

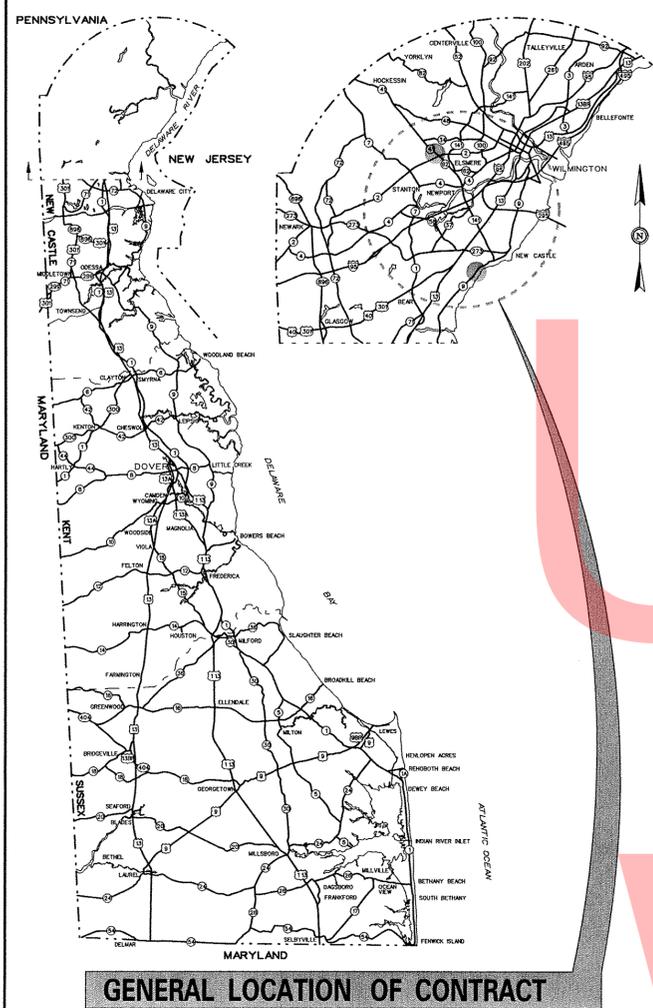
U.S. CUSTOMARY UNITS

DESIGN DESIGNATION

FUNCTIONAL CLASS: MINOR ARTERIAL	D.H.V. PROJECTED: N/A	YEAR: N/A
TYPE OF CONSTRUCTION: HIGHWAY/RAIL CROSSING	DESIGN SPEED: 35	
A.A.D.T. CURRENT: 7,095	YEAR: 2012	TRUCKS: N/A %
A.A.D.T. PROJECTED: N/A	YEAR: N/A	DIRECTION OF DISTRIBUTION: N/A %

INDEX OF SHEETS

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THE STATE OF DELAWARE  
DEPARTMENT OF TRANSPORTATION

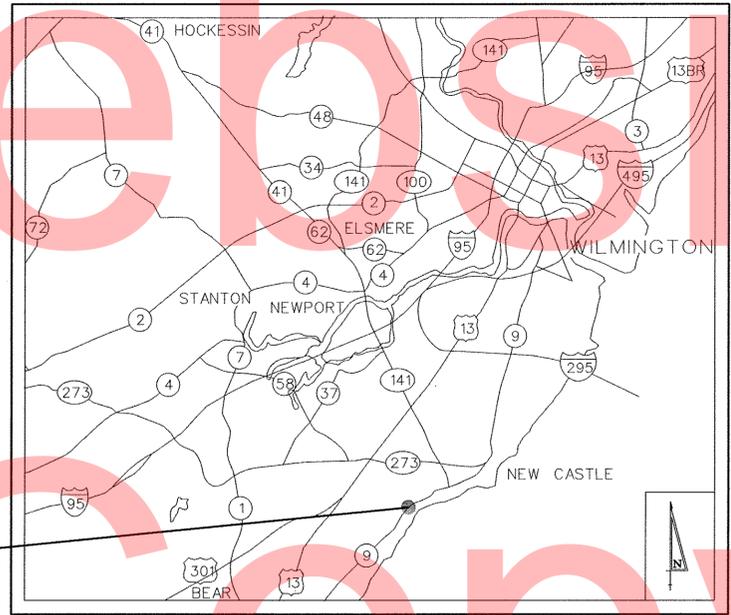


CONSTRUCTION PLANS FOR:

SR 9 RIVER ROAD (N378) RAILROAD  
CROSSING SAFETY IMPROVEMENTS  
DOT CROSSING NO. 507-888R

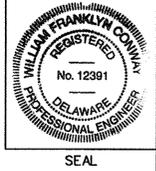
CONTRACT NUMBER: T201400504  
FEDERAL AID PROJECT NUMBER: ESTP-N378(07)

COUNTY: NEW CASTLE



CONTRACT NO. T201400504  
SR 9 RIVER ROAD

PREPARED BY  
THE CONSULTING FIRM OF  
**CENTURY ENGINEERING**  
CONSULTING ENGINEERS, SURVEYORS  
4134 N. DUPONT HWY.  
DOVER, DELAWARE 19901  
(302) 734-9188



*William Franklyn Conway* 6/12/14  
RECOMMENDED DATE

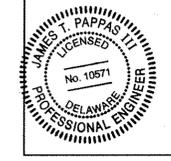
<b>RECOMMENDED</b>	
SQUAD MANAGER, CONSTRUCTION	DATE
GROUP ENGINEER, CONSTRUCTION	DATE
ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION)	DATE

<b>RECOMMENDED</b>	<b>RECOMMENDED</b>
STORMWATER ENGINEER	SQUAD MANAGER, TRANSPORTATION SOLUTIONS (PROJECT DEVELOPMENT OR BRIDGE DESIGN)
DATE	DATE
SEAL	SEAL

<b>RECOMMENDED</b>	<b>RECOMMENDED</b>
BRIDGE DESIGN ENGINEER	SEAL
DATE	DATE

<b>RECOMMENDED AS TO PROCESS</b>	<b>RECOMMENDED AS TO PROCESS</b>
<i>Robert C. Penn</i>	<i>James T. Pappas III</i>
RAILROAD PROGRAM MANAGER	ASSISTANT DIRECTOR, DESIGN
DATE 16 June 2014	DATE 6.16.14
SEAL	SEAL

<b>RECOMMENDED AS TO PROCESS</b>	<b>APPROVED AS TO PROCESS</b>
<i>Robert B. Wilson</i>	<i>Robert B. Wilson</i>
CHIEF ENGINEER	CHIEF ENGINEER
DATE 6/17/14	DATE 6/17/14
SEAL	SEAL



<b>ASSOCIATED CONTRACTS</b>	
CONTRACT NO.	CONTRACT NAME

TOTAL SHEETS: 15

**APPROVED DESIGN EXCEPTIONS**

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

**ADDENDA & REVISIONS**

DESCRIPTION	NAME & DATE

## EXISTING SYMBOLS

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

MANMADE ROADSIDE FEATURES	
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	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

RIGHT-OF-WAY SYMBOLS	
	PROPERTY MARKER - CONCRETE MON.
	PROPERTY MARKER - IRON PIPE
	HISTORIC RIGHT-OF-WAY BASELINE
	EXISTING RIGHT-OF-WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING DENIAL OF ACCESS
	EXISTING R/W & DENIAL OF ACCESS

SURVEY CONTROL & MONUMENTATION	
	SURVEY BENCHMARK LOCATION
	SURVEY TIE POINT LOCATION
	SURVEY TRAVERSE POINT
	POINT OF CURVATURE OR TANGENCY
	POINT OF INTERSECTING TANGENTS

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
	MANHOLE - UNDETERMINED OWNER

UTILITY COMPANY FACILITIES	
	ARTESIAN WATER (UNDERGROUND)
	DELMARVA POWER (ELECTRIC)
	DELMARVA POWER (GAS)
	NEW CASTLE COUNTY - SEWER
	COMCAST CABLE (OVERHEAD)
	COMCAST CABLE (UNDERGROUND)
	VERIZON (OVERHEAD)
	VERIZON (UNDERGROUND)

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
	BIOFILTRATION SWALE
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	BRICK PATTERNED SURFACE
	BUTT JOINT
	CONSTRUCTION BASELINE
	CONSTRUCTION SAFETY FENCE
	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, TYPE 1
	GUARDRAIL, TYPE 2
	GUARDRAIL, TYPE 3
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1
	GUARDRAIL END TREATMENT, TYPE 2
	GUARDRAIL END TREATMENT, TYPE 3
	HORIZONTAL CLEARANCE
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
	LIMIT OF CONSTRUCTION
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK @ 4"
	P.C.C. SIDEWALK @ 6"
	UNDERDRAIN
	UNDERDRAIN OUTLET

RIGHT-OF-WAY SYMBOLS	
	PROPOSED RIGHT-OF-WAY MONUMENT
	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

## PROPOSED SYMBOLS

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
	CONSTRUCTION SAFETY FENCE
	DRAINAGE INLET
	DO NOT DISTURB
	ENERGY DISSIPATOR
	FENCE
	FLARED END SECTION
	FILL WITH FLOWABLE FILL
	FILTRATION STRUCTURE
	GUARDRAIL
	JUNCTION BOX
	MANHOLE
	MONUMENT - RIGHT-OF-WAY
	PIPE
	RELOCATE BY CONTRACTOR
	RELOCATE BY OTHERS
	REMOVE BY CONTRACTOR
	REMOVE BY OTHERS
	UNDERDRAIN / LENGTH
	UNDERDRAIN OUTLET PIPE

LANDSCAPING	
	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

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

PAVEMENT SECTION(S)	
	WARM MIX ASPHALT PATCHING
	MILL AND WARM MIX ASPHALT OVERLAY
	PROPOSED TRACK PANELS

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

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GENERAL NOTES

- 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.
- SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
( X ) INSIGNIFICANT	NONE
( ) MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MEDIUM	THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
( ) MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR PRIOR TO THE EXECUTION OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

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

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

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

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

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

( )	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
( X )	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.

- THE DISTURBED AREA FOR THIS PROJECT IS 0.101 ACRES.

PROJECT NOTES

SECTION 100

- 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.

SECTION 200

- THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG THE PROPOSED CONSTRUCTION AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF CONFLICTS EXIST. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 208000, BUT ONLY TO THE ACTUAL DEPTH EXCAVATED.

SECTION 200 (CONTINUED)

- ITEMS TO BE REMOVED UNDER ITEM 211501 - REMOVAL OF RAILROAD CROSSING SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:  
EXISTING RAIL CROSSING, INCLUDING RAIL, TIES, PANELS, SHIMS, SUBBASE, CONCRETE BASE, AND ALL CONCRETE ASSOCIATED WITH THE CROSSING.
- REMOVAL OF EXISTING UNDERDRAIN IF ENCOUNTERED SHALL BE INCIDENTAL TO ITEM 202000. CONNECTING TO AN EXISTING UNDERDRAIN SYSTEM SHALL BE INCIDENTAL TO THE CONTRACT IF REQUIRED.
- UNSUITABLE MATERIALS FROM THE RAIL BED, ROADWAY AND UNDERCUT EXCAVATION SHALL NOT BE USED AS FILL AND SHALL BE LEGALLY DISPOSED OF OUTSIDE THE PROJECT AREA. ALL COSTS ASSOCIATED WITH THE REMOVAL AND DISPOSAL OF THIS MATERIAL SHALL BE INCIDENTAL TO THE ITEM BEING REMOVED.
- THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, SHALL BE DIRECTED TO USE ON THE PROJECT BORROW MATERIALS AS MAY BE FOUND IN THE EXCAVATIONS THAT ARE DETERMINED BY THE ENGINEER TO BE SUITABLE FOR USE ELSEWHERE WITHIN THE PROJECT. PAYMENT FOR PLACING THESE BORROW MATERIALS AT LOCATIONS AS DIRECTED BY THE ENGINEER SHALL BE INCIDENTAL TO THE ITEM THAT GENERATED THE MATERIAL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DRY OR WET THE MATERIALS, IF NEEDED, SO THAT THE MATERIALS WILL MEET THE REQUIREMENTS OF ITS INTENDED USE. THE CONTRACTOR MAY, WITH APPROVAL OF THE ENGINEER, STOCKPILE MATERIALS TO MEET THESE REQUIREMENTS. HOWEVER, MOVING THE MATERIAL FROM THE STOCKPILE AND THEN UTILIZING THE MATERIALS SHALL NOT BE MEASURED FOR PAYMENT. ALL MATERIALS ENCOUNTERED IN THE EXCAVATIONS OF THE PROJECT THAT ARE NOT USED ELSEWHERE ON THE PROJECT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH STOCKPILING MATERIAL, MOVING ANY MATERIAL FROM ANY STOCKPILES, WETTING AND/OR DRYING THE MATERIAL, OR REMOVAL AND FINAL DISPOSAL SHALL BE INCIDENTAL TO THE ITEM THAT GENERATED THAT MATERIAL.
- ROADSIDE AMENITIES WITHIN THE LIMITS OF CONSTRUCTION OR EASEMENT AREAS THAT ARE TO REMAIN IN PLACE AND ARE NOTED BY "DND" SHALL BE PROTECTED BY THE CONTRACTOR WITH SAFETY FENCE OR OTHER MEASURES AS DIRECTED BY THE ENGINEER. ALL COSTS SHALL BE INCIDENTAL TO THE CONTRACT. ANY DAMAGE TO THESE TO THESE AMENITIES WHICH IS DONE BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL USE DELAWARE NO. 57 STONE TO BACKFILL ALL UNDERCUT AREAS AS DIRECTED BY THE ENGINEER IN THE FIELD. ALL COSTS PAID UNDER ITEM #302012 - DELAWARE NO. 57 STONE.

SECTION 300

- A. THE CONTRACTOR MAY ELECT TO USE THE FOLLOWING MATERIALS FOR ITEM 302008 (GRADED AGGREGATE BASE COURSE, TYPE B) PROVIDED THEY MEET THE REQUIREMENTS OF ITEM 302008. DELDOT'S M&R SECTION SHALL HAVE THE FINAL APPROVAL ON USING THE MATERIAL:
  - CRUSHED STONE (PER STANDARD SPEC. 821)
  - CRUSHED CONCRETE (PER STANDARD SPEC. 821)
  - HOT MIX MILLINGS (PER SPECIAL PROVISION 302514)

THE CONTRACTOR WILL NOT BE ALLOWED TO MIX DIFFERENT MATERIALS (OR SIMILAR MATERIALS FROM ANY DIFFERENT SOURCES) TO MEET THE REQUIREMENTS OF 302008. ALL 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 PROJECT RESIDENT SHALL AGREE ON THE LIMITS OF EACH SOURCE OF MATERIAL PRIOR TO PLACEMENT.

B. THE QUANTITY USED FOR BASE COURSE OF EACH OF THE ABOVE LISTED MATERIALS WILL BE THE CONTRACTOR'S CHOICE, WITH THE TOTAL MEETING THE ADVERTISED QUANTITY OF ITEM 302008.

