

GENERAL LOCATION OF CONTRACT

THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION



CONSTRUCTION & RIGHT-OF-WAY PLANS FOR:

BR 2-100A ON DENNEYS ROAD OVER FORK BRANCH

CONTRACT NUMBER: **T201107203**
FEDERAL AID PROJECT NUMBER: **EBRN-K100(01)**

COUNTY: **KENT** M.R. #: **K100**

U.S. CUSTOMARY
UNITS

DESIGN DESIGNATION

| | | |
|--|-----------------------|--------------------------------|
| FUNCTIONAL CLASS: URBAN COLLECTOR | D.H.V. PROJECTED: 235 | YEAR: 2040 |
| TYPE OF CONSTRUCTION: BRIDGE REPLACEMENT | DESIGN SPEED: 45 MPH | |
| A.A.D.T. CURRENT: 2250 | YEAR: 2008 | TRUCKS: 13% |
| A.A.D.T. PROJECTED: 4300 | YEAR: 2040 | DIRECTION OF DISTRIBUTION: 65% |

INDEX OF SHEETS

| SHEET NO | TABLE OF CONTENTS |
|----------|-------------------------------------|
| 1 | TITLE SHEET |
| 2 | LEGEND SHEET |
| 3 | NOTES SHEET |
| 4 | TYPICAL SECTIONS |
| 5 | HORIZONTAL AND VERTICAL CONTROL |
| 6 | HORIZONTAL AND VERTICAL CONTROL |
| 7 | CONSTRUCTION PLAN |
| 8 | CONSTRUCTION PLAN |
| 9 | PROFILE |
| 10 | PROFILE |
| 11 | GRADES AND GEOMETRICS |
| 12 | GRADES AND GEOMETRICS |
| 13 | BRIDGE PLAN, SECTION, & ELEVATION |
| 14 | PRECAST CONCRETE DETAILS |
| 15 | BRIDGE RAIL DETAILS |
| 16 | BORING LOG |
| 17 | ENVIRONMENTAL NOTES |
| 18 | ENVIRONMENTAL COMPLIANCE PLAN |
| 19 | SEQUENCE OF CONSTRUCTION & E&S PLAN |
| 20 | SEQUENCE OF CONSTRUCTION & E&S PLAN |
| 21 | UTILITY RELOCATION PLAN |
| 22 | SIGNING AND STRIPING PLAN |
| 23 | SIGNING AND STRIPING PLAN |
| 24 | DETOUR PLAN |
| 25 | RIGHT-OF-WAY PLAN |
| 26 | RIGHT-OF-WAY DATA SHEET |
| 27 | RIGHT-OF-WAY DATA SHEET |
| 28 | RIGHT-OF-WAY TABULATION SHEET |

TOTAL SHEETS: 28

APPROVED DESIGN EXCEPTIONS

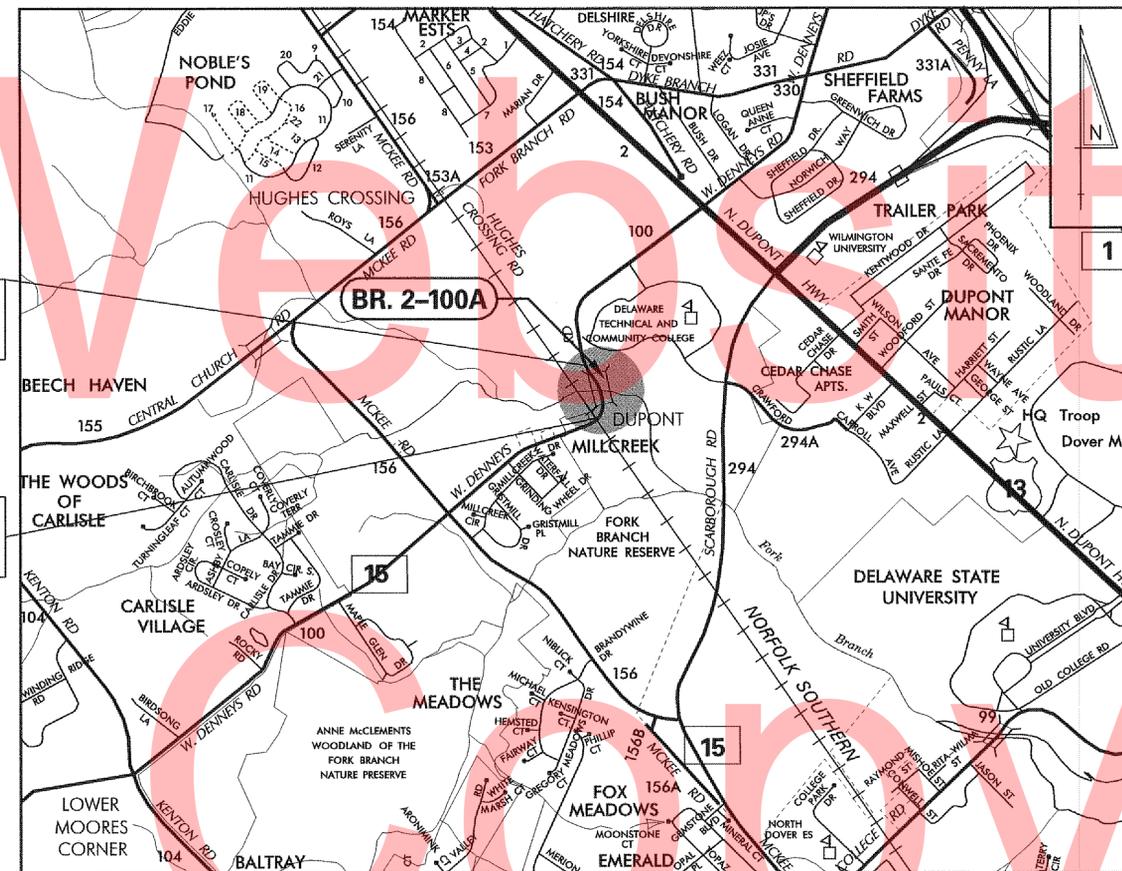
| DESIGN PARAMETER | REQUIRED | PROVIDED | DATE |
|------------------|----------|----------|------------|
| HORIZONTAL CURVE | 643 ft. | 265 ft. | 12/10/2012 |

ADDENDA & REVISIONS

| DESCRIPTION | NAME & DATE |
|-------------|-------------|
| | |
| | |

ASSOCIATED CONTRACTS

| CONTRACT NO. | CONTRACT NAME |
|--------------|--------------------|
| 86-072-03 | CONTRACT 86-072-03 |
| 1906 | CONTRACT NO. 1906 |



END CONTRACT
STATION 15+96.69

BEGIN CONTRACT
STATION 6+36.73

RECOMMENDED

[Signature] 8/29/14
SQUAD MANAGER, CONSTRUCTION DATE

[Signature] 8/29/14
GROUP ENGINEER, CONSTRUCTION DATE

[Signature] 9/2/14
ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION) DATE

RECOMMENDED

[Signature]
STORMWATER ENGINEER (ACTING)

DATE Aug 22, 2014



RECOMMENDED

[Signature]
SQUAD MANAGER, BRIDGE DESIGN

DATE 8/21/14



RECOMMENDED

[Signature]
BRIDGE DESIGN ENGINEER

DATE 21 August 2014



RECOMMENDED

[Signature]
ASSISTANT DIRECTOR, BRIDGE (ACTING)

DATE 21 August 2014



APPROVED

[Signature]
CHIEF ENGINEER

DATE 9/02/14



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 |

| 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 |
| | 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 | |
|---------|----------------------------------|
| | SOIL BORING LOCATION |
| | UTILITY TEST HOLE LOCATION |
| | CABLE TV DISTRIBUTION BOX |
| | ELECTRIC MANHOLE |
| | 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 |

| UTILITY COMPANY FACILITIES | |
|----------------------------|------------------------|
| | CITY OF DOVER ELECTRIC |
| | CITY OF DOVER WATER |
| | CITY OF DOVER SEWER |
| | KENT COUNTY SEWER |

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 |

| 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 |

| EROSION & SEDIMENT CONTROL | |
|----------------------------|------------------------------------|
| | DEWATERING BASIN |
| | EROSION CONTROL BLANKET |
| | EARTH DIKE |
| | INLET SEDIMENT CONTROL |
| | PERIMETER DIKE/SWALE |
| | PORTABLE SEDIMENT TANK |
| | REINFORCED SILT 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 |
| | SEDIMENT TRAP PIPE OUTLET |
| | STILLING WELL |
| | TEMPORARY SWALE |
| | TEMPORARY SLOPE DRAIN |

| 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 |

| PAVEMENT SECTION(S) | |
|---------------------|--|
| | 2" SUPERPAVE TYPE C, PG 64-22, 160 GYRATIONS |
| | 2-1/4" SUPERPAVE TYPE B, PG 64-22, 160 GYRATIONS |
| | 3" BCBC, PG 64-22, 160 GYRATIONS |
| | 8" GRADED AGGREGATE BASE COURSE, TYPE B |
| | N/A |

| 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 |

| UTILITY COMPANY FACILITIES | |
|----------------------------|-----------------------|
| | CITY OF DOVER - WATER |

ADDENDUMS / REVISIONS

NOT TO SCALE

BRIDGE 2-100A ON
DENNEYS ROAD
OVER FORK BRANCH

CONTRACT
T201107203
COUNTY
KENT

BRIDGE NO.
2-100A
DESIGNED BY: TRS
CHECKED BY: EM

LEGEND SHEET

SHEET NO.
2
TOTAL SHTS.
28

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.
- THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- THE ENDS OF ALL CURBS SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE MINIMUM DIAMETER, 6" INSIDE MAXIMUM DIAMETER) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE MATERIAL. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.
- 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.
- 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. 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. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

| EROSION POTENTIAL FOR THIS PROJECT | SITE REVIEWER REQUIREMENT |
|------------------------------------|---|
| () INSIGNIFICANT | NONE |
| () MINOR | CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS. |
| (X) MEDIUM | AT THE TIME OF BID OF THE CONTRACT, EITHER 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 AT THE TIME OF BID 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 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). |

- 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. |

- THE DISTURBED AREA FOR THIS PROJECT IS 1.05 ACRES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.
- THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL 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 SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

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 CONTRACTOR SHALL REMOVE AND RESET ALL MAILBOXES TO MAINTAIN MAIL SERVICE AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RELOCATE MAILBOXES AS REQUIRED BY THE PROPOSED GEOMETRICS AND AS DIRECTED BY THE ENGINEER. WHEN RELOCATING MAILBOXES IN CURBED SECTIONS, THE FACE OF THE MAILBOX SHALL BE FLUSH WITH THE BACK EDGE OF CURB. WHEN RELOCATING MAILBOXES IN OPEN SECTIONS, THE FACE OF THE MAILBOX SHALL SET BACK 8 INCHES FROM THE EDGE OF THE PAVED SHOULDER. THE BOTTOM OF THE MAILBOX SHALL BE SET 46 INCHES ABOVE THE ROADWAY SURFACE. MAILBOXES LOCATED AT DRIVEWAY ENTRANCES SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY IN THE DIRECTION OF TRAVEL. POSTS BEING RESET IN CONCRETE SIDEWALK SHALL BE PLACED IN AN APPROPRIATE SIZE PVC SLEEVE. COST FOR ALL WORK AND MATERIALS SHALL BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.
- ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - EXISTING STEEL BEAM GUARDRAIL
 - EXISTING CORRUGATED METAL PIPES
- 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 GENERAL PERMIT AND NOIS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOICAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

SECTION 300

- THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B':
 - CRUSHED STONE (PER STANDARD SPECIFICATION 821)
 - CRUSHED CONCRETE (PER STANDARD SPECIFICATION 821)
 - 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.

- 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'.
- 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.
- HOT-MIX MILLINGS MAY BE GENERATED FROM THE FOLLOWING SOURCES:
 - MATERIAL MILLED ON THIS CONTRACT AT THE CONTRACTOR'S CHOICE UNDER ITEM 202000.
 - 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:

- 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.
- 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.
- 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'.
- 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.
- 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 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.

SECTION 600

- PORTLAND CEMENT CONCRETE
STRUCTURAL ELEMENTS OF PORTLAND CEMENT CONCRETE SHALL BE AS NOTED:
(F'c = 28 DAY COMPRESSIVE STRENGTH)
PRECAST CONCRETE ELEMENTS - F'c = 5000 psi
MIX REQUIREMENTS SHALL CONFORM TO SECTION 812 OF THE SPECIFICATIONS WITH THE FOLLOWING MODIFICATIONS:
ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- BAR REINFORCEMENT
REINFORCING STEEL SHALL CONFORM TO AASHTO M31 (ASTM A615), GRADE 60. ALL REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL REINFORCING STEEL SHALL BE PROTECTED WITH FUSION BONDED EPOXY. EPOXY COATED REINFORCING STEEL SHALL CONFORM TO AASHTO M284 (ASTM D3963) AND IS DENOTED WITH AN 'E' IN THE BAR MARKS.
- LIMITS OF COARSE AGGREGATE FOR FOUNDATION STABILIZATION SHALL EXTEND 18" OUTSIDE OF THE NEAT LINE PERIMETER OF THE VERTICAL FACES OF ANY FOOTER, ENCASEMENT, OR STRUCTURAL UNIT.

SECTION 700

- ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT. ALL HOT MIX SAWCUTTING IS TO BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR AS DIRECTED BY THE ENGINEER
- ALL MOT ITEMS WITH EXCEPTION OF CHANGEABLE MESSAGE BOARDS AND FLAGGERS WILL BE INCLUDED IN ITEM 763643 - MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.
- ALL GEOTEXTILES SHALL BE KEYED UNDER ADJACENT SOIL OF RIPRAP A MINIMUM OF 6" IN LENGTH TO PREVENT FREE EDGES.

MISCELLANEOUS

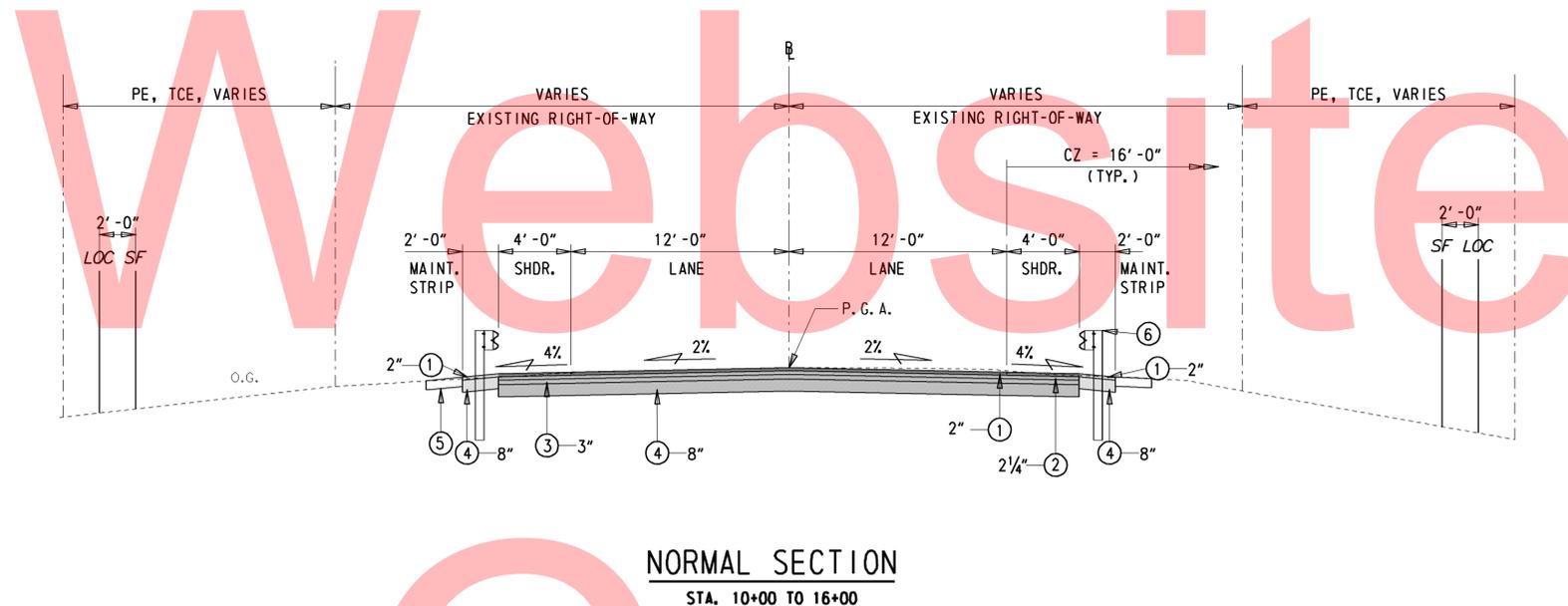
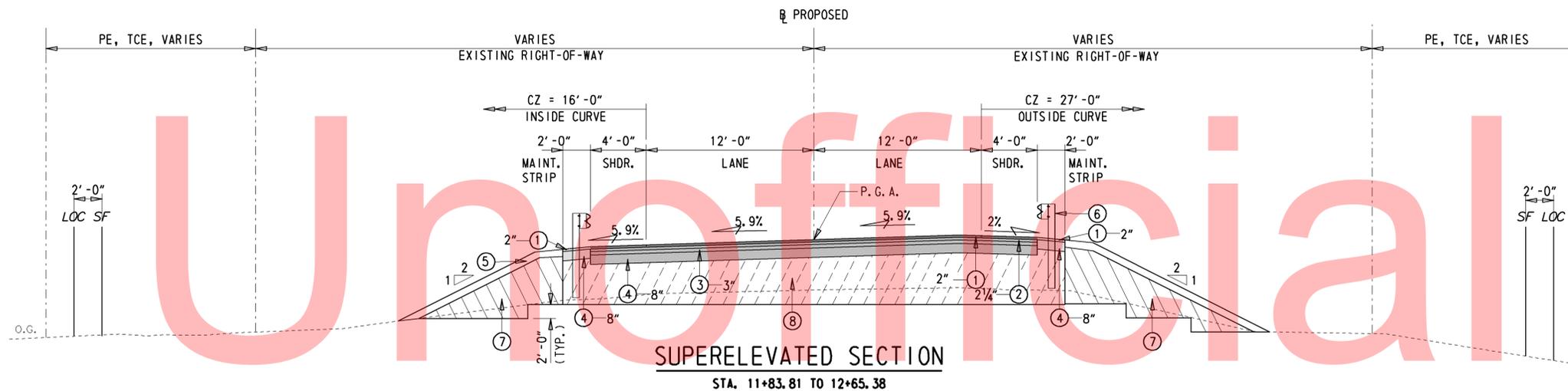
- DESIGN CRITERIA
2010 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION, CUSTOMARY U.S. UNITS.
- LOADING
DEAD LOAD INCLUDES 25 PSF FOR FUTURE WEARING SURFACE. VEHICULAR LIVE LOAD IS HL-93.
- HYDRAULIC DATA

| | | | |
|-------------------|---------------|-------------------|----------|
| DRAINAGE AREA: | 9.85 sq miles | DESIGN FREQUENCY: | 50 YEARS |
| DESIGN DISCHARGE: | 1679.00 cfs | 50-YEAR FLOOD EL: | 22.00 ft |
- SCOUR ANALYSIS
THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC-18 - 'EVALUATING SCOUR AT BRIDGES' AND HEC 23 - 'BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES'. SCOUR COUNTERMEASURE HAS BEEN DESIGNED FOR THE LESSER OF THE OVERTOPPING FLOOD OR THE 500-yr STORM EVENT.

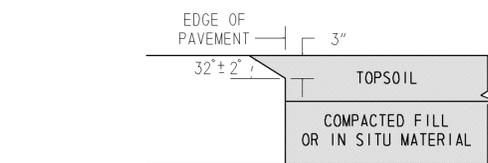
| | | | |
|-------------------|----------------------------|-----------------------|----------|
| DESIGN EVENT: | OVERTOPPING FLOOD (100-yr) | DESIGN VELOCITY: | 8.43 fps |
| DESIGN DISCHARGE: | 2056.00 cfs | DESIGN DEPTH OF FLOW: | 11.75 ft |
- CROSS SECTIONS USED IN THE PREPARATION OF THIS CONTRACT WILL BE MADE AVAILABLE TO THE SUCCESSFUL BIDDER FOR INFORMATIONAL PURPOSES ONLY.
- DATUM REFERENCE
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).
VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.
- LOAD RATINGS FOR BR 2-100A HAVE BEEN PERFORMED BY DELDOT'S BRIDGE MANAGEMENT SECTION IN ACCORDANCE WITH THE 2011 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE MANUAL FOR BRIDGE EVALUATION. ALL CURRENT AASHTO, DELAWARE LEGAL AND PERMIT LOADS HAVE BEEN CONFIRMED TO HAVE A MINIMUM LOAD RATING FACTOR OF 1.0 IN ACCORDANCE WITH DELDOT'S BRIDGE DESIGN MANUAL.

Y:\KENT\%A\BRIDGE\20107203\PLANS\PN.DGN

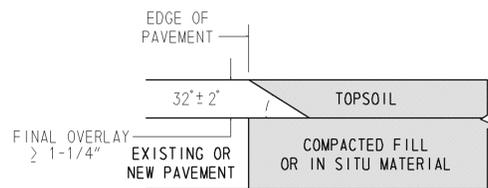
| | | | | | | | | | |
|--|-----------------------|--------------|--|----------|------------|------------------|-------------|-----------|-------------|
|  DELAWARE DEPARTMENT OF TRANSPORTATION | ADDENDUMS / REVISIONS | NOT TO SCALE | BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH | CONTRACT | BRIDGE NO. | 2-100A | NOTES SHEET | SHEET NO. | |
| | | | | | T20107203 | | | | 3 |
| | | | | | KENT | DESIGNED BY: TRS | | | TOTAL SHTS. |
| | | | | | | CHECKED BY: EM | | | 28 |



NOTE: FOR STA. 6+36.73 TO STA. 10+00.00, PLEASE REFER TO TYPICAL SECTIONS AS SHOWN ON SHEET 7.



