

INDEX OF SHEETS		
SECTION	SHEET DESCRIPTION	SHEET NO(S)
RKK	TITLE	1
RKK	INDEX OF SHEETS	2
RKK	ADDENDA AND REVISIONS	3
RKK	LEGEND	4
RKK	NOTES	5-6
RKK	TYPICAL SECTIONS	7
RKK	HORIZONTAL AND VERTICAL CONTROL	8
RKK	CONSTRUCTION PLANS	9-10
RKK	GRADES AND GEOMETRICS	11
RKK	CONSTRUCTION DETAILS	12
RKK	ENVIRONMENTAL COMPLIANCE PLANS	13-15
RKK	CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS	16-20
RKK	RIGHT OF WAY PLANS	21-23

UNOFFICIAL
WEBSITE
COPY

6/6/2019 11:41:11 AM \\BALSRV01\2014\2014\14144...DELID01707\TASK_25 - COMMONS MITIGATION DESIGN\CADD\CONTRACT\PLANS\IS01_CMD.DGN

ADDENDA / REVISIONS		NOT TO SCALE	WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II	CONTRACT	BRIDGE NO.	N/A	INDEX OF SHEETS	SECTION
				T201703701	DESIGNED BY:	N. BYERS		RK&K
				COUNTY	CHECKED BY:	J. REEL		SHEET NO.
				NEW CASTLE				2

UNOFFICIAL WEBSITE COPY

6/6/2019 11:44:05 AM
\\BALSREV01\2014\2014_14144...DELID011707\TASK_25 - COMMONS MITIGATION DESIGN\CADD\CONTRACT\PLANS\AR01_CMD.DGN

ADDENDA / REVISIONS	<p align="center">NOT TO SCALE</p>	<p align="center">WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II</p>	CONTRACT	BRIDGE NO.	N/A	<p align="center">ADDENDA AND REVISIONS</p>	SECTION
			T201703701	DESIGNED BY: N. BYERS	RK&K		
			COUNTY	CHECKED BY: J. REEL	SHEET NO.		
			NEW CASTLE	3			

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
	USACE WETLAND BOUNDARY
	DNREC STATE MAPPED WETLAND
	USACE WETLAND AND DNREC STATE MAPPED WETLAND
	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	
	CITY OF WILMINGTON SEWER
	CITY OF WILMINGTON COMBINED SEWER
	CITY OF WILMINGTON STORM DRAIN
	CITY OF WILMINGTON WATER
	DELMARVA POWER-ELECTRIC
	DELMARVA POWER-ELECTRIC OVERHEAD
	DELMARVA POWER-GAS
	VERIZON
	AT&T FIBER OPTIC
	COMCAST
	NEW CASTLE COUNTY SEWER

PROPOSED SYMBOLS

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
	BIOFILTRATION SWALE
	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
	IMPACT ATTENUATOR
	JUNCTION BOX - DRAINAGE
	LATERAL OFFSET
	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

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

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

MISCELLANEOUS SYMBOLS	
	PROPOSED ENHANCEMENT BOUNDARY

ADDENDA / REVISIONS

NOT TO SCALE

WETLAND MITIGATION AT
PETERSON WILDLIFE REFUGE,
PHASE II

CONTRACT
T201703701
COUNTY
NEW CASTLE

BRIDGE NO.
N/A
DESIGNED BY: N. BYERS
CHECKED BY: J. REEL

LEGEND

SECTION
RK&K
SHEET NO.
4

GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2016 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2018, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

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

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

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

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

PROJECT NOTES

SECTION 100

- THE CONTRACTOR WILL CONTACT THE DELAWARE TMC AT 302-659-4600 PRIOR TO ANY UNMANNED AIRCRAFT VEHICLE (UAV) FLIGHTS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE FOLLOWING INFORMATION: THE REGISTRATION NUMBER OF THE UAV, THE FLIGHT TIME, LOCATION OF THE FLIGHT, THE PILOT'S NAME AND THE PILOT'S CONTACT NUMBER DURING THE FLIGHT.

SECTION 200

- ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - SUPER SILT FENCE NOT SALVAGED FOR REUSE.
- THIS WORK CONSISTS OF THE REMOVAL AND DISPOSAL OF MIXTURES OF SOIL, PEATS, AND ORGANIC MATTER. THE METHOD OF EXCAVATION SHALL MINIMIZE THE COMPACTION OF EXISTING AND CREATED WETLANDS AND SUBAQUEOUS LANDS. ALL EQUIPMENT WITHIN EXISTING AND CREATED WETLANDS AND SUBAQUEOUS LANDS SHALL BE LOW GROUND-CONTACT PRESSURE (LGP) EQUIPMENT OR SHALL BE SUPPORTED ON MATS, SUBJECT TO APPROVAL BY THE ENGINEER. MANUFACTURER'S SPECIFICATIONS AND ADVERTISED MATERIALS FOR LGP EQUIPMENT OR MAT AND EQUIPMENT SPECIFICATIONS SHALL BE FORWARDED TO THE ENGINEER FOR APPROVAL WITHIN THIRTY (30) DAYS OF THE AWARD OF THE CONTRACT. ALL PAGES FROM THE APPROPRIATE PERFORMANCE REFERENCE HANDBOOK DETAILING GROUND PRESSURE FOR ALL PROPOSED EQUIPMENT SHALL BE SUPPLIED WITHOUT EDIT - HANDBOOK COVER PAGE, COMPLETE PAGES AND COMPLETE TABLES. ANY PIECE OF EQUIPMENT NOT CONSIDERED LOW GROUND-CONTACT PRESSURE BY THE ENGINEER SHALL ONLY BE UTILIZED ON MATS. ALL OFF-MAT EQUIPMENT SHALL BE ADVERTISED BY THE MANUFACTURER AS LGP EQUIPMENT. SHOE WIDTH SHALL BE THE LARGEST AVAILABLE FOR THE MODEL AS MANUFACTURED BY THE MANUFACTURER. THE ENGINEER MAY REQUIRE THE USE OF MATS IF THE GROUND PRESSURE EXCEEDS 10 PSI EVEN IF MAXIMUM SHOE WIDTH IS UTILIZED. EXCAVATION SHALL BE STAGED SUCH THAT LGP EQUIPMENT OR MATS AND MAT-SUPPORTED EQUIPMENT SHALL NOT OPERATE ON EXCAVATED AREAS AFTER FINAL GRADE IS REACHED, I.E. EXCAVATION SHALL BACK OUT OF THE SITE. PAYMENT FOR ALL MATERIALS (MATS, ETC.), EQUIPMENT, LABOR, AND INCIDENTALS REQUIRED FOR EXCAVATION OF WETLAND MITIGATION AREAS SHALL BE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT.
- REMOVE THE TOP 6 INCHES OF ROOT MAT FROM ALL AREAS TO BE EXCAVATED.
- CLEAR ALL ABOVEGROUND VEGETATION, DEBRIS AND TRASH FROM THE DISPOSAL AREA. CUT ALL WOODY VEGETATION TO THE EXISTING GROUND HEIGHT. THIS CLEARING SHALL BE PAID FOR UNDER ITEM 201000 - CLEARING AND GRUBBING.
- THE CONTRACTOR SHALL PREPARE AND SUBMIT AS-BUILT TOPOGRAPHIC PLANS OF THE FINAL GRADE. THE MAXIMUM DISTANCE BETWEEN SPOT ELEVATIONS SHALL BE 20' AND ADDITIONAL SPOT ELEVATIONS SHALL BE OBTAINED AS NECESSARY TO IDENTIFY ALL BREAKS IN GRADE AND OTHER FEATURES. SPOT ELEVATIONS SHALL EXTEND TO THE LIMIT OF CONSTRUCTION. SPOT ELEVATIONS SHALL BE OBTAINED AND SHOWN ON THE AS-BUILT PLAN TO ONE HUNDREDTH OF A FOOT. THE DRAWINGS SHALL BE SUBMITTED TO DELDOT IN BOTH DIGITAL AND PAPER FORMAT CONFORMING TO CURRENT DELDOT CADD STANDARDS. DIGITAL INFORMATION SHALL BE SUBMITTED IN DGN FORMAT AND DTM FORMAT AND SHALL INCLUDE ALL SURVEY DATA IN TXT FORMAT. THE DRAWINGS SHALL BE AT THE SAME SCALE AS THE CONSTRUCTION PLAN DRAWINGS. CONTOURS SHALL BE SHOWN AT 0.5' INTERVALS. ADDITIONALLY, CONTOURS SHALL BE SHOWN FOR ELEVATIONS 1.2' AND 1.8'. THE CONTOUR LINES SHALL BE LABELED FREQUENTLY ENOUGH THAT IT IS POSSIBLE TO CLEARLY ASCERTAIN THE ELEVATION OF ANY PARTICULAR CONTOUR LINE ANYWHERE ON THE PLAN SHEET. SPOT ELEVATIONS ON THE AS-BUILTS SHALL BE LABELED AND SHALL BE SUCH THAT THE PLAN SHEET TEXT SHALL BE LEGIBLE, SOLID BLACK CHARACTERS, IN A SIZE APPROPRIATE TO THE SCALE OF THE DRAWINGS AND SEPARATED, NOT SUPERIMPOSED ON TOP OF ONE ANOTHER. A PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF DELAWARE SHALL SIGN AND SEAL THE AS-BUILTS. THE CONTRACTOR SHALL SUBMIT THE AS-BUILTS WITHIN 14 CALENDAR DAYS OF REACHING FINAL GRADES. ALL COSTS FOR PREPARING THE FINAL GRADE AS-BUILT PLANS SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING. THE AS-BUILTS WILL BE REVIEWED BY THE ENGINEER WITHIN 14 DAYS. NO EARTH DISTURBANCE SHALL OCCUR DURING THE 14 DAY REVIEW PERIOD. THE CONTRACTOR SHALL CORRECT DEFICIENCIES IDENTIFIED BY THE ENGINEER TO THE ENGINEER'S SATISFACTION WITHIN 7 DAYS. ANY CHANGES TO CORRECT THE GRADING SHALL BE AT THE CONTRACTOR'S EXPENSE. AS-BUILT TOPOGRAPHIC PLANS FOR CORRECTED AREAS SHALL BE DEVELOPED AS DIRECTED ABOVE AND SUBMITTED TO THE ENGINEER FOR APPROVAL. UPON THE ENGINEER'S FINAL APPROVAL, THE AS-BUILTS WILL BE SUBMITTED TO THE REGULATORY AGENCIES.

PROJECT NOTES

SECTION 200

- THE WETLAND SCIENTIST WILL REVIEW THE AS-BUILTS IN THE FIELD DURING THE LOW TIDE CYCLE, CHECKING TO ENSURE THAT THERE IS NO PONDING THAT WOULD PREVENT SEED GERMINATION. THE WETLAND SCIENTIST WILL NOTE LOCATIONS THAT REQUIRE HAND CORRECTION WITH SHALLOW DITCHES (BLEEDERS) BY THE CONTRACTOR. THIS WILL BE DONE ONE TIME WITHIN 7 DAYS OF THE AS-BUILT PLAN SUBMISSION. ALL CORRECTIONS WILL BE SUBMITTED TO THE PROJECT ENGINEER. THESE CORRECTIONS WILL BE INCIDENTAL TO ITEM 202000.
- ALL SURVEY WORK, INCLUDING LAYOUT AND AS-BUILTS, SHALL BE BASED OFF THE MASTER CONTROL POINT BM2A SHOWN ON THE HORIZONTAL AND VERTICAL CONTROL SHEET. THIS BENCHMARK MAY NOT BE RESET TO A DIFFERENT ELEVATION. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING THE MASTER BENCHMARK DURING CONSTRUCTION. AT A MINIMUM, PROTECTION SHALL INCLUDE ORANGE PROTECTION FENCING AROUND THE BENCHMARK. MATERIALS AND METHODS FOR PROTECTION SHALL BE INCIDENTAL TO ITEM 763501 - CONSTRUCTION ENGINEERING. IF THE BENCHMARK IS DAMAGED, THE CONTRACTOR SHALL REPLACE IT AT THE ORIGINAL ELEVATION AT NO ADDITIONAL COST TO THE DEPARTMENT.
- ONLY MATERIALS PRODUCED DIRECTLY FROM EXCAVATION ON THE SITE SHALL BE MOVED INTO THE DISPOSAL AREA. DEBRIS, CONCRETE, AND PIPES SHALL BE DISPOSED OF OFFSITE.
- THE CONTRACTOR MAY ENCOUNTER SUPER SILT FENCE WITHIN THE DISPOSAL SITE. PORTIONS OF THE EXISTING SUPER SILT FENCE IN SUITABLE CONDITION AS DETERMINED BY THE ENGINEER MAY BE SALVAGED FOR REUSE WITHIN THE CONTRACT. ANY PORTION NOT SALVAGED FOR REUSE SHALL BE REMOVED BY THE CONTRACTOR.
- DO NOT EMBANK SOIL WITHIN 10 FEET OF THE SUPER SILT FENCE.
- THE CONSTRUCTION GRADING TOLERANCE SHALL BE PLUS OR MINUS 0.1 FEET AND SHALL BE STRICTLY ADHERED TO.

SECTION 800

- LIGHT PLANTS, IF USED, SHALL BE INCIDENTAL TO ITEM 801000 - MAINTENANCE OF TRAFFIC.

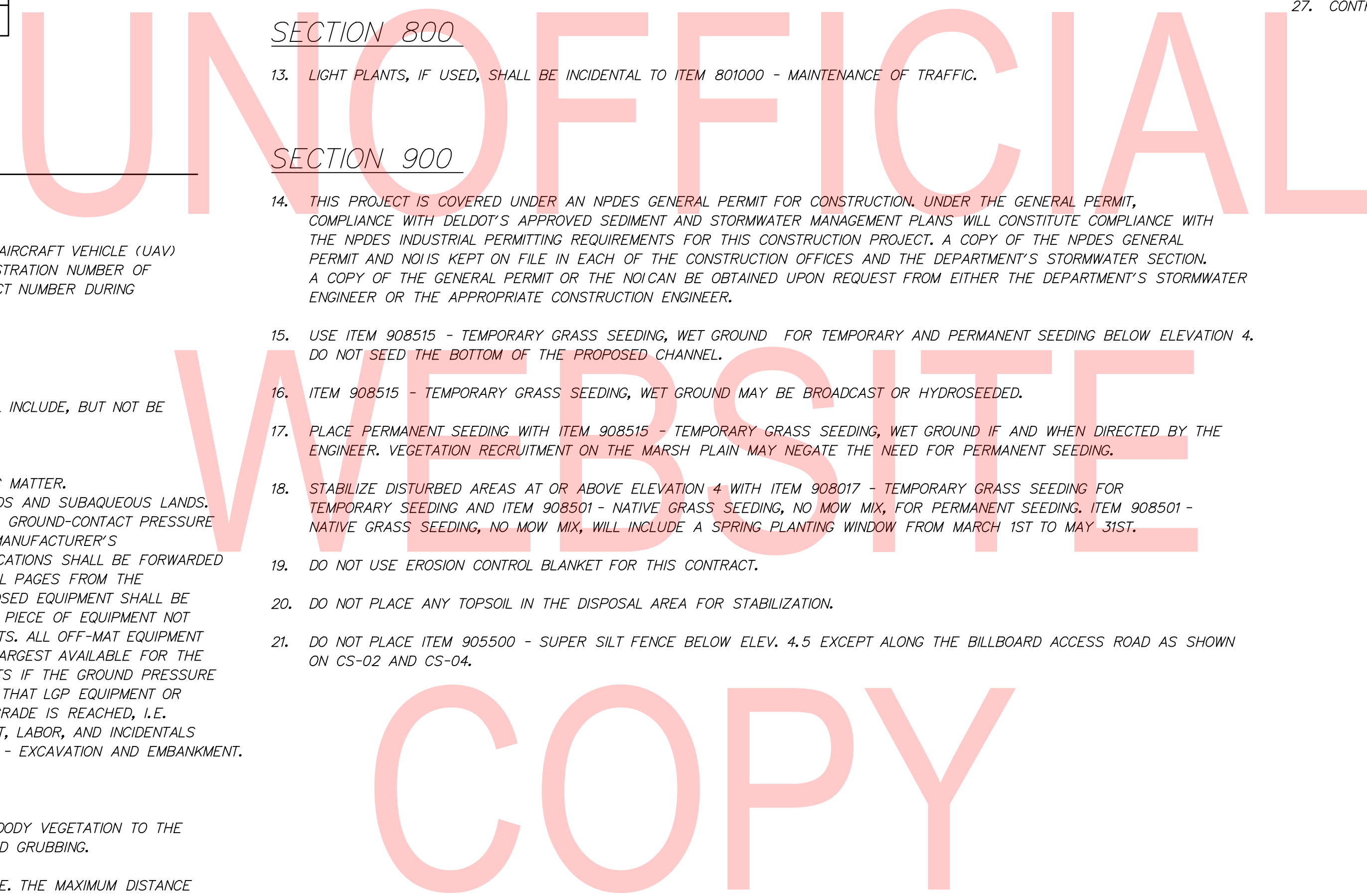
SECTION 900

- 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 NO11S KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S STORMWATER SECTION. A COPY OF THE GENERAL PERMIT OR THE NO11CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.
- USE ITEM 908515 - TEMPORARY GRASS SEEDING, WET GROUND FOR TEMPORARY AND PERMANENT SEEDING BELOW ELEVATION 4. DO NOT SEED THE BOTTOM OF THE PROPOSED CHANNEL.
- ITEM 908515 - TEMPORARY GRASS SEEDING, WET GROUND MAY BE BROADCAST OR HYDROSEEDED.
- PLACE PERMANENT SEEDING WITH ITEM 908515 - TEMPORARY GRASS SEEDING, WET GROUND IF AND WHEN DIRECTED BY THE ENGINEER. VEGETATION RECRUITMENT ON THE MARSH PLAIN MAY NEGATE THE NEED FOR PERMANENT SEEDING.
- STABILIZE DISTURBED AREAS AT OR ABOVE ELEVATION 4 WITH ITEM 908017 - TEMPORARY GRASS SEEDING FOR TEMPORARY SEEDING AND ITEM 908501 - NATIVE GRASS SEEDING, NO MOW MIX, FOR PERMANENT SEEDING. ITEM 908501 - NATIVE GRASS SEEDING, NO MOW MIX, WILL INCLUDE A SPRING PLANTING WINDOW FROM MARCH 1ST TO MAY 31ST.
- DO NOT USE EROSION CONTROL BLANKET FOR THIS CONTRACT.
- DO NOT PLACE ANY TOPSOIL IN THE DISPOSAL AREA FOR STABILIZATION.
- DO NOT PLACE ITEM 905500 - SUPER SILT FENCE BELOW ELEV. 4.5 EXCEPT ALONG THE BILLBOARD ACCESS ROAD AS SHOWN ON CS-02 AND CS-04.

