PAYMENT. THE EARTHWORK SUMMARY IS CONSIDERED FOR INFORMATIONAL PURPOSES ONLY.

\$FILES \$DATES

ADDENDUMS / REVISIONS

NOT TO SCALE

US 301,
NORFOLK SOUTHERN RR TO SR 896

CONTRACT	BRIDGE NO.
T200911301	
COUNTY	DESIGNED BY:
NEW CASTLE	WJD
	CHECKED BY:
	MAA

NOTES

PN-04
SHEET NO.
7
TOTAL SHTS.
240



DELAWARE
DEPARTMENT OF TRANSPORTATION

SECTOR A EARTHWORK

STA 637+50 TO STA 688+00

ROADWAY EXCAVATION		
FROM CROSS SECTIONS (US 301 MAINLINE AND FARM ACCESS)	15813	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	18234	C.Y.
PLUS TOPSOIL PLACED IN CUT	3874	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	237	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	37685	C.Y.
FROM CROSS SECTIONS (RELOCATED STREAM AT STA 656+75)	2410	C.Y.
PLUS FROM CROSS SECTIONS (EXISTING STREAM AT STA 658+75)	316	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	529	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	3255	C.Y.
FROM DTM (CHURCHTOWN MANOR NORTH BORROW SITE)	191779	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	30381	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	222160	C.Y.
FROM DTM (CHURCHTOWN MANOR SOUTH BORROW SITE)	43251	C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0	C.Y.
PLUS TOPSOIL PLACED IN CUT	12889	C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS REMOVAL OF EXISTING PCC	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	56140	C.Y.
TOTAL ROADWAY EXCAVATION (ITEM 202000)	319240	C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT		
TOTAL EXCAVATION	351540	C.Y.
LESS SURCHARGE EXCAVATION	4606	C.Y.
PLUS EXCAVATION FROM STRUCTURES	2070	C.Y.
LESS EXCAVATION FROM ABUTMENT ABOVE EX. GROUND	1054	C.Y.
PLUS EXCAVATION FROM PIPE TRENCHES	2578	C.Y.
PLUS EXCAVATION FROM CHANNELS	0	C.Y.
PLUS EXCAVATION FROM UNDERDRAIN INSTALLATION	1313	C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	72761	C.Y.
LESS TOPSOIL REMOVED IN STORMWATER MANAGEMENT PONDS	4288	C.Y.
LESS UNSUITABLE MATERIAL (5% OF TOTAL EXCAVATION)	17577	C.Y.
LESS MATERIAL USED FOR BORROW TYPES A, B, C AND D	39186	C.Y.
TOTAL EXCAVATION AVAILABLE FOR BORROW TYPE F	218029	C.Y.

BORROW TYPE A REQUIRED	
BORROW TYPE A FOR CAPPING	19079 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	3816 C.Y.
SUBTOTAL	22894 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE A	22894 C.Y.
TOTAL ADJUSTED BORROW TYPE A REQUIRED	0 C.Y.

BORROW TYPE B REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVAL UNDER FILLS	3320 C.Y.
PLUS EXISTING STREAM BACKFILL	316 C.Y.
PLUS USED UNDER TEMPORARY PIPES	75 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	742 C.Y.
SUBTOTAL	4454 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE B	4454 C.Y.
TOTAL ADJUSTED BORROW TYPE B REQUIRED	0 C.Y.

BORROW TYPE C REQUIRED	
BACKFILL FOR STRUCTURES	1457 C.Y.
PLUS BACKFILL FOR DRAINAGE PIPES	2288 C.Y.
PLUS BACKFILL FOR DRAINAGE STRUCTURES	139 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	777 C.Y.
SUBTOTAL	4661 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE C	4661 C.Y.
TOTAL ADJUSTED BORROW TYPE C REQUIRED	0 C.Y.

BORROW TYPE D REQUIRED	
BORROW TYPE D REQUIRED FOR 35885 SY OF SOIL CEMENT BASE COURSE	5981 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	1196 C.Y.
SUBTOTAL	7177 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE D	7177 C.Y.
TOTAL ADJUSTED BORROW TYPE D REQUIRED	0 C.Y.