CONCRETE PAVEMENTS
NOT TO SCALE



HOT-MIX PAVEMENTS AND OVERLAYS
NOT TO SCALE

SAFETY EDGE DETAIL
NOT TO SCALE

| LEGEND | |
|--------|---|
| ① | ITEM 401801 - BIT CONC, SP, TYPE C, 160 GYRATIONS, PG 64-22, (CARBONATE STONE) |
| ② | ITEM 401810 - BIT CONC, SP, TYPE B, 160 GYRATIONS, PG 64-22 (CARBONATE STONE) |
| ③ | ITEM 401819 - BIT CONC, SP, BCBC, 160 GYRATIONS, PG 64-22 |
| ④ | ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B |
| ⑤ | ITEM 732002 - TOPSOIL, 6" DEPTH ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND |
| ⑥ | ITEM 720043 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-27 ITEM 720637 - GUARDRAIL END TREATMENT, TYPE 1-27 ITEM 720664 - BRIDGE RAILING, GUARDRAIL, TYPE ITEM 720665 - BRIDGE RAILING, GUARDRAIL TYPE - TRANSITION UNIT |
| ⑦ | ITEM 209006 - BORROW, TYPE F |
| ⑧ | ITEM 209001 - BORROW, TYPE A ITEM 209003 - BORROW, TYPE C (AT BRIDGE) |

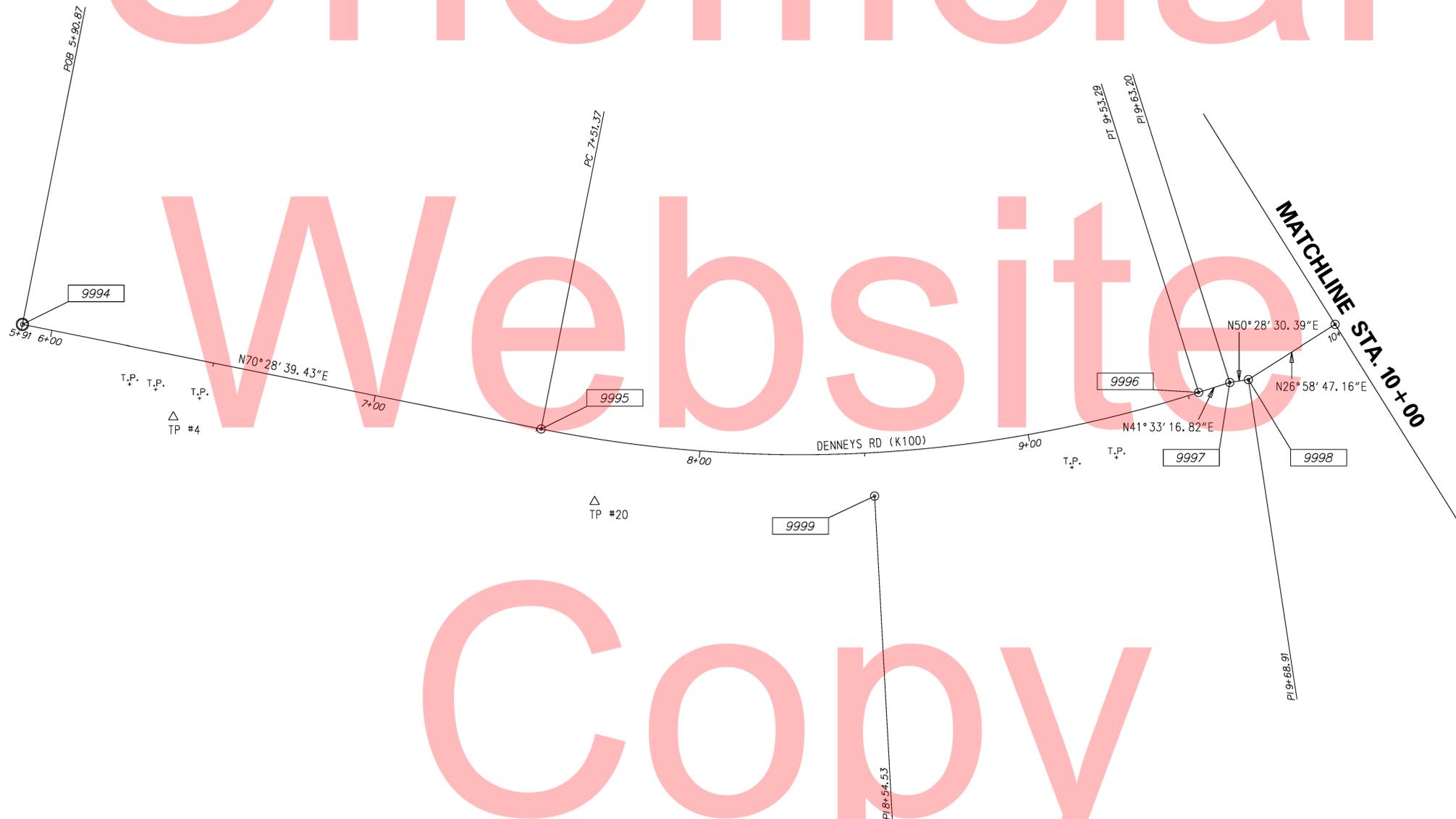
W:\MS\8\CELLS\PROJDEV\SB\CEL

| HORIZONTAL / VERTICAL CONTROL DATA | | | | | |
|------------------------------------|---------|--------|-----------|-----------|-----------|
| POINT | STATION | OFFSET | NORTHING | EASTING | ELEVATION |
| TP#4 | 6+41.22 | 18.36 | 434888.29 | 614100.98 | 33.37 |
| TP#20 | 7+70.67 | 18.81 | 434931.88 | 614223.82 | 31.57 |

| CONSTRUCTION ALIGNMENT CONTROL | | | | | |
|--------------------------------|---------|--------|-----------|-----------|--|
| POINT | STATION | OFFSET | NORTHING | EASTING | |
| 9994 | 5+90.87 | 0.00 | 434888.77 | 614047.39 | |
| 9995 | 7+51.37 | 0.00 | 434942.40 | 614198.66 | |
| 9996 | 9+53.29 | 0.00 | 435054.07 | 614364.32 | |
| 9997 | 9+63.20 | 0.00 | 435061.49 | 614370.89 | |
| 9998 | 9+68.91 | 0.00 | 435065.13 | 614375.30 | |
| 9999 | 8+54.53 | 13.09 | 434976.87 | 614295.89 | |

Element: Circular Curve, Contract T201107203
 PC (9995) 7+51.37 434942.4003 614198.6583
 PI (9999) 8+54.53 434976.8738 614295.8878
 CC () 435054.07 614364.3175
 PT (9996) 9+53.29 435054.0709 614364.3175
 Radius: 400.0000
 Delta: 28°55'22.6071" Left
 Degree of Curvature(Arc): 14°19'26.2016"
 Length: 201.92
 Tangent: 103.16
 Chord: 199.78
 Middle Ordinate: 12.67
 External: 13.09
 Tangent Direction: N 70°28'39.4290" E
 Radial Direction: S 19°31'20.5710" E
 Chord Direction: N 56°00'58.1255" E
 Radial Direction: S 48°26'43.1780" E
 Tangent Direction: N 41°33'16.8220" E

DATUM REFERENCE:
 HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).
 VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.



Unofficial
 Website
 Copy

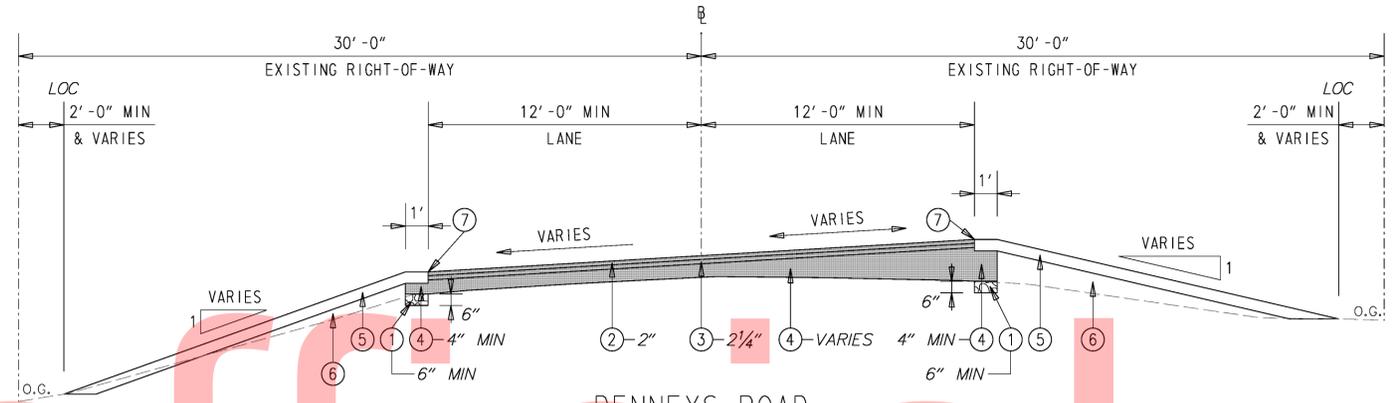


W:\MSV8\CELLS\PROJDEV\SB.CEL

| | | | | | | | | | |
|---|-----------------------|----------------------|-------------------|---|-------------|------------|---------------|--|-----------|
| DELAWARE DEPARTMENT OF TRANSPORTATION | ADDENDUMS / REVISIONS | | SCALE FEET | BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH | CONTRACT | BRIDGE NO. | 2-100A | HORIZONTAL AND VERTICAL CONTROL | SHEET NO. |
| | T201107203 | DESIGNED BY: MBR | | | 5 | | | | |
| | KENT | CHECKED BY: TRS, SDR | | | TOTAL SHTS. | | | | |
| | | | | | 28 | | | | |

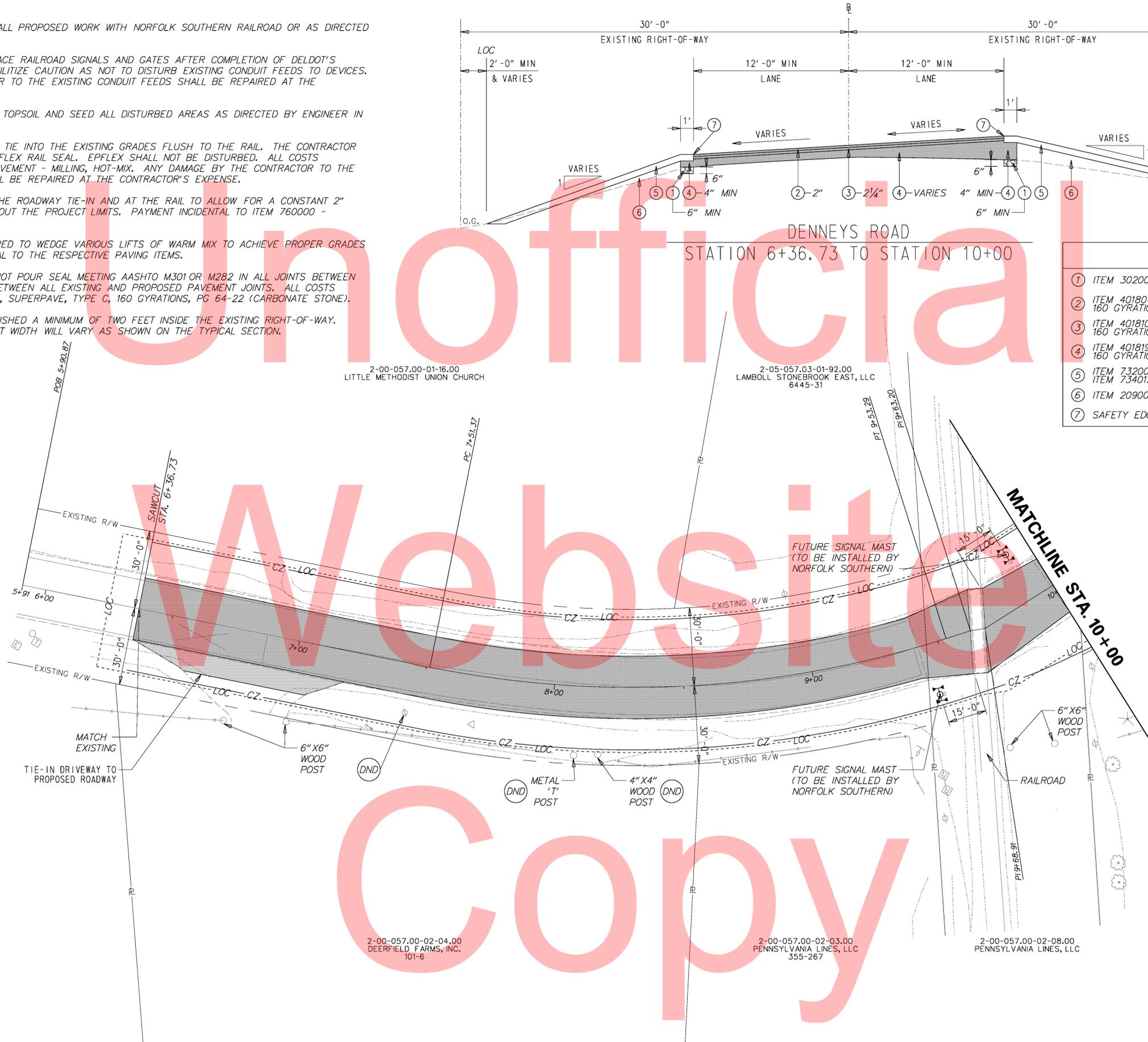
NOTES:

1. CONTRACTOR SHALL COORDINATE ALL PROPOSED WORK WITH NORFOLK SOUTHERN RAILROAD OR AS DIRECTED BY THE ENGINEER.
2. NORFOLK SOUTHERN SHALL REPLACE RAILROAD SIGNALS AND GATES AFTER COMPLETION OF DELDOT'S PROJECT. CONTRACTOR SHALL UTILIZE CAUTION AS NOT TO DISTURB EXISTING CONDUIT FEEDS TO DEVICES. ANY DAMAGE BY THE CONTRACTOR TO THE EXISTING CONDUIT FEEDS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. IF REQUIRED, CONTRACTOR SHALL TOPSOIL AND SEED ALL DISTURBED AREAS AS DIRECTED BY ENGINEER IN FIELD.
4. THE MILLING AND OVERLAY SHALL TIE INTO THE EXISTING GRADES FLUSH TO THE RAIL. THE CONTRACTOR SHALL MILL ADJACENT TO THE EPFLEX RAIL SEAL. EPFLEX SHALL NOT BE DISTURBED. ALL COSTS INCIDENTAL TO ITEM 760000 - PAVEMENT - MILLING, HOT-MIX. ANY DAMAGE BY THE CONTRACTOR TO THE EXISTING EPFLEX RAIL SEAL SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL MILL 2" AT THE ROADWAY TIE-IN AND AT THE RAIL TO ALLOW FOR A CONSTANT 2" FINAL TYPE C OVERLAY THROUGHOUT THE PROJECT LIMITS. PAYMENT INCIDENTAL TO ITEM 760000 - PAVEMENT - MILLING, HOT-MIX.
6. THE CONTRACTOR WILL BE REQUIRED TO WEDGE VARIOUS LIFTS OF WARM MIX TO ACHIEVE PROPER GRADES AS SHOWN. ALL COSTS INCIDENTAL TO THE RESPECTIVE PAVING ITEMS.
7. THE CONTRACTOR SHALL PLACE HOT POUR SEAL MEETING AASHTO M301 OR M282 IN ALL JOINTS BETWEEN EPFLEX AND 2" OVERLAY AND BETWEEN ALL EXISTING AND PROPOSED PAVEMENT JOINTS. ALL COSTS INCIDENTAL TO ITEM 401801 - WMA, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE).
8. TOE OF SLOPE SHALL BE ESTABLISHED A MINIMUM OF TWO FEET INSIDE THE EXISTING RIGHT-OF-WAY. RATE OF SLOPE AND EMBANKMENT WIDTH WILL VARY AS SHOWN ON THE TYPICAL SECTION.

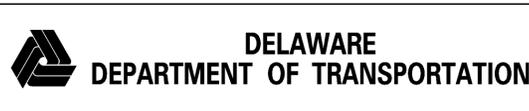


DENNEYS ROAD
STATION 6+36.73 TO STATION 10+00

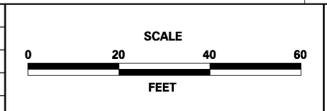
| LEGEND | |
|--------|---|
| ① | ITEM 302007 - GRADED AGGREGATE BASE COURE, TYPE B |
| ② | ITEM 401801 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, 160 GYRATIONS, PG 64-22 (CARBONATE STONE) |
| ③ | ITEM 401810 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22 (CARBONATE STONE) |
| ④ | ITEM 401819 - BITUMINOUS CONCRETE, SUPERPAVE, BCBC, 160 GYRATIONS, PG 64-22 |
| ⑤ | ITEM 732002 - TOPSOIL, 6" DEPTH ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND |
| ⑥ | ITEM 209006 - BORROW, TYPE F |
| ⑦ | SAFETY EDGE - SEE DETAIL ON SHEET 4. |



W:\MSV8\CELLS\PROJDEV\SB.CEL



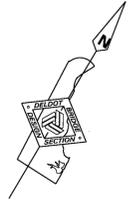
| ADDENDUMS / REVISIONS |
|-----------------------|
| |
| |
| |



BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

| | |
|------------------------|----------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: MBR |
| | CHECKED BY: TRS, SDR |

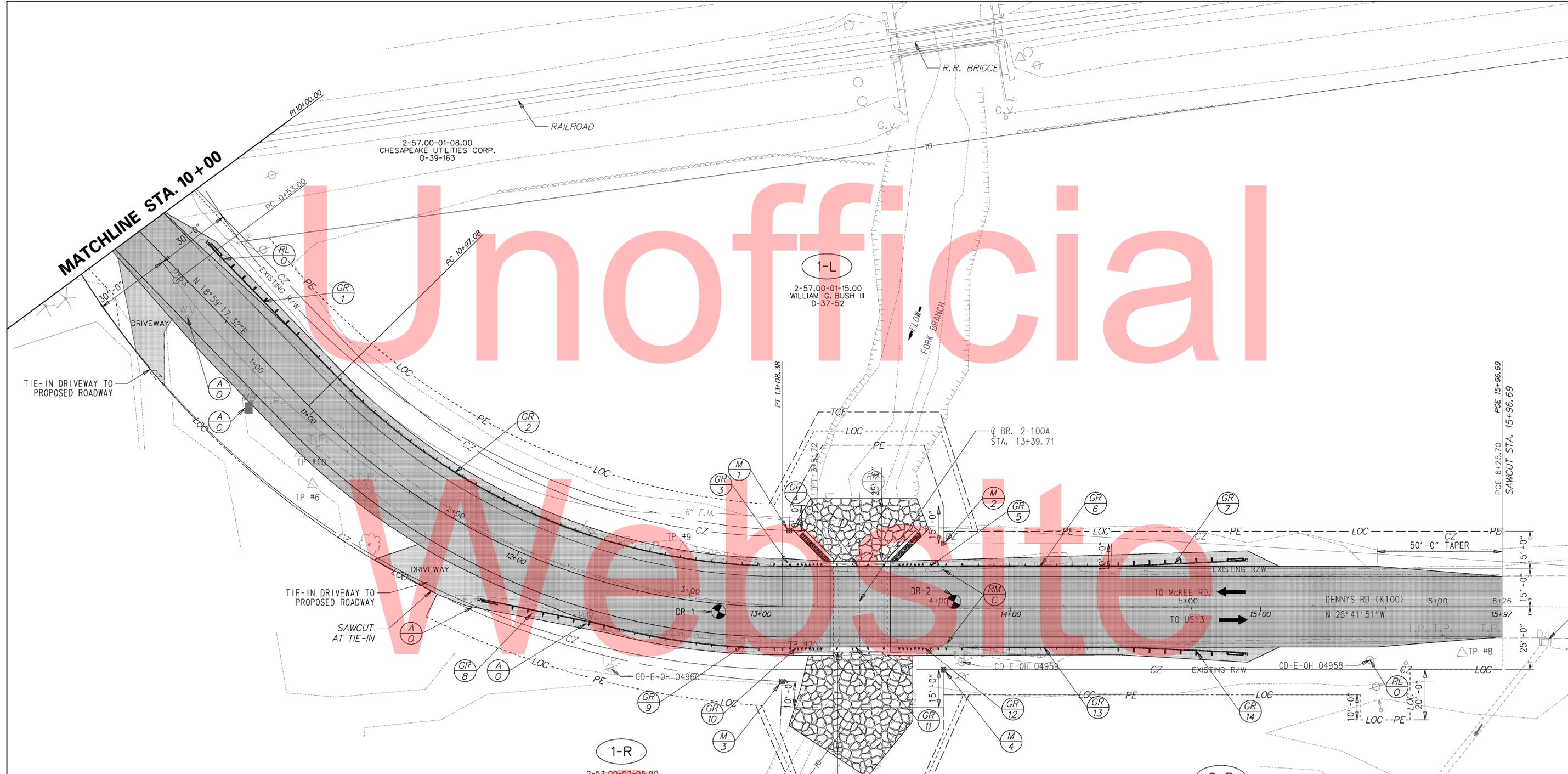
| | |
|--------------------------|-------------------|
| CONSTRUCTION PLAN | SHEET NO. 7 |
| | TOTAL SHTS. 28 |



Unofficial

Watermark

Copy



GUARDRAIL SCHEDULE

| NO. | ITEM DESCRIPTION / TYPE | BEGIN STA. | OFFSET | LENGTH |
|-----|---|------------|--------|--------|
| 1 | GUARDRAIL END TREATMENT, TYPE 1-27 | 10+23.55 | -18.00 | 50.00 |
| 2 | GALVANIZED STEEL BEAM GR, TYPE 1-27 | 10+73.55 | -16.00 | 212.50 |
| 3 | BRIDGE RAILING, GR TYPE-TRANSITION UNIT | 12+98.48 | -16.00 | 25.00 |
| 4 | BRIDGE RAILING, GUARDRAIL TYPE | 13+24.08 | -16.00 | 31.25 |
| 5 | BRIDGE RAILING, GR TYPE-TRANSITION UNIT | 13+55.33 | -16.00 | 25.00 |
| 6 | GALVANIZED STEEL BEAM GR, TYPE 1-27 | 13+80.33 | -16.00 | 62.50 |
| 7 | GUARDRAIL END TREATMENT, TYPE 1-27 | 14+42.83 | -16.00 | 50.00 |
| 8 | GUARDRAIL END TREATMENT, TYPE 1-27 | 10+86.58 | 23.50 | 50.00 |
| 9 | GALVANIZED STEEL BEAM GR, TYPE 1-27 | 11+36.58 | 16.00 | 62.50 |
| 10 | BRIDGE RAILING, GR TYPE-TRANSITION UNIT | 12+99.08 | 16.00 | 25.00 |
| 11 | BRIDGE RAILING, GUARDRAIL TYPE | 13+24.08 | 16.00 | 31.25 |
| 12 | BRIDGE RAILING, GR TYPE-TRANSITION UNIT | 13+55.33 | 16.00 | 25.00 |
| 13 | GALVANIZED STEEL BEAM GR, TYPE 1-27 | 13+80.33 | 16.00 | 62.50 |
| 14 | GUARDRAIL END TREATMENT, TYPE 1-27 | 14+42.83 | 16.00 | 50.00 |

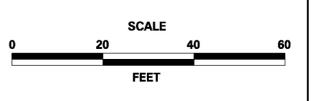
RIGHT-OF-WAY MONUMENT SCHEDULE

| NO. | TYPE | STATION | OFFSET | NORTHING | EASTING |
|-----|--------------|---------|---------|-----------|-----------|
| M-1 | CAPPED REBAR | 3+39.08 | 30.00 L | 435378.90 | 614378.86 |
| M-2 | CAPPED REBAR | 4+02.05 | 25.00 L | 435436.44 | 614355.77 |
| M-3 | CAPPED REBAR | 3+38.60 | 30.00 R | 435403.23 | 614433.71 |
| M-4 | CAPPED REBAR | 4+02.05 | 25.00 R | 435458.91 | 614400.44 |



