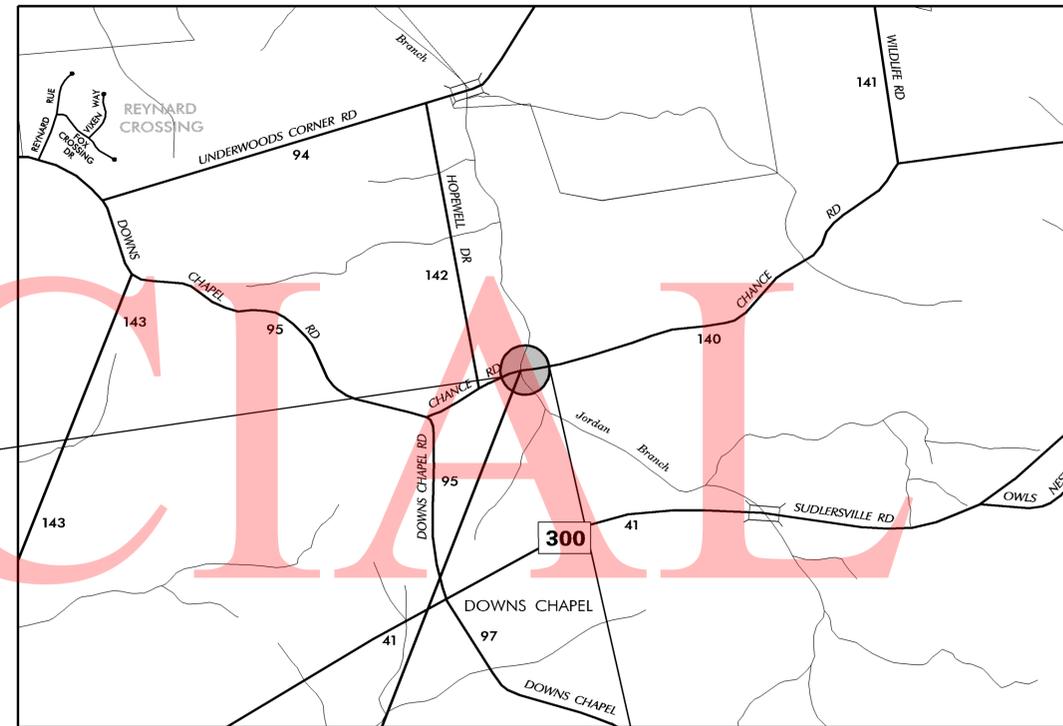


**END CONTRACT
STATION 8+35**

**BEGIN CONTRACT
STATION 4+50**



**END CONTRACT
STATION 6+50**

**END CONTRACT
STATION 8+25**

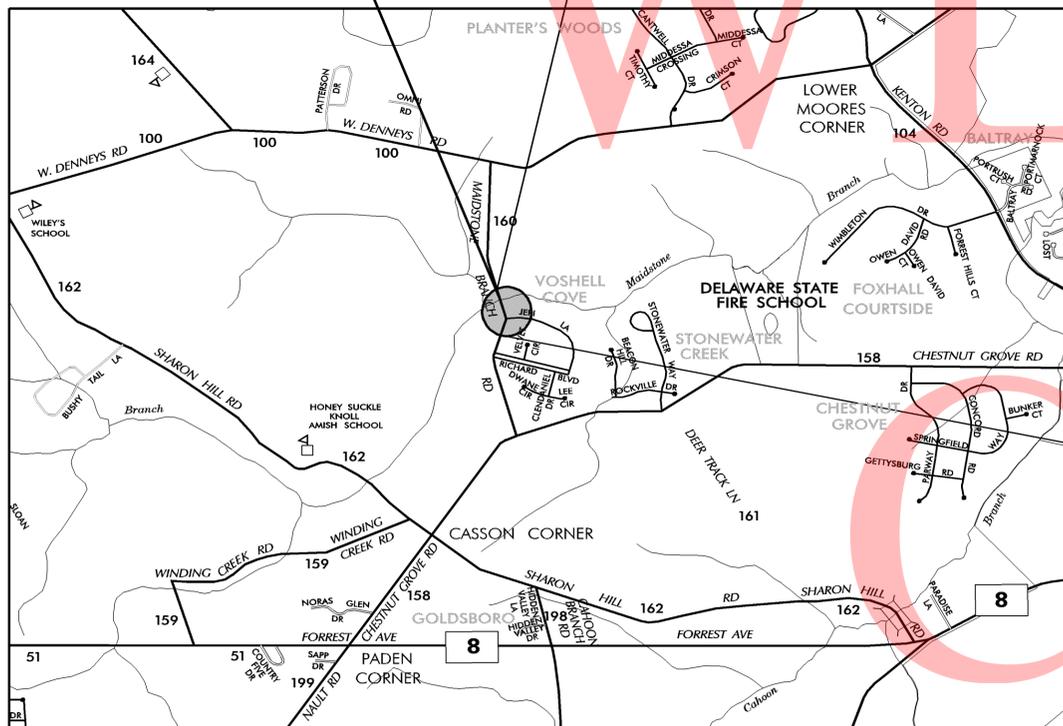
**BEGIN CONTRACT
STATION 5+50**

BR 2-131A

**BEGIN CONTRACT
STATION 5+00**

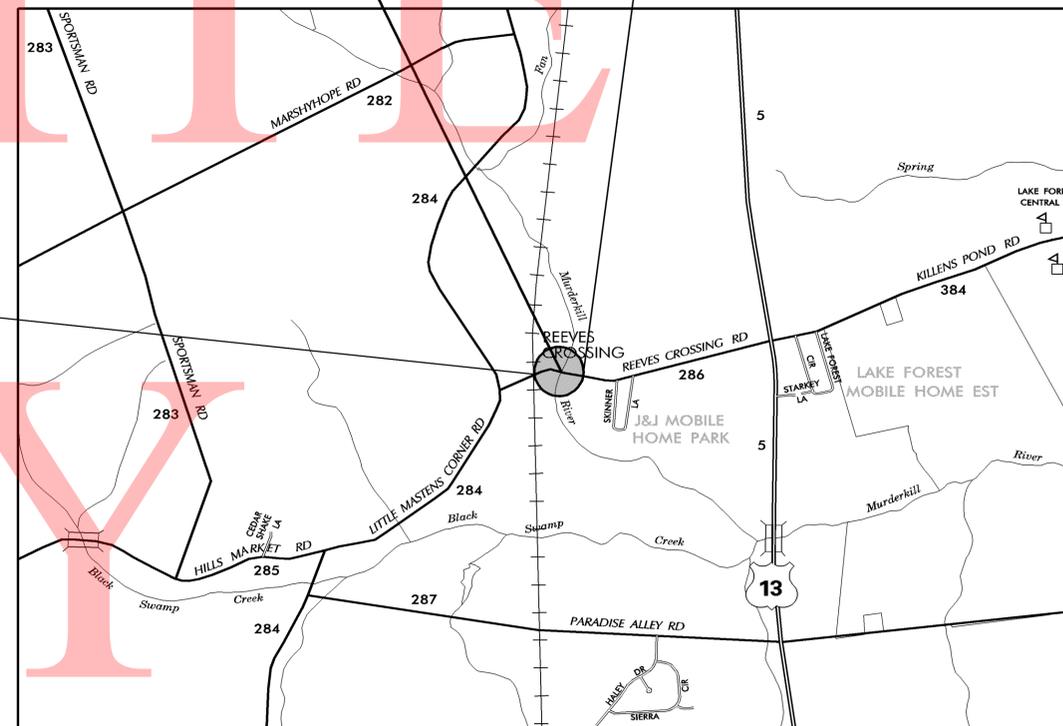
BR 2-140A

BR 2-286A



**BEGIN CONTRACT
STATION 3+50**

**END CONTRACT
STATION 7+00**



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EXISTING SYMBOLS

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

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

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

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

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

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

UTILITY COMPANY FACILITIES	
BRIDGE 2-131A:	
	VERIZON
	DELAWARE ELECTRIC COOPERATIVE
BRIDGE 2-140A:	
	VERIZON
	DELAWARE ELECTRIC COOPERATIVE
BRIDGE 2-160A:	
	DELAWARE ELECTRIC COOPERATIVE
	COMCAST CABLE
BRIDGE 2-286A:	
	VERIZON
	COMCAST CABLE

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
	BIOFILTRATION SWALE
	BOLLARD - STEEL POLE
	BOLLARD - WOOD POST
	BRICK PATTERNED SURFACE
	BUTT JOINT
	CONSTRUCTION BASELINE
	CONSTRUCTION SAFETY FENCE
	CURB, TYPE 1 & TYPE 3
	CURB, TYPE 2
	CURB & GUTTER, TYPE 1
	CURB & GUTTER, TYPE 2
	CURB & GUTTER, TYPE 3
	CURB & GUTTER, TYPE 4
	CLEAR ZONE
	DRAINAGE INLET
	DITCH
	FENCE - METAL
	FENCE - WOOD
	FLARED END SECTION
	GUARDRAIL, TYPE 1
	GUARDRAIL, TYPE 2
	GUARDRAIL, TYPE 3
	GUARDRAIL END ANCHORAGE
	GUARDRAIL END TREATMENT, TYPE 1
	GUARDRAIL END TREATMENT, TYPE 2
	GUARDRAIL END TREATMENT, TYPE 3
	HORIZONTAL CLEARANCE
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
	LIMIT OF CONSTRUCTION
	MAILBOX
	MANHOLE
	PAVEMENT PATCH
	PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH
	PIPE & DIRECTIONAL FLOW ARROW
	RIPRAP
	P.C.C. SIDEWALK - 4"
	P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)
	UNDERDRAIN
	UNDERDRAIN OUTLET

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

PROPOSED SYMBOLS

IDENTIFIERS	
	ADJUST BY CONTRACTOR
	ADJUST BY OTHERS
	CONCRETE SAFETY BARRIER
	CURB OR CURB & GUTTER
	CONVERT TO JUNCTION BOX
	CONVERT TO DRAINAGE MANHOLE
	CURB OPENING
	CURB RAMP / TYPE
	CURB RAMP / TYPE - WITHOUT SIDEWALK SURFACE DETECTABLE WARNING SYSTEM
	CONSTRUCTION SAFETY FENCE
	DRAINAGE INLET
	DO NOT DISTURB
	ENERGY DISSIPATOR
	FENCE
	FLARED END SECTION
	FILL WITH FLOWABLE FILL
	FILTRATION STRUCTURE
	GUARDRAIL
	JUNCTION BOX
	MANHOLE
	MONUMENT - RIGHT-OF-WAY
	PIPE
	RELOCATE BY CONTRACTOR
	RELOCATE BY OTHERS
	REMOVE BY CONTRACTOR
	REMOVE BY OTHERS
	UNDERDRAIN / LENGTH
	UNDERDRAIN OUTLET PIPE

LANDSCAPING	
	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

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

PAVEMENT SECTION(S) - BR2-131A	
	2" SUPERPAVE, TYPE C WARM-MIX 2 1/4" SUPERPAVE, TYPE B WARM-MIX 6" GRADED AGGREGATE BASE COURSE, TYPE B

PAVEMENT SECTION(S) - BR2-140A	
	2" SUPERPAVE, TYPE C WARM-MIX 2 1/4" SUPERPAVE, TYPE B WARM-MIX 6" GRADED AGGREGATE BASE COURSE, TYPE B

PAVEMENT SECTION(S) - BR2-160A	
	2" SUPERPAVE, TYPE C WARM-MIX 2 1/4" SUPERPAVE, TYPE B WARM-MIX 8" GRADED AGGREGATE BASE COURSE, TYPE B

PAVEMENT SECTION(S) - BR2-286A	
	2" SUPERPAVE, TYPE C WARM-MIX 2 1/4" SUPERPAVE, TYPE B WARM-MIX 8" GRADED AGGREGATE BASE COURSE, TYPE B

	2" SUPERPAVE, TYPE C WARM-MIX 6" GRADED AGGREGATE BASE COURSE, TYPE B
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EROSION & SEDIMENT CONTROL	
	DEWATERING BAG
	DEWATERING BASIN
	EARTH DIKE
	INLET SEDIMENT CONTROL
	PERIMETER DIKE/SWALE
	PORTABLE SEDIMENT TANK
	PUMP
	SANDBAG DIKE
	SANDBAG DIVERSION
	STONE CHECK DAM
	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE / LENGTH
	SILT FENCE
	SILT FENCE - REINFORCED
	SUMP PIT, TYPE 1
	SUMP PIT, TYPE 2
	SEDIMENT TRAP
	SEDIMENT TRAP
	SEDIMENT TRAP WITH INLET AS OUTLET
	SEDIMENT TRAP PIPE OUTLET
	STILLING WELL
	TEMPORARY SWALE
	TEMPORARY SLOPE DRAIN
	TURBIDITY CURTAIN / LENGTH
	TURBIDITY CURTAIN

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GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
- SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT PRIOR TO THE EXECUTION OF THE CONTRACT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

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

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

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

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

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

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

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

(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 AREAS FOR THIS PROJECT IS AS FOLLOWS:

-BR 2-131A: 0.5941 ACRES
 -BR 2-140A: 0.4001 ACRES
 -BR 2-160A: 0.5271 ACRES
 -BR 2-286A: 0.8397 ACRES
 -TOTAL: 2.3171 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:
 - BR 2-131A:
 - THE EXISTING BRIDGE 2-131A COMPRISED OF THREE 6'-0" CORRUGATED METAL PIPES
 - THE EXISTING GUARDRAIL ON BOTH SIDES OF BLACKISTON CHURCH ROAD
 - THE EXISTING RIPRAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE. STONE MAY BE RE-USED IF IT MEETS THE REQUIREMENTS FOR R-5 RIPRAP
 - BR 2-140A:
 - THE EXISTING BRIDGE 2-140A COMPRISED OF ONE 3'-6" x 5'-0" ELLIPTICAL CORRUGATED METAL PIPES AND TWO 4'-0" x 6'-0" ELLIPTICAL CORRUGATED METAL PIPES
 - THE EXISTING 12" H.D.P.E. PIPE
 - THE TWO SPEED LIMIT SIGNS ON THE EAST SIDE OF THE BRIDGE (SIGNS SHALL BE RESET IN THE SAME LOCATION BY THE CONTRACTOR AT THE COMPLETION OF THIS PROJECT)
 - THE EXISTING RIPRAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE. STONE MAY BE RE-USED IF IT MEETS THE REQUIREMENTS FOR R-5 RIPRAP
 - BR 2-160A:
 - THE EXISTING BRIDGE 2-160A COMPRISED OF THREE 6'-0" CORRUGATED METAL PIPES
 - THE ROAD SIGN ON THE NORTHWEST SIDE OF THE BRIDGE (SIGN SHALL BE RESET IN THE SAME LOCATION BY THE CONTRACTOR AT THE COMPLETION OF THIS PROJECT)
 - THE TWO FENCES ON THE NORTHWEST AND SOUTHEAST SIDES OF THE BRIDGE RESPECTIVELY (FENCES SHALL ONLY BE REMOVED FROM THE WORK ZONE AND SHALL BE RESET BY THE CONTRACTOR AT THE COMPLETION OF THIS PROJECT)
 - THE EXISTING RIPRAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE. STONE MAY BE RE-USED IF IT MEETS THE REQUIREMENTS FOR R-5 RIPRAP
 - BR 2-286A:
 - THE EXISTING BRIDGE 2-286A COMPRISED OF THREE 7'-3" SPAN x 5'-3" RISE CORRUGATED METAL PIPE ARCHES
 - THE EXISTING GUARDRAIL ON BOTH SIDES OF REEVES CROSSING ROAD
 - THE ROAD SIGN ON SOUTHWEST SIDE OF THE BRIDGE (SIGNS SHALL BE RESET IN THE SAME LOCATION BY THE CONTRACTOR AT THE COMPLETION OF THIS PROJECT)
 - THE EXISTING RIPRAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE. STONE MAY BE RE-USED IF IT MEETS THE REQUIREMENTS FOR R-5 RIPRAP
- 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 NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

SECTION 300

- A. THE CONTRACTOR MAY ELECT TO USE ANY OF THE FOLLOWING MATERIALS TO MEET THE REQUIREMENTS OF ITEM 302007
 - GRADED AGGREGATE BASE COURSE, TYPE 'B':
 - 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 ENGINEER SHALL AGREE ON THE LIMITS OF EACH SOURCE OF MATERIAL PRIOR TO PLACEMENT.

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

C. THE CONTRACTOR MAY ALSO ELECT TO RECYCLE MILLINGS FOR USE IN HOT-MIX AS PERMITTED BY THE STANDARD SPECIFICATIONS. THE CHOICE OF THE QUANTITY OF MILLINGS USED FOR THIS PURPOSE, OR FOR BASE COURSE, LIES WITH THE CONTRACTOR. ALL EXCESS 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 FOR 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 ITEM - 302514 MILLED HOT-MIX BASE COURSE ARE INCIDENTAL TO ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'. NO PAYMENT WILL BE MADE FOR ITEM 302514 - MILLED HOT-MIX BASE COURSE. THE QUANTITY OF MILLINGS USED FOR BASE COURSE WILL BE PAID FOR UNDER ITEM 302007 - GRADED AGGREGATE BASE COURSE.

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 GEOTEXTILES SHALL BE KEVED UNDER ADJACENT SOIL OR RIPRAP A MINIMUM OF 6" IN LENGTH TO PREVENT FREE EDGES.
- PROPOSED STRIPING SHALL MATCH EXISTING FOR BR 2-140A (DOUBLE YELLOW CENTERLINE), BR 2-160A (DOUBLE YELLOW CENTERLINE), AND BR 2-286A (DOUBLE YELLOW CENTERLINE, SINGLE WHITE LINE DENOTING EACH SHOULDER, AND RAILROAD CROSSING SYMBOL) AND BE IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR STRIPING SHALL BE MADE UNDER ITEM *748548. PAYMENT FOR SYMBOLS SHALL BE MADE UNDER ITEM *748015.
- MAINTENANCE OF TRAFFIC SHALL BE AS PER DETOUR. THE DETOUR SHALL REMAIN IN EFFECT UNTIL THE FINAL HOT MIX IS PLACED. ALL MOT ITEMS WITH THE EXCEPTION OF CHANGEABLE MESSAGE BOARDS AND FLAGGERS WILL BE INCLUDED IN ITEM * 763643 - MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

MISCELLANEOUS

- DESIGN CRITERIA: 2012 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, USING AASHTO HL93 FOR LIVE LOAD, AND 25 PSF FOR FUTURE WEARING SURFACE.
- HYDRAULIC DATA:

*BR 2-131A:	-DRAINAGE AREA = 6.20 SQ. MILES	*BR 2-160A:	-DRAINAGE AREA = 7.24 SQ. MILES
	-DESIGN FREQUENCY = 25 YEARS		-DESIGN FREQUENCY = 25 YEARS
	-DESIGN DISCHARGE = 607 CFS		-DESIGN DISCHARGE = 646 CFS
	-DESIGN HEADWATER ELEVATION = 47.18 FEET		-DESIGN HEADWATER ELEVATION = 41.31 FEET
	-PROPOSED OPENINGS = 3 X 28.27 SQ. FEET		-PROPOSED OPENINGS = 3 X 28.27 SQ. FEET
*BR 2-140A:	-DRAINAGE AREA = 2.75 SQ. MILES	*BR 2-286A:	-DRAINAGE AREA = 3.97 SQ. MILES
	-DESIGN FREQUENCY = 25 YEARS		-DESIGN FREQUENCY = 25 YEARS
	-DESIGN DISCHARGE = 306 CFS		-DESIGN DISCHARGE = 283 CFS
	-DESIGN HEADWATER ELEVATION = 56.03 FEET		-DESIGN HEADWATER ELEVATION = 35.66 FEET
	-PROPOSED OPENINGS = 3 X 19.90 SQ. FEET		-PROPOSED OPENINGS = 3 X 28.27 SQ. FEET
- THE PROPOSED STRUCTURE HAS BEEN ANALYZED FOR THE EFFECTS OF SCOUR IN ACCORDANCE WITH HEC-18 - 'EVALUATING SCOUR AT BRIDGES' FIFTH EDITION AND HEC-23 - 'BRIDGE SCOUR AND STREAM INSTABILITY COUNTERMEASURES.' SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE WORST CASE OF THE OVERTOPPING FLOOD OR THE 100-YEAR FLOOD EVENT. THE ONLY EXCEPTION IS BR 2-286A WHICH WAS DESIGNED FOR THE 500-YEAR STORM EVENT DUE TO THE INCREASED VELOCITY DURING THAT STORM EVENT.

*BR 2-131A:	-DESIGN EVENT = 100-YEAR STORM	*BR 2-160A:	-DESIGN EVENT = 100-YEAR STORM
	-DESIGN HEADWATER ELEVATION = 49.19 FEET		-DESIGN HEADWATER ELEVATION = 43.13 FEET
	-DESIGN DISCHARGE = 889 CFS		-DESIGN DISCHARGE = 945 CFS
	-DESIGN VELOCITY (100-YEAR STORM) = 10.41 FT/S		-DESIGN VELOCITY (100-YEAR STORM) = 10.45 FT/S
*BR 2-140A:	-DESIGN EVENT = 100-YEAR STORM	*BR 2-286A:	-DESIGN EVENT = 500-YEAR STORM
	-DESIGN HEADWATER ELEVATION = 57.06 FEET		-DESIGN HEADWATER ELEVATION = 37.83 FEET
	-DESIGN DISCHARGE = 445 CFS		-DESIGN DISCHARGE = 623 CFS
	-DESIGN VELOCITY (100-YEAR STORM) = 7.09 FT/S		-DESIGN VELOCITY (500-YEAR STORM) = 7.50 FT/S
- ENVIRONMENTAL COMPLIANCE: SEE ENVIRONMENTAL COMPLIANCE PLAN FOR FURTHER RESTRICTIONS/GUIDANCE ASSOCIATED WITH THIS PROJECT.
- CROSS SECTIONS USED IN THE PREPARATION OF THIS CONTRACT ARE AVAILABLE TO THE WINNING BIDDER FROM THE DEPARTMENT.
- PLEASE REFER TO THE UTILITY STATEMENT FOR ANY UTILITY INFORMATION.
- CONTRACTOR MAY WORK ON MULTIPLE LOCATIONS CONCURRENTLY EXCEPT THAT BR 2-131A AND BR 2-140A CANNOT BE CLOSED AT THE SAME TIME. CONTRACTOR MUST COORDINATE WITH THE CONTRACTOR FOR T201207504 TO ENSURE CONSTRUCTION OF BR 2-131A DOES NOT OCCUR DURING THE CONSTRUCTION OF BR 2-126A. ALSO, THE CONTRACTOR SHALL BEGIN CONSTRUCTION OF BR 2-160A BEFORE ANY OF THE OTHER THREE LOCATIONS.



DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

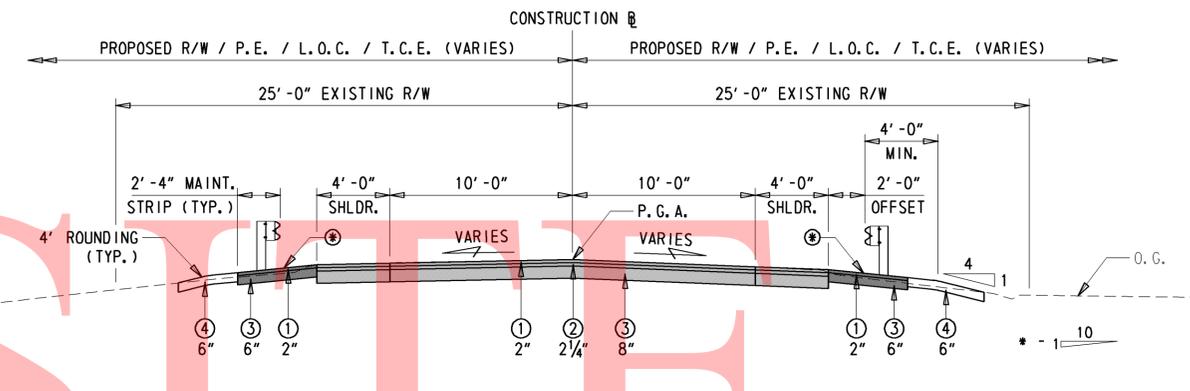
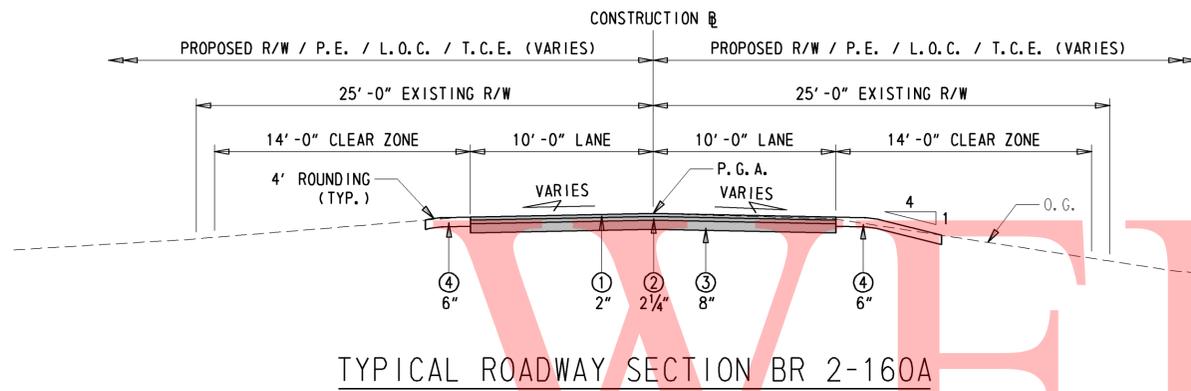
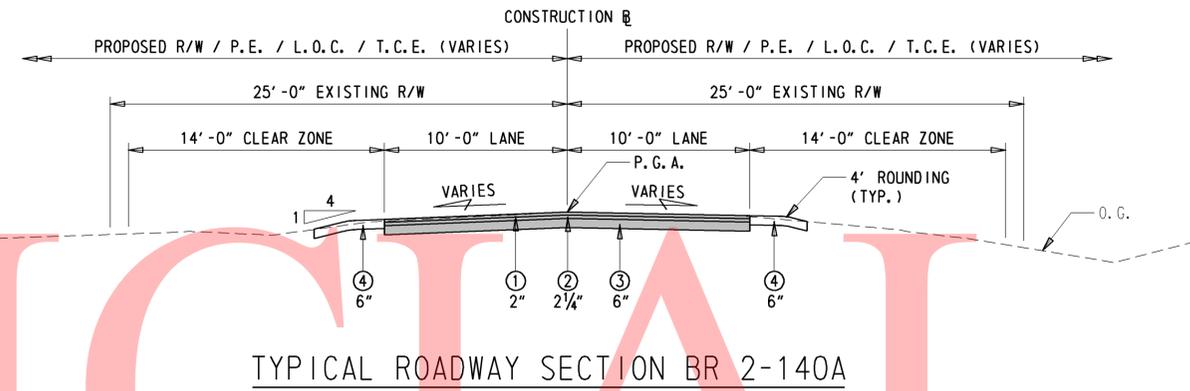
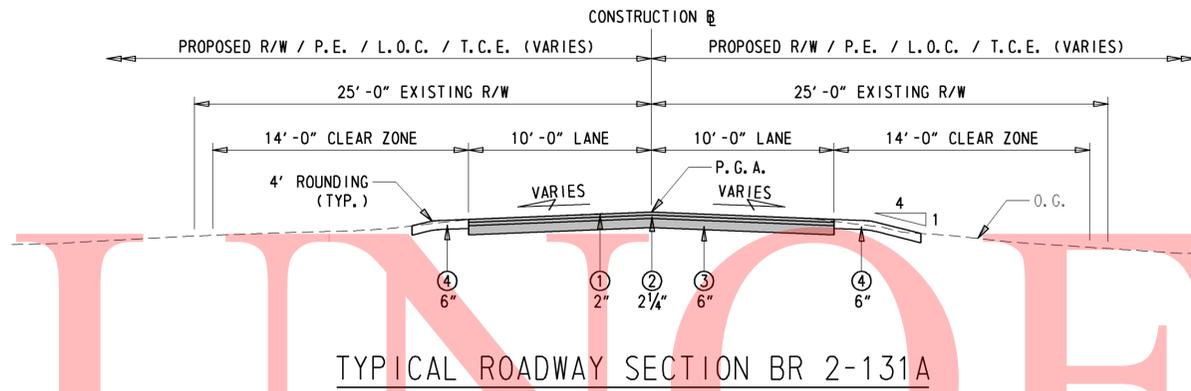
NOT TO SCALE

KENT COUNTY PIPE
REPLACEMENTS, FEDERAL, 2012

CONTRACT	BRIDGE NO.	MULTIPLE
T201207505	DESIGNED BY: NED	
COUNTY	CHECKED BY: MJG	
KENT		

NOTES

SHEET NO.	4
TOTAL SHTS.	48

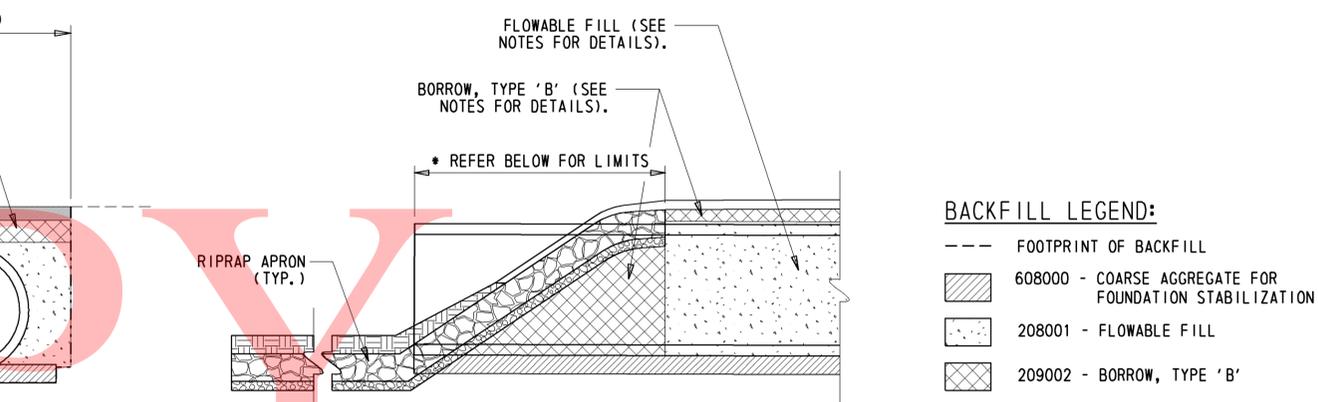
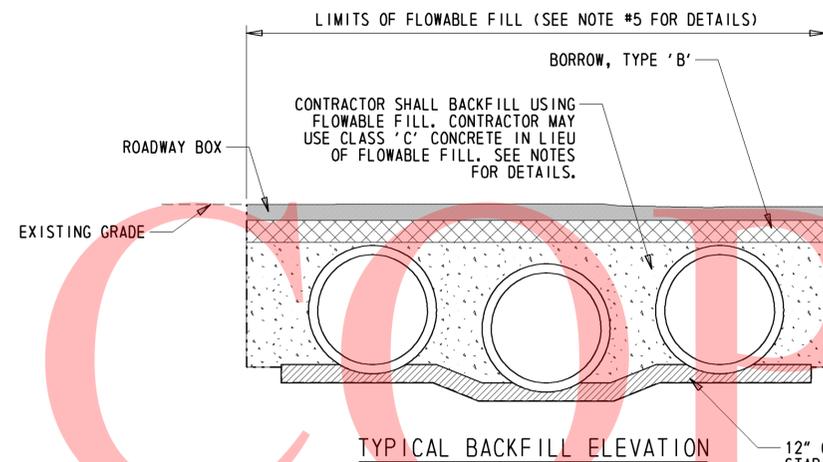


TYPICAL ROADWAY LEGEND

①	ITEM 401800 - WMA, SUPERPAVE TYPE 'C', 115 GYRATIONS PG 64-22, (CARBONATE STONE)
②	ITEM 401809 - WMA, SUPERPAVE TYPE 'B', 115 GYRATIONS, PG 64-22
③	ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE 'B'
④	ITEM 732004 - TOPSOIL ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND

BACKFILL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING THE PIPES IN ORDER TO PREVENT ANY MOVEMENT DURING THE POUR OF FLOWABLE FILL (ITEM #208001).
2. THE MAXIMUM DIFFERENCE IN SURFACE LEVELS OF THE FLOWABLE FILL ON OPPOSITE SIDES OF A PIPE SHALL NOT EXCEED 1'-0" DURING POUR.
3. THE CONTRACTOR SHALL DETERMINE THE NEED TO POUR FLOWABLE FILL IN LIFTS DUE TO BUOYANCY FOR ALL FOUR BRIDGE LOCATIONS. THE CONTRACTOR SHALL SUBMIT BUOYANCY CALCULATIONS TO THE ENGINEER FOR APPROVAL. POURING OF FLOWABLE FILL SHALL TERMINATE 2" ABOVE THE TOP OF THE OUTSIDE PIPES AT ALL FOUR BRIDGE LOCATIONS.
4. THE LIMITS OF THE FLOWABLE FILL AS SHOWN IN THE TYPICAL BACKFILL SECTION VARIES FOR ALL FOUR BRIDGE LOCATIONS. THE TYPE OF BACKFILL SHALL BE BORROW, TYPE 'B' UNDER THE SLOPES AT BOTH ENDS OF THE PIPES, PAYMENT UNDER ITEM #209002. THE CONTRACTOR HAS THE OPTION TO USE FLOWABLE FILL IN LIEU OF BORROW, TYPE 'B' FOR THE SLOPES. HOWEVER, PAYMENT WILL BE MADE AT THE UNIT PRICE FOR ITEM #209002 - BORROW, TYPE 'B'.
5. THE LIMITS OF THE FLOWABLE FILL AS SHOWN IN THE TYPICAL BACKFILL ELEVATION SHALL BE AT THE #207000 OR #211000 LIMITS, WHICHEVER GOVERNS.
6. IF THE CONTRACTOR CHOOSES TO USE CLASS 'C' CONCRETE IN LIEU OF FLOWABLE FILL, PAYMENT WILL BE MADE AT THE UNIT PRICE FOR ITEM #208001 - FLOWABLE FILL.



TYPICAL BACKFILL DETAILS

- BR 2-131A: 13'-8" FROM END OF PIPE TO FLOWABLE FILL LIMITS (BOTH ENDS)
- BR 2-140A: 12'-2" FROM END OF PIPE TO FLOWABLE FILL LIMITS (BOTH ENDS)
- BR 2-160A: 13'-10" FROM END OF PIPE TO FLOWABLE FILL LIMITS (BOTH ENDS)
- BR 2-286A: 15'-5" FROM END OF PIPE TO FLOWABLE FILL LIMITS (BOTH ENDS)

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ENVIRONMENTAL COMPLIANCE NOTES

1. GENERAL NOTES:

- A. THE PURPOSE OF THIS SHEET IS 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 THIS SHEET 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:

- BRIDGE 2-131A:
U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT *3(a) AND (c) (NO PCN)
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL. CODE CH. 72, SECTION 7217 (b), AS AMENDED BY SB 186
DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT IS NOT LOCATED IN CRW)
- BRIDGE 2-140A:
U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT *3(a) AND (c) (NO PCN)
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL. CODE CH. 72, SECTION 7217 (b), AS AMENDED BY SB 186
DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT IS NOT LOCATED IN CRW)
- BRIDGE 2-160A:
U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT *3(a) AND (c) (NO PCN)
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL. CODE CH. 72, SECTION 7217 (b), AS AMENDED BY SB 186
DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT IS NOT LOCATED IN CRW)
- BRIDGE 2-286A:
U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT *3(a) AND (c) (NO PCN)
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL. CODE CH. 72, SECTION 7217 (b), AS AMENDED BY SB 186
DNREC - WATER QUALITY (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.