C. THE CONTRACTOR MAY ALSO ELECT TO RECYCLE MILLINGS FOR THE USE IN HOT MIX AS PERMITTED BY THE STANDARD SPECIFICATIONS. THE OF THE QUANTITY OF MILLINGS USED FOR THIS PURPOSE, OR FOR BASE COURSE, LIES WITH THE CONTRACTOR.

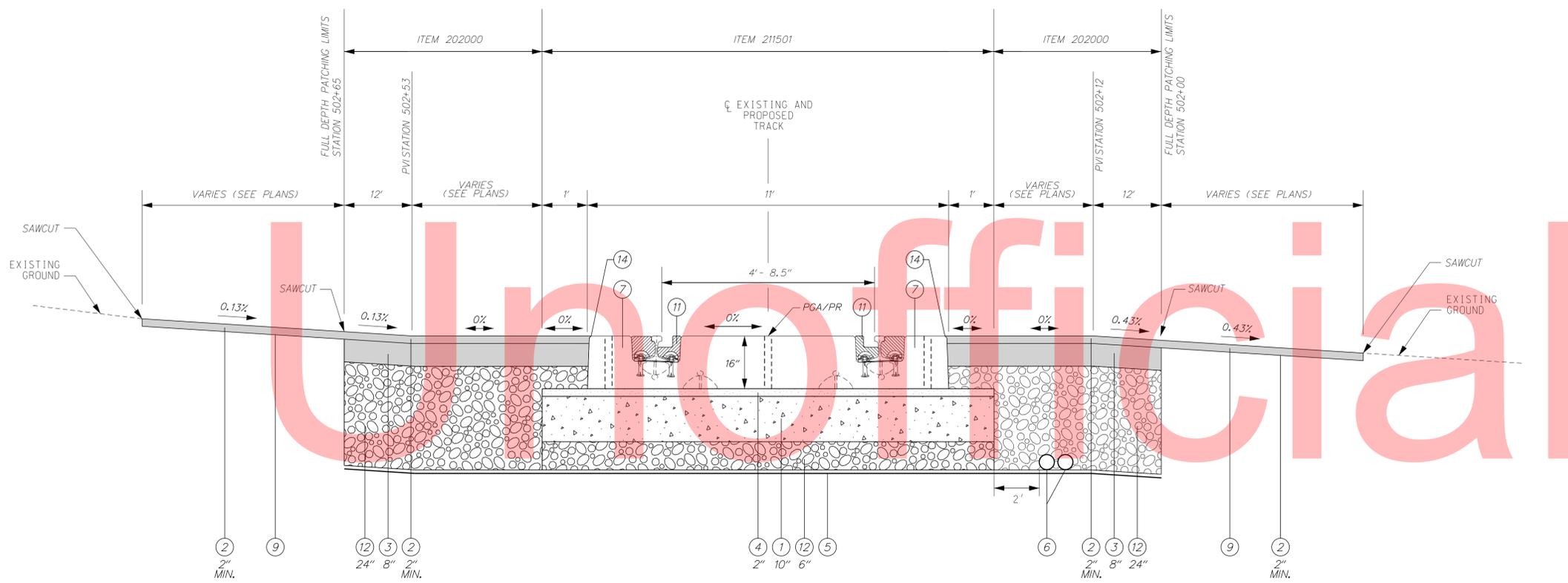
- D. HOT MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:
- MATERIAL MADE AVAILABLE WHEN MILLED ON THIS CONTRACT.
  - MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 302008
  - MILLED MATERIAL FURNISHED ON THE JOB FROM THE CONTRACTOR'S YARD OR OTHER OUTSIDE SOURCE. ALL MILLED MATERIALS SHALL BE REQUIRED TO MEET THE MATERIAL REQUIREMENTS OF ITEM 302514.

E. PAYMENT CLARIFICATION:

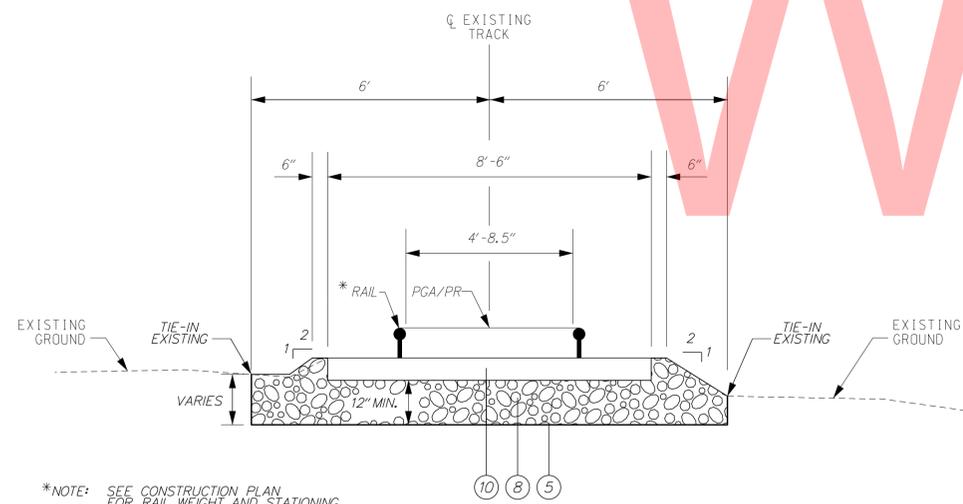
- SHOULD THE CONTRACTOR ELECT TO MILL PORTIONS OF HOT MIX SHOWN ON THE PLANS TO BE REMOVED UNDER ITEM 202000, THE COST OF MILLING THIS HOT MIX WILL BE INCIDENTAL TO ITEM 202000. THE MILLINGS GENERATED MAY BE RECYCLED INTO HOT MIX, UTILIZED FOR BASE COURSE, OR DISPOSED OF TO AN APPROVED SITE. HAULING COSTS FOR DISPOSAL AND/OR RECYCLING ARE INCIDENTAL TO ITEM 202000.
- MILLINGS GENERATED MAY BE RECYCLED INTO HOT MIX, UTILIZED FOR BASE COURSE OR DISPOSED BY THE CONTRACTOR TO AN APPROVED SITE. NO SEPARATE PAYMENT WILL BE MADE FOR TRANSPORTING MILLINGS ON SITE OR TO AN APPROVED SITE.
- 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.
- MILLINGS USED FOR BASE COURSE SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF PROVISION 302514. 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 302008.
- ALL COSTS TO UTILIZE THE MILLINGS IN HOT MIX WILL BE INCIDENTAL TO THE UNIT PRICE BID FOR THE HOT MIX ITEM USING THE RECYCLED MATERIAL.
- SPECIAL PROVISION 302514 IS PROVIDED TO SPECIFY THE MEANS OF LAY DOWN AND COMPACTION AS THE MATERIAL REQUIREMENTS FOR MILLINGS USED AS BASE COURSE. ALL COSTS TO BRING THE MILLINGS INTO COMPLIANCE WITH THE REQUIREMENTS OF 302514 AND THE QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 302008.

SECTION 700

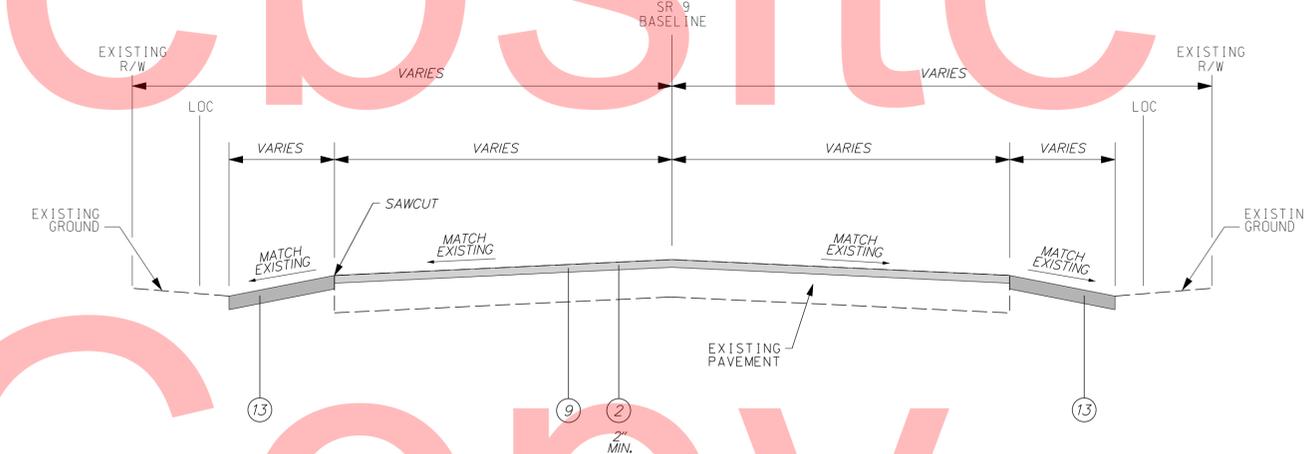
- STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED ALONG THE CENTERLINE OF THE STRUCTURE WITH ITS INTERSECTION TO THE FLOWLINE FOR CURB INLETS, THE CENTER OF THE STRUCTURE FOR LAWN BASINS AND JUNCTION BOXES, AND THE CENTER OF THE LID FOR MANHOLES.
  - ALL DISTURBED AREAS WITHIN THE LIMIT OF CONSTRUCTION, SHALL BE TOPSOILED (6" MINIMUM), SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER. ALL COSTS ARE PAID UNDER THE RESPECTIVE ITEMS BEING INSTALLED.
  - THE CONTRACTOR SHALL INSTALL ALL PERMANENT SIGNAGE AND TEMPORARY SIGNAGE AS SHOWN ON THE CONTRACT DOCUMENTS. ALL COSTS COVERED UNDER THE APPROPRIATE ITEMS.
  - ALL PAVED AREAS (INCLUDING DRIVEWAYS) TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.
  - DURING CONSTRUCTION OF THE RAIL CROSSING, ALL BARE AREAS SHALL BE STABILIZED AT THE END OF EACH WORK DAY. BARE AREAS SHALL BE EITHER PERMANENTLY STABILIZED OR COVERED WITH STONE.
- MISCELLANEOUS
- THERE ARE NO ENVIRONMENTAL PERMITS ASSOCIATED WITH THIS PROJECT. AS SUCH, AN ENVIRONMENTAL COMPLIANCE SHEET WAS NOT PREPARED.
  - THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL RESIDENTS AND BUSINESSES DURING CONSTRUCTION ACTIVITIES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ALL COSTS INCIDENTAL TO THE CONTRACT.
  - REQUESTS FOR MATERIAL SOURCES FOR ALL SPECIALTY ITEMS AND FOR ALL REQUIRED CONTRACT SHOP DRAWINGS SHALL BE SUBMITTED TO CENTURY ENGINEERING, INC., 4134 NORTH DUPONT HIGHWAY, DOVER, DE 19901, ATTENTION MR. ANDY WASLYN. SHOP DRAWING SUBMITTAL PROCEDURES WILL BE ESTABLISHED AT THE PRECONSTRUCTION MEETING. MATERIAL SOURCE REQUESTS FOR ALL OTHER CONTRACT ITEMS SHALL BE SUBMITTED TO DELDOT MATERIALS AND RESEARCH, PO BOX 778, DOVER, DE 19903, ATTENTION MR. GREG HAINSWORTH.
  - ALL WORK SHALL TAKE PLACE WITHIN RAILROAD RIGHT OF WAY OWNED BY NORFOLK SOUTHERN AND/OR PRINTPACK, INC., AND/OR STATE MAINTAINED RIGHT OF WAY. ALL WORK PERFORMED OUTSIDE OF THE STATE MAINTAINED RIGHT OF WAY WAS APPROVED AS PART OF A WRITTEN AGREEMENT WITH DELDOT, NORFOLK SOUTHERN, AND PRINTPACK, INC., DATED MAY 22, 2014.
  - ALL EXISTING 136 RE RAIL AND 136 RE TIE PLATES, TO BE REPLACED, SHALL BE STOCKPILED ON NORFOLK SOUTHERN'S PROPERTY. THE STOCKPILE LOCATION SHALL BE COORDINATED WITH STEVE GUNTHER FROM NORFOLK SOUTHERN. ALL OTHER RAIL AND RAIL COMPONENTS NOT MEETING 136 RE SHALL BE HAULED OFFSITE AND DISPOSED OF PROPERLY. ALL COSTS FOR THIS WORK WILL BE INCIDENTAL TO ITEM #211501 - REMOVAL OF RAILROAD CROSSING.



**TYPICAL SECTION AT RIVER ROAD (SR 9)  
PRECAST CONCRETE TRACK BOX**



**TYPICAL SECTION AT RIVER ROAD (SR 9)  
TRACK PANELS**  
STATION 202+12.07 TO STATION 202+32.07  
STATION 202+92.07 TO STATION 203+79.01



**TYPICAL SECTION - RIVER ROAD (SR 9) ROADWAY**

NOTE: IN ORDER TO TIE INTO THE PROPOSED RAIL PROFILE, THE TRANSITION OF THE NORMAL CROSS SLOPE SHALL START 150' BEFORE THE CONCRETE TRACK BOX FROM EACH DIRECTION.