ADDENDUMS / REVISIONS

| | |
|--|--|
| | |
| | |
| | |



BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

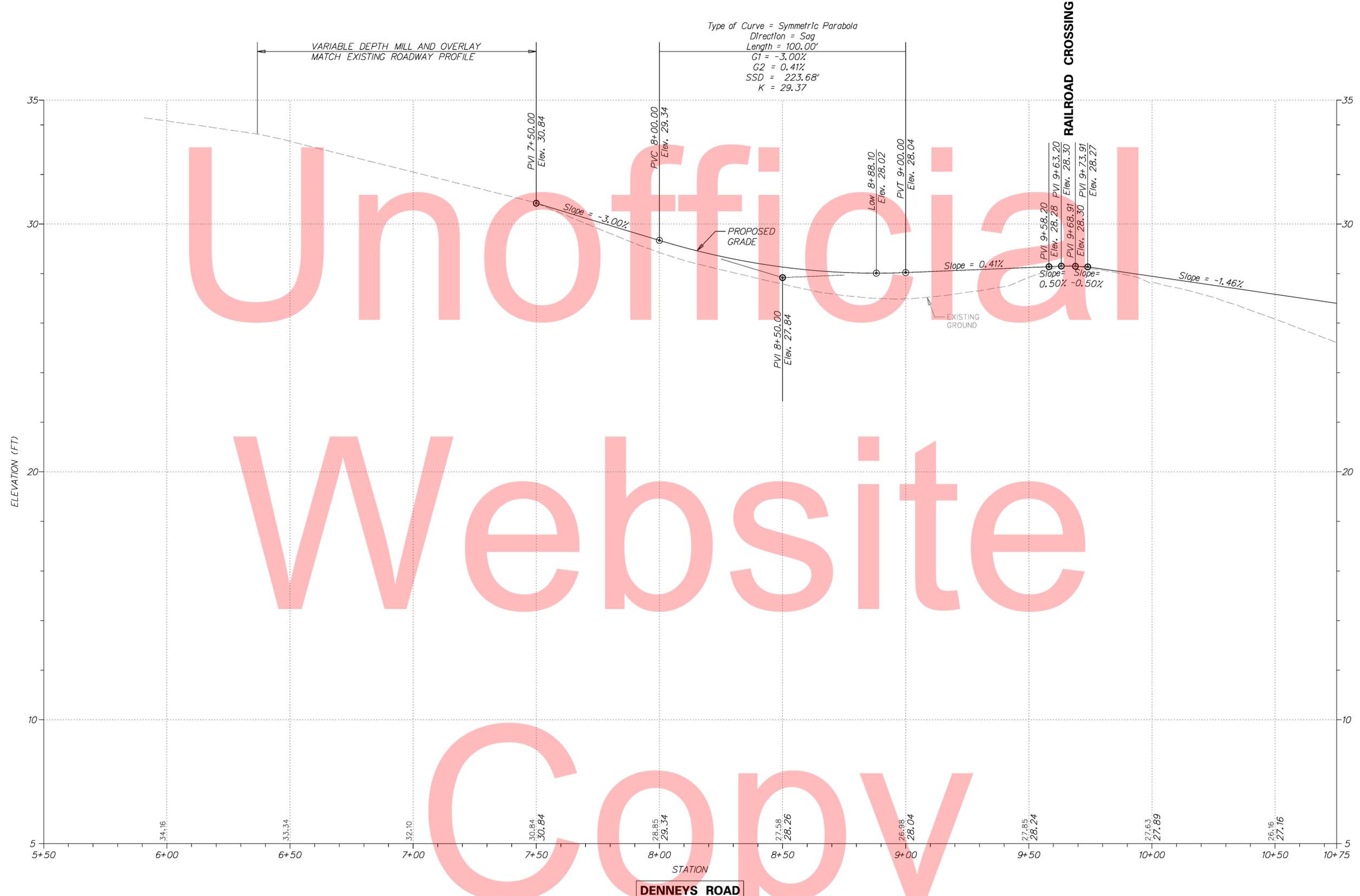
| | |
|------------------------|----------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: TRS |
| | CHECKED BY: EM |

CONSTRUCTION PLAN

| |
|-------------------|
| SHEET NO. 8 |
| TOTAL SHTS. 28 |

W:\MSV8\CELLS\PROJDEV\SB\CEL

G:\PROJECTS\115013.00 (DELDOT AGRMT 1583 DOTS OPEN-END)\115013.14 (TASK 12, RAILROAD DESIGN SERVICES)\CROSSING COORDINATION TASKS\531635U W. DENNYS RD\CADD\PF01ADGN



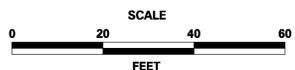
Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 100.00'
 G1 = -3.00%
 G2 = 0.41%
 SSD = 223.68'
 K = 29.37

DENNEYS ROAD

MATCHLINE STA. 10 + 75



| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
| | |
| | |



BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

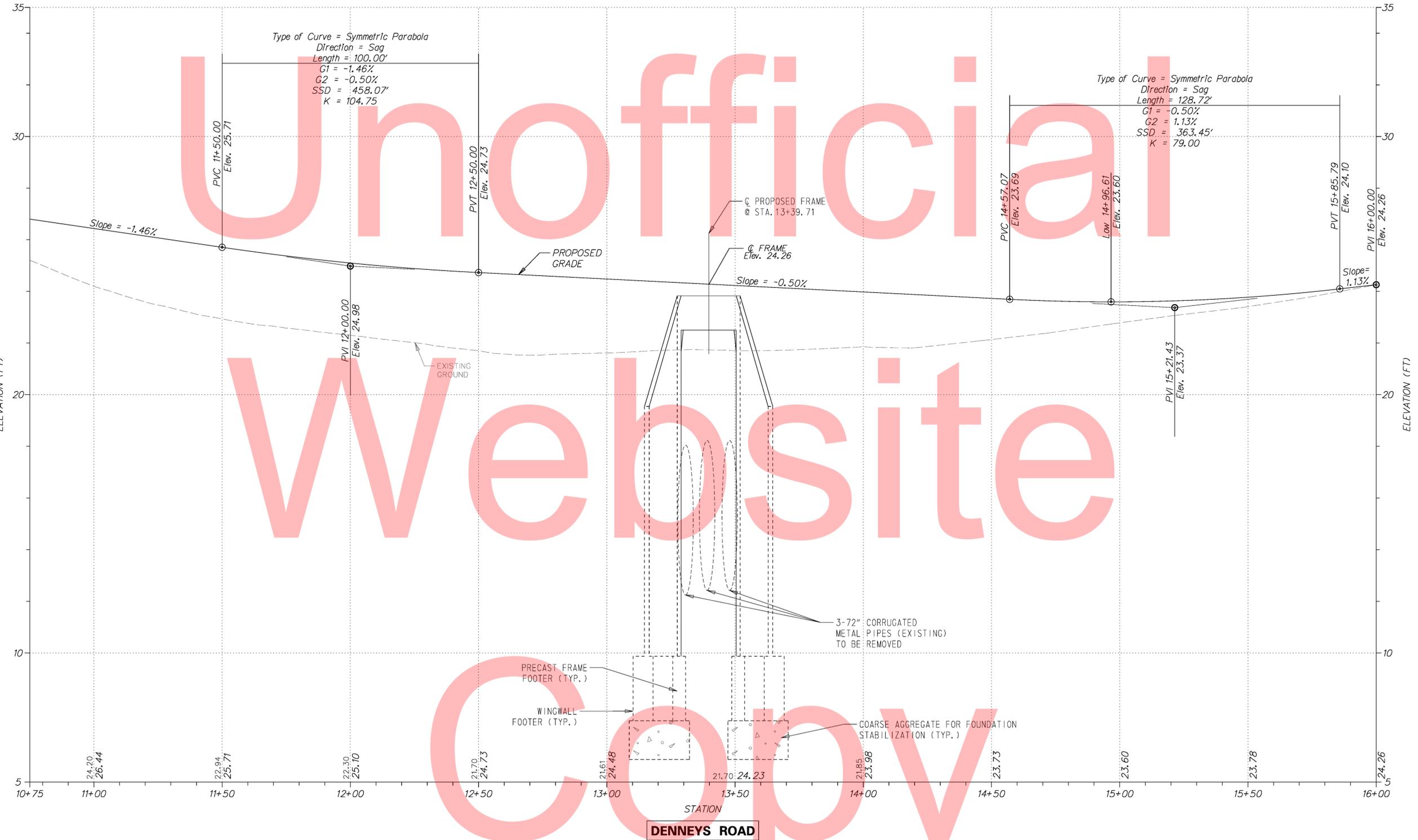
| | |
|------------------------|-----------------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: MBR |
| | CHECKED BY: TRS, SDR |

PROFILE

| |
|-------------------|
| SHEET NO. 9 |
| TOTAL SHTS. 28 |

G:\PROJECTS\115013.00 (DELDOT AGRMT 1583 DOTS OPEN-END)\115013.14 (TASK 12, RAILROAD DESIGN SERVICES)\CROSSING COORDINATION TASKS\531635U W. DENNY'S RD\CADD\PF01.DGN

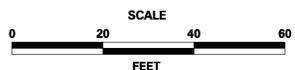
MATCHLINE STA. 10+75



DENNEYS ROAD



| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
| | |
| | |

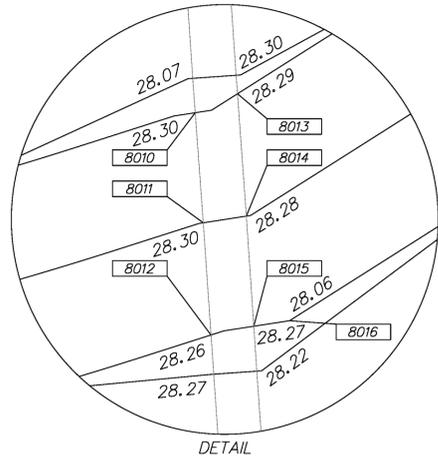


BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

| | |
|------------------------|-----------------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: TRS |
| | CHECKED BY: EM |

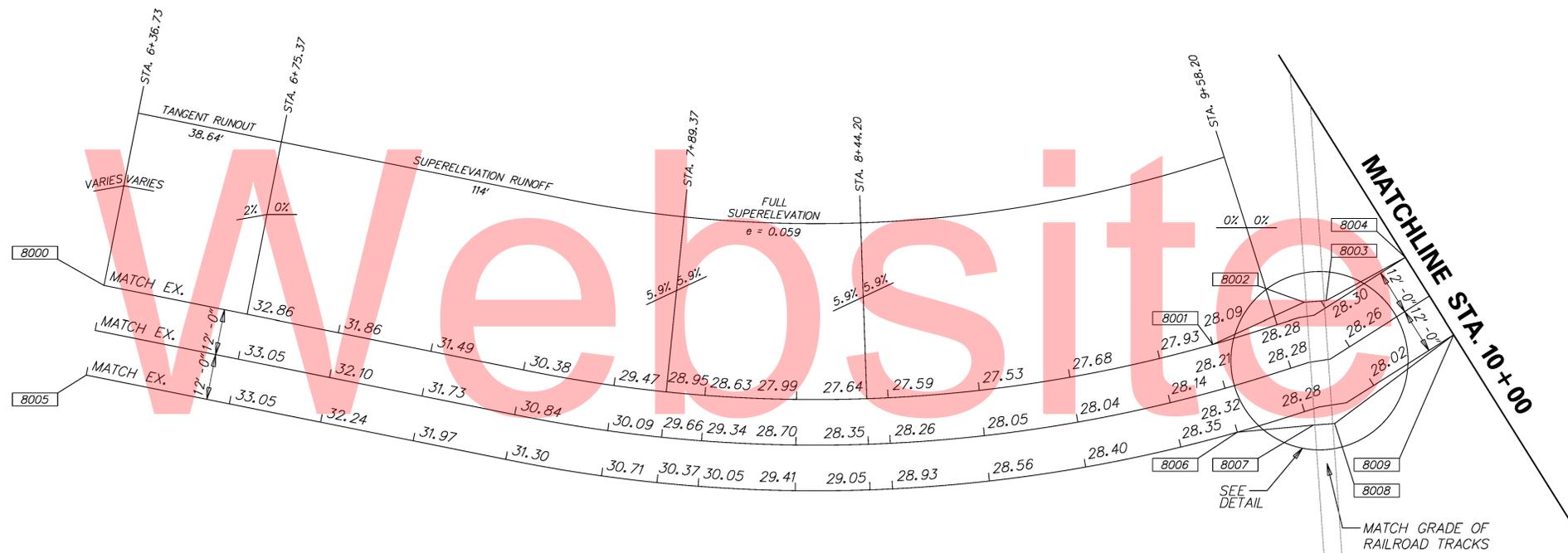
PROFILE

| |
|-------------------|
| SHEET NO. 10 |
| TOTAL SHTS. 28 |



| COORDINATE LIST | | | | |
|-----------------|----------|--------|-----------|-----------|
| POINT NO. | STATION | OFFSET | NORTHING | EASTING |
| 8000 | 6+36.73 | -12.00 | 434915.40 | 614086.60 |
| 8001 | 9+40.00 | -12.00 | 435052.53 | 614346.63 |
| 8002 | 9+64.38 | -15.79 | 435074.42 | 614361.76 |
| 8003 | 9+76.16 | -13.55 | 435077.73 | 614366.51 |
| 8004 | 10+01.67 | -11.88 | 435098.27 | 614378.71 |
| 8005 | 6+36.76 | 12.00 | 434892.78 | 614094.62 |
| 8006 | 9+40.00 | 12.00 | 435036.02 | 614364.05 |
| 8007 | 9+59.33 | 16.07 | 435047.93 | 614380.36 |
| 8008 | 9+67.54 | 16.94 | 435051.19 | 614385.03 |
| 8009 | 10+00.00 | 12.00 | 435087.39 | 614400.10 |
| 8010 | 9+64.60 | -12.00 | 435071.64 | 614364.34 |
| 8011 | 9+63.66 | 0.00 | 435061.78 | 614371.25 |
| 8012 | 9+60.76 | 12.00 | 435051.70 | 614378.26 |
| 8013 | 9+74.78 | -12.00 | 435075.80 | 614367.27 |
| 8014 | 9+68.45 | 0.00 | 435064.83 | 614374.94 |
| 8015 | 9+67.44 | 12.00 | 435054.93 | 614381.80 |
| 8016 | ----- | ----- | 435057.46 | 614384.86 |

Unofficial



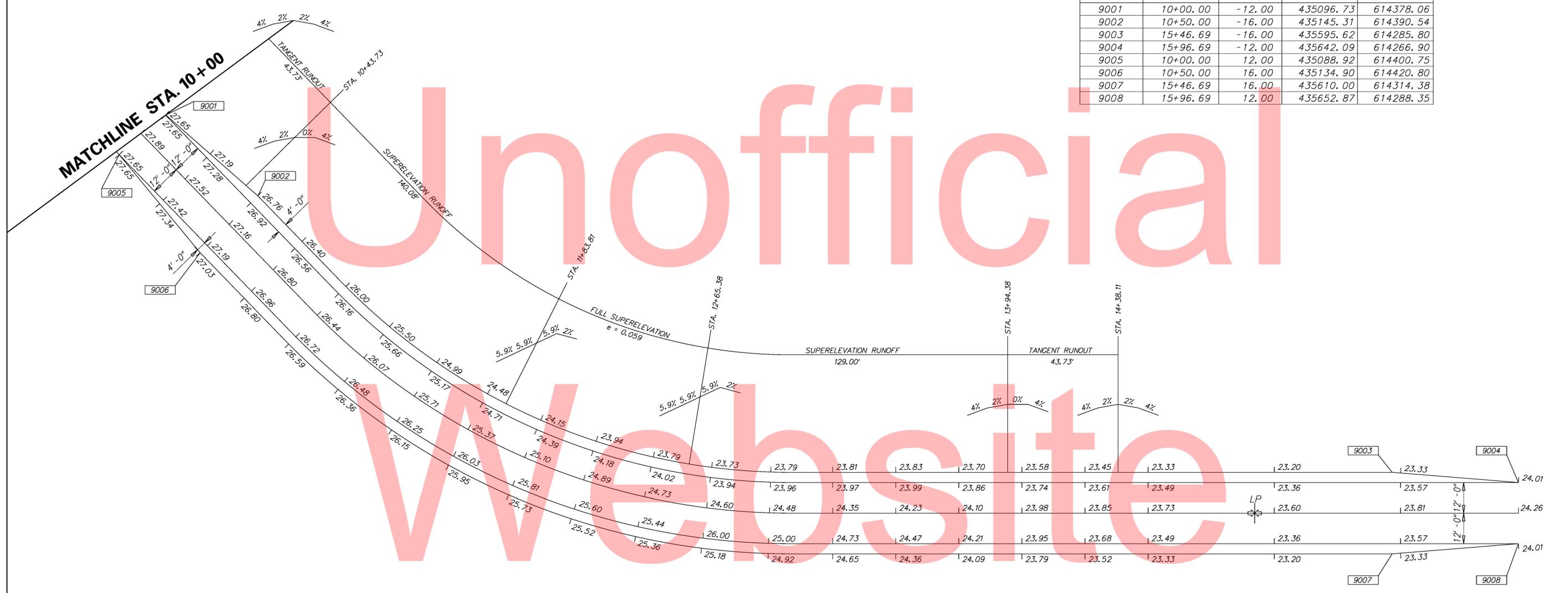
Copy



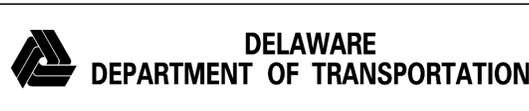
W:\MSV8\CELLS\PROJDEV\SB.CEL

| | | | | | | | | | |
|--|-----------------------|--|--------------------------|--|------------|----------------------|----------------------|-------------------------------------|-------------|
| | ADDENDUMS / REVISIONS | | <p>SCALE</p> <p>FEET</p> | <p>BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH</p> | CONTRACT | BRIDGE NO. | <p>2-100A</p> | <p>GRADES AND GEOMETRICS</p> | SHEET NO. |
| | | | | | T201107203 | DESIGNED BY: MBR | | | 11 |
| | | | | | KENT | CHECKED BY: TRS, SDR | | | TOTAL SHTS. |
| | | | | | | | | 28 | |

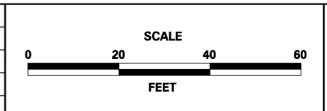
| COORDINATE LIST | | | | |
|-----------------|----------|--------|-----------|-----------|
| POINT NO. | STATION | OFFSET | NORTHING | EASTING |
| 9001 | 10+00.00 | -12.00 | 435096.73 | 614378.06 |
| 9002 | 10+50.00 | -16.00 | 435145.31 | 614390.54 |
| 9003 | 15+46.69 | -16.00 | 435595.62 | 614285.80 |
| 9004 | 15+96.69 | -12.00 | 435642.09 | 614266.90 |
| 9005 | 10+00.00 | 12.00 | 435088.92 | 614400.75 |
| 9006 | 10+50.00 | 16.00 | 435134.90 | 614420.80 |
| 9007 | 15+46.69 | 16.00 | 435610.00 | 614314.38 |
| 9008 | 15+96.69 | 12.00 | 435652.87 | 614288.35 |