B. CONSTRUCTION RESTRICTIONS:

- BRIDGE 2-131A:
FISHERIES - NONE
ENDANGERED SPECIES - NONE
MIGRATORY BIRDS - NONE
- BRIDGE 2-140A:
FISHERIES - NONE
ENDANGERED SPECIES - NONE
MIGRATORY BIRDS - NONE
- BRIDGE 2-160A:
FISHERIES - NONE
ENDANGERED SPECIES - NONE
MIGRATORY BIRDS - NONE
- BRIDGE 2-286A:
FISHERIES - NONE
ENDANGERED SPECIES - SWAMP PINK LOCATED DOWNSTREAM IN ORDER TO AVOID AN ADVERSE EFFECT ON THIS SPECIES, SEDIMENTATION DOWNSTREAM MUST BE MINIMIZED TO THE MAXIMUM EXTENT POSSIBLE AND NO STAGING/STOCKPILING SHALL OCCUR IN ADJACENT WETLANDS.
MIGRATORY BIRDS - NONE

3. CULTURAL RESOURCE ISSUES:

- A. BRIDGES 2-131A, 2-140A, AND 2-160A ARE CONSISTENT WITH STIPULATION II.B. 1, 4, AND 12 OF DELDOT'S PROGRAMMATIC AGREEMENT WITH FHWA, DE SHPO, AND ACHP.
- B. BRIDGE 2-286A - A STANDING STRUCTURE OVER 50 YEARS EXISTS ON THE SOUTHWEST CORNER OF THE BRIDGE WITHIN THE VICINITY OF THE PROJECT BUT OUTSIDE THE LOC. A "FINDING OF NO HISTORIC PROPERTIES AFFECTED" HAS BEEN APPROVED BY THE DE SHPO. ANY MODIFICATIONS TO THE PLANS WITHIN THIS AREA ARE TO BE COORDINATED WITH THE DISTRICT ENGINEER AND THE ENVIRONMENTAL STUDIES OFFICE (CONTACT LAURA KEELEY 302-760-2282) OR LAURAA.KEELEY@STATE.DE.US.

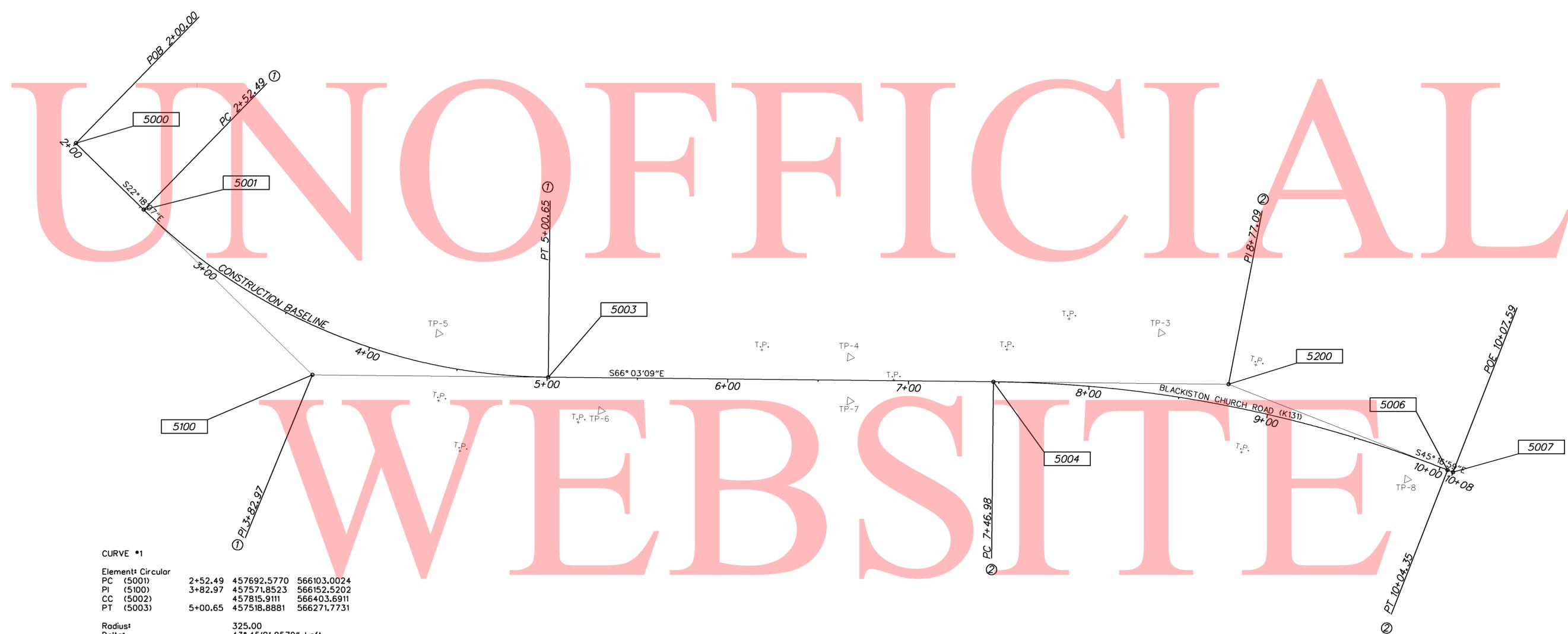
4. STREAM RESTORATION AND SLOPE RIPRAP TREATMENT

- A. THE CONTRACTOR SHALL FOLLOW THE SPECIAL PROVISIONS OF ITEM *7125.31 - 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 ITEMS *7125.31 - CHANNEL BEDFILL. 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 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 *7125.31 - 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 *7125.31 - 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, 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" TOPSOIL LAYER SHALL BE PLACED ON TOP OF THE RIPRAP. SLOPE SEEDING SHALL BE WITH ITEM *7345.31 - STREAMBANK SEED MIX. FOLLOWING THE SEEDING OPERATION, ITEM *7355.35 - 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. 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).
- 6. 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/HER DESIGNEE. SPECIFIC PLANT SELECTION IS AT THE DISCRETION OF THE ROADSIDE ENVIRONMENTAL ADMINISTRATOR OR HIS/HER DESIGNEE BUT SHALL BE A NATIVE SPECIES APPROVED BY THE DELAWARE DEPARTMENT OF NATURAL RESOURCES.
- 7. A NATURAL AREA EXISTS ON THE NORTHWEST CORNER OF BRIDGE 2-160A. THE CONTRACTOR'S ACCESS TO THE WORK IN THIS AREA WILL NEED TO BE COORDINATED WITH THE ENVIRONMENTAL STUDIES SECTION (CONTACT CAROL SULLIVAN 302-760-2129 OR CAROL.SULLIVAN@STATE.DE.US).

INFORMATIONAL
WEBSITE
COPY

LAST REVISED: 03/22/2011
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 DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		NOT TO SCALE	KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT	BRIDGE NO.	MULTIPLE	ENVIRONMENTAL COMPLIANCE NOTES	SHEET NO.
					T201207505	DESIGNED BY: NED			6
					COUNTY	CHECKED BY: MJG	TOTAL SHTS.		
					KENT		48		



CURVE #1

Element:	Circular		
PC (5001)	2+52.49	457692.5770	566103.0024
PI (5100)	3+82.97	457571.8523	566152.5202
CC (5002)		457815.9111	566403.6911
PT (5003)	5+00.65	457518.8881	566271.7731

Radius:	325.00
Delta:	43° 45' 01.0579" Left
Degree of Curvature(Arc):	17° 37' 46.0942"
Length:	248.17
Tangent:	130.49
Chord:	242.18
Middle Ordinate:	23.40
External:	25.22
Tangent Direction:	S 22° 18' 07.4579" E
Radial Direction:	S 67° 41' 52.5421" W
Chord Direction:	S 44° 10' 37.9868" E
Radial Direction:	S 23° 56' 51.4842" W
Tangent Direction:	S 66° 03' 08.5158" E

CURVE #2

Element:	Circular		
PC (5004)	7+46.98	457418.9030	566496.8967
PI (5200)	8+77.09	457366.0903	566615.8083
CC (5005)		456770.0221	566208.7066
PT (5006)	10+04.35	457274.5430	566708.2651

Radius:	710.00
Delta:	20° 46' 09.0923" Right
Degree of Curvature(Arc):	8° 04' 11.3812"
Length:	257.37
Tangent:	130.11
Chord:	255.96
Middle Ordinate:	11.63
External:	11.82
Tangent Direction:	S 66° 03' 08.5158" E
Radial Direction:	S 23° 56' 51.4842" W
Chord Direction:	S 55° 40' 03.9697" E
Radial Direction:	S 44° 43' 00.5765" W
Tangent Direction:	S 45° 16' 59.4235" E

HORIZONTAL / VERTICAL CONTROL DATA

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
TP-3	8+35.50	-33.70	457406.8922	566592.7492	53.11
TP-4	6+67.57	-12.71	457462.7556	566429.4824	48.30
TP-5	4+35.87	-17.43	457565.1020	566225.6547	48.86
TP-6	5+29.98	18.18	457490.3725	566291.1986	49.37
TP-7	6+67.60	11.43	457440.6744	566419.7093	48.52
TP-8	9+84.99	12.61	457278.7712	566685.6988	53.55

CONSTRUCTION ALIGNMENT CONTROL

POINT	STATION	OFFSET	NORTHING	EASTING
5000	2+00.00	0.00	457741.1375	566083.0842
5007	10+07.59	0.00	457272.2603	566710.5705

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

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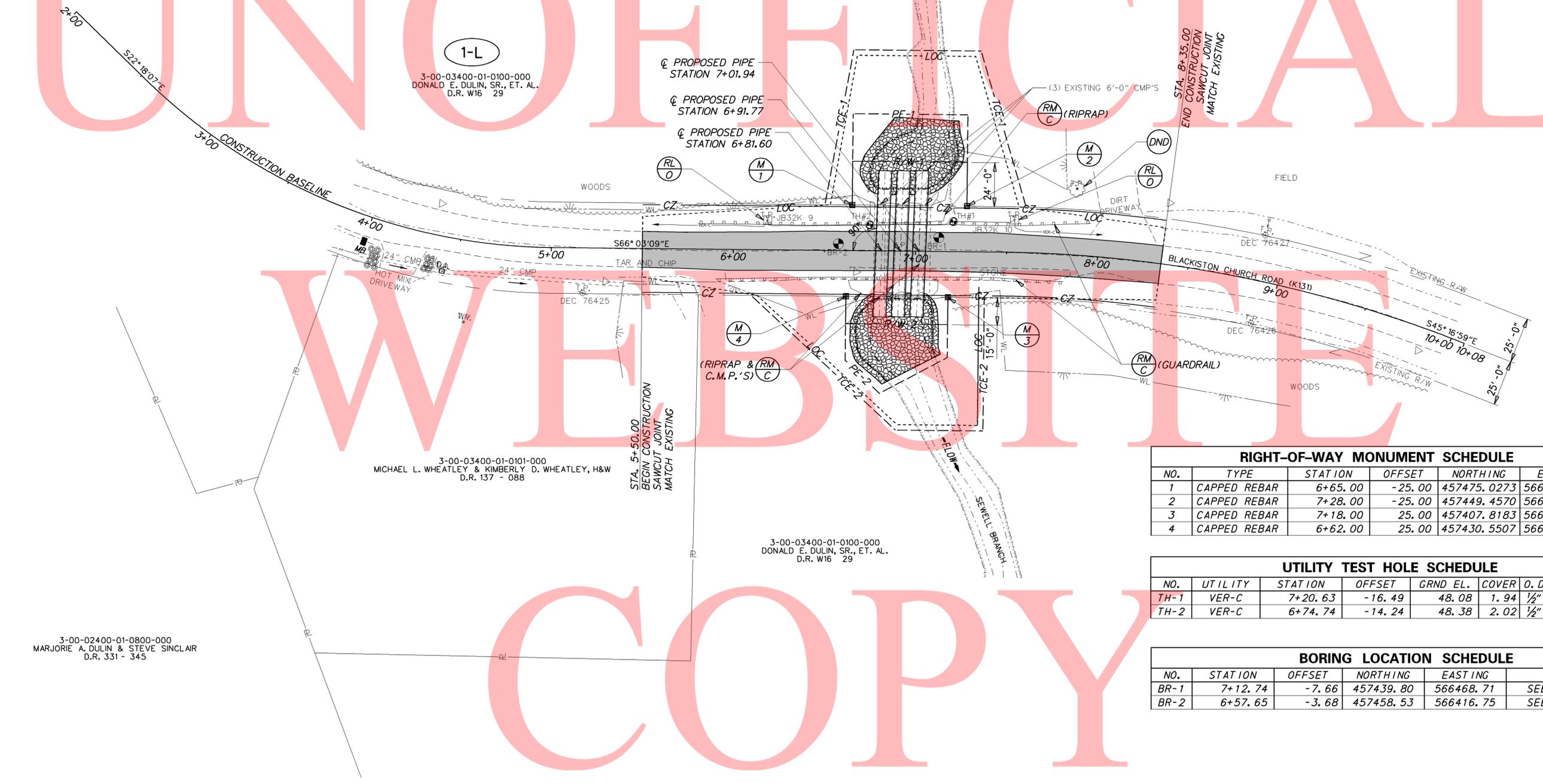
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE FEET	KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT T201207505 COUNTY KENT	BRIDGE NO. 2-131A DESIGNED BY: NED CHECKED BY: MJG	HORIZONTAL AND VERTICAL CONTROL	SHEET NO. 7 TOTAL SHTS. 48



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RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
1	CAPPED REBAR	6+65.00	-25.00	457475.0273	566432.1202
2	CAPPED REBAR	7+28.00	-25.00	457449.4570	566489.6934
3	CAPPED REBAR	7+18.00	25.00	457407.8183	566460.2636
4	CAPPED REBAR	6+62.00	25.00	457430.5507	566409.0799

UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O. D. & MATERIAL
TH-1	VER-C	7+20.63	-16.49	48.08	1.94	1/2" DBC
TH-2	VER-C	6+74.74	-14.24	48.38	2.02	1/2" DBC

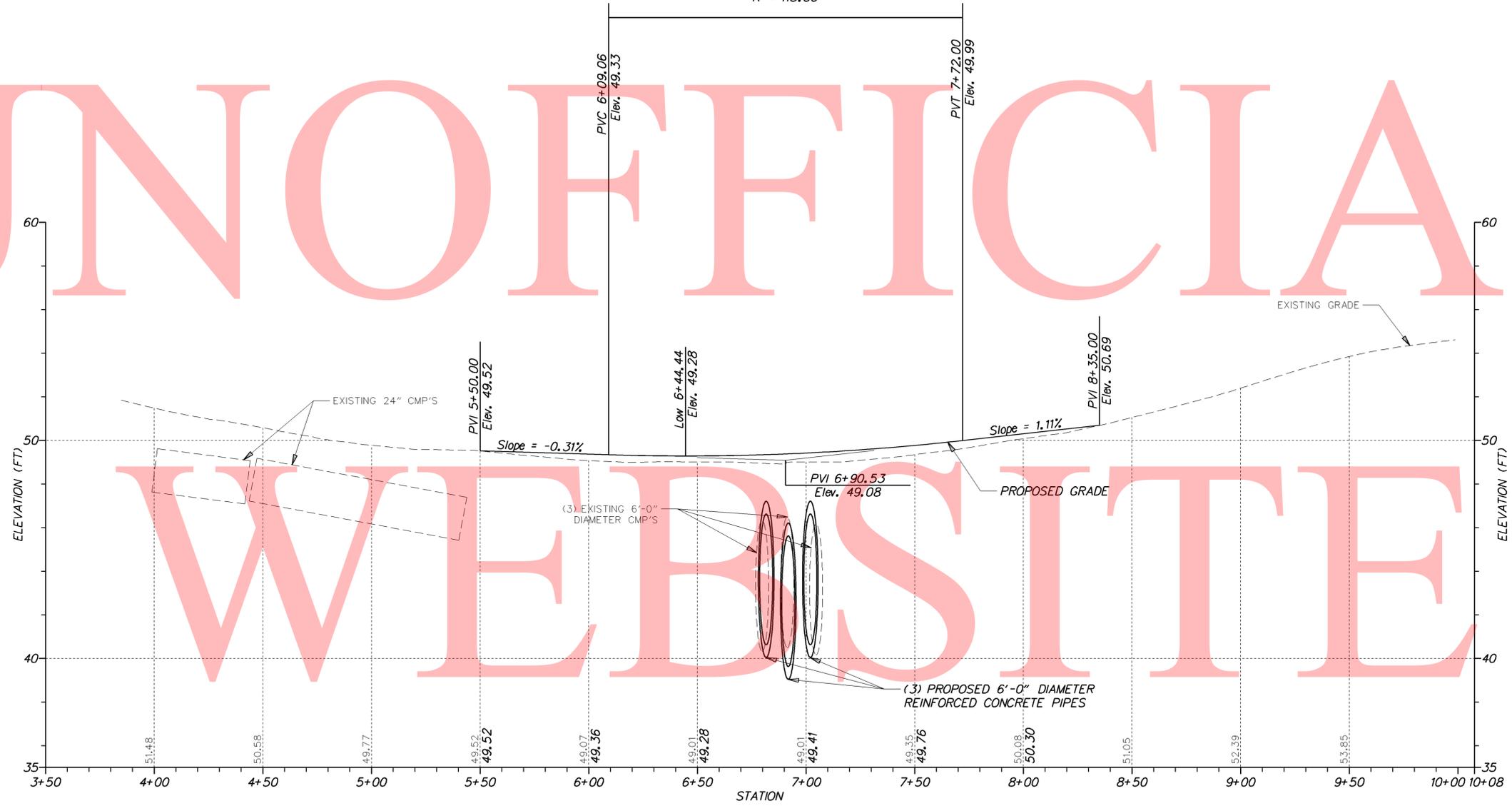
BORING LOCATION SCHEDULE					
NO.	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
BR-1	7+12.74	-7.66	457439.80	566468.71	SEE SOIL BORINGS
BR-2	6+57.65	-3.68	457458.53	566416.75	SEE SOIL BORINGS

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	DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS <table border="1" style="width: 100%; height: 20px;"> <tr><td> </td></tr> </table>		SCALE 	KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT T201207505 COUNTY KENT	BRIDGE NO. 2-131A DESIGNED BY: NED CHECKED BY: MJG	CONSTRUCTION PLAN	SHEET NO. 8 TOTAL SHTS. 48

Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 162.94'
 L1 = 81.47'
 L2 = 81.47'
 G1 = -0.31%
 G2 = 1.11%
 SSD = 495.36'
 K = 115.00

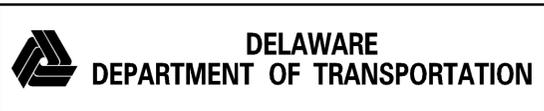
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K131 - BLACKISTON CHURCH ROAD

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ADDENDUMS / REVISIONS	

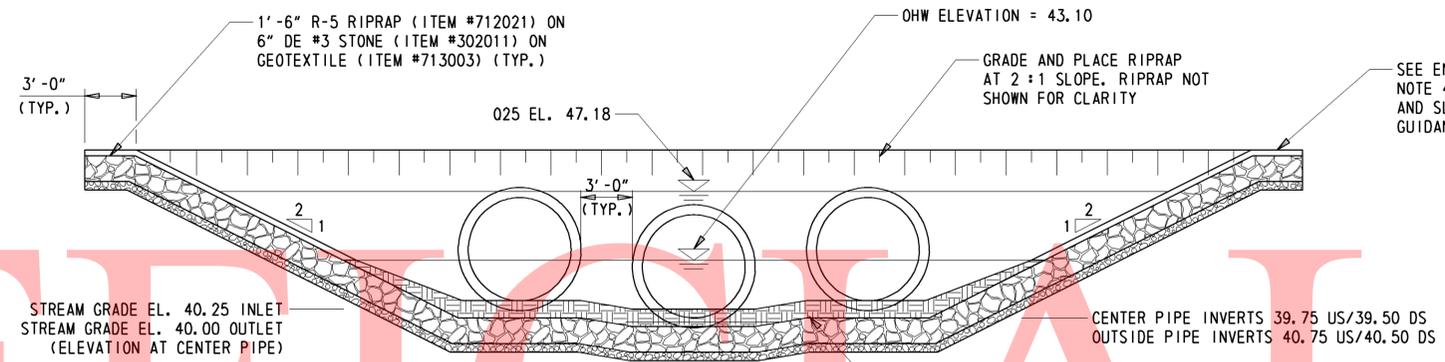
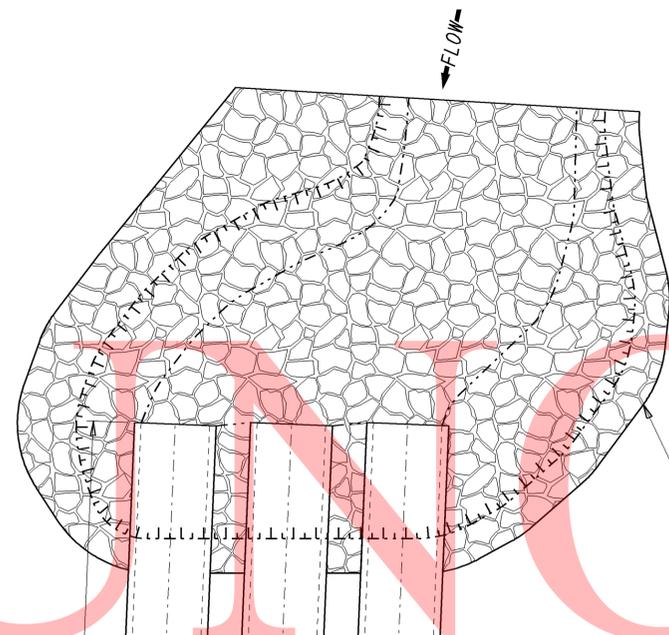


KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

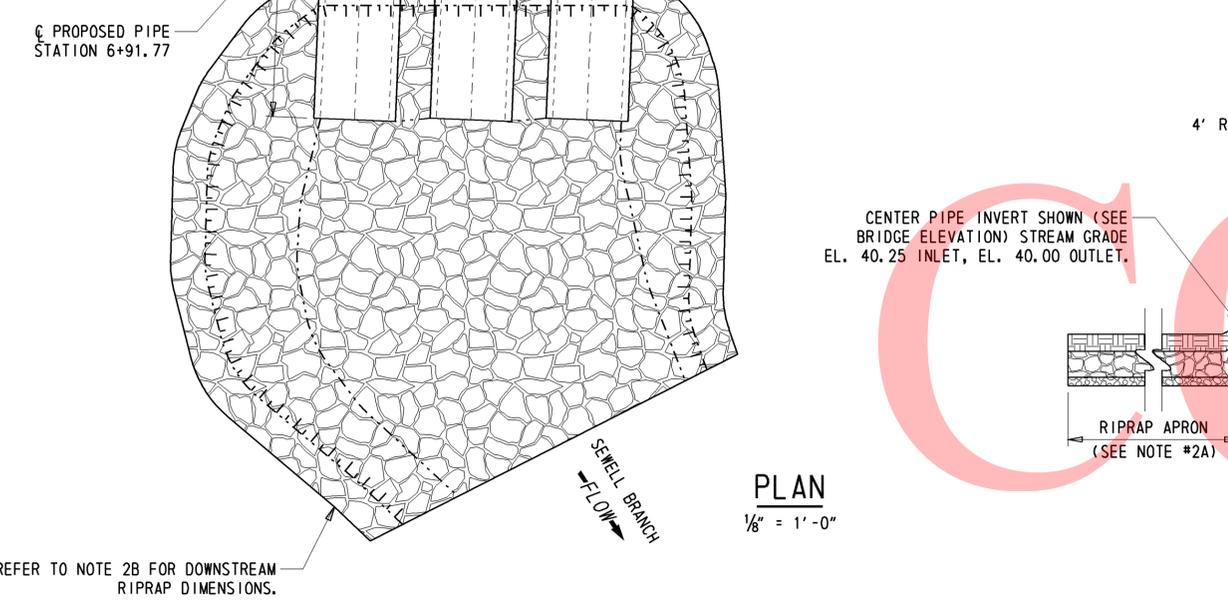
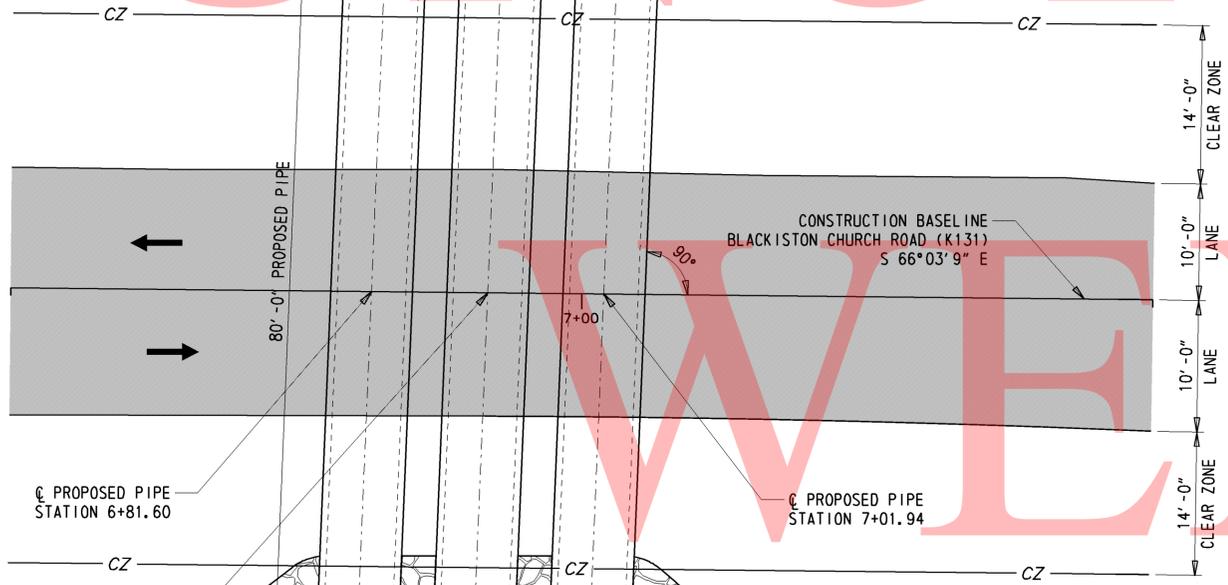
CONTRACT	BRIDGE NO.	2-131A
T201207505	DESIGNED BY:	NED
COUNTY	CHECKED BY:	MJG
KENT		

PROFILE

VERTICAL SCALE FEET	9 6 3 0
SHEET NO.	9
TOTAL SHTS.	48



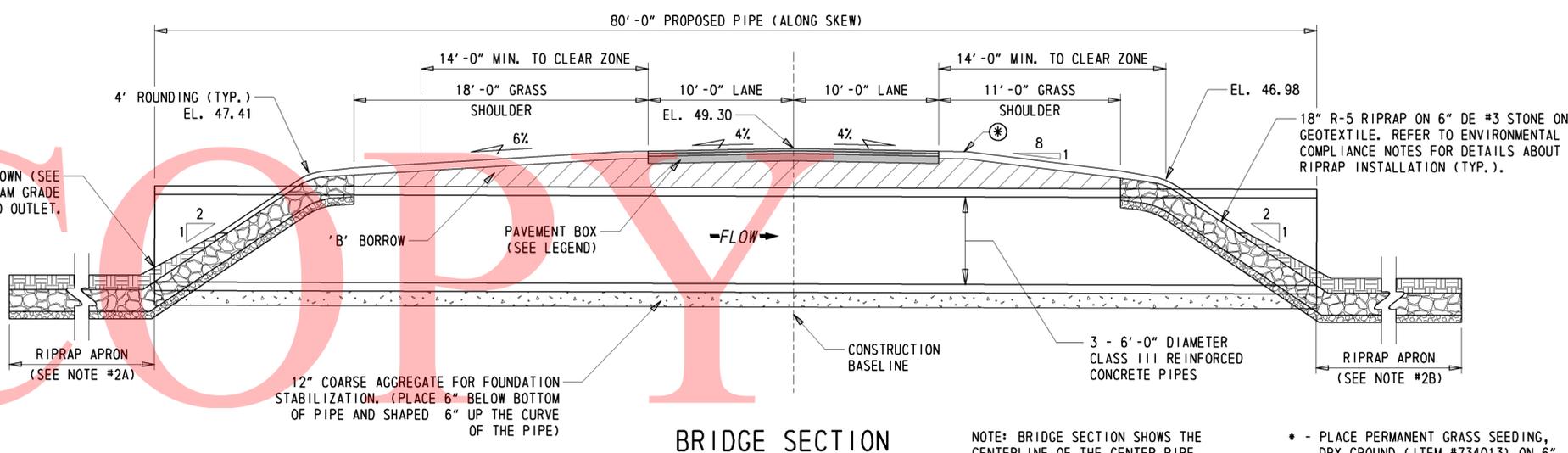
BRIDGE ELEVATION
1/8" = 1'-0"



PLAN
1/8" = 1'-0"

NOTES:

1. PROPOSED BRIDGE
THE EXISTING (3) 6'-0" DIAMETER CORRUGATED METAL PIPES SHALL BE REPLACED WITH (3) 6'-0" DIAMETER REINFORCED CONCRETE PIPES (80'-0" LONG). THE CENTER PIPE SHALL BE PLACED 6" BELOW THE ESTABLISHED STREAM GRADE. THE INVERT OF THE OUTER PIPES SHALL BE PLACED 1'-0" ABOVE THE INVERT OF THE CENTER PIPE. PLACE PIPES WITH A 3'-0" GAP BETWEEN THE OUTER WALLS OF EACH RUN. PLACE 6" COARSE AGGREGATE BEDDING BENEATH PIPES AND 6" SHAPED UP THE CURVE OF EACH PIPE.
2. RIPRAP PLACEMENT
 - A. UPSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM 35'-0" FROM THE PIPE INLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.
 - B. DOWNSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM 30'-0" FROM THE PIPE OUTLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.



BRIDGE SECTION
1/8" = 1'-0"

NOTE: BRIDGE SECTION SHOWS THE CENTERLINE OF THE CENTER PIPE.

* - PLACE PERMANENT GRASS SEEDING, DRY GROUND (ITEM #734013) ON 6" TOPSOIL (ITEM #732004) (TYP. FOR BOTH SIDES OF THE ROAD).

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ADDENDUMS / REVISIONS	

CONTRACT T201207505	BRIDGE NO. 2-131A
COUNTY KENT	DESIGNED BY: NED
	CHECKED BY: MJG

SHEET NO. 10
TOTAL SHTS. 48

BORING: BC-1		DATE DRILLED: 9/13/12			
STATION: 7+12.74	OFFSET: -7.66	ELEVATION: 48.77	NORTHING: 457439.80		
EASTING: 566468.71					
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.0	12	MOIST DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-1-B	
	1.0	35			
2	1.0	30	MOIST VERY DENSE BROWN FINE TO COARSE SAND AND FINE GRAVEL W/SOME SILT.	A-1-B	
		29			
		31			
		35			
3	2.0	3	WET STIFF GRAY FINE SANDY SILT W/SOME COARSE SAND, TRACE OF FINE GRAVEL.	A-4(0)	
	2.0	6			
		4			
		3			
4	4.0	1	SATURATED VERY LOOSE GRAY ORGANIC FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
	4.0	2			
		2			
		2			
5	6.0	5	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
	6.0	6			
		5			
		5			
	8.0	5			☞ WATER LEVEL (EL. 41.77)
6	8.0	11	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-3	
		10			
		9			
		9			
	10.0	5	SATURATED MEDIUM DENSE GRAY FINE GRAVEL AND COARSE TO FINE SAND W/SOME SILT.	A-1-B	-BOTTOM OF COARSE AGGREGATE (EL. 38.50)
	10.0	6			
		8			
		10			
8	12.0	5	SATURATED STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-4(0)	
		6			
		5			
		5			
9	14.0	6	NO RECOVERY		
		10			
		8			
		8			
10	16.0	5	SATURATED VERY STIFF GRAY FINE SANDY SILT W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-4(0)	
	16.0	8			
		10			
		11			
11	18.0	3	SATURATED FIRM BROWNISH GRAY SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND.	A-6(10)	
	18.0	1			
		4			
		5			
12	23.0	6	SATURATED STIFF GRAYISH BROWN FINE SANDY SILTY CLAY W/TRACE OF COARSE SAND.	A-6(7)	
	23.0	6			
		9			
		9			
13	28.0	6	SATURATED STIFF GRAYISH BROWN SILTY CLAY W/SOME FINE SAND, TRACE OF COARSE SAND.	A-6(13)	
	28.0	6			
		9			
		12			
14	33.0	7	SATURATED VERY STIFF GRAYISH BROWN CLAY W/SOME SILT, TRACE OF COARSE TO FINE SAND.	A-7-6(24)	
	33.0	7			
		9			
		12			
15	38.0	7	SATURATED VERY STIFF GRAYISH BROWN CLAY W/SOME SILT AND FINE SAND, TRACE OF COARSE SAND.	A-7-6(14)	
	38.0	9			
		14			
		18			
16	43.0	7	SATURATED VERY STIFF GRAYISH BROWN CLAY W/SOME SILT AND FINE SAND, TRACE OF COARSE SAND.	A-7-6(11)	
	43.0	9			
		12			
		15			
	48.0	15			
	48.0		END BORING.		
	50.0				

BORING: BC-2		DATE DRILLED: 9/13/12			
STATION: 6+57.65	OFFSET: -3.68	ELEVATION: 48.86	NORTHING: 457458.53		
EASTING: 566416.75					
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.5	11	MOIST DENSE ORANGE COARSE SAND W/SOME FINE GRAVEL AND SILT, TRACE OF FINE SAND.	A-1-B	
		14			
		17			
2	2.0	24	MOIST DENSE BROWN SILTY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
	2.0	20			
		24			
		10			
3A	4.0	5	MOIST LOOSE ORANGE COARSE SAND W/SOME FINE SAND AND SILT, TRACE OF FINE GRAVEL.	A-1-B	
	4.0	1			
		1			
3B	4.5	1	WET SOFT GRAY FINE SANDY SILT W/SOME COARSE SAND AND CLAY, TRACE OF FINE GRAVEL.	A-4(0)	
	4.5	2			
		2			
4	6.0	2	WET LOOSE GRAY SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
	6.0	3			
		3			
		4			
5	8.0	4	SATURATED VERY LOOSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL AND CLAY.	A-2-4(0)	
	8.0	3			
		1			
		2			
6	10.0	3	SATURATED DENSE GRAY FINE GRAVEL AND COARSE SAND W/SOME FINE SAND, TRACE OF SILT.	A-1-B	
	10.0	19			
		21			
		13			
7	12.0	9	SATURATED MEDIUM DENSE GRAY COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.	A-1-B	-BOTTOM OF COARSE AGGREGATE (EL. 38.50)
	12.0	11			
		11			
		11			
8	14.0	7	SATURATED STIFF GRAY COARSE TO FINE SANDY SILT.	A-4(0)	
	14.0	5			
		8			
		11			
9	16.0	9	SATURATED HARD GRAY FINE TO COARSE SANDY SILT W/ SOME ORGANIC MATTER.	A-4(0)	
	16.0	14			
		16			
		20			
10	18.0	7	SATURATED VERY STIFF GRAY FINE TO COARSE SANDY SILT.	A-4(0)	
	18.0	9			
		11			
		11			
11	23.0	3	SATURATED VERY STIFF GRAY COARSE SANDY CLAY W/SOME SILT AND FINE SAND.	A-6(6)	
	23.0	7			
		9			
		10			
12	28.0	3	SATURATED STIFF GRAY COARSE SANDY CLAY W/SOME SILT AND FINE SAND, TRACE OF ORGANIC MATTER.	A-6(6)	
	28.0	6			
		8			
		8			
13	33.0	6	SATURATED VERY STIFF GRAY SILTY CLAY W/TRACE OF FINE TO COARSE SAND AND ORGANIC MATTER.	A-7-6(23)	
	33.0	8			
		12			
		13			
14	38.0	6	SATURATED VERY STIFF GRAY SILTY CLAY W/TRACE OF COARSE TO FINE SAND AND ORGANIC MATTER.	A-7-6(37)	
	38.0	9			
		13			
		15			
15	43.0	7	SATURATED VERY STIFF GRAY COARSE SANDY CLAY W/SOME FINE SAND, SILT AND ORGANIC MATTER.	A-7-6(9)	
	43.0	11			
		15			
		18			
16	48.0	9	SATURATED HARD GRAY COARSE SANDY CLAY W/SOME FINE SAND, SILT AND ORGANIC MATTER.	A-7-6(9)	
	48.0	15			
		20			
		25			
	50.0		END BORING.		