- LEGEND**
- ① ITEM 208001 - FLOWABLE FILL
  - ② ITEM 401830 - WMA, SUPERPAVE TYPE C, 160 GYRATIONS, PG 70-22 (NON-CARBONATE STONE)
  - ③ ITEM 401822 - WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22, PATCHING (3 LIFTS)
  - ④ ITEM 302015 - DELAWARE NO. 10 STONE
  - ⑤ ITEM 713500 - GEOTEXTILES STABILIZATION, SPECIAL
  - ⑥ 4" SCHEDULE 80 PVC CONDUIT (INCIDENTAL TO ITEM 746619)
  - ⑦ ITEM 601529 - CONCRETE HIGHWAY/RAIL AT-GRADE CROSSING SYSTEM (PRECAST CONCRETE TRACK BOX)
  - ⑧ ITEM 302011 - DELAWARE NO. 3 STONE
  - ⑨ ITEM 760507 - PAVEMENT - MILLING, HOT-MIX, VARIABLE DEPTH
  - ⑩ ITEM 601516 - INSTALLATION OF RAILROAD TRACK PANELS
  - ⑪ RAILROAD CROSSING RUBBER INSERTS (INCIDENTAL TO ITEM 601529)
  - ⑫ ITEM 302008 - GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING
  - ⑬ ITEM 732002 - TOPSOIL, 6" DEPTH  
ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
  - ⑭ HOT-POURED JOINT SEALANT (INCIDENTAL TO ITEM 601529)

PR - POINT OF ROTATION  
PDGA - PROFILE DITCH GRADE APPLICATION  
PGA - PROFILE GRADE APPLICATION

MAXIMUM SINGLE LIFTS FOR THE FOLLOWING MATERIALS AFTER COMPACTION ARE:  
2" = WARM MIX, TYPE C  
3" = WARM MIX, TYPE B  
6" = WARM MIX, BCBC  
8" = GABC

- NOTES:**
1. MAXIMUM ALGEBRAIC DIFFERENCE OF CROSS SLOPES SHALL NOT EXCEED 8%.
  2. CONTRACTOR SHALL TEST ROLL ALL SUBGRADE SOIL, PER STANDARD SPECIFICATION 202.02, PRIOR TO THE PLACEMENT OF THE SUBBASE COURSE. ALL UNSUITABLE MATERIAL FOUND SHALL BE EXCAVATED TO THE DEPTH OF STABLE SOIL AND BACKFILLED WITH APPROVED MATERIAL. THE CONTRACTOR SHALL COMPACT ALL MATERIALS TO MEET THE DELDOT STANDARD SPECIFICATIONS.
  3. SEE GRADES AND GEOMETRICS FOR FURTHER DETAILS.
  4. DELAWARE NO. 57 STONE SHALL BE UTILIZED FOR ALL UNDERCUT LOCATIONS AS DIRECTED BY ENGINEER IN THE FIELD.
  5. FLOWABLE FILL HAS SHOWN HISTORICALLY TO SHRINK AS THE MIXTURE CURES. THE SHRINKAGE FACTOR HAS MEASURED APPROXIMATELY 1 IN. PER 8 IN. POURED. THE CONTRACTOR SHALL POUR BASE SO THAT THE DEPTH OF DELAWARE NO. 10 STONE SHALL BE BETWEEN 1 - 2 INCHES TO MEET PROPOSED ELEVATIONS.
  6. FLOWABLE FILL SHALL BE POURED UTILIZING FORMS AND THE MIXTURE SHALL PROVIDE 350-500 PSI STRENGTH. COSTS OF FORMWORK AND BRACING TO BE INCIDENTAL TO ITEM 208001. FORMS SHALL NOT BE REMOVED UNTIL THE FLOWABLE FILL IS SELF-SUPPORTING. GABC SHALL BE PLACED TO THE TOP OF THE FLOWABLE FILL AND A MINIMUM WIDTH OF 4 FEET TO PROVIDE ADDITIONAL LATERAL SUPPORT PRIOR TO SETTING THE PRECAST CONCRETE TRACK PANELS. PRECAST PANELS SHALL NOT BE PLACED UNTIL CYLINDER BREAKS HAVE VERIFIED A FLOWABLE FILL STRENGTH OF AT LEAST 350 PSI.

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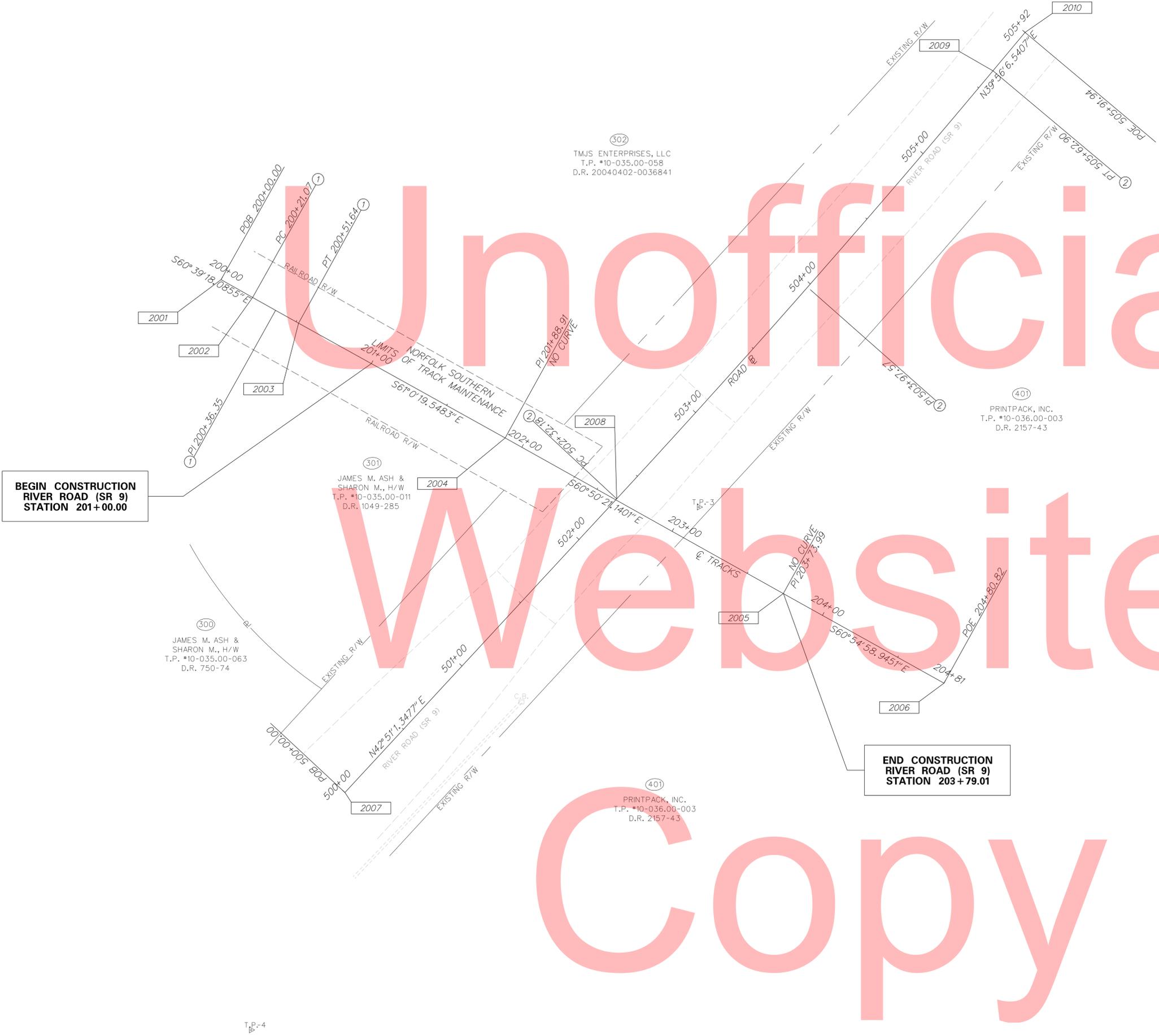
ADDENDUMS / REVISIONS	

NOT TO SCALE

CONTRACT T201400504	BRIDGE NO. -
COUNTY NEW CASTLE	DESIGNED BY: AMW
	CHECKED BY: WFC

<b>PROPOSED TYPICAL SECTIONS</b>	SHEET NO. 4
	TOTAL SHTS. 15

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**CURVE ①**

STATION	NORTHING	EASTING	
PC ( 2002 )	200+21.07	600443.2910	605621.0530
PI ( )	200+36.35	600435.7982	605634.3805
CC ( )	200+51.64	604801.7152	608071.3873
PT ( 2003 )	200+51.64	600428.3870	605647.7536
Radius:		5000.0000	
Delta:		0° 21' 01.4628" Left	
Degree of Curvature(Chord):		1° 08' 45.3649"	
Length:		30.5787	
Tangent:		15.2894	
Chord:		30.5787	
Middle Ordinate:		0.0234	
External:		0.0234	
Tangent Direction:		S 60° 39' 18.0855" E	
Radial Direction:		S 29° 20' 41.9145" W	
Chord Direction:		S 60° 49' 48.8169" E	
Radial Direction:		S 28° 59' 40.4517" W	
Tangent Direction:		S 61° 00' 19.5483" E	

**CURVE ②**

STATION	NORTHING	EASTING	
PC ( 2008 )	502+32.18	600326.5760	605832.6113
PI ( )	503+97.57	600447.8335	605945.0952
CC ( )	604747.1359	601067.2519	
PT ( 2009 )	505+62.90	600574.6549	606051.2665
Radius:		6500.0000	
Delta:		2° 54' 54.8070" Left	
Degree of Curvature(Arc):		0° 52' 53.3047"	
Length:		330.7217	
Tangent:		165.3965	
Chord:		330.6860	
Middle Ordinate:		2.1033	
External:		2.1040	
Tangent Direction:		N 42° 51' 01.3477" E	
Radial Direction:		S 47° 08' 58.6523" E	
Chord Direction:		N 41° 23' 33.9442" E	
Radial Direction:		S 50° 03' 53.4593" E	
Tangent Direction:		N 39° 56' 06.5407" E	

**BEGIN CONSTRUCTION  
RIVER ROAD (SR 9)  
STATION 201+00.00**

**END CONSTRUCTION  
RIVER ROAD (SR 9)  
STATION 203+79.01**

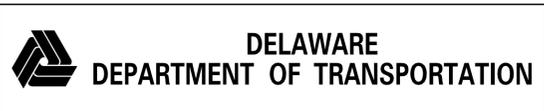
**CONSTRUCTION ALIGNMENT CONTROL**

POINT	STATION	OFFSET	NORTHING	EASTING
2001	200+00.00	0.00	600453.6143	605602.6909
2002	200+21.07	0.00	600443.2910	605621.0530
2003	200+51.64	0.00	600428.3870	605647.7536
2004	201+88.91	0.00	600361.8498	605767.8167
2005	203+73.99	0.00	600271.6682	605929.4373
2006	204+80.82	0.00	600219.7395	606022.7976
2007	500+00.00	0.00	600156.3587	605674.7101
2008	502+32.18	0.00	600326.5760	605832.6113
2009	505+62.90	0.00	600574.6549	606051.2665
2010	505+91.94	0.00	600596.9229	606069.9087

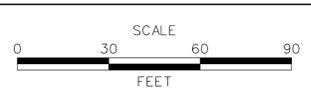
**CONTROL POINTS**

POINT	NORTHING	EASTING	ELEVATION
TP-3	600321.7587	605880.4242	100.00
TP-4	600018.7119	605620.1613	97.35

NOTE: ALL CONTROL VALUES BOTH HORIZONTALLY AND VERTICALLY ARE BASED ON AN ASSUMED DATUM.



ADDENDUMS / REVISIONS



**SR 9 RIVER ROAD (N378) RAILROAD  
CROSSING SAFETY IMPROVEMENTS  
DOT CROSSING NO. 507-888R**

CONTRACT	BRIDGE NO.	-
T201400504	DESIGNED BY:	AMW
COUNTY	CHECKED BY:	WFC
NEW CASTLE		

**HORIZONTAL AND  
VERTICAL CONTROL**

SHEET NO.	5
TOTAL SHTS.	15

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COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
4001	202+32.07	0.00'	600340.8206	605805.5046
4002	202+37.07	0.00'	600338.3843	605809.8708
4003	202+87.07	0.00'	600314.0212	605853.5336
4004	202+92.07	0.00'	600311.5849	605857.8999
4005	502+15.80	31.61	600293.0738	605844.6490
4006	502+54.95	-31.29	600364.4994	605825.0529

NOTES:

- THE CONTRACTOR SHALL COORDINATE THE RAIL CLOSURE WITH PRINTPACK, INC. IN ORDER AS TO NOT IMPAIR PLANT OPERATIONS. THIS NOTICE SHALL BE GIVEN A MINIMUM OF FOURTEEN (14) CALENDAR DAYS PRIOR TO THE START OF CONSTRUCTION. THE ADDRESS OF PRINTPACK, INC. AND THEIR POINT OF CONTACT IS:

PRINTPACK, INC.  
 600 GRANTHAM LANE  
 NEW CASTLE, DE 19720  
  
 MR. DAN BLOOM  
 PLANT MANAGER  
 PHONE: (302) 323-4043

- THE CURRENT LABOR AGREEMENTS BETWEEN NORFOLK SOUTHERN RAILWAY CORPORATION (NS AND/OR RAILROAD) AND ITS LABOR FORCE MANDATES THAT ALL WORK INVOLVED IN THE INSTALLATION OF ALL COMPONENTS ON NS PROPERTY NECESSARY FOR THE SAFE AND NORMAL OPERATION OF RAIL TRAFFIC SHALL BE INSTALLED BY THE RAILROAD'S LABOR FORCE, OR OTHERWISE APPROVED.

THIS STATEMENT INCLUDES ALL WORK WITHIN THE AREA MARKED AS "NORFOLK SOUTHERN LIMITS OF TRACK MAINTENANCE" ON THE CONTRACT PLANS. THE TYPE OF RAIL COMPONENTS THAT SHALL BE INSTALLED BY NS PERSONNEL ARE, BUT ARE NOT LIMITED TO, THE FOLLOWING: RAIL, TIES, TIES PLATES, JOINT BARS, INSULATED JOINTS, WIRING, COMPROMISE JOINTS, ETC. ALL MATERIALS, EXCEPT THOSE SALVAGED FOR USE BY NS FORCES, SHALL BE SUPPLIED BY THE CONTRACTOR FOR INSTALLATION BY NS FORCES. COSTS INCLUDED IN ITEM \*601516 AND/OR ITEM \*746619.

- THE CONTRACTOR SHALL INFORM THE NS TRACK SUPERVISOR THAT "THE TRACK IS OUT OF SERVICE" STARTING AT THE WESTERLY RIGHT-OF-WAY OF RIVER ROAD (SR9) TO THE END OF THE SIDING. THIS NOTICE SHALL BE GIVEN A MINIMUM OF FOURTEEN (14) CALENDAR DAYS PRIOR TO THE START OF CONSTRUCTION. POINT OF CONTACT FOR NS SHALL BE: MR. STEVE GUNTHER

- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING NS PERSONNEL FOURTEEN (14) CALENDAR DAYS PRIOR TO REQUIRING INSTALLATION OF THE TRACK COMPONENTS LISTED IN NOTE NUMBER 2:

FOR TRACK COMPONENTS: MR. STEVE GUNTHER  
 NS TRACK SUPERVISOR  
 PHONE: (610) 297-2956

FOR SIGNALIZATION COMPONENTS: MR. SCOTT REED  
 NS C&S SUPERVISOR  
 PHONE: (410) 378-5616

- NEW TRACK CONSTRUCTION SHALL FOLLOW THE EXISTING ALIGNMENT AND PROPOSED PROFILE ELEVATION WITHIN THE CONSTRUCTION LIMITS. NO DEVIATIONS OF THE EXISTING ALIGNMENT AND/OR RAIL ELEVATIONS SHALL BE ALLOWED, UNLESS DIRECTED BY THE ENGINEER.

- ALL EXISTING UTILITIES ARE TO REMAIN AS IS UNLESS OTHERWISE DIRECTED BY ENGINEER IN THE FIELD. THE CONTRACTOR SHALL UTILIZE CAUTION WHILE EXCAVATING FOR TRACK AND SIGNAL INSTALLATION.