BORROW TYPE F REQUIRED	
EMBANKMENT REQUIRED BELOW CAPPING	217190 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	18234 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL (NOT BACKFILLED WITH BORROW TYPE B)	9341 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0 C.Y.
PLUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
PLUS RELOCATED STREAM BACKFILL	308 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	* C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	12810 C.Y.
LESS TOPSOIL PLACED IN STREAM BACKFILL	76 C.Y.
LESS STRUCTURE BACKFILL	4661 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
SUBTOTAL	227526 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	45505 C.Y.
SUBTOTAL	273032 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE F	218029 C.Y.
SUBTOTAL	55003 C.Y.
LESS EXCESS BORROW TYPE F FROM SECTOR B	55003 C.Y.
TOTAL ADJUSTED BORROW TYPE F REQUIRED	0 C.Y.

STORMWATER MANAGEMENT POND EXCAVATION		
FROM DTM (SWM FACILITY 705)	5390	C.Y.
PLUS TOPSOIL REMOVED IN FILL	2111	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	7501	C.Y.
FROM DTM (SWM FACILITY 711)	18016	C.Y.
PLUS TOPSOIL REMOVED IN FILL	2177	C.Y.
LESS ROOTMAT REMOVED IN CUT	0	C.Y.
LESS ROCK EXCAVATION	0	C.Y.
SUBTOTAL:	20193	C.Y.
TOTAL STORMWATER MANAGEMENT POND EXCAVATION (ITEM 202000)	27694	C.Y.

TOPSOIL SUMMARY		
TOPSOIL SALVAGED FROM CUT AND FILL (US 301 MAIN LINE AND FARM ACCESS)	23052	C.Y.
PLUS TOPSOIL SALVAGED FROM RELOCATED STREAM AT 656+75	626	C.Y.
PLUS TOPSOIL SALVAGED FROM CHURCHTOWN NORTH BORROW SITE	30381	C.Y.
PLUS TOPSOIL SALVAGED FROM CHURCHTOWN SOUTH BORROW SITE	14414	C.Y.
PLUS TOPSOIL SALVAGED FROM SWM FACILITY 705	2111	C.Y.
PLUS TOPSOIL SALVAGED FROM SWM FACILITY 711	2177	C.Y.
LESS TOPSOIL PLACED ON MEDIAN AND SIDESLOPES (US 301 MAIN LINE)	13328	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (RELOCATED STREAM AT 656+75)	605	C.Y.
LESS TOPSOIL PLACED ON BACKFILLED SLOPE (RELOCATED STREAM AT 656+75)	76	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (CHURCHTOWN NORTH)	30381	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (CHURCHTOWN SOUTH)	12889	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (SWM 705)	1677	C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (SWM 711)	995	C.Y.
SUBTOTAL	12810	C.Y.
LESS EXCESS TOPSOIL PLACED IN BERMS	0	C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENT	12810	C.Y.
TOTAL EXCESS TOPSOIL	0	C.Y.

SURCHARGE EXCAVATION		
BRIDGE 1-467 NORTH ABUTMENTS		
SURCHARGE VOLUME (BR 1-467 N. ABUT.)	5660	C.Y.
LESS EXCAVATION FOR ABUTMENT (ITEM 207000)	1054	C.Y.
SUBTOTAL:	4606	C.Y.
TOTAL SURCHARGE EXCAVATION (ITEM 202000)	4606	C.Y.

TOTAL EXCAVATION AND EMBANKMENT (ITEM 202000)		
ROADWAY EXCAVATION	319240	C.Y.
PLUS STORMWATER MANAGEMENT EXCAVATION	27694	C.Y.
SURCHARGE EXCAVATION (NOT INCLUDED IN 207000)	4606	C.Y.
TOTAL EXCAVATION AVAILABLE FOR BORROW TYPE F	351540	C.Y.

*TOPSOIL PLACED ON FILL SLOPES NOT INCLUDED IN END-AREA CALCULATIONS.

NOTES:
1) THE VALUES LISTED IN THE EARTHWORK SUMMARY ARE APPROXIMATE AND ARE NOT TO BE USED AS A BASIS OF PAYMENT. THE EARTHWORK SUMMARY IS CONSIDERED FOR INFORMATIONAL PURPOSES ONLY.