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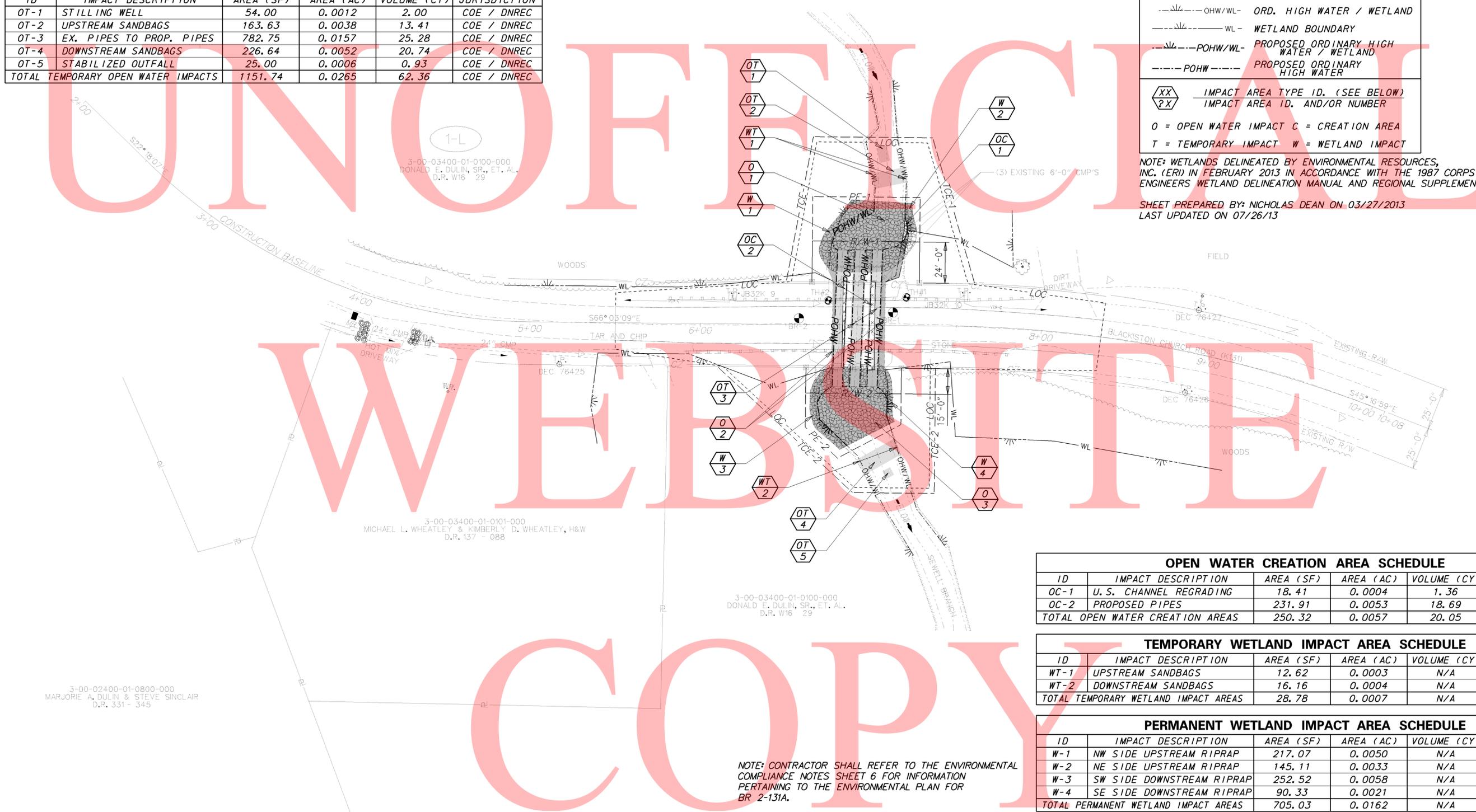
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		NOT TO SCALE	KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT	BRIDGE NO.	2-131A	BORING LOGS	SHEET NO.
					T201207505	DESIGNED BY: NED			11
					COUNTY	CHECKED BY: MJG			TOTAL SHTS.
		KENT			48				

PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
O-1	UPSTREAM RIPRAP	1531.09	0.0351	113.41	COE / DNREC
O-2	FILL OF EXISTING PIPES	306.81	0.0070	20.03	COE / DNREC
O-3	DOWNSTREAM RIPRAP	1501.42	0.0345	111.22	COE / DNREC
TOTAL PERMANENT OPEN WATER IMPACTS		3339.32	0.0766	244.66	COE / DNREC

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	STILLING WELL	54.00	0.0012	2.00	COE / DNREC
OT-2	UPSTREAM SANDBAGS	163.63	0.0038	13.41	COE / DNREC
OT-3	EX. PIPES TO PROP. PIPES	782.75	0.0157	25.28	COE / DNREC
OT-4	DOWNSTREAM SANDBAGS	226.64	0.0052	20.74	COE / DNREC
OT-5	STABILIZED OUTFALL	25.00	0.0006	0.93	COE / DNREC
TOTAL TEMPORARY OPEN WATER IMPACTS		1151.74	0.0265	62.36	COE / DNREC

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

NOTE: WETLANDS DELINEATED BY ENVIRONMENTAL RESOURCES, INC. (ERI) IN FEBRUARY 2013 IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND REGIONAL SUPPLEMENT
 SHEET PREPARED BY: NICHOLAS DEAN ON 03/27/2013
 LAST UPDATED ON 07/26/13



OPEN WATER CREATION AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OC-1	U. S. CHANNEL REGRADING	18.41	0.0004	1.36	COE / DNREC
OC-2	PROPOSED PIPES	231.91	0.0053	18.69	COE / DNREC
TOTAL OPEN WATER CREATION AREAS		250.32	0.0057	20.05	COE / DNREC

TEMPORARY WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
WT-1	UPSTREAM SANDBAGS	12.62	0.0003	N/A	COE
WT-2	DOWNSTREAM SANDBAGS	16.16	0.0004	N/A	COE
TOTAL TEMPORARY WETLAND IMPACT AREAS		28.78	0.0007	N/A	COE

PERMANENT WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
W-1	NW SIDE UPSTREAM RIPRAP	217.07	0.0050	N/A	COE
W-2	NE SIDE UPSTREAM RIPRAP	145.11	0.0033	N/A	COE
W-3	SW SIDE DOWNSTREAM RIPRAP	252.52	0.0058	N/A	COE
W-4	SE SIDE DOWNSTREAM RIPRAP	90.33	0.0021	N/A	COE
TOTAL PERMANENT WETLAND IMPACT AREAS		705.03	0.0162	N/A	COE

NOTE: CONTRACTOR SHALL REFER TO THE ENVIRONMENTAL COMPLIANCE NOTES SHEET 6 FOR INFORMATION PERTAINING TO THE ENVIRONMENTAL PLAN FOR BR 2-131A.

Y:\KENT\131A\BRIDGE_T201207505\PLANS_2-131A\CP01.DGN



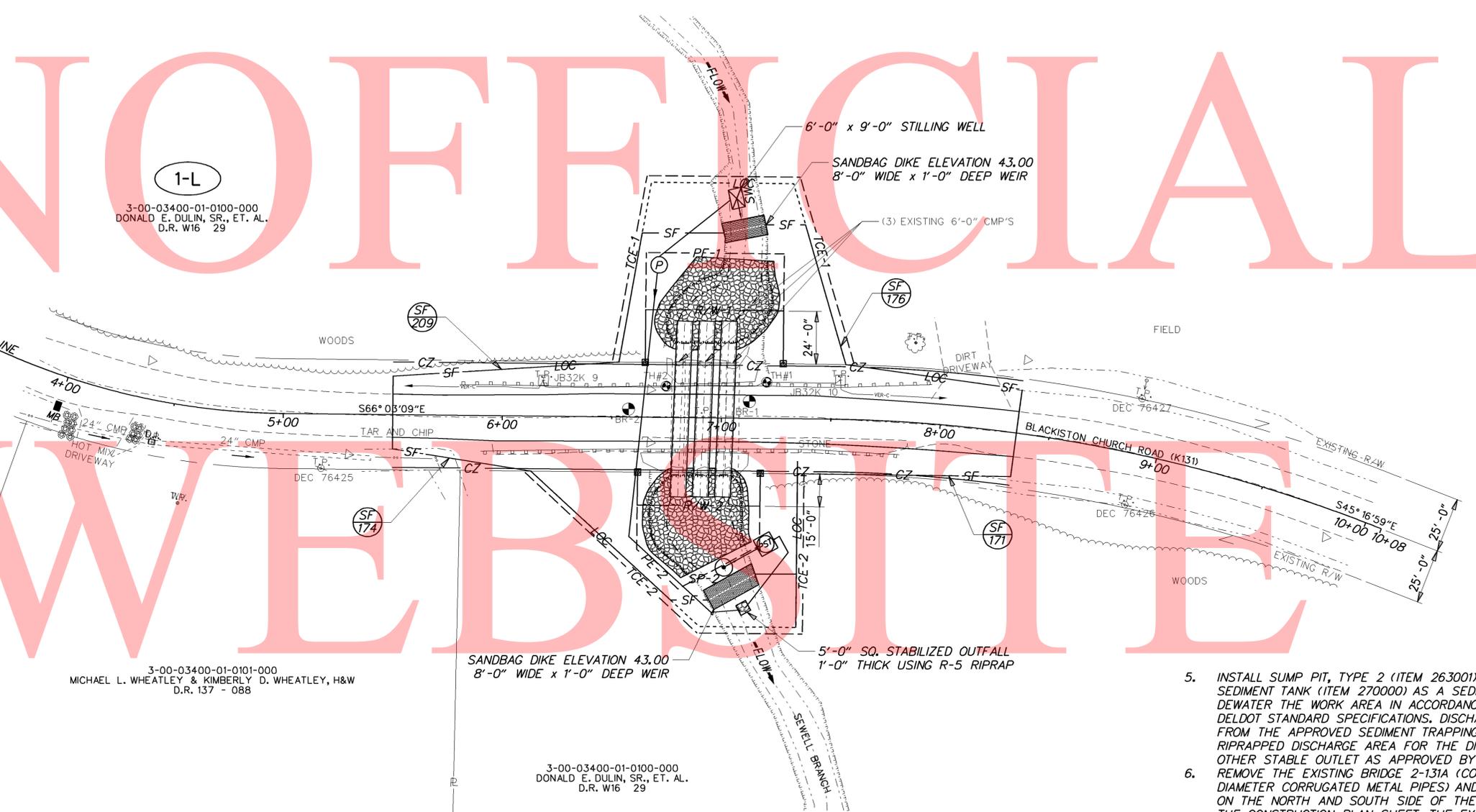
UNOFFICIAL

1-L
 3-00-03400-01-0100-000
 DONALD E. DULIN, SR., ET. AL.
 D.R. W16 29

3-00-03400-01-0101-000
 MICHAEL L. WHEATLEY & KIMBERLY D. WHEATLEY, H&W
 D.R. 137 - 088

3-00-03400-01-0100-000
 DONALD E. DULIN, SR., ET. AL.
 D.R. W16 29

3-00-02400-01-0800-000
 MARJORIE A. DULIN & STEVE SINCLAIR
 D.R. 331 - 345



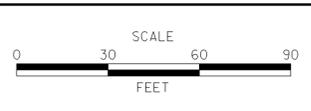
SEQUENCE OF CONSTRUCTION

1. CLOSE BLACKISTON CHURCH ROAD IN ACCORDANCE WITH THE DETOUR PLAN.
2. INSTALL SILT FENCE (ITEM 251000) EXCEPT CONNECTION TO SANDBAG DIKES.
3. INSTALL A 6'x9' STILLING WELL (ITEM 265500) UPSTREAM OF THE PROPOSED UPSTREAM SANDBAG DIKE AS SHOWN ON THE PLANS. PLACE R-5 RIPRAP AT THE PROPOSED DISCHARGE AREA OF THE PUMP.
4. CONSTRUCT THE SANDBAG DIKES, AT THE LOCATIONS SHOWN ON PLAN. SANDBAG DIKE DIMENSIONS ARE SHOWN ON THE PLAN. CONNECT SILT FENCE TO THE SANDBAG DIKES TO COMPLETELY ENCLOSE THE WORK AREA. USE PUMP (ITEM 265500) TO DIVERT THE STREAM BASE FLOW AROUND THE ENCLOSED WORK AREA. WHEN THE FLOW IS HIGHER THAN PUMP CAPACITY DURING RAINFALL EVENTS, THE STREAM FLOW IS ALLOWED TO FLOW OVER THE SANDBAG DIKE. THEREFORE, THE ENCLOSED AREA SHALL BE KEPT CLEAR OF DEBRIS AND OBSTRUCTIONS AT THE END OF EACH WORKDAY.
5. INSTALL SUMP PIT, TYPE 2 (ITEM 263001) AND A PORTABLE SEDIMENT TANK (ITEM 270000) AS A SEDIMENT TRAPPING DEVICE. DEWATER THE WORK AREA IN ACCORDANCE WITH SECTION 111 OF DELDOT STANDARD SPECIFICATIONS. DISCHARGE CLEAN EFFLUENT FROM THE APPROVED SEDIMENT TRAPPING DEVICE AT THE RIPRAPPED DISCHARGE AREA FOR THE DIVERSION PUMP OR ON OTHER STABLE OUTLET AS APPROVED BY THE ENGINEER.
6. REMOVE THE EXISTING BRIDGE 2-131A (COMPRISED OF (3) 6'-0" DIAMETER CORRUGATED METAL PIPES) AND THE EXISTING GUARDRAIL ON THE NORTH AND SOUTH SIDE OF THE ROADWAY AS SHOWN ON THE CONSTRUCTION PLAN SHEET, THE EXISTING RIPRAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE (STONE MAY BE RE-USED IF IT MEETS THE REQUIREMENTS FOR R-5 RIPRAP), AND EXISTING HOTMIX WITHIN THE PROJECT LIMITS.
7. IF THE CONTRACTOR CHOOSES TO USE ON-SITE CHANNEL BED FILL, EXCAVATE AND STOCKPILE THE EXISTING STREAMBED MATERIAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF ITEM #712531-CHANNEL BED FILL.
8. INSTALL (3) 6'-0" DIAMETER REINFORCED CONCRETE PIPES, RIPRAP, AND CHANNEL BED FILL AS NOTED.
9. CONSTRUCT SLOPES, PLACE ANY REMAINING RIPRAP, AND COMPLETE ALL ROAD WORK.
10. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL AND STREAM DIVERSION DEVICES (INCLUDING RIPRAP USED AS STABILIZED OUTFALL) WHEN THEY ARE NO LONGER NEEDED. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER (RESTORE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES AND AS DIRECTED BY THE ENGINEER).
11. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.

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DELAWARE
 DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	



KENT COUNTY PIPE
REPLACEMENTS, FEDERAL, 2012

CONTRACT	BRIDGE NO.	2-131A
T201207505	DESIGNED BY:	NED
COUNTY	CHECKED BY:	MJG
KENT		

CONSTRUCTION SEQUENCE
& EROSION CONTROL PLAN

SHEET NO.	13
TOTAL SHTS.	48

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

BLACK-ISTON CHURCH

ROAD TO CLOSE XXXXXX

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-1

BLACK-ISTON CHURCH

CLOSED FOLLOW DETOUR

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

XXXXXXXX
XXXXXXXX
XXXXXXXX

XXXXXXXX
XXXXXXXX
XXXXXXXX

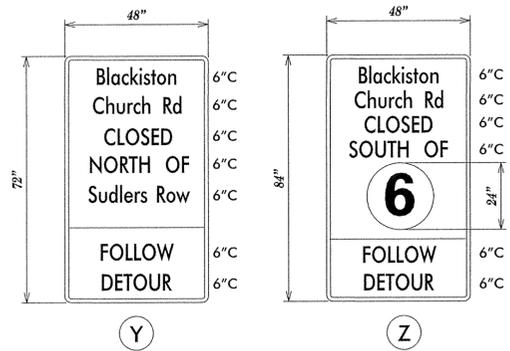
DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-1

XXXXXXXX
XXXXXXXX
XXXXXXXX

XXXXXXXX
XXXXXXXX
XXXXXXXX

SPECIAL SIGNS



*D/G RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND; BLACK LEGEND

*ROUTE SHIELD-WHITE BACKGROUND; BLACK LEGEND

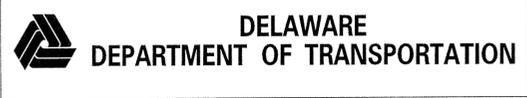


LEGEND

GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
5. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
6. 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" (DE MUTCD) WILL PREVAIL.
7. SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
8. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
9. "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
10. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

RECOMMENDED *Mundt* DATE: 10-16-12 RECOMMENDED *[Signature]* DATE: 10-17-12 RECOMMENDED _____ DATE: _____ APPROVED CHIEF SAFETY OFFICER *[Signature]* DATE: 10-20-12 APPROVED TRAFFIC ENGINEER *[Signature]* DATE: 10/20/12



NOT TO SCALE

KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

CONTRACT	ROAD NO.	K131
7201207505	DESIGNED BY:	MFR
COUNTY	CHECKED BY:	ASW
KENT		

DETOUR PLAN
BLACKISTON CHURCH RD

SHEET NO.	14
TOTAL SHTS.	48

C:\DOCUMENTS AND SETTINGS\MICHAEL.RIVERA\MY DOCUMENTS\MICRO STATION DGN\BLACKISTON CHURCH RD BR 2-131A.DGN



UNOFFICIAL

2+00
S22°18'07"E
3+00 CONSTRUCTION BASELINE

1-L
3-00-03400-01-0100-000
DONALD E. DULIN, SR., ET. AL.
D.R. W16 - 29

12002
11001
10002
10001
12001
12003
11002
10003
10004
12005
12004

FIELD

WOODS
TAR AND CHIP
BLACKISTON CHURCH ROAD (K131)
EXISTING R/W
WOODS

3-00-03400-01-0101-000
MICHAEL L. WHEATLEY & KIMBERLY D. WHEATLEY, H&W
D.R. 137 - 088

15001
13001
13004
14003
14002
15004
15002
13002
13003
14001
15003

3-00-03400-01-0100-000
DONALD E. DULIN, SR., ET. AL.
D.R. W16 - 29

3-00-02400-01-0800-000
MARJORIE A. DULIN & STEVE SINCLAIR
D.R. 331 - 345

RECOMMENDED

Robert A. Reed / Shehnaaz Chaudhri 6/26/13
TEAM SUPPORT SQUAD MANAGER DATE

H. C. Dull 6/27/13
TEAM SUPPORT ENGINEER DATE

Robert B. McCleary 6/27/13
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.

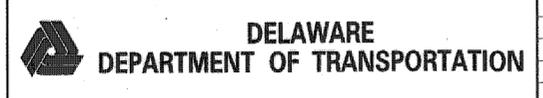
CHIEF, REAL ESTATE

DATE

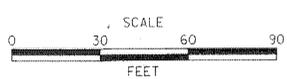
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RIGHT-OF-WAY SHEET 1 OF 2

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ADDENDUMS / REVISIONS



KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

CONTRACT	BRIDGE NO.	2-131A
T201207505	DESIGNED BY:	NED
COUNTY	CHECKED BY:	MJG
KENT		

RIGHT-OF-WAY PLAN

SHEET NO.	15
TOTAL SHTS.	48

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-03400-01-0100-000	(1-L) DONALD E. DULIN, SR., ET. AL.	FEE-1	D.R. W16-29	695.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10001	5000	6+65.00	-25.00	457475.0271	566432.1206	N 23°56'51.48" E	24.0000				
10002	5000	6+65.00	-49.00	457496.9611	566441.8622	S 66°03'08.52" E	63.0000				
10003	5000	7+28.00	-49.00	457471.3893	566499.4390	S 23°56'51.48" W	24.0000				
10004	5000	7+28.00	-25.00	457449.4553	566489.6973	N 66°03'08.52" W	63.0000				
10001	5000	6+65.00	-25.00	457475.0271	566432.1206						
FIGURE 10001 AREA = 1512.0000 SQ. FT. (0.0347 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-03400-01-0100-000	(1-L) DONALD E. DULIN, SR., ET. AL.	FEE-2	D.R. W16-29	695.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
13001	5000	6+62.00	25.00	457430.5490	566409.0838	S 66°03'08.52" E	56.0000				
13002	5000	7+18.00	25.00	457407.8185	566460.2631	S 23°56'51.48" W	15.0000				
13003	5000	7+18.00	40.00	457394.1097	566454.1746	N 66°03'08.52" E	56.0000				
13004	5000	6+62.00	40.00	457416.8402	566402.9952	N 23°56'51.48" E	15.0000				
13001	5000	6+62.00	25.00	457430.5490	566409.0838						
FIGURE 13001 AREA = 840.0000 SQ. FT. (0.0193 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-03400-01-0100-000	(1-L) DONALD E. DULIN, SR., ET. AL.	P/E-1	D.R. W16-29	695.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10002	5000	6+65.00	-49.00	457496.9611	566441.8622	N 23°56'51.48" E	26.0000				
11001	5000	6+65.00	-75.00	457520.7229	566452.4157	S 66°03'08.52" E	63.0000				
11002	5000	7+28.00	-75.00	457495.1512	566509.9924	S 23°56'51.48" W	26.0000				
10003	5000	7+28.00	-49.00	457471.3893	566499.4390	N 66°03'08.52" W	63.0000				
10002	5000	6+65.00	-49.00	457496.9611	566441.8622						
FIGURE 11001 AREA = 1638.0000 SQ. FT. (0.0376 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-03400-01-0100-000	(1-L) DONALD E. DULIN, SR., ET. AL.	P/E-2	D.R. W16-29	695.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
13004	5000	6+62.00	40.00	457416.8402	566402.9952	S 66°03'08.52" E	56.0000				
13003	5000	7+18.00	40.00	457394.1097	566454.1746	S 23°56'51.48" W	18.0000				
14001	5000	7+18.00	58.00	457377.6592	566446.8684	S 85°33'16.61" W	42.0595				
14002	5000	6+81.00	78.00	457374.3993	566404.9354	N 22°36'01.88" W	26.1725				
14003	5000	6+62.00	60.00	457398.5619	566394.8772	N 23°56'51.48" E	20.0000				
13004	5000	6+62.00	40.00	457416.8402	566402.9952						
FIGURE 14001 AREA = 1587.0000 SQ. FT. (0.0364 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-03400-01-0100-000	(1-L) DONALD E. DULIN, SR., ET. AL.	TCE-1	D.R. W16-29	695.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
12001	5000	6+50.00	-25.00	457481.1156	566418.4118	N 33°57'20.21" E	86.3134				
12002	5000	6+65.00	-110.00	457552.7100	566466.6222	S 66°03'08.52" E	70.0000				
12003	5000	7+35.00	-110.00	457524.2969	566530.5964	S 7°17'50.77" W	88.8488				
12004	5000	7+60.00	-25.00	457436.1678	566519.3108			N 65°31'37.51" W	13.4782	13.4784	735.0000
12005	5000	7+46.98	-25.00	457441.7513	566507.0435	N 66°03'08.52" W	18.9800				
10004	5000	7+28.00	-25.00	457449.4553	566489.6973	N 23°56'51.48" E	50.0000				
11002	5000	7+28.00	-75.00	457495.1512	566509.9924	N 66°03'08.52" W	63.0000				
11001	5000	6+65.00	-75.00	457520.7229	566452.4157	S 23°56'51.48" W	50.0000				
10001	5000	6+65.00	-25.00	457475.0271	566432.1206	N 66°03'08.52" W	15.0000				
12001	5000	6+50.00	-25.00	457481.1156	566418.4118						
FIGURE 12001 AREA = 4518.9883 SQ. FT. (0.1037 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-03400-01-0100-000	(1-L) DONALD E. DULIN, SR., ET. AL.	TCE-2	D.R. W16-29	695.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
15001	5000	6+10.00	25.00	457451.6559	566361.5601	S 66°03'08.52" E	52.0000				
13001	5000	6+62.00	25.00	457430.5490	566409.0838	S 23°56'51.48" W	35.0000				
14003	5000	6+62.00	60.00	457398.5619	566394.8772	S 22°36'01.88" E	26.1725				
14002	5000	6+81.00	78.00	457374.3993	566404.9354	N 85°33'16.61" E	42.0595				
14001	5000	7+18.00	58.00	457377.6592	566446.8684	N 23°56'51.48" E	33.0000				
13002	5000	7+18.00	25.00	457407.8185	566460.2631	S 66°03'08.52" E	20.0000				
15002	5000	7+38.00	25.00	457399.7005	566478.5414	S 23°56'51.48" W	73.0000				
15003	5000	7+38.00	98.00	457332.9845	566448.9106	N 66°03'08.52" W	48.0000				
15004	5000	6+90.00	98.00	457352.4678	566405.0426	N 23°40'18.89" W	108.3005				
15001	5000	6+10.00	25.00	457451.6559	566361.5601						
FIGURE 15001 AREA = 3997.0000 SQ. FT. (0.0918 ACRES)											

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)	EASEMENT PERMANENT (SQ. FEET /ACRES) TEMPORARY (SQ. FEET /ACRES)			
3-00-03400-01-0100-000	6	(1-L) DONALD E. DULIN, SR., ET. AL.	D.R. W16-29	D - 695.00	FEE-1	1512.00 / 0.03				
					P/E-1					
					TCE-1		1638.00 / 0.04			
					FEE-2	840.00 / 0.02				
					P/E-2					
					TCE-2		1587.00 / 0.04			
								3997.00 / 0.09	30271848.00 / 694.95	

WEB SITE
COPY

RIGHT-OF-WAY SHEET 2 OF 2

LEGEND	
FEE	AREA OF ACQUISITION
RW	AREA OCCUPIED BY EXISTING RW
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
..	OFFSET IS LEFT OF BASELINE
**	CURVE TURNS TO THE LEFT

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Element: Circular
 PC (5001) 2+87.70 445144.1102 570957.1748
 PI (5100) 4+22.03 445213.0034 571072.4954
 CC (5002) 444564.6403 571303.3534
 PT (5003) 5+52.90 445232.4960 571205.4056

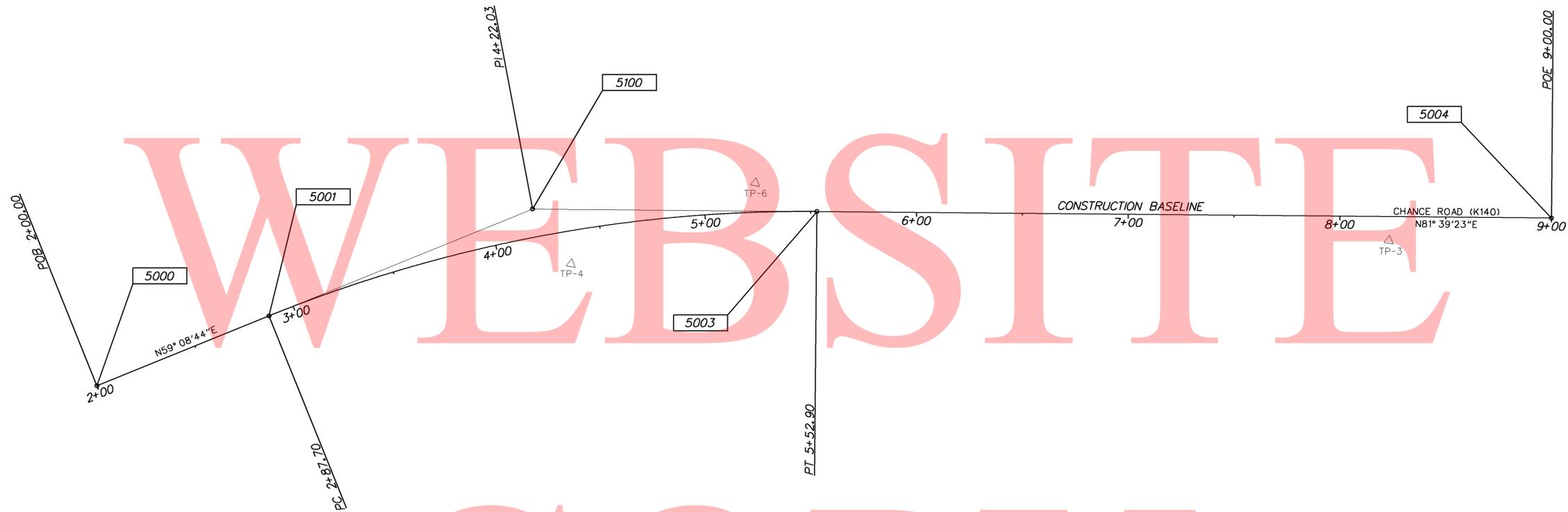
Radius: 675.00
 Delta: 22° 30' 38.9105" Right
 Degree of Curvature(Arc): 8° 29' 17.7491"
 Length: 265.20
 Tangent: 134.33
 Chord: 263.50
 Middle Ordinate: 12.98
 External: 13.24
 Tangent Direction: N 59° 08' 44.4070" E
 Radial Direction: S 30° 51' 15.5930" E
 Chord Direction: N 70° 24' 03.8623" E
 Radial Direction: S 8° 20' 36.6824" E
 Tangent Direction: N 81° 39' 23.3176" E

HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
TP-3	8+23.35	11.28	445260.5842	571474.6290	56.96
TP-4	4+33.69	15.43	445190.2624	571094.4805	56.35
TP-5			445040.3599	570750.6283	62.27
TP-6	5+24.30	-13.81	445241.3157	571174.6241	56.91
TP-7			445318.7772	571650.5289	57.14

CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
5000	2+00.00	0.00	445099.1329	570881.8871
5004	9+00.00	0.00	445282.8631	571548.8331

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



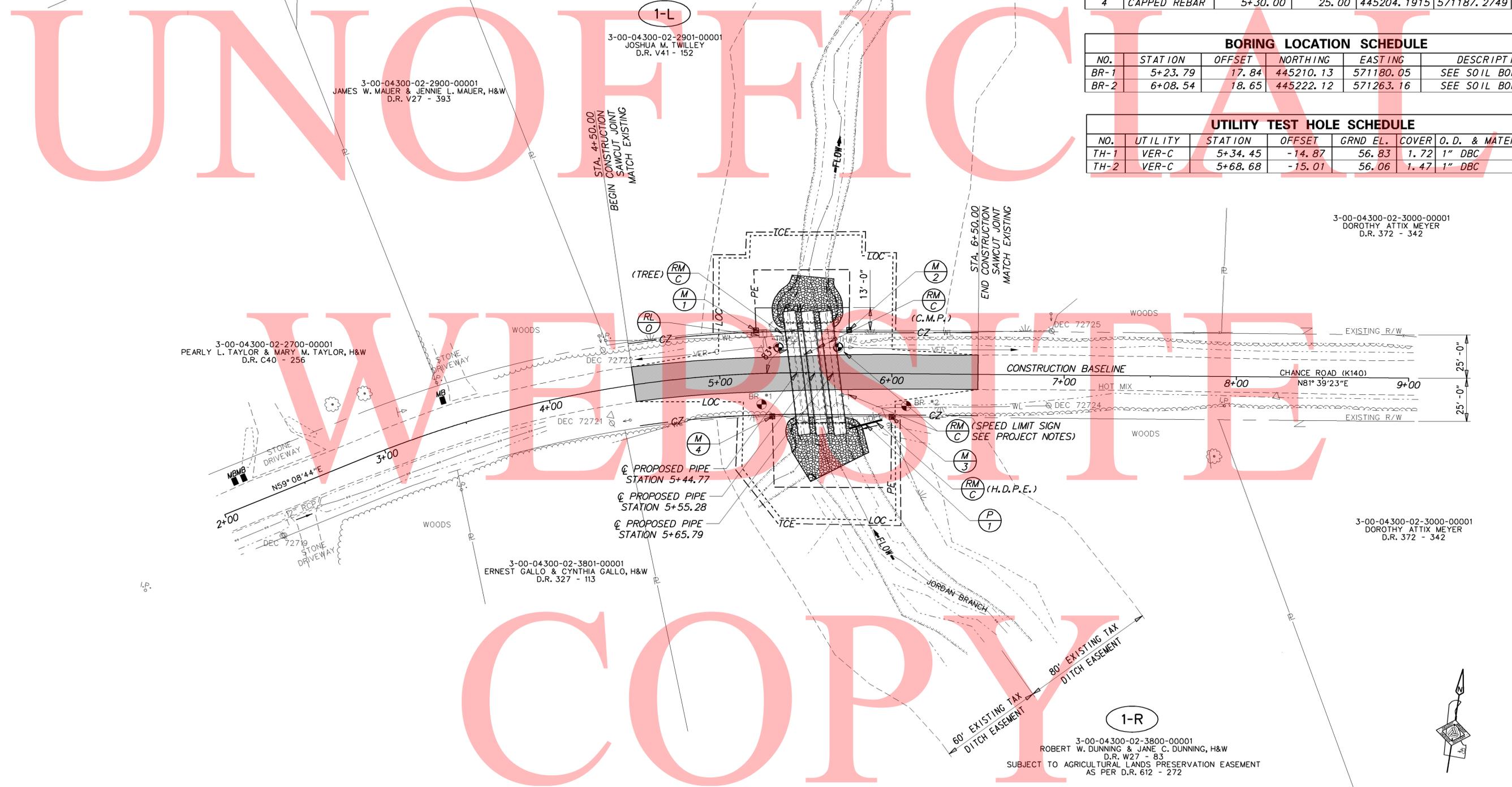
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TP-5