W:\MSV8\CELLS\PROJDEV\SB.CEL



| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
| | |
| | |

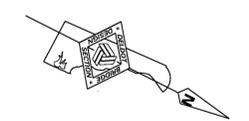


BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

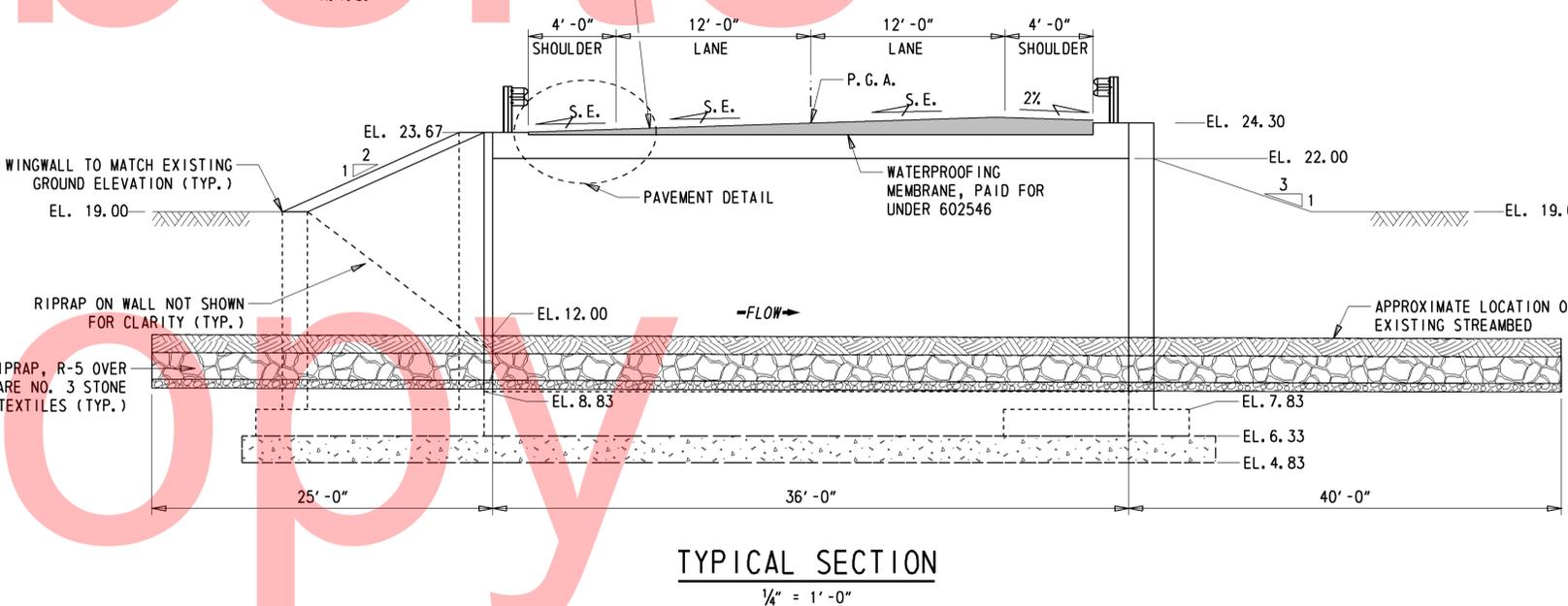
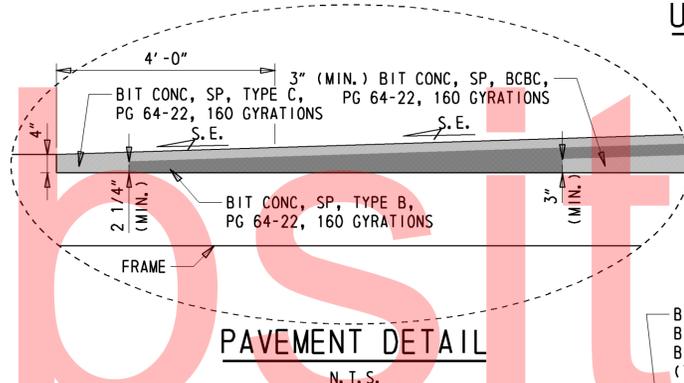
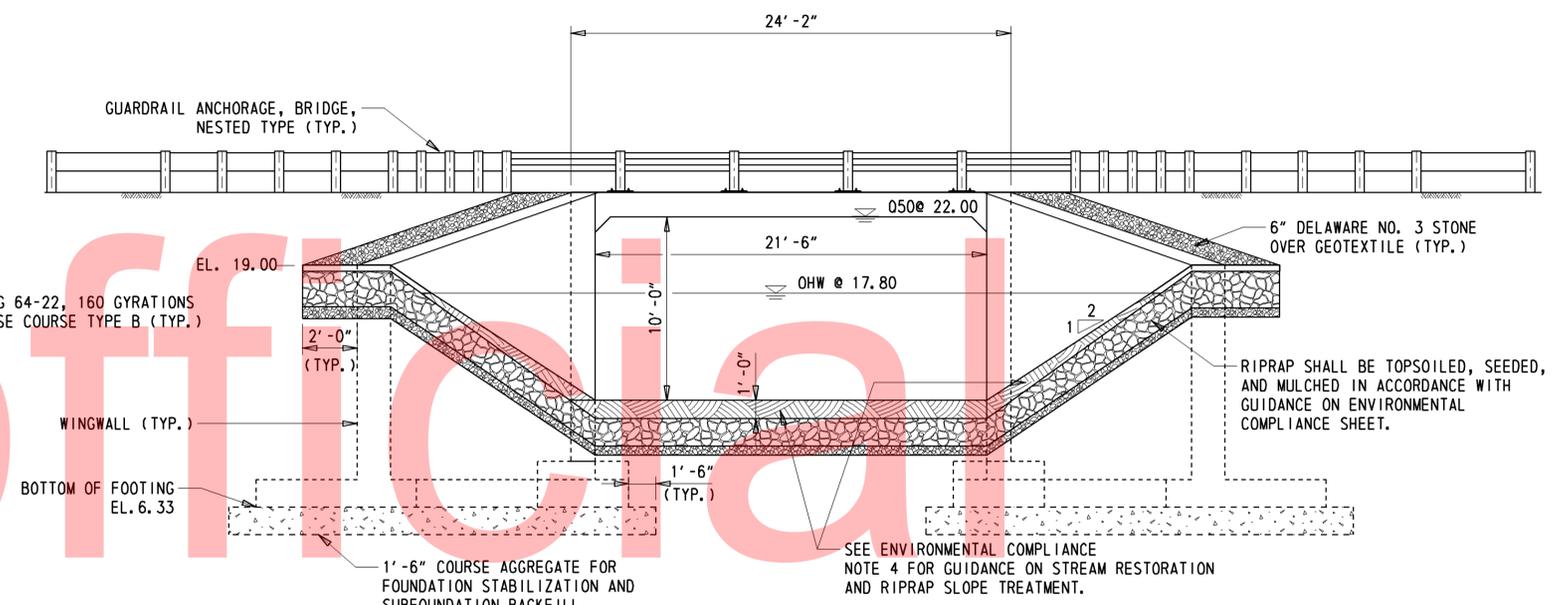
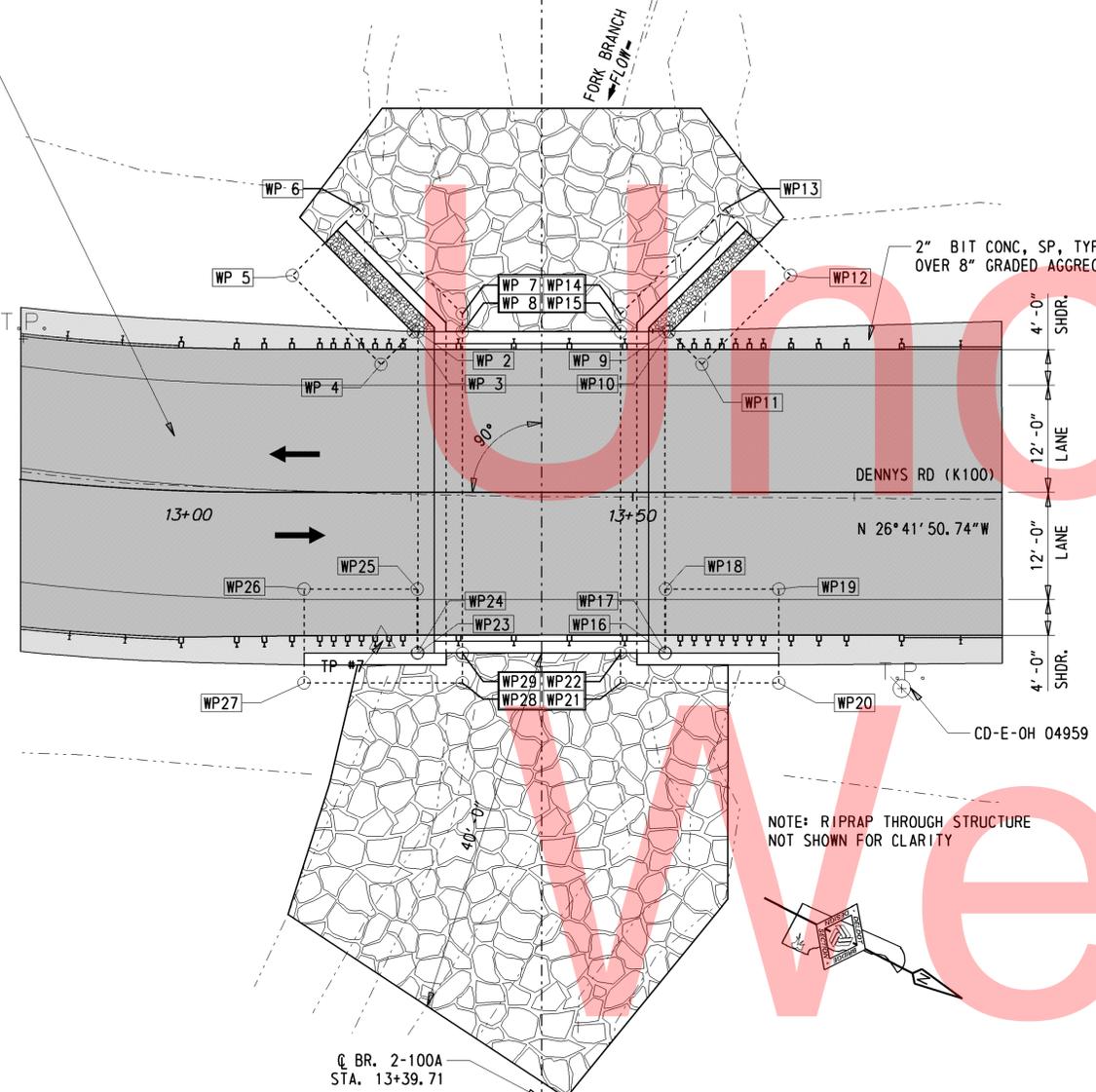
| | |
|------------------------|----------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: TRS |
| | CHECKED BY: EM |

GRADES AND GEOMETRICS

| |
|-------------------|
| SHEET NO. 12 |
| TOTAL SHTS. 28 |



2" BIT CONC, SP, TYPE C, PG 64-22, 160 GYRATIONS OVER
 2 1/4" BIT CONC, SP, TYPE B, PG 64-22, 160 GYRATIONS OVER
 3" BIT CONC, SP, BCBC, PG 64-22, 160 GYRATIONS OVER
 8" GRADED AGGREGATE BASE COURSE TYPE B

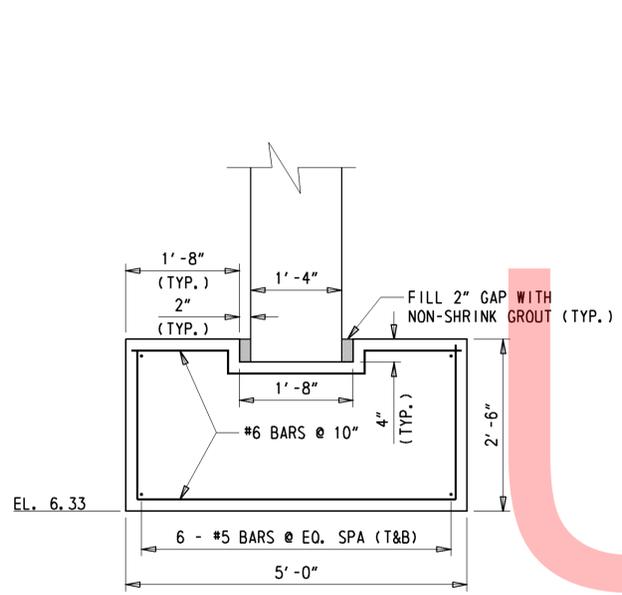


| WORKING POINTS | | | | | |
|----------------|----------|---------|-------|-----------|-----------|
| PT. | STATION | OFFSET | ELEV. | NORTHING | EASTING |
| WP2 | 13+25.80 | 18.00 L | 6.33 | 435397.38 | 614383.25 |
| WP3 | 13+25.30 | 18.00 L | 6.33 | 435396.93 | 614383.48 |
| WP4 | 13+21.62 | 14.32 L | 6.33 | 435395.30 | 614388.41 |
| WP5 | 13+11.64 | 24.30 L | 6.33 | 435381.90 | 614383.98 |
| WP6 | 13+19.06 | 31.73 L | 6.33 | 435385.20 | 614374.01 |
| WP7 | 13+30.80 | 20.00 L | 6.33 | 435400.95 | 614379.22 |
| WP8 | 13+30.80 | 18.00 L | 6.33 | 435401.84 | 614381.00 |
| WP9 | 13+53.63 | 18.00 L | 6.33 | 435422.25 | 614370.75 |
| WP10 | 13+54.13 | 18.00 L | 6.33 | 435422.69 | 614370.52 |
| WP11 | 13+57.81 | 14.32 L | 6.33 | 435427.63 | 614372.15 |
| WP12 | 13+67.79 | 24.30 L | 6.33 | 435432.06 | 614358.75 |
| WP13 | 13+60.36 | 31.73 L | 6.33 | 435422.09 | 614355.46 |
| WP14 | 13+48.63 | 20.00 L | 6.33 | 435416.88 | 614371.21 |
| WP15 | 13+48.63 | 18.00 L | 6.33 | 435417.78 | 614372.99 |
| WP16 | 13+53.63 | 18.00 R | 6.33 | 435438.42 | 614402.91 |
| WP17 | 13+53.71 | 18.00 R | 6.33 | 435438.49 | 614402.87 |
| WP18 | 13+53.71 | 10.83 R | 6.33 | 435435.27 | 614396.47 |
| WP19 | 13+66.47 | 10.83 R | 6.33 | 435446.67 | 614390.74 |
| WP20 | 13+66.47 | 21.33 R | 6.33 | 435451.39 | 614400.12 |
| WP21 | 13+48.63 | 21.33 R | 6.33 | 435435.45 | 614408.13 |
| WP22 | 13+48.63 | 18.00 R | 6.33 | 435433.95 | 614405.16 |
| WP23 | 13+25.80 | 18.00 R | 6.33 | 435413.55 | 614415.41 |
| WP24 | 13+25.71 | 18.00 R | 6.33 | 435413.48 | 614415.45 |
| WP25 | 13+25.71 | 10.83 R | 6.33 | 435410.26 | 614409.05 |
| WP26 | 13+12.96 | 10.83 R | 6.33 | 435398.87 | 614414.78 |
| WP27 | 13+12.96 | 21.33 R | 6.33 | 435403.58 | 614424.16 |
| WP28 | 13+30.80 | 21.33 R | 6.33 | 435419.52 | 614416.15 |
| WP29 | 13+30.80 | 18.00 R | 6.33 | 435418.02 | 614413.17 |

NOTE: ALL ELEVATIONS AT BOTTOM OF FOOTER

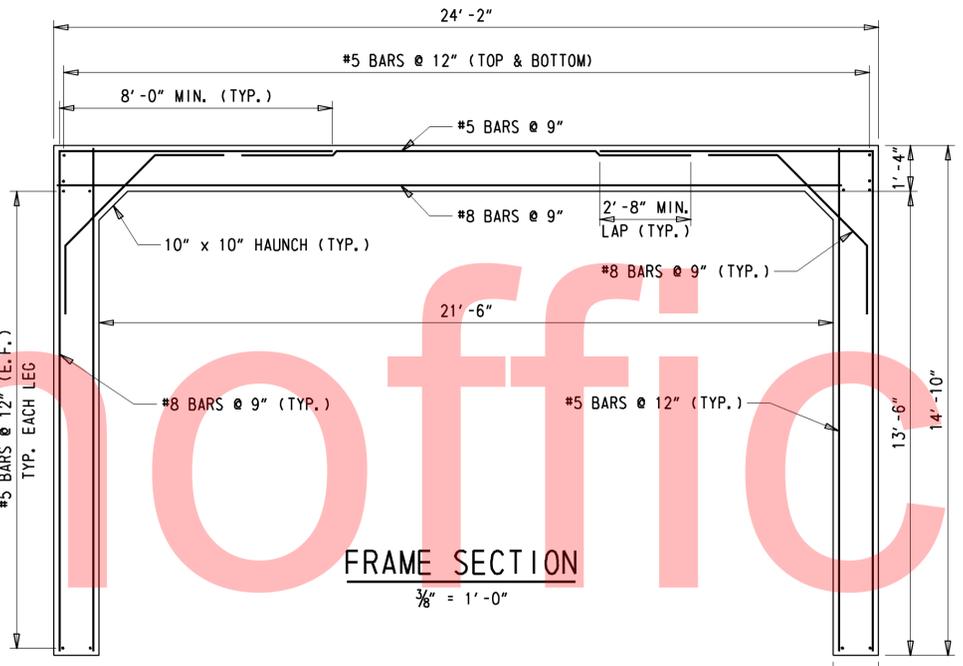
W:\MSV8\CELLS\PROVIDE\SB.CEL

| | | | | | | | | | |
|--|--|-----------------------|------------------------------------|-----------------|--|------------------------|----------------------|--------------------------------------|-----------------|
| | DELAWARE DEPARTMENT OF TRANSPORTATION | ADDENDUMS / REVISIONS | | SCALE: AS NOTED | BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH | CONTRACT T201107203 | BRIDGE NO. 2-100A | BRIDGE PLAN, SECTION, & ELEVATION | SHEET NO. 13 |
| | | COUNTY KENT | DESIGNED BY: TRS CHECKED BY: EM | | | TOTAL SHTS. 28 | | | |



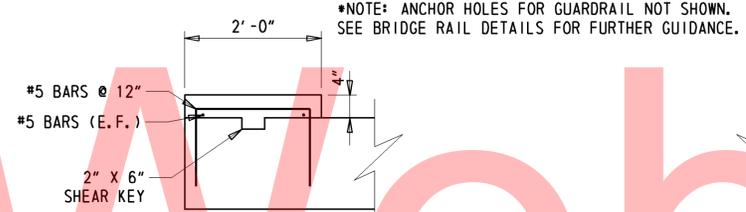
FOOTER SECTION

3/8" = 1'-0"



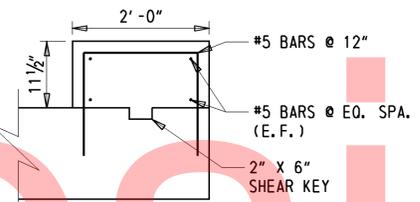
FRAME SECTION

3/8" = 1'-0"



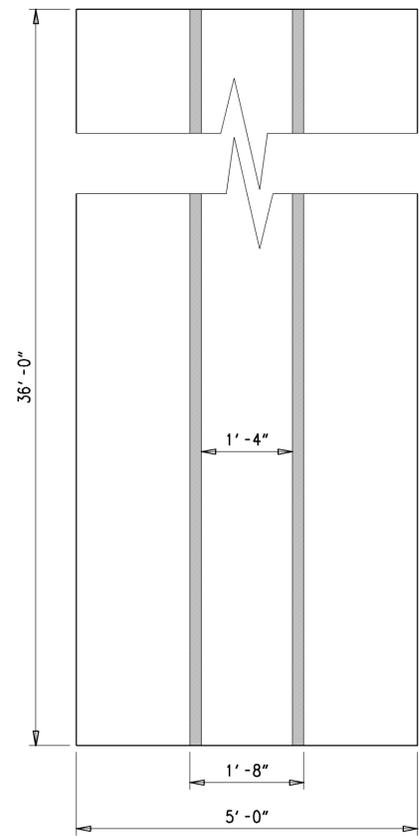
HEADWALL SECTION (WEST ONLY)

3/8" = 1'-0"



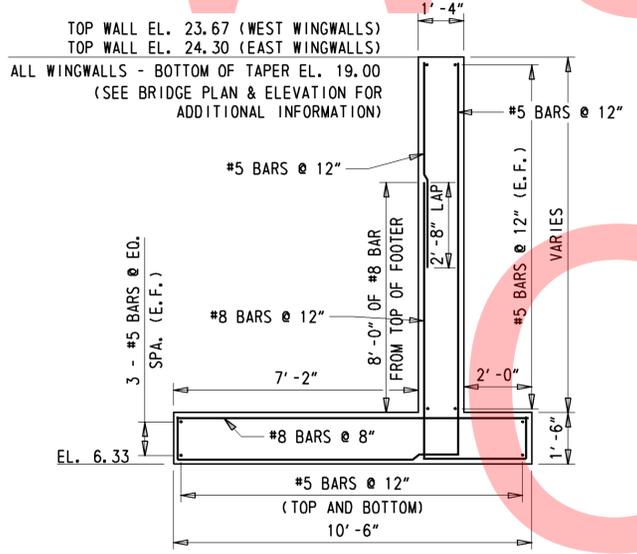
HEADWALL SECTION (EAST ONLY)

3/8" = 1'-0"



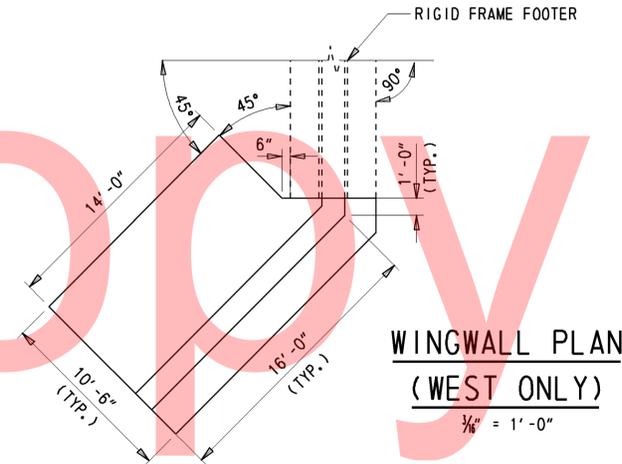
FOOTER PLAN

N. T. S.



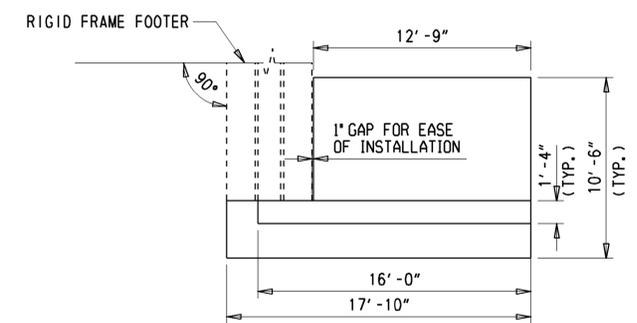
WINGWALL SECTION

3/8" = 1'-0"



WINGWALL PLAN (WEST ONLY)

3/8" = 1'-0"



WINGWALL PLAN (EAST ONLY)

3/8" = 1'-0"

PRECAST ELEMENT NOTES

- DESIGN PLANS / WORKING DRAWINGS
INFORMATION PERTAINING TO THE PRECAST REINFORCED CONCRETE RIGID FRAME AND WINGWALL SECTIONS IS INTENDED TO SERVE AS AN INDICATION OF THE TYPE OF CONSTRUCTION ACCEPTABLE FOR USE. THE CONTRACTOR WILL BE REQUIRED TO PREPARE AND SUBMIT FOR APPROVAL A COMPLETE SET OF DETAILED SHOP DRAWINGS FOR THE PRECAST CONCRETE UNITS THEY PROPOSE TO FURNISH. THE SHOP DRAWINGS SHALL INCLUDE:
 - AN OVERALL PLAN SHOWING ALL UNITS TOGETHER AND DETAILS OF EACH TYPE OF UNIT.
 - A PLAN VIEW OF REINFORCEMENT FOR ANY IRREGULAR SHAPED (SKEWED, CURVED, ETC.) SECTIONS.
 - REINFORCING BAR LIST
 - BILL OF MATERIALS INCLUDING ALL ACCESSORIES
 - METHOD AND SEQUENCE OF POST-TENSIONING
- PRECAST ELEMENTS, ACCESSORIES AND INSTALLATION
PAYMENT FOR ITEM 602739 - PRECAST CONCRETE RIGID FRAME AND ITEM 602738 - PRECAST CONCRETE RETAINING WALL SHALL INCLUDE:
 - ALL PRECAST ELEMENTS FOR THE RESPECTIVE ITEM (RIGID FRAME, FOOTERS UNDER ITEM 602739 AND WINGWALLS UNDER ITEM 602738).
 - ALL ASSOCIATED REINFORCEMENT
 - ALL ACCESSORIES (INCLUDING, BUT NOT LIMITED TO, WEEP HOLES, CONCRETE FINISH, POST-TENSIONING TENDONS, CONNECTION PLATES, GROUT, JOINT WRAP, THREADED INSERTS) MENTIONED IN THE FOLLOWING NOTES UNLESS NOTED OTHERWISE.
 - DELIVERY AND INSTALLATION OF ALL PRECAST ELEMENTS AND ALL ACCESSORIES.
- MISCELLANEOUS CONCRETE NOTES
 - ALL EXPOSED SURFACES SHALL BE PROTECTED WITH A WATER MISCIBLE, PENETRATING SILANE SEALER.
 - ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED.
- RIGID FRAME POST-TENSIONING
THE PRECAST RIGID FRAME SECTIONS SHALL BE POST-TENSIONED TOGETHER WITH A MINIMUM OF FOUR POST-TENSIONING TENDONS. THE FRAME SHALL BE POST-TENSIONED SUCH THAT THE NEOPRENE GASKETS ARE COMPRESSED ALL AROUND AND THERE IS A 1/2" MAXIMUM GAP BETWEEN SECTIONS. MAXIMUM POST-TENSIONING FORCE SHALL BE 28,900 LBS. POST-TENSIONING DETAILS (PLACEMENT, SEQUENCE OF TENSIONING, etc.) SHALL BE SHOWN IN THE SUBMITTED SHOP DRAWINGS. ALL POCKETS AND DUCTS FOR POST-TENSIONING SHALL BE COMPLETELY FILLED WITH NON-SHRINK GROUT.
- WINGWALL CONNECTIONS
 - THE PRECAST WINGWALL SECTIONS SHALL BE POST TENSIONED TOGETHER AND POSITIVELY CONNECTED TO THE RIGID FRAME WITH A MINIMUM OF TWO POST-TENSIONING TENDONS. POST-TENSIONING SHALL BE AS PER NOTE 4.
 - AT LOCATIONS WHERE POST TENSIONING OF THE WINGWALLS IS NOT FEASIBLE, A BOLTED CONNECTION MAY BE USED. BOLTED CONNECTION DETAILS SHALL BE SHOWN IN THE SUBMITTED SHOP DRAWINGS. THE BOLTED CONNECTION MUST CONSIST OF A MINIMUM OF TWO 3'-0" WIDE x 2'-0" TALL x 1/4" THICK PLATES PER JOINT WITH AT LEAST FOUR 3/4" BOLTS PER PLATE. ANGLED PLATES SHALL HAVE 8 BOLTS. SLOTTED HOLES IN THE PLATE SHALL NOT BE PERMITTED. HOLES FOR ANCHOR BOLTS MAY BE FIELD DRILLED.
 - JOINTS BETWEEN PRECAST SECTIONS
 - NEOPRENE GASKETS SHALL BE PROVIDED AT THE JOINTS BETWEEN ALL PRECAST UNITS IN ORDER TO MAKE THE JOINTS WATERTIGHT. AFTER INSTALLATION, THE GASKETS SHALL BE COMPRESSED SUCH THAT GAPS ARE NOT VISIBLE.
 - ALL JOINTS BETWEEN PRECAST FRAME SECTIONS SHALL HAVE A SHEAR KEY ALL AROUND.
 - ALL WINGWALL TO WINGWALL, AND WINGWALL TO RIGID FRAME JOINTS SHALL HAVE A SHEAR KEY.
 - THE LOCATIONS OF THE JOINTS IN THE PRECAST SECTIONS SHALL BE DETERMINED BY THE PRECASTER AND SUBMITTED IN THE SHOP DRAWINGS FOR APPROVAL.
 - THE REINFORCEMENT SHALL HAVE 2" COVER AT THE END OF EACH SECTION AND MEET OR EXCEED THE MINIMUM AREA OF STEEL PER FOOT NOTED ON THE PLANS.
 - ALL JOINT EXTERIORS SHALL BE COVERED WITH A MINIMUM 9" WIDE WRAP CENTERED ON THE JOINT AS PER THE SPECIAL PROVISION FOR ITS RESPECTIVE ITEM.

