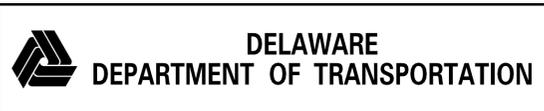


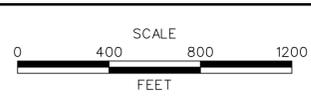
UNOFFICIAL  
WEBSITE  
COPY

PLAN SHEET INDEX CROSS REFERENCE											
CONSTRUCTION PLAN	8	9	10	11	12	13	14	15	16	17	19
SIGNING AND STRIPING	-	-	-	-	-	-	-	-	-	-	-

No. 31611-006 CAD North Project\ISO1\_SRN.dgn 2/23/2015 2:42:05 PM



ADDENDUMS / REVISIONS	



**SR 1**  
**HIGH TENSION CABLE BARRIER,**  
**ROTH BRIDGE TO US 13**

CONTRACT T201401001	BRIDGE NO. 
COUNTY NEW CASTLE	DESIGNED BY: GRP CHECKED BY: TAO

**PLAN SHEET INDEX**

IS-01
SHEET NO. 2
TOTAL SHTS. 25

## 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

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

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

PAVEMENT SECTION(S)	
	HIGH TENSION CABLE BARRIER MAINTENANCE STRIP 4" WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22 4" GRADED AGGREGATE BASE COURSE, TYPE B
	GUARDRAIL MAINTENANCE STRIP 1 1/4" WMA, SUPERPAVE, TYPE B, 160 GYRATIONS, PG 64-22 4" GRADED AGGREGATE BASE COURSE, TYPE B
	CROSSOVER PAVEMENT 2" WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATIONS, PG 64-22 3" WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATIONS, PG 64-22 8" GRADED AGGREGATE BASE COURSE, TYPE B

MISCELLANEOUS	
	HIGH TENSION CABLE BARRIER
	CABLE BARRIER END TERMINAL
	INLET SEDIMENT CONTROL
	SILT FENCE

ADDENDUMS / REVISIONS

NOT TO SCALE

SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: GRP
NEW CASTLE	CHECKED BY: TAO

LEGEND

LG-01

SHEET NO.
3
TOTAL SHTS.
25

## GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
- THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- THE ENDS OF ALL CURBS SHALL BE DEPRESSED FLUSH WITH THE PAVEMENT AT A RATIO OF TWELVE TO ONE (12:1) UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE MINIMUM DIAMETER, 6" INSIDE MAXIMUM DIAMETER) IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE MATERIAL. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.
- STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDING AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732, 734 AND 735, FOR TOPSOIL, SEED AND MULCH RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

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

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

( )	NONE
( )	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
( X )	RASTER FILES, IN .CAL FILE FORMAT, FOR ALL PLAN SHEETS.
( )	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.

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

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

- THE DISTURBED AREA FOR THIS PROJECT IS 5.44 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

- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN AREA SUITABLE FOR STOCKPILING BORROW, TOPSOIL AND OTHER FILL MATERIAL REQUIRED FOR THE PROJECT IN ACCORDANCE WITH SECTIONS 110.07 AND 110.10 OF THE STANDARD SPECIFICATIONS. SUBJECT TO THE APPROVAL OF THE ENGINEER, STOCKPILE AREA MAY BE LOCATED OUTSIDE THE PROJECT LIMITS, IF NECESSARY. NO ADDITIONAL PAYMENT WILL OCCUR FOR OFFSITE STOCKPILING.

### SECTION 200

- THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG THE PROPOSED ALIGNMENT FOR THE HIGH TENSION CABLE BARRIER AT POINTS OF POSSIBLE UTILITY OR DRAINAGE CONFLICTS TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE CONTRACTOR MAY NEED TO ADJUST POST SPACING AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS WITH EXISTING UNDERGROUND UTILITIES AND STORM SEWER PIPES. THE ADJUSTED POST SPACING SHALL BE DETERMINED BASED ON THE REQUIREMENTS FOR THE MAXIMUM ALLOWABLE DEFLECTION AS STATED IN THE SPECIAL PROVISIONS. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO ANY CONFLICT. TEST HOLES SHALL BE MEASURED BASED ON THE QUANTITY OF EXCAVATION (CUBIC YARDS) AND PAID FOR AT THE BID PRICE FOR ITEM 202000 - EXCAVATION AND EMBANKMENT.