TP-7



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DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
1	12" H. D. P. E.	S	20.00	1.00%	53.60	53.40

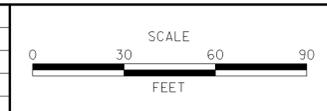
RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
1	CAPPED REBAR	5+22.00	-25.00	445251.8576	571170.1903
2	CAPPED REBAR	5+75.00	-25.00	445260.4380	571223.6422
3	CAPPED REBAR	6+00.00	25.00	445214.5953	571255.6359
4	CAPPED REBAR	5+30.00	25.00	445204.1915	571187.2749

BORING LOCATION SCHEDULE					
NO.	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
BR-1	5+23.79	17.84	445210.13	571180.05	SEE SOIL BORINGS
BR-2	6+08.54	18.65	445222.12	571263.16	SEE SOIL BORINGS

UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O. D. & MATERIAL
TH-1	VER-C	5+34.45	-14.87	56.83	1.72	1" DBC
TH-2	VER-C	5+68.68	-15.01	56.06	1.47	1" DBC

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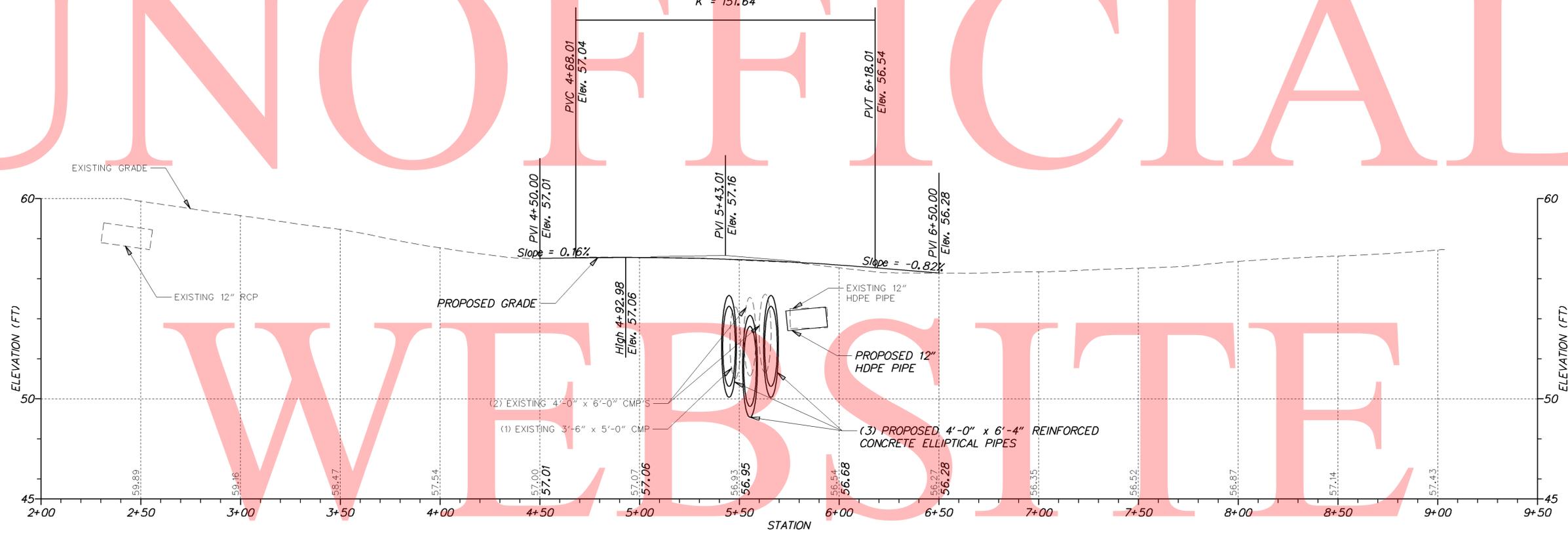
ADDENDUMS / REVISIONS



CONTRACT T201207505	BRIDGE NO. 2-140A
COUNTY KENT	DESIGNED BY: NED CHECKED BY: MJG

UNOFFICIAL

Type of Curve = Symmetric Parabola
 Direction = Crest
 Length = 150.00'
 L1 = 75.00'
 L2 = 75.00'
 G1 = 0.16%
 G2 = -0.82%
 SSD = 1165.96'
 K = 151.64

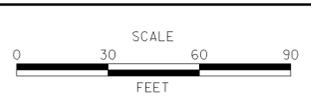


K140 - CHANCE ROAD

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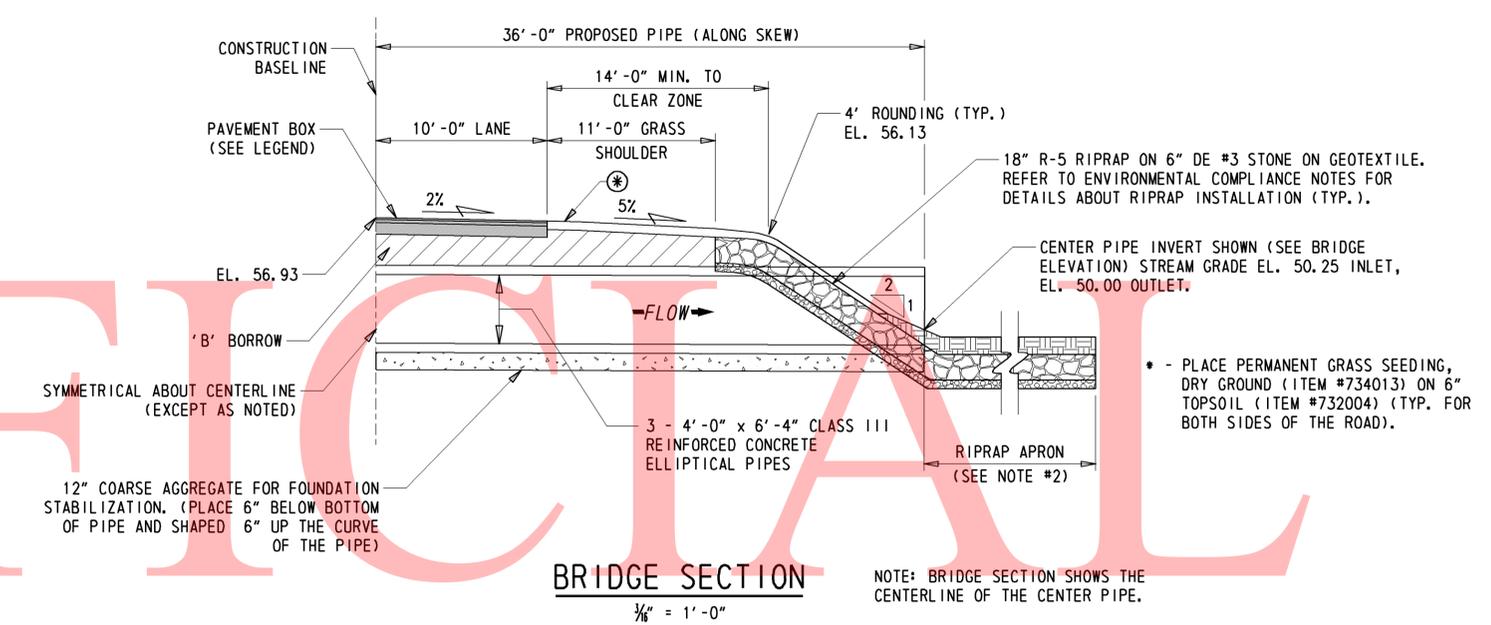
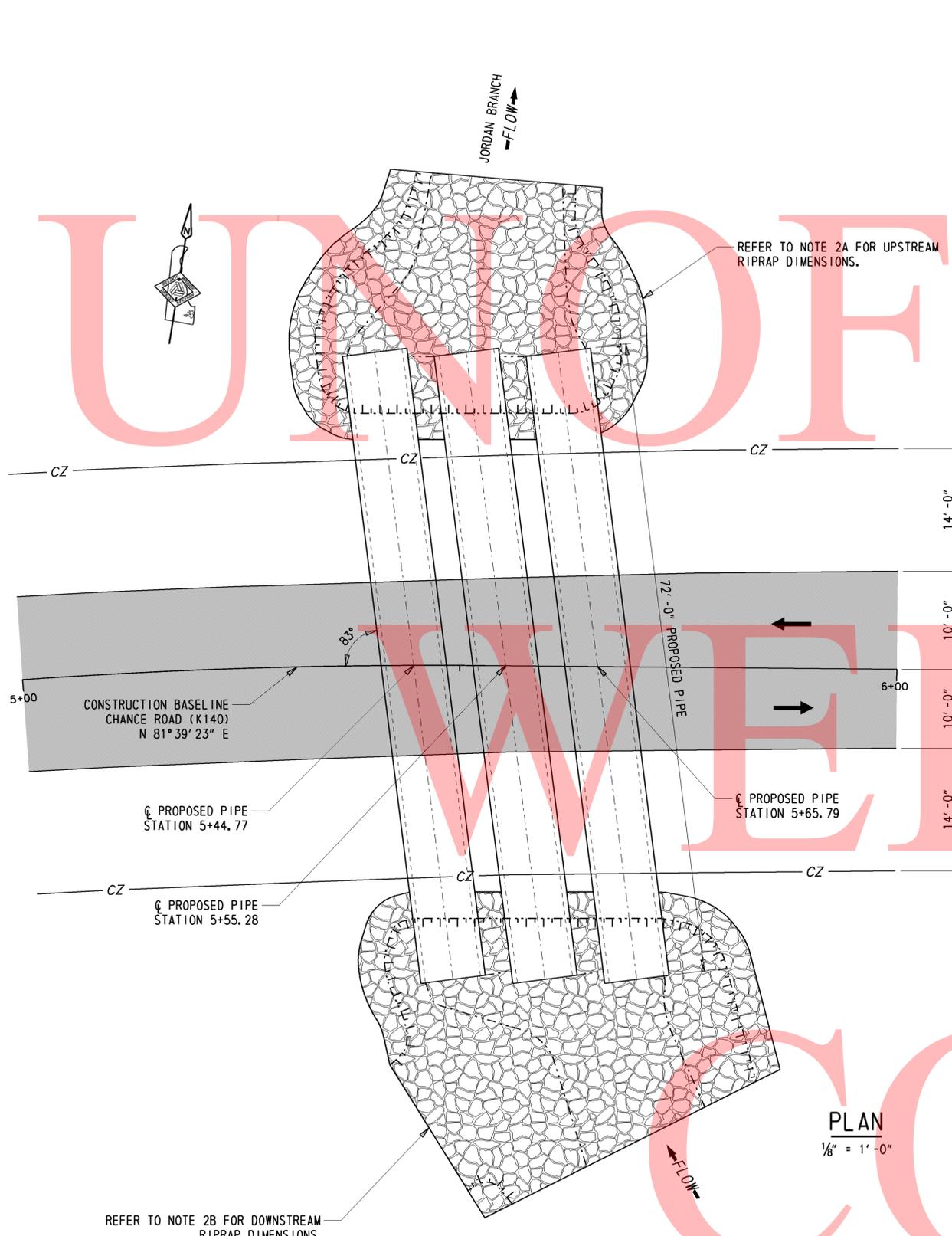
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ADDENDUMS / REVISIONS	

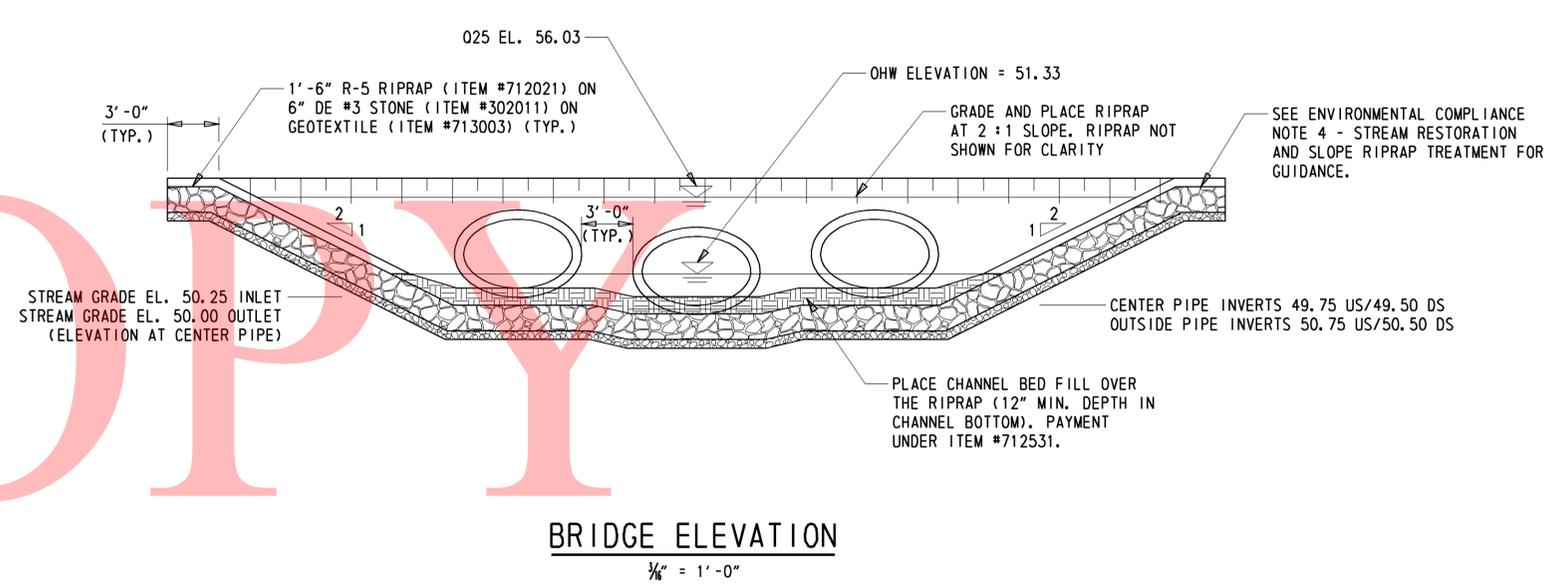


CONTRACT	BRIDGE NO.	2-140A
T201207505	DESIGNED BY:	NED
COUNTY	CHECKED BY:	MJG
KENT		

VERTICAL SCALE	9
	6
	3
	0
FEET	
SHEET NO.	19
TOTAL SHTS.	48



- NOTES:**
- PROPOSED BRIDGE
THE EXISTING (1) 3'-6" x 5'-0" CORRUGATED METAL ELLIPTICAL PIPE AND (2) 4'-0" x 6'-0" CORRUGATED METAL ELLIPTICAL PIPES SHALL BE REPLACED WITH (3) 4'-0" x 6'-4" REINFORCED CONCRETE ELLIPTICAL PIPES (72'-0" LONG). THE CENTER PIPE SHALL BE PLACED 6" BELOW THE ESTABLISHED STREAM GRADE. THE INVERT OF THE OUTER PIPES SHALL BE PLACED 1'-0" ABOVE THE INVERT OF THE CENTER PIPE. PLACE PIPES WITH A 3'-0" GAP BETWEEN THE OUTER WALLS OF EACH RUN. PLACE 6" COARSE AGGREGATE BEDDING BENEATH PIPES AND 6" SHAPED UP THE CURVE OF EACH PIPE.
 - RIPRAP PLACEMENT
 - UPSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM 20'-0" FROM THE PIPE INLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.
 - DOWNSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM 20'-0" FROM THE PIPE OUTLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.



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<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS		SCALE AS NOTED	KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT	BRIDGE NO.	2-140A	BRIDGE PLAN, SECTION & ELEVATION	SHEET NO.
					T201207505	DESIGNED BY: NED			20
					COUNTY	CHECKED BY: MJG			TOTAL SHTS.
					KENT				48

BORING: BR-1		DATE DRILLED: 9/14/12	
STATION: 6+23.79	OFFSET: 17.84	ELEVATION: 55.84	NORTHING: 445210.13
EASTING: 571180.05			
COMMENTS: N/A			
SAMPLE INFORMATION			
NO.	DEPTH	BLOWS /6"	DESCRIPTION
1	2.0	1	NO SIEVE ANALYSIS - INDICATION OF WET VERY LOOSE SILTY SAND.
		2	
		3	
2	4.0	11	WET VERY STIFF GRAY FINE TO COARSE SANDY CLAY W/SOME SILT, TRACE OF FINE GRAVEL.
		13	
		12	
		11	
3	6.0	3	WET LOOSE GRAY COARSE SAND AND FINE GRAVEL W/TRACE OF FINE SAND AND SILT.
		4	
		5	
		6	
4	8.0	5	WET MEDIUM DENSE GRAY COARSE TO FINE SAND AND FINE GRAVEL W/SOME SILT.
		6	
		7	
		5	
		7	
		9	
6	12.0	6	WET STIFF GRAY DENSE SANDY SILT W/ SOME FINE GRAVEL, TRACE OF COARSE SAND.
		6	
		5	
		8	
7	14.0	6	WET MEDIUM DENSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		7	
		13	
		9	
8	16.0	6	WET MEDIUM DENSE GRAY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.
		6	
		8	
		10	
9	18.0	5	WET MEDIUM DENSE GRAY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.
		6	
		9	
		13	
10	23.0	2	SATURATED LOOSE DARK GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL AND ORGANIC MATTER.
		3	
		5	
		4	
11	28.0	4	SATURATED MEDIUM DENSE DARK GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND.
		8	
		16	
		16	
12	33.0	15	SATURATED MEDIUM DENSE DARK GRAY FINE SAND W/TRACE OF COARSE SAND AND SILT.
		13	
		12	
		11	
13	38.0	9	SATURATED MEDIUM DENSE DARK GRAY FINE SAND W/TRACE OF COARSE SAND AND SILT.
		11	
		14	
		21	
14	43.0	14	SATURATED DENSE DARK GRAY FINE SAND W/TRACE OF COARSE SAND, FINE GRAVEL AND SILT.
		28	
		26	
		28	
15	48.0	22	SATURATED DENSE DARK GRAY FINE SAND W/SOME COARSE SAND, TRACE OF FINE GRAVEL AND SILT.
		22	
		31	
		25	
			END BORING.

BORING: BR-2		DATE DRILLED: 9/14/12	
STATION: 6+06.54	OFFSET: 18.65	ELEVATION: 55.85	NORTHING: 445222.12
EASTING: 571263.16			
COMMENTS: N/A			
SAMPLE INFORMATION			
NO.	DEPTH	BLOWS /6"	DESCRIPTION
1	0.5	9	MOIST DENSE GRAY COARSE TO FINE SAND AND FINE GRAVEL W/SOME SILT.
		18	
		13	
2	2.0	9	WET MEDIUM DENSE GRAY SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND CLAY.
		6	
		5	
		6	
3	4.0	5	WET VERY LOOSE GRAY FINE TO COARSE SAND W/SOME FINE GRAVEL AND SILT, TRACE OF ORGANIC MATTER.
		2	
		2	
		2	
4	6.0	2	WET LOOSE GRAY COARSE TO FINE SAND AND FINE GRAVEL W/TRACE OF SILT AND ORGANIC MATTER.
		3	
		5	
		6	
		5	
5	8.0	5	WET VERY LOOSE GRAY COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		2	
		2	
		3	
6	10.0	3	WET MEDIUM DENSE GRAY COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.
		9	
		5	
		3	
7	12.0	4	WET MEDIUM DENSE GRAY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.
		5	
		10	
		12	
8	14.0	4	SATURATED SOFT TAN CLAYEY FINE SANDY SILT W/TRACE OF COARSE SAND AND FINE GRAVEL.
		1	
		2	
		3	
9	16.0	5	SATURATED STIFF TAN FINE SANDY SILT W/TRACE OF COARSE SAND.
		6	
		7	
		6	
10	18.0	4	SATURATED MEDIUM DENSE BROWNISH GRAY COARSE TO FINE SAND W/ SOME FINE GRAVEL, TRACE OF SILT.
		8	
		12	
		9	
11	23.0	1	SATURATED VERY LOOSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		2	
		2	
		2	
12	28.0	2	SATURATED LOOSE GRAY FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL AND ORGANIC MATTER.
		4	
		5	
		8	
13	33.0	8	SATURATED DENSE GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND AND ORGANIC MATTER.
		15	
		27	
		16	
14	38.0	13	SATURATED DENSE GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND, FINE GRAVEL AND ORGANIC MATTER.
		18	
		21	
		30	
15	43.0	15	SATURATED VERY DENSE GRAY FINE SAND W/TRACE OF COARSE SAND, FINE GRAVEL AND SILT.
		24	
		33	
		25	
16	48.0	7	SATURATED DENSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		13	
		24	
		34	
			END BORING.

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LEGEND

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

OPEN WATER CREATION AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OC-1	PROPOSED PIPES	472.94	0.0109	18.79	COE / DNREC
TOTAL OPEN WATER CREATION AREAS		472.94	0.0109	18.79	COE / DNREC

PERMANENT OPEN WATER IMPACT AREA SCHEDULE

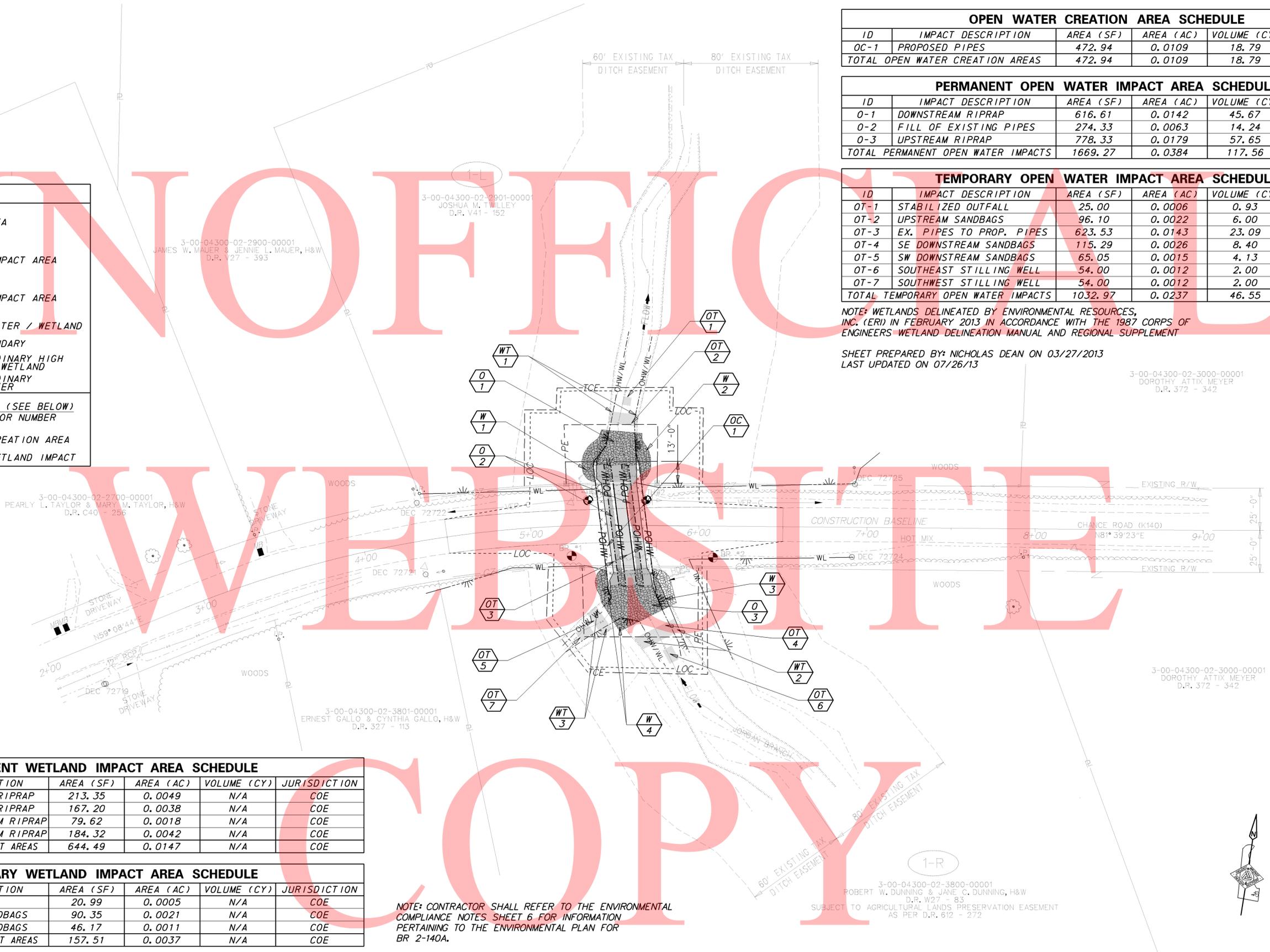
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
O-1	DOWNSTREAM RIPRAP	616.61	0.0142	45.67	COE / DNREC
O-2	FILL OF EXISTING PIPES	274.33	0.0063	14.24	COE / DNREC
O-3	UPSTREAM RIPRAP	778.33	0.0179	57.65	COE / DNREC
TOTAL PERMANENT OPEN WATER IMPACTS		1669.27	0.0384	117.56	COE / DNREC

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	STABILIZED OUTFALL	25.00	0.0006	0.93	COE / DNREC
OT-2	UPSTREAM SANDBAGS	96.10	0.0022	6.00	COE / DNREC
OT-3	EX. PIPES TO PROP. PIPES	623.53	0.0143	23.09	COE / DNREC
OT-4	SE DOWNSTREAM SANDBAGS	115.29	0.0026	8.40	COE / DNREC
OT-5	SW DOWNSTREAM SANDBAGS	65.05	0.0015	4.13	COE / DNREC
OT-6	SOUTHEAST STILLING WELL	54.00	0.0012	2.00	COE / DNREC
OT-7	SOUTHWEST STILLING WELL	54.00	0.0012	2.00	COE / DNREC
TOTAL TEMPORARY OPEN WATER IMPACTS		1032.97	0.0237	46.55	COE / DNREC

NOTE: WETLANDS DELINEATED BY ENVIRONMENTAL RESOURCES, INC. (ERI) IN FEBRUARY 2013 IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND REGIONAL SUPPLEMENT

SHEET PREPARED BY: NICHOLAS DEAN ON 03/27/2013
LAST UPDATED ON 07/26/13



PERMANENT WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
W-1	NW SIDE UPSTREAM RIPRAP	213.35	0.0049	N/A	COE
W-2	NE SIDE UPSTREAM RIPRAP	167.20	0.0038	N/A	COE
W-3	SE SIDE DOWNSTREAM RIPRAP	79.62	0.0018	N/A	COE
W-4	SW SIDE DOWNSTREAM RIPRAP	184.32	0.0042	N/A	COE
TOTAL PERMANENT WETLAND IMPACT AREAS		644.49	0.0147	N/A	COE

TEMPORARY WETLAND IMPACT AREA SCHEDULE

ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
WT-1	UPSTREAM SANDBAGS	20.99	0.0005	N/A	COE
WT-2	DOWNSTREAM SE SANDBAGS	90.35	0.0021	N/A	COE
WT-3	DOWNSTREAM SW SANDBAGS	46.17	0.0011	N/A	COE
TOTAL TEMPORARY WETLAND IMPACT AREAS		157.51	0.0037	N/A	COE

NOTE: CONTRACTOR SHALL REFER TO THE ENVIRONMENTAL COMPLIANCE NOTES SHEET 6 FOR INFORMATION PERTAINING TO THE ENVIRONMENTAL PLAN FOR BR 2-140A.

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<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS			<p>KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012</p>	CONTRACT	BRIDGE NO.	2-140A	<p>ENVIRONMENTAL COMPLIANCE PLAN</p>	SHEET NO.
	T201207505	DESIGNED BY: NED			22				
	KENT	CHECKED BY: MJG			TOTAL SHTS.				
								48	

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

CHANCE ROAD

TO CLOSE STARTING XXXXXX

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-1

CHANCE ROAD CLOSED

FOLLOW DETOUR

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

XXXXXXXXXX

XXXXXXXXXX

XXXXXXXXXX

XXXXXXXXXX

XXXXXXXXXX

XXXXXXXXXX

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-1

XXXXXXXXXX

XXXXXXXXXX

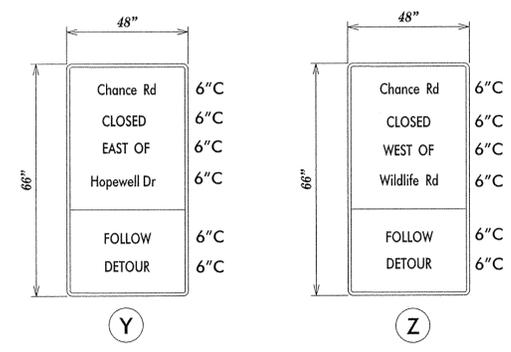
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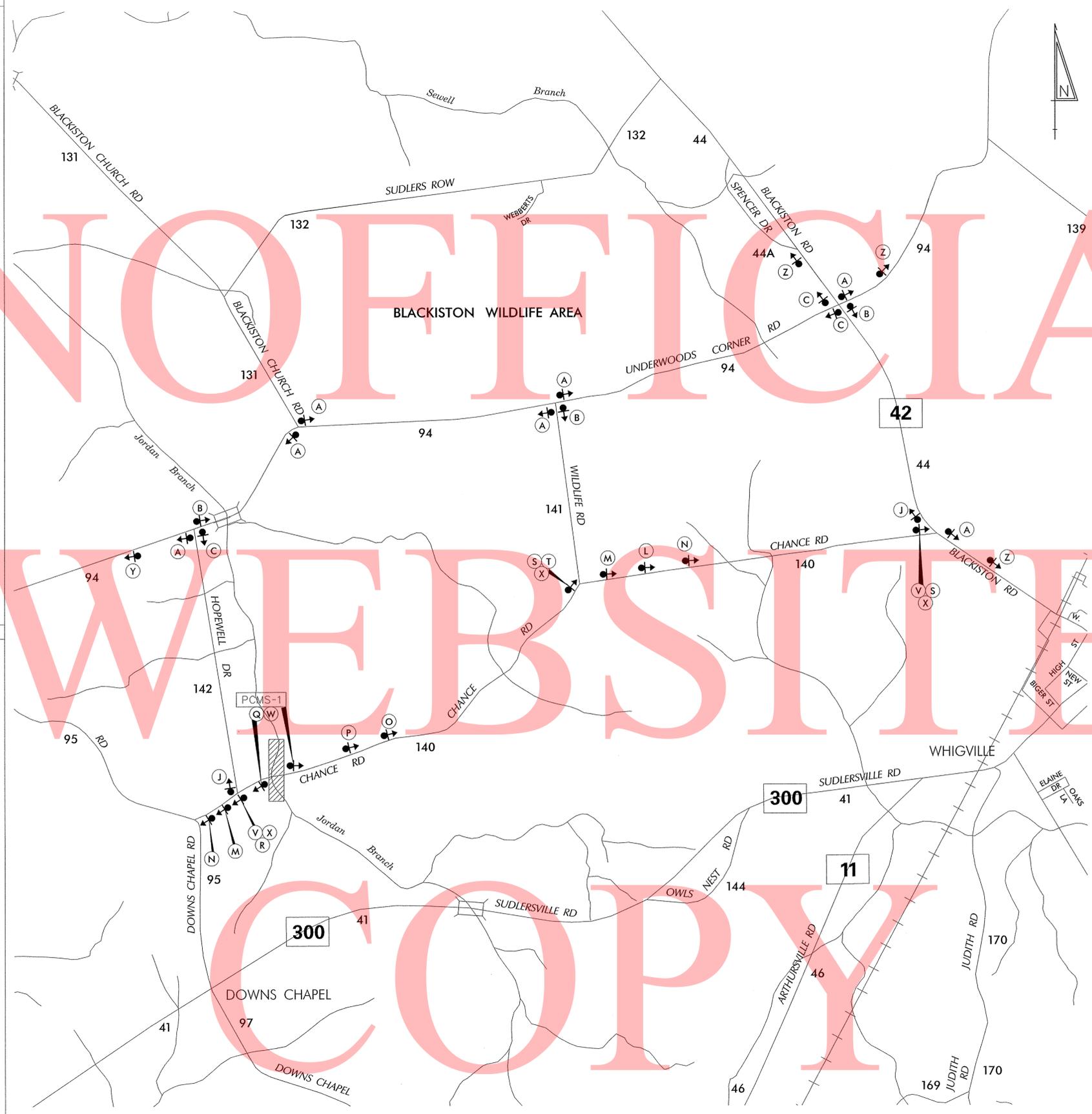
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SPECIAL SIGNS



*D/G RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND; BLACK LEGEND



LEGEND

(A) DETOUR M4-9-DE	(B) DETOUR M4-9	(C) DETOUR M4-9	(D) DETOUR M4-9	(E) DETOUR M4-9
(F) DETOUR M4-9	(G) DETOUR M4-9	(H) DETOUR M4-9	(I) DETOUR M4-9	(J) END DETOUR M4-8a
(K) DETOUR AHEAD W20-2	(L) DETOUR 1000 FT W20-2	(M) DETOUR 500 FT W20-2		
(N) ROAD CLOSED AHEAD W20-3	(O) ROAD CLOSED 1000 FT W20-3	(P) ROAD CLOSED 500 FT W20-3		
(Q) ROAD CLOSED R11-2	(R) DETOUR M4-10(L)	(S) DETOUR M4-10(R)		
(T) ROAD CLOSED 2 1/2 MILES AHEAD LOCAL TRAFFIC ONLY R11-3a	(U) BRIDGE OUT XX MILES AHEAD LOCAL TRAFFIC ONLY R11-3b	(V) ROAD CLOSED TO THRU TRAFFIC R11-4		
(W) BARRICADE	(X) BARRICADE			

GENERAL NOTES

- ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
- THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
- DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
- SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
- SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
- 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" (DE MUTCD) WILL PREVAIL.
- SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
- WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
- "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
- BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

W:\MSV\B\C\CELLS\PROJDEV\SR.CEL

RECOMMENDED *Mohand* DATE: 10-23-12 RECOMMENDED *Jefferson* DATE: 10-26-12 RECOMMENDED _____ DATE: _____ APPROVED CHIEF SAFETY OFFICER *Michael Morgan Jr* DATE: 10-26-12 APPROVED TRAFFIC ENGINEER *ASW* DATE: 10/20/12

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS	

NOT TO SCALE

KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

CONTRACT	ROAD NO.	K140
T201207505	DESIGNED BY: MFR	
KENT	CHECKED BY: ASW	

DETOUR PLAN CHANCE RD	SHEET NO.
	24
	TOTAL SHTS.
	48

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RECOMMENDED AS PER REVISION 1