NOTE: WINGWALLS ARE MIRRORED ABOUT CENTERLINE OF BRIDGE

| ADDENDUMS / REVISIONS |
|-----------------------|
| |
| |
| |

SCALE AS NOTED

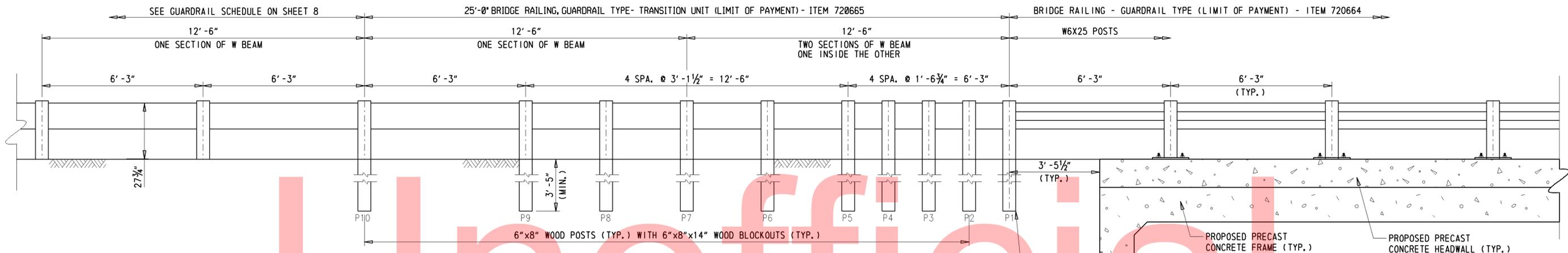
BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

| | |
|------------------------|----------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: TRS |
| | CHECKED BY: EM |

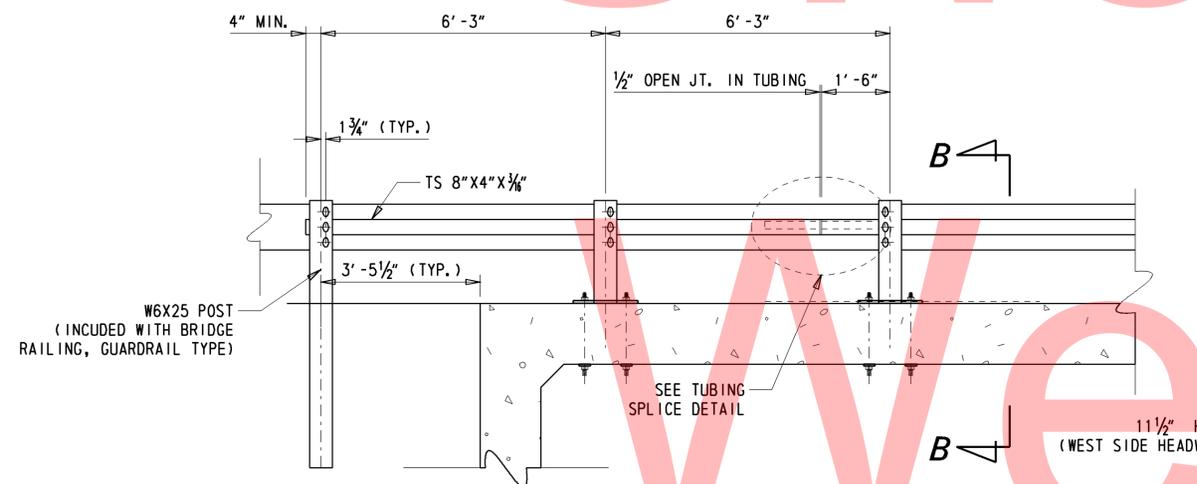
PRECAST CONCRETE DETAILS

| |
|-------------------|
| SHEET NO. 14 |
| TOTAL SHTS. 28 |

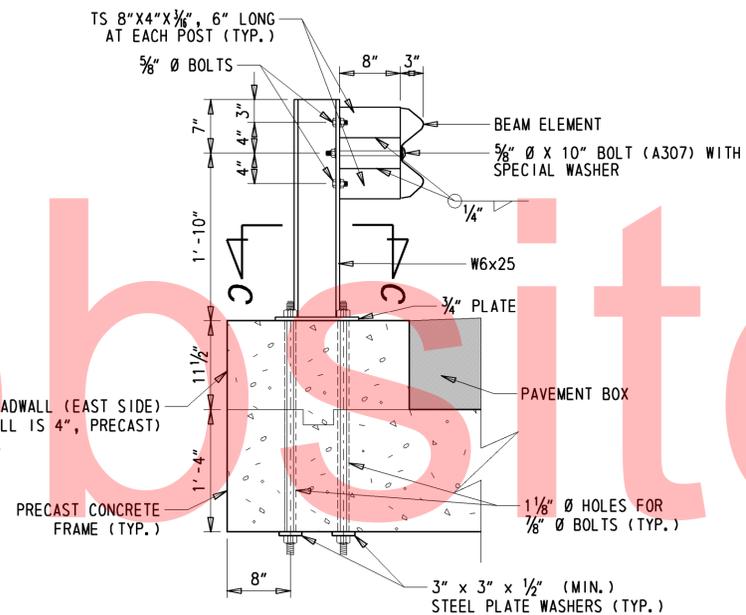
Y:\KENT\BRIDGE\T201107203\PLANS\DT01.DGN



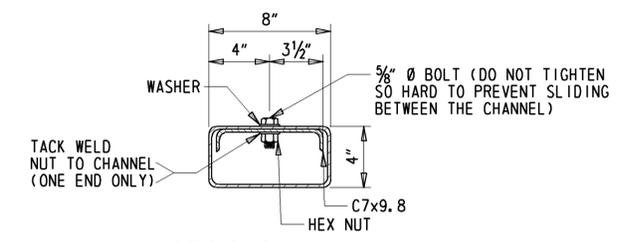
APPROACH GUARDRAIL
1/2" = 1'



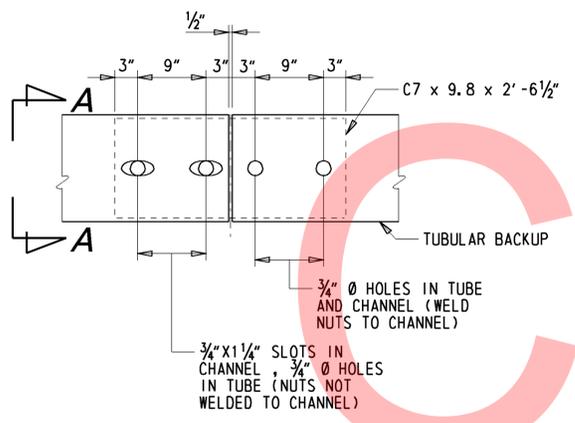
RAILING ELEVATION
1/2" = 1'



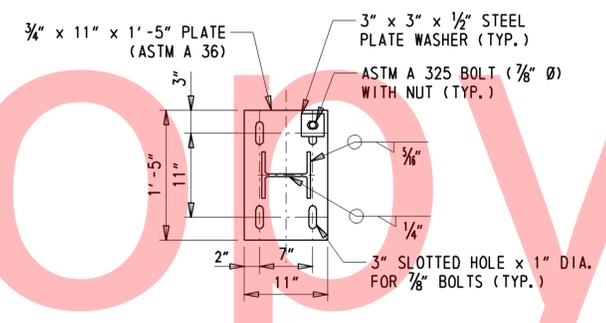
SECTION B-B
1" = 1'-0"



SECTION A-A
2" = 1'-0"



TUBING SPLICE DETAIL
1" = 1'-0"



SECTION C-C
1" = 1'-0"

BRIDGE RAILING NOTES

DETAILS SHOWN IN ACCORDANCE WITH CURRENT AASHTO SPECIFICATIONS.

FOR 7/8" DIA. ANCHOR BOLTS, THROUGH-BOLTING IS REQUIRED. CONTRACTOR MUST ENSURE PROPER SPACING OF REBAR NEAR ANCHOR SYSTEM PRIOR TO CASTING CONCRETE FRAME. ANCHOR ASSEMBLIES SHALL NOT COME INTO CONTACT WITH REINFORCING STEEL. CONTRACTOR MUST PROVIDE DETAIL OF ANCHORING METHOD TO ENGINEER. FIELD DRILLING SHALL NOT BE PERMITTED. PAYMENT FOR ANCHOR ASSEMBLIES SHALL BE INCLUDED UNDER #602739 - PRECAST CONCRETE RIGID FRAME.

FOR BRIDGE RAILING, GUARDRAIL TYPE - TRANSITION UNIT, POST ASSEMBLIES SHALL BE DRIVEN TO GRADE. GUARDRAIL IS ONLY ATTACHED AT 6'-3" INTERVALS, TO P1, P5, P7, P9 AND P10. USE WOOD BLOCKOUTS ONLY. STEEL OR PLASTIC BLOCKOUTS ARE NOT PERMITTED.

Y:\KENT*\BRIDGE\2907201\PLANS\RA01.DGN

| | | | | | | | | | | |
|---|-----------------------|--|-----------------|--|------------|--------------|--------|-----------------|---------------------|-------------|
| <p>DELAWARE DEPARTMENT OF TRANSPORTATION</p> | ADDENDUMS / REVISIONS | | SCALE: AS NOTED | BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH | CONTRACT | BRIDGE NO. | 2-100A | SHEET NO. 15 | | |
| | | | | | T201107203 | DESIGNED BY: | TRS | | BRIDGE RAIL DETAILS | TOTAL SHTS. |
| | | | | | KENT | CHECKED BY: | JNH | | | 28 |
| | | | | | | | | | | |

BORING: DR # 1 DATE DRILLED: 12/7/2010
 STATION: 12+83.27 OFFSET: 3.19' RT ELEVATION: 23.96 NORTHING: 435368.13 EASTING: 614420.34
 COMMENTS: N/A

BORING: DR # 2 DATE DRILLED: 12/7/2010
 STATION: 13+77.18 OFFSET: 2' LT ELEVATION: 25.37 NORTHING: 435450.49 EASTING: 614374.49
 COMMENTS: N/A

| SAMPLE INFORMATION | | | | | |
|--------------------|-------|-----------|---|-------------|------------------------------------|
| NO. | DEPTH | BLOWS /6" | DESCRIPTION | CLASS /G.I. | REMARKS |
| 1 | 0.0 | | NO SAMPLING | | |
| 2 | 0.0 | | | | |
| | | 14 | MOIST DENSE ORANGE SILTY FINE TO COARSE SAND AND FINE GRAVEL W/SOME CLAY. | A-2-4(0) | |
| | | 15 | | | |
| | | 16 | | | |
| | 2.0 | 18 | | | |
| 3 | 2.0 | 5 | MOIST MEDIUM DENSE BLACK FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL. | A-2-4(0) | |
| | | 6 | | | |
| | | 7 | | | |
| | 4.0 | 5 | | | |
| 4 | 4.0 | 1 | NO SIEVE ANALYSIS - INDICATION OF SATURATED SOFT BROWN ORGANIC SANDY SILT. | | |
| | | 2 | | | |
| | | 1 | | | |
| | 6.0 | 2 | | | |
| 5 | 6.0 | 1 | SATURATED SOFT BROWN ORGANIC FINE SANDY SILT W/TRACE OF COARSE SAND. | A-5(1) | |
| | | 2 | | | |
| | | 2 | | | |
| | 8.0 | 1 | | | |
| 6 | 8.0 | 3 | SATURATED LOOSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL AND ORGANIC MATTER. | A-2-4(0) | |
| | | 3 | | | |
| | | 4 | | | |
| | 10.0 | 5 | | | |
| 7 | 10.0 | 6 | SATURATED MEDIUM DENSE GRAY FINE SAND W/SOME COARSE SAND AND FINE GRAVEL, TRACE OF SILT. | A-3 | |
| | | 6 | | | |
| | | 6 | | | |
| | 12.0 | 7 | | | |
| 8 | 12.0 | 9 | SATURATED MEDIUM DENSE GRAY FINE SAND W/SOME COARSE SAND, TRACE OF SILT AND FINE GRAVEL. | A-3 | |
| | | 10 | | | |
| | | 12 | | | |
| | 14.0 | 9 | | | |
| 9 | 14.0 | 12 | SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/SOME FINE GRAVEL, TRACE OF SILT. | A-3 | |
| | | 10 | | | |
| | | 11 | | | |
| | 16.0 | 13 | | | |
| 10 | 16.0 | 2 | SATURATED SOFT BROWN ORGANIC FINE TO COARSE SANDY CLAY W/SOME SILT. | A-6(3) | PROPOSED BOTTOM OF FOOTER LOCATION |
| | | 2 | | | |
| | | 4 | | | |
| | 18.0 | 4 | | | |
| 11 | 18.0 | 4 | SATURATED MEDIUM DENSE BROWN SILTY FINE SAND W/SOME COARSE SAND, TRACE OF ORGANIC MATTER. | A-2-4(0) | |
| | | 6 | | | |
| | | 8 | | | |
| | 23.0 | 6 | | | |
| 12 | 23.0 | 3 | SATURATED STIFF GRAY FINE SANDY SILT W/SOME COARSE SAND, TRACE OF ORGANIC MATTER. | A-4(0) | |
| | | 3 | | | |
| | | 6 | | | |
| | 28.0 | 8 | | | |
| 13 | 28.0 | 7 | SATURATED HARD GRAY ORGANIC FINE SANDY CLAY W/SOME SILT, TRACE OF COARSE SAND. | A-7-5(13) | |
| | | 15 | | | |
| | | 25 | | | |
| | 33.0 | 27 | | | |
| 14 | 33.0 | 7 | SATURATED DENSE GRAY FINE SAND W/SOME SILT AND COARSE SAND, TRACE OF ORGANIC MATTER AND SHELL FRAGMENTS. | A-2-4(0) | |
| | | 12 | | | |
| | | 20 | | | |
| | 38.0 | 21 | | | |
| 15 | 38.0 | 7 | SATURATED DENSE GRAY FINE SAND W/SOME SILT AND COARSE SAND, TRACE OF FINE GRAVEL, ORGANIC MATTER AND SHELL FRAGMENTS. | A-2-4(0) | |
| | | 15 | | | |
| | | 16 | | | |
| | 43.0 | 20 | | | |
| 16 | 43.0 | 9 | SATURATED DENSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND. | A-2-4(0) | |
| | | 13 | | | |
| | | 20 | | | |
| | 48.0 | 23 | | | |
| | 48.0 | | END OF BORING | | |
| | 50.0 | | | | |

| SAMPLE INFORMATION | | | | | |
|--------------------|-------|-----------|--|-------------|------------------------------------|
| NO. | DEPTH | BLOWS /6" | DESCRIPTION | CLASS /G.I. | REMARKS |
| 1 | 0.0 | | NO SAMPLING | | |
| | 0.0 | | | | |
| | | 13 | MOIST DENSE GRAY SILTY FINE TO COARSE SAND W/SOME FINE GRAVEL. | A-2-4(0) | |
| | | 2 | | | |
| | | 19 | | | |
| | 2.0 | 16 | | | |
| 2 | 2.0 | 2 | SATURATED LOOSE BLACK ORGANIC SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL. | A-2-4(0) | |
| | | 2 | | | |
| | | 3 | | | |
| | 4.0 | 3 | | | |
| 3 | 4.0 | 2 | SATURATED LOOSE BLACK ORGANIC SILTY FINE SAND W/SOME COARSE SAND AND FINE GRAVEL. | A-2-4(0) | |
| | | 3 | | | |
| | | 2 | | | |
| | 6.0 | 3 | | | |
| U-1 | 6.0 | | NO SAMPLE RECOVERY - SAMPLE FELL OUT OF TUBE. | | |
| | 8.0 | | | | |
| 4 | 8.0 | 2 | SATURATED VERY LOOSE GRAY SILTY FINE SAND W/SOME ORGANIC MATTER, TRACE OF COARSE SAND. | A-2-4(0) | |
| | | 2 | | | |
| | | 2 | | | |
| | 10.0 | 2 | | | |
| 5 | 10.0 | 6 | SATURATED MEDIUM DENSE FINE GRAVELLY FINE TO COARSE SAND W/SOME SILT. | A-2-4(0) | |
| | | 10 | | | |
| | | 15 | | | |
| | 12.0 | 8 | | | |
| 6 | 12.0 | 11 | SATURATED STIFF GRAY ORGANIC FINE SANDY SILT W/SOME COARSE SAND. | A-5(0) | |
| | | 6 | | | |
| | | 8 | | | |
| | 14.0 | 6 | | | |
| 7 | 14.0 | 9 | SATURATED STIFF GRAY ORGANIC FINE TO COARSE SANDY SILT. | A-5(1) | |
| | | 7 | | | |
| | | 10 | | | |
| | 16.0 | 10 | | | |
| | | 6 | | | |
| | | 9 | | | |
| U-2 | 18.0 | | SATURATED GRAY SILT W/SOME FINE TO COARSE SAND, TRACE OF CLAY. | A-5(9) | PROPOSED BOTTOM OF FOOTER LOCATION |
| | 22.0 | | | | |
| 9 | 22.0 | 2 | SATURATED LOOSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF ORGANIC MATTER. | A-2-4(0) | |
| | | 2 | | | |
| | | 4 | | | |
| | 24.0 | 3 | | | |
| 10 | 24.0 | 4 | SATURATED STIFF GRAY FINE SANDY SILT W/SOME ORGANIC MATTER, TRACE OF COARSE SAND. | A-5(0) | |
| | | 5 | | | |
| | | 10 | | | |
| | 29.0 | 13 | | | |
| 11 | 29.0 | 10 | SATURATED VERY STIFF GRAY ORGANIC FINE SANDY SILT W/TRACE OF COARSE SAND. | A-5(2) | |
| | | 12 | | | |
| | | 18 | | | |
| | 34.0 | 25 | | | |
| 12 | 34.0 | 8 | SATURATED MEDIUM DENSE GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND, FINE GRAVEL AND ORGANIC MATTER. | A-2-4(0) | |
| | | 12 | | | |
| | | 12 | | | |
| | 39.0 | 16 | | | |
| 13 | 39.0 | 7 | SATURATED DENSE GRAY FINE SAND W/SOME SILT AND COARSE SAND, TRACE OF ORGANIC MATTER AND SHELL FRAGMENTS. | A-2-4(0) | |
| | | 11 | | | |
| | | 22 | | | |
| | 44.0 | 23 | | | |
| 14 | 44.0 | 9 | SATURATED DENSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND. | A-2-4(0) | |
| | | 14 | | | |
| | | 22 | | | |
| | 48.0 | 24 | | | |
| | 48.0 | | END OF BORING | | |
| | 50.0 | | | | |

Unofficial

www.eglobsite

Copy

K:\KENT\DCN\BRIDGE\1201107203\PLANS\B001.DGN

1. GENERAL NOTES:

- A. THE PURPOSE OF THESE SHEETS ARE TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
- B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, THE ENVIRONMENTAL STUDIES SECTION SHALL BE CONTACTED AT (302)760-2264 TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.
- C. USE OF THESE SHEETS DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

2. NATURAL RESOURCE ISSUES:

- A. PERMIT REQUIREMENTS/APPROVALS*:
 U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT (NWP) *3 (a) & (c) (NO PCN)
 DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT IS CONSISTENT WITH DEL. CODE CH. 92, SECTION 7217, SPECIAL EXEMPTION (b) AS AMENDED BY SB186
 DNREC - WATER QUALITY CERTIFICATION (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT IS NOT LOCATED IN CRW).

 * THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THIS APPROVAL.
 NOTE: THE ABSENCE OF ASTERISKS AFTER A PERMIT (COE, WLSL, WQC, CZM) INDICATES THAT COORDINATION HAS BEEN DONE WITH THAT AGENCY BUT NO WRITTEN AUTHORIZATION WAS REQUIRED. AS SUCH, NO PAPERWORK FROM THAT AGENCY SHOULD BE ANTICIPATED.
- B. CONSTRUCTION RESTRICTIONS:
 FISHERIES - NONE
 ENDANGERED SPECIES - NONE
 MIGRATORY BIRDS - NONE

3. CULTURAL RESOURCE ISSUES:

- A. NONE.

4. STREAM RESTORATION AND RIPRAP TREATMENTS

- A. THE CONTRACTOR SHALL FOLLOW THE SPECIAL PROVISIONS OF ITEM *712531 CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFF-SITE MATERIAL. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF ITEM *712531 CHANNEL BED FILL. ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) SHALL BE RECESSED ONE FOOT BELOW STREAM BED ELEVATION AND CHOKED WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH MATERIAL. PAYMENT UNDER ITEM *209002 BORROW TYPE 'B'. THE RIPRAP SHALL THEN BE COVERED WITH A MINIMUM OF 12" CHANNEL BED FILL. FINAL CHANNEL ELEVATIONS SHALL MATCH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS SHALL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM *712531 - CHANNEL BED FILL.
- B. OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) SHALL BE RESTORED TO EXISTING CONDITIONS. ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE FILLED WITH CHANNEL BED FILL. PAYMENT UNDER ITEM *712531 CHANNEL BED FILL.
- C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.
- D. ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, SHALL BE CHOKED WITH DELAWARE *57 STONE, FILLED WITH TOPSOIL, AND SEEDED. PLACE JUST ENOUGH CHOKE MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. AN ADDITIONAL 4-INCH TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SLOPE SEEDING SHALL BE WITH ITEM *734531 STREAMBANK SEED MIX. FOLLOWING THE SEEDING OPERATION, ITEM *735535 SOIL RETENTION BLANKET MULCH, TYPE 5, OR OTHER BLANKET AS SHOWN ON THE PLANS SHALL BE INSTALLED. ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING SHALL BE COMPLETED PRIOR TO ANY RAIN EVENT. PAYMENT FOR DELAWARE *57 STONE SHALL BE INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS SHALL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.

5. PROTECTION OF RESOURCES:

THE CONTRACTOR SHALL ACCESS THE STREAM FROM THE NORTHEAST AND NORTHWEST CORNERS ONLY. CONTRACTOR'S ACCESS BEYOND THE LOC (AS IDENTIFIED ON THESE PLANS) IS STRICTLY PROHIBITED. ANY CHANGES TO THE LOC MUST BE COORDINATED WITH THE DELDOT ENVIRONMENTAL STUDIES SECTION. FURTHERMORE, SILT FENCE OR CONSTRUCTION SAFETY FENCE SHALL BE USED ALONG THE LIMITS OF CONSTRUCTION IN AREAS WHERE WETLANDS EXIST.