PROJECT NOTES

MISCELLANEOUS

- THE SITE IS SUSCEPTIBLE TO TIDAL FLOODING WITH MEAN HIGHER HIGH TIDE ELEVATIONS OF APPROXIMATELY THREE FEET AND HIGHER ELEVATIONS OCCURRING DURING STORM TIDES. THE PROPOSED GRADES ARE 1 TO 4 FEET BELOW HIGH TIDE. PLAN FOR TIDAL INTRUSION AND SCHEDULE WORK ACCORDINGLY. DELAYS OR DIFFICULTIES CAUSED BY TIDAL INTRUSION SHALL NOT BE A CAUSE FOR A TIME EXTENSION. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR MANAGING TIDAL WATERS IN THE WORKZONE OR REPAIRING DAMAGE TO THE WORK CAUSED BY TIDAL WATERS.
- SUBMIT A NARRATIVE DESCRIBING MEANS AND METHODS FOR CONSTRUCTION AT THE SITE TO THE ENGINEER FOR APPROVAL 21 CALENDAR DAYS PRIOR TO BEGINNING ANY WORK AT THE MITIGATION SITE. THE NARRATIVE SHALL INCLUDE WORK TIMES, DEWATERING OPERATIONS (IF USED), AND SEQUENCE OF CONSTRUCTION. THE ENGINEER WILL SUBMIT THE NARRATIVE TO THE REGULATORY AGENCIES WITHIN SEVEN DAYS. THE AGENCIES WILL HAVE 14 DAYS TO COMMENT ON THE NARRATIVE. DO NOT BEGIN WORK UNTIL THE NARRATIVE HAS BEEN APPROVED BY THE ENGINEER. THIS NARRATIVE SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
- NOTIFY THE ENGINEER OF ANY WORK LEADING TO CLOSURE OF THE BILLBOARD ACCESS ROAD AS SOON AS POSSIBLE, AT LEAST ONE MONTH PRIOR TO CLOSURE. THE ENGINEER WILL COORDINATE WITH MEGAN MCGLINCHY AT 320-425-4890 (MCGLINCHY@RIVERFRONTWILM.COM) IN ADVANCE OF ANY BILLBOARD ACCESS ROAD CLOSURE TO COORDINATE ACTIVITIES.
- THE NEW CHANNEL TO BE EXCAVATED UNDER THIS CONTRACT WILL NOT BE CONSIDERED A WATER OF THE U.S. UNTIL AFTER CONSTRUCTION IS COMPLETE. NO TIME-OF-YEAR RESTRICTIONS WILL BE APPLICABLE FOR THIS CHANNEL DURING CONSTRUCTION.
- THIS PROJECT INCLUDES WETLAND MITIGATION REQUIREMENTS FOR T201109001 SR 141 IMPROVEMENTS, I-95 INTERCHANGE TO JAY DRIVE AS PER USACE INDIVIDUAL PERMIT CENAP-OP-R-2018-822-85 (PENDING) AND DNREC WETLAND PERMIT WE-350/18 ISSUED 1/7/2019, AS WELL AS FOR T200512102 AND T201612101 CHRISTINA RIVER BRIDGE AND APPROACHES PER USACE CENAP-OP-R-2011-175-1 NWP *14 & 15 ISSUED 7/21/2017 AND DNREC WETLAND PERMIT WE-433/15 ISSUED 8/11/2016.
- CONTRACT T200512102 MAY BE ACTIVE IN THE VICINITY OF THIS CONTRACT AT THE TIME OF CONSTRUCTION.



ADDENDA / REVISIONS

NOT TO SCALE

WETLAND MITIGATION AT
PETERSON WILDLIFE REFUGE,
PHASE II

CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

NOTES

SECTION
RK&K
SHEET NO.
5

NOTE: DISPOSE OF UNSUITABLE MATERIAL AND ROOTMAT IN DESIGNATED DISPOSAL SITE.

	SHT: 1	
	STA. 100+00.00	PROJECT
	TO	TOTALS
	STA. 110+51.30	
EXCAVATION - ITEM 202000 (CY) [NEED = '-' / EXCESS = '+']		
EX01 : FROM CROSS SECTIONS / MODELS (+)	37280	37280
EX02 : BITUMINOUS PAVEMENT REMOVED IN FILL SECTIONS (+)	0	0
EX03 : TOPSOIL REMOVED UNDER FILL SECTIONS (+)	0	0
EX04 : TOPSOIL PLACED IN CUT SECTIONS (+)	0	0
EX05 : ROOT MAT REMOVED IN CUT SECTIONS (-)	7870	7870
EX06 : CURB AND/OR CURB AND GUTTER EXCAVATION (-)	0	0
EX07 : UNDERDRAIN EXCAVATION (-)	0	0
EX08 : ROCK EXCAVATION (-)	0	0
EX09 : REMOVAL OF PCC PAVEMENT, CURBS, SIDEWALK, ETC. (-)	0	0
EXTOTAL : TOTAL EXCAVATION	29410	29410
STORMWATER MANAGEMENT POND EXCAVATION - ITEM 271000 (CY) [NEED = '-' / EXCESS = '+']		
SWEX01 : FROM CROSS SECTIONS / MODELS (+)	0	0
SWEX02 : TOPSOIL REMOVED UNDER FILL SECTIONS (+)	0	0
SWEX03 : TOPSOIL PLACED IN CUT SECTIONS (+)	0	0
SWEX04 : ROOT MAT REMOVED (-)	0	0
SWEX05 : ROCK EXCAVATION (-)	0	0
SWEXTOTAL : TOTAL STORMWATER MANAGEMENT POND EXCAVATION	0	0
EXCAVATION AVAILABLE FOR EMBANKMENT (CY) [NEED = '-' / EXCESS = '+']		
EXTOTAL : TOTAL EXCAVATION (+) [ITEM 202000]	29410	29410
SWEXTOTAL : TOTAL STORMWATER MANAGEMENT POND EXCAVATION (+) [ITEM 910008]	0	0
AVEX01 : EXCAVATION AND BACKFILLING FOR STRUCTURES (+) [ITEM 207000]	0	0
AVEX02 : EXCAVATION FOR PIPE TRENCHES (+) [Item 601XXX]	0	0
AVEX03 : CHANNEL EXCAVATION (+) [ITEM 203000]	0	0
AVEX04 : POLE BASES EXCAVATION (+) [ITEM 834XXX]	0	0
AVEX05 : EXCAVATION FROM CURBS AND/OR CURB AND GUTTER (+)	0	0
AVEX06 : EXCAVATION FROM UNDERDRAINS (+) [ITEM 70900X]	0	0
AVEX07 : MISCELLANEOUS EXCAVATIONS (+)	0	0
AVEX08 : TOPSOIL REMOVED IN CUT AND/OR FILL SECTIONS (-)	0	0
AVEX09 : TOPSOIL REMOVED IN CUT AND/OR FILL SECTIONS FOR STORMWATER MANAGEMENT PONDS (-)	0	0
AVEX10 : UNSUITABLE MATERIALS (-)	29410	29410
AVEXTOTAL : TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	0	0
EMBANKMENT AND BORROW, TYPE 'F' REQUIRED (CY) [NEED = '-' / EXCESS = '+']		
EMRF01 : FROM CROSS SECTIONS / MODEL (+) [EMBANKMENT REQUIRED BELOW SUBGRADE OR CAPPING]	0	0
EMRF02 : TOPSOIL REMOVED UNDER FILL (+)	0	0
EMRF03 : ROOT MAT REMOVED UNDER FILL (+)	0	0
EMRF04 : UNSUITABLE MATERIAL REMOVED UNDER FILL (+)	0	0
EMRF05 : PCC REMOVED UNDER FILL (+)	0	0
EMRF06 : BITUMINOUS PAVEMENT REMOVED UNDER FILL (+)	0	0
EMRF07 : TOPSOIL TO BE PLACED IN FILL (+)	0	0
EMRF08 : SUBTOTAL OF EMBANKMENT AND BORROW, TYPE 'F' REQUIRED	0	0
EMRF09 : COMPACTION FACTOR APPLIED TO THE SUBTOTAL (%)	1.2	
EMRFTOTAL : TOTAL EMBANKMENT AND BORROW, TYPE 'F' REQUIRED	0	0
TOPSOIL SUMMARY (CY) [NEED = '-' / EXCESS = '+']		
TOP01 : TOPSOIL SALVAGED FROM CUT SECTIONS (+)	0	0
TOP02 : TOPSOIL SALVAGED FROM FILL SECTIONS (+)	0	0
TOP03 : TOPSOIL SALVAGED FROM STORMWATER MANAGEMENT PONDS (+)	0	0
TOP04 : TOPSOIL REQUIRED (-)	0	0
TOPTOTAL : TOTAL TOPSOIL	0	0
MATERIAL BALANCE (CY) [NEED = '-' / EXCESS = '+']		
BORROW, TYPE 'A'	0	0
BORROW, TYPE 'B'	0	0
BORROW, TYPE 'C'	0	0
BORROW, TYPE 'F'	0	0
TOPSOIL	0	0
UNSUITABLE MATERIAL	29410	29410