Robert A. Reed / Shel Chaudh 11/8/13
 TEAM SUPPORT SQUAD MANAGER DATE

Hyun Dull 11.8.13
 TEAM SUPPORT ENGINEER DATE

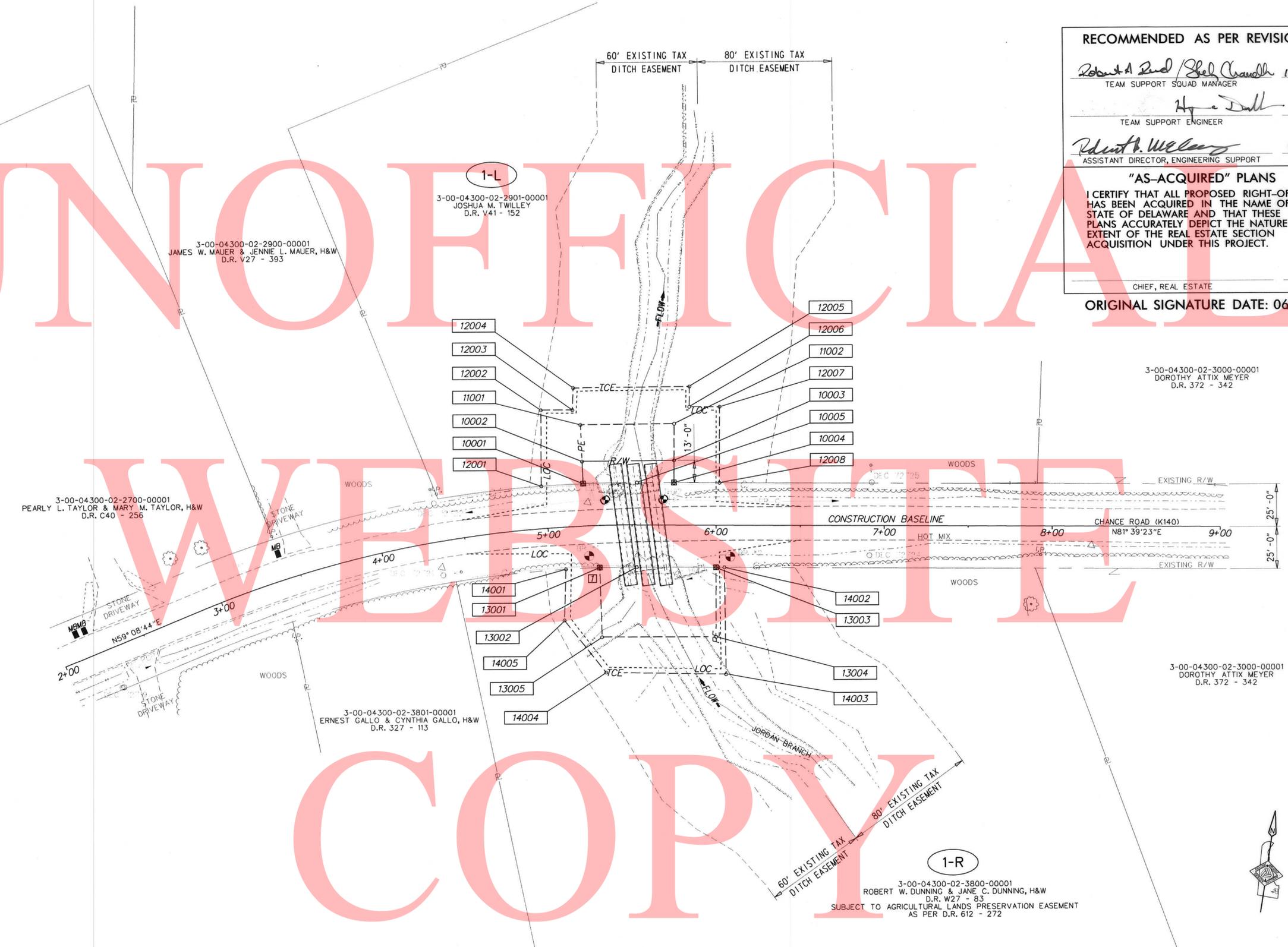
Robert B. Williams 11/8/13
 ASSISTANT DIRECTOR, ENGINEERING SUPPORT DATE

"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

ORIGINAL SIGNATURE DATE: 06/27/13



RIGHT-OF-WAY SHEET 1 OF 2

<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS [] - DELETED FEE ON PARCEL 1-R AND CHANGED IT TO PE - NED 09/27/13	SCALE 0 30 60 90 FEET	KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT T201207505	BRIDGE NO. 2-140A	RIGHT-OF-WAY PLAN	SHEET NO. 25
				COUNTY KENT	DESIGNED BY: NED		TOTAL SHTS. 48
				CHECKED BY: MJG			

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ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-04300-02-2901-00001	(1-L) JOSHUA M. TWILLEY	FEE	D.R. V41-152	6.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10001	5000	5+22.00	-25.00	445251.8578	571170.1914	N 10°57' 58.64" W	13.00				
10002	5000	5+22.00	-38.00	445264.6204	571167.7184	N 80°52' 28.53" E	54.73				
10003	5000	5+75.00	-38.00	445273.3008	571221.7589	S 8°20' 36.68" E	13.00				
10004	5000	5+75.00	-25.00	445260.4384	571223.6453	S 81°39' 23.32" W	22.10				
10005	5000	5+52.90	-25.00	445257.2316	571201.7792			S 80°20' 42.52" W	32.04	32.04	~700.00
10001	5000	5+22.00	-25.00	445251.8578	571170.1914						

FIGURE 10001 AREA = 695.4285 SQ. FT. (0.0160 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-04300-02-2901-00001	(1-L) JOSHUA M. TWILLEY	P/E	D.R. V41-152	6.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10002	5000	5+22.00	-38.00	445264.6204	571167.7184	N 10°57' 58.64" W	22.00				
11001	5000	5+22.00	-60.00	445286.2187	571163.5333	N 80°51' 54.09" E	55.74				
11002	5000	5+75.00	-60.00	445295.0680	571218.5665	S 8°20' 36.68" E	22.00				
10003	5000	5+75.00	-38.00	445273.3008	571221.7589	S 80°52' 28.53" W	54.73				
10002	5000	5+22.00	-38.00	445264.6204	571167.7184						

FIGURE 11001 AREA = 1214.8371 SQ. FT. (0.0279 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-04300-02-2901-00001	(1-L) JOSHUA M. TWILLEY	TCE	D.R. V41-152	6.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
12001	5000	4+98.00	-25.00	445246.6898	571145.8463	N 8°47' 40.37" W	45.11				
12002	5000	5+01.00	-70.00	445291.2737	571138.9487	N 81°01' 31.22" E	18.78				
12003	5000	5+18.00	-69.00	445294.2028	571157.4954	N 6°22' 29.76" W	13.05				
12004	5000	5+19.00	-82.00	445307.1696	571156.0467	N 80°51' 54.66" E	69.11				
12005	5000	5+84.00	-82.00	445318.1411	571224.2789	S 8°20' 36.68" E	12.00				
12006	5000	5+84.00	-70.00	445306.2681	571226.0202	N 81°39' 23.32" E	18.00				
12007	5000	6+02.00	-70.00	445308.8801	571243.8297	S 8°20' 36.68" E	45.00				
12008	5000	6+02.00	-25.00	445264.3564	571250.3595	S 81°39' 23.32" W	27.00				
10004	5000	5+75.00	-25.00	445260.4384	571223.6453	N 8°20' 36.68" W	35.00				
11002	5000	5+75.00	-60.00	445295.0680	571218.5665	S 80°51' 54.09" W	55.74				
11001	5000	5+22.00	-60.00	445286.2187	571163.5333	S 10°57' 58.64" E	35.00				
10001	5000	5+22.00	-25.00	445251.8578	571170.1914			S 78°00' 54.43" W	24.89	24.89	~700.00
12001	5000	4+98.00	-25.00	445246.6898	571145.8463						

FIGURE 12001 AREA = 3669.9301 SQ. FT. (0.0843 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-04300-02-3800-00001	(1-R) ROBERT W. DUNNING & JANE C. DUNNING, H&W	P/E	D.R. W27-83	73.100							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
13001	5000	5+30.00	25.00	445204.1914	571187.2745			N 80°41' 04.85" E	22.05	22.05	650.00
13002	5000	5+52.90	25.00	445207.7608	571209.0346	N 81°39' 23.32" E	47.10				
13003	5000	6+00.00	25.00	445214.5953	571255.6361	S 8°20' 36.68" E	41.00				
13004	5000	6+00.00	66.00	445174.0293	571261.5855	S 81°21' 36.65" W	67.76				
13005	5000	5+30.00	66.00	445163.8505	571194.5964	N 10°17' 14.02" W	41.00				
13001	5000	5+30.00	25.00	445204.1914	571187.2745						

FIGURE 13001 AREA = 2816.1733 SQ. FT. (0.0647 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
3-00-04300-02-3800-00001	(1-R) ROBERT W. DUNNING & JANE C. DUNNING, H&W	TCE	D.R. W27-83	73.100							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
14001	5000	5+09.00	25.00	445200.2712	571167.4368			N 78°49' 17.42" E	20.22	20.22	650.00
13001	5000	5+30.00	25.00	445204.1914	571187.2745	S 10°17' 14.02" E	41.00				
13005	5000	5+30.00	66.00	445163.8505	571194.5964	N 81°21' 36.65" E	67.76				
13004	5000	6+00.00	66.00	445174.0293	571261.5855	N 8°20' 36.68" W	41.00				
13003	5000	6+00.00	25.00	445214.5953	571255.6361	N 81°39' 23.32" E	5.00				
14002	5000	6+05.00	25.00	445215.3209	571260.5831	S 9°15' 10.45" E	63.01				
14003	5000	6+06.00	88.00	445153.1328	571270.7144	S 82°14' 00.83" W	71.31				
14004	5000	5+32.00	87.00	445143.4967	571200.0613	N 47°14' 34.25" W	39.56				
14005	5000	5+06.00	55.00	445170.3522	571171.0165	N 6°49' 22.25" W	30.13				
14001	5000	5+09.00	25.00	445200.2712	571167.4368						

FIGURE 14001 AREA = 2751.0999 SQ. FT. (0.0632 ACRES)

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)
3-00-04300-02-2901-00001	17	(1-L) JOSHUA M. TWILLEY	D.R. V41-152	A - 6.00	FEE	695.4285 / 0.02						
					P/E			1214.8371 / 0.03				
					TCE				3669.9301 / 0.08		260664.5715 / 5.98	
3-00-04300-02-3800-00001	17	(1-R) ROBERT W. DUNNING & JANE C. DUNNING, H&W	D.R. W27-83	D - 73.10	7	P/E	2816.1733 / 0.06					
					TCE				2751.0999 / 0.06		3184236.00 / 73.10	

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ADDENDUMS / REVISIONS
 7 - DELETED FEE ON PARCEL 1-R AND CHANGED IT TO PE - NED 09/27/13

KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

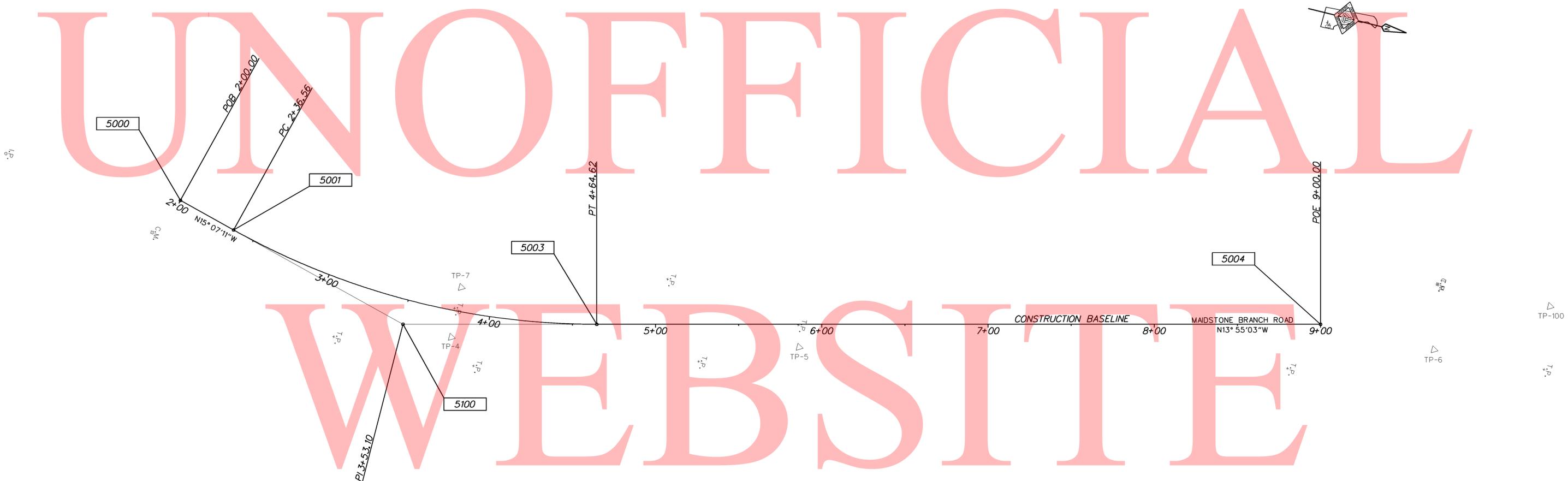
CONTRACT T201207505
 COUNTY KENT
 BRIDGE NO. 2-140A
 DESIGNED BY: NED
 CHECKED BY: MJG

RIGHT-OF-WAY DATA & TABULATION SHEET
 SHEET NO. 26
 TOTAL SHTS. 48

RIGHT-OF-WAY SHEET 2 OF 2

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

UNOFFICIAL



CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
5000	2+00.00	0.00	426123.6926	602753.4955
5004	9+00.00	0.00	426807.2002	602660.6800

HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
TP-4	3+79.67	16.03	426301.5818	602793.9546	44.97
TP-5	5+86.36	13.80	426506.0905	602749.5165	42.35
TP-6			426877.1011	602659.0359	43.33
TP-7	3+79.96	-14.46	426300.2052	602763.4940	44.80
TP-100			426938.6676	602616.9922	44.51

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

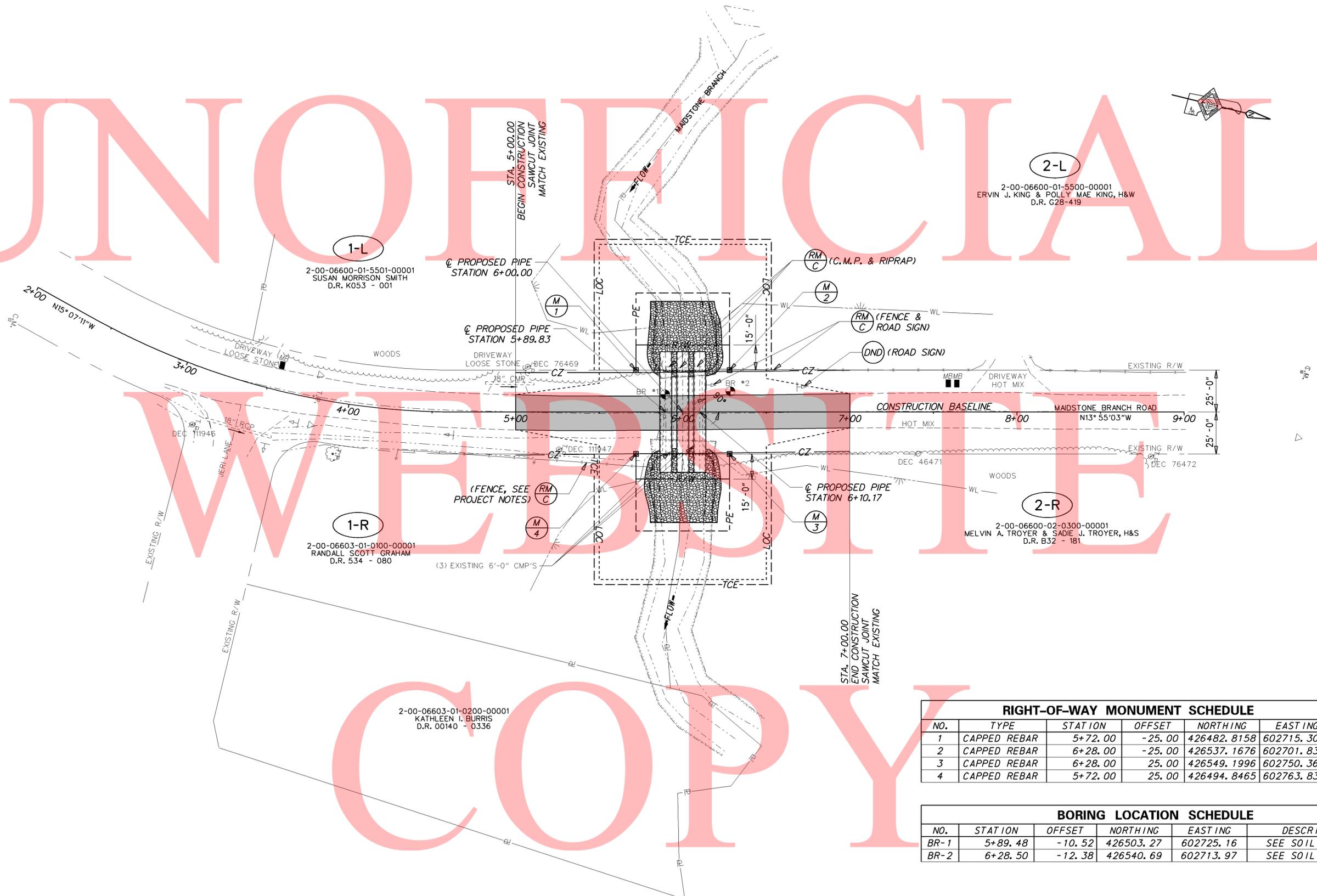
Element:	Circular			
PC	(5001)	2+36.56	426158.9913	602763.0328
PI	(5100)	3+53.10	426271.4912	602793.4290
CC	(5002)		426276.3673	602328.6104
PT	(5003)	4+64.62	426384.6039	602765.3996

Radius:	450.00
Delta:	29°02'14.0092" Left
Degree of Curvature(Arc):	12°43'56.6236"
Length:	228.06
Tangent:	116.53
Chord:	225.63
Middle Ordinate:	14.37
External:	14.84
Tangent Direction:	N 15°07'10.7416" E
Radial Direction:	S 74°52'49.2584" E
Chord Direction:	N 0°36'03.7370" E
Radial Direction:	N 76°04'56.7324" E
Tangent Direction:	N 13°55'03.2676" W

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT	BRIDGE NO.	2-160A	HORIZONTAL AND VERTICAL CONTROL	SHEET NO.
					T201207505			DESIGNED BY: NED
				COUNTY	CHECKED BY: MJG		TOTAL SHTS.	
				KENT			48	

UNOFFICIAL



1-L
2-00-06600-01-5501-00001
SUSAN MORRISON SMITH
D.R. K053 - 001

1-R
2-00-06603-01-0100-00001
RANDALL SCOTT GRAHAM
D.R. 534 - 080

2-00-06603-01-0200-00001
KATHLEEN I. BURRIS
D.R. 00140 - 0336

2-L
2-00-06600-01-5500-00001
ERVIN J. KING & POLLY MAE KING, H&W
D.R. C28-419

2-R
2-00-06600-02-0300-00001
MELVIN A. TROYER & SADIE J. TROYER, H&S
D.R. B32 - 181

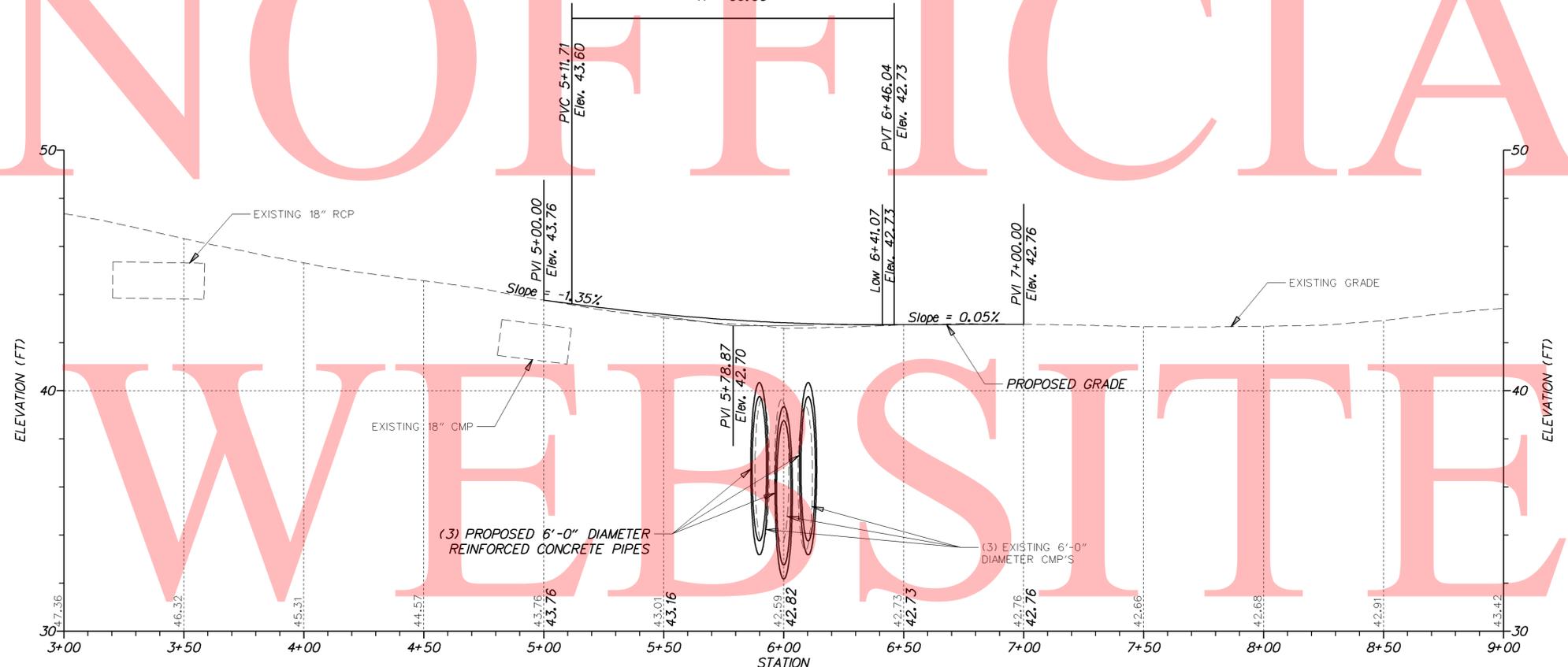
RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
1	CAPPED REBAR	5+72.00	-25.00	426482.8158	602715.3065
2	CAPPED REBAR	6+28.00	-25.00	426537.1676	602701.8381
3	CAPPED REBAR	6+28.00	25.00	426549.1996	602750.3688
4	CAPPED REBAR	5+72.00	25.00	426494.8465	602763.8376

BORING LOCATION SCHEDULE					
NO.	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
BR-1	5+89.48	-10.52	426503.27	602725.16	SEE SOIL BORINGS
BR-2	6+28.50	-12.38	426540.69	602713.97	SEE SOIL BORINGS

Y:\KENT\131\BRIDGE\T201207505\PLANS\2-160A\CP01.DGN

UNOFFICIAL

Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 134.33'
 L1 = 67.17'
 L2 = 67.17'
 G1 = -1.35%
 G2 = 0.05%
 SSD = 426.12'
 K = 96.00

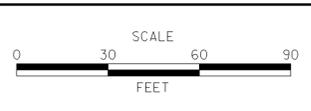


K160 - MAIDSTONE BRANCH ROAD

COPY

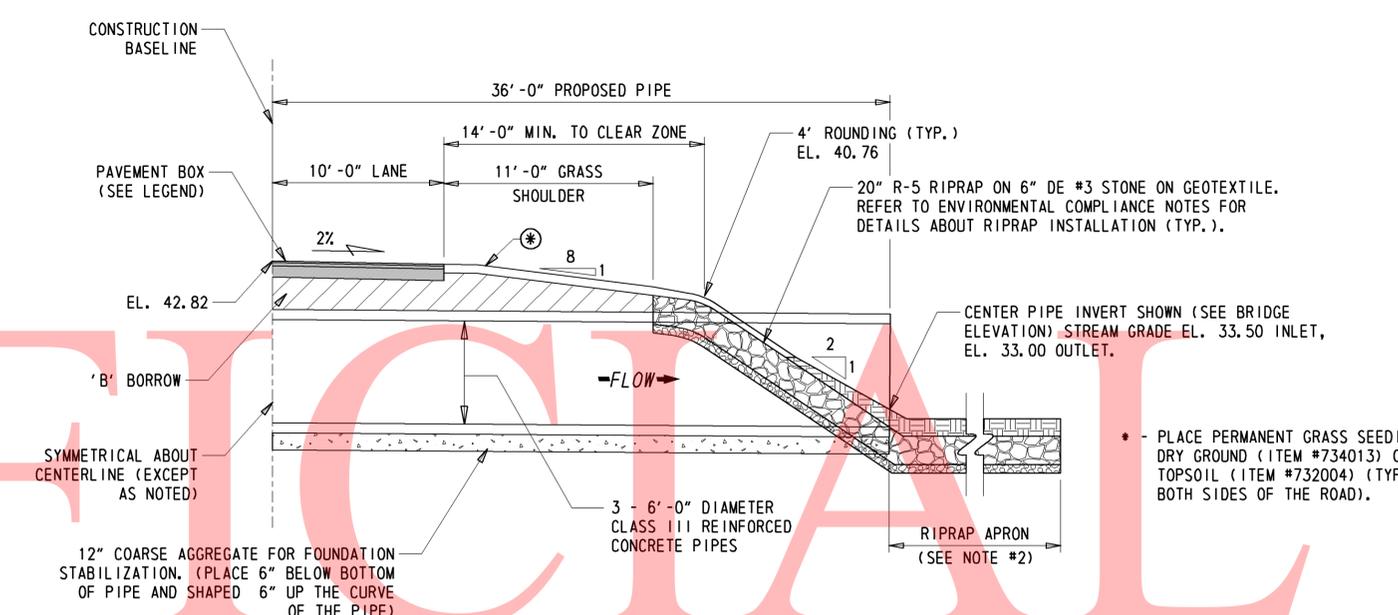
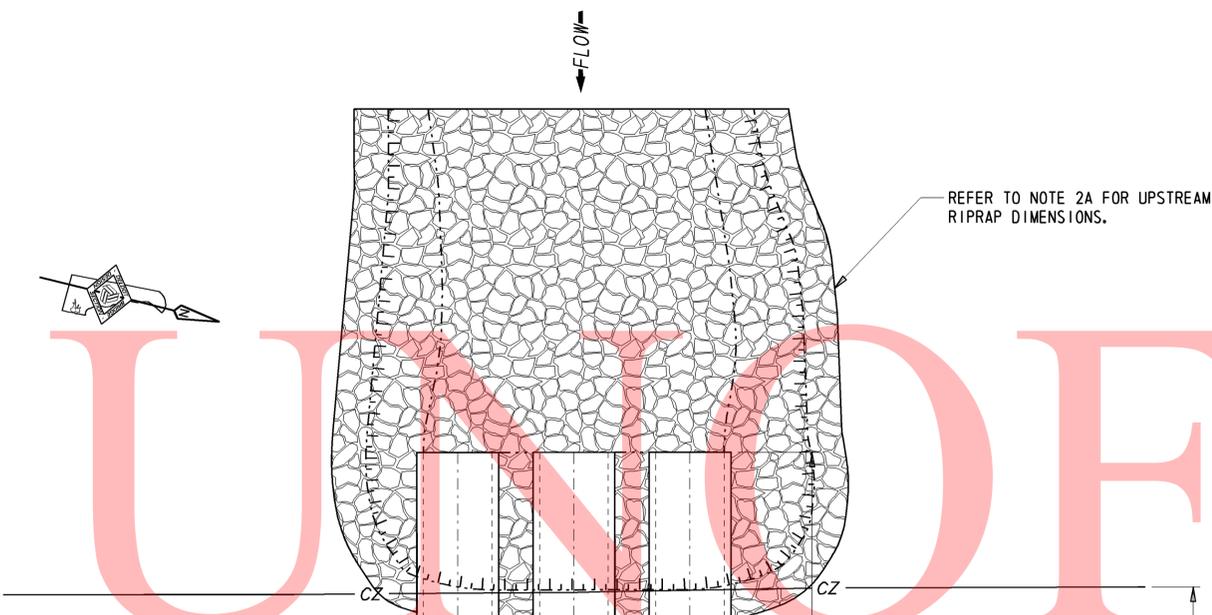
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ADDENDUMS / REVISIONS	



CONTRACT T201207505	BRIDGE NO. 2-160A
COUNTY KENT	DESIGNED BY: NED
	CHECKED BY: MJG

VERTICAL SCALE FEET	9
	6
	3
	0
SHEET NO.	29
TOTAL SHTS.	48



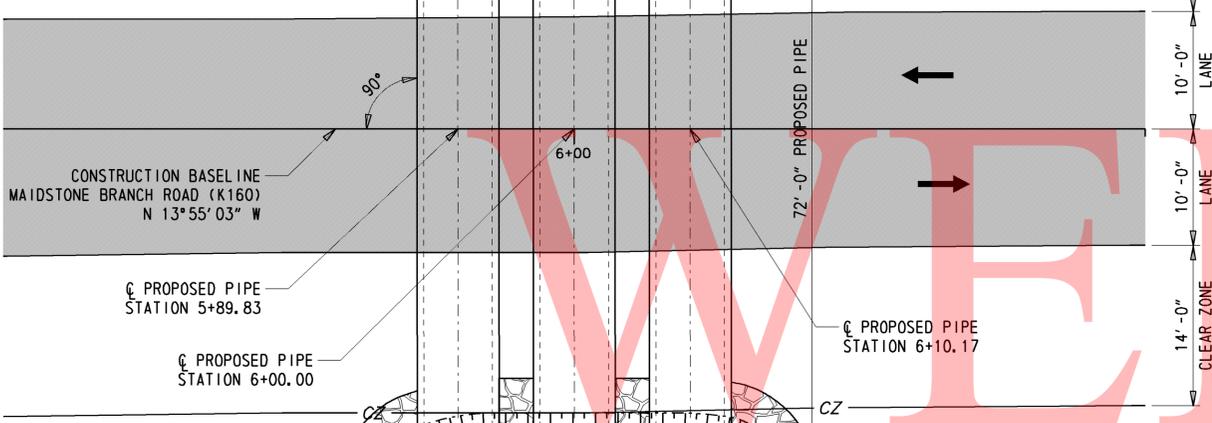
BRIDGE SECTION

NOTE: BRIDGE SECTION SHOWS THE CENTERLINE OF THE CENTER PIPE.

1/8" = 1'-0"

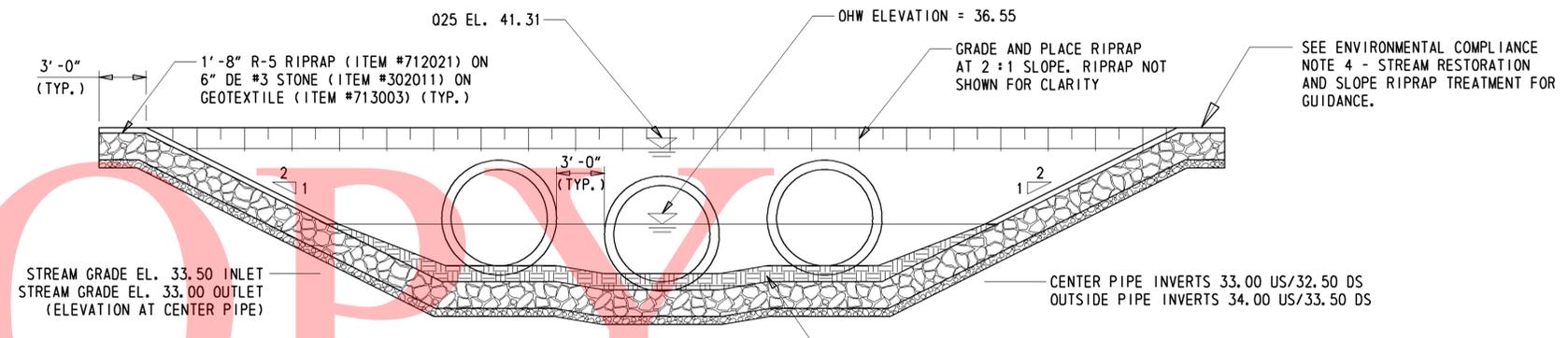
NOTES:

1. PROPOSED BRIDGE
THE EXISTING (3) 6'-0" DIAMETER CORRUGATED METAL PIPES SHALL BE REPLACED WITH (3) 6'-0" DIAMETER REINFORCED CONCRETE PIPES (72'-0" LONG). THE CENTER PIPE SHALL BE PLACED 6" BELOW THE ESTABLISHED STREAM GRADE. THE INVERT OF THE OUTER PIPES SHALL BE PLACED 1'-0" ABOVE THE INVERT OF THE CENTER PIPE. PLACE PIPES WITH A 3'-0" GAP BETWEEN THE OUTER WALLS OF EACH RUN. PLACE 6" COARSE AGGREGATE BEDDING BENEATH PIPES AND 6" SHAPED UP THE CURVE OF EACH PIPE.
2. THE SOIL BORINGS IDENTIFY SAND MATERIAL AT A DEPTH OF 11'-14' IN THE BORING. THIS LAYER IS UNACCEPTABLE FOR BEARING OF THE CONCRETE PIPES AND SHALL BE EXCAVATED UNTIL SUITABLE MATERIAL IS REACHED. UNDERCUT EXCAVATION IS ESTIMATED AT 3'-0". ACTUAL EXTENT OF UNDERCUT EXCAVATION SHALL BE DETERMINED BY THE FIELD ENGINEER. ANY AREAS OF UNDERCUT EXCAVATION SHALL BE BACKFILLED WITH BORROW, TYPE 'B'.
3. RIPRAP PLACEMENT
 - A. UPSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM 30'-0" FROM THE PIPE INLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.
 - B. DOWNSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM 30'-0" FROM THE PIPE OUTLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.