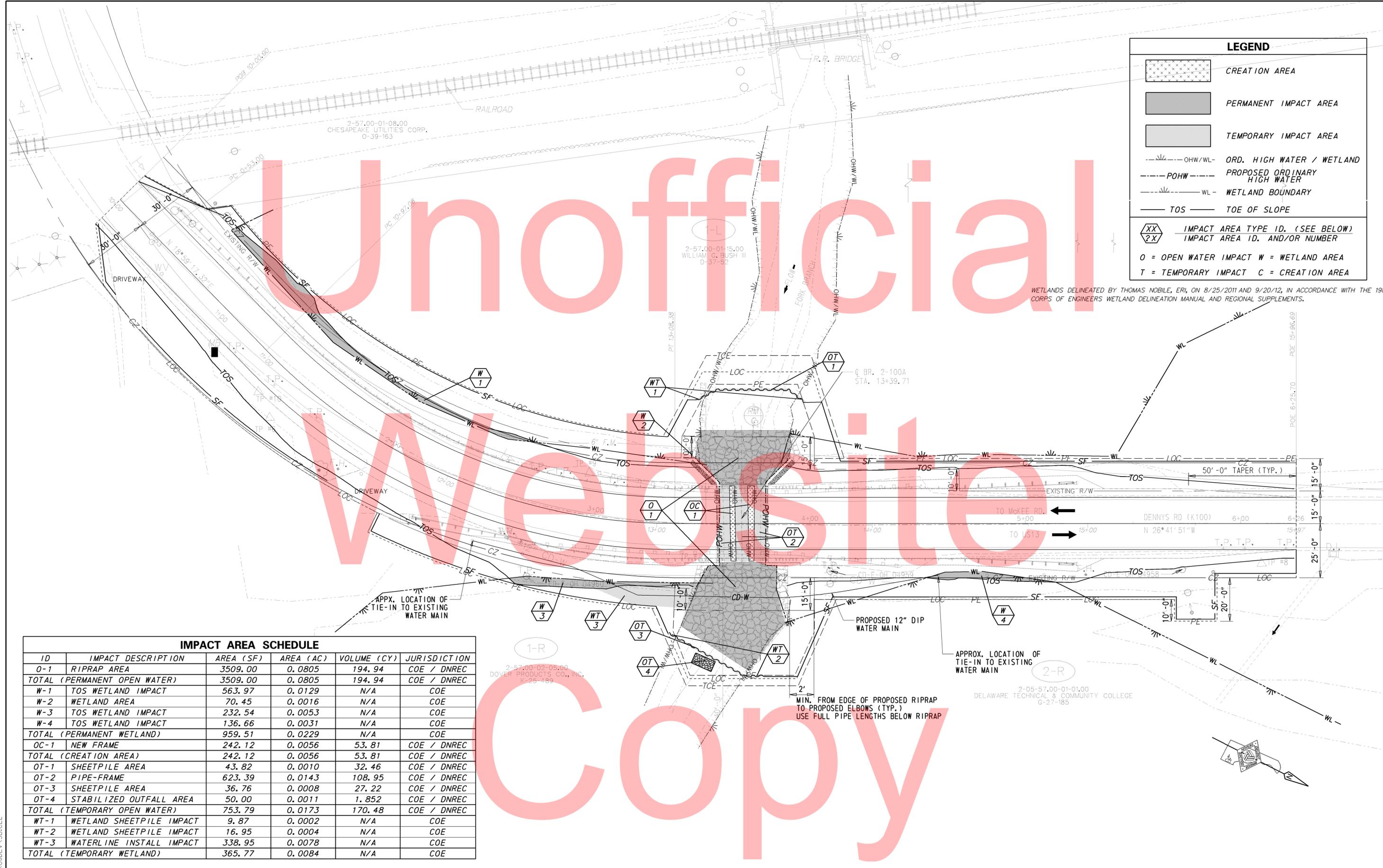
- 6. CLEARING IN WETLAND AREAS SHALL BE KEPT TO A MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. IN WETLAND AREAS THAT ARE CLEARED, THERE SHALL BE NO GRUBBING EXCEPT WHERE NECESSARY TO CONSTRUCT PROJECT COMPONENTS SUCH AS FOUNDATIONS AND RIPRAP PROTECTION. VEGETATION SHALL BE CUT FLUSH WITH THE GROUND (I.E. NO DISTURBANCE OF THE ROOT MAT). TEMPORARILY DISTURBED WETLAND AREAS SHALL BE RESTORED TO GRADE AND SEEDED WITH TEMPORARY GRASS SEEDING - DRY GROUND, (PAYMENT UNDER ITEM 734017).

- 7. PLANTING GUIDANCE (INFORMATIONAL ONLY, WORK TO BE DONE BY OTHERS. THERE SHALL BE NO PAYMENT FOR PLANTING ON THIS CONTRACT.) UPON FINAL ACCEPTANCE OF THE CONTRACT, APPROPRIATE TREES AND/OR SHRUBS SHALL BE PLANTED IN A NATURALIZED PATTERN (MINIMUM 8', MAXIMUM 12' CENTERS) IN TEMPORARILY DISTURBED WOODED WETLAND AREAS WITHIN THE LOC. FINAL PLANT COUNTS WILL BE BASED ON FIELD CONDITIONS AND DETERMINED BY THE ROADSIDE ENVIRONMENTAL ADMINISTRATOR OR HIS DESIGNEE. SPECIFIC PLANT SELECTION IS ALSO AT HIS DISCRETION BUT SHALL BE A NATIVE SPECIES APPROVED BY THE DELAWARE DEPARTMENT OF NATURAL RESOURCES.

Unofficial
Website
Copy

LAST REVISED: 5/5/2009
Y:\KENT\%A BRIDGE\201007205\PLANS\PN.DGN

| | | | | | | | | | | |
|--|-----------------------|--|---------------------|---|------------|------------------|---------------|----------------------------|-----------|----|
|  DELAWARE DEPARTMENT OF TRANSPORTATION | ADDENDUMS / REVISIONS | | NOT TO SCALE | BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH | CONTRACT | BRIDGE NO. | 2-100A | ENVIRONMENTAL NOTES | SHEET NO. | 17 |
| | | | | | T201107203 | DESIGNED BY: TRS | TOTAL SHTS. | | 28 | |
| | | | | | COUNTY | CHECKED BY: EM | | | | |
| | | | | | KENT | | | | | |



| LEGEND | |
|--------|----------------------------------|
| | CREATION AREA |
| | PERMANENT IMPACT AREA |
| | TEMPORARY IMPACT AREA |
| | ORD. HIGH WATER / WETLAND |
| | PROPOSED ORDINARY HIGH WATER |
| | WETLAND BOUNDARY |
| | TOE OF SLOPE |
| | IMPACT AREA TYPE ID. (SEE BELOW) |
| | IMPACT AREA ID. AND/OR NUMBER |
| O | = OPEN WATER IMPACT |
| W | = WETLAND AREA |
| T | = TEMPORARY IMPACT |
| C | = CREATION AREA |

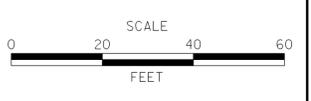
WETLANDS DELINEATED BY THOMAS NOBLE, ERI, ON 8/25/2011 AND 9/20/12, IN ACCORDANCE WITH THE 1987 CORPUS OF ENGINEERS WETLAND DELINEATION MANUAL AND REGIONAL SUPPLEMENTS.

| IMPACT AREA SCHEDULE | | | | | |
|------------------------------|--------------------------|-----------|-----------|-------------|--------------|
| ID | IMPACT DESCRIPTION | AREA (SF) | AREA (AC) | VOLUME (CY) | JURISDICTION |
| O-1 | RIPRAP AREA | 3509.00 | 0.0805 | 194.94 | COE / DNREC |
| TOTAL (PERMANENT OPEN WATER) | | 3509.00 | 0.0805 | 194.94 | COE / DNREC |
| W-1 | TOS WETLAND IMPACT | 563.97 | 0.0129 | N/A | COE |
| W-2 | WETLAND AREA | 70.45 | 0.0016 | N/A | COE |
| W-3 | TOS WETLAND IMPACT | 232.54 | 0.0053 | N/A | COE |
| W-4 | TOS WETLAND IMPACT | 136.66 | 0.0031 | N/A | COE |
| TOTAL (PERMANENT WETLAND) | | 959.51 | 0.0229 | N/A | COE |
| OC-1 | NEW FRAME | 242.12 | 0.0056 | 53.81 | COE / DNREC |
| TOTAL (CREATION AREA) | | 242.12 | 0.0056 | 53.81 | COE / DNREC |
| OT-1 | SHEETPILE AREA | 43.82 | 0.0010 | 32.46 | COE / DNREC |
| OT-2 | PIPE-FRAME | 623.39 | 0.0143 | 108.95 | COE / DNREC |
| OT-3 | SHEETPILE AREA | 36.76 | 0.0008 | 27.22 | COE / DNREC |
| OT-4 | STABILIZED OUTFALL AREA | 50.00 | 0.0011 | 1.852 | COE / DNREC |
| TOTAL (TEMPORARY OPEN WATER) | | 753.79 | 0.0173 | 170.48 | COE / DNREC |
| WT-1 | WETLAND SHEETPILE IMPACT | 9.87 | 0.0002 | N/A | COE |
| WT-2 | WETLAND SHEETPILE IMPACT | 16.95 | 0.0004 | N/A | COE |
| WT-3 | WATERLINE INSTALL IMPACT | 338.95 | 0.0078 | N/A | COE |
| TOTAL (TEMPORARY WETLAND) | | 365.77 | 0.0084 | N/A | COE |

W:\MSV8\CELLS\PRO\DEV\SB.CEL



| ADDENDUMS / REVISIONS |
|-----------------------|
| |
| |
| |



BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

| | |
|------------------------|-----------------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: TRS |
| | CHECKED BY: EM |

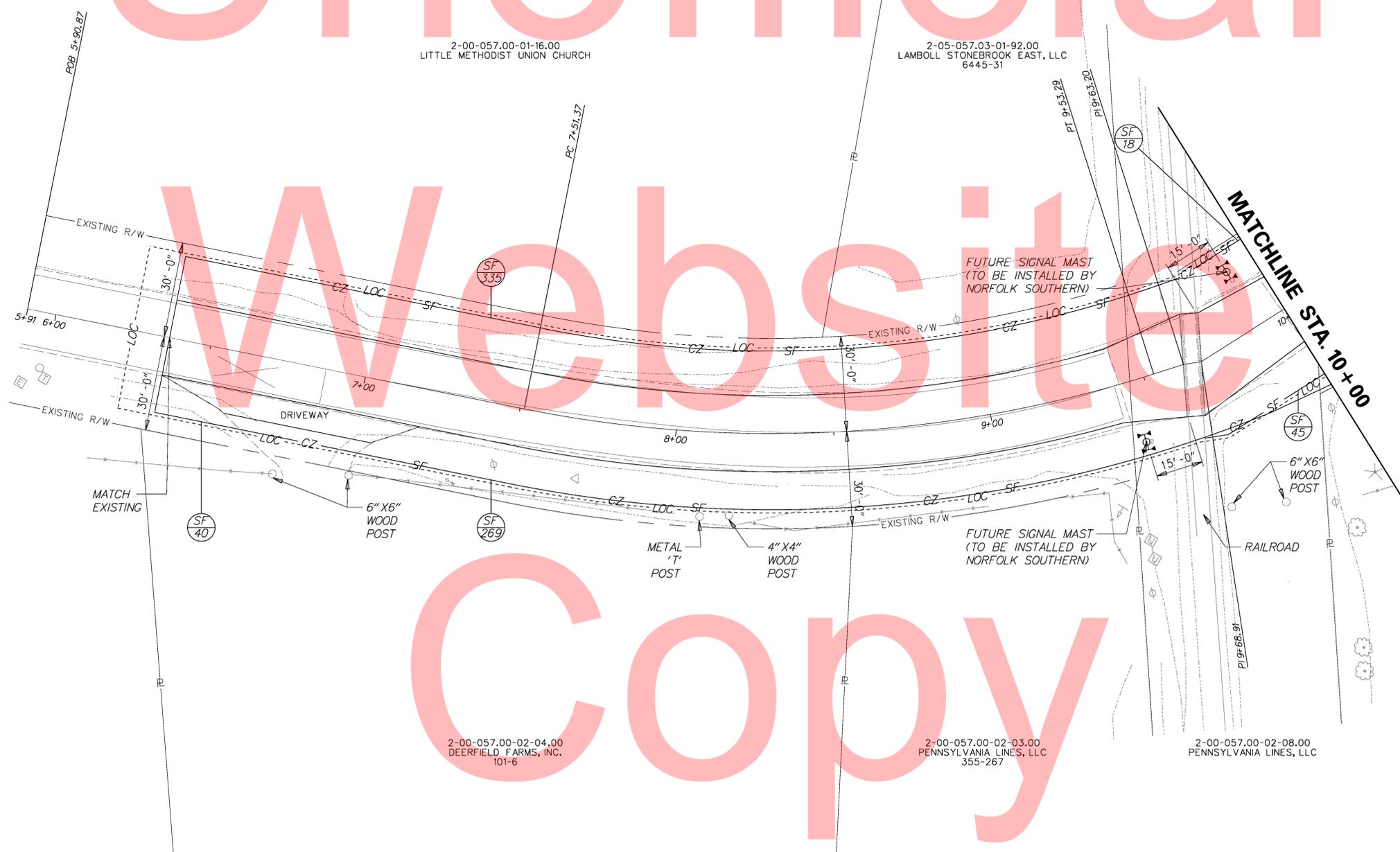
| | |
|--------------------------------------|-------------------|
| ENVIRONMENTAL COMPLIANCE PLAN | SHEET NO. 18 |
| | TOTAL SHTS. 28 |

SEQUENCE OF CONSTRUCTION

1. INSTALL ALL M.O.T. ITEMS AS SHOWN ON THE DETOUR PLAN SHEET OR AS DIRECTED BY THE ENGINEER.
2. INSTALL SILT FENCE, EXCEPT CONNECTION TO SHEETPILE, AS SHOWN ON THE PLANS.
INSTALL SHEET PILE IN CHANNEL WITH A 5' LENGTH WEIR OPENING OF EL. 19.00. OUTFALL SHEETPILE.
INSTALL PUMPING SYSTEM TO DIVERT FLOW AROUND WORK AREA.
CONNECT SILT FENCE TO THE SHEETPILE TO ENCLOSE THE WORK AREA.
3. INSTALL SUMP PIT, PORTABLE SEDIMENT TANK, AND STABILIZED OUTFALL. DEWATER WORK AREA IN ACCORDANCE WITH SECTION 111 OF THE STANDARD SPECIFICATIONS.
4. PERFORM ALL UTILITY RELOCATION WORK INCLUDING WATER MAIN RELOCATION AND UTILITY POLE RELOCATION. REFER TO SPECIAL PROVISION, ITEM *614508 - WATER MAIN AND ACCESSORIES, FOR SPECIFIC GUIDANCE.
5. PERFORM ALL CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS INCLUDING REMOVING EXISTING PIPES, INSTALLING NEW BRIDGE AND WINGWALLS, BACKFILLING, AND PLACING RIPRAP.
6. COMPLETE ALL REMAINING WORK INCLUDING GUARDRAIL INSTALLATION, ROADWAY RECONSTRUCTION, AND GRADING.

SEQUENCE OF PAVING (STA. 6+37 TO 10+00):

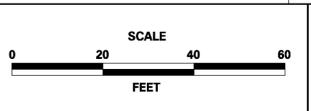
- A. MILL AS REQUIRED TO ACHIEVE PROPER GRADES.
 - B. PLACE TACK COAT AND BCBC WEDGING TO THE BOTTOM OF THE 2 1/4" TYPE B WMA. FEATHER THE JOINTS WHERE THEY MEETING EXISTING PAVEMENT.
 - C. PLACE A CONSTANT THICKNESS LIFT OF 2 1/4" TYPE B WMA, FEATHERING TO MATCH EXISTING PAVEMENT APPROACHING THE RAILROAD TRACKS AND AT THE PAVING LIMITS.
 - D. MILL THE TIE IN JOINTS AT THE PAVING LIMITS AND ON BOTH SIDES OF THE RAILROAD TRACKS.
 - E. PLACE A CONSTANT 2" LIFT OF TYPE C WMA TO COMPLETE THE PAVING.
7. REMOVE STREAM DIVERSION INCLUDING SUMP PIT, PORTABLE SEDIMENT TANK, TEMPORARY DIVERSION PIPE, AND SHEETPILE. RESTORE DISTURBED AREAS IN ACCORDANCE WITH ENVIRONMENTAL COMPLIANCE NOTES.
 8. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
 9. RESTORE THE STREAM TO EXISTING CONDITIONS IN ACCORDANCE WITH GUIDANCE ON THE ENVIRONMENTAL COMPLIANCE SHEET AND THE ENVIRONMENTAL NOTES SHEET.
 10. TOPSOIL, SEED, AND MULCH DISTURBED AREAS.
 11. REMOVE ALL M.O.T. DEVICES.



Unofficial Website Copy

DELAWARE
DEPARTMENT OF TRANSPORTATION

| ADDENDUMS / REVISIONS |
|-----------------------|
| |
| |
| |



BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

| | |
|------------------------|----------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: MBR |
| | CHECKED BY: TRS, SDR |

SEQUENCE OF CONSTRUCTION & E&S PLAN

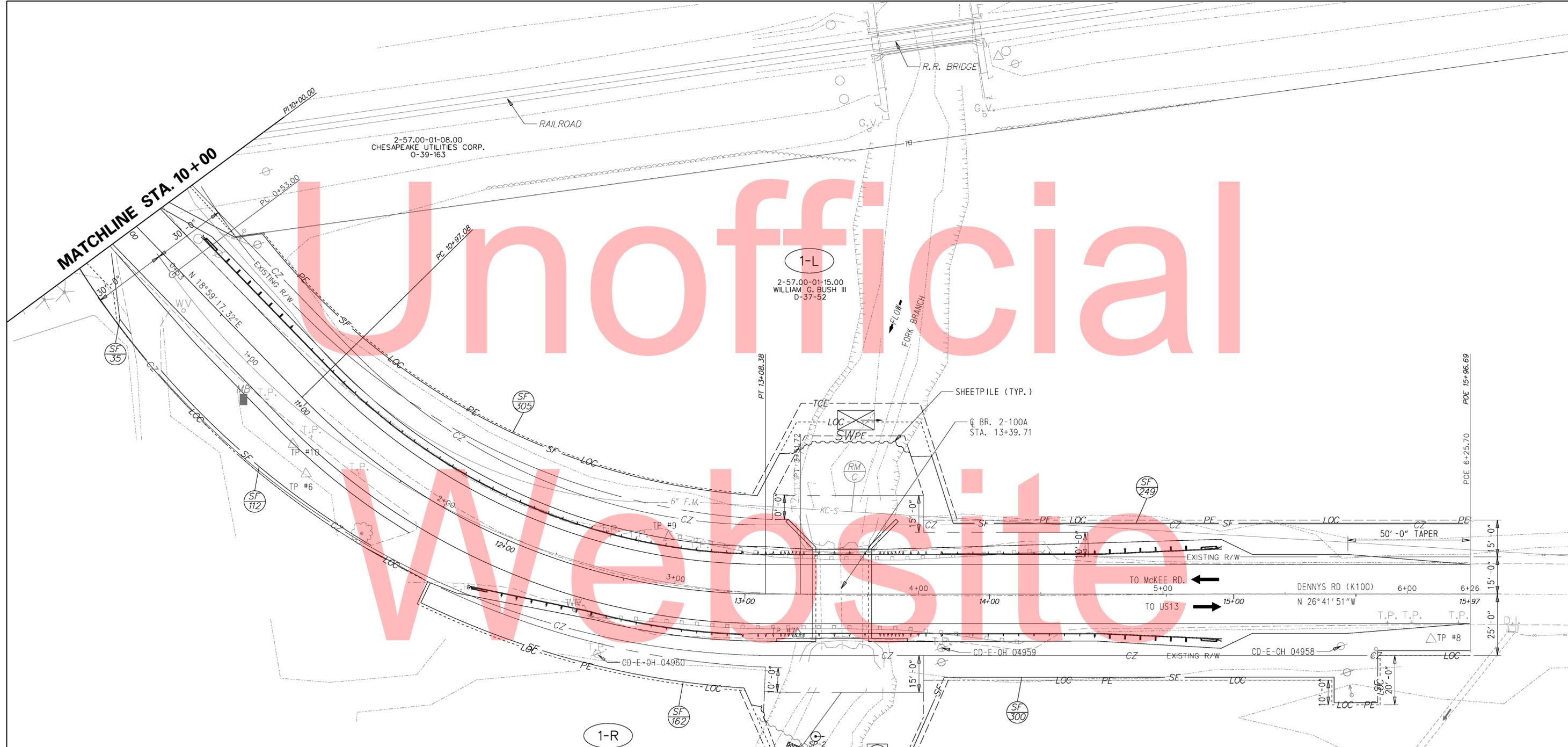
| |
|-------------------|
| SHEET NO. 19 |
| TOTAL SHTS. 28 |

W:\MSV8\CELLS\PROJDEV\SB.CEL

Unofficial

Website

Copy



SEQUENCE OF CONSTRUCTION

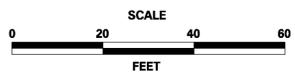
1. INSTALL ALL M.O.T. ITEMS AS SHOWN ON THE DETOUR PLAN SHEET OR AS DIRECTED BY THE ENGINEER.
2. INSTALL SILT FENCE, EXCEPT CONNECTION TO SHEETPILE, AS SHOWN ON THE PLANS.
INSTALL SHEET PILE IN CHANNEL WITH A 5' LENGTH WEIR OPENING OF EL. 19.00. OUTFALL SHEETPILE.
INSTALL PUMPING SYSTEM TO DIVERT FLOW AROUND WORK AREA.
CONNECT SILT FENCE TO THE SHEETPILE TO ENCLOSE THE WORK AREA.
3. INSTALL SUMP PIT, PORTABLE SEDIMENT TANK, AND STABILIZED OUTFALL. DEWATER WORK AREA IN ACCORDANCE WITH SECTION 111 OF THE STANDARD SPECIFICATIONS.
4. PERFORM ALL UTILITY RELOCATION WORK INCLUDING WATER MAIN RELOCATION AND UTILITY POLE RELOCATION. REFER TO SPECIAL PROVISION, ITEM *614508 - WATER MAIN AND ACCESSORIES, FOR SPECIFIC GUIDANCE.
5. PERFORM ALL CONSTRUCTION ACTIVITY IN WORK AREA AS PER PLANS INCLUDING REMOVING EXISTING PIPES, INSTALLING NEW BRIDGE AND WINGWALLS, BACKFILLING, AND PLACING RIPRAP.
6. COMPLETE ALL REMAINING WORK INCLUDING GUARDRAIL INSTALLATION, ROADWAY RECONSTRUCTION, AND GRADING.
7. REMOVE STREAM DIVERSION INCLUDING SUMP PIT, PORTABLE SEDIMENT TANK, TEMPORARY DIVERSION PIPE, AND SHEETPILE.
RESTORE DISTURBED AREAS IN ACCORDANCE WITH ENVIRONMENTAL COMPLIANCE NOTES.
8. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
9. RESTORE THE STREAM TO EXISTING CONDITIONS IN ACCORDANCE WITH GUIDANCE ON THE ENVIRONMENTAL COMPLIANCE SHEET AND THE ENVIRONMENTAL NOTES SHEET.
10. TOPSOIL, SEED, AND MULCH DISTURBED AREAS.
11. REMOVE ALL M.O.T. DEVICES.