- THE CONTRACTOR SHALL TOPSOIL AND SEED ALL DISTURBED SOIL AREAS AS DIRECTED BY THE ENGINEER.

- THE PROPOSED SIGNALS SHALL BE PLACED A MINIMUM OF 14 FEET FROM THE EDGE OF THE TRAVEL LANE OUTSIDE OF THE CLEAR ZONE.

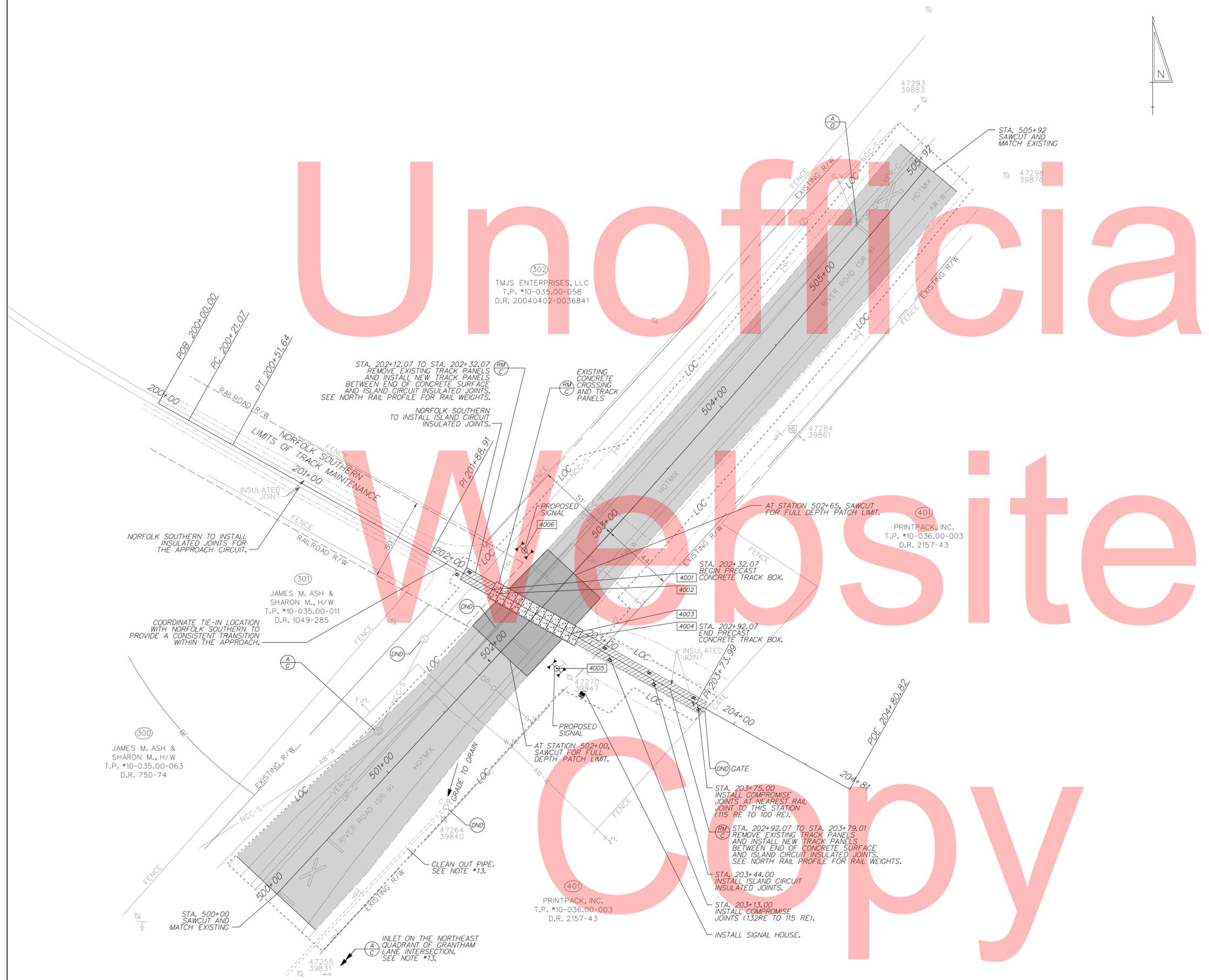
- THE FOUNDATIONS SHOULD NOT EXCEED THE 4" MAXIMUM REVEAL GUIDANCE DENOTED IN THE DEMUTCD. THE CONTRACTOR IS RESPONSIBLE FOR THE FOUNDATION DESIGN.

- ALL WORK SHALL TAKE PLACE WITHIN RAILROAD RIGHT OF WAY OWNED BY NORFOLK SOUTHERN AND/OR PRINTPACK, INC., AND/OR STATE MAINTAINED RIGHT OF WAY. ALL WORK PERFORMED OUTSIDE OF THE STATE MAINTAINED RIGHT OF WAY WAS APPROVED AS PART OF A WRITTEN AGREEMENT WITH DELDOT AND PRINTPACK, INC., DATED MAY 22, 2014.

- COORDINATE LOCATION OF SIGNAL HOUSE WITH NORFOLK SOUTHERN.

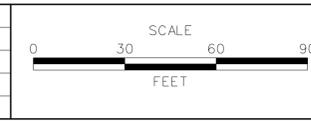
- CONTRACTOR SHALL GRADE TO DRAIN AROUND THE INLET AT STATION 501+08 RT., SO THAT THE PAVEMENT NORTH OF THE INLET WILL DRAIN INTO THE CATCH BASIN. ALL COSTS SHALL BE INCIDENTAL TO ITEM \*732002.

- AT GRANTHAM LANE INTERSECTION, THE CONTRACTOR SHALL CLEAN OUT AND REPAIR THE INLET ON THE NORTHEAST QUADRANT AND ENSURE A STABILIZED SURROUNDING. THE CONTRACTOR SHALL POUR A CONCRETE COLLAR TO INCLUDE THE LIMITS OF DAMAGED PAVEMENT AROUND THE CATCH BASIN, AS DIRECTED IN THE FIELD BY THE ENGINEER. ALL COSTS SHALL BE INCIDENTAL TO ITEM \*71001 - ADJUSTING AND REPAIRING EXISTING DRAINAGE INLET. IN ADDITION, THE CONTRACTOR SHALL FLUSH EXISTING PIPES TO REMOVE ALL SEDIMENT WITHIN THE DRAINAGE SYSTEM FROM THE INLET AT STATION 501+08 RT. TO THE INLET LOCATED ON THE SOUTHEAST QUADRANT OF GRANTHAM LANE INTERSECTION. ALL COSTS SHALL BE INCIDENTAL TO THE CONTRACT.



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ADDENDUMS / REVISIONS

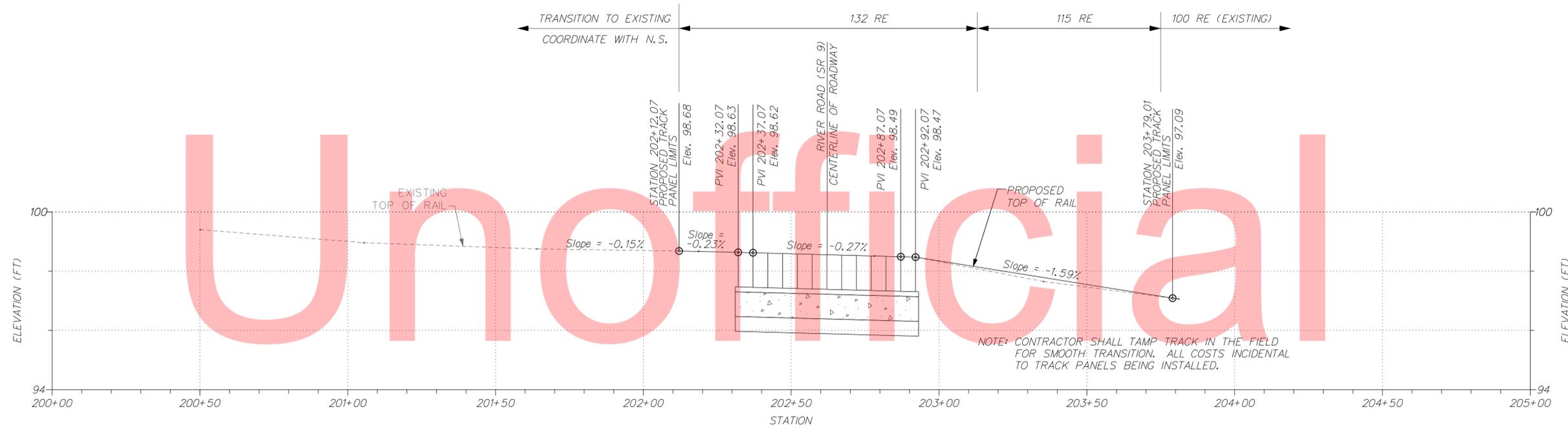


**SR 9 RIVER ROAD (N378) RAILROAD**  
**CROSSING SAFETY IMPROVEMENTS**  
**DOT CROSSING NO. 507-888R**

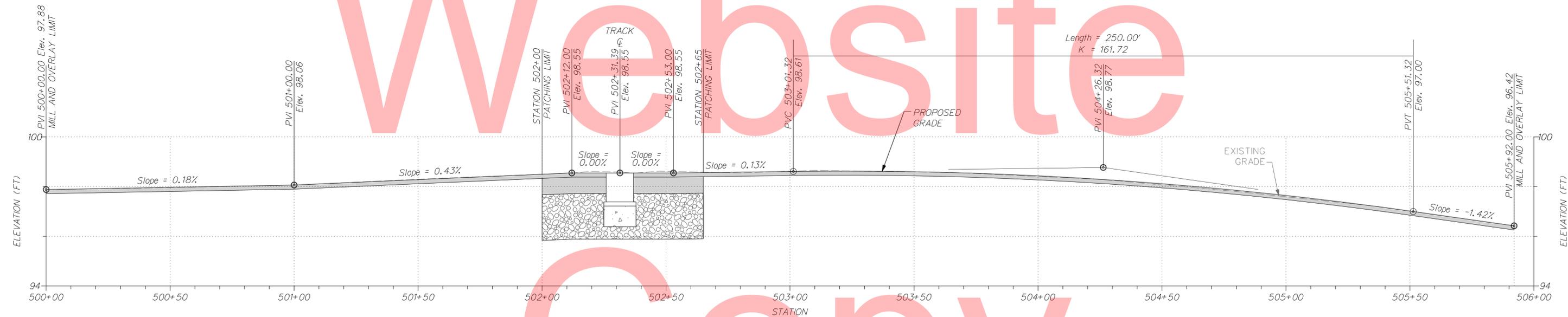
CONTRACT	BRIDGE NO.	-
T201400504	DESIGNED BY:	AMW
COUNTY	CHECKED BY:	WFC
NEW CASTLE		

<b>CONSTRUCTION PLAN</b>	
SHEET NO.	6
TOTAL SHTS.	15

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**RIVER ROAD (SR 9)  
NORTH RAIL PROFILE**



**RIVER ROAD (SR 9)  
CENTERLINE OF ROADWAY**



ADDENDUMS / REVISIONS	

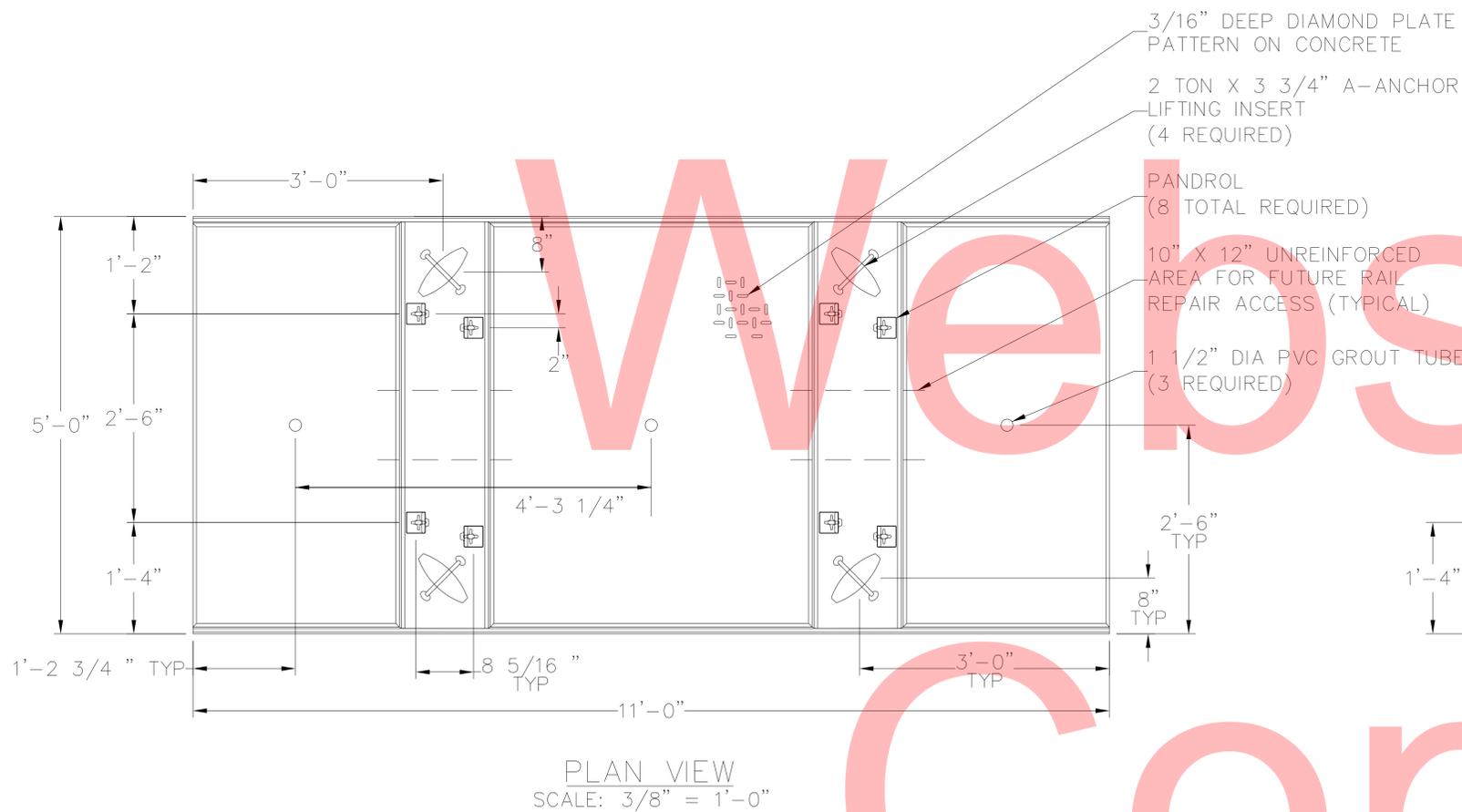
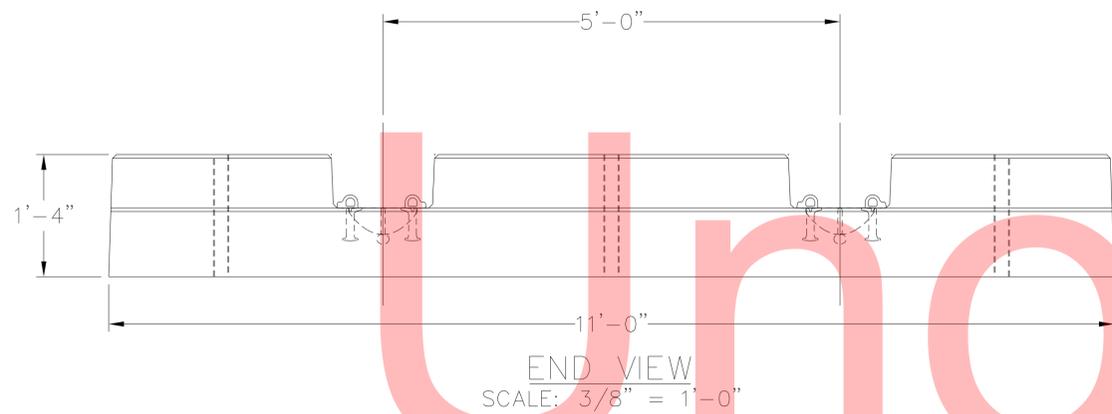