DRAFT
NOT FOR BIDDING

\$FILES \$DATES



ADDENDUMS / REVISIONS

NOT TO SCALE

US 301,
NORFOLK SOUTHERN RR TO SR 896

CONTRACT	BRIDGE NO.
T200911301	
COUNTY	DESIGNED BY: WJD
NEW CASTLE	CHECKED BY: MAA

NOTES

PN-05
SHEET NO. 8
TOTAL SHTS. 240

SECTOR B EARTHWORK

STA 594+37 TO STA 637+50

EXCAVATION	
FROM CROSS SECTIONS (US 301 MAINLINE)	15745 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	24933 C.Y.
PLUS TOPSOIL PLACED IN CUT	3613 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	137 C.Y.
LESS REMOVAL OF EXISTING PCC	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL:	44154 C.Y.
FROM CROSS SECTIONS (WETLAND MITIGATION SITE)	0 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	2866 C.Y.
PLUS TOPSOIL PLACED IN CUT	0 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS REMOVAL OF EXISTING PCC	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL:	2866 C.Y.
FROM DTM (PLEASANTON SOUTH BORROW SITE)	92420 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0 C.Y.
PLUS TOPSOIL PLACED IN CUT	22562 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS REMOVAL OF EXISTING PCC	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL:	114982 C.Y.
FROM DTM (PLEASANTON SOUTHEAST BORROW SITE)	207052 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	0 C.Y.
PLUS TOPSOIL PLACED IN CUT	32025 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS REMOVAL OF EXISTING PCC	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL:	239077 C.Y.
FROM DTM (PLEASANTON EAST BORROW SITE)	84865 C.Y.
PLUS TOPSOIL REMOVED IN FILL	0 C.Y.
PLUS TOPSOIL PLACED IN CUT	14373 C.Y.
PLUS BITUMINOUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS REMOVAL OF EXISTING PCC	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL:	99238 C.Y.
TOTAL ROADWAY EXCAVATION (ITEM 202000)	500317 C.Y.

STORMWATER MANAGEMENT POND EXCAVATION	
FROM DTM (SWM FACILITY 700)	14443 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	2348 C.Y.
LESS ROOTMAT REMOVED IN CUT	610 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL	16181 C.Y.
FROM DTM (SWM FACILITY 704)	1214 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	871 C.Y.
LESS ROOTMAT REMOVED IN CUT	0 C.Y.
LESS ROCK EXCAVATION	0 C.Y.
SUBTOTAL	2085 C.Y.
TOTAL STORMWATER MANAGEMENT POND EXCAVATION (ITEM 202000)	18266 C.Y.

SURCHARGE EXCAVATION	
BRIDGE 1-467 SOUTH ABUTMENTS	
SURCHARGE VOLUME (BR 1-467 S. ABUT.)	5912 C.Y.
LESS EXCAVATION FOR ABUTMENT (ITEM 207000)	1054 C.Y.
SUBTOTAL:	4858 C.Y.
TOTAL SURCHARGE EXCAVATION (ITEM 202000)	4858 C.Y.

TOTAL EXCAVATION AND EMBANKMENT (ITEM 202000)	
ROADWAY EXCAVATION	500317 C.Y.
PLUS STORMWATER MANAGEMENT EXCAVATION	18266 C.Y.
SURCHARGE EXCAVATION (NOT INCLUDED IN 207000)	4858 C.Y.
TOTAL EXCAVATION AVAILABLE FOR BORROW TYPE F	523441 C.Y.

EXCAVATION AVAILABLE FOR EMBANKMENT	
TOTAL EXCAVATION	523441 C.Y.
LESS SURCHARGE EXCAVATION	4858 C.Y.
PLUS EXCAVATION FROM STRUCTURES	1890 C.Y.
LESS EXCAVATION FOR ABUTMENT ABOVE EXISTING GROUND	1054 C.Y.
PLUS EXCAVATION FROM PIPE TRENCHES	2662 C.Y.
PLUS EXCAVATION FROM CHANNELS	0 C.Y.
PLUS EXCAVATION FROM UNDERDRAIN INSTALLATION	854 C.Y.
LESS TOPSOIL REMOVED IN CUT AND FILL	105456 C.Y.
LESS TOPSOIL REMOVED IN STORMWATER MANAGEMENT PONDS	3219 C.Y.
LESS UNSUITABLE MATERIAL (5% OF TOTAL EXCAVATION)	26172 C.Y.
LESS MATERIAL USED FOR BORROW TYPES A, B AND D	31487 C.Y.
TOTAL EXCAVATION AVAILABLE FOR BORROW TYPE F	356601 C.Y.