PLAN

1/8" = 1'-0"



BRIDGE ELEVATION

1/8" = 1'-0"

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<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS		SCALE AS NOTED	KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT	BRIDGE NO.	2-160A	BRIDGE PLAN, SECTION & ELEVATION	SHEET NO.
					T201207505	DESIGNED BY: NED			30
					COUNTY	CHECKED BY: MJG			TOTAL SHTS.
					KENT				48

BORING: BR-1		DATE DRILLED: 9/12/12			
STATION: 5+89.48	OFFSET: -10.52	ELEVATION: 42.26	NORTHING: 426503.27	EASTING: 602725.16	
COMMENTS: DRILLER AUGERED THROUGH STONE BASE TO START SAMPLING AT 2.0'					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	2.0	6	MOIST MEDIUM DENSE ORANGE COARSE TO FINE SAND W/SOME SILT AND FINE GRAVEL.	A-2-4(0)	
2	4.0	5	MOIST LOOSE ORANGE COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	
3	6.0	4	WET LOOSE ORANGE SILTY COARSE TO FINE SAND W/SOME FINE GRAVEL.	A-2-4(0)	
4	8.0	2	WH WET VERY LOOSE BROWN FINE GRAVELLY COARSE TO FINE SAND W/SOME SILT.	A-1-B	☞ WATER LEVEL (EL. 34.76)
5	10.0	1	SATURATED SOFT GRAY FINE TO COARSE SANDY SILT W/SOME CLAY, TRACE OF FINE GRAVEL.	A-4(0)	-BOTTOM OF COARSE AGGREGATE (EL. 31.50)
6	12.0	1	WH SATURATED VERY LOOSE GRAY SILTY FINE SAND W/SOME CLAY, TRACE OF COARSE SAND, FINE GRAVEL AND ORGANIC MATTER.	A-2-4(0)	
7	14.0	1	SATURATED LOOSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-2-4(0)	
8	16.0	2	SATURATED LOOSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND, FINE GRAVEL AND ORGANIC MATTER.	A-2-4(0)	
9	18.0	2	SATURATED LOOSE GRAY FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL AND ORGANIC MATTER.	A-2-4(0)	
10	23.0	5	WR SATURATED VERY LOOSE GRAY FINE TO COARSE SAND W/TRACE OF SILT, FINE GRAVEL AND ORGANIC MATTER.	A-3	
11	28.0	24	SATURATED VERY DENSE GRAY FINE SAND W/SOME COARSE SAND, TRACE OF FINE GRAVEL, SILT AND ORGANIC MATTER.	A-3	
12	33.0	24	SATURATED VERY DENSE GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND AND ORGANIC MATTER.	A-2-4(0)	
13	38.0	9	SATURATED VERY STIFF GRAY ORGANIC SILTY FINE SAND W/SOME CLAY AND COARSE SAND.	A-4(0)	
14	43.0	8	SATURATED MEDIUM DENSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-2-4(0)	
15	48.0	12	SATURATED DENSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-2-4(0)	
	53.0	24	END BORING.		

BORING: BR-2		DATE DRILLED: 9/12/12			
STATION: 6+28.50	OFFSET: -12.38	ELEVATION: 42.17	NORTHING: 426540.69	EASTING: 602713.97	
COMMENTS: N/A					
SAMPLE INFORMATION					
NO.	DEPTH	BLOWS /6"	DESCRIPTION	CLASS /G.I.	REMARKS
1	0.5	6	MOIST MEDIUM DENSE GRAY COARSE TO FINE SAND AND FINE GRAVEL W/SOME SILT, TRACE OF ORGANIC MATTER.	A-1-B	
2	2.0	2	MOIST VERY LOOSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.	A-1-B	
3	4.0	2	WET VERY LOOSE BROWN SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.	A-2-4(0)	
4	6.0	1	WH SATURATED SOFT GRAY FINE TO COARSE SANDY CLAY W/TRACE OF SILT.	A-7-6(2)	☞ WATER LEVEL (EL. 35.07)
5	8.0	2	SATURATED LOOSE GRAY FINE TO COARSE SAND W/TRACE OF SILT AND FINE GRAVEL.	A-3	
6	10.0	3	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.	A-2-4(0)	-BOTTOM OF COARSE AGGREGATE (EL. 31.50)
7	12.0	1	SATURATED VERY LOOSE GRAY SILTY FINE SAND W/SOME COARSE SAND, TRACE OF ORGANIC MATTER.	A-2-4(0)	
8	14.0	1	SATURATED VERY LOOSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND AND ORGANIC MATTER.	A-2-4(0)	
9	16.0	3	SATURATED LOOSE GRAY SILTY FINE SAND W/TRACE OF COARSE SAND AND FINE GRAVEL.	A-2-4(0)	
10	18.0	2	SATURATED LOOSE GRAY FINE TO COARSE SAND W/ SOME SILT, TRACE OF ORGANIC MATTER.	A-2-4(0)	
11	23.0	3	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/TRACE OF SILT, FINE GRAVEL AND ORGANIC MATTER.	A-3	
12	28.0	16	SATURATED DENSE GRAY FINE SAND W/SOME COARSE SAND, TRACE OF FINE GRAVEL AND SILT.	A-3	
13	33.0	37	SATURATED VERY DENSE GRAY FINE SAND W/TRACE OF SILT, COARSE SAND AND FINE GRAVEL.	A-3	
14	38.0	6	SATURATED VERY STIFF GRAY ORGANIC FINE SANDY SILT W/SOME COARSE SAND.	A-4(0)	
15	43.0	9	SATURATED VERY STIFF GRAY ORGANIC FINE SANDY SILT W/SOME COARSE SAND.	A-4(0)	
16	48.0	10	SATURATED VERY STIFF GRAY FINE SANDY SILT W/SOME CLAY AND ORGANIC MATTER, TRACE OF COARSE SAND.	A-4(0)	
	50.0	20	END BORING.		

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PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
O-1	UPSTREAM RIPRAP	1021.05	0.0234	81.94	COE / DNREC
O-2	FILL OF EXISTING PIPES	178.23	0.0041	16.02	COE / DNREC
O-3	DOWNSTREAM RIPRAP	1280.94	0.0294	102.79	COE / DNREC
TOTAL PERMANENT OPEN WATER IMPACTS		2480.22	0.0569	200.75	COE / DNREC

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	STILLING WELL	54.00	0.0012	2.00	COE / DNREC
OT-2	UPSTREAM SANDBAGS	204.98	0.0047	16.90	COE / DNREC
OT-3	EX. PIPES TO PROP. PIPES	743.47	0.0171	27.54	COE / DNREC
OT-4	DOWNSTREAM SANDBAGS	224.30	0.0051	19.07	COE / DNREC
OT-5	STABILIZED OUTFALL	25.00	0.0006	0.93	COE / DNREC
TOTAL TEMPORARY OPEN WATER IMPACTS		1251.75	0.0287	66.44	COE / DNREC

NOTE: WETLANDS DELINEATED BY ENVIRONMENTAL RESOURCES, INC. (ERI) IN FEBRUARY 2013 IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND REGIONAL SUPPLEMENT

SHEET PREPARED BY: NICHOLAS DEAN ON 03/27/2013
LAST UPDATED ON 07/26/13

NOTE: A NATURAL AREA EXISTS ON THE NORTHWEST CORNER OF BRIDGE 2-160A. THE CONTRACTOR'S ACCESS TO THE WORK IN THIS AREA WILL NEED TO BE COORDINATED WITH THE ENVIRONMENTAL STUDIES SECTION (CONTACT CAROL SULLIVAN 302-760-2129 OR CAROL.SULLIVAN@STATE.DE.US).

OPEN WATER CREATION AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OC-1	U. S. CHANNEL REGRADING	73.00	0.0017	5.86	COE / DNREC
OC-2	PROPOSED PIPES	199.99	0.0046	16.02	COE / DNREC
OC-3	D. S. CHANNEL REGRADING	14.60	0.0003	1.17	COE / DNREC
TOTAL OPEN WATER CREATION AREAS		287.59	0.0066	23.05	COE / DNREC



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

NOTE: CONTRACTOR SHALL REFER TO THE ENVIRONMENTAL COMPLIANCE NOTES SHEET 6 FOR INFORMATION PERTAINING TO THE ENVIRONMENTAL PLAN FOR BR 2-160A.

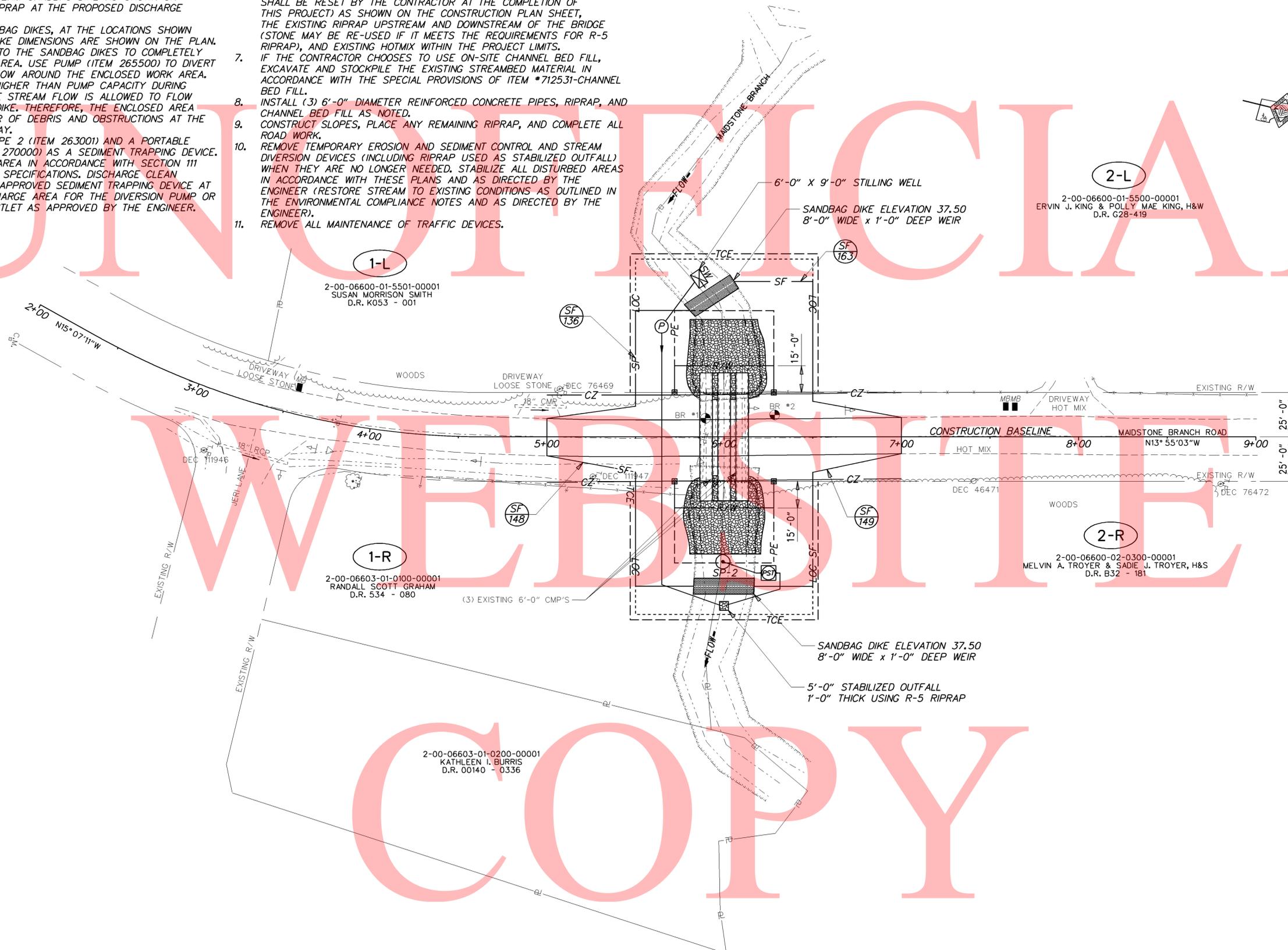
TEMPORARY WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
WT-1	UPSTREAM SANDBAGS	63.89	0.0015	N/A	COE
WT-2	DOWNSTREAM SANDBAGS	82.96	0.0019	N/A	COE
TOTAL TEMPORARY WETLAND IMPACT AREAS		146.85	0.0034	N/A	COE

PERMANENT WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
W-1	NW SIDE UPSTREAM RIPRAP	182.34	0.0042	N/A	COE
W-2	SW SIDE UPSTREAM RIPRAP	143.98	0.0033	N/A	COE
W-3	NE SIDE DOWNSTREAM RIPRAP	268.77	0.0062	N/A	COE
W-4	SE SIDE DOWNSTREAM RIPRAP	229.50	0.0053	N/A	COE
TOTAL PERMANENT WETLAND IMPACT AREAS		824.59	0.0190	N/A	COE

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SEQUENCE OF CONSTRUCTION

1. CLOSE MAIDSTONE BRANCH ROAD IN ACCORDANCE WITH THE DETOUR PLAN.
2. INSTALL SILT FENCE (ITEM 251000) EXCEPT CONNECTION TO SANDBAG DIKES.
3. INSTALL A 6'x9' STILLING WELL (ITEM 265500) UPSTREAM OF THE PROPOSED UPSTREAM SANDBAG DIKE AS SHOWN ON PLANS. PLACE R-5 RIPRAP AT THE PROPOSED DISCHARGE AREA OF THE PUMP.
4. CONSTRUCT THE SANDBAG DIKES, AT THE LOCATIONS SHOWN ON PLAN. SANDBAG DIKE DIMENSIONS ARE SHOWN ON THE PLAN. CONNECT SILT FENCE TO THE SANDBAG DIKES TO COMPLETELY ENCLOSE THE WORK AREA. USE PUMP (ITEM 265500) TO DIVERT THE STREAM BASE FLOW AROUND THE ENCLOSED WORK AREA. WHEN THE FLOW IS HIGHER THAN PUMP CAPACITY DURING RAINFALL EVENTS, THE STREAM FLOW IS ALLOWED TO FLOW OVER THE SANDBAG DIKE. THEREFORE, THE ENCLOSED AREA SHALL BE KEPT CLEAR OF DEBRIS AND OBSTRUCTIONS AT THE END OF EACH WORKDAY.
5. INSTALL SUMP PIT, TYPE 2 (ITEM 263001) AND A PORTABLE SEDIMENT TANK (ITEM 270000) AS A SEDIMENT TRAPPING DEVICE. DEWATER THE WORK AREA IN ACCORDANCE WITH SECTION III OF DELDOT STANDARD SPECIFICATIONS. DISCHARGE CLEAN EFFLUENT FROM THE APPROVED SEDIMENT TRAPPING DEVICE AT THE RIPRAPPED DISCHARGE AREA FOR THE DIVERSION PUMP OR ON OTHER STABLE OUTLET AS APPROVED BY THE ENGINEER.
6. REMOVE THE EXISTING BRIDGE 2-160A (COMPRISED OF (3) 6'-0" DIAMETER CORRUGATED METAL PIPES), THE ROAD SIGN ON THE NORTHWEST SIDE OF THE BRIDGE, THE TWO FENCES ON THE NORTHWEST AND SOUTHEAST SIDES OF THE BRIDGE RESPECTIVELY (FENCES SHALL ONLY BE REMOVED FROM THE WORK ZONE AND SHALL BE RESET BY THE CONTRACTOR AT THE COMPLETION OF THIS PROJECT) AS SHOWN ON THE CONSTRUCTION PLAN SHEET, THE EXISTING RIPRAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE (STONE MAY BE RE-USED IF IT MEETS THE REQUIREMENTS FOR R-5 RIPRAP), AND EXISTING HOTMIX WITHIN THE PROJECT LIMITS.
7. IF THE CONTRACTOR CHOOSES TO USE ON-SITE CHANNEL BED FILL, EXCAVATE AND STOCKPILE THE EXISTING STREAMBED MATERIAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF ITEM *712531-CHANNEL BED FILL.
8. INSTALL (3) 6'-0" DIAMETER REINFORCED CONCRETE PIPES, RIPRAP, AND CHANNEL BED FILL AS NOTED.
9. CONSTRUCT SLOPES, PLACE ANY REMAINING RIPRAP, AND COMPLETE ALL ROAD WORK.
10. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL AND STREAM DIVERSION DEVICES (INCLUDING RIPRAP USED AS STABILIZED OUTFALL) WHEN THEY ARE NO LONGER NEEDED. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER (RESTORE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES AND AS DIRECTED BY THE ENGINEER).
11. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.



1-L
2-00-06600-01-5501-00001
SUSAN MORRISON SMITH
D.R. K053 - 001

1-R
2-00-06603-01-0100-00001
RANDALL SCOTT GRAHAM
D.R. 534 - 080

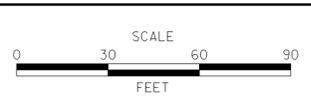
2-00-06603-01-0200-00001
KATHLEEN I. BURRIS
D.R. 00140 - 0336

2-L
2-00-06600-01-5500-00001
ERVIN J. KING & POLLY MAE KING, H&W
D.R. G28-419

2-R
2-00-06600-02-0300-00001
MELVIN A. TROYER & SADIE J. TROYER, H&S
D.R. B32 - 181

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ADDENDUMS / REVISIONS	



CONTRACT	BRIDGE NO.	2-160A
T201207505	DESIGNED BY:	NED
COUNTY	CHECKED BY:	MJG
KENT		

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

MAID-
STONE
BRANCH

ROAD
TO CLOSE
XXXXXX

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

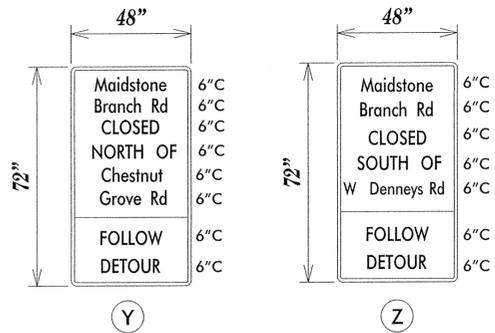
PCMS-2

MAID-
STONE
BRANCH

CLOSED
FOLLOW
DETOUR

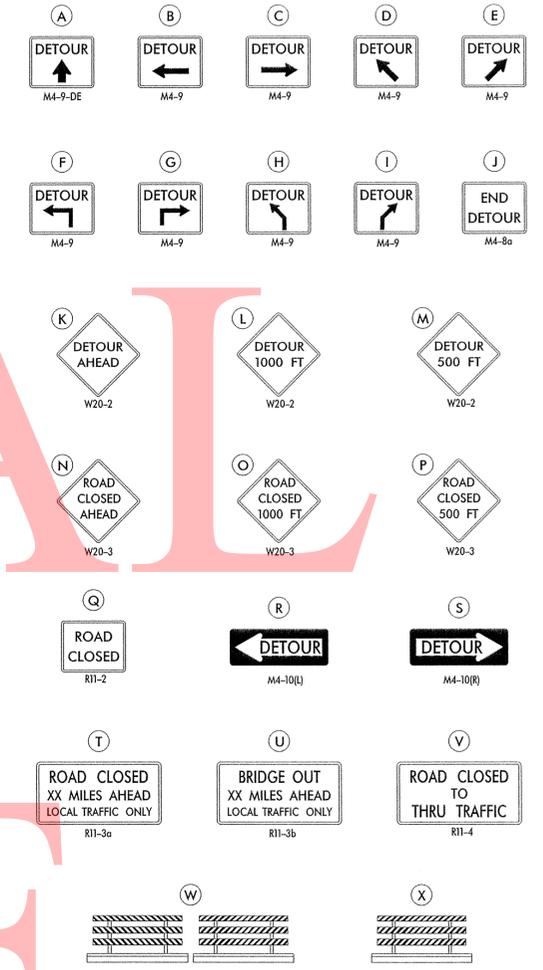
*UPON IMPLEMENTATION OF DETOUR, PCMS-1 SHALL BE RELOCATED TO PCMS-2 LOCATIONS AND THE CORRESPONDING MESSAGE SHALL BE DISPLAYED.

SPECIAL SIGNS



*D/G RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND; BLACK LEGEND

LEGEND



GENERAL NOTES

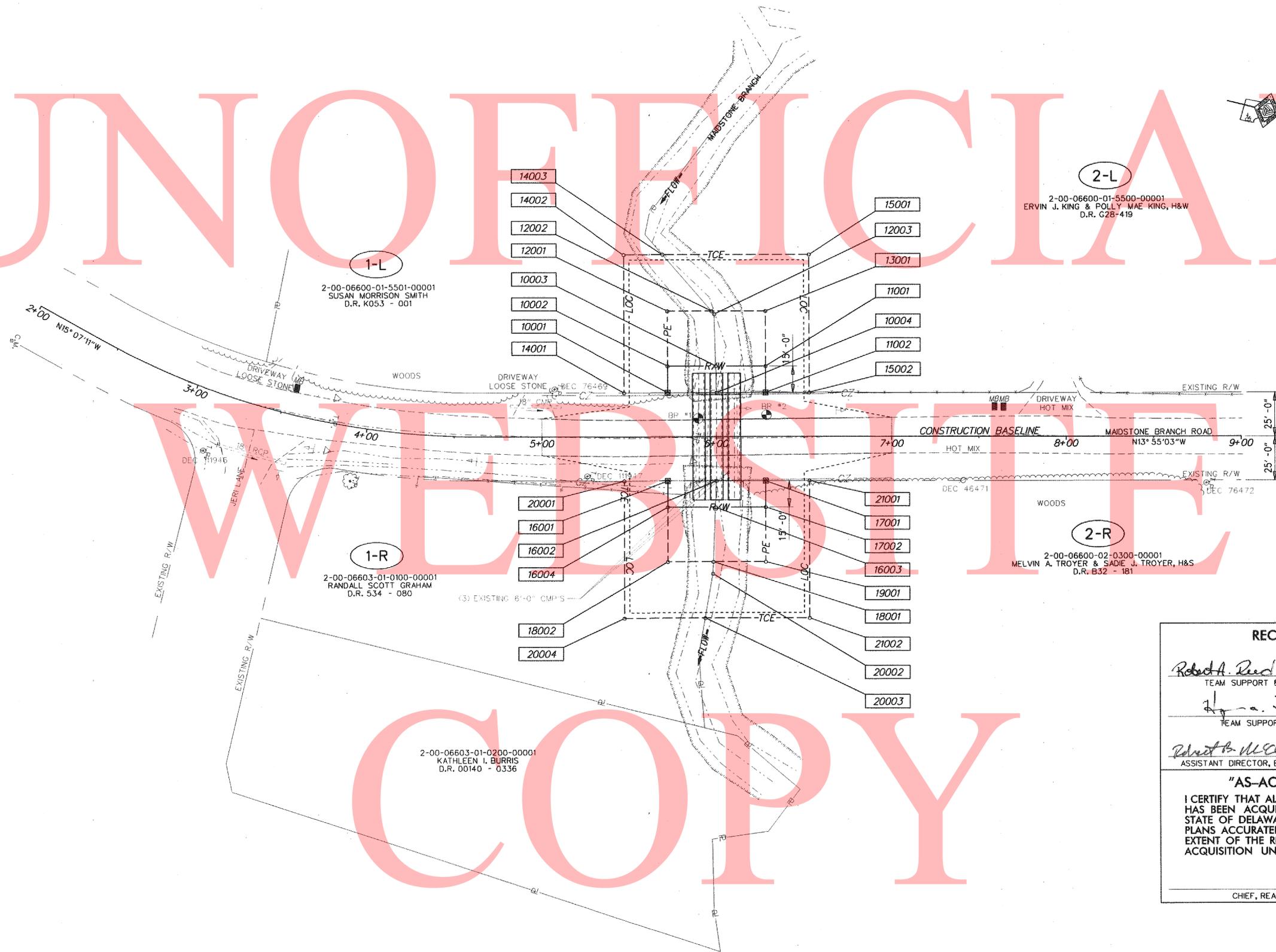
- ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
- THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
- DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
- SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
- SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
- 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" (DE MUTCD) WILL PREVAIL.
- SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
- WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
- "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
- BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.



C:\DOCUMENTS AND SETTINGS\MICHAEL_RIVERA\MY DOCUMENTS\MICRO STATION DGN\MAIDSTONE BRANCH RD (BR 2-160A).DGN

RECOMMENDED <i>[Signature]</i> DATE: 10-26-12	RECOMMENDED <i>[Signature]</i> DATE: 10-26-12	RECOMMENDED _____ DATE: _____	APPROVED CHIEF SAFETY OFFICER <i>[Signature]</i> DATE: 10-26-12	APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: 10/26/12
ADDENDUM / REVISIONS			CONTRACT T201207505	ROAD NO. K160
NOT TO SCALE			COUNTY KENT	DESIGNED BY: MFR
DELAWARE DEPARTMENT OF TRANSPORTATION			CHECKED BY: ASW	SHEET NO. 34
			KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	TOTAL SHTS. 48
			DETOUR PLAN MAIDSTONE BRANCH RD	

UNOFFICIAL



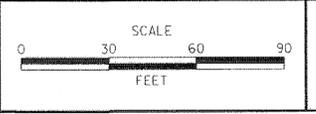
RECOMMENDED	
<i>Robert A. Reed / Shwamy Chaudhri</i>	6.26.13
TEAM SUPPORT SQUAD MANAGER	DATE
<i>John A. Dull</i>	6.27.13
TEAM SUPPORT ENGINEER	DATE
<i>Robert B. McClean</i>	6/27/13
ASSISTANT DIRECTOR, ENGINEERING SUPPORT	DATE
"AS-ACQUIRED" PLANS	
I CERTIFY THAT ALL PROPOSED RIGHT-OF-WAY HAS BEEN ACQUIRED 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

RIGHT-OF-WAY SHEET 1 OF 3

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DELAWARE
DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS



KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

CONTRACT	BRIDGE NO.	2-160A
T201207505	DESIGNED BY: NED	
COUNTY	CHECKED BY: MJG	
KENT		

RIGHT-OF-WAY PLAN	SHEET NO.	35
	TOTAL SHTS.	48

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06600-01-5501-00001	(1-L) SUSAN MORRISON SMITH					FEE	D.R. K 053-001	2.740			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10001	5000	5+72.00	-25.00	426482.8162	602715.3064	S 76°04'56.73" W	15.0000				
10002	5000	5+72.00	-40.00	426479.2083	602700.7468	N 13°55'03.27" W	27.6300				
10003	5000	5+99.63	-40.00	426506.0272	602694.1010	N 74°33'17.64" E	15.0053				
10004	5000	6+00.03	-25.00	426510.0233	602708.5645	S 13°55'03.27" E	28.0300				
10001	5000	5+72.00	-25.00	426482.8162	602715.3064						
FIGURE 10001 AREA = 417.4500 SQ. FT. (0.0096 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06600-01-5501-00001	(1-L) SUSAN MORRISON SMITH					P/E	D.R. K 053-001	2.740			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10002	5000	5+72.00	-40.00	426479.2083	602700.7468	S 76°04'56.73" W	31.0000				
12001	5000	5+72.00	-71.00	426471.7520	602670.6569	N 13°55'03.27" W	25.3500				
12002	5000	5+97.35	-71.00	426496.3578	602664.5595	N 34°50'55.73" E	2.2606				
12003	5000	5+98.84	-69.30	426498.2130	602665.8512	N 74°32'16.67" E	29.3106				
10003	5000	5+99.63	-40.00	426506.0272	602694.1010	S 13°55'03.27" E	27.6300				
10002	5000	5+72.00	-40.00	426479.2083	602700.7468						
FIGURE 12001 AREA = 842.3470 SQ. FT. (0.0193 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06600-01-5501-00001	(1-L) SUSAN MORRISON SMITH					TCE	D.R. K 053-001	2.740			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
14001	5000	5+47.00	-25.00	426458.5502	602721.3196	S 76°04'56.73" W	78.0000				
14002	5000	5+47.00	-103.00	426439.7892	602645.6094	N 13°55'03.27" W	22.3100				
14003	5000	5+69.31	-103.00	426461.4442	602640.2433	N 34°51'21.46" E	42.5469				
12002	5000	5+97.35	-71.00	426496.3578	602664.5595	S 13°55'03.27" E	25.3500				
12001	5000	5+72.00	-71.00	426471.7520	602670.6569	N 76°04'56.73" E	31.0000				
10002	5000	5+72.00	-40.00	426479.2083	602700.7468	N 76°04'56.73" E	15.0000				
10001	5000	5+72.00	-25.00	426482.8162	602715.3064	S 13°55'03.27" E	25.0000				
14001	5000	5+47.00	-25.00	426458.5502	602721.3196						
FIGURE 14001 AREA = 2312.5600 SQ. FT. (0.0531 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06600-01-5500-00001	(2-L) ERVIN J. KING & POLLY MAE KING, H&W					FEE	D.R. G 28-419	22.000			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10004	5000	6+00.03	-25.00	426510.0233	602708.5645	S 74°33'17.64" W	15.0053				
10003	5000	5+99.63	-40.00	426506.0272	602694.1010	N 13°55'03.27" W	28.3700				
11001	5000	6+28.00	-40.00	426533.5643	602687.2773	N 76°04'56.73" E	15.0000				
11002	5000	6+28.00	-25.00	426537.1722	602701.8370	S 13°55'03.27" E	27.9700				
10004	5000	6+00.03	-25.00	426510.0233	602708.5645						
FIGURE 11001 AREA = 422.5500 SQ. FT. (0.0097 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06600-01-5500-00001	(2-L) ERVIN J. KING & POLLY MAE KING, H&W					P/E	D.R. G 28-419	22.000			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10003	5000	5+99.63	-40.00	426506.0272	602694.1010	S 74°32'16.67" W	29.3106				
12003	5000	5+98.84	-69.30	426498.2130	602665.8512	S 34°50'55.73" W	2.2606				
12002	5000	5+97.35	-71.00	426496.3578	602664.5595	N 13°55'03.27" W	30.6500				
13001	5000	6+28.00	-71.00	426526.1080	602657.1874	N 76°04'56.73" E	31.0000				
11001	5000	6+28.00	-40.00	426533.5643	602687.2773	S 13°55'03.27" E	28.3700				
10003	5000	5+99.63	-40.00	426506.0272	602694.1010						
FIGURE 13001 AREA = 893.6530 SQ. FT. (0.0205 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06600-01-5500-00001	(2-L) ERVIN J. KING & POLLY MAE KING, H&W					TCE	D.R. G 28-419	22.000			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
12002	5000	5+97.35	-71.00	426496.3578	602664.5595	S 34°51'21.46" W	42.5469				
14003	5000	5+69.31	-103.00	426461.4442	602640.2433	N 13°55'03.27" W	83.6900				
15001	5000	6+53.00	-103.00	426542.6773	602620.1137	N 76°04'56.73" E	78.0000				
15002	5000	6+53.00	-25.00	426561.4383	602695.8238	S 13°55'03.27" E	25.0000				
11002	5000	6+28.00	-25.00	426537.1722	602701.8370	S 76°04'56.73" W	15.0000				
11001	5000	6+28.00	-40.00	426533.5643	602687.2773	S 76°04'56.73" W	31.0000				
13001	5000	6+28.00	-71.00	426526.1080	602657.1874	S 13°55'03.27" E	30.6500				
12002	5000	5+97.35	-71.00	426496.3578	602664.5595						
FIGURE 15001 AREA = 3379.4400 SQ. FT. (0.0776 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06603-01-0100-00001	(1-R) RANDALL SCOTT GRAHAM					FEE	D.R. 534-080	0.629			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
16001	5000	5+72.00	25.00	426494.8425	602763.8386	N 13°55'03.27" W	27.9400				
16002	5000	5+99.94	25.00	426521.9623	602757.1183	N 78°24'40.22" E	15.0124				
16003	5000	5+99.33	40.00	426524.9781	602771.8246	S 13°55'03.27" E	27.3300				
16004	5000	5+72.00	40.00	426498.4504	602778.3982	S 76°04'56.73" W	15.0000				
16001	5000	5+72.00	25.00	426494.8425	602763.8386						
FIGURE 16001 AREA = 414.5250 SQ. FT. (0.0095 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06603-01-0100-00001	(1-R) RANDALL SCOTT GRAHAM					P/E	D.R. 534-080	0.629			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
18004	5000	5+72.00	40.00	426498.4504	602778.3982	N 13°55'03.27" W	27.3300				
18003	5000	5+99.33	40.00	426524.9781	602771.8246	N 78°24'35.79" E	31.0256				
18001	5000	5+98.07	71.00	426531.2114	602802.2176	S 13°55'03.27" E	26.0700				
18002	5000	5+72.00	71.00	426505.9067	602808.4881	S 76°04'56.73" W	31.0000				
16004	5000	5+72.00	40.00	426498.4504	602778.3982						
FIGURE 18001 AREA = 827.7000 SQ. FT. (0.0190 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06603-01-0100-00001	(1-R) RANDALL SCOTT GRAHAM					TCE	D.R. 534-080	0.629			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
20001	5000	5+47.00	25.00	426470.5765	602769.8517	N 13°55'03.27" W	25.0000				
16001	5000	5+72.00	25.00	426494.8425	602763.8386	N 76°04'56.73" E	15.0000				
16004	5000	5+72.00	40.00	426498.4504	602778.3982	N 76°04'56.73" E	31.0000				
18002	5000	5+72.00	71.00	426505.9067	602808.4881	N 13°55'03.27" W	26.0700				
18001	5000	5+98.07	71.00	426531.2114	602802.2176	N 78°22'22.93" E	6.7554				
20002	5000	5+97.80	77.75	426532.5728	602808.8344	N 86°19'09.71" E	25.6585				
20003	5000	5+93.24	103.00	426534.2200	602834.4399	S 13°55'03.27" E	46.2400				
20004	5000	5+47.00	103.00	426489.3375	602845.5618	S 76°04'56.73" W	78.0000				
20001	5000	5+47.00	25.00	426470.5765	602769.8517						
FIGURE 20001 AREA = 2718.9413 SQ. FT. (0.0624 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06600-02-0300-00001	(2-R) MELVIN TROYER & SADIE TROYER, H&W					FEE	D.R. B 32-181	9.800			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
16002	5000	5+99.94	25.00	426521.9623	602757.1183	N 13°55'03.27" W	28.0600				
17001	5000	6+28.00	25.00	426549.1985	602750.3691	N 76°04'56.73" E	15.0000				
17002	5000	6+28.00	40.00	426552.8064	602764.9288	S 13°55'03.27" E	28.6700				
16003	5000	5+99.33	40.00	426524.9781	602771.8246	S 78°24'40.22" W	15.0124				
16002	5000	5+99.94	25.00	426521.9623	602757.1183						
FIGURE 17001 AREA = 425.4750 SQ. FT. (0.0098 ACRES)											
ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
2-00-06600-02-0300-00001	(2-R) MELVIN TROYER & SADIE TROYER, H&W					P/E	D.R. B 32-181	9.800			
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
16003	5000	5+99.33	40.00	426524.9781	602771.8246	N 13°55'03.27" W	28.6700				
17002											

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)			
2-00-06600-01-5501-00001	28	(1-L) SUSAN MORRISON SMITH	D.R. K 053-001	D - 2.74	FEE P/E TCE	417.45 / 0.01		842.347 / 0.02	2312.56 / 0.05	118915.17 / 2.73		
2-00-06600-01-5500-00001	28	(2-L) ERVIN J. KING & POLLY MAE KING, H&W	D.R. G 28-419	D - 22.00	FEE P/E TCE	422.55 / 0.01		893.653 / 0.02	3379.44 / 0.08	957897.45 / 21.99		
2-00-06603-01-0100-00001	28	(1-R) RANDALL SCOTT GRAHAM	D.R. 534-080	D - 0.63	FEE P/E TCE	414.525 / 0.01		827.70 / 0.02	2718.9413 / 0.06	26984.715 / 0.62		
2-00-06600-02-0300-00001	28	(2-R) MELVIN TROYER & SADIE TROYER, H&W	D.R. B 32-181	D - 9.80	FEE P/E TCE	425.475 / 0.01		908.30 / 0.02	2973.0588 / 0.07	426454.525 / 9.79		

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COPY

RIGHT-OF-WAY SHEET 3 OF 3



ADDENDUMS / REVISIONS

KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

CONTRACT T201207505
COUNTY KENT
BRIDGE NO. 2-160A
DESIGNED BY: NED
CHECKED BY: MJG

ACQUISITION CODES
FEE - ACQUISITION
R/W - AREA OCCUPIED BY EXISTING R/W
P/E - PERMANENT EASEMENT
TCE - TEMPORARY EASEMENT
RIGHT-OF-WAY TABULATION SHEET
SHEET NO. 37
TOTAL SHTS. 48

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HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
TP-2			358036.9775	610766.9182	45.22
TP-3	7+47.77	15.17	358120.2868	610485.6119	38.96
TP-4	5+47.15	17.51	358154.3626	610292.7886	37.41
TP-5	2+58.83	-19.49	358126.2198	610007.3187	46.60
TP-6	5+01.65	-28.82	358199.8175	610246.0086	39.86
TP-7	7+83.19	-18.45	358143.1812	610528.7399	39.25
TP-50	6+40.37	-19.52	358181.1129	610389.4682	38.16

CONSTRUCTION ALIGNMENT CONTROL					
POINT	STATION	OFFSET	NORTHING	EASTING	
5000	2+00.00	0.00	358086.0807	609960.1002	
5004	9+96.90	0.00	358068.1275	610729.6925	

Curve Set Type: Circular
 PC (5001) 3+21.05 358131.4877 610072.3094
 PI (5100) 5+09.86 358202.3155 610247.3383
 CC (5002) 357617.0146 610280.4979
 PT (5003) 6+85.05 358151.7096 610429.2468

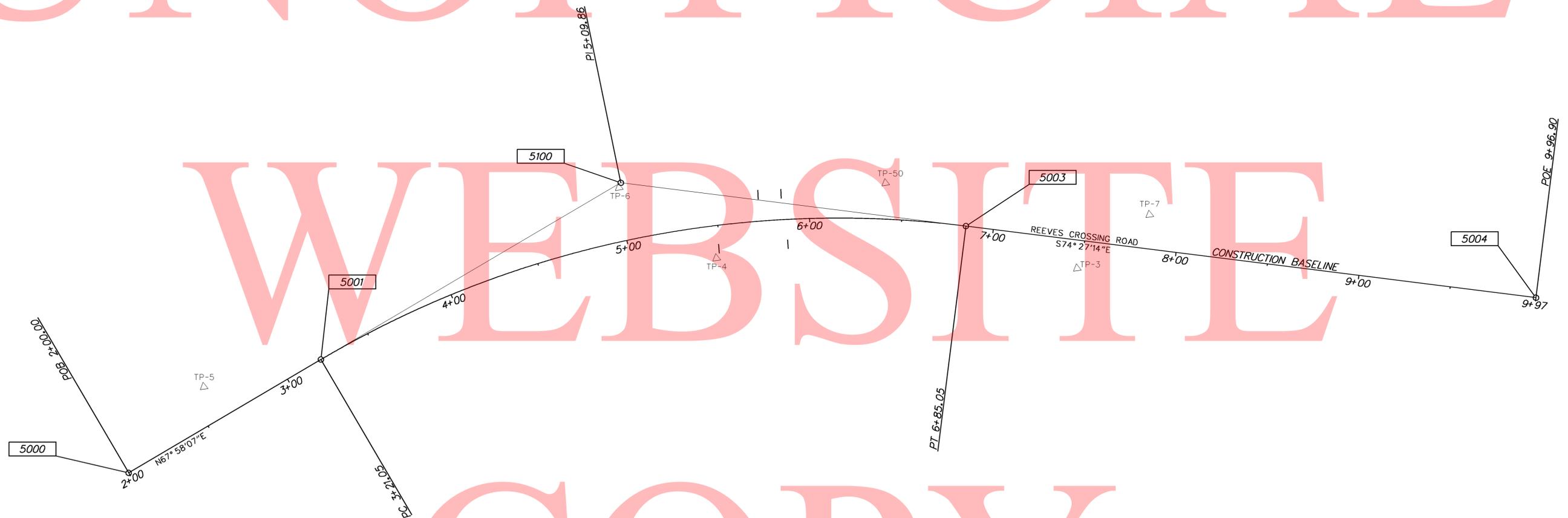
Radius: 555.00
 Delta: 37° 34' 39.4670" Right
 Degree of Curvature (Arc): 10° 19' 24.8300"
 Length: 364.00
 Tangent: 188.82
 Chord: 357.51
 Middle Ordinate: 29.57
 External: 31.24
 Tangent Direction: N 67° 58' 07.0011" E
 Radial Direction: S 22° 01' 52.9989" E
 Chord Direction: N 86° 45' 26.7346" E
 Radial Direction: S 15° 32' 46.4681" W
 Tangent Direction: S 74° 27' 13.5319" 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.