**SR 9 RIVER ROAD (N378) RAILROAD  
CROSSING SAFETY IMPROVEMENTS  
DOT CROSSING NO. 507-888R**

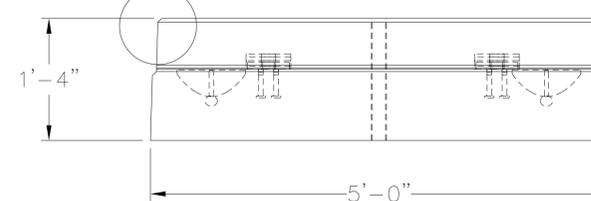
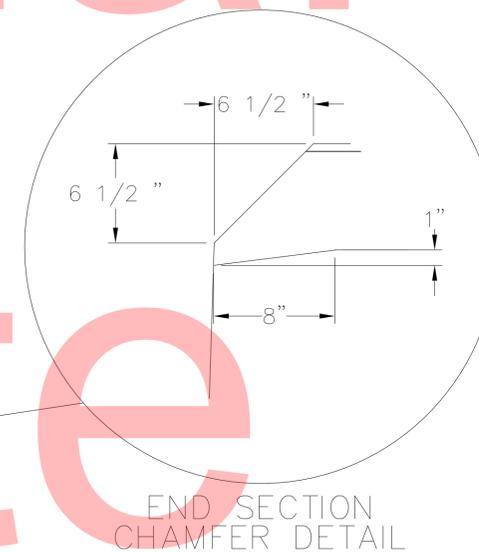
CONTRACT	T201400504	BRIDGE NO.	-
COUNTY	NEW CASTLE	DESIGNED BY:	AMW
		CHECKED BY:	WFC

<b>PROFILES</b>	SHEET NO.	7
	TOTAL SHTS.	15

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- 3/16" DEEP DIAMOND PLATE PATTERN ON CONCRETE
- 2 TON X 3 3/4" A-ANCHOR LIFTING INSERT (4 REQUIRED)
- PANDROL (8 TOTAL REQUIRED)
- 10" X 12" UNREINFORCED AREA FOR FUTURE RAIL REPAIR ACCESS (TYPICAL)
- 1 1/2" DIA PVC GROUT TUBE (3 REQUIRED)

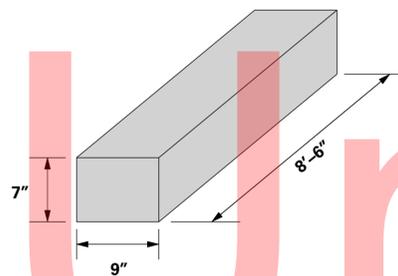


**PRECAST CONCRETE TRACK BOX**

NOTES:

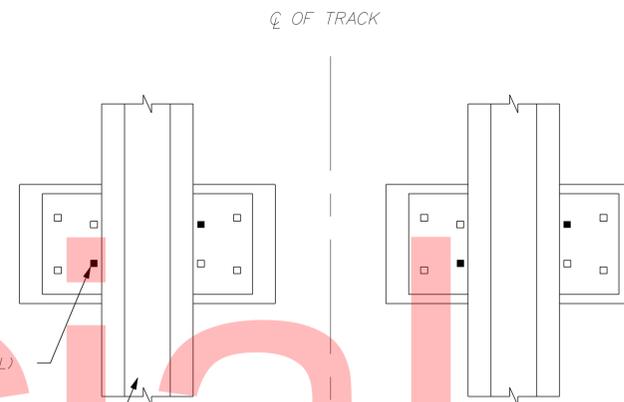
1. ALL COSTS ARE PAID FOR UNDER ITEM #601529.
2. PANDROLS MUST NOT TOUCH REBAR OR LIFTING DEVICES.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SIGNED AND SEALED BY A REGISTERED DELAWARE PROFESSIONAL ENGINEER FOR APPROVAL BY THE ENGINEER.
4. THIS PROJECT WILL UTILIZE 132 RE RAIL THROUGHOUT THE CROSSING. THE CONTRACTOR SHALL CONFIRM THAT THE BLOCK OUT WILL ACCOMMODATE THE PROPOSED 132 RE RAIL.

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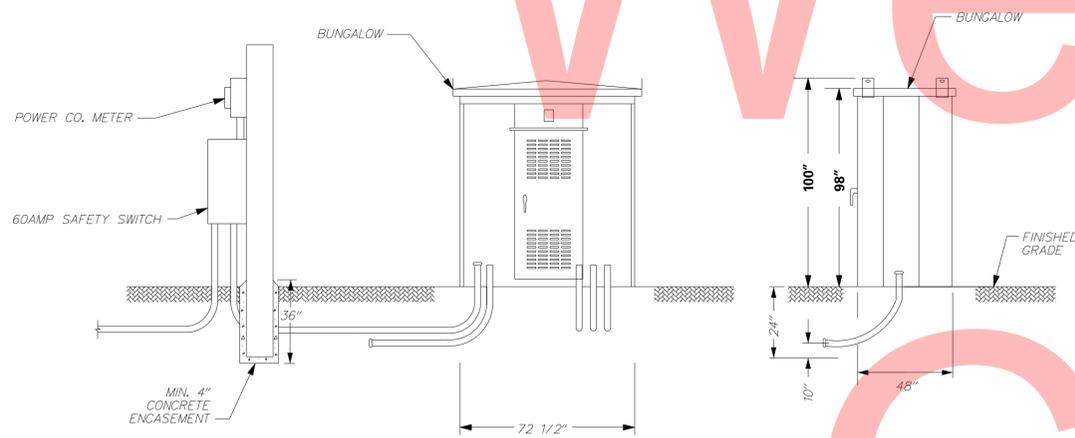
**CROSSTIE DETAIL**  
NOT TO SCALE

**NOTE:** TIES SHALL BE PLACED MIN. 20" CENTER TO CENTER, WITH THE 9" SIDE PLACED HORIZONTAL.



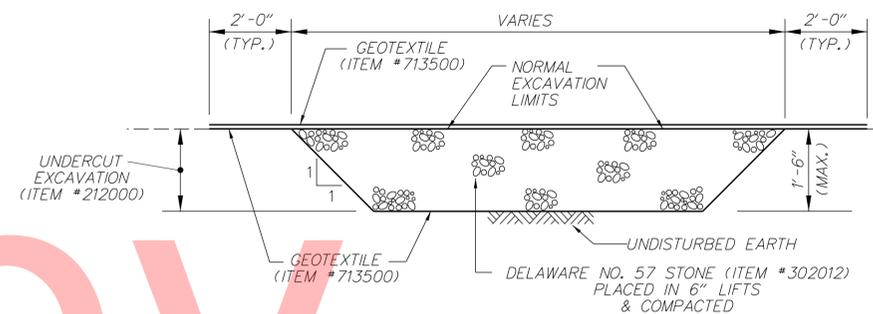
**TRACK SPIKING PATTERN**  
NOT TO SCALE

**NOTE:** ALL COSTS PAID UNDER ITEM #601529 CONCRETE HIGHWAY / RAIL AT-GRADE CROSSING SYSTEM AND ITEM #601516 - INSTALLATION OF RAILROAD TRACK PANEL.



**PRIMARY SERVICE AND SIGNAL HOUSE ELEVATION**  
NOT TO SCALE

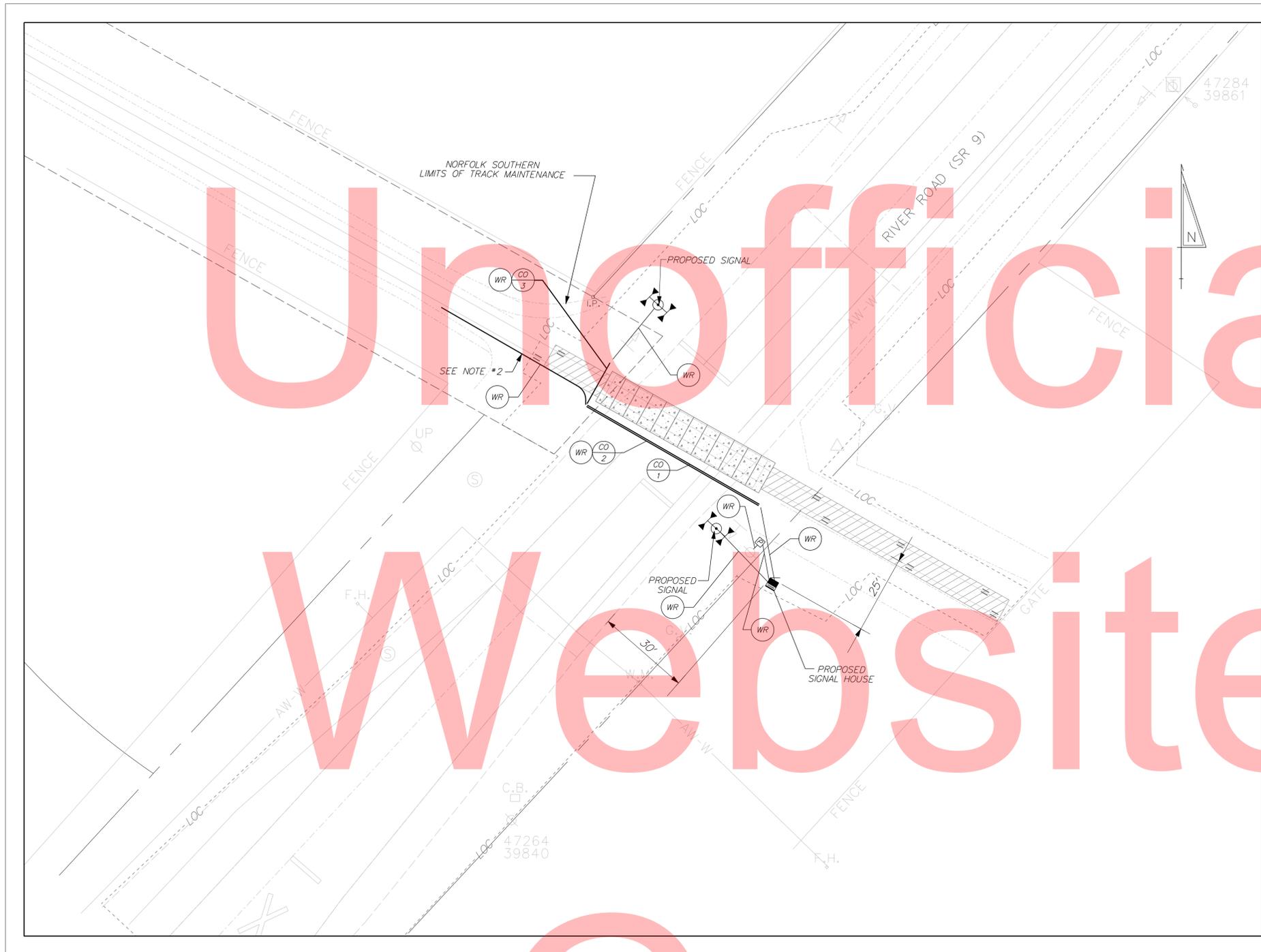
**NOTE:** 1. SIGNAL HOUSE SHALL BE INSTALLED SO IT DOES NOT BLOCK SIGNAL DISTANCE.  
2. ALL COSTS PAID UNDER ITEM #746619 - RAILROAD SIGNALIZATION, INCLUDING METER AND SERVICE CONNECTION.