UNOFFICIAL
WEBSITE
COPY

ADDENDA / REVISIONS

NOT TO SCALE

WETLAND MITIGATION AT
PETERSON WILDLIFE REFUGE,
PHASE II

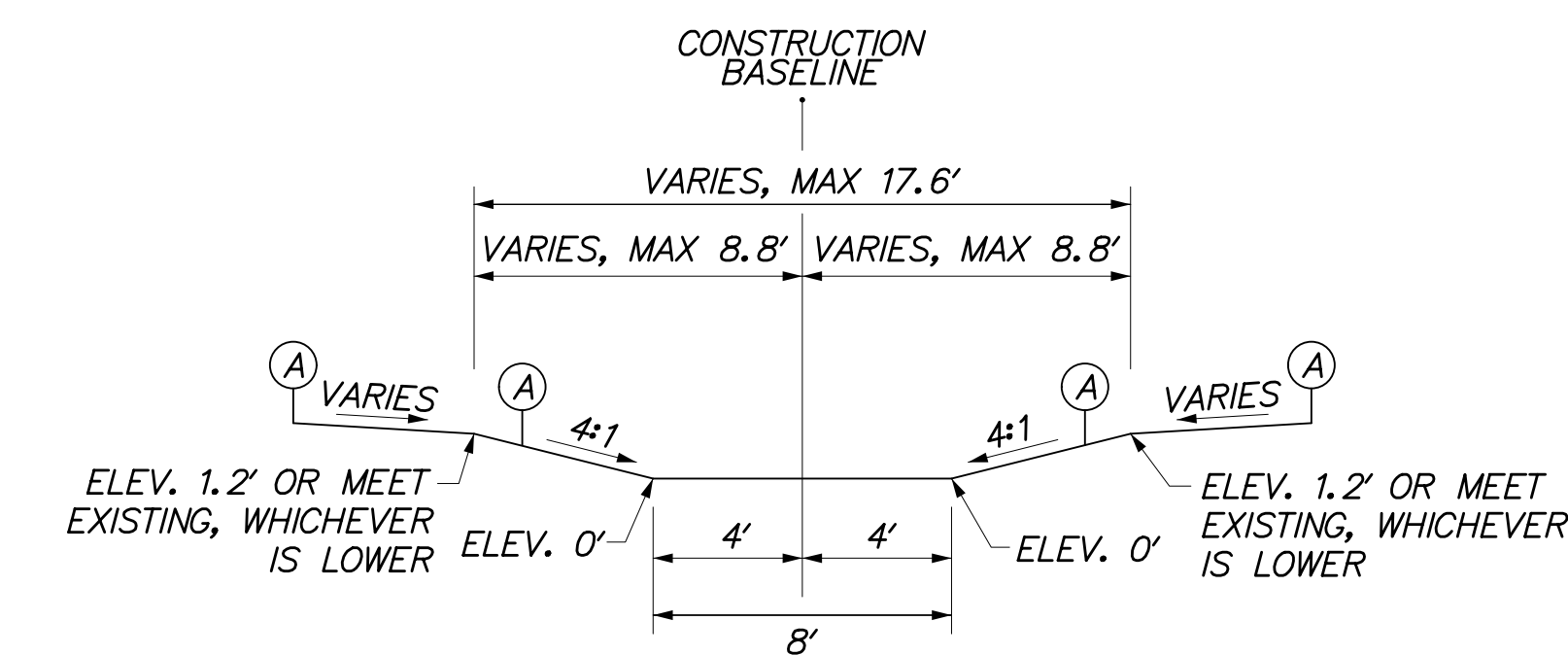
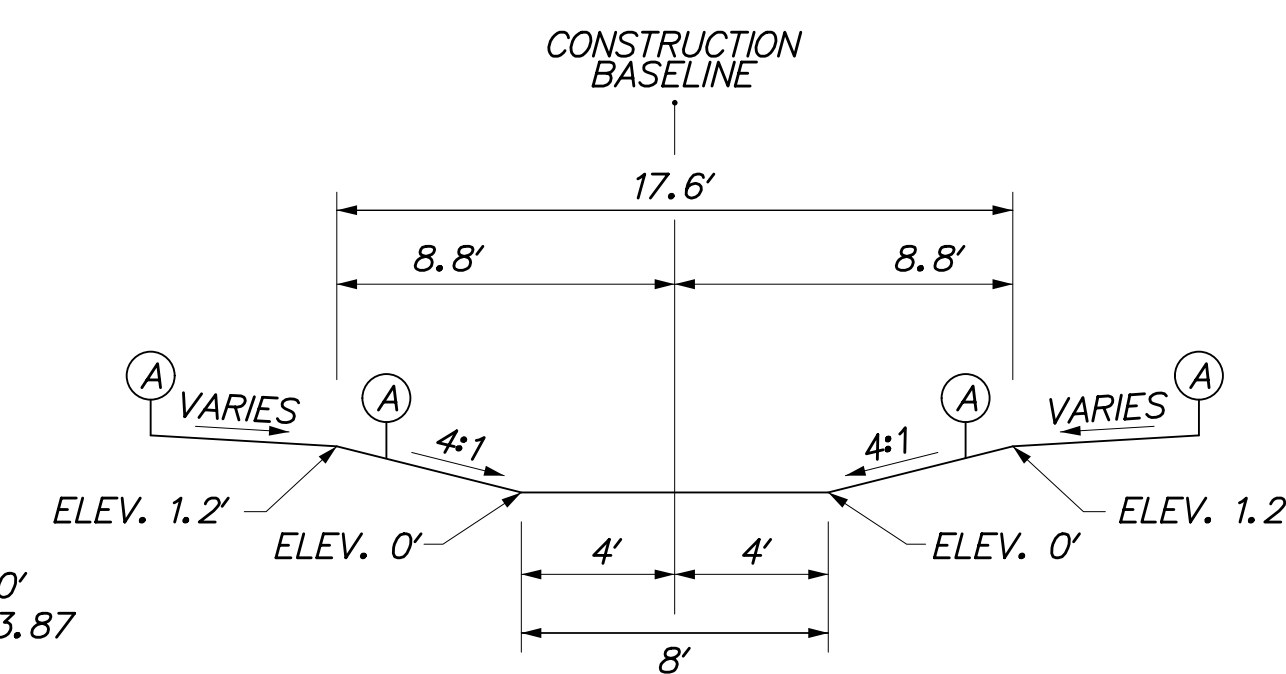
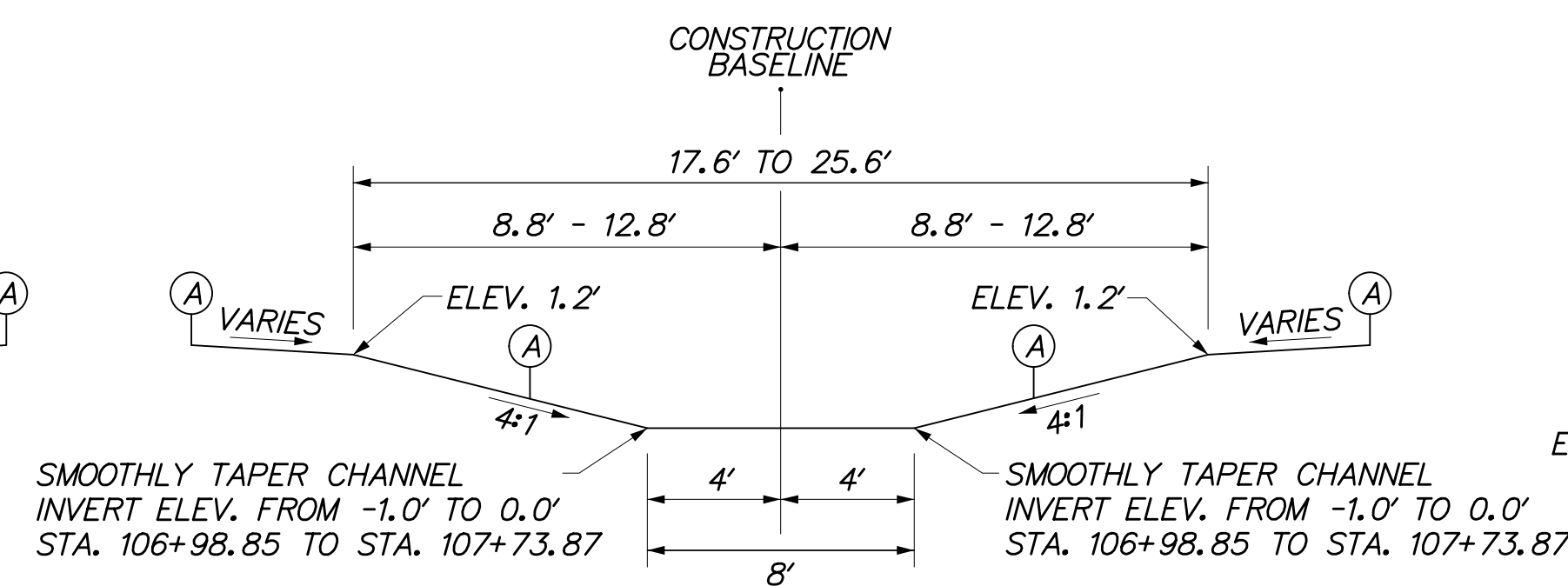
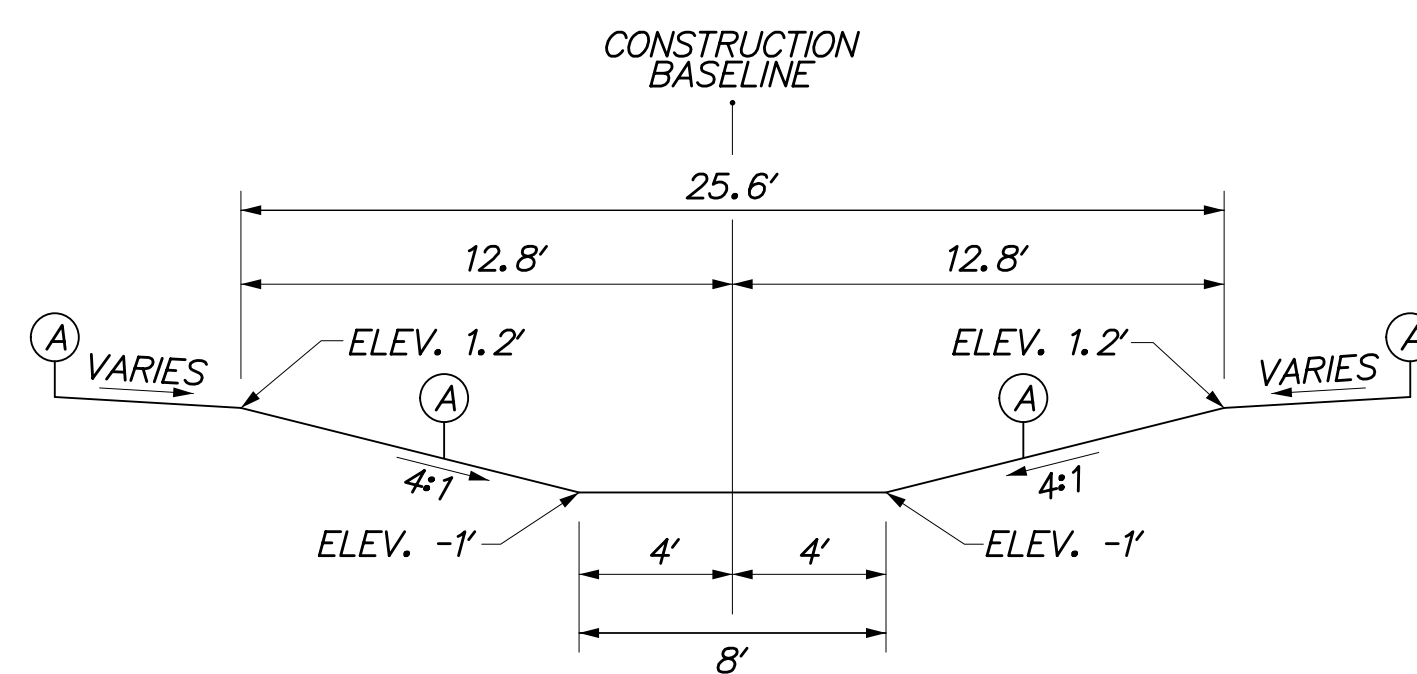
CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

NOTES

SECTION
RK&K
SHEET NO.
6

LEGEND

- (A) ITEM 908515 - TEMPORARY GRASS SEEDING - WET GROUND
- (B) ITEM 908501 - NATIVE GRASS SEEDING, NO MOW MIX

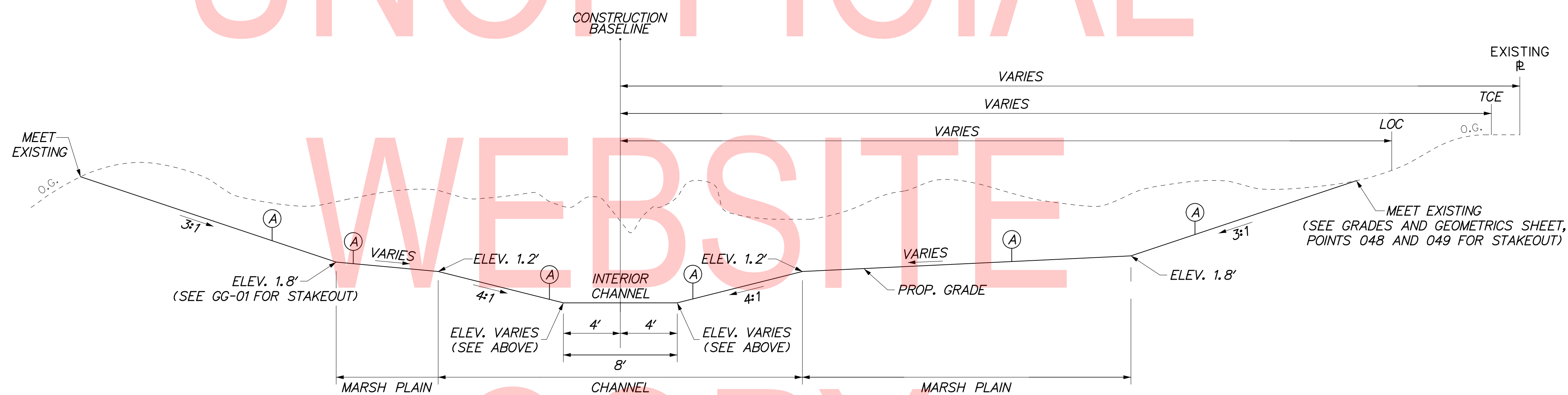


MAIN CHANNEL AND SPUR DITCHES
 MAIN CHANNEL: STA. 100+00.00 TO STA. 106+98.85
 SPUR DITCH WEST: STA. 200+00.00 TO STA. 202+22.42
 SPUR DITCH EAST: STA. 300+00.00 TO STA. 305+82.60

MAIN CHANNEL
 STA. 106+98.85 TO STA. 107+73.87

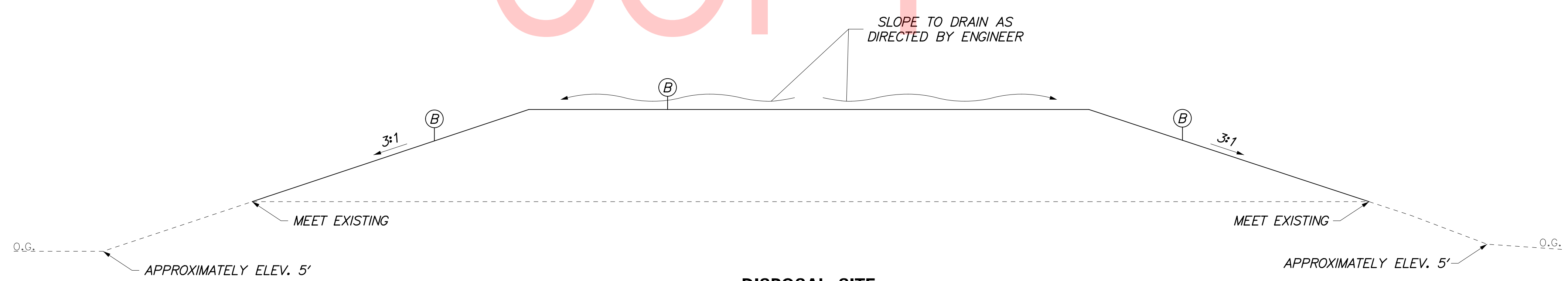
MAIN CHANNEL
 STA. 107+73.87 TO STA. 109+93.75

MAIN CHANNEL
 STA. 109+93.75 TO STA. 112+41.73



UNOFFICIAL WEBSITE COPY

MAIN CHANNEL
 STA. 100+00.00 TO STA. 112+41.73



ADDENDA / REVISIONS

NOT TO SCALE

WETLAND MITIGATION AT
 PETERSON WILDLIFE REFUGE,
 PHASE II

CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

TYPICAL SECTIONS

SECTION
RK&K
SHEET NO.
7

MAIN CHANNEL

SPUR DITCH WEST

MAIN CHANNEL

CIRCULAR CURVE NO. ①

Element:	STATION	NORTHING	EASTING
Element: Circular			
PC (101)	100+86.51	628062.7760	613104.1802
PI (1001)	101+77.49	628151.6790	613084.8528
CC (102)		628084.9152	613206.0177
PCC (103)	102+36.10	628182.8316	613170.3327
Radius:	104.2162		
Delta:	82°14'28.4386" Right		
Degree of Curvature(Arc):	54°58'40.0439"		
Length:	149.5899		
Tangent:	90.9797		
Chord:	137.0748		
Middle Ordinate:	25.7074		
External:	34.1251		
Tangent Direction:	N 12°15'54.5348" W		
Radial Direction:	N 7°44'05.4652" E		
Chord Direction:	N 28°51'19.6845" E		
Radial Direction:	S 20°01'26.0962" E		
Tangent Direction:	N 69°58'33.9038" E		

CIRCULAR CURVE NO. ⑤

Element:	STATION	NORTHING	EASTING
Element: Circular			
PC (201)	200+18.88	628189.3000	613188.0736
PI (2005)	201+36.42	628229.5640	613298.5040
CC (202)		628342.0233	613132.3893
POE (203)	202+22.42	628347.0497	613294.8696
Radius:	162.5581		
Delta:	71°44'22.4727" Left		
Degree of Curvature(Arc):	35°14'46.8513"		
Length:	203.5376		
Tangent:	117.5418		
Chord:	190.5002		
Middle Ordinate:	30.8290		
External:	38.0440		
Tangent Direction:	N 69°58'03.6339" E		
Radial Direction:	S 20°01'56.3661" E		
Chord Direction:	N 34°05'52.3975" E		
Radial Direction:	N 88°13'41.1611" E		
Tangent Direction:	N 1°46'18.8389" W		

CONSTRUCTION ALIGNMENT CONTROL

POINT	STATION	OFFSET	NORTHING	EASTING
100	100+00.00	0	627978.2375	613122.5587
110	112+60.00	0	627874.4307	614054.7113

CONSTRUCTION ALIGNMENT CONTROL

POINT	STATION	OFFSET	NORTHING	EASTING
200	200+00.00	0	628182.8318	613170.3333

CIRCULAR CURVE NO. ②

Element:	STATION	NORTHING	EASTING
Element: Circular			
PCC (103)	102+36.10	628182.8316	613170.3327
PI (1002)	106+96.64	628340.5242	613603.0276
CC (104)		627527.2612	613409.2508
PRC (105)	110+50.23	628004.6555	613918.1212
Radius:	697.7495		
Delta:	66°51'06.6821" Right		
Degree of Curvature(Arc):	8°12'41.4392"		
Length:	814.1237		
Tangent:	460.5342		
Chord:	768.7225		
Middle Ordinate:	115.4087		
External:	138.2805		
Tangent Direction:	N 69°58'33.9038" E		
Radial Direction:	S 20°01'26.0962" E		
Chord Direction:	S 76°35'52.7551" E		
Radial Direction:	S 46°49'40.5859" W		
Tangent Direction:	S 43°10'19.4141" E		

SPUR DITCH EAST

CIRCULAR CURVE NO. ⑥

Element:	STATION	NORTHING	EASTING
Element: Circular			
PC (300)	300+00.00	628220.1774	613491.2358
PI (3006)	301+48.34	628202.7472	613638.5518
CC (301)		628316.7901	613502.6668
PRC (302)	301+92.69	628344.8065	613595.8321
Radius:	97.2866		
Delta:	113°29'05.0021" Left		
Degree of Curvature(Arc):	58°53'37.7256"		
Length:	192.6938		
Tangent:	148.3436		
Chord:	162.7046		
Middle Ordinate:	43.9342		
External:	80.1127		
Tangent Direction:	S 83°15'08.0313" E		
Radial Direction:	S 6°44'51.9687" W		
Chord Direction:	N 40°00'19.4677" E		
Radial Direction:	N 73°15'46.9666" E		
Tangent Direction:	N 16°44'13.0334" W		

CIRCULAR CURVE NO. ③

Element:	STATION	NORTHING	EASTING
Element: Circular			
PRC (105)	110+50.23	628004.6555	613918.1212
PI (1003)	111+16.78	627956.1194	613963.6550
CC (106)		628158.5986	614082.2142
PRC (107)	111+79.64	627940.1621	614028.2650
Radius:	225.0000		
Delta:	32°57'17.0049" Left		
Degree of Curvature(Arc):	25°27'53.2472"		
Length:	129.4129		
Tangent:	66.5513		
Chord:	127.6364		
Middle Ordinate:	9.2403		
External:	9.6361		
Tangent Direction:	S 43°10'19.4141" E		
Radial Direction:	S 46°49'40.5859" W		
Chord Direction:	S 59°38'57.9165" E		
Radial Direction:	S 13°52'23.5810" W		
Tangent Direction:	S 76°07'36.4190" E		