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WEBSITE

COPY

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<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS		<p>SCALE</p> <p>0 30 60 90 FEET</p>	<p>KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012</p>		<p>CONTRACT T201207505</p>	<p>BRIDGE NO. 2-286A</p>	<p>HORIZONTAL AND VERTICAL CONTROL</p>	<p>SHEET NO. 38</p>
					<p>COUNTY KENT</p>	<p>DESIGNED BY: NED</p>	<p>CHECKED BY: MJG</p>		<p>TOTAL SHTS. 48</p>

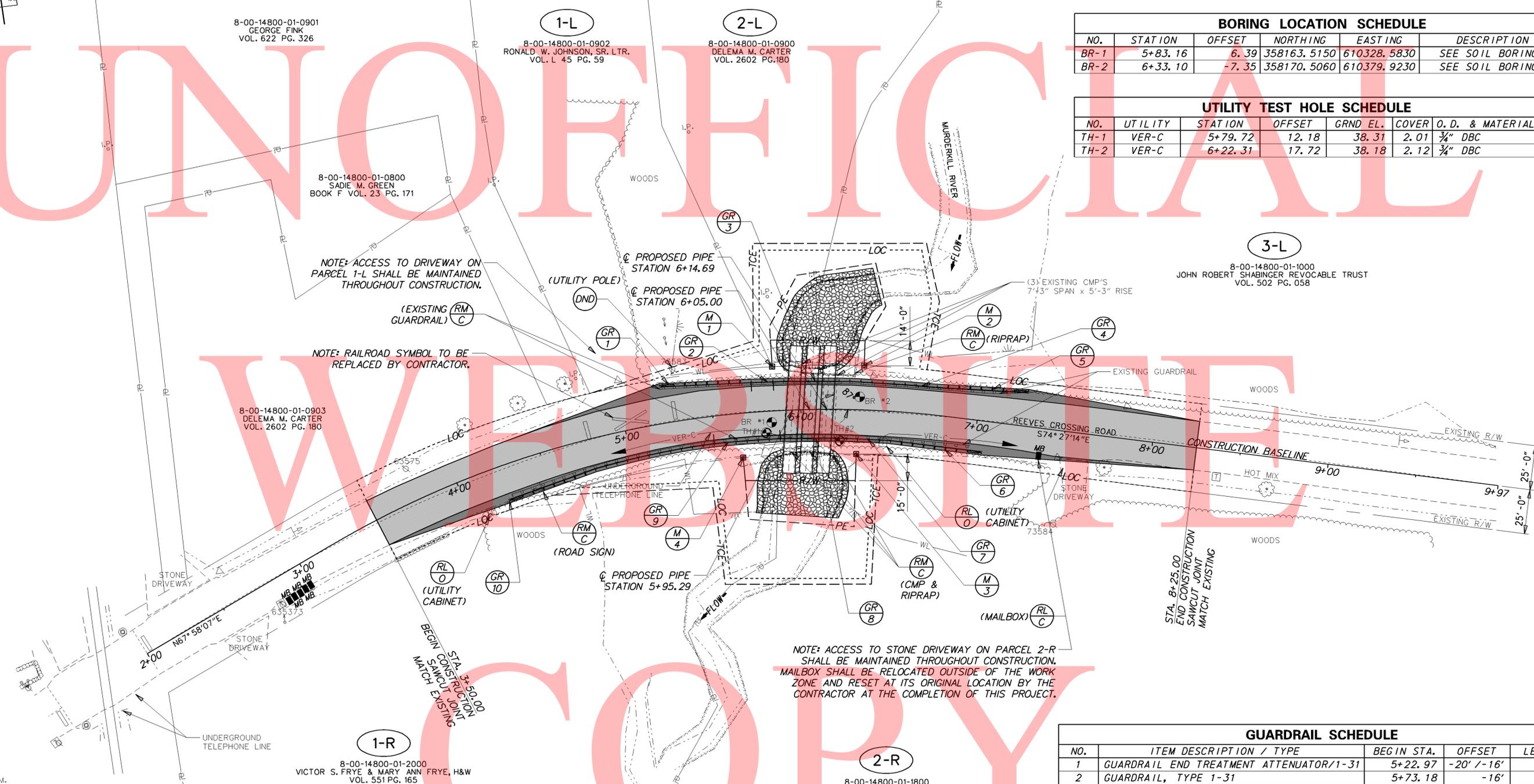


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RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
1	CAPPED REBAR	5+85.13	-25.00	358194.5993	610333.3748
2	CAPPED REBAR	6+35.00	-25.00	358187.5235	610384.9950
3	CAPPED REBAR	6+32.00	25.00	358138.8508	610373.1640
4	CAPPED REBAR	5+65.00	25.00	358146.2124	610309.6476

BORING LOCATION SCHEDULE					
NO.	STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
BR-1	5+83.16	6.39	358163.5150	610328.5830	SEE SOIL BORINGS
BR-2	6+33.10	-7.35	358170.5060	610379.9230	SEE SOIL BORINGS

UTILITY TEST HOLE SCHEDULE					
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER O. D. & MATERIAL
TH-1	VER-C	5+79.72	12.18	38.31	2.01 3/4" DBC
TH-2	VER-C	6+22.31	17.72	38.18	2.12 3/4" DBC

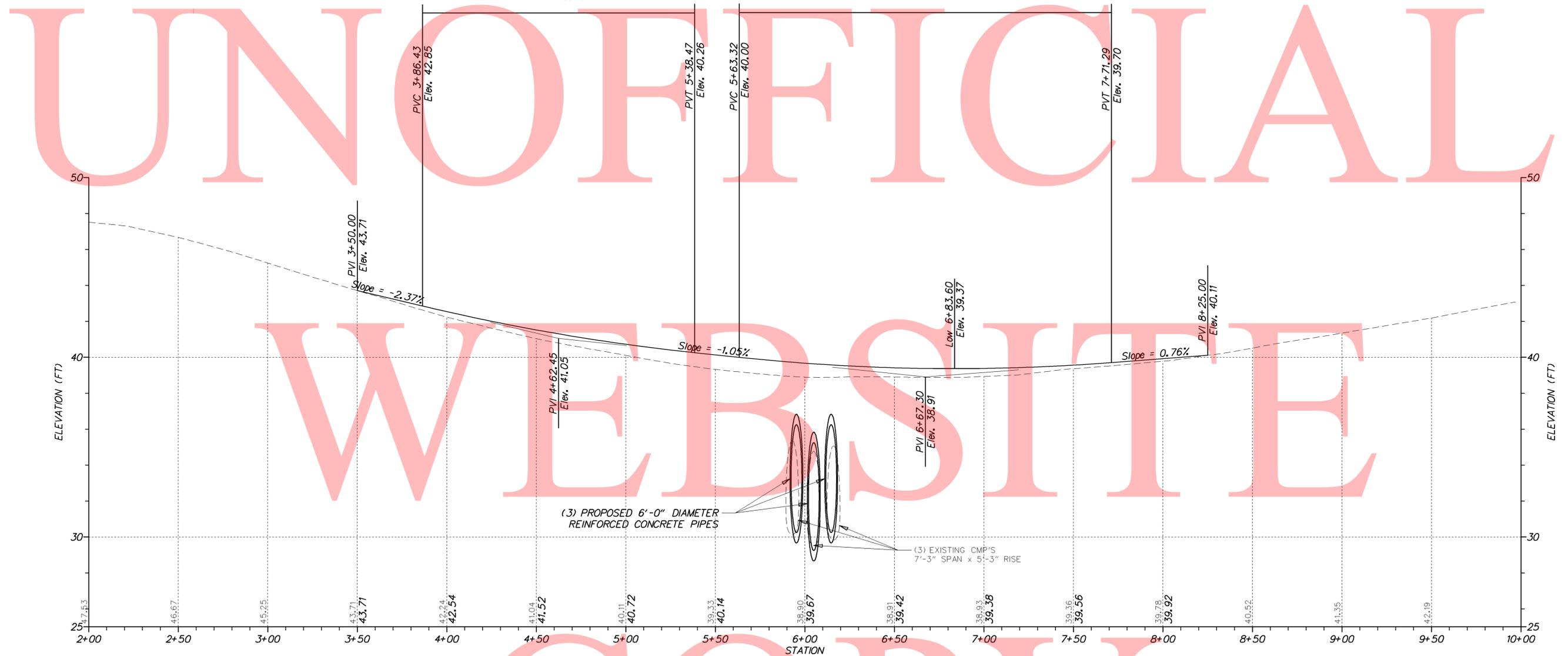


GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
1	GUARDRAIL END TREATMENT ATTENUATOR/1-31	5+22.97	-20' / -16'	50.00'
2	GUARDRAIL, TYPE 1-31	5+73.18	-16'	12.50'
3	GUARDRAIL OVER CULVERTS, TYPE 3-31	5+85.31	-16'	75.00'
4	GUARDRAIL, TYPE 1-31	6+57.79	-16'	25.00'
5	GUARDRAIL END TREATMENT ATTENUATOR/1-31	6+81.60	-18' / -16'	50.00'
6	GUARDRAIL END TREATMENT ATTENUATOR/1-31	7+04.95	18' / 16'	50.00'
7	GUARDRAIL, TYPE 1-31	6+51.95	16'	25.00'
8	GUARDRAIL OVER CULVERTS, TYPE 3-31	6+26.17	16'	75.00'
9	GUARDRAIL, TYPE 1-31	5+48.95	16'	75.00'
10	GUARDRAIL END TREATMENT ATTENUATOR/1-31	4+71.73	19' / 16'	50.00'

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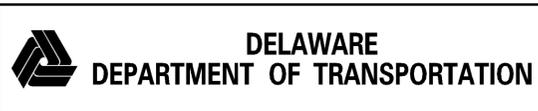
Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 152.04'
 L1 = 76.02'
 L2 = 76.02'
 G1 = -2.37%
 G2 = -1.05%
 SSD = 495.36'
 K = 115.00

Type of Curve = Symmetric Parabola
 Direction = Sag
 Length = 207.97'
 L1 = 103.98'
 L2 = 103.98'
 G1 = -1.05%
 G2 = 0.76%
 SSD = 6642.90'
 K = 115.00

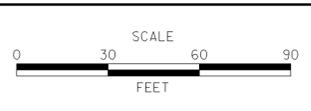


K286 - REEVES CROSSING ROAD

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ADDENDUMS / REVISIONS	



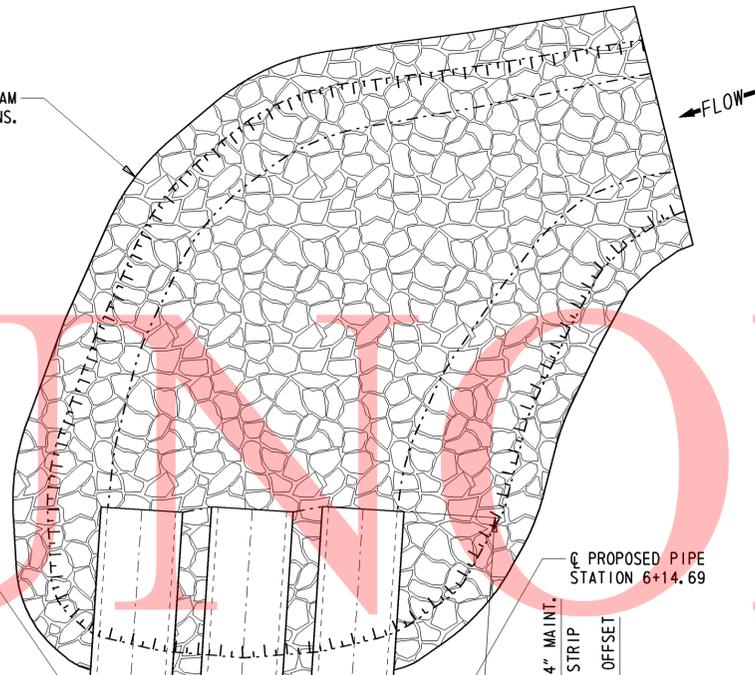
KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

CONTRACT	BRIDGE NO.	2-286A
T201207505	DESIGNED BY:	NED
COUNTY	CHECKED BY:	MJG
KENT		

PROFILE

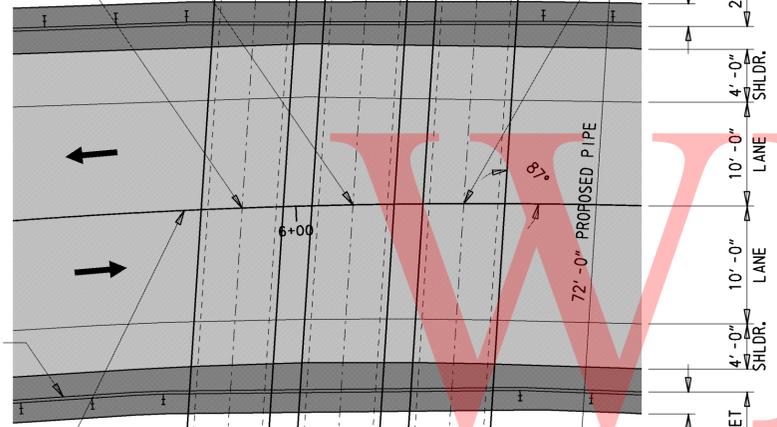
VERTICAL SCALE	9
	6
	3
	0
FEET	
SHEET NO.	40
TOTAL SHTS.	48

REFER TO NOTE 2A FOR UPSTREAM RIPRAP DIMENSIONS.



PROPOSED PIPE STATION 6+05.00
 PROPOSED PIPE STATION 5+95.29

PROPOSED PIPE STATION 6+14.69



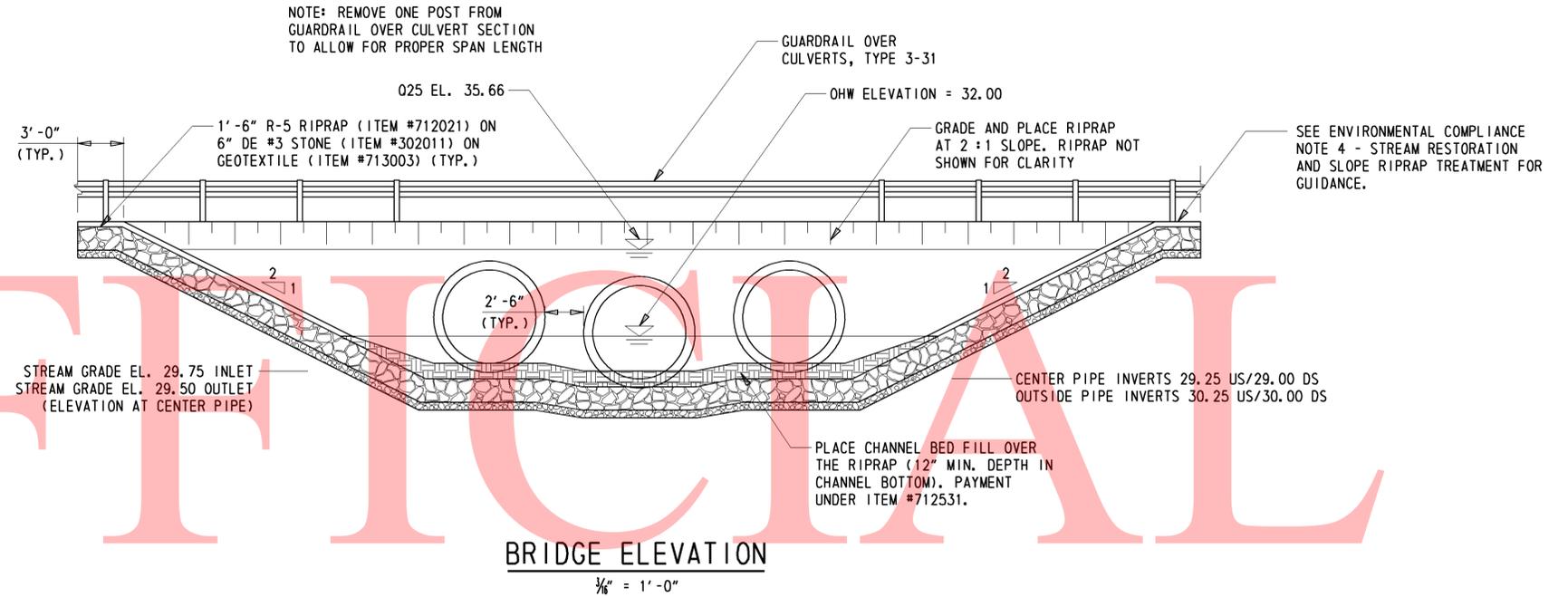
GUARDRAIL, TYPE 1-31

CONSTRUCTION BASELINE REEVES CROSSING ROAD (K286) S 74°27'14" E

REFER TO NOTE 2B FOR DOWNSTREAM RIPRAP DIMENSIONS.

MURDERKILL RIVER

PLAN
 $\frac{1}{8}'' = 1' - 0''$



NOTE: REMOVE ONE POST FROM GUARDRAIL OVER CULVERT SECTION TO ALLOW FOR PROPER SPAN LENGTH

GUARDRAIL OVER CULVERTS, TYPE 3-31

OHW ELEVATION = 32.00
 GRADE AND PLACE RIPRAP AT 2:1 SLOPE. RIPRAP NOT SHOWN FOR CLARITY

SEE ENVIRONMENTAL COMPLIANCE NOTE 4 - STREAM RESTORATION AND SLOPE RIPRAP TREATMENT FOR GUIDANCE.

STREAM GRADE EL. 29.75 INLET
 STREAM GRADE EL. 29.50 OUTLET
 (ELEVATION AT CENTER PIPE)

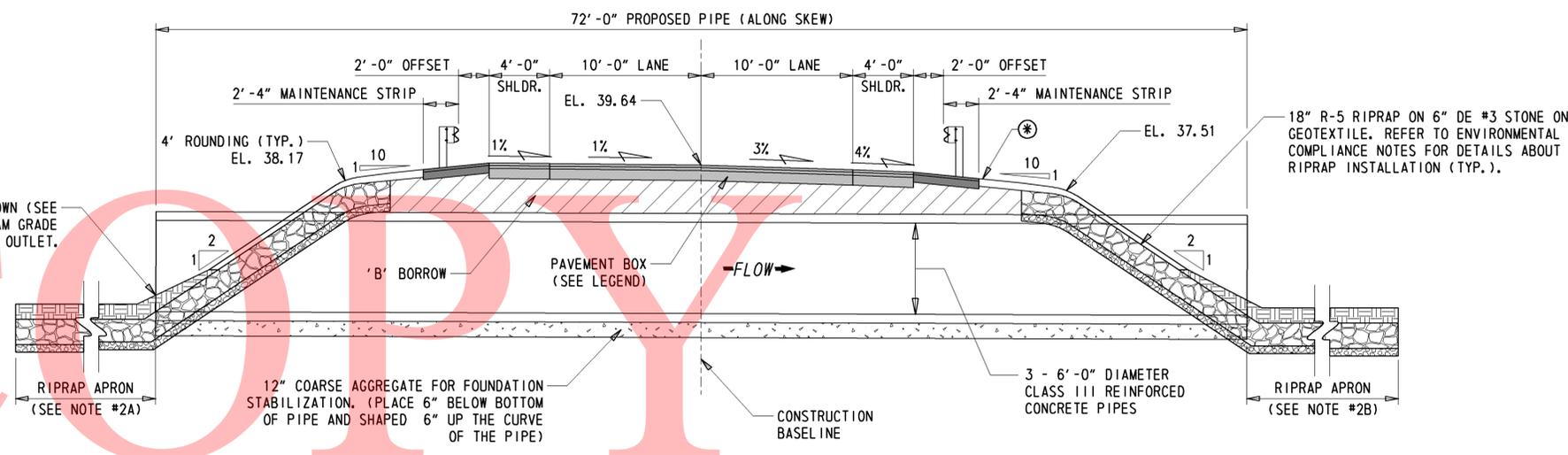
CENTER PIPE INVERTS 29.25 US/29.00 DS
 OUTSIDE PIPE INVERTS 30.25 US/30.00 DS

PLACE CHANNEL BED FILL OVER THE RIPRAP (12" MIN. DEPTH IN CHANNEL BOTTOM). PAYMENT UNDER ITEM #712531.

BRIDGE ELEVATION
 $\frac{3}{16}'' = 1' - 0''$

NOTES:

- PROPOSED BRIDGE
 THE EXISTING (3) 7'-3" SPAN x 5'-3" RISE CORRUGATED METAL PIPES SHALL BE REPLACED WITH (3) 6'-0" DIAMETER REINFORCED CONCRETE PIPES (72'-0" LONG). THE CENTER PIPE SHALL BE PLACED 6" BELOW THE ESTABLISHED STREAM GRADE. THE INVERT OF THE OUTER PIPES SHALL BE PLACED 1'-0" ABOVE THE INVERT OF THE CENTER PIPE. PLACE PIPES WITH A 2'-6" GAP BETWEEN THE OUTER WALLS OF EACH RUN. PLACE 6" COARSE AGGREGATE BEDDING BENEATH PIPES AND 6" SHAPED UP THE CURVE OF EACH PIPE.
- RIPRAP PLACEMENT
 - UPSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM 56'-0" FROM THE PIPE INLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.
 - DOWNSTREAM - RIPRAP SHALL BE PLACED IN THE CHANNEL BOTTOM 24'-0" FROM THE PIPE OUTLET ALONG THE STREAM CENTERLINE AND SHALL BE PLACED TO CREATE A SMOOTH BEND THAT MATCHES THE EXISTING STREAM BANKS.



CENTER PIPE INVERT SHOWN (SEE BRIDGE ELEVATION) STREAM GRADE EL. 29.75 INLET, EL. 29.50 OUTLET.

RIPRAP APRON (SEE NOTE #2A)

12" COARSE AGGREGATE FOR FOUNDATION STABILIZATION. (PLACE 6" BELOW BOTTOM OF PIPE AND SHAPED 6" UP THE CURVE OF THE PIPE)

BRIDGE SECTION
 $\frac{3}{16}'' = 1' - 0''$

NOTE: BRIDGE SECTION SHOWS THE CENTERLINE OF THE CENTER PIPE.

* - PLACE PERMANENT GRASS SEEDING, DRY GROUND (ITEM #734013) ON 6" TOPSOIL (ITEM #732004) (TYP. FOR BOTH SIDES OF THE ROAD).

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ADDENDUMS / REVISIONS	

CONTRACT	BRIDGE NO.	2-286A
T201207505	DESIGNED BY:	NED
COUNTY	CHECKED BY:	MJG
KENT		

BORING: BR-1		DATE DRILLED: 8/30/12	
STATION: 5+83.16		ELEVATION: 38.64	
OFFSET: 6.39		NORTHING: 358163.515	
COMMENTS: N/A		EASTING: 610328.583	
SAMPLE INFORMATION			
NO.	DEPTH	BLOWS /6"	DESCRIPTION
1	0.5	8	MOIST DENSE REDDISH BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
	2.0	20	
	2.0	27	
2	2.0	7	MOIST MEDIUM DENSE BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
	4.0	5	
	4.0	7	
3	4.0	1	WET VERY LOOSE GRAY FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
	6.0	1	
	6.0	2	
4	6.0	2	WET MEDIUM DENSE BLACK ORGANIC SILTY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL.
	8.0	2	
	8.0	9	
	8.0	8	
5	8.0	1	WET MEDIUM DENSE GRAYISH ORANGE FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.
	10.0	3	
	10.0	9	
	10.0	6	
6	10.0	2	WET LOOSE GRAYISH ORANGE FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
	12.0	4	
	12.0	2	
	12.0	5	
7	12.0	2	WET LOOSE ORANGE COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.
	14.0	2	
	14.0	3	
8	14.0	1	WET LOOSE ORANGE FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL.
	16.0	1	
	16.0	8	
	16.0	7	
9	16.0	2	SATURATED LOOSE GRAY ORGANIC FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL.
	18.0	3	
	18.0	2	
	18.0	3	
	18.0	3	
	18.0	4	
U-1	20.0		SATURATED DARK GRAY FINE TO COARSE SAND W/SOME CLAY AND SILT, TRACE OF ORGANIC MATTER.
	23.0		
11	23.0	0	SATURATED LOOSE GRAY FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF ORGANIC MATTER.
	25.0	1	
	25.0	5	
	25.0	7	
U-2	25.0		NO RECOVERY
	28.0		
12	28.0	8	SATURATED DENSE GRAY FINE SAND W/TRACE OF COARSE SAND AND SILT.
	33.0	13	
	33.0	20	
	33.0	28	
	33.0	28	
	33.0	35	
13	33.0	14	SATURATED DENSE GRAY FINE SAND W/TRACE OF COARSE SAND AND SILT.
	38.0	16	
	38.0	28	
	38.0	35	
14	38.0	7	SATURATED MEDIUM DENSE GRAY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.
	43.0	7	
	43.0	12	
	43.0	13	
15	43.0	2	SATURATED MEDIUM DENSE DARK GRAY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.
	48.0	8	
	48.0	8	
	48.0	29	
16	48.0	12	SATURATED VERY DENSE DARK GRAY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.
	53.0	50	
17	53.0	38	SATURATED VERY DENSE DARK GRAY COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.
	58.0	50	
18	58.0	12	SATURATED VERY DENSE DARK GRAY FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.
	60.0	44	
	60.0	50	
			END BORING.

BORING: BR-2		DATE DRILLED: 8/29/12	
STATION: 6+33.10		ELEVATION: 38.84	
OFFSET: -7.35		NORTHING: 358170.506	
COMMENTS: ENCOUNTERED TAR COATED SAND AND OLD PAVEMENT @ 5' BELOW EXISTING GRADE.		EASTING: 610379.923	
SAMPLE INFORMATION			
NO.	DEPTH	BLOWS /6"	DESCRIPTION
1	0.5	19	MOIST DENSE ORANGISH BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.
	2.0	15	
	2.0	16	
2	2.0	4	MOIST MEDIUM DENSE ORANGE COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.
	4.0	6	
	4.0	5	
	4.0	7	
3	4.0	15	MOIST VERY DENSE ORANGISH BROWN COARSE TO FINE SAND W/TRACE OF FINE GRAVEL AND SILT.
	6.0	50	
4	6.0	3	WET LOOSE GRAYISH BROWN FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.
	8.0	4	
	8.0	5	
	8.0	2	
5	8.0	3	WET LOOSE GRAYISH BROWN FINE TO COARSE SAND W/TRACE OF FINE GRAVEL AND SILT.
	10.0	4	
	10.0	4	
	10.0	7	
6	10.0	3	WET MEDIUM DENSE DARK GRAY COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.
	12.0	5	
	12.0	10	
	12.0	5	
7	12.0	1	WET VERY LOOSE BROWN FINE SAND W/SOME COARSE SAND AND SILT.
	14.0	2	
	14.0	2	
	14.0	1	
8	14.0	1	WET LOOSE GRAY FINE SAND W/SOME SILT, TRACE OF COARSE SAND AND FINE GRAVEL.
	16.0	2	
	16.0	5	
	16.0	7	
9	16.0	2	WET LOOSE DARK GRAY FINE SAND W/SOME COARSE SAND, TRACE OF SILT.
	18.0	3	
	18.0	5	
	18.0	5	
10	18.0	1	WET LOOSE DARK GRAY FINE SAND W/SOME COARSE SAND AND SILT, TRACE OF FINE GRAVEL.
	23.0	2	
	23.0	3	
	23.0	4	
11	23.0	3	WET MEDIUM DENSE DARK GRAY FINE SAND W/TRACE OF COARSE SAND AND SILT.
	28.0	7	
	28.0	18	
	28.0	45	
12	28.0	12	WET VERY DENSE DARK GRAY FINE SAND W/TRACE OF COARSE SAND AND SILT.
	33.0	43	
	33.0	50	
13	33.0	7	WET DENSE DARK GRAY FINE SAND W/TRACE OF COARSE SAND AND SILT.
	38.0	11	
	38.0	16	
	38.0	8	
14	38.0	8	WET MEDIUM DENSE DARK GRAY FINE SAND W/SOME COARSE SAND, SILT AND FINE GRAVEL.
	43.0	11	
	43.0	15	
	43.0	19	
15	43.0	3	WET MEDIUM DENSE DARK GRAY FINE SAND W/SOME COARSE SAND, TRACE OF SILT.
	48.0	8	
	48.0	16	
	48.0	24	
16	48.0	14	WET VERY DENSE DARK GRAY FINE TO COARSE SAND W/TRACE OF SILT AND FINE GRAVEL.
	50.0	44	
	50.0	40	
	50.0	46	
			END BORING.