**UNDERCUT EXCAVATION**  
NOT TO SCALE

**NOTE:** UNDERCUT EXCAVATION SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER.

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**NOTES:**

- THE SIGNALIZATION CONTRACTOR SHALL DESIGN A TYPE "C" CIRCUIT TRAIN-ACTUATED HIGHWAY/RAIL AT-GRADE WARNING SYSTEM WITH THE REQUIRED ITEMS INSTALLED AS PART OF THIS CONTRACT. SEE SPECIAL PROVISION ITEM 746619 - RAILROAD SIGNALIZATION, FOR FURTHER INFORMATION.
- THE ISLAND AND APPROACH CIRCUIT LOCATIONS ON THE RAILROAD WEST OF THE CROSSING SHALL REMAIN IN THE NORMAL POSITIONS (ISLAND CIRCUIT 50 FEET OFFSET FROM THE EDGE OF THE TRAVEL LANE AND APPROACH INSULATED JOINTS LOCATED BASED ON TRACK SPEED. SIGNAL CIRCUIT ON THE EAST SIDE OF SR 9 SHALL CONSIST OF ONLY THE ISLAND INSULATED JOINTS, LOCATED A MINIMUM DISTANCE OF 75 FEET FROM THE EDGE OF THE ROAD TRAVEL LANE. THERE IS INSUFFICIENT SPACE FOR INSTALLATION OF THE EASTERN APPROACH CIRCUIT SO THE ISLAND CIRCUIT WILL ACT AS THE APPROACH CIRCUIT.
- THE CURRENT LABOR AGREEMENTS BETWEEN NORFOLK SOUTHERN RAILWAY CORPORATION (NS AND/OR RAILROAD) AND ITS LABOR FORCE MANDATES THAT ALL WORK INVOLVED IN THE INSTALLATION OF ALL COMPONENTS NECESSARY FOR THE SAFE AND NORMAL OPERATION OF RAIL TRAFFIC SHALL BE INSTALLED BY THE RAILROAD'S LABOR FORCE, UNLESS OTHERWISE APPROVED BY NS. THIS STATEMENT INCLUDES ALL WORK WITHIN THE AREA MARKED AS "NORFOLK SOUTHERN LIMITS OF TRACK MAINTENANCE" ON THE CONTRACT PLANS. THE TYPE OF RAIL COMPONENTS THAT SHALL BE INSTALLED BY NS PERSONNEL ARE, BUT ARE NOT LIMITED TO, THE FOLLOWING: RAIL, TIES, TIES PLATES, JOINT BARS, INSULATED JOINTS, WIRING, COMPROMISE JOINTS, ETC.
- THE SIGNALIZATION CONTRACTOR SHALL NOTIFY THE FOLLOWING NS PERSONNEL FOURTEEN (14) CALENDAR DAYS PRIOR TO REQUIRING INSTALLATION OF THE TRACK COMPONENTS LISTED IN NOTE NUMBER 2:  
FOR SIGNALIZATION COMPONENTS: MR. SCOTT REED  
NS C&S SUPERVISOR  
PHONE: (410) 378-5616
- THE SIGNALIZATION CONTRACTOR SHALL MAKE AVAILABLE THOSE ITEMS TO BE INSTALLED BY NS LABOR FORCES WITHIN THE NORFOLK SOUTHERN RAILROAD LIMITS OF TRACK MAINTENANCE (I.E. INSULATED JOINTS, TRACK WIRING, BONDING WIRES FOR RAIL HEADS, ETC.) AVAILABLE TO NS WHEN REQUIRED. COST INCLUDED IN ITEM #601516 AND/OR ITEM #746619.
- PROPOSED SIGNALS SHALL BE STAKED OUT FOR APPROVAL PRIOR TO INSTALLATION. ALL COSTS SHALL BE INCIDENTAL TO ITEM #746619.
- ALL COSTS FOR SUPPLYING AND INSTALLING SIGNALIZATION MATERIALS SHALL BE PAID UNDER 746619 - RAILROAD SIGNALIZATION.
- SIGNALIZATION CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER.
- THE INSTALLATION OF CONDUIT SHALL BE COMPLETED CONCURRENTLY WITH THE TRACK INSTALLATION. THE SIGNALIZATION CONTRACTOR SHALL SUPPLY PROPOSED CONDUIT TO THE CONTRACTOR INSTALLING THE TRACK PRIOR TO PAVING THE TRACK BOX.
- ALL EXISTING UTILITIES ARE TO REMAIN AS IS UNLESS OTHERWISE DIRECTED BY ENGINEER IN THE FIELD. THE CONTRACTOR SHALL UTILIZE CAUTION WHILE EXCAVATING FOR TRACK AND SIGNAL INSTALLATION.
- THE CONTRACTOR SHALL COORDINATE WITH DELMARVA ELECTRIC TO INSTALL THE ELECTRICAL SERVICE FOR THE SIGNALIZATION CABINET IN THE NAME OF PRINTPACK, INC. ALL COSTS TO BE INCIDENTAL TO ITEM #746619.

SIGNALIZATION LEGEND	
SYMBOL	DESCRIPTION
	EXISTING UTILITY POLE
	PROPOSED JUNCTION WELL
	PROPOSED SIGNAL HOUSE
	PROPOSED SIGNAL POLE BASE
	PROPOSED SIGNAL HEAD
	SERVICE PEDESTAL
	PROPOSED WIRE RUN IDENTIFIER (* OF WIRE RUN)
	PROPOSED CONDUIT RUN IDENTIFIER (* OF CONDUIT RUN)

CONDUIT RUN SCHEDULE						
CO#	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE/WIRE	
1	1	4"	64'	T	TO BE DETERMINED	
2	1	4"	64'	T	TO BE DETERMINED	
3	1	4"	15'	T	TO BE DETERMINED	

LEGEND  
 X - DENOTES EXISTING  
 B - BORE T - TRENCH O - OPEN CUT  
 NOTE: ALL 4" CONDUIT TO BE SCHEDULE 80 PVC CONDUIT, COSTS INCLUDED IN ITEM 746619.

Copy

TRAFFIC CONTROL NOTES

1. ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL REASONABLY PROVIDE THE LEAST PRACTICABLE OBSTRUCTION TO ROAD USERS, INCLUDING VEHICULAR TRAFFIC, BICYCLE TRAFFIC AND PEDESTRIAN TRAFFIC.
2. ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH: THE CONTRACT DOCUMENTS, THE LATEST EDITION OF THE MANUAL TITLED "STATE OF DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)" (HEREINAFTER REFERRED TO AS THE "DELAWARE MUTCD"), CURRENT STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND SUPPLEMENTAL SPECIFICATIONS, INCLUDING ALL REVISIONS AS OF THE DATE OF THE ENTRANCE PERMIT APPROVAL.
3. THE DEPARTMENT RESERVES THE RIGHT TO STOP THE CONTRACTOR'S OPERATIONS, IF, IN THE OPINION OF THE DEPARTMENT'S REPRESENTATIVE, THE CONTRACTOR'S OPERATIONS ARE NOT IN COMPLIANCE WITH THE DELAWARE MUTCD, THE SPECIFICATIONS OR THE PLANS OR IF THE CONTRACTOR'S OPERATIONS ARE DEEMED UNSAFE.
4. IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TEMPORARY TRAFFIC CONTROL PLAN (TTCP) PROVIDED IN THE PLAN SET OR DESIRES CHANGES TO THE PHASING OR SCOPE OF THE TTCP, THE CONTRACTOR SHALL SUBMIT A NEW TTCP TO THE DISTRICT SAFETY OFFICER FOR APPROVAL PRIOR TO THE START OF WORK AT EACH AND EVERY LOCATION. THE TTCP SHALL BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE AND SHALL BE PREPARED IN ACCORDANCE WITH ALL APPLICABLE DELDOT STANDARDS. THE TTCP SHALL BE SUBMITTED 14 CALENDAR DAYS IN ADVANCE OF STARTING WORK.
5. ALL ROADWAY CLOSURES OR LANE CLOSURES BEYOND THOSE SPECIFIED AND APPROVED IN THE PLANS SHALL BE APPROVED BY THE DISTRICT SAFETY OFFICER A MINIMUM OF TWO WEEKS IN ADVANCE OF THE PROPOSED RESTRICTION.
6. TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE MAINTAINED IN GOOD CONDITION IN ACCORDANCE WITH THE BROCHURE ENTITLED "QUALITY GUIDELINES FOR TEMPORARY TRAFFIC CONTROL DEVICES", PUBLISHED BY THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA). ANY TEMPORARY TRAFFIC CONTROL DEVICES THAT DO NOT MEET THE QUALITY GUIDELINES SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE DEVICES. FAILURE TO COMPLY WILL RESULT IN WORK STOPPAGE.
7. TEMPORARY TRAFFIC CONTROL DEVICES USED ON ALL ROADWAYS OPEN TO THE PUBLIC IN DELAWARE SHALL CONFORM TO THE DELAWARE MUTCD AND SHALL BE IN NEW OR REFURBISHED CONDITION. ALL DEVICES SHALL BE CRASHWORTHY IN ACCORDANCE WITH THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 AND/OR IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO). THE CONTRACTOR SHALL SUBMIT CERTIFICATION FOR ALL TEMPORARY TRAFFIC CONTROL DEVICES USED SPECIFICALLY ON THIS PROJECT TO THE DISTRICT SAFETY OFFICER AT OR PRIOR TO THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL NOT BEGIN WORK OR PLACE ANY TEMPORARY TRAFFIC CONTROL DEVICES UNTIL THE CERTIFICATION OF DEVICES HAS BEEN APPROVED BY THE DISTRICT SAFETY OFFICER.
8. ANY DEFICIENCIES RELATED TO TEMPORARY TRAFFIC CONTROL THAT ARE REPORTED TO THE CONTRACTOR IN WRITING SHALL BE CORRECTED WITHIN 24 HOURS OR AS DIRECTED BY THE DISTRICT SAFETY OFFICER. CORRECTIVE ACTIONS ON SEVERE DEFICIENCIES SHALL BE TAKEN IMMEDIATELY. FAILURE TO COMPLY WILL RESULT IN THE SUSPENSION OF WORK UNTIL DEVICES ARE BROUGHT BACK INTO COMPLIANCE.
9. ACCESS TO ALL BUSINESSES AND RESIDENCES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THIS CONTRACT. ANY TEMPORARY CLOSURE OF A DRIVEWAY OR ENTRANCE FOR TIE-IN PURPOSES SHALL BE COORDINATED WITH THE ENGINEER AND THE PROPERTY OWNER IN ADVANCE OF THE CLOSURE.
10. ACCESS TO ALL TRANSIT STOPS LOCATED WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED UNLESS OTHERWISE DIRECTED BY THE PLANS OR THE ENGINEER. MAINTAINING ACCESS TO THE TRANSIT STOP SHALL INCLUDE MAINTAINING AN AREA OF THE TRANSIT VEHICLE TO STOP TO PICK-UP AND DISCHARGE PASSENGERS AND ALSO AN ACCESSIBLE PATH FOR PEDESTRIANS TO SAFELY ACCESS THE TRANSIT STOP.
11. THE CONTRACTOR SHALL PROVIDE ALL PROPERTY OWNERS AND RESIDENTS WHO LIVE ADJACENT TO THE WORK ZONE WITH WRITTEN NOTICE, 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION WORK. THIS NOTIFICATION SHALL INCLUDE THE SCOPE OF WORK, WORKING HOURS, ANTICIPATED START AND COMPLETION DATES; A SUMMARY OF CONSTRUCTION ACTIVITIES WHICH MAY INTERFERE WITH ACCESS TO THE PROPERTY INCLUDING A SCHEDULE AND ACCESS COORDINATION PLAN, CONTRACTOR NAME AND ADDRESS; AND A DELDOT CONTACT PHONE NUMBER. FAILURE TO GIVE PROPER NOTICE WILL RESULT IN A SUSPENSION OF THE WORK REQUIRING NOTICE, UNTIL PROPER NOTICE IS PROVIDED. THE CONTRACTOR SHALL PROVIDE WRITTEN VERIFICATION TO THE ENGINEER THAT THE PROPERTY OWNERS AND RESIDENTS WERE NOTIFIED.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE LOCAL 911 CENTER, LOCAL SCHOOLS AND THE DELDOT PUBLIC INFORMATION CENTER OF ALL ROADS AND LANES TO BE CLOSED A MINIMUM OF SEVEN CALENDAR DAYS BEFORE THE CLOSURE.
13. THE CONTRACTOR SHALL NOTIFY THE LOCAL 911 CENTER IF ACCESS TO A FIRE HYDRANT IS TEMPORARILY RESTRICTED.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE TRANSPORTATION MANAGEMENT CENTER IS NOTIFIED EACH AND EVERY DAY WHEN WORK IS BEING PERFORMED IN STATE RIGHT-OF-WAY. THE CONTRACTOR SHALL IDENTIFY THE TYPE OF WORK, ANY LANE(S) OR SHOULDERS CLOSED, THE LENGTH OF TIME FOR WORK, WHEN THE LANE RESTRICTIONS ARE IN PLACE AND WHEN LANE RESTRICTIONS ARE LIFTED, CONTACT PERSON/PHONE NUMBER AND STATE INSPECTOR. THE TRANSPORTATION MANAGEMENT CENTER CAN BE REACHED AT (302) 659-4600.
15. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL CORRECT ALL VERTICAL DIFFERENCES IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD, IF REQUIRED TO MAINTAIN TRAFFIC.
16. AT THE END OF EACH DAY'S OPERATION AND BEFORE TRAFFIC IS RETURNED TO UNRESTRICTED ROADWAY USE, TEMPORARY PAVEMENT MARKINGS SHALL BE APPLIED IN ACCORDANCE WITH THE DELAWARE MUTCD AND DELDOT'S TEMPORARY PAVEMENT MARKINGS POLICY.
17. WHEN SIDE ROADS INTERSECT THE WORK ZONE, ADDITIONAL TRAFFIC CONTROL DEVICES SHALL BE ERECTED INCLUDING PERMANENT WARNING SIGNS.
18. ALL STORAGE OF EQUIPMENT AND MATERIAL SHALL COMPLY WITH SECTION 6G.21 OF THE DELAWARE MUTCD.
19. ALL FLAGGERS SHALL COMPLY WITH CHAPTER 6E OF THE DELAWARE MUTCD.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS/HER WORK WITH OTHER CONTRACTORS IN THE AREA.
21. ALL PERSONS WORKING WITHIN THE STATE RIGHT-OF-WAY SHALL WEAR A MINIMUM OF AN ANSICLASS II SAFETY VEST MEETING OR EXCEEDING THE ANSI107-2004 REQUIREMENTS, AS SPECIFIED IN THE DELAWARE MUTCD.
22. ALL PAVEMENT MARKINGS THAT ARE NO LONGER IN USE AND CONFLICT WITH TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED AND COMPLETELY OBLITERATED BY A METHOD APPROVED BY THE ENGINEER. PAINTING OVER THE CONFLICTING PAVEMENT MARKINGS WILL NOT BE ACCEPTED AS A METHOD OF REMOVAL.
23. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING PAVEMENT WITHIN THE PROJECT LIMITS FOR THE DURATION OF THE CONTRACT OR AS DIRECTED BY THE ENGINEER.
24. ALL ROADWAYS AND ENTRANCES NOT OPEN TO TRAFFIC SHALL BE CLOSED USING TYPE III BARRICADES AND SHALL BE INSTALLED PER THE DELAWARE MUTCD. IF THE ROADWAY OR ENTRANCE IS CLOSED FOR MORE THAN ONE MONTH, THE CONTRACTOR SHALL ERECT PERMANENT BARRICADES AS DIRECTED IN PART 3 OF THE DELAWARE MUTCD.

25. WITHIN THE MAINLINE WORK AREA, PERMANENT ADVANCE WARNING SIGNS WITH THE LEGENDS ROAD WORK 1500 FT, ROAD WORK 1000 FT AND ROAD WORK 500 FT SHALL BE INSTALLED IN ADVANCE OF THE WORK AREA IN BOTH DIRECTIONS. AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM FROM THE WORK AREA. ON INTERSECTING ROADWAYS WITHIN THE PROJECT LIMITS, A ROAD WORK AHEAD SIGN SHALL BE PLACED AT A DISTANCE NOT LESS THAN 500 FEET IN ADVANCE OF THE WORK AREA AND AN END ROAD WORK SIGN SHALL BE LOCATED 500 FEET DOWNSTREAM OF THE WORK AREA. ALL PERMANENT ADVANCE WARNING SIGNS SHALL BE GROUND MOUNTED ON TWO NCHRP-350 OR MASH APPROVED BREAKAWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DELAWARE MUTCD. PERMANENT ADVANCE WARNING SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE ROADWAY TO THE BOTTOM OF THE SIGN. THE USE OF SKID MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE ENGINEER; OR CONCRETE MEDIANS PREVENT THE INSTALLATION OF THE PERMANENT ADVANCE WARNING SIGNS IN THE APPROPRIATE LOCATION.
26. TYPICAL APPLICATIONS PER THE DELAWARE MUTCD SHALL BE INCORPORATED TO ACHIEVE REQUIRED TEMPORARY TRAFFIC CONTROL AND SAFETY REQUIREMENTS. THIS PROJECT WILL IMPLEMENT A FULL ROAD CLOSURE, AS SHOWN BY THE DETOUR PLAN, THEREFORE NO TEMPORARY TRAFFIC CONTROLS ARE ANTICIPATED.
27. THE CONTRACTOR SHALL COORDINATE ROAD CLOSURE WITH SURROUNDING PROJECTS. THE SR9 DETOUR SHALL NOT BE IMPLEMENTED WHILE SR9 AT DELAWARE CITY REFINING COMPANY IS UNDER DETOUR.
28. THE CONTRACTOR MAY USE A DESIGNATED WORKER TO ASSIST PEDESTRIANS TO PASS THROUGH THE WORK ZONE, WHEN REQUIRED. ALL COSTS ARE INCIDENTAL TO THE CONTRACT.