CIRCULAR CURVE NO. ⑦

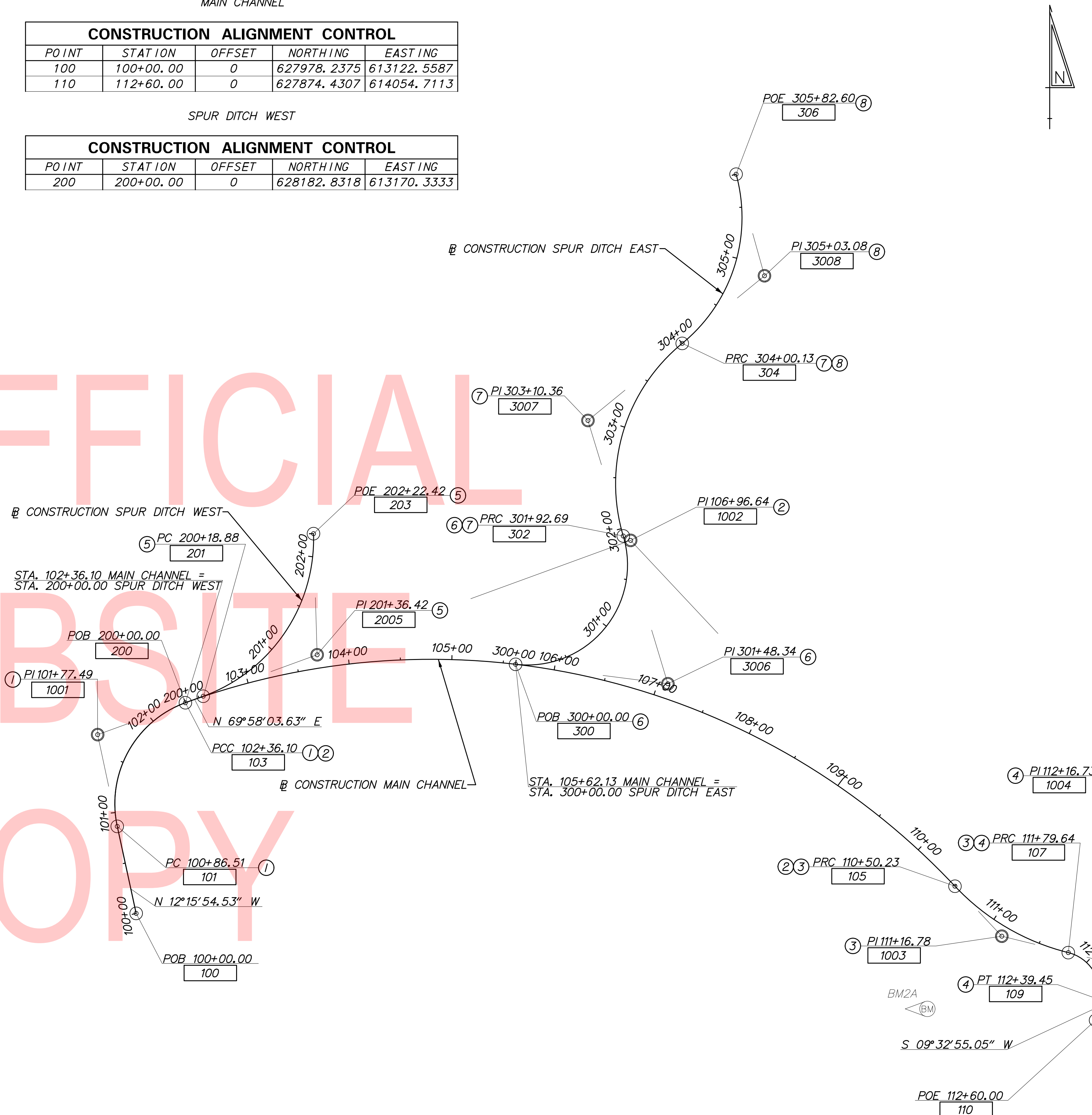
Element:	STATION	NORTHING	EASTING
Element: Circular			
PRC (302)	301+92.69	628344.8065	613595.8321
PI (3007)	303+10.36	628457.4880	613561.9467
CC (303)		628395.4861	613764.3612
PRC (304)	304+00.13	628531.8600	613653.1287
Radius:	175.9844		
Delta:	67°32'05.1255" Right		
Degree of Curvature(Arc):	32°33'26.3020"		
Length:	207.4335		
Tangent:	117.6662		
Chord:	195.6321		
Middle Ordinate:	29.6884		
External:	35.7132		
Tangent Direction:	N 16°44'13.0334" W		
Radial Direction:	N 73°15'46.9666" E		
Chord Direction:	N 17°01'49.5294" E		
Radial Direction:	S 39°12'07.9079" E		
Tangent Direction:	N 50°47'52.0921" E		

CIRCULAR CURVE NO. ④

Element:	STATION	NORTHING	EASTING
Element: Circular			
PRC (107)	111+79.64	627940.1621	614028.2650
PI (1004)	112+16.73	627931.2691	614064.2724
CC (108)		627901.3290	614018.6740
PT (109)	112+39.45	627894.6936	614058.1198
Radius:	40.0000		
Delta:	85°40'31.4709" Right		
Degree of Curvature(Arc):	143°14'22.0156"		
Length:	59.8127		
Tangent:	37.0893		
Chord:	54.3939		
Middle Ordinate:	10.6687		
External:	14.5492		
Tangent Direction:	S 76°07'36.4190" E		
Radial Direction:	S 13°52'23.5810" W		
Chord Direction:	S 33°17'20.6835" E		
Radial Direction:	N 80°27'04.9480" W		
Tangent Direction:	S 9°32'55.0520" W		

CIRCULAR CURVE NO. ⑧

Element:	STATION	NORTHING	EASTING
Element: Circular			
PRC (304)	304+00.13	628531.8600	613653.1287
PI (3008)	305+03.08	628596.9353	613732.9126
CC (305)		628654.2081	613553.3362
POE (306)	305+82.60	628696.1869	613705.5380
Radius:	157.8848		
Delta:	66°13'01.8693" Left		
Degree of Curvature(Arc):	36°17'22.6307"		
Length:	182.4687		
Tangent:	102.9575		
Chord:	172.4820		
Middle Ordinate:	25.6347		
External:	30.6036		
Tangent Direction:	N 50°47'52.0921" E		
Radial Direction:	S 39°12'07.9079" E		
Chord Direction:	N 17°41'21.1574" E		
Radial Direction:	N 74°34'50.2228" E		
Tangent Direction:	N 15°25'09.7772" W		

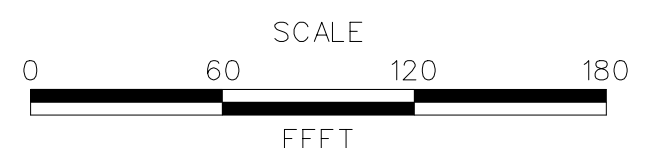


DATUM REFERENCE:
 HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).
 VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88.

MASTER CONTROL POINT DATA

POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM2A	110+85.38	120.98	627885.50	613869.80	6.22	8" NAIL TOP OF CUT-OFF WOODEN UTILITY POLE

ADDENDA / REVISIONS



WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II

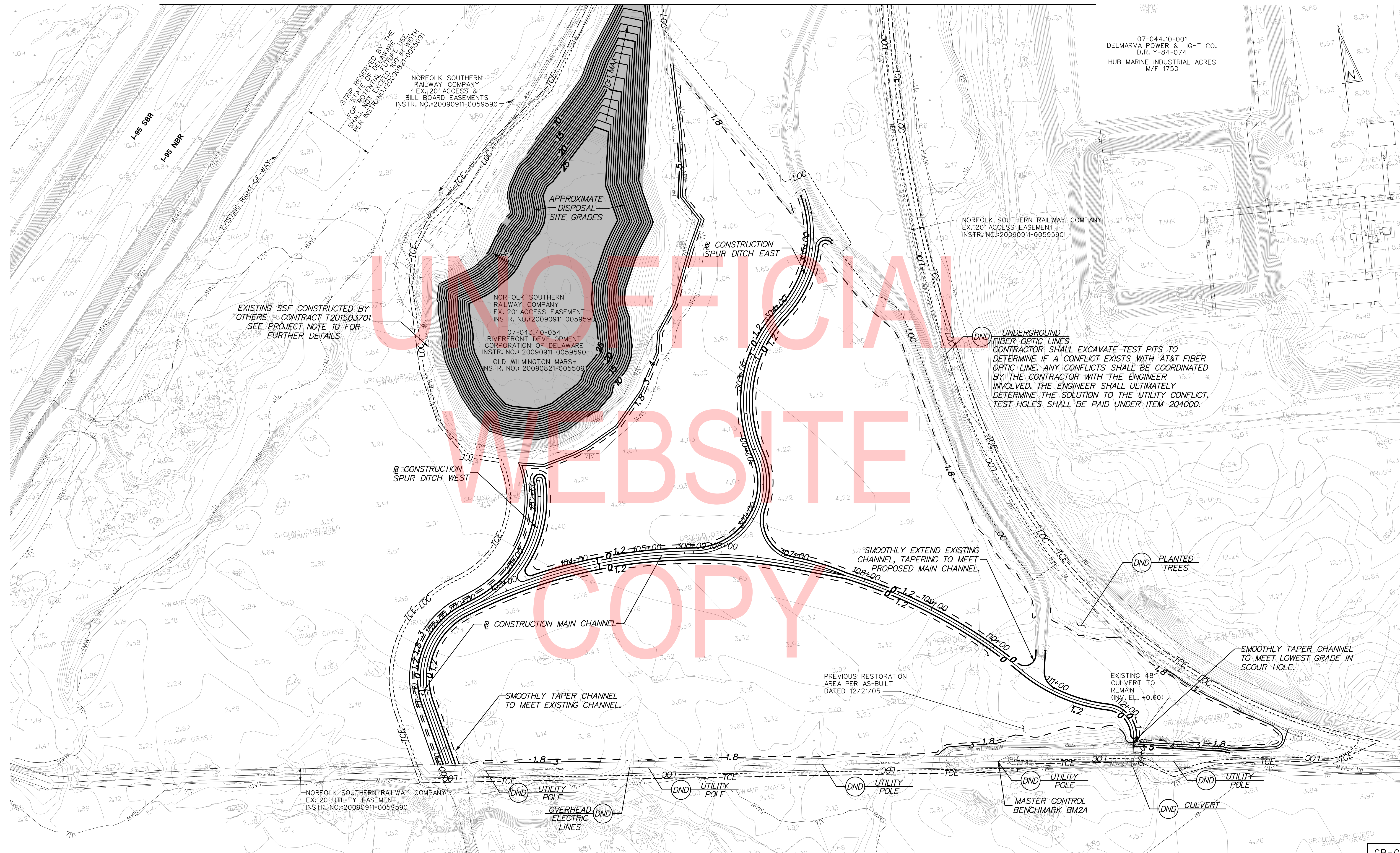
CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

HORIZONTAL AND VERTICAL CONTROL

SECTION	RK&K
SHEET NO.	8

4/24/2019 2:20:49 PM \\bosrv01\2014\2014\14144...DelDOT1707\Task 25 - Commons Mitigation Design\Cadd\Contract\Plans\hv01_c.mxd.dgn

07-044.10-001
 DELMARVA POWER & LIGHT CO.
 D.R. Y-84-074
 HUB MARINE INDUSTRIAL ACRES
 M/F 1750



EXISTING SSF CONSTRUCTED BY OTHERS - CONTRACT T201503701
 SEE PROJECT NOTE 10 FOR FURTHER DETAILS

07-043.40-054
 RIVERFRONT DEVELOPMENT CORPORATION OF DELAWARE
 INSTR. NO.: 20090911-0059590
 OLD WILMINGTON MARSH
 INSTR. NO.: 20090821-005509

NORFOLK SOUTHERN RAILWAY COMPANY
 EX. 20' ACCESS EASEMENT
 INSTR. NO.: 20090911-0059590

DND UNDERGROUND FIBER OPTIC LINES
 CONTRACTOR SHALL EXCAVATE TEST PITS TO DETERMINE IF A CONFLICT EXISTS WITH AT&T FIBER OPTIC LINE. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE ENGINEER INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE PAID UNDER ITEM 204000.

B CONSTRUCTION SPUR DITCH WEST

B CONSTRUCTION SPUR DITCH EAST

B CONSTRUCTION MAIN CHANNEL

SMOOTHLY TAPER CHANNEL TO MEET EXISTING CHANNEL.

SMOOTHLY EXTEND EXISTING CHANNEL, TAPERING TO MEET PROPOSED MAIN CHANNEL.

DND PLANTED TREES

SMOOTHLY TAPER CHANNEL TO MEET LOWEST GRADE IN SCOUR HOLE.

NORFOLK SOUTHERN RAILWAY COMPANY
 EX. 20' UTILITY EASEMENT
 INSTR. NO.: 20090911-0059590

DND UTILITY POLE

DND UTILITY POLE

DND UTILITY POLE

DND UTILITY POLE

DND UTILITY POLE

MASTER CONTROL BENCHMARK BM2A

DND CULVERT

OVERHEAD ELECTRIC LINES

EXISTING 48" CULVERT TO REMAIN (INV. EL. +0.60')

PREVIOUS RESTORATION AREA PER AS-BUILT DATED 12/21/05

ADDENDA / REVISIONS



WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II

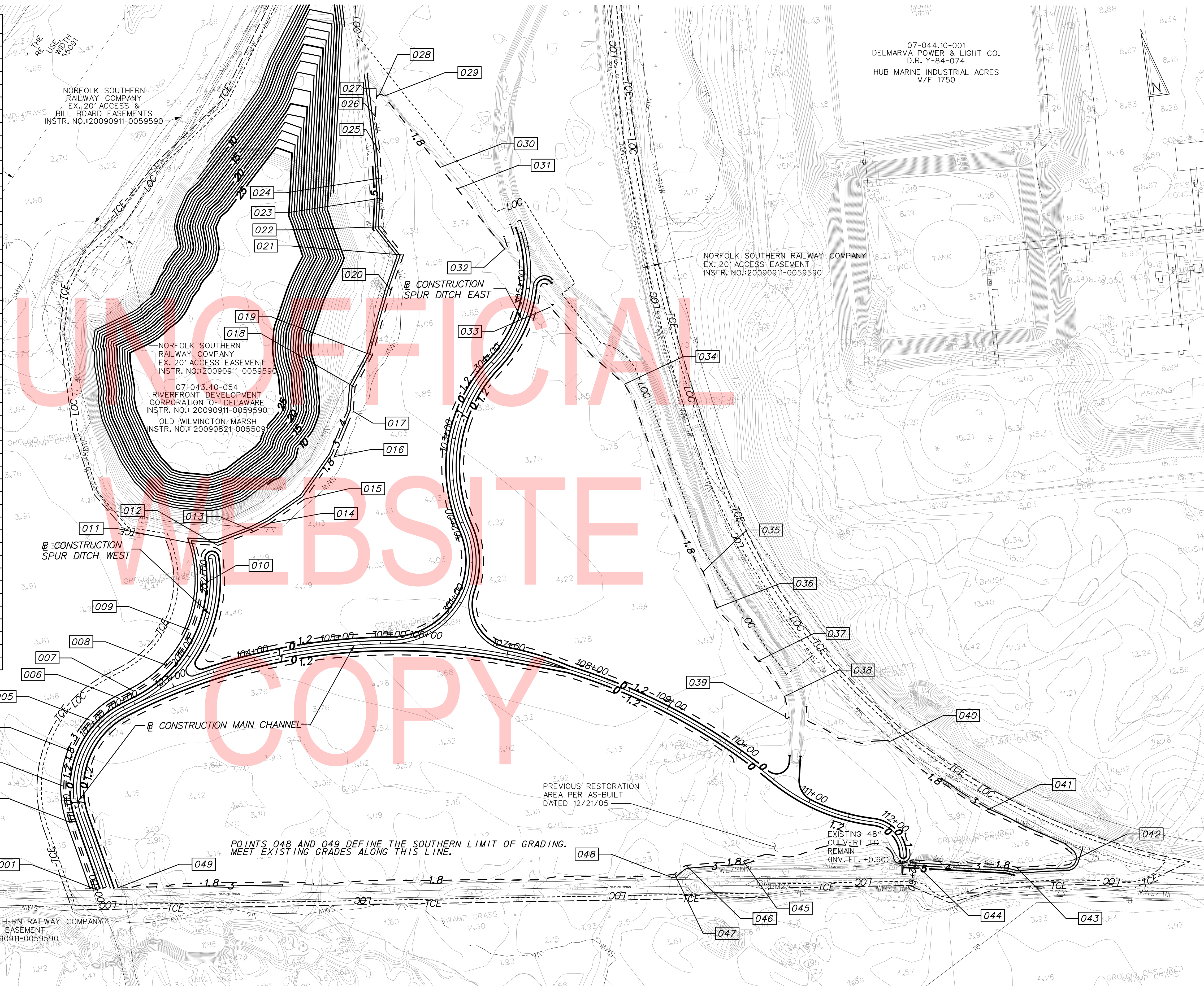
CONTRACT	T201703701	BRIDGE NO.	N/A
COUNTY	NEW CASTLE	DESIGNED BY:	N. BYERS
		CHECKED BY:	J. REEL