1-R
2-57.00-02-05.00
DOVER PRODUCTS CO., INC.
K-25-489

2-R
2-05-57.00-01-01.00
DELAWARE TECHNICAL & COMMUNITY COLLEGE
G-27-185



| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
| | |
| | |



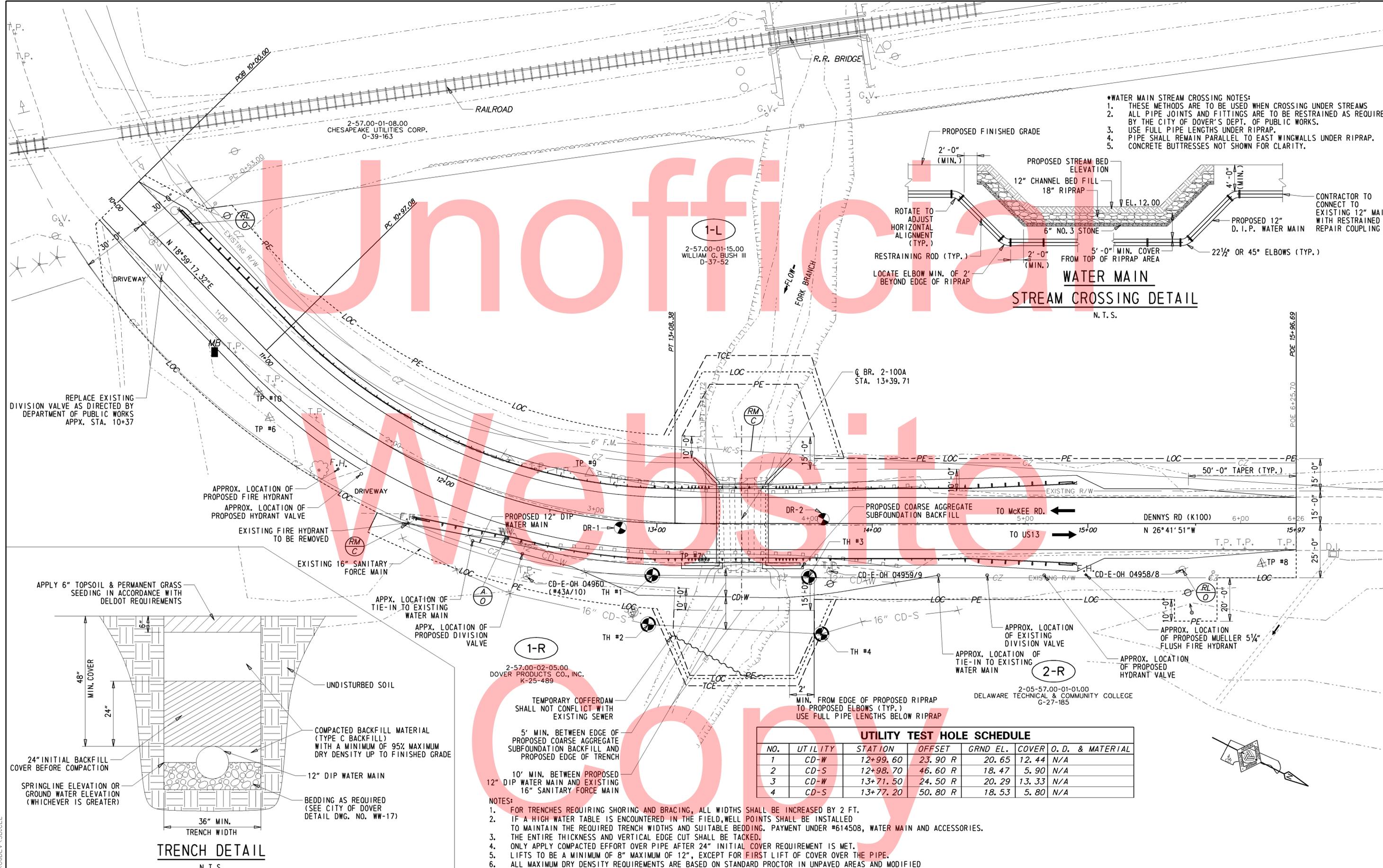
BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

| | | |
|------------------------|--------------------------------|---------------|
| CONTRACT T201107203 | BRIDGE NO. DESIGNED BY: TRS | 2-100A |
| COUNTY KENT | CHECKED BY: EM | |

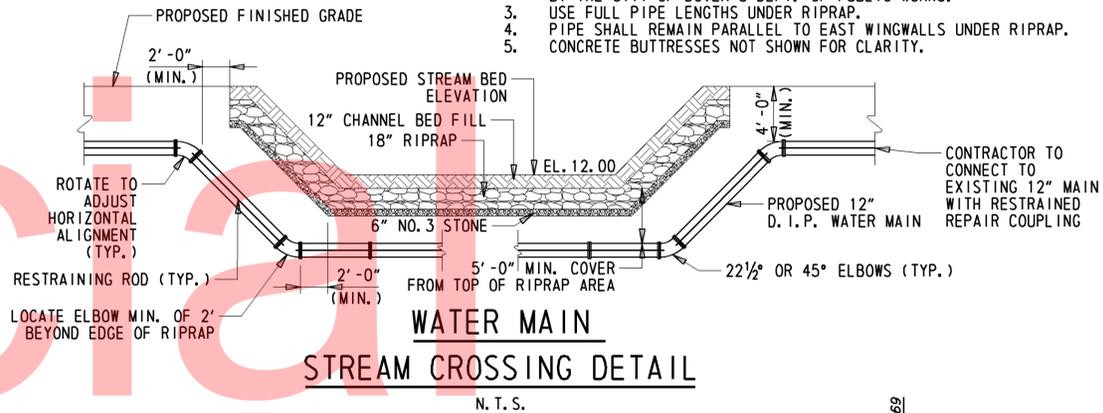
SEQUENCE OF CONSTRUCTION & E&S PLAN

| |
|-------------------|
| SHEET NO. 20 |
| TOTAL SHTS. 28 |

W:\MSV8\CELLS\PROJDEV\SB.CEL



- *WATER MAIN STREAM CROSSING NOTES:**
1. THESE METHODS ARE TO BE USED WHEN CROSSING UNDER STREAMS
 2. ALL PIPE JOINTS AND FITTINGS ARE TO BE RESTRAINED AS REQUIRED BY THE CITY OF DOVER'S DEPT. OF PUBLIC WORKS.
 3. USE FULL PIPE LENGTHS UNDER RIPRAP.
 4. PIPE SHALL REMAIN PARALLEL TO EAST WINGWALLS UNDER RIPRAP.
 5. CONCRETE BUTTRESSES NOT SHOWN FOR CLARITY.



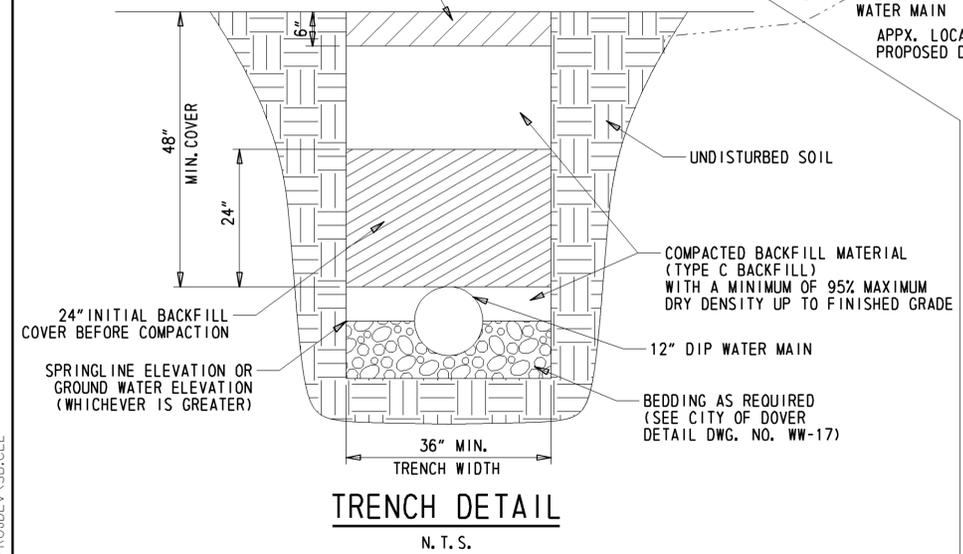
REPLACE EXISTING DIVISION VALVE AS DIRECTED BY DEPARTMENT OF PUBLIC WORKS APPX. STA. 10+37

APPROX. LOCATION OF PROPOSED FIRE HYDRANT
APPROX. LOCATION OF PROPOSED HYDRANT VALVE

EXISTING FIRE HYDRANT TO BE REMOVED

EXISTING 16" SANITARY FORCE MAIN

APPLY 6" TOPSOIL & PERMANENT GRASS SEEDING IN ACCORDANCE WITH DELDOT REQUIREMENTS



1-R
2-57.00-02-05.00
DOVER PRODUCTS CO., INC.
K-25-489

TEMPORARY COFFERDAM SHALL NOT CONFLICT WITH EXISTING SEWER

5' MIN. BETWEEN EDGE OF PROPOSED COARSE AGGREGATE SUBFOUNDATION BACKFILL AND PROPOSED EDGE OF TRENCH

10' MIN. BETWEEN PROPOSED 12" DIP WATER MAIN AND EXISTING 16" SANITARY FORCE MAIN

- NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, ALL WIDTHS SHALL BE INCREASED BY 2 FT.
 2. IF A HIGH WATER TABLE IS ENCOUNTERED IN THE FIELD, WELL POINTS SHALL BE INSTALLED TO MAINTAIN THE REQUIRED TRENCH WIDTHS AND SUITABLE BEDDING. PAYMENT UNDER #614508, WATER MAIN AND ACCESSORIES.
 3. THE ENTIRE THICKNESS AND VERTICAL EDGE CUT SHALL BE TACKED.
 4. ONLY APPLY COMPACTED EFFORT OVER PIPE AFTER 24" INITIAL COVER REQUIREMENT IS MET.
 5. LIFTS TO BE A MINIMUM OF 8" MAXIMUM OF 12", EXCEPT FOR FIRST LIFT OF COVER OVER THE PIPE.
 6. ALL MAXIMUM DRY DENSITY REQUIREMENTS ARE BASED ON STANDARD PROCTOR IN UNPAVED AREAS AND MODIFIED PROCTOR IN PAVED AREAS.

UTILITY TEST HOLE SCHEDULE

| NO. | UTILITY | STATION | OFFSET | GRND EL. | COVER | O. D. & MATERIAL |
|-----|---------|----------|---------|----------|-------|------------------|
| 1 | CD-W | 12+99.60 | 23.90 R | 20.65 | 12.44 | N/A |
| 2 | CD-S | 12+98.70 | 46.60 R | 18.47 | 5.90 | N/A |
| 3 | CD-W | 13+71.50 | 24.50 R | 20.29 | 13.33 | N/A |
| 4 | CD-S | 13+77.20 | 50.80 R | 18.53 | 5.80 | N/A |

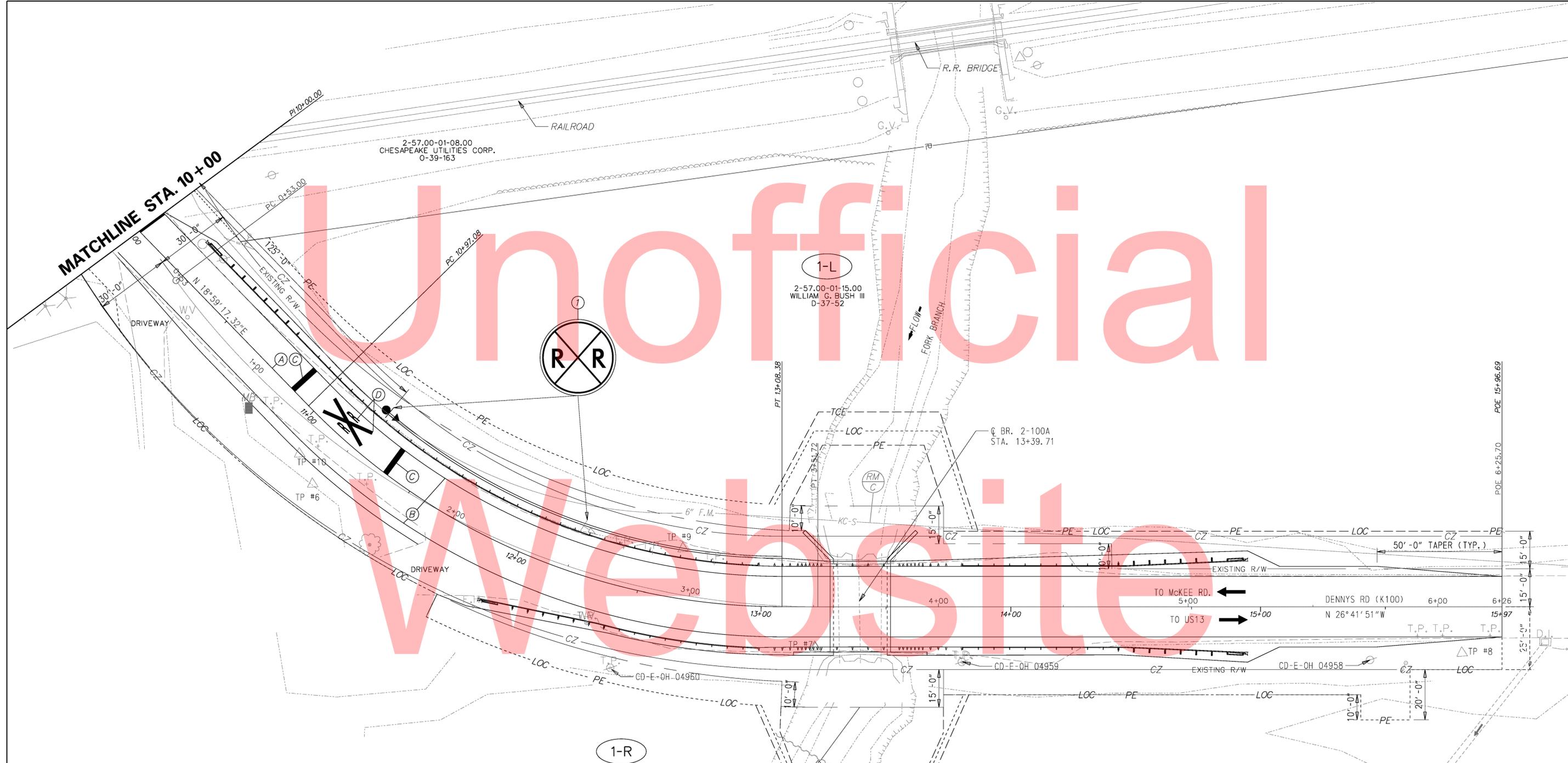
APPROX. LOCATION OF EXISTING DIVISION VALVE
APPROX. LOCATION OF TIE-IN TO EXISTING WATER MAIN
2-R

2-05-57.00-01-01.00
DELAWARE TECHNICAL & COMMUNITY COLLEGE
6-27-185

Unofficial

Website

Copy



PAVEMENT MARKINGS LEGEND

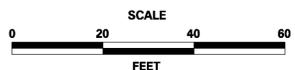
| SYMBOL | ITEM | QUANTITY |
|--------|--|----------|
| (A) | EPOXY RESIN PAINT PAVEMENT STRIPING, YELLOW 5" SOLID DOUBLE LINE (ITEM 748548) | 1200 LF |
| (B) | EPOXY RESIN PAINT PAVEMENT STRIPING, WHITE 5" SOLID (ITEM 748548) | 1200 LF |
| (C) | ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE 24" SOLID (ITEM 748015) | 48 SF |
| (D) | ALKYD-THERMOPLASTIC PAVEMENT STRIPING, WHITE SYMBOL/LEGEND, (ITEM 748015) | 69 SF |

SIGN SCHEDULE

| NO. | SHEET NO. | PLAN INDICATOR | CODE (DE-MUTCD) | QTY. | DESCRIPTION | ASSEMBLY NO. | SIGN WIDTH (IN) | SIGN HEIGHT (IN) | SIGN AREA (SF) | ITEM 749687 SINGLE POST (EACH) | | | | ITEM 749690 MULTI POST (SF) | | | | POST INSTALLATION TYPE | Code X11 12' Post (W/Basepost) | ITEM 749688 4" HOLE, 0-6" (EACH) | ITEM 749689 4" HOLE, >6" (EACH) | REMARKS |
|--------------------|-----------|----------------|-----------------|------|---|--------------|-----------------|------------------|----------------|--------------------------------|----------------------|--------|---------|-----------------------------|----------------------|--------|---------|------------------------|--------------------------------|----------------------------------|---------------------------------|---------|
| | | | | | | | | | | SIGN DISPOSITION | TOTAL SIGN AREA (SF) | REMOVE | INSTALL | SIGN DISPOSITION | TOTAL SIGN AREA (SF) | REMOVE | INSTALL | | | | | |
| 1124 | 23 | 1 | W10-1(36) | 1 | HIGHWAY-RAIL GRADE CROSSING ADVANCE WARNING 36 Inch | 1 | 36 | 1 | 7 | REPOSITION | 7 | 1 | 1 | | | SOIL | 0 | 0 | 0 | | | |
| PAGE TOTALS | | | | | | | | | | | | | | | | | | | | | | |

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS



BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

| | |
|------------------------|----------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: TRS |
| | CHECKED BY: EM |

SIGNING AND STRIPING PLAN

| |
|-------------------|
| SHEET NO. 23 |
| TOTAL SHTS. 28 |

W:\MSV8\CELLS\PROJDEV\SB\CEL

CHANGEABLE MESSAGE BOARDS:

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

DENNEYS RD WEST OF RT 13 **TO CLOSE STARTING XXXXXX**

CMS-1 DURING DETOUR (DISPLAYED UP TO 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

DENNEYS RD WEST OF RT 13 **CLOSED FOLLOW DETOUR**

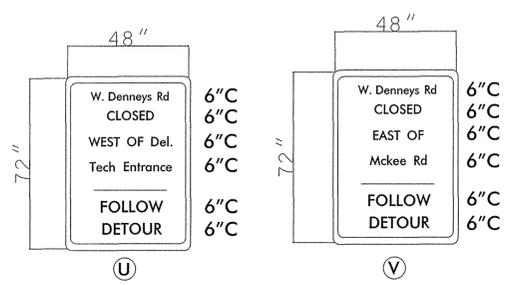
CMS-2 PRIOR TO DETOUR (10 DAYS PRIOR TO BEGINNING OF DETOUR)

DENNEYS RD EAST OF MCKEE **TO CLOSE STARTING XXXXXX**

CMS-2 DURING DETOUR (DISPLAYED UP TO 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

DENNEYS RD EAST OF MCKEE **CLOSED FOLLOW DETOUR**

SPECIAL SIGNS:



D/G FLOURESCENT ORANGE; BLACK LEGEND



LEGEND:

| | | |
|---|---------------------------------------|---|
| A DETOUR ↑ | B DETOUR ← | C DETOUR → |
| D DETOUR ↙ | E DETOUR ↘ | F 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 ← | O DETOUR → |
| 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.

RECOMMENDED *[Signature]* DATE: 9-7-11

RECOMMENDED *[Signature]* DATE: 09-08-11

RECOMMENDED _____ DATE: _____

APPROVED CHIEF SAFETY OFFICER *[Signature]* DATE: 9-21-11

APPROVED TRAFFIC ENGINEER *[Signature]* DATE: 9/22/11



| ADDENDUM / REVISIONS |
|----------------------|
| |
| |
| |

NOT TO SCALE

BR 2-100A on W. Denneys Rd over Fork Branch

| | | |
|------------|--------------|-------------|
| CONTRACT | ROAD NO. | K100 |
| T201107203 | DESIGNED BY: | MFR |
| COUNTY | CHECKED BY: | ASW |
| KENT | | |

DETOUR PLAN
W. DENNEYS RD
OVER FORK BRANCH

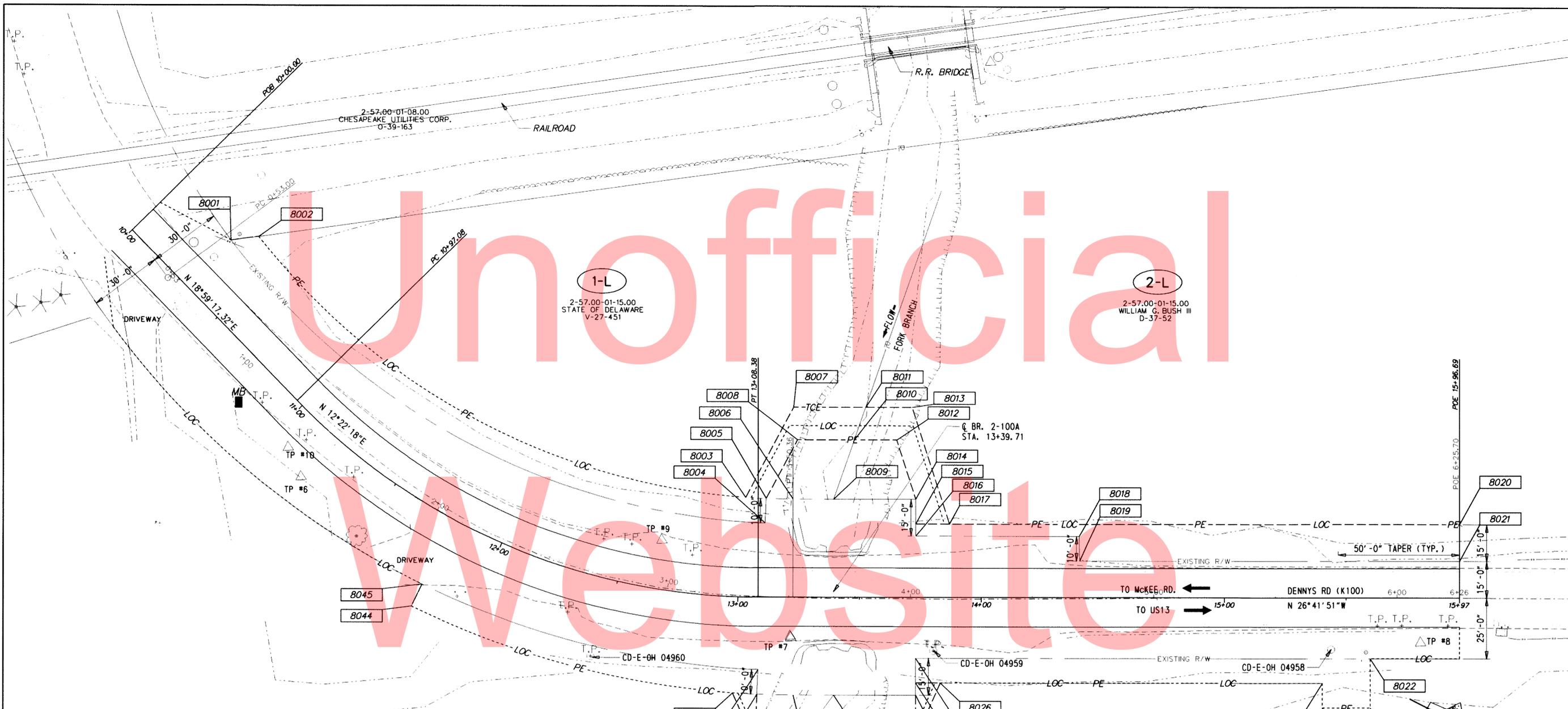
| | |
|-------------|----|
| SHEET NO. | 24 |
| TOTAL SHTS. | 28 |

W:\MSV8\CELLS\PROJ\DEV\ASB.CEL

Unofficial

Website

Copy



RECOMMENDED

Shel Claude / Robert B. Williams 2/27/13
 TEAM SUPPORT SQUAD MANAGER DATE

Shelby Claude 2/27/13
 TEAM SUPPORT ENGINEER, ACTING DATE

Robert B. Williams 2/27/13
 ASSISTANT DIRECTOR, ENGINEERING SUPPORT DATE

"AS-ACQUIRED" PLANS

I CERTIFY THAT ALL PROPOSED RIGHT-OF-WAY HAS BEEN ACQUIRED IN THE NAME OF THE STATE OF DELAWARE AND THAT THESE PLANS ACCURATELY DEPICT THE NATURE AND EXTENT OF THE REAL ESTATE SECTION ACQUISITION UNDER THIS PROJECT.