PROJECT NOTES FOR SEDIMENT AND STORMWATER MANAGEMENT

- 1) EROSION CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY ENGINEER IN THE FIELD.
- 2) STAGING AREAS. PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS, AT COMPLETION OF THE PROJECT. STAGING AREAS THAT ARE PAVED SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF UNPAVED, STAGING AREAS SHALL BE REGRADED TO THE SATISFACTION OF THE ENGINEER, TOPSOILED SEEDED, AND MULCHED IN ACCORDANCE WITH DELDOT STANDARD SPECIFICATIONS SECTIONS 732, 734, AND 735 FOR TOPSOIL, SEED AND MULCH RESPECTIVELY. SEED SHALL ADHERE TO THE SPECIFICATIONS FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED TO THE ABOVE ITEMS 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 RE-ESTABLISHING A SATISFACTORY STAND OF GRASS SHALL ALSO BE AT THE CONTRACTOR'S EXPENSE.
- 3) CONSTRUCTION ENTRANCES (IF REQUIRED.) IT IS INTENDED THAT MUD TRACKING BE ELIMINATED ON STATE MAINTAINED ROADWAYS ADJOINING THE PROJECT. EACH POINT OF INGRESS AND EGRESS FROM THE PROJECT SHALL HAVE INSTALLED STABILIZED CONSTRUCTION ENTRANCES (SCE), ITEM 268000. ALL PAVED SURFACES ADJOINING THE PROJECT LIMITS SHALL BE LEFT IN A BROOM CLEAN CONDITION AT THE END OF EACH WORKDAY. STABILIZED CONSTRUCTION ENTRANCES SHALL BE TOP DRESSED WITH TWO (2) INCHES OF CLEAN DE NO. 3 STONE WHEN THE VOIDS BECOME CLOGGED OR AS DIRECTED BY THE ENGINEER. ADDITIONAL STONE REQUIRED TO MAINTAIN THE ENTRANCES SHALL BE PAID UNDER ITEM 268000.
- 4) THE CONTRACTOR SHALL PLACE SILT FENCE (IF REQUIRED) AS DIRECTED IN THE FIELD BY THE ENGINEER. ALL COSTS ARE INCLUDED UNDER ITEM 251000.
- 5) REMOVAL OF ALL PIPES AND RIPRAP AT THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE INCIDENTAL TO THEIR RESPECTIVE ITEMS. (IF REQUIRED)

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ADDENDUMS / REVISIONS



**SR 9 RIVER ROAD (N378) RAILROAD CROSSING SAFETY IMPROVEMENTS DOT CROSSING NO. 507-888R**

CONTRACT	BRIDGE NO.	-
T201400504	DESIGNED BY:	AMW
COUNTY	CHECKED BY:	WFC
NEW CASTLE		

**CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL NOTES**

SHEET NO.	11
TOTAL SHTS.	15

**SEQUENCE OF CONSTRUCTION**

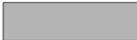
ALL WORK SHALL BE COMPLETED UNDER TRAFFIC DETOUR CONDITIONS AND DURING ONE DETOUR PERIOD. THE DETOUR DURATION SHALL NOT EXCEED A TOTAL OF 14 CALENDAR DAYS.

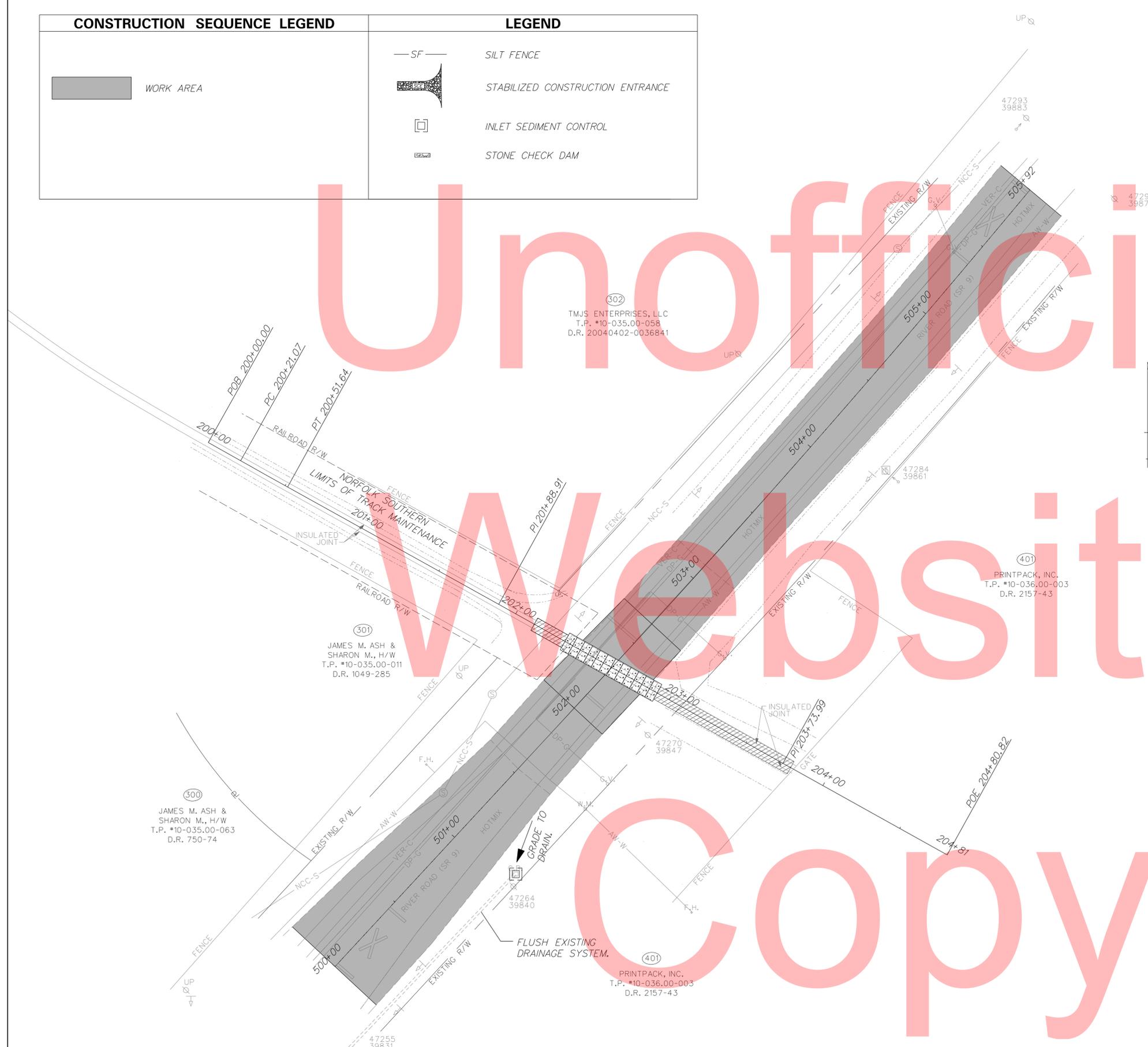
THE CONTRACTOR SHALL COMPLETE ALL WORK IN THE FOLLOWING SEQUENCE. ALL WORK SHALL BE COMPLETED IN A PHASE/STAGE BEFORE STARTING WORK IN A SUBSEQUENT PHASE/STAGE UNLESS OTHERWISE APPROVED BY THE ENGINEER. ALL DISTURBED AREAS IN A STAGE SHALL BE STABILIZED AS DIRECTED BY THE ENGINEER BEFORE BEGINNING WORK IN THE NEXT PHASE/STAGE.

**RIVER ROAD (SR 9) CONSTRUCTION**

1. PLACE PORTABLE CHANGEABLE MESSAGE SIGNS TEN (10) DAYS IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE THE LOCATION AND PORTABLE CHANGEABLE MESSAGE SIGN WITH THE CANAL DISTRICT SAFETY OFFICER.
2. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES. THE CONTRACTOR MAY UTILIZE THE EXISTING ROADWAY FOR A STAGING AREA.
3. THE CONTRACTOR SHALL DEMONSTRATE THAT ALL MATERIALS REQUIRING LEAD TIME ARE ON SITE AND VERIFIED IN THE FIELD TO MEET THE PLAN SPECIFICATIONS, PRIOR TO BEGINNING WORK.
4. COORDINATE CONSTRUCTION SCHEDULE WITH PRINTPACK, INC. AND RAILROAD OUTAGE, NOT TO EXCEED 7 CALENDAR DAYS FOR RAIL TRAFFIC OUTAGE. CONTRACTOR MAY BE REQUIRED TO WORK 24/7 TO COMPLETE THE TRACK WORK.
5. ON FRIDAY AT 8PM, IMPLEMENT DETOUR PLAN TO CLOSE RIVER ROAD, DURING CONSTRUCTION. THE CONTRACTOR SHALL HAVE UNTIL THE FOLLOWING THURSDAY TO COMPLETE STAGES 6 THRU 15. IF THE WORK IS NOT COMPLETED BY THE TIME ALLOCATED, THE CONTRACTOR WILL BE CHARGED LIMITED LIQUIDATED DAMAGES.
6. SAWCUT HOTMIX AT FULL DEPTH LIMITS. REMOVE EXISTING HOTMIX, CONCRETE CROSSING AND TRACK TO LIMITS SHOWN.
7. PREPARE TRACK BOX IN ORDER TO INSTALL PRECAST CONCRETE CROSSING. INSTALL GEOTEXTILE, PLACE GABC, POUR FLOWABLE FILL BASE AND PLACE DEL. NO. 10 STONE.
8. INSTALL CONDUIT RUNS ADJACENT TO TRACK BOX AND UNDER PROPOSED TRACK PANELS. INSTALL SIGNAL POLES.
9. PLACE PROPOSED CONCRETE PANELS.
10. INSTALL NEW 132RE CWR RAIL AND RAIL CLAMPS.
11. CONSTRUCT FULL DEPTH PATCHING, AS SHOWN IN THE PLANS. WARM MIX ASPHALT SHALL BE PLACED TO THE TOP OF TYPE B.
12. CONSTRUCT TRACK PANELS TO TRANSITION INTO THE EXISTING MAINLINE TRACK ON BOTH SIDES OF THE CROSSING.
13. PLACE BALLAST AND TAMP TRACK TO FINAL ELEVATIONS.
14. INSTALL RAILROAD GRADE CROSSING RUBBER INSERTS.
15. NOTIFY NS (SCOTT REED 410-378-5616) THAT TRACK IS READY FOR THEIR PHASE OF WORK.
16. COMPLETE INSTALLATION OF SIGNALIZATION ITEMS.
17. CONTRACTOR SHALL MILL THE EXISTING PAVEMENT IN BOTH THE NORTHBOUND AND SOUTHBOUND LANES TO THE DEPTH OF 2" BELOW THE FINAL GRADES. PLACE MINIMUM 2" OF WARM MIX ASPHALT, TYPE C TO FINAL ELEVATIONS. CONTRACTOR SHALL HOT POUR SEALANT AT JOINT BETWEEN CONCRETE PANEL AND ROAD PAVEMENT.
18. PLACE ALL PERMANENT PAVEMENT MARKINGS AND WARNING SIGNS.
19. GRADE TO DRAIN AROUND THE INLET AT STATION 501+08 RT., SO THAT THE PAVEMENT NORTH OF THE INLET WILL DRAIN INTO THE CATCH BASIN. STABILIZE THE AREA. CLEAN OUT AND REPAIR THE INLET ON THE NORTHEAST QUADRANT OF GRANTHAM LANE INTERSECTION AND ENSURE A STABILIZED SURROUNDING.
20. TOPSOIL AND SEED ALL DISTURBED AREAS WITHIN THIS PHASE OF CONSTRUCTION. WHEN TOPSOIL IS PROPERLY STABILIZED WITH VEGETATION AND APPROVED BY THE ENGINEER IN THE FIELD, THE CONTRACTOR SHALL REMOVE ALL EROSION AND SEDIMENT CONTROL ITEMS. CONTRACTOR SHALL FLUSH EXISTING PIPES TO REMOVE ALL SEDIMENT WITHIN THE DRAINAGE SYSTEM TO THE POINT DOWNSTREAM AT THE INLET LOCATED ON THE SOUTHEAST QUADRANT OF GRANTHAM LANE INTERSECTION.
21. OPEN ROADWAY TO TRAFFIC.

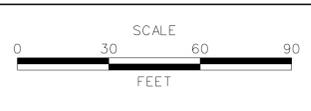
CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ENTRANCES DURING THIS PHASE OF CONSTRUCTION. COSTS ASSOCIATED WITH MAINTAINING ENTRANCES ARE INCIDENTAL TO THE CONTRACT.