CONSTRUCTION PLAN

CP-01
SECTION
RK&K
SHEET NO.
9

4/24/2019 2:29:45 PM \\betr\01\2014\2014_1414_DeDOT1707\Task 25 - Commons Mitigation Design\Cadd\Contract\Plans\cp01_cmt.dgn

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
001	100+03.68	-15.20	627978.60	613106.92
002	100+86.51	-15.20	628059.55	613089.33
003	101+23.91	-15.20	628102.14	613087.85
004	101+61.30	-15.20	628142.54	613101.42
005	101+98.69	-15.20	628175.60	613128.32
006	102+36.09	-15.20	628197.11	613165.11
007	102+54.58	-15.45	628203.58	613182.87
008	103+01.61	-26.80	628228.27	613226.07
009	103+39.56	-56.74	628265.94	613258.59
010	103+64.40	-101.91	628315.98	613277.43
011	103+71.47	-150.96	628365.74	613277.83
012	103+91.96	-142.54	628360.88	613303.56
013	104+29.51	-149.11	628371.91	613348.08
014	104+46.24	-155.23	628379.25	613368.05
015	104+82.04	-177.16	628402.17	613411.87
016	105+13.15	-223.43	628447.40	613453.05
017	105+32.04	-275.30	628497.60	613481.82
018	105+34.59	-303.35	628525.29	613487.56
019	105+49.42	-340.15	628560.02	613512.41
020	105+64.62	-416.75	628633.57	613544.15
021	105+73.56	-458.19	628672.82	613563.86
022	105+58.10	-491.47	628709.04	613542.16
023	105+59.40	-525.57	628742.66	613548.24
024	105+58.75	-549.07	628766.14	613549.75
025	105+57.97	-578.36	628795.40	613551.63
026	105+55.41	-621.63	628838.94	613551.66
027	105+56.24	-642.73	628859.74	613555.51
028	105+58.08	-647.16	628863.75	613559.53
029	105+60.89	-645.42	628861.40	613564.71
030	105+97.13	-562.43	628769.71	613619.89
031	106+08.99	-538.16	628742.10	613636.51
032	106+44.75	-472.26	628664.79	613683.03
033	106+83.22	-411.89	628590.15	613727.95
034	107+51.02	-341.23	628553.17	613750.20
035	108+70.39	-164.34	628257.87	613866.86
036	108+97.60	-133.00	628213.58	613877.34
037	109+60.39	-102.59	628145.27	613917.80
038	110+03.64	-85.56	628100.12	613943.49
039	110+16.97	-66.81	628076.34	613941.29
040	111+82.02	-96.39	628031.55	614059.21
041	112+23.15	-106.90	627936.37	614161.33
042	112+38.76	-199.98	627865.64	614255.99
043	112+46.37	-134.00	627865.64	614189.11
044	112+42.38	-9.36	627890.25	614066.87
045	110+73.77	98.68	627913.69	613870.58
046	110+31.56	143.62	627917.06	613803.09
047	110+26.06	159.87	627908.63	613788.55
048	110+26.53	164.93	627904.80	613785.23
049	NA	NA	627975.57	613136.24



07-044.10-001
 DELMARVA POWER & LIGHT CO.
 D.R. Y-84-074
 HUB MARINE INDUSTRIAL ACRES
 M/F 1750

NORFOLK SOUTHERN RAILWAY COMPANY
 EX. 20' ACCESS & BILL BOARD EASEMENTS
 INSTR. NO.:20090911-0059590

07-043.40-054
 RIVERFRONT DEVELOPMENT CORPORATION OF DELAWARE
 INSTR. NO.: 20090911-0059590
 OLD WILMINGTON MARSH
 INSTR. NO.: 20090821-005509

NORFOLK SOUTHERN RAILWAY COMPANY
 EX. 20' ACCESS EASEMENT
 INSTR. NO.:20090911-0059590

CONSTRUCTION SPUR DITCH WEST

CONSTRUCTION SPUR DITCH EAST

CONSTRUCTION MAIN CHANNEL

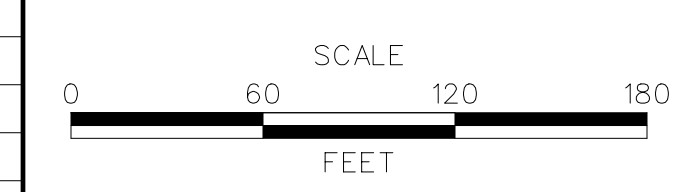
POINTS 048 AND 049 DEFINE THE SOUTHERN LIMIT OF GRADING.
 MEET EXISTING GRADES ALONG THIS LINE.

PREVIOUS RESTORATION AREA PER AS-BUILT DATED 12/21/05

EXISTING 48" CULVERT TO REMAIN (INV. EL. +0.60)

NORFOLK SOUTHERN RAILWAY COMPANY
 EX. 20' UTILITY EASEMENT
 INSTR. NO.:20090911-0059590

ADDENDA / REVISIONS



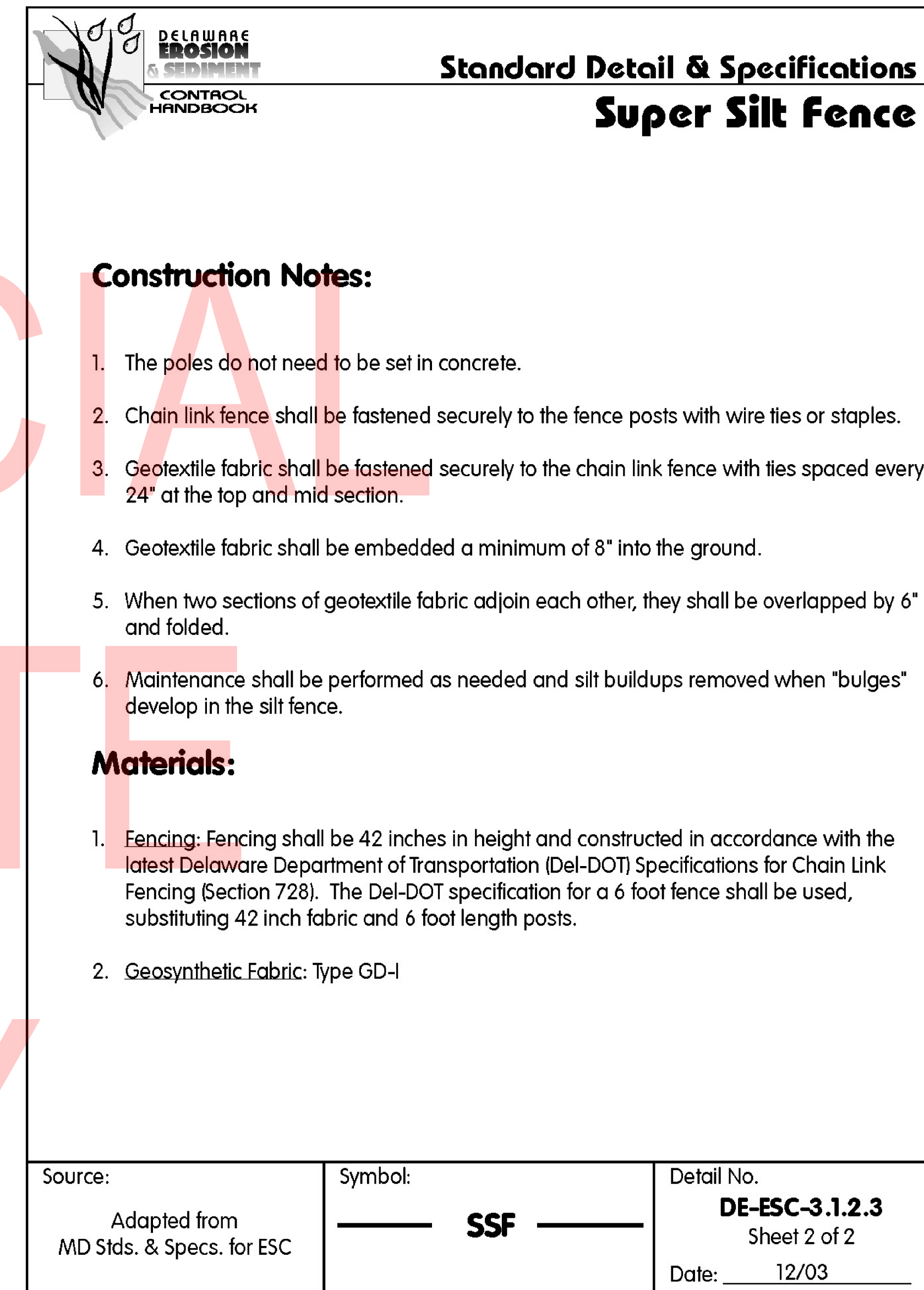
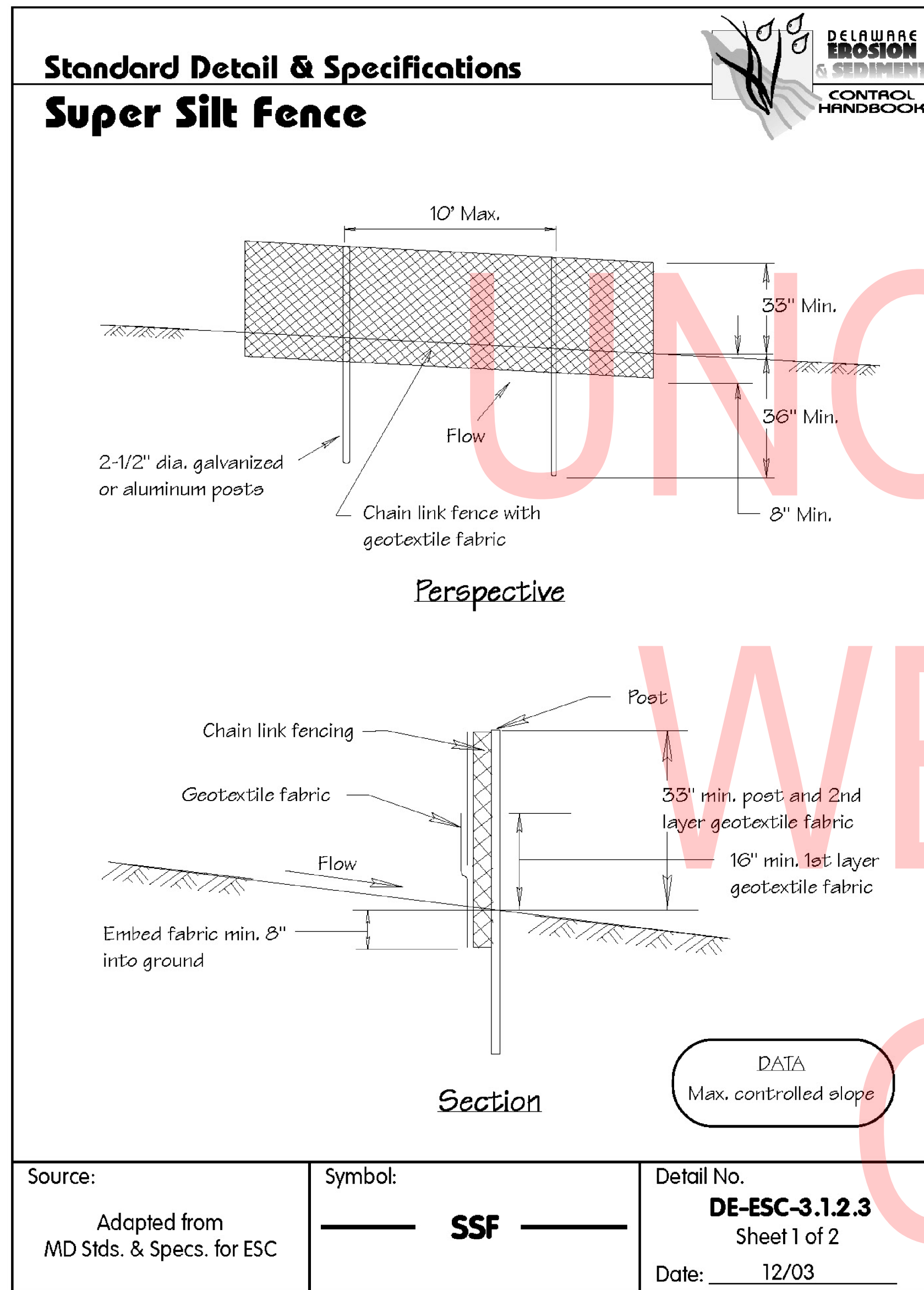
WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II

CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

GRADES AND GEOMETRICS

SECTION	RK&K
SHEET NO.	11

7/10/2019 11:52:48 AM \\belsr\01\2014\2014_1414...DelDOT1707\Task_25 - Commons Mitigation Design\Cadd\Contract\Plans\gg01_cadd.dgn



6/6/2019 12:06:26 PM \\BALSRV01\2014\2014-14144-DELDOT1707\TASK 25 - COMMONS MITIGATION DESIGN\CADD\CONTRACT\PLANS\DT01_CMD.DGN

ADDENDA / REVISIONS

NOT TO SCALE

WETLAND MITIGATION AT
PETERSON WILDLIFE REFUGE,
PHASE II

CONTRACT T201703701	BRIDGE NO. N/A
COUNTY NEW CASTLE	DESIGNED BY: N. BYERS
	CHECKED BY: J. REEL

CONSTRUCTION DETAILS

SECTION RK&K
SHEET NO. 12

ENVIRONMENTAL COMPLIANCE NOTES

TABLES FOR ENTIRE PROJECT

1. GENERAL NOTES:

- A. THE PURPOSE OF THESE SHEETS AND MITIGATION SUMMARY TABLES 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 THESE SHEETS DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.
- D. THE IDENTIFIED PERMANENT AND TEMPORARY IMPACTS TO JURISDICTIONAL RESOURCES SHOWN ON THE ENVIRONMENTAL COMPLIANCE SHEETS ARE THE ONLY AUTHORIZED IMPACTS.

2. PROTECTION OF RESOURCES:

A. PERMIT REQUIREMENTS / APPROVALS*

USACE INDIVIDUAL PERMIT CENAP-OP-R-2018-822-85 - APPROVED 7/15/2019; EXPIRES 12/31/2024**
 DNREC TIDAL WETLANDS PERMIT - APPROVED 1/7/2019; EXPIRES 1/7/2022**
 DNREC 401 WQC - APPROVED 1/7/2019; EXPIRES 1/7/2022**
 DNREC CZM - APPROVED 10/9/2018**
 NEW CASTLE COUNTY FLOODPLAIN - PENDING**

- * THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING/OBTAINING THESE PERMITS/APPROVALS.
- ** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO THE BEGINNING OF CONSTRUCTION AND ENSURE THESE PERMITS/APPROVALS ARE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.

B. CONSTRUCTION RESTRICTIONS:

ENDANGERED SPECIES: NONE
 FISHERIES: NONE
 MIGRATORY BIRDS: NONE

C. PROTECTION OF RESOURCES:

- I KEEP CLEARING IN WETLAND AREAS TO THE MINIMUM ABSOLUTELY NECESSARY FOR CONSTRUCTION ACCESS. ALL EQUIPMENT TRAVERSING WETLANDS AND SUBAQUEOUS LAND SHALL BE LOW GROUND-CONTACT PRESSURE EQUIPMENT OR SHALL BE SUPPORTED ON MATS. PAYMENT FOR TRAVERSING WETLANDS WITH LOW GROUND-CONTACT PRESSURE EQUIPMENT OR MATS WILL BE INCIDENTAL TO ITEM 202000 - EXCAVATION AND EMBANKMENT. SEE PROJECT NOTES FOR ADDITIONAL DETAILS. RESTORE TEMPORARILY DISTURBED WETLAND AREAS TO GRADE AND SEED WITH ITEM 908515 - TEMPORARY GRASS SEEDING - WET GROUND.
- II CONTRACTOR ACCESS BEYOND THE LOC IS STRICTLY PROHIBITED. LOC LIMITS SHALL BE FLAGGED IN AREAS WHERE SUPER SILT FENCE AND TURBIDITY CURTAIN ARE NOT UTILIZED.