TOPSOIL SUMMARY	
TOPSOIL SALVAGED FROM CUT AND FILL (US 301 MAIN LINE)	30373 C.Y.
PLUS TOPSOIL SALVAGED FROM WETLAND MITIGATION SITE	2866 C.Y.
PLUS TOPSOIL SALVAGED FROM PLEASANTON SOUTH BORROW SITE	22561 C.Y.
PLUS TOPSOIL SALVAGED FROM PLEASANTON SOUTHEAST BORROW SITE	32025 C.Y.
PLUS TOPSOIL SALVAGED FROM PLEASANTON EAST BORROW SITE	14412 C.Y.
PLUS TOPSOIL SALVAGED FROM SWM FACILITY 700	2348 C.Y.
PLUS TOPSOIL SALVAGED FROM SWM FACILITY 704	871 C.Y.
LESS TOPSOIL PLACED ON MEDIAN AND SIDESLOPES (US 301 MAIN LINE)	12661 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (WETLAND MITIGATION SITE)	2485 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (PLEASANTON SOUTH)	22562 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (PLEASANTON SOUTHEAST)	32025 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (PLEASANTON EAST)	14373 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (SWM FACILITY 700)	733 C.Y.
LESS TOPSOIL PLACED ON CUT SLOPES (SWM FACILITY 704)	894 C.Y.
SUBTOTAL	19723 C.Y.
LESS EXCESS TOPSOIL PLACED IN BERMS	0 C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENT	19723 C.Y.
TOTAL EXCESS TOPSOIL	0 C.Y.

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BORROW TYPE A REQUIRED	
BORROW TYPE A FOR CAPPING	16870 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	3374 C.Y.
SUBTOTAL	20244 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE A	20244 C.Y.
TOTAL ADJUSTED BORROW TYPE A REQUIRED	0 C.Y.

BORROW TYPE B REQUIRED	
BACKFILL FOR UNSTABLE SUBGRADES AFTER ROOTMAT REMOVAL UNDER FILLS	4081 C.Y.
PLUS USED UNDER TEMPORARY PIPES	100 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	836 C.Y.
SUBTOTAL	5017 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE B	738 C.Y.
TOTAL ADJUSTED BORROW TYPE B REQUIRED	4279 C.Y.

BORROW TYPE C REQUIRED	
BACKFILL FOR STRUCTURES	878 C.Y.
PLUS BACKFILL FOR DRAINAGE PIPES	2066 C.Y.
PLUS BACKFILL FOR DRAINAGE STRUCTURES	109 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	611 C.Y.
SUBTOTAL	3664 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE C	3664 C.Y.
TOTAL ADJUSTED BORROW TYPE C REQUIRED	0 C.Y.

BORROW TYPE D REQUIRED	
BORROW TYPE D REQUIRED FOR 34202 SY OF SOIL CEMENT BASE COURSE	5701 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	1140 C.Y.
SUBTOTAL	6841 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE D	6841 C.Y.
TOTAL ADJUSTED BORROW TYPE D REQUIRED	0 C.Y.

BORROW TYPE F REQUIRED	
EMBANKMENT REQUIRED BELOW CAPPING	246075 C.Y.
PLUS TOPSOIL REMOVED UNDER FILL	24933 C.Y.
PLUS ROOTMAT REMOVED UNDER FILL (NOT BACKFILLED WITH BORROW TYPE B)	0 C.Y.
PLUS UNDERCUT MATERIAL REMOVED UNDER FILL	0 C.Y.
PLUS PAVEMENT REMOVED UNDER FILL	0 C.Y.
PLUS EMBANKMENT REQUIRED FOR WETLAND MITIGATION BERMS	3710 C.Y.
LESS TOPSOIL PLACED ON FILL SLOPES	* C.Y.
LESS EXCESS TOPSOIL PLACED IN OUTER EMBANKMENTS	19723 C.Y.
LESS STRUCTURE BACKFILL	3664 C.Y.
LESS BORROW TYPE B PLACED ABOVE ORIGINAL GROUND	0 C.Y.
SUBTOTAL	251331 C.Y.
PLUS ADJUSTMENT FACTOR (20%)	50266 C.Y.
SUBTOTAL	301598 C.Y.
LESS EXCAVATED MATERIAL SUITABLE FOR BORROW TYPE F	356601 C.Y.
TOTAL ADJUSTED BORROW TYPE F REQUIRED	-55003 C.Y.

*TOPSOIL PLACED ON FILL SLOPES NOT INCLUDED IN END-AREA CALCULATIONS.

\$DATES \$FILES