CONSTRUCTION SEQUENCE LEGEND		LEGEND	
	WORK AREA		SILT FENCE
			STABILIZED CONSTRUCTION ENTRANCE
			INLET SEDIMENT CONTROL
			STONE CHECK DAM



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ADDENDUMS / REVISIONS



**SR 9 RIVER ROAD (N378) RAILROAD CROSSING SAFETY IMPROVEMENTS DOT CROSSING NO. 507-888R**

CONTRACT	BRIDGE NO.	-
T201400504	DESIGNED BY:	AMW
COUNTY	CHECKED BY:	WFC
NEW CASTLE		

**CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS**

SHEET NO.	12
TOTAL SHTS.	15

**CHANGEABLE MESSAGE BOARDS**

**CMS-1** PRIOR TO DETOUR (10 DAYS PRIOR TO BEGINNING OF DETOUR)

DE 9 RR XING TO CLOSE

STARTING XXXXXX

**CMS-2** DURING DETOUR

DE 9 RR XING CLOSED

FOLLOW DETOUR

**CMS-X** PRIOR TO DETOUR (10 DAYS PRIOR TO BEGINNING OF DETOUR)

XXXXXXXX  
XXXXXXXX  
XXXXXXXX

XXXXXXXX  
XXXXXXXX  
XXXXXXXX

**CMS-X** DURING DETOUR

XXXXXXXX  
XXXXXXXX  
XXXXXXXX

XXXXXXXX  
XXXXXXXX  
XXXXXXXX

**SPECIAL SIGNS**

U

9

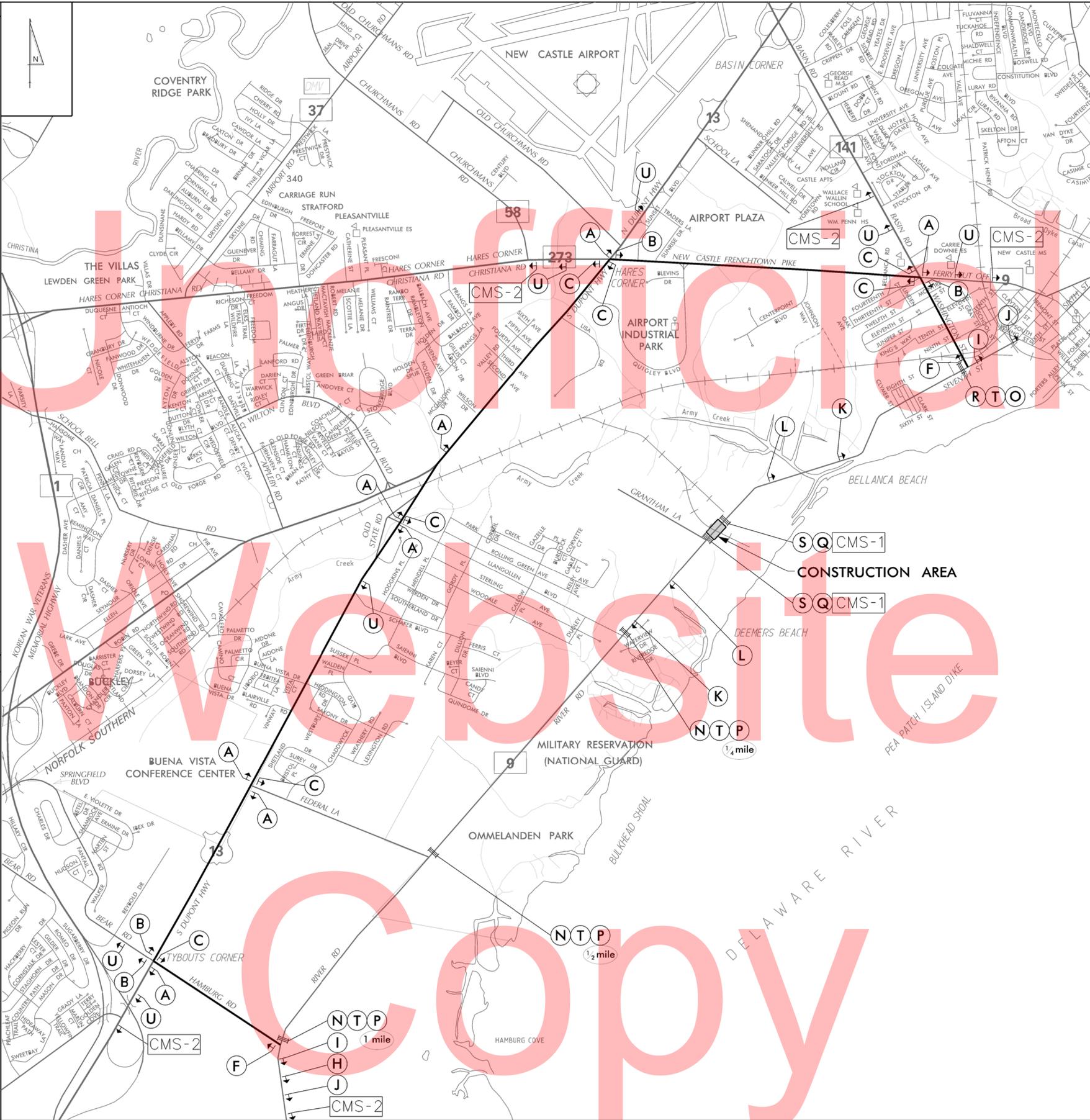
CLOSED AT Grantham La. RR CROSSING

FOLLOW DETOUR

104" X 48"

ORANGE BACKGROUND WITH 8" BLACK LEGEND AND 36" ROUTE MARKER

NOTES:  
1. SIGNS ON DIVIDED HIGHWAYS SHALL BE POSTED ADJACENT TO LEFT AND RIGHT SHOULDERS.



**LEGEND**

A: 9 DETOUR (up arrow)

B: 9 DETOUR (left arrow)

C: 9 DETOUR (right arrow)

D: 9 DETOUR (down arrow)

E: 9 DETOUR (up-right arrow)

F: 9 END DETOUR

G: DETOUR AHEAD

H: DETOUR 1000 FT

I: DETOUR 500 FT

J: ROAD CLOSED AHEAD

K: ROAD CLOSED 1000 FT

L: ROAD CLOSED 500 FT

M: ROAD NAME

N: DETOUR (left arrow)

O: DETOUR (right arrow)

P: ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY

Q: ROAD CLOSED

R: ROAD CLOSED TO THRU TRAFFIC

S: BARRICADE

T: BARRICADE

- GENERAL NOTES**
- ALL DETOUR SIGNING INCLUDING, TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE TO THE DE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
  - THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE - MUTCD PART 6) FOR LIGHTS, BARRICADES AND SIGNS.(AS PER LATEST REVISION)
  - FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES WILL PREVAIL.
  - SIGNS J THROUGH L AND P THROUGH R, THE WORD (ROAD) SHOULD BE CHANGED TO RAMP, R/R OR BRIDGE WHERE APPLICABLE.
  - WARNING SIGNS SHOULD BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT SHEETING.
  - "S" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF ROADWAY.
  - BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
  - SIGNS PLACED ON ROADWAYS WITH MORE THAN ONE LANE IN ONE DIRECTION SHALL BE INSTALLED ON BOTH THE LEFT AND RIGHT SHOULDERS

RECOMMENDED B. J. J. J. DATE: 2/2/12

RECOMMENDED [Signature] DATE: 2/2/12

RECOMMENDED \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED CHIEF SAFETY OFFICER [Signature] DATE: 2-7-12

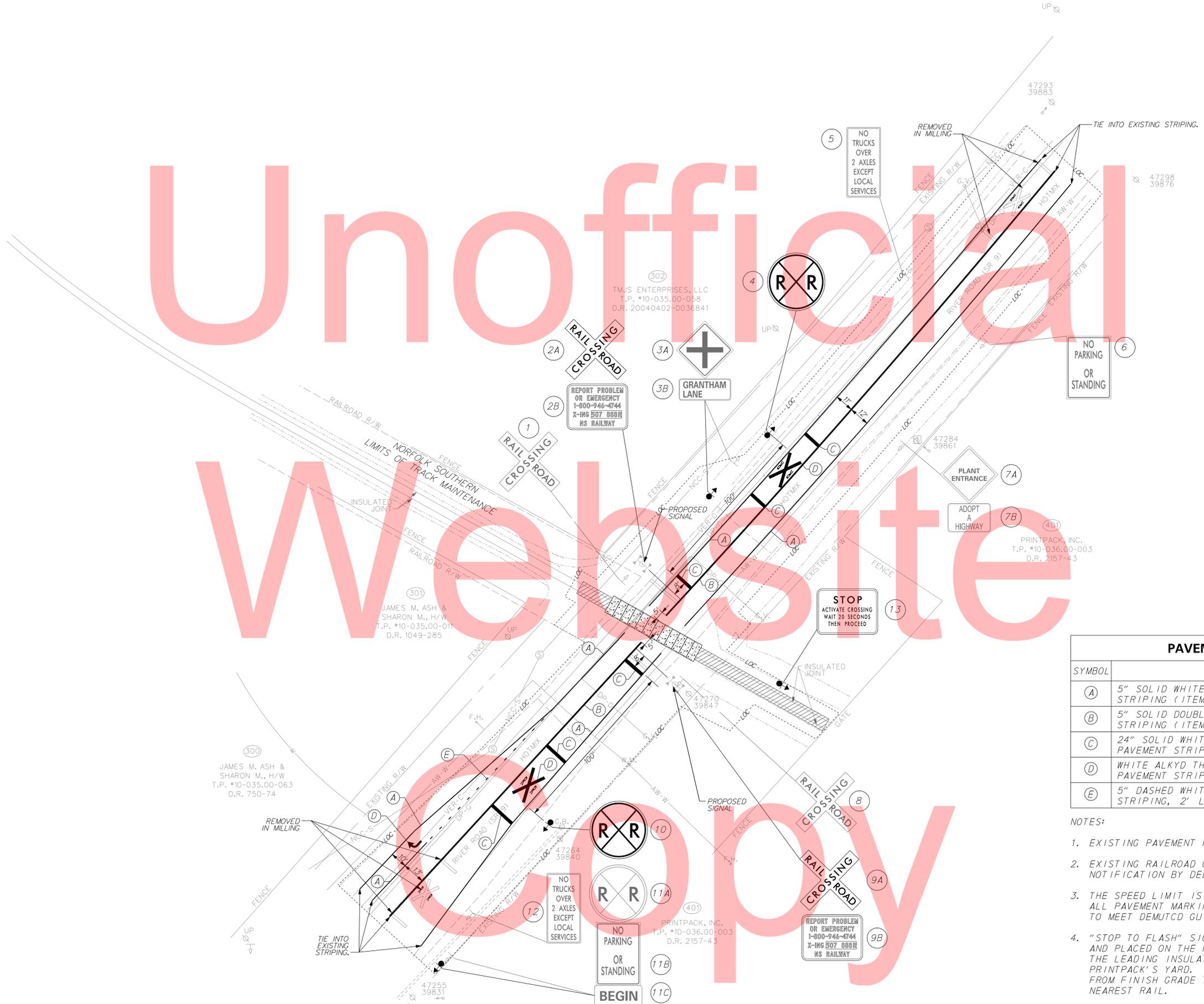
APPROVED TRAFFIC ENGINEER [Signature] DATE: 2/6/12

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# Unofficial

# Website

# Copy



PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	5" SOLID WHITE EPOXY RESIN PAVEMENT STRIPING (ITEM 748548)	1218 LF
(B)	5" SOLID DOUBLE YELLOW EPOXY RESIN PAVEMENT STRIPING (ITEM 748548)	1170 LF
(C)	24" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 748015)	154 SF
(D)	WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 748015)	154 SF
(E)	5" DASHED WHITE EPOXY RESIN PAVEMENT STRIPING, 2' LINE & 6' GAP (ITEM 748548)	26 LF

- NOTES:
- EXISTING PAVEMENT MARKINGS TO REMAIN UNLESS OTHERWISE NOTED.
  - EXISTING RAILROAD CROSSING SIGNS TO BE REMOVED UPON NOTIFICATION BY DELDOT'S RAILROAD PROGRAM MANAGER.
  - THE SPEED LIMIT IS 35 MPH THROUGH THE LIMITS OF THIS PROJECT, ALL PAVEMENT MARKING AND PROPOSED SIGNS SHALL BE INSTALLED TO MEET DEMUTCD GUIDELINES.
  - "STOP TO FLASH" SIGN SHALL BE OF RETRO-REFLECTIVE MATERIAL AND PLACED ON THE RIGHT HAND SIDE OF THE TRACKS OPPOSITE THE LEADING INSULATED JOINT AS THE TRAIN IS LEAVING PRINTPACK'S YARD. THE SIGN SHALL BE A MINIMUM OF 6 FOOT FROM FINISH GRADE TO BOTTOM OF SIGN AND 15 FEET FROM NEAREST RAIL.

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**PERMANENT SIGN SCHEDULE**

SHEET NO.	PLAN INDICATOR	CODE	DESCRIPTION	ASSEMBLY NO.	SIGN WIDTH (IN.)	SIGN HEIGHT (IN.)	SIGN AREA (SF)	ITEM 749687 SINGLE POST (EA)			ITEM 749690 MULTI POST (SF)			ITEM 749688 4" HOLE, 0-6" (EACH)	ITEM 749689 4" HOLE, >6" (EACH)	REMARKS
								ACTION	REMOVE	INSTALL	ACTION	REMOVE	INSTALL			
14	1		GRADE CROSSING (CROSSBUCK)	1				REMOVE	1							
14	2A	R15-1	GRADE CROSSING (CROSSBUCK)	2	48	9	6.00	NEW								* SIGN INCLUDED UNDER ITEM#746619 (FURNISHED BY CONTRACTOR)
14	2B	I-13	EMERGENCY NOTIFICATION SIGN	2	12	9	0.75	NEW								* SIGN INCLUDED UNDER ITEM#746619 (FURNISHED BY CONTRACTOR)
14	3A		INTERSECTION WARNING	3				REPOS.	1	1						
14	3B		DESTINATION SIGN	3				REPOS.								
14	4	W10-1	GRADE CROSSING ADVANCE WARNING	4	36	36	7.00	NEW		1						
14	5		NO TRUCKS OVER 2 AXLES EXCEPT LOCAL SERVICES	5				REMAIN								
14	6		NO PARKING OR STANDING	6				REMAIN								
14	7A		PLANT ENTRANCE	7				REMAIN								
14	7B		ADOPT A HIGHWAY	7				REMAIN								
14	8		GRADE CROSSING (CROSSBUCK)	8				REMOVE	1							
14	9A	R15-1	GRADE CROSSING (CROSSBUCK)	9	48	9	6.00	NEW								* SIGN INCLUDED UNDER ITEM#746619 (FURNISHED BY CONTRACTOR)
14	9B	I-13	EMERGENCY NOTIFICATION SIGN	9	12	9	0.75	NEW								* SIGN INCLUDED UNDER ITEM#746619 (FURNISHED BY CONTRACTOR)
14	10	W10-1	GRADE CROSSING ADVANCE WARNING	10	36	36	7.00	NEW		1						
14	11A		GRADE CROSSING ADVANCE WARNING	11				REMOVE								
14	11B		NO PARKING OR STANDING	11				REPOS.	1	1						
14	11C		BEGIN	11				REPOS.								
14	12		NO TRUCKS OVER 2 AXLES EXCEPT LOCAL SERVICES	12				REMAIN								
14	13		STOP TO FLASH	13	36	24	6.00	NEW								* SIGN INCLUDED UNDER ITEM#746619 (FURNISHED BY CONTRACTOR)
TOTALS							52.50			4	4					

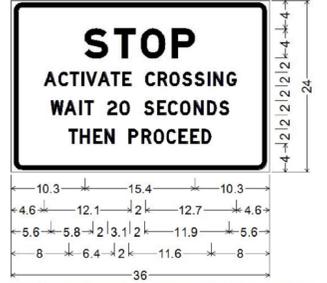
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R15-1



"EMERGENCY NOTIFICATION SYSTEM" (ENS) SIGN



"STOP TO FLASH" SIGN