D. CULTURAL RESOURCES:

IF ANY UNANTICIPATED DISCOVERIES OF ARCHAEOLOGICAL OR HUMAN REMAINS OCCUR DURING CONSTRUCTION, ALL WORK SHALL BE IMMEDIATELY SUSPENDED IN THE AREA OF THE DISCOVERY AND THE ENVIRONMENTAL MONITOR SHALL BE CONTACTED. THE ENVIRONMENTAL MONITOR WILL CONTACT DELDOT CULTURAL RESOURCES, SHPO AND USACE TO COMMENCE THE NECESSARY FEDERAL AND STATE COORDINATION. WORK SHALL NOT RESUME UNTIL APPROPRIATE RESOURCE AGENCY COORDINATION, INVESTIGATION AND/OR RECOVERY IS COMPLETE.

TEMPORARY WETLAND IMPACT AREA SCHEDULE				
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	JURISDICTION
2-WT-01	CONSTRUCTION ACCESS/E&S	29,368.97	0.6742	USACE/DNREC
2-WT-02	CONSTRUCTION ACCESS/E&S	4,819.40	0.1106	USACE
2-WT-03	CONSTRUCTION ACCESS/E&S	900.20	0.0207	USACE/DNREC
2-WT-04	CONSTRUCTION ACCESS/E&S	222.02	0.0051	USACE
2-WT-05	CONSTRUCTION ACCESS/E&S	15.07	0.0003	USACE
2-WT-06	CONSTRUCTION ACCESS/E&S	21,066.29	0.4836	USACE/DNREC
2-WT-07	CONSTRUCTION ACCESS/E&S	6,672.56	0.1532	USACE/DNREC
2-WT-08	ENHANCEMENT OF PREVIOUSLY RESTORED MARSH	55,541.38	1.2751	USACE/DNREC
3-WT-01	CONSTRUCTION ACCESS/ E&S	3,270.75	0.0751	DNREC
3-WT-02	CONSTRUCTION ACCESS/ E&S	102.44	0.0024	USACE
3-WT-03	CONSTRUCTION ACCESS/ E&S	418.46	0.0096	USACE/DNREC
3-WT-04	CONSTRUCTION ACCESS/ E&S	23.58	0.0005	USACE
3-WT-05	CONSTRUCTION ACCESS/ E&S	3,963.54	0.0910	USACE
TOTAL TEMPORARY WETLAND IMPACT AREAS		123,113.91	2.8263	USACE
TOTAL TEMPORARY WETLAND IMPACT AREAS		117,238.61	2.6915	DNREC

WETLAND CREATION AREA SCHEDULE				
ID	DESCRIPTION	AREA (SF)	AREA (AC)	JURISDICTION
2-WC-01	TIDAL WETLAND	5,878.89	0.1350	DNREC
2-WC-02	TIDAL WETLAND	2,824.83	0.0648	DNREC
TOTAL WETLAND CREATION AREAS		0	0	USACE
TOTAL WETLAND CREATION AREAS		8,703.72	0.1998	DNREC

WETLAND ENHANCEMENT AREA SCHEDULE				
ID	DESCRIPTION	AREA (SF)	AREA (AC)	JURISDICTION
2-WE-01	TIDAL WETLAND	5,878.89	0.1350	USACE
2-WE-02	TIDAL WETLAND	2,824.83	0.0648	USACE
2-WE-03	TIDAL WETLAND	347,187.63	7.9703	USACE/DNREC
2-WE-04	TIDAL WETLAND	49,417.15	1.1345	USACE/DNREC
TOTAL WETLAND ENHANCEMENT AREAS		405,308.50	9.3046	USACE
TOTAL WETLAND ENHANCEMENT AREAS		396,604.78	9.1048	DNREC

COMPENSATORY MITIGATION PROVIDED		
TYPE	USACE (AC)	DNREC (AC)
CREATION	0	0.1998
ENHANCEMENT	9.3046	9.1048
TOTAL	9.3046	9.3046

USACE COMPENSATORY MITIGATION TABLE				
IMPACT LOCATION	IMPACTS (AC)	RATIO	MITIGATION REQUIRED (AC)	PETERSON MITIGATION LOCATION **
CHRISTINA RIVER BRIDGE	0.0596*	4:1	0.2385	2-WE-01, 2-WE-04
CHRISTINA RIVER BRIDGE APPROACHES	0.2577	4:1	1.0309	2-WE-01, 2-WE-04
SR 141, I-95 JAY DRIVE	2.6784	3:1	8.0352	2-WE-02, 2-WE-03

DNREC COMPENSATORY MITIGATION TABLE				
IMPACT LOCATION	IMPACTS (AC)	RATIO	MITIGATION REQUIRED (AC)	PETERSON MITIGATION LOCATION **
CHRISTINA RIVER BRIDGE	0.0453	4:1	0.1812	2-WC-01, 2-WE-04
CHRISTINA RIVER BRIDGE APPROACHES	0	-	0	-
SR 141, I-95 JAY DRIVE	1.5295	3:1	4.5885	2-WC-02, 2-WE-03

* CHRISTINA RIVER BRIDGE IMPACTS NUMBER EXCLUDES SHADING IMPACTS.
 ** DUE TO DIFFERING USACE AND DNREC WETLAND BOUNDARIES, MITIGATION AREAS MAY PRESENT MULTIPLE IDENTIFIERS (E.G., 2-WE-01 AND 2-WC-01 ON EC-02)

ORIGINAL SHEET PREPARED BY RKK ON 08-29-2017. SHEET LAST UPDATED ON 08-07-2019.

WETLANDS DELINEATED BY ERION 12-23-2014 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)".

DNREC MAP REVISION DATE: 12-2-2015

ADDENDA / REVISIONS

NOT TO SCALE

WETLAND MITIGATION AT
 PETERSON WILDLIFE REFUGE,
 PHASE II

CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE NOTES

EC-01

SECTION

RK&K

SHEET NO.

13

8/7/2019 9:50:04 AM \\bosrv01\12014\2014\14144_DeID011707\Task_25 - Commons Mitigation Design\Cadd\Contract\Plans\ec01_crm.dgn

TEMPORARY WETLAND IMPACT AREA SCHEDULE				
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	JURISDICTION
2-WT-01	CONSTRUCTION ACCESS/E&S	29,368.97	0.6742	USACE/DNREC
2-WT-02	CONSTRUCTION ACCESS/E&S	4,819.40	0.1106	USACE
2-WT-03	CONSTRUCTION ACCESS/E&S	900.20	0.0207	USACE/DNREC
2-WT-04	CONSTRUCTION ACCESS/E&S	222.02	0.0051	USACE
2-WT-05	CONSTRUCTION ACCESS/E&S	15.07	0.0003	USACE
2-WT-06	CONSTRUCTION ACCESS/E&S	21,066.29	0.4836	USACE/DNREC
2-WT-07	CONSTRUCTION ACCESS/E&S	6,672.56	0.1532	USACE/DNREC
2-WT-08	ENHANCEMENT OF PREVIOUSLY RESTORED MARSH	55,541.38	1.2751	USACE/DNREC
TOTAL TEMP. WETLAND IMPACT AREAS		118,605.89	2.7228	USACE
TOTAL TEMP. WETLAND IMPACT AREAS		113,549.40	2.6068	DNREC

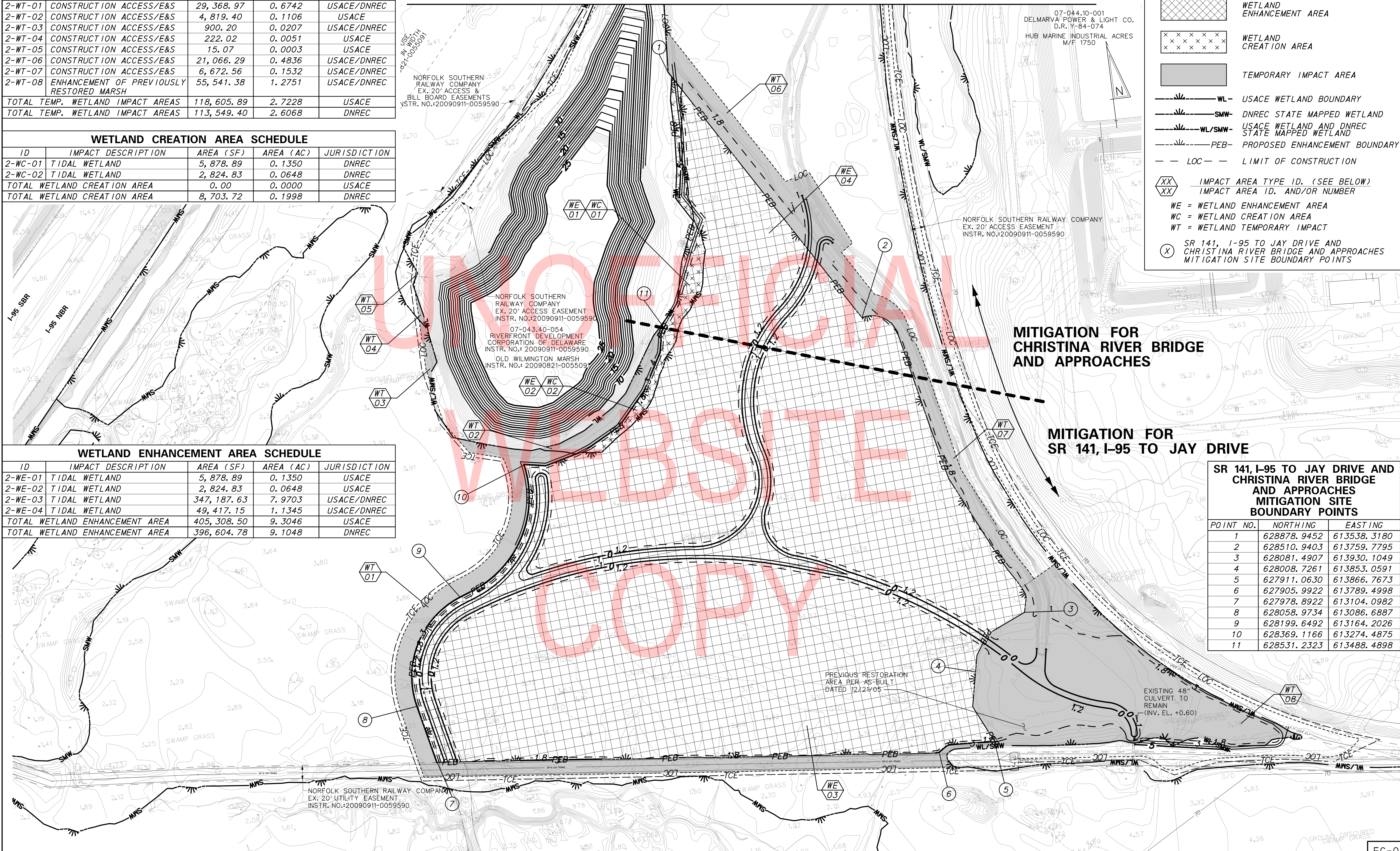
WETLAND CREATION AREA SCHEDULE				
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	JURISDICTION
2-WC-01	TIDAL WETLAND	5,878.89	0.1350	DNREC
2-WC-02	TIDAL WETLAND	2,824.83	0.0648	DNREC
TOTAL WETLAND CREATION AREA		0.00	0.0000	USACE
TOTAL WETLAND CREATION AREA		8,703.72	0.1998	DNREC

WETLAND ENHANCEMENT AREA SCHEDULE				
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	JURISDICTION
2-WE-01	TIDAL WETLAND	5,878.89	0.1350	USACE
2-WE-02	TIDAL WETLAND	2,824.83	0.0648	USACE
2-WE-03	TIDAL WETLAND	347,187.63	7.9703	USACE/DNREC
2-WE-04	TIDAL WETLAND	49,417.15	1.1345	USACE/DNREC
TOTAL WETLAND ENHANCEMENT AREA		405,308.50	9.3046	USACE
TOTAL WETLAND ENHANCEMENT AREA		396,604.78	9.1048	DNREC

MATCH LINE - SEE SHEET EC-03

LEGEND

- WETLAND ENHANCEMENT AREA
- WETLAND CREATION AREA
- TEMPORARY IMPACT AREA
- USACE WETLAND BOUNDARY
- DNREC STATE MAPPED WETLAND
- USACE WETLAND AND DNREC STATE MAPPED WETLAND
- PROPOSED ENHANCEMENT BOUNDARY
- LIMIT OF CONSTRUCTION
- IMPACT AREA TYPE ID. (SEE BELOW) IMPACT AREA ID. AND/OR NUMBER
- WE = WETLAND ENHANCEMENT AREA
- WC = WETLAND CREATION AREA
- WT = WETLAND TEMPORARY IMPACT
- SR 141, I-95 TO JAY DRIVE AND CHRISTINA RIVER BRIDGE AND APPROACHES MITIGATION SITE BOUNDARY POINTS



MITIGATION FOR CHRISTINA RIVER BRIDGE AND APPROACHES

MITIGATION FOR SR 141, I-95 TO JAY DRIVE

SR 141, I-95 TO JAY DRIVE AND CHRISTINA RIVER BRIDGE AND APPROACHES MITIGATION SITE BOUNDARY POINTS

POINT NO.	NORTHING	EASTING
1	628878.9452	613538.3180
2	628510.9403	613759.7795
3	628081.4907	613930.1049
4	628008.7261	613853.0591
5	627911.0630	613866.7673
6	627905.9922	613789.4998
7	627978.8922	613104.0982
8	628058.9734	613086.6887
9	628199.6492	613164.2026
10	628369.1166	613274.4875
11	628531.2323	613488.4898

6/6/2019 12:09:49 PM \\belsr001\2014\2014_14144_DeDOT1707\Task_25 - Commons Mitigation Design\Cadd\Contract\Plans\ec02_cadd.dgn

ADDENDA / REVISIONS



WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II





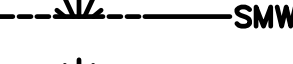



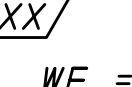


CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

ENVIRONMENTAL COMPLIANCE PLAN

EC-02
SECTION
R&K
SHEET NO.
14

TEMPORARY WETLAND IMPACT AREA SCHEDULE				
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	JURISDICTION
3-WT-01	CONSTRUCTION ACCESS/E&S	3,270.75	0.0751	DNREC
3-WT-02	CONSTRUCTION ACCESS/E&S	102.44	0.0024	USACE
3-WT-03	CONSTRUCTION ACCESS/E&S	418.46	0.0096	USACE/DNREC
3-WT-04	CONSTRUCTION ACCESS/E&S	23.58	0.0005	USACE
3-WT-05	CONSTRUCTION ACCESS/E&S	3,963.54	0.0910	USACE
TOTAL TEMP. WETLAND IMPACT AREAS		4,508.02	0.1035	USACE
TOTAL TEMP. WETLAND IMPACT AREAS		3,689.21	0.0847	DNREC

LEGEND

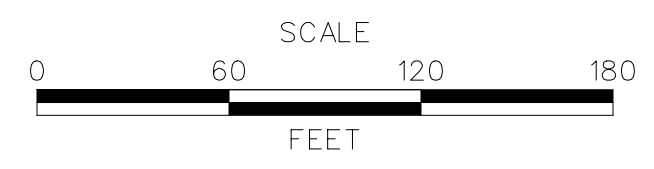
-  WETLAND ENHANCEMENT AREA
-  WETLAND CREATION AREA
-  TEMPORARY IMPACT AREA
-  WL - USACE WETLAND BOUNDARY
-  SMW - DNREC STATE MAPPED WETLAND
-  WL/SMW - USACE WETLAND AND DNREC STATE MAPPED WETLAND
-  PEB - PROPOSED ENHANCEMENT BOUNDARY
-  LOC - LIMIT OF CONSTRUCTION
-  IMPACT AREA TYPE ID. (SEE BELOW)
-  IMPACT AREA ID. AND/OR NUMBER
- WE = WETLAND ENHANCEMENT AREA
- WC = WETLAND CREATION AREA
- WT = WETLAND TEMPORARY IMPACT
-  SR 141, I-95 TO JAY DRIVE AND CHRISTINA RIVER BRIDGE AND APPROACHES MITIGATION SITE BOUNDARY POINTS

MATCH LINE - SEE SHEET EC-02

UNOFFICIAL
WETLAND COPY



ADDENDA / REVISIONS



**WETLAND MITIGATION AT
PETERSON WILDLIFE REFUGE,
PHASE II**

CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

**ENVIRONMENTAL
COMPLIANCE PLAN**

EC-03
SECTION
RK&K
SHEET NO.
15

4/24/2019 2:29:54 PM \\sfsr001\2014\2014\14144_DelDOT17071\Task 25 - Commons Mitigation Design\Cadd\Contract\Plans\ec03_cmd.dgn

PREPARED BY
RK&K

Carm D. Webb 5/31/19
DATE



THIS SEAL APPLIES TO ALL SHEETS BEARING THE "RK&K" SECTION DESIGNATION.