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PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
O-1	UPSTREAM RIPRAP	1033.51	0.0237	76.56	COE / DNREC
O-2	FILL OF EXISTING PIPES	231.75	0.0053	15.46	COE / DNREC
O-3	DOWNSTREAM RIPRAP	1213.46	0.0279	89.89	COE / DNREC
TOTAL PERMANENT OPEN WATER IMPACTS		2478.72	0.0569	181.90	COE / DNREC

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	STILLING WELL	54.00	0.0012	2.00	COE / DNREC
OT-2	UPSTREAM SANDBAGS	51.48	0.0012	2.27	COE / DNREC
OT-3	EX. PIPES TO PROP. PIPES	889.59	0.0204	32.95	COE / DNREC
OT-4	DOWNSTREAM SANDBAGS	279.48	0.0064	27.89	COE / DNREC
OT-5	STABILIZED OUTFALL	25.00	0.0006	0.93	COE / DNREC
TOTAL TEMPORARY OPEN WATER IMPACTS		1299.55	0.0298	66.04	COE / DNREC

OPEN WATER CREATION AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OC-1	U. S. CHANNEL REGRADING	463.48	0.0106	34.33	COE / DNREC
OC-2	PROPOSED PIPES	38.06	0.0009	2.72	COE / DNREC
TOTAL OPEN WATER CREATION AREAS		501.54	0.0115	37.05	COE / DNREC

NOTE: WETLANDS DELINEATED BY ENVIRONMENTAL RESOURCES, INC. (ERI) IN FEBRUARY 2013 IN ACCORDANCE WITH THE 1987 CORPS OF ENGINEERS WETLAND DELINEATION MANUAL AND REGIONAL SUPPLEMENT

SHEET PREPARED BY: NICHOLAS DEAN ON 03/27/2013
LAST UPDATED ON 07/26/13

LEGEND

CREATION AREA

PERMANENT IMPACT AREA

TEMPORARY IMPACT AREA

ORD. HIGH WATER / WETLAND

WETLAND BOUNDARY

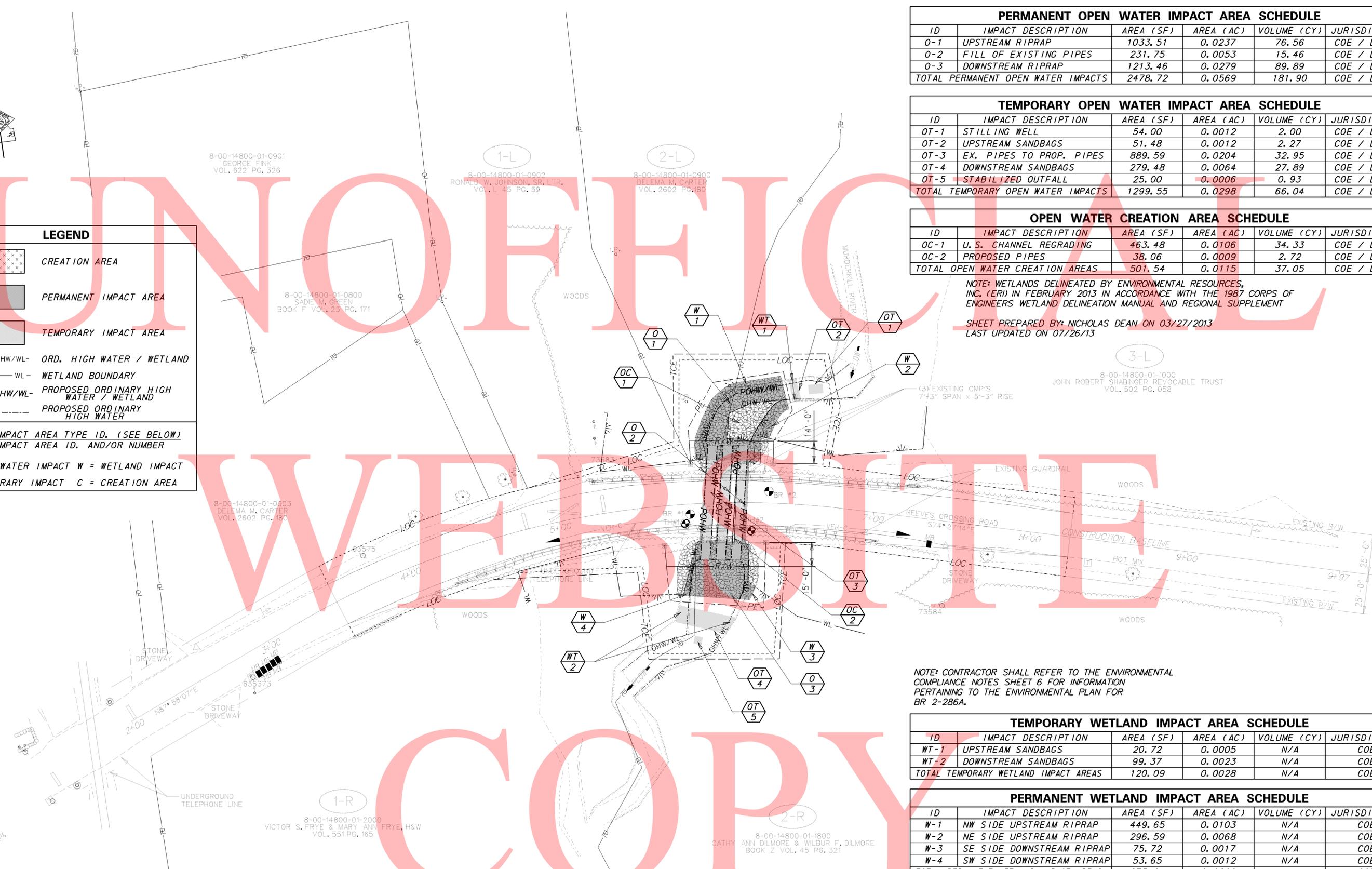
PROPOSED ORDINARY HIGH WATER / WETLAND

PROPOSED ORDINARY HIGH WATER

IMPACT AREA TYPE ID. (SEE BELOW)

IMPACT AREA ID. AND/OR NUMBER

O = OPEN WATER IMPACT W = WETLAND IMPACT
T = TEMPORARY IMPACT C = CREATION AREA



NOTE: CONTRACTOR SHALL REFER TO THE ENVIRONMENTAL COMPLIANCE NOTES SHEET 6 FOR INFORMATION PERTAINING TO THE ENVIRONMENTAL PLAN FOR BR 2-286A.

TEMPORARY WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
WT-1	UPSTREAM SANDBAGS	20.72	0.0005	N/A	COE
WT-2	DOWNSTREAM SANDBAGS	99.37	0.0023	N/A	COE
TOTAL TEMPORARY WETLAND IMPACT AREAS		120.09	0.0028	N/A	COE

PERMANENT WETLAND IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
W-1	NW SIDE UPSTREAM RIPRAP	449.65	0.0103	N/A	COE
W-2	NE SIDE UPSTREAM RIPRAP	296.59	0.0068	N/A	COE
W-3	SE SIDE DOWNSTREAM RIPRAP	75.72	0.0017	N/A	COE
W-4	SW SIDE DOWNSTREAM RIPRAP	53.65	0.0012	N/A	COE
TOTAL PERMANENT WETLAND IMPACT AREAS		875.61	0.0200	N/A	COE

NOTE: BRIDGE 2-286A - A STANDING STRUCTURE OVER 50 YEARS EXISTS ON THE SOUTHWEST CORNER OF THE BRIDGE WITHIN THE VICINITY OF THE PROJECT BUT OUTSIDE THE LOC. A "FINDING OF NO HISTORIC PROPERTIES AFFECTED" HAS BEEN APPROVED BY THE DE SHPO. ANY MODIFICATIONS TO THE PLANS WITHIN THIS AREA ARE TO BE COORDINATED WITH THE DISTRICT ENGINEER AND THE ENVIRONMENTAL STUDIES OFFICE (CONTACT LAURA KEELEY 302-760-2282) OR LAURAA.KEELEY@STATE.DE.US.

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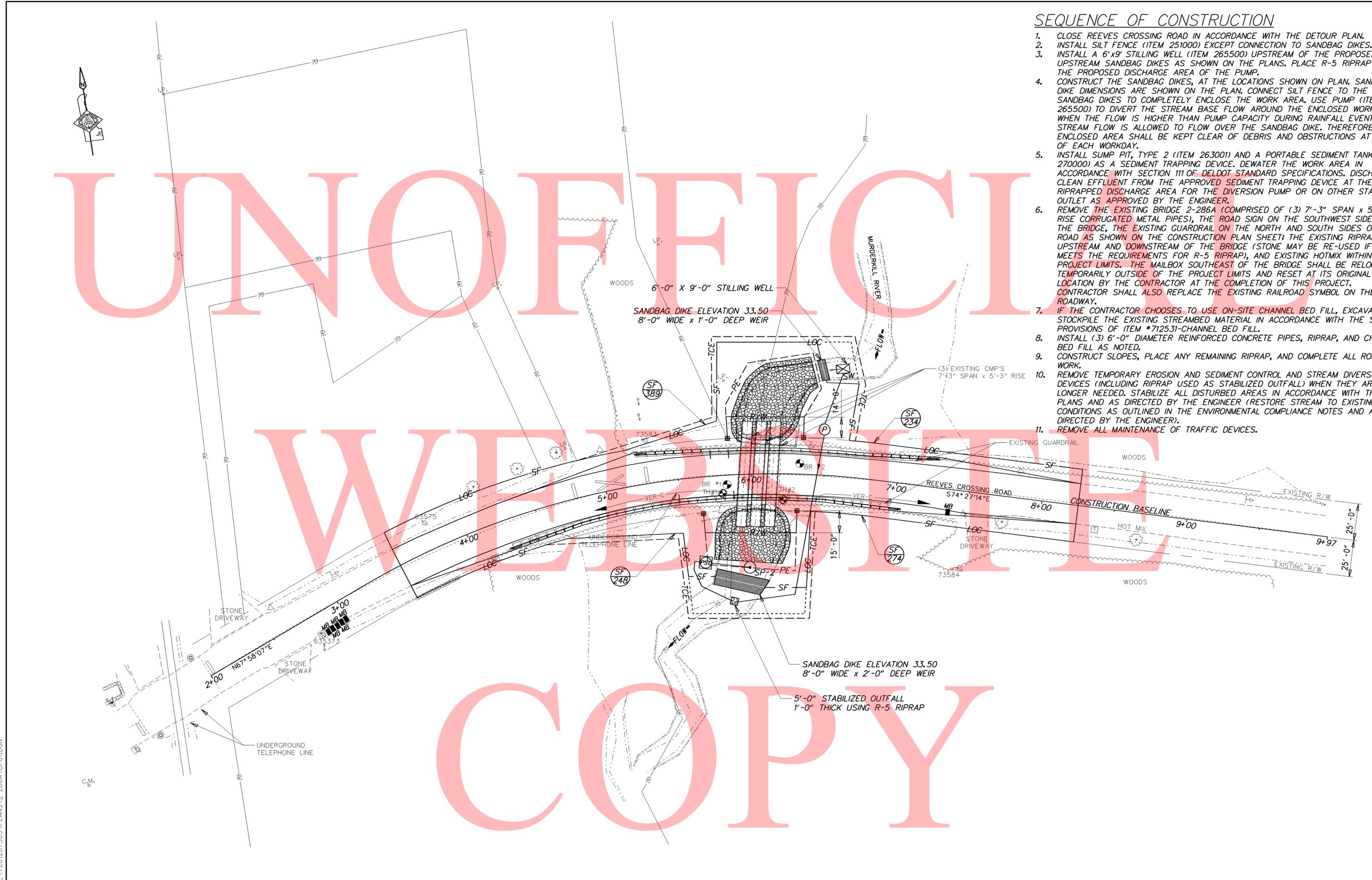
SEQUENCE OF CONSTRUCTION

1. CLOSE REEVES CROSSING ROAD IN ACCORDANCE WITH THE DETOUR PLAN.
2. INSTALL SILT FENCE (ITEM 251000) EXCEPT CONNECTION TO SANDBAG DIKES.
3. INSTALL A 6'x9" STILLING WELL (ITEM 265500) UPSTREAM OF THE PROPOSED UPSTREAM SANDBAG DIKES AS SHOWN ON THE PLANS. PLACE R-5 RIPRAP AT THE PROPOSED DISCHARGE AREA OF THE PUMP.
4. CONSTRUCT THE SANDBAG DIKES, AT THE LOCATIONS SHOWN ON PLAN. SANDBAG DIKE DIMENSIONS ARE SHOWN ON THE PLAN. CONNECT SILT FENCE TO THE SANDBAG DIKES TO COMPLETELY ENCLOSE THE WORK AREA. USE PUMP (ITEM 265500) TO DIVERT THE STREAM BASE FLOW AROUND THE ENCLOSED WORK AREA. WHEN THE FLOW IS HIGHER THAN PUMP CAPACITY DURING RAINFALL EVENTS, THE STREAM FLOW IS ALLOWED TO FLOW OVER THE SANDBAG DIKE. THEREFORE, THE ENCLOSED AREA SHALL BE KEPT CLEAR OF DEBRIS AND OBSTRUCTIONS AT THE END OF EACH WORKDAY.
5. INSTALL SUMP PIT, TYPE 2 (ITEM 263001) AND A PORTABLE SEDIMENT TANK (ITEM 270000) AS A SEDIMENT TRAPPING DEVICE. DEWATER THE WORK AREA IN ACCORDANCE WITH SECTION 111 OF DELDOT STANDARD SPECIFICATIONS. DISCHARGE CLEAN EFFLUENT FROM THE APPROVED SEDIMENT TRAPPING DEVICE AT THE RIPRAPPED DISCHARGE AREA FOR THE DIVERSION PUMP OR ON OTHER STABLE OUTLET AS APPROVED BY THE ENGINEER.
6. REMOVE THE EXISTING BRIDGE 2-286A (COMPRISED OF (3) 7'-3" SPAN x 5'-3" RISE CORRUGATED METAL PIPES), THE ROAD SIGN ON THE SOUTHWEST SIDE OF THE BRIDGE, THE EXISTING GUARDRAIL ON THE NORTH AND SOUTH SIDES OF THE ROAD AS SHOWN ON THE CONSTRUCTION PLAN SHEET; THE EXISTING RIPRAP UPSTREAM AND DOWNSTREAM OF THE BRIDGE (STONE MAY BE RE-USED IF IT MEETS THE REQUIREMENTS FOR R-5 RIPRAP), AND EXISTING HOTMIX WITHIN THE PROJECT LIMITS. THE MAILBOX SOUTHEAST OF THE BRIDGE SHALL BE RELOCATED TEMPORARILY OUTSIDE OF THE PROJECT LIMITS AND RESET AT ITS ORIGINAL LOCATION BY THE CONTRACTOR AT THE COMPLETION OF THIS PROJECT. CONTRACTOR SHALL ALSO REPLACE THE EXISTING RAILROAD SYMBOL ON THE ROADWAY.
7. IF THE CONTRACTOR CHOOSES TO USE ON-SITE CHANNEL BED FILL, EXCAVATE AND STOCKPILE THE EXISTING STREAMBED MATERIAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS OF ITEM #712531-CHANNEL BED FILL.
8. INSTALL (3) 6'-0" DIAMETER REINFORCED CONCRETE PIPES, RIPRAP, AND CHANNEL BED FILL AS NOTED.
9. CONSTRUCT SLOPES, PLACE ANY REMAINING RIPRAP, AND COMPLETE ALL ROAD WORK.
10. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL AND STREAM DIVERSION DEVICES (INCLUDING RIPRAP USED AS STABILIZED OUTFALL) WHEN THEY ARE NO LONGER NEEDED. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER (RESTORE STREAM TO EXISTING CONDITIONS AS OUTLINED IN THE ENVIRONMENTAL COMPLIANCE NOTES AND AS DIRECTED BY THE ENGINEER).
11. REMOVE ALL MAINTENANCE OF TRAFFIC DEVICES.

UNOFFICIAL

WARNING

COPY



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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE 0 30 60 90 FEET	KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT	BRIDGE NO.	2-286A	CONSTRUCTION SEQUENCE & EROSION CONTROL PLAN	SHEET NO.	
					T201207505	DESIGNED BY: NED		44	
					KENT	CHECKED BY: MJG		48	

PORTABLE CHANGEABLE MESSAGE SIGNS

PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

REEVES
CROSSING
ROAD

TO CLOSE
STARTING
XXXXXX

DURING DETOUR
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

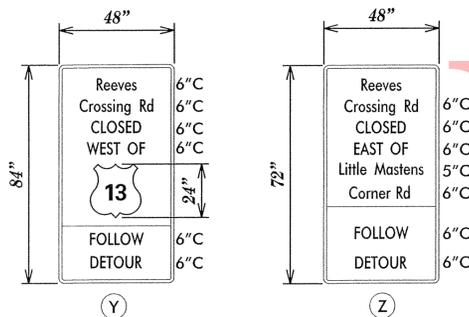
PCMS-2

REEVES
CROSSING
ROAD

CLOSED
FOLLOW
DETOUR

*UPON IMPLEMENTATION OF DETOUR, BOTH PCMS-1 SHALL BE RELOCATED TO PCMS-2 LOCATIONS, AND THE CORRESPONDING MESSAGE SHALL BE DISPLAYED.

SPECIAL SIGNS



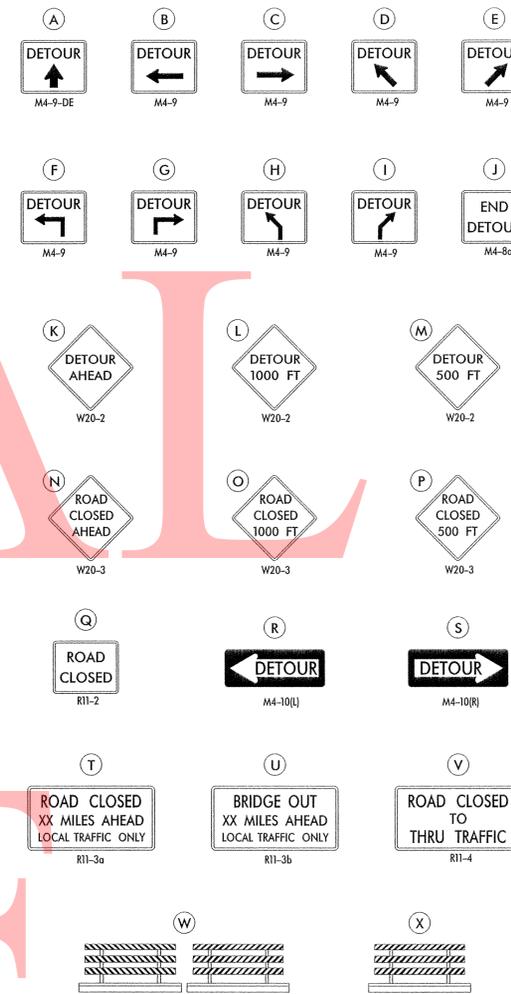
*D/G RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND; BLACK LEGEND

*ROUTE SHIELD - WHITE BACKGROUND; BLACK LEGEND

SPECIAL NOTES

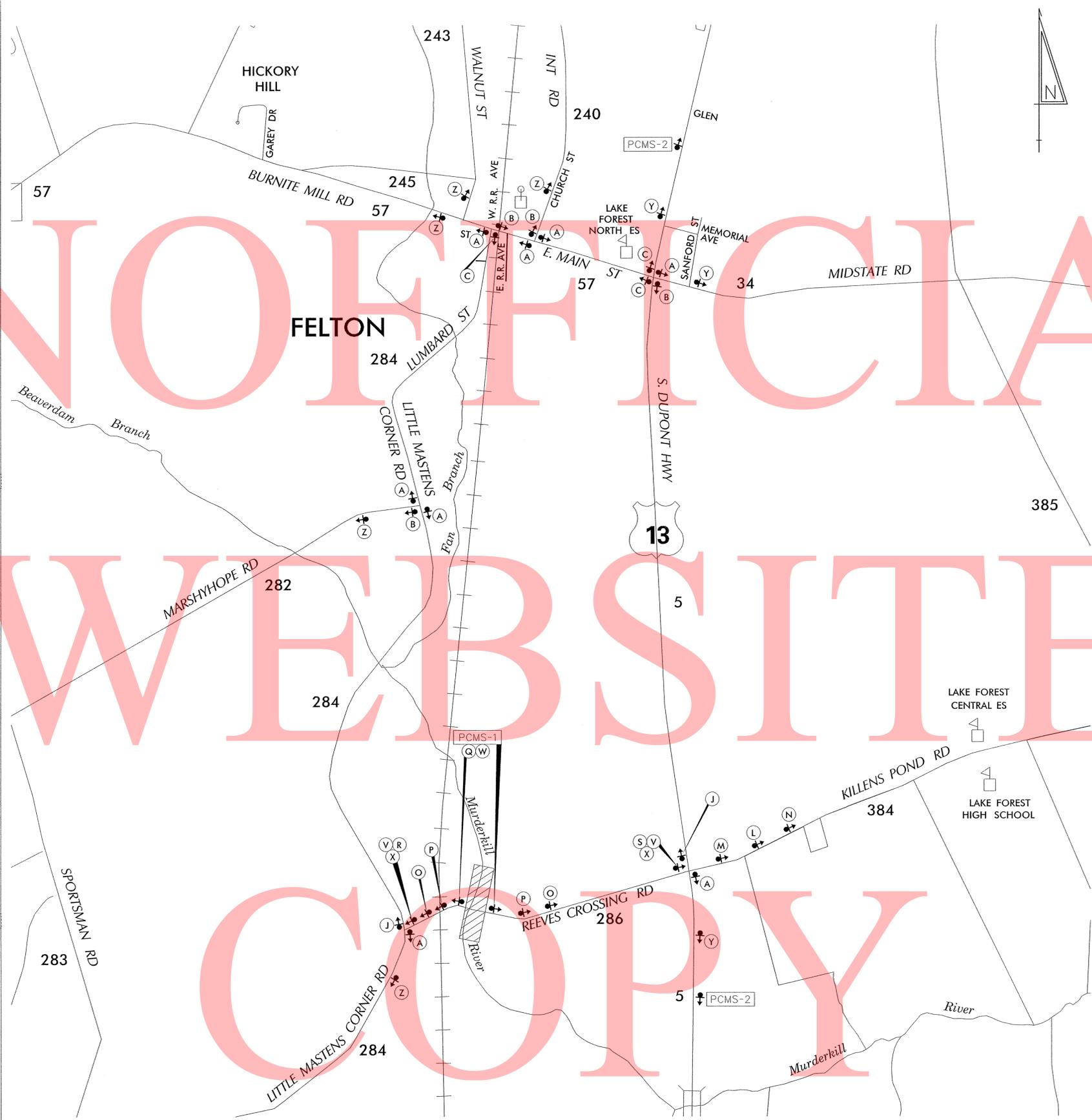
1. SIGNS PLACED ON MULTI-LANE ROADWAYS SHALL BE PLACED ON BOTH SIDES OF THE DIRECTIONAL ROADWAY.

LEGEND



GENERAL NOTES

- ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
- THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
- DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
- SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
- SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
- 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" (DE MUTCD) WILL PREVAIL.
- SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
- WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON "BREAKAWAY" POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
- "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
- BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.



C:\DOCUMENTS AND SETTINGS\MICHAEL.RIVERA\MY DOCUMENTS\MICRO STATION DGN\REEVES CROSSING RD (K286).BR 2-286A.DGN

RECOMMENDED *[Signature]* DATE: 10-23-12

RECOMMENDED *[Signature]* DATE: 10-26-12

RECOMMENDED _____ DATE: _____

APPROVED CHIEF SAFETY OFFICER *[Signature]* DATE: 10-26-12

APPROVED TRAFFIC ENGINEER *[Signature]* DATE: 10/29/12



ADDENDUM / REVISIONS

NOT TO SCALE

KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012

CONTRACT	ROAD NO.	K286
T201207505	DESIGNED BY: MFR	
COUNTY	CHECKED BY: ASW	
KENT		

DETOUR PLAN
REEVES CROSSING RD

SHEET NO.	45
TOTAL SHTS.	48

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-0902	(1-L) RONALD W. JOHNSON, SR. LTR.	TCE	BK. L VOL. 45 PG. 159	1.760							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
14001	5000	4+85.29	-25.00	358194.7402	610229.1833	N 80°44' 50.09" E	97.0731				
14002	5000	5+76.00	-40.00	358210.3485	610324.9934	N 7°31' 51.41" E	9.0443				
14003	5000	5+76.47	-49.03	358219.3148	610326.1787	S 16°14' 37.72" E	25.7437				
10001	5000	5+85.13	-25.00	358194.5988	610333.3799			N 89°55' 20.17" W	104.1967	104.3373	-580.0000
14001	5000	4+85.29	-25.00	358194.7402	610229.1833						
FIGURE 14001 AREA = 703.9419 SQ. FT. (0.0162 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-0900	(2-L) DELEMA M. CARTER	FEE	2602 - 180	13.250							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10001	5000	5+85.13	-25.00	358194.5988	610333.3799	N 4°41' 56.10" E	15.0006				
10002	5000	5+85.00	-40.00	358209.5490	610334.6087	S 81°07' 28.68" E	21.3594				
10003	5000	6+04.92	-39.02	358206.2536	610355.7124	S 21°50' 40.86" W	14.4977				
10004	5000	6+01.43	-25.00	358192.7968	610350.3179			N 83°55' 38.56" W	17.0336	17.0342	-580.0000
10001	5000	5+85.13	-25.00	358194.5988	610333.3799						
FIGURE 10001 AREA = 277.8926 SQ. FT. (0.0064 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-0900	(2-L) DELEMA M. CARTER	P/E	2602 - 180	13.250							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10002	5000	5+85.00	-40.00	358209.5490	610334.6087	N 5°13' 04.20" E	8.0000				
12001	5000	5+85.00	-48.00	358217.5159	610335.3363	N 36°46' 11.87" E	32.5871				
12002	5000	6+00.00	-76.00	358243.6196	610354.8430	N 89°52' 05.24" E	15.8551				
12003	5000	6+13.80	-78.10	358243.6561	610370.6981	S 21°50' 02.27" W	40.2929				
10003	5000	6+04.92	-39.02	358206.2536	610355.7124	N 81°07' 28.68" W	21.3594				
10002	5000	5+85.00	-40.00	358209.5490	610334.6087						
FIGURE 12001 AREA = 757.2919 SQ. FT. (0.0174 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-0900	(2-L) DELEMA M. CARTER	TCE	2602 - 180	13.250							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
14003	5000	5+76.47	-49.03	358219.3148	610326.1787	N 8°01' 32.67" E	46.0587				
15001	5000	5+79.00	-95.00	358264.9223	610332.6094	S 81°38' 59.71" E	44.4816				
15002	5000	6+17.01	-93.61	358258.4627	610376.6194	S 21°47' 49.79" W	15.9467				
12003	5000	6+13.80	-78.10	358243.6561	610370.6981	S 89°52' 05.24" W	15.8551				
12002	5000	6+00.00	-76.00	358243.6196	610354.8430	S 36°46' 11.87" W	32.5871				
12001	5000	5+85.00	-48.00	358217.5159	610335.3363	S 5°13' 04.20" W	8.0000				
10002	5000	5+85.00	-40.00	358209.5490	610334.6087	S 4°41' 56.10" W	15.0006				
10001	5000	5+85.13	-25.00	358194.5988	610333.3799	N 16°14' 37.72" E	25.7437				
14003	5000	5+76.47	-49.03	358219.3148	610326.1787						
FIGURE 15001 AREA = 1332.9509 SQ. FT. (0.0306 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-1000	(3-L) JOHN ROBERT SHABINGER REVOCABLE TRUST	FEE	502 - 058	115.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10004	5000	6+01.43	-25.00	358192.7968	610350.3179	N 21°50' 40.86" E	14.4977				
10003	5000	6+04.92	-39.02	358206.2536	610355.7124	S 81°08' 14.87" E	32.1903				
11001	5000	6+35.00	-39.00	358201.2942	610387.5184	S 10°22' 46.61" W	14.0000				
11002	5000	6+35.00	-25.00	358187.5233	610384.9961			N 81°21' 11.51" W	35.0768	35.0822	-580.0000
10004	5000	6+01.43	-25.00	358192.7968	610350.3179						
FIGURE 11001 AREA = 466.6020 SQ. FT. (0.0107 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-1000	(3-L) JOHN ROBERT SHABINGER REVOCABLE TRUST	P/E	502 - 058	115.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
10003	5000	6+04.92	-39.02	358206.2536	610355.7124	N 21°50' 02.27" E	40.2929				
12003	5000	6+13.80	-78.10	358243.6561	610370.6981	N 89°51' 23.33" E	29.2678				
13001	5000	6+39.00	-83.00	358243.7294	610399.9658	S 4°38' 43.36" E	24.9356				
13002	5000	6+45.00	-59.00	358218.8757	610401.9853	S 39°26' 56.42" W	22.7684				
11001	5000	6+35.00	-39.00	358201.2942	610387.5184	N 81°08' 14.87" W	32.1903				
10003	5000	6+04.92	-39.02	358206.2536	610355.7124						
FIGURE 13001 AREA = 1450.0372 SQ. FT. (0.0333 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-1000	(3-L) JOHN ROBERT SHABINGER REVOCABLE TRUST	TCE	502 - 058	115.000							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
12003	5000	6+13.80	-78.10	358243.6561	610370.6981	N 21°47' 49.79" E	15.9467				
15002	5000	6+17.01	-93.61	358258.4627	610376.6194	S 81°38' 59.71" E	53.8835				
16001	5000	6+63.00	-96.00	358250.6318	610429.9309	S 4°06' 11.80" E	33.6149				
16002	5000	6+72.00	-64.00	358217.1031	610432.3362	S 18°47' 39.59" W	39.1343				
16003	5000	6+69.00	-25.00	358180.0554	610419.7283			N 77°51' 55.37" W	35.5260	35.5315	-580.0000
11002	5000	6+35.00	-25.00	358187.5233	610384.9961	N 10°22' 46.61" E	14.0000				
11001	5000	6+35.00	-39.00	358201.2942	610387.5184	N 39°26' 56.42" E	22.7684				
13002	5000	6+45.00	-59.00	358218.8757	610401.9853	N 4°38' 43.36" W	24.9356				
13001	5000	6+39.00	-83.00	358243.7294	610399.9658	S 89°51' 23.33" W	29.2678				
12003	5000	6+13.80	-78.10	358243.6561	610370.6981						
FIGURE 16001 AREA = 2656.0899 SQ. FT. (0.0610 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-2000	(1-R) VICTOR S. FRYE & MARY ANN FRYE, H&W	FEE	551 - 165	2.438							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
17001	5000	5+65.00	25.00	358146.2122	610309.6504			S 85°46' 18.05" E	19.8905	19.8917	530.0000
17002	5000	5+85.83	25.00	358144.7457	610329.4868	S 9°31' 06.69" W	14.4101				
17003	5000	5+84.69	39.37	358130.5340	610327.1038	N 81°33' 13.29" W	18.3677				
17004	5000	5+65.00	38.00	358133.2319	610308.9353	N 3°09' 11.23" E	13.0000				
17001	5000	5+65.00	25.00	358146.2122	610309.6504						
FIGURE 17001 AREA = 262.8202 SQ. FT. (0.0060 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-2000	(1-R) VICTOR S. FRYE & MARY ANN FRYE, H&W	P/E	551 - 165	2.438							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
17004	5000	5+65.00	38.00	358133.2319	610308.9353	S 81°33' 13.29" E	18.3677				
17003	5000	5+84.69	39.37	358130.5340	610327.1038	S 9°28' 43.05" W	23.0076				
19001	5000	5+82.75	62.31	358107.8406	610323.3149	N 77°36' 37.67" W	15.9615				
19002	5000	5+65.00	60.00	358111.2652	610307.7252	N 3°09' 11.23" E	22.0000				
17004	5000	5+65.00	38.00	358133.2319	610308.9353						
FIGURE 19001 AREA = 384.5638 SQ. FT. (0.0088 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-2000	(1-R) VICTOR S. FRYE & MARY ANN FRYE, H&W	TCE	551 - 165	2.438							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
21001	5000	4+50.00	25.00	358140.8898	610200.1562	N 87°13' 01.45" E	109.6235		109.8198		530.0000
17001	5000	5+65.00	25.00	358146.2122	610309.6504	S 3°09' 11.23" W	13.0000				
17004	5000	5+65.00	38.00	358133.2319	610308.9353	S 3°09' 11.23" W	22.0000				
19002	5000	5+65.00	60.00	358111.2652	610307.7252	S 77°36' 37.67" E	15.9615				
19001	5000	5+82.75	62.31	358107.8406	610323.3149	S 9°28' 47.78" W	20.6262				
21002	5000	5+80.85	82.87	358087.4961	610319.9178	S 67°46' 52.65" W	29.3159				
21003											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-1800	(2-R) CATHY ANN DILMORE	P/E	BK. Z VOL. 45 PG. 321	9.147							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
17003	5000	5+84.69	39.37	358130.5340	610327.1038	S 81°33' 03.43" E	43.9183				
18002	5000	6+32.00	40.00	358124.0811	610370.5455	S 10°04' 11.67" W	26.0000				
20001	5000	6+32.00	66.00	358098.4816	610365.9994	N 77°37' 59.12" W	43.6984				
19001	5000	5+82.75	62.31	358107.8406	610323.3149	N 9°28' 43.05" E	23.0076				
17003	5000	5+84.69	39.37	358130.5340	610327.1038						

FIGURE 20001 AREA = 1072.7685 SQ. FT. (0.0246 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)							
8-00-14800-01-1800	(2-R) CATHY ANN DILMORE	TCE	BK. Z VOL. 45 PG. 321	9.147							
ALIGNMENT NUMBER & DESCRIPTION: 5000 - CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
18001	5000	6+32.00	25.00	358138.8500	610373.1682	S 79°15' 32.62" E			12.4141	12.4144	530.0000
22001	5000	6+45.00	25.00	358136.5364	610385.3649	S 11°24' 43.09" W	73.0000				
22002	5000	6+45.00	98.00	358064.9797	610370.9209	N 81°40' 39.58" W	78.9739				
21003	5000	5+49.29	95.44	358076.4105	610292.7787	N 67°46' 52.65" E	29.3159				
21002	5000	5+80.85	82.87	358087.4961	610319.9178	N 9°28' 47.78" E	20.6262				
19001	5000	5+82.75	62.31	358107.8406	610323.3149	S 77°37' 59.12" E	43.6984				
20001	5000	6+32.00	66.00	358098.4816	610365.9994	N 10°04' 11.67" E	26.0000				
18002	5000	6+32.00	40.00	358124.0811	610370.5455	N 10°04' 11.67" E	15.0000				
18001	5000	6+32.00	25.00	358138.8500	610373.1682						

FIGURE 22001 AREA = 2510.0859 SQ. FT. (0.0576 ACRES)

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)			
8-00-14800-01-0902	36	(1-L) RONALD W. JOHNSON, SR. LTR.	BK. L VOL. 45 PG. 159	D - 1.76	TCE			703.9419 / 0.02	76665.60 / 1.76		
8-00-14800-01-0900	36	(2-L) DELEMA M. CARTER	2602 - 180	D - 13.25	FEE P/E TCE	277.8926 / 0.01		757.2919 / 0.02 1332.9509 / 0.03	576892.1074 / 13.24		
8-00-14800-01-1000	36	(3-L) JOHN ROBERT SHABINGER REVOCABLE TRUST	502 - 058	D - 115.00	FEE P/E TCE	466.602 / 0.01		1450.0372 / 0.03 2656.0899 / 0.06	5008933.398 / 114.99		
8-00-14800-01-2000	36	(1-R) VICTOR S. FRYE & MARY ANN FRYE, H&W	551 - 165	D - 2.44	FEE P/E TCE	262.8202 / 0.01		384.5638 / 0.01 2373.9172 / 0.05	105914.6798 / 2.43		
8-00-14800-01-1800	36	(2-R) CATHY ANN DILMORE	BK. Z VOL. 45 PG. 321	D - 9.15	FEE P/E TCE	660.1453 / 0.02		1072.7685 / 0.02 2510.0859 / 0.06	397765.7547 / 9.13		

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LEGEND	
FEE	AREA OF ACQUISITION
RW	AREA OCCUPIED BY EXISTING RW
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
..	OFFSET IS LEFT OF BASELINE
..	CURVE TURNS TO THE LEFT

RIGHT-OF-WAY SHEET 3 OF 3

	ADDENDUMS / REVISIONS		KENT COUNTY PIPE REPLACEMENTS, FEDERAL, 2012	CONTRACT	BRIDGE NO.	2-286A	RIGHT-OF-WAY DATA & TABULATION SHEET	SHEET NO.
				T201207505	DESIGNED BY: NED			48
				COUNTY	CHECKED BY: MJG			TOTAL SHTS.
				KENT				48