 CHIEF, REAL ESTATE DATE

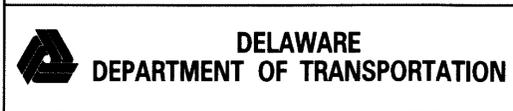
1-R

2-57.00-02-05.00
 DOVER PRODUCTS CO., INC.
 K-25-489

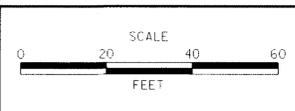
2-R

2-05-57.00-01-01.00
 DELAWARE TECHNICAL & COMMUNITY COLLEGE
 G-27-185

W:\MSV8\CELLS\PROJ\DEV\SB\CELL



| ADDENDUMS / REVISIONS | |
|-----------------------|--|
| | |
| | |
| | |



BRIDGE 2-100A ON DENNEYS ROAD OVER FORK BRANCH

| | | |
|------------|--------------|---------------|
| CONTRACT | BRIDGE NO. | 2-100A |
| T201107203 | DESIGNED BY: | TRS |
| COUNTY | CHECKED BY: | EM |
| KENT | | |

| | | |
|--------------------------|-------------|----|
| RIGHT-OF-WAY PLAN | SHEET NO. | 25 |
| | TOTAL SHTS. | 28 |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|---------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|-------------------|--------------|------------|-----------|
| 2-57.00-01-15.00 | (1-L) WILLIAM G. BUSH III | P/E | D-37-52 | 5.922 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8001 | 1000 | 0+56.25 | -30.00 | 435130.9282 | 614374.8774 | N 34°33' 43.70" W | 11.5166 | | | | |
| 8002 | 1000 | 0+62.66 | -40.00 | 435140.4123 | 614368.3440 | | | N 1°12' 59.48" E | 226.6057 | 233.3153 | -279.6200 |
| 8003 | 1000 | 3+29.35 | -40.00 | 435366.9669 | 614373.1550 | | | N 23°33' 31.45" W | 8.5052 | 8.5055 | -279.6200 |
| 8005 | 1000 | 3+39.08 | -40.00 | 435374.7632 | 614369.7556 | N 65°34' 20.60" E | 10.0000 | | | | |
| 8004 | 1000 | 3+39.08 | -30.00 | 435378.8987 | 614378.8604 | | | S 0°55' 12.84" W | 248.0024 | 256.2825 | 289.6200 |
| 8001 | 1000 | 0+56.25 | -30.00 | 435130.9282 | 614374.8774 | | | | | | |
| FIGURE 8001 AREA = 2490.5716 SQ. FT. (0.0572 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|--------------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|---------------|--------------|------------|-----------|
| 2-57.00-02-05.00 | (1-R) DOVER PRODUCTS CO., INC. | TCE | K-25-489 | 15.978 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8040 | 1000 | 3+29.57 | 40.00 | 435398.0468 | 614446.8713 | | | | | | |
| 8038 | 1000 | 3+38.60 | 40.00 | 435407.3567 | 614442.8165 | N 65°39' 22.05" E | 10.0000 | | | | |
| 8037 | 1000 | 3+38.60 | 50.00 | 435411.4788 | 614451.9273 | N 42°22' 14.63" E | 21.6710 | | | | |
| 8035 | 1000 | 3+45.62 | 70.00 | 435427.4893 | 614466.5319 | N 25°44' 49.86" W | 1.9505 | | | | -389.6200 |
| 8034 | 1000 | 3+47.22 | 70.00 | 435429.2462 | 614465.6847 | S 80°25' 34.83" E | 6.1193 | | | | |
| 8036 | 1000 | 3+44.35 | 75.00 | 435428.2284 | 614471.7187 | S 39°27' 48.18" W | 39.0938 | | | | |
| 8040 | 1000 | 3+29.57 | 40.00 | 435398.0468 | 614446.8713 | | | | | | |
| FIGURE 8007 AREA = 182.0933 SQ. FT. (0.0042 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|---------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|-------------------|--------------|------------|-----------|
| 2-57.00-01-15.00 | (1-L) WILLIAM G. BUSH III | P/E | D-37-52 | 5.922 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8005 | 1000 | 3+39.08 | -40.00 | 435374.7632 | 614369.7556 | N 89°13' 34.61" W | 27.9304 | | | | |
| 8008 | 1000 | 3+53.55 | -65.00 | 435375.1404 | 614341.8277 | N 26°41' 50.74" W | 40.7213 | | | | |
| 8009 | 1000 | 3+94.27 | -65.00 | 435411.5204 | 614323.5325 | N 46°00' 54.79" E | 26.1828 | | | | |
| 8011 | 1000 | 4+02.05 | -40.00 | 435429.7035 | 614342.3716 | S 26°41' 50.74" E | 50.3241 | | | | |
| 8006 | 1000 | 3+51.72 | -40.00 | 435384.7443 | 614364.9812 | | | S 25°33' 49.64" E | 11.0642 | 11.0649 | 279.6200 |
| 8005 | 1000 | 3+39.08 | -40.00 | 435374.7632 | 614369.7556 | | | | | | |
| FIGURE 8002 AREA = 1276.9465 SQ. FT. (0.0293 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|---------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|---------------|--------------|------------|-----------|
| 2-57.00-01-15.00 | (1-L) WILLIAM G. BUSH III | P/E | D-37-52 | 5.922 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8012 | 1000 | 4+02.05 | -30.00 | 435434.1963 | 614351.3055 | N 26°41' 50.74" W | 13.8345 | | | | |
| 8014 | 1000 | 4+15.88 | -30.00 | 435446.5559 | 614345.0900 | N 26°41' 50.74" W | 209.6618 | | | | |
| 8017 | 1000 | 6+25.54 | -30.00 | 435633.8660 | 614250.8934 | N 63°18' 09.26" E | 15.0000 | | | | |
| 8018 | 1000 | 6+25.54 | -15.00 | 435640.6052 | 614264.2942 | S 26°41' 50.74" E | 156.0708 | | | | |
| 8016 | 1000 | 4+69.47 | -15.00 | 435501.1728 | 614334.4135 | S 62°13' 13.18" W | 10.0018 | | | | |
| 8015 | 1000 | 4+69.29 | -25.00 | 435496.5113 | 614325.5645 | S 26°41' 50.74" E | 67.2366 | | | | |
| 8013 | 1000 | 4+02.05 | -25.00 | 435436.4427 | 614355.7725 | S 63°18' 09.26" W | 5.0000 | | | | |
| 8012 | 1000 | 4+02.05 | -30.00 | 435434.1963 | 614351.3055 | | | | | | |
| FIGURE 8003 AREA = 2679.1339 SQ. FT. (0.0615 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|---------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|---------------|--------------|------------|-----------|
| 2-57.00-01-15.00 | (1-L) WILLIAM G. BUSH III | TCE | D-37-52 | 5.922 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8003 | 1000 | 3+29.35 | -40.00 | 435366.9669 | 614373.1550 | N 88°27' 14.92" W | 41.7908 | | | | |
| 8007 | 1000 | 3+51.95 | -77.50 | 435368.0943 | 614331.3794 | N 26°41' 50.74" W | 48.6624 | | | | |
| 8010 | 1000 | 4+00.61 | -77.50 | 435411.5689 | 614309.5165 | N 45°28' 34.57" E | 49.8955 | | | | |
| 8014 | 1000 | 4+15.88 | -30.00 | 435446.5559 | 614345.0900 | S 26°41' 50.74" E | 13.8345 | | | | |
| 8012 | 1000 | 4+02.05 | -30.00 | 435434.1963 | 614351.3055 | S 63°18' 09.26" W | 10.0000 | | | | |
| 8011 | 1000 | 4+02.05 | -40.00 | 435429.7035 | 614342.3716 | S 46°00' 54.79" W | 26.1828 | | | | |
| 8009 | 1000 | 3+94.27 | -65.00 | 435411.5204 | 614323.5325 | S 26°41' 50.74" E | 40.7213 | | | | |
| 8008 | 1000 | 3+53.55 | -65.00 | 435375.1404 | 614341.8277 | S 89°13' 34.61" E | 27.9304 | | | | |
| 8005 | 1000 | 3+39.08 | -40.00 | 435374.7632 | 614369.7556 | S 23°33' 31.45" E | 8.5052 | 8.5055 | | 279.6200 | |
| 8003 | 1000 | 3+29.35 | -40.00 | 435366.9669 | 614373.1550 | | | | | | |
| FIGURE 8004 AREA = 1269.3749 SQ. FT. (0.0291 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|--------------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|-------------------|--------------|------------|-----------|
| 2-57.00-02-05.00 | (1-R) DOVER PRODUCTS CO., INC. | P/E | K-25-489 | 15.978 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8041 | 1000 | 2+07.44 | 40.00 | 435264.3468 | 614474.7530 | S 89°10' 00.24" W | 10.0000 | | | | |
| 8042 | 1000 | 2+07.44 | 30.00 | 435264.2014 | 614464.7541 | | | N 12°35' 18.96" W | 142.4582 | 143.4626 | -349.6200 |
| 8039 | 1000 | 3+38.60 | 30.00 | 435403.2349 | 614433.7054 | N 65°39' 29.27" E | 10.0000 | | | | |
| 8038 | 1000 | 3+38.60 | 40.00 | 435407.3567 | 614442.8165 | | | S 23°32' 05.70" E | 10.1546 | 10.1550 | 359.6200 |
| 8040 | 1000 | 3+29.57 | 40.00 | 435398.0468 | 614446.8713 | S 11°46' 46.60" E | 136.5762 | | 137.4106 | | 359.6200 |
| 8041 | 1000 | 2+07.44 | 40.00 | 435264.3468 | 614474.7530 | | | | | | |
| FIGURE 8005 AREA = 1455.1407 SQ. FT. (0.0334 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|---------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|---------------|--------------|------------|-----------|
| 2-57.00-01-15.00 | (1-L) WILLIAM G. BUSH III | TCE | D-37-52 | 5.922 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8003 | 1000 | 3+29.35 | -40.00 | 435366.9669 | 614373.1550 | N 88°27' 14.92" W | 41.7908 | | | | |
| 8007 | 1000 | 3+51.95 | -77.50 | 435368.0943 | 614331.3794 | N 26°41' 50.74" W | 48.6624 | | | | |
| 8010 | 1000 | 4+00.61 | -77.50 | 435411.5689 | 614309.5165 | N 45°28' 34.57" E | 49.8955 | | | | |
| 8014 | 1000 | 4+15.88 | -30.00 | 435446.5559 | 614345.0900 | S 26°41' 50.74" E | 13.8345 | | | | |
| 8012 | 1000 | 4+02.05 | -30.00 | 435434.1963 | 614351.3055 | S 63°18' 09.26" W | 10.0000 | | | | |
| 8011 | 1000 | 4+02.05 | -40.00 | 435429.7035 | 614342.3716 | S 46°00' 54.79" W | 26.1828 | | | | |
| 8009 | 1000 | 3+94.27 | -65.00 | 435411.5204 | 614323.5325 | S 26°41' 50.74" E | 40.7213 | | | | |
| 8008 | 1000 | 3+53.55 | -65.00 | 435375.1404 | 614341.8277 | S 89°13' 34.61" E | 27.9304 | | | | |
| 8005 | 1000 | 3+39.08 | -40.00 | 435374.7632 | 614369.7556 | S 23°33' 31.45" E | 8.5052 | 8.5055 | | 279.6200 | |
| 8003 | 1000 | 3+29.35 | -40.00 | 435366.9669 | 614373.1550 | | | | | | |
| FIGURE 8004 AREA = 1269.3749 SQ. FT. (0.0291 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|--------------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|---------------|--------------|------------|-----------|
| 2-57.00-02-05.00 | (1-R) DOVER PRODUCTS CO., INC. | P/E | K-25-489 | 15.978 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8031 | 1000 | 3+51.74 | 40.00 | 435420.6976 | 614436.4470 | N 26°41' 50.74" W | 16.7184 | | | | |
| 8030 | 1000 | 3+68.46 | 40.00 | 435435.6337 | 614428.9358 | S 80°08' 22.70" E | 37.2999 | | | | |
| 8035 | 1000 | 3+45.62 | 70.00 | 435429.2462 | 614465.6847 | S 25°44' 49.86" E | 1.9505 | 1.9505 | | 389.6200 | |
| 8037 | 1000 | 3+38.60 | 50.00 | 435411.4788 | 614451.9273 | S 65°39' 22.05" W | 10.0000 | | | | |
| 8038 | 1000 | 3+38.60 | 40.00 | 435407.3567 | 614442.8165 | | | | | | |
| FIGURE 8006 AREA = 544.1540 SQ. FT. (0.0125 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | | | | | |
|--|--------------------------------|---------------------|--------------|---------------------|-------------|-------------------|----------|-------------------|--------------|------------|-----------|
| 2-57.00-02-05.00 | (1-R) DOVER PRODUCTS CO., INC. | P/E | K-25-489 | 15.978 | | | | | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8041 | 1000 | 2+07.44 | 40.00 | 435264.3468 | 614474.7530 | S 89°10' 00.24" W | 10.0000 | | | | |
| 8042 | 1000 | 2+07.44 | 30.00 | 435264.2014 | 614464.7541 | | | N 12°35' 18.96" W | 142.4582 | 143.4626 | -349.6200 |
| 8039 | 1000 | 3+38.60 | 30.00 | 435403.2349 | 614433.7054 | N 65°39' 29.27" E | 10.0000 | | | | |
| 8038 | 1000 | 3+38.60 | 40.00 | 435407.3567 | 614442.8165 | | | S 23°32' 05.70" E | 10.1546 | 10.1550 | 359.6200 |
| 8040 | 1000 | 3+29.57 | 40.00 | 435398.0468 | 614446.8713 | S 11°46' 46.60" E | 136.5762 | | 137.4106 | | 359.6200 |
| 8041 | 1000 | 2+07.44 | 40.00 | 435264.3468 | 614474.7530 | | | | | | |
| FIGURE 8005 AREA = 1455.1407 SQ. FT. (0.0334 ACRES) | | | | | | | | | | | |

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES |
|-------------------|---------------------|---------------------|--------------|--------------------|
|-------------------|---------------------|---------------------|--------------|--------------------|

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | | | | | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | |
|--|--|---------|----------|-------------|-------------|---------------------|--------------|---------------------|--------------|------------|-----------|
| 2-05-57.00-01-01.00 | (2-R) DELAWARE TECHNICAL & COMMUNITY COLLEGE | | | | | #/E | G-27-185 | 150.792 | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8025 | 1000 | 4+02.05 | 35.00 | 435463.3994 | 614409.3760 | S 63°18'09.26" W | 10.0000 | | | | |
| 8024 | 1000 | 4+02.05 | 25.00 | 435458.9066 | 614400.4421 | N 26°41'50.74" W | 186.8570 | | | | |
| 8019 | 1000 | 5+88.91 | 25.00 | 435625.8431 | 614316.4911 | N 63°18'09.26" E | 20.0000 | | | | |
| 8020 | 1000 | 5+88.91 | 45.00 | 435634.8287 | 614334.3590 | S 26°41'50.74" E | 19.7079 | | | | |
| 8021 | 1000 | 5+69.20 | 45.00 | 435617.2218 | 614343.2133 | S 63°18'09.26" W | 10.0000 | | | | |
| 8022 | 1000 | 5+69.20 | 35.00 | 435612.7291 | 614334.2794 | S 26°41'50.74" E | 156.9735 | | | | |
| 8023 | 1000 | 4+12.22 | 35.00 | 435472.4903 | 614404.8043 | S 26°41'50.74" E | 10.1757 | | | | |
| 8025 | 1000 | 4+02.05 | 35.00 | 435463.3994 | 614409.3760 | | | | | | |

FIGURE 8008 AREA = 2065.6487 SQ. FT. (0.0474 ACRES)

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | | | | | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | |
|--|--|---------|----------|-------------|-------------|---------------------|--------------|---------------------|--------------|------------|-----------|
| 2-05-57.00-01-01.00 | (2-R) DELAWARE TECHNICAL & COMMUNITY COLLEGE | | | | | P/E | G-27-185 | 150.792 | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8026 | 1000 | 4+02.05 | 40.00 | 435465.6458 | 614413.8429 | N 63°18'09.26" E | 10.0000 | | | | |
| 8027 | 1000 | 4+02.05 | 50.00 | 435470.1386 | 614422.7768 | N 87°44'49.64" E | 21.9693 | | | | |
| 8029 | 1000 | 3+92.96 | 70.00 | 435471.0022 | 614444.7291 | S 26°41'50.74" E | 41.2207 | | | | |
| 8032 | 1000 | 3+51.74 | 70.00 | 435434.1760 | 614463.2487 | | | S 26°17'41.70" E | 5.4988 | 5.4989 | 389.6200 |
| 8034 | 1000 | 3+47.22 | 70.00 | 435429.2462 | 614465.6847 | N 80°08'22.70" W | 37.2999 | | | | |
| 8030 | 1000 | 3+68.46 | 40.00 | 435435.6337 | 614428.9358 | N 26°41'50.74" W | 33.5935 | | | | |
| 8026 | 1000 | 4+02.05 | 40.00 | 435465.6458 | 614413.8429 | | | | | | |

FIGURE 8009 AREA = 1250.5070 SQ. FT. (0.0287 ACRES)

| ASSESSMENT NUMBER | OWNERSHIP OF RECORD | | | | | TYPE OF ACQUISITION | TITLE SOURCE | PARCEL AREA (ACRES) | | | |
|--|--|---------|----------|-------------|-------------|---------------------|--------------|---------------------|--------------|------------|-----------|
| 2-05-57.00-01-01.00 | (2-R) DELAWARE TECHNICAL & COMMUNITY COLLEGE | | | | | TCE | G-27-185 | 150.792 | | | |
| ALIGNMENT NUMBER & DESCRIPTION: 1000 - HISTORIC R/W BASELINE | | | | | | | | | | | |
| PT. NO. | ALIGN. NO. | STATION | OFFSET * | NORTH | EAST | BEARING | DISTANCE | CHORD BEARING | CHORD LENGTH | ARC LENGTH | RADIUS ** |
| 8023 | 1000 | 4+12.22 | 35.00 | 435472.4903 | 614404.8043 | N 87°08'52.20" E | 43.7330 | | | | |
| 8028 | 1000 | 3+94.54 | 75.00 | 435474.6664 | 614448.4831 | S 26°41'50.74" E | 42.8077 | | | | |
| 8033 | 1000 | 3+51.74 | 75.00 | 435436.4224 | 614467.7157 | | | S 26°02'13.77" E | 9.1195 | 9.1197 | 394.6200 |
| 8036 | 1000 | 3+44.35 | 75.00 | 435428.2284 | 614471.7187 | N 80°25'34.83" W | 6.1193 | | | | |
| 8034 | 1000 | 3+47.22 | 70.00 | 435429.2462 | 614465.6847 | | | N 26°17'41.70" W | 5.4988 | 5.4989 | -389.6200 |
| 8032 | 1000 | 3+51.74 | 70.00 | 435434.1760 | 614463.2487 | N 26°41'50.74" W | 41.2207 | | | | |
| 8029 | 1000 | 3+92.96 | 70.00 | 435471.0022 | 614444.7291 | S 87°44'49.64" W | 21.9693 | | | | |
| 8027 | 1000 | 4+02.05 | 50.00 | 435470.1386 | 614422.7768 | S 63°18'09.26" W | 10.0000 | | | | |
| 8026 | 1000 | 4+02.05 | 40.00 | 435465.6458 | 614413.8429 | S 63°18'09.26" W | 5.0000 | | | | |
| 8025 | 1000 | 4+02.05 | 35.00 | 435463.3994 | 614409.3760 | N 26°41'50.74" W | 10.1757 | | | | |
| 8023 | 1000 | 4+12.22 | 35.00 | 435472.4903 | 614404.8043 | | | | | | |

FIGURE 8010 AREA = 432.4566 SQ. FT. (0.0099 ACRES)

Unofficial
Website
Copy

| LEGEND | |
|--------|---------------------------------|
| FEE | AREA OF ACQUISITION |
| RW | AREA OCCUPIED BY EXISTING RW |
| PE | PERMANENT EASEMENT |
| TCE | TEMPORARY CONSTRUCTION EASEMENT |
| * | OFFSET IS LEFT OF BASELINE |
| ** | CURVE TURNS TO THE LEFT |



| ADDENDUMS / REVISIONS |
|-----------------------|
| |
| |
| |

| |
|--|
| |
|--|

**BRIDGE 2-100A ON
DENNEYS ROAD
OVER FORK BRANCH**

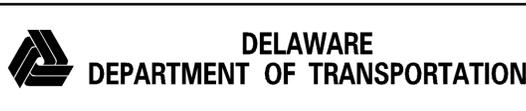
| | |
|-----------------------|-----------------------------|
| CONTRACT T20107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: TRS |
| | CHECKED BY: EM |

| | |
|------------------------------------|-------------------|
| RIGHT-OF-WAY DATA SHEET | SHEET NO. 27 |
| | TOTAL SHTS. 28 |

| COUNTY ASSESSMENT PARCEL NUMBER | PLAN SHEET NUMBER | OWNERSHIP OF RECORD | TITLE SOURCE | PROPERTY AREA BEFORE ACQUISITION (ACRE) D=DEED C=CALCULATED A=ASSESSMENT | ACQUISITION CODE FEE, R/W, P/E, TCE | AREA TO BE ACQUIRED | | | | PROPERTY AREA REMAINING (SQ. FEET /ACRES) | DEED RECORD OF ACQUISITION | REMARKS |
|------------------------------------|-------------------------|--|--------------|---|--|----------------------------------|--|--|--------------------------------|---|----------------------------------|---------|
| | | | | | | ACQUISITION (SQ. FEET /ACRES) | AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET /ACRES) | EASEMENT | | | | |
| | | | | | | | | PERMANENT (SQ. FEET /ACRES) | TEMPORARY (SQ. FEET /ACRES) | | | |
| 2-57.00-01-15.00 | 15 | (1-L) WILLIAM G. BUSH III | D-37-52 | D - 5.92 | P/E P/E P/E TCE | | | 2490.5716 / 0.06 1276.9465 / 0.03 2679.1339 / 0.06 | 1269.3749 / 0.03 | 257955.00 / 5.92 | | |
| 2-57.00-02-05.00 | 15 | (1-R) DOVER PRODUCTS CO., INC. | K-25-489 | D - 15.98 | P/E P/E TCE | | | 1455.1407 / 0.03 544.154 / 0.01 | 182.0933 / 0.00 | 696000.00 / 15.98 | | |
| 2-05-57.00-01-01.00 | 15 | (2-R) DELAWARE TECHNICAL & COMMUNITY COLLEGE | G-27-185 | D - 150.79 | P/E P/E TCE | | | 2065.6487 / 0.05 1250.507 / 0.03 | 432.4566 / 0.01 | 6568500.00 / 150.79 | | |

Unofficial
Website
Copy

ACQUISITION CODES
 FEE - ACQUISITION P/E - PERMANENT EASEMENT
 R/W - AREA OCCUPIED BY EXISTING R/W TCE - TEMPORARY EASEMENT



ADDENDUMS / REVISIONS
 PARCEL 2-L REMOVED.
 PARCEL 1-L INFORMATION UPDATED
 TRS - 10/14/13

**BRIDGE 2-100A ON
DENNEYS ROAD
OVER FORK BRANCH**

| | |
|------------------------|-----------------------------|
| CONTRACT T201107203 | BRIDGE NO. 2-100A |
| COUNTY KENT | DESIGNED BY: TRS |
| | CHECKED BY: EM |

**RIGHT-OF-WAY
TABULATION SHEET**

| |
|-------------------|
| SHEET NO. 28 |
| TOTAL SHTS. 28 |