"I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN OF THESE PLANS MEETS THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS."

Vincent W. Davis 06/04/2019
DELDOT STORMWATER ENGINEER DATE

"I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THESE PLANS MEET THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS AND THAT ALL CLEARING, GRADING, AND CONSTRUCTION WILL BE ACCOMPLISHED PURSUANT TO THE PLAN."

EROSION AND SEDIMENT CONTROL NOTES

1. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS ARE VALID FOR A FIVE 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 FIVE YEARS, THE CONTRACTOR WILL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS. THE STORMWATER ENGINEER WILL REVIEW THE CURRENT SEDIMENT AND STORMWATER MANAGEMENT PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

2.

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

3. THE DISTURBED AREA FOR THIS PROJECT IS 17.48 ACRES.

MAINTENANCE OF TRAFFIC NOTES

1. 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 801000.

UNOFFICIAL WEBSITE COPY

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

6/3/2019 11:09:12 AM \\belsr01\2014\2014_1414...DelDOT1707\Task_25 - Commons Mitigation Design\Cadd\Contract\Plans\cs01A_ccmd.dgn

ADDENDA / REVISIONS

NOT TO SCALE

WETLAND MITIGATION AT
PETERSON WILDLIFE REFUGE,
PHASE II

CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

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

CS-01
SECTION
RK&K
SHEET NO.
16

07-044.10-001
 DELMARVA POWER & LIGHT CO.
 D.R. Y-84-074
 HUB MARINE INDUSTRIAL ACRES
 M/F 1750

EXISTING SSF CONSTRUCTED BY OTHERS - CONTRACT T201503701
 SEE PROJECT NOTE 9 FOR FURTHER DETAILS

NORFOLK SOUTHERN RAILWAY COMPANY
 EX. 20' ACCESS EASEMENT
 INSTR. NO.: 20090911-0059590

07-043.40-054
 RIVERFRONT DEVELOPMENT CORPORATION OF DELAWARE
 INSTR. NO.: 20090911-0059590
 OLD WILMINGTON MARSH
 INSTR. NO.: 20090821-005509

NORFOLK SOUTHERN RAILWAY COMPANY
 EX. 20' ACCESS EASEMENT
 INSTR. NO.: 20090911-0059590

PHASE 1 SEQUENCE OF CONSTRUCTION

1. INSTALL TEMPORARY WARNING SIGNS AS SHOWN ON THE PLANS.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS.
3. INSTALL PERIMETER FLAGGING POSTS PER ITEM 763501.
4. INSTALL PHASE 1 TURBIDITY CURTAINS, FLOATING, PHASE 1 SILT FENCE, AND PHASE 1 SUPER SILT FENCE AS SHOWN ON THE PLANS.
5. EXCAVATE TO THE PROPOSED GRADES.
6. STABILIZE WITH SEED IN ACCORDANCE WITH PROJECT NOTES 15 THROUGH 18.
7. SUBMIT FINAL GRADE AS-BUILTS FOR APPROVAL IN ACCORDANCE WITH PROJECT NOTE 6.
8. UPON APPROVAL OF AS-BUILTS, REMOVE TURBIDITY CURTAINS, SILT FENCE AND PERIMETER FLAGGING POSTS. SUPER SILT FENCE SHALL REMAIN IN PLACE.

CONSTRUCTION SPUR DITCH WEST

CONSTRUCTION SPUR DITCH EAST

CONSTRUCTION MAIN CHANNEL

PREVIOUS RESTORATION AREA PER AS-BUILT DATED 12/21/05

EXISTING 48" PIPE
 TO REMAIN
 (INV. EL. +0.60)

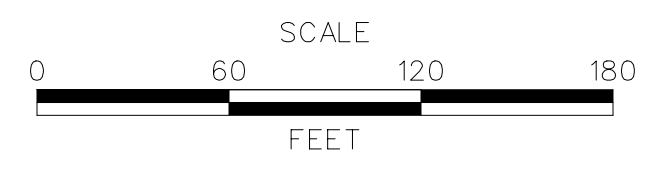
EROSION & SEDIMENT CONTROL

	TURBIDITY CURTAIN / LENGTH
	TURBIDITY CURTAIN
	SILT FENCE / LENGTH
	SILT FENCE
	SUPER SILT FENCE / LENGTH
	SUPER SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION PHASING LEGEND

WORK AREA THIS PHASE

ADDENDA / REVISIONS



WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II

CONTRACT	T201703701	BRIDGE NO.	N/A
COUNTY	NEW CASTLE	DESIGNED BY:	N. BYERS
		CHECKED BY:	J. REEL

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 1

CS-02
SECTION
RK&K
SHEET NO.
17

7/12/2019 10:43:08 AM \\belsr001\2014\2014\14144_DeDOT1707\Task 25 - Commons Mitigation Design\Cadd\Contract\Plans\cs02_cadd.dgn

EROSION & SEDIMENT CONTROL

	TURBIDITY CURTAIN / LENGTH
	TURBIDITY CURTAIN
	SILT FENCE / LENGTH
	SILT FENCE
	SUPER SILT FENCE / LENGTH
	SUPER SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE

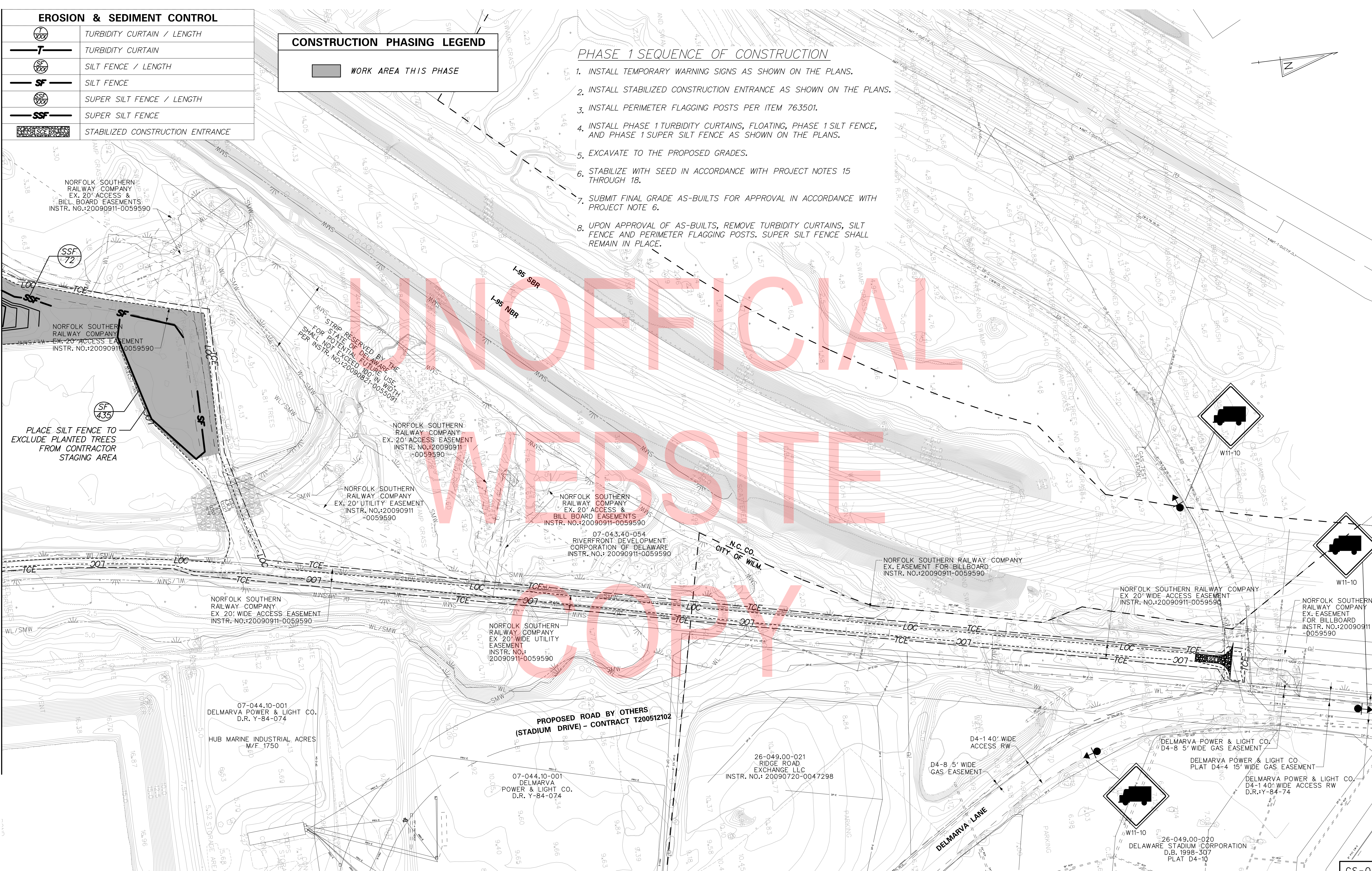
CONSTRUCTION PHASING LEGEND

WORK AREA THIS PHASE

PHASE 1 SEQUENCE OF CONSTRUCTION

1. INSTALL TEMPORARY WARNING SIGNS AS SHOWN ON THE PLANS.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE PLANS.
3. INSTALL PERIMETER FLAGGING POSTS PER ITEM 763501.
4. INSTALL PHASE 1 TURBIDITY CURTAINS, FLOATING, PHASE 1 SILT FENCE, AND PHASE 1 SUPER SILT FENCE AS SHOWN ON THE PLANS.
5. EXCAVATE TO THE PROPOSED GRADES.
6. STABILIZE WITH SEED IN ACCORDANCE WITH PROJECT NOTES 15 THROUGH 18.
7. SUBMIT FINAL GRADE AS-BUILTS FOR APPROVAL IN ACCORDANCE WITH PROJECT NOTE 6.
8. UPON APPROVAL OF AS-BUILTS, REMOVE TURBIDITY CURTAINS, SILT FENCE AND PERIMETER FLAGGING POSTS. SUPER SILT FENCE SHALL REMAIN IN PLACE.

MATCH LINE - SEE SHEET CS-01



ADDENDA / REVISIONS



**WETLAND MITIGATION AT
PETERSON WILDLIFE REFUGE,
PHASE II**

CONTRACT	T201703701	BRIDGE NO.	N/A
COUNTY	NEW CASTLE	DESIGNED BY:	N. BYERS
		CHECKED BY:	J. REEL

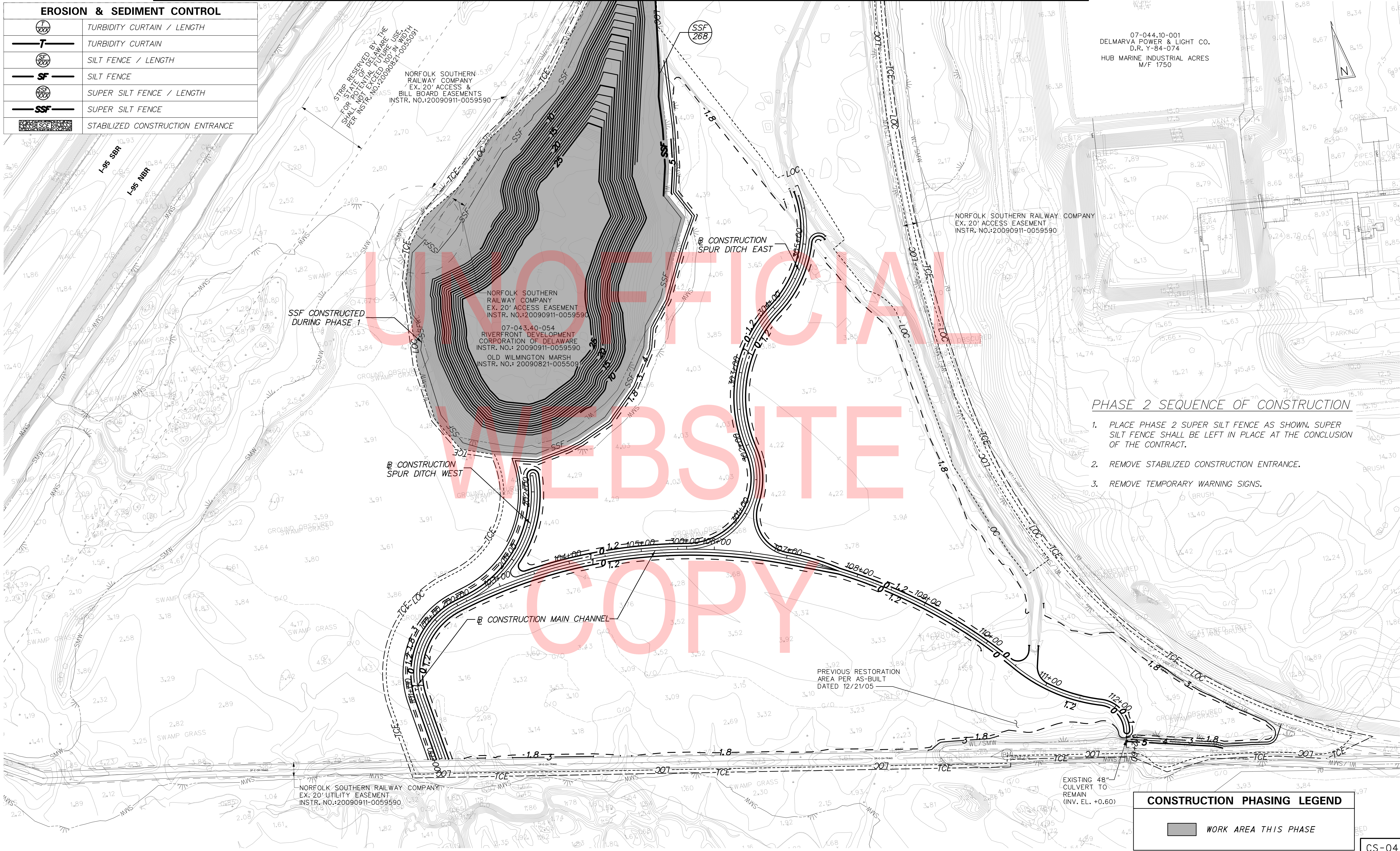
**CONSTRUCTION PHASING,
M.O.T., AND EROSION
CONTROL PLAN - PHASE 1**

CS-03
SECTION
RK&K
SHEET NO.
18

7/12/2019 10:46:16 AM \\balsrc01\2014\14144_DelDOT1707\Task 25 - Commons Mitigation Design\Cadd\Contract\Plans\cs03_crd.dgn

EROSION & SEDIMENT CONTROL	
	TURBIDITY CURTAIN / LENGTH
	TURBIDITY CURTAIN
	SILT FENCE / LENGTH
	SILT FENCE
	SUPER SILT FENCE / LENGTH
	SUPER SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE

07-044.10-001
 DELMARVA POWER & LIGHT CO.
 D.R. Y-84-074
 HUB MARINE INDUSTRIAL ACRES
 M/F 1750



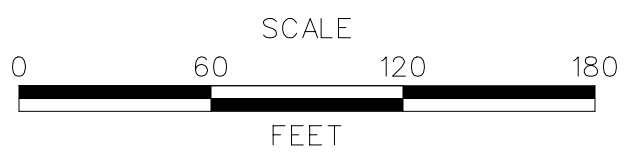
PHASE 2 SEQUENCE OF CONSTRUCTION

1. PLACE PHASE 2 SUPER SILT FENCE AS SHOWN. SUPER SILT FENCE SHALL BE LEFT IN PLACE AT THE CONCLUSION OF THE CONTRACT.
2. REMOVE STABILIZED CONSTRUCTION ENTRANCE.
3. REMOVE TEMPORARY WARNING SIGNS.

CONSTRUCTION PHASING LEGEND

WORK AREA THIS PHASE

ADDENDA / REVISIONS



**WETLAND MITIGATION AT
 PETERSON WILDLIFE REFUGE,
 PHASE II**

CONTRACT	BRIDGE NO.	N/A
T201703701	DESIGNED BY:	N. BYERS
COUNTY	CHECKED BY:	J. REEL
NEW CASTLE		

**CONSTRUCTION PHASING,
 M.O.T., AND EROSION
 CONTROL PLAN - PHASE 2**

CS-04
 SECTION
 RK&K
 SHEET NO.
 19

EROSION & SEDIMENT CONTROL

	TURBIDITY CURTAIN / LENGTH
	TURBIDITY CURTAIN
	SILT FENCE / LENGTH
	SILT FENCE
	SUPER SILT FENCE / LENGTH
	SUPER SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE

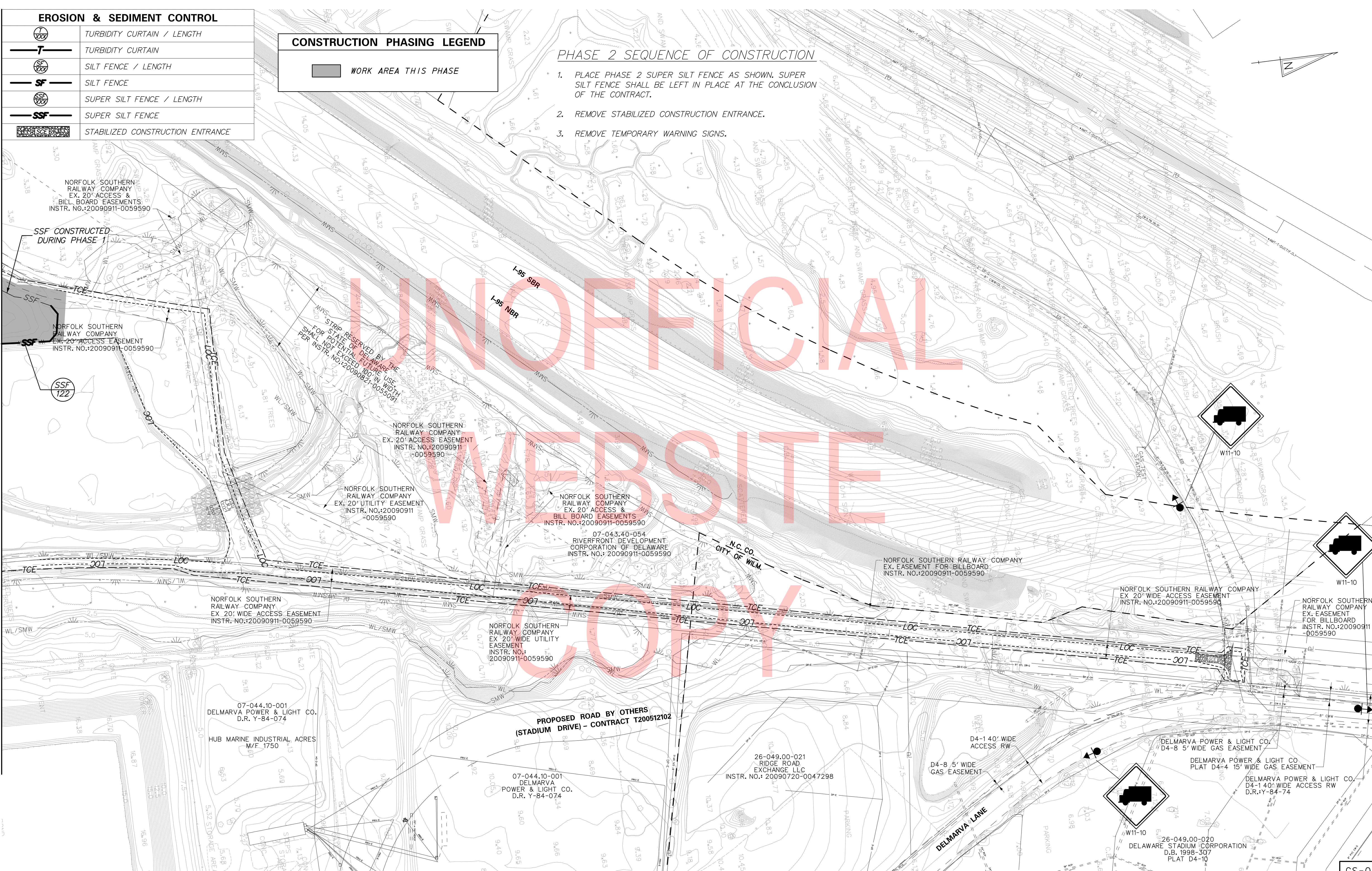
CONSTRUCTION PHASING LEGEND

WORK AREA THIS PHASE

PHASE 2 SEQUENCE OF CONSTRUCTION

1. PLACE PHASE 2 SUPER SILT FENCE AS SHOWN. SUPER SILT FENCE SHALL BE LEFT IN PLACE AT THE CONCLUSION OF THE CONTRACT.
2. REMOVE STABILIZED CONSTRUCTION ENTRANCE.
3. REMOVE TEMPORARY WARNING SIGNS.

MATCH LINE - SEE SHEET CS-03



ADDENDA / REVISIONS



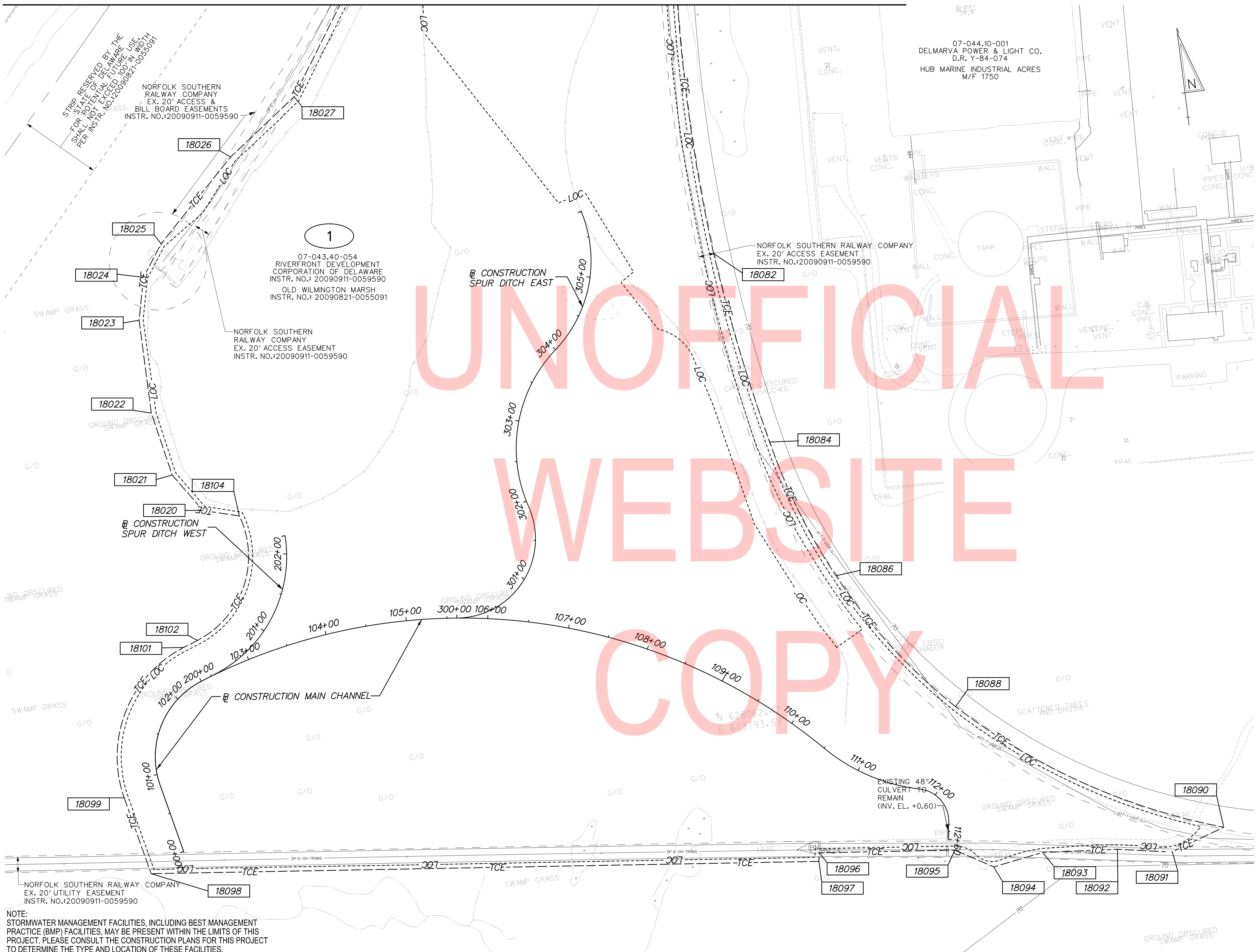
WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II

CONTRACT	T201703701	BRIDGE NO.	N/A
COUNTY	NEW CASTLE	DESIGNED BY:	N. BYERS
		CHECKED BY:	J. REEL

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLAN - PHASE 2

CS-05
SECTION
RK&K
SHEET NO.
20

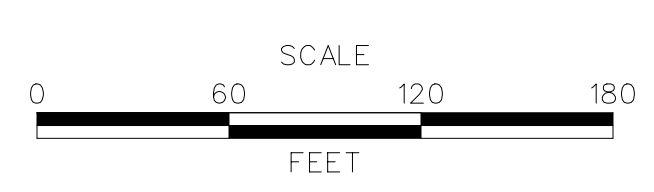
7/10/2019 12:10:36 PM \\belsco01\2014\2014\14144_DelDOT1707\Task 25 - Commons Mitigation Design\Cadd\Contract\Plans\cs05_crd.dgn



NOTE:
STORMWATER MANAGEMENT FACILITIES, INCLUDING BEST MANAGEMENT PRACTICE (BMP) FACILITIES, MAY BE PRESENT WITHIN THE LIMITS OF THIS PROJECT. PLEASE CONSULT THE CONSTRUCTION PLANS FOR THIS PROJECT TO DETERMINE THE TYPE AND LOCATION OF THESE FACILITIES.

RECOMMENDED AS TO ENGINEERING NEED	
<i>M. C. Kelly III</i> MANAGER, ROW ENGINEERING	5/24/18 DATE
<i>Shehnaaz Chaudhri</i> PROGRAM MANAGER, TEAM SUPPORT	5/24/18 DATE
<i>Kelly B. Kelly</i> TECHNICAL REVIEWER, TEAM SUPPORT	5/24/18 DATE

ADDENDA / REVISIONS

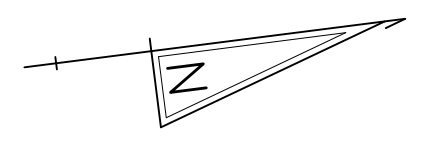


**WETLAND MITIGATION AT
PETERSON WILDLIFE REFUGE,
PHASE II**

CONTRACT T201703701	BRIDGE NO. N/A
COUNTY NEW CASTLE	DESIGNED BY: J. C. FLANIGAN
	CHECKED BY: J. REEL

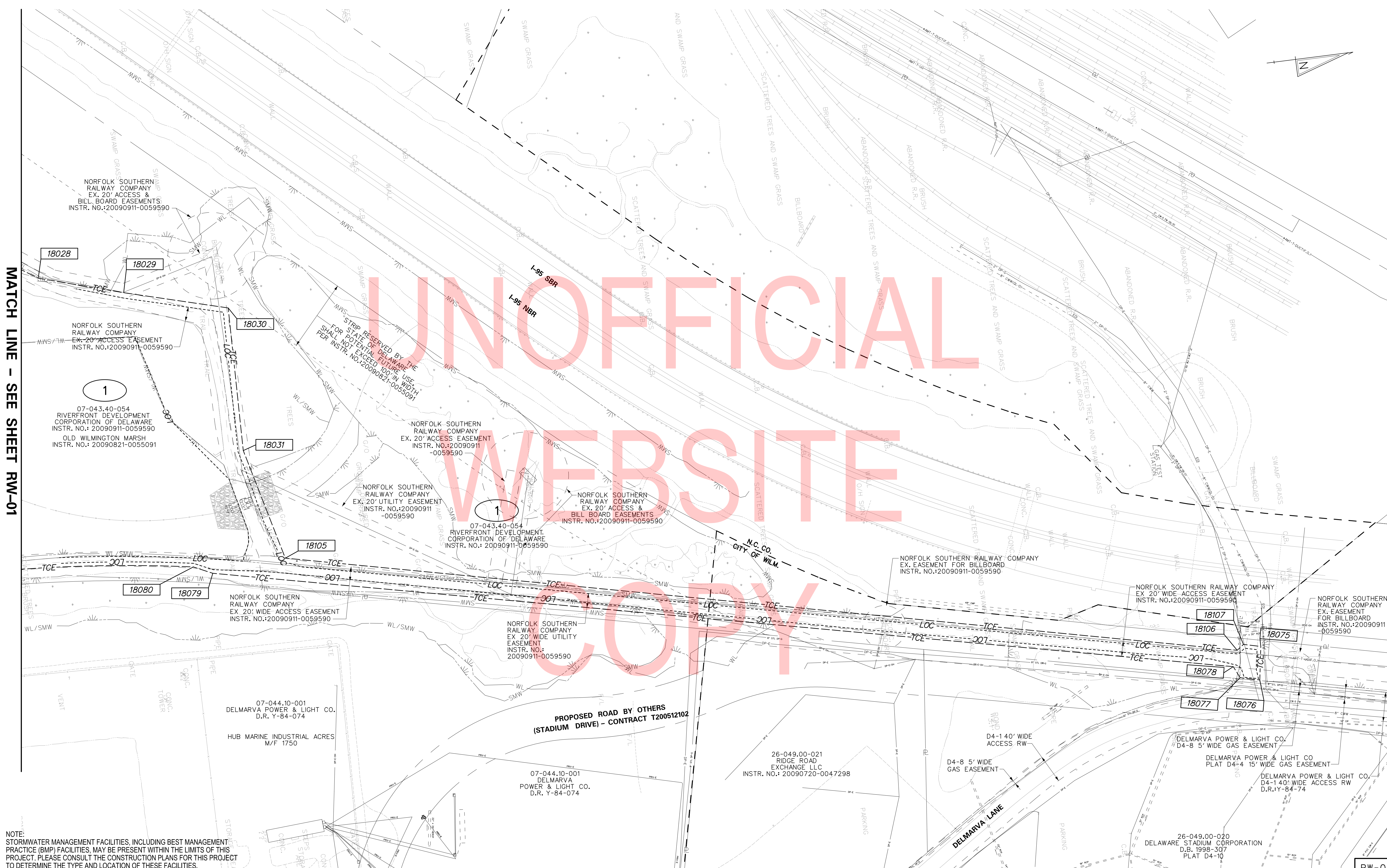
RIGHT-OF-WAY PLAN	
SECTION RK&K	SHEET NO. 21

6/10/2019 8:48:57 AM \\balsrv01\2014\14144_DeDOT1707\Task 25 - Commons Mitigation Design\Cadd\Contract\Plans\rw01_cadd.dgn



MATCH LINE - SEE SHEET RW-01

UNOFFICIAL WEBSITE COPY



NOTE:
STORMWATER MANAGEMENT FACILITIES, INCLUDING BEST MANAGEMENT PRACTICE (BMP) FACILITIES, MAY BE PRESENT WITHIN THE LIMITS OF THIS PROJECT. PLEASE CONSULT THE CONSTRUCTION PLANS FOR THIS PROJECT TO DETERMINE THE TYPE AND LOCATION OF THESE FACILITIES.

ADDENDA / REVISIONS



WETLAND MITIGATION AT PETERSON WILDLIFE REFUGE, PHASE II

CONTRACT	T201703701	BRIDGE NO.	N/A
COUNTY	NEW CASTLE	DESIGNED BY:	J. C. FLANIGAN
		CHECKED BY:	J. REEL

RIGHT-OF-WAY PLAN

RW-02
SECTION
RK&K
SHEET NO.
22

6/10/2019 8:49:00 AM
\\belsr001\2014\2014_14144_DelDOT1707\Task 25 - Commons Mitigation Design\Cadd\Contract\Plans\w02_crm.dgn