- 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 THE 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 NOICAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

### SECTION 400

- THE CONTRACTOR MAY PLACE THE TYPE B WMA FOR THE PROPOSED MAINTENANCE STRIP FOR THE HIGH-TENSION CABLE BARRIER IN ONE 4-INCH LIFT.

### SECTION 700

- AT LOCATIONS WHERE THE PROPOSED HIGH TENSION CABLE BARRIER TERMINATES ADJACENT TO EXISTING STEEL BEAM GUARDRAIL, THE PROPOSED END TERMINAL SHALL NOT IMPACT OR CONNECT TO THE EXISTING GUARDRAIL. THE LIMITS OF THE PROPOSED END TERMINAL SHALL BEGIN AT THE FINAL LINE POST OF THE CABLE BARRIER SEGMENT, AS IDENTIFIED ON THE CONSTRUCTION PLANS. ANY DAMAGE TO THE EXISTING GUARDRAIL SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

### MISCELLANEOUS

- ROADSIDE AMENITIES WITHIN THE LIMITS OF CONSTRUCTION AREAS THAT ARE TO REMAIN IN PLACE AND ARE NOTED BY "DND," SHALL BE PROTECTED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. ANY DAMAGE TO THESE AMENITIES SHALL BE REPAIRED OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL SUPPLY DELDOT WITH SPARE PARTS AS DESCRIBED IN THE SPECIAL PROVISIONS FOR ITEM 720622 - HIGH TENSION CABLE BARRIER AND ITEM 720623 - HIGH TENSION CABLE BARRIER END TERMINAL. THESE PARTS SHALL BE DELIVERED BY THE CONTRACTOR TO THE DELDOT NORTH DISTRICT MAINTENANCE FACILITY AS DIRECTED BY THE ENGINEER. PAYMENT FOR THESE ITEMS SHALL BE INCIDENTAL TO THE RESPECTIVE BID ITEMS.
- FHWA "BUY AMERICA" PROVISIONS APPLY TO THIS CONTRACT.
- THERE ARE NO ENVIRONMENTAL PERMITS REQUIRED FOR THIS PROJECT; THEREFORE, NO ENVIRONMENTAL COMPLIANCE SHEET WAS PREPARED.
- DURING MAINTENANCE STRIP CONSTRUCTION, NO BARE SOIL SHALL BE PERMITTED TO SHOW AT THE END OF THE WORK DAY. ALL BARE SOIL SHALL BE COVERED WITH GABC OR A METHOD APPROVED BY THE ENGINEER.
- EXISTING FEATURES SHOWN ON THESE PLANS ARE BASED ON FIELD OBSERVATIONS, DELDOT 2007 AERIAL PHOTOS, AND CONTRACT DRAWINGS FROM 91-110-16 AND 91-110-17. THE CONSTRUCTION BASELINE IS PROVIDED FOR REFERENCE TO APPROXIMATE THE LOCATION OF THE FIRST AND LAST LINE POST ALONG EACH SEGMENT OF CABLE BARRIER. THE FINAL LAYOUT OF THE CABLE BARRIER SHALL BE BASED ON MANUFACTURER DESIGN AND DETAILS.
- THE CONTRACTOR SHALL NOT IMPACT ANY EXISTING DRAINAGE STRUCTURES OR PIPES DURING CONSTRUCTION. ANY DAMAGE TO EXISTING DRAINAGE FEATURES SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE.
- UTILITY INFORMATION REQUESTS HAVE NOT BEEN COMPLETED AND THE LOCATIONS OF THE EXISTING UTILITIES HAVE NOT BEEN SHOWN ON THE PLANS. THE EXISTING UTILITIES LISTED ON SHEET 3 ARE BASED ON THE AS-BUILT PLANS FOR CONTRACT 91-10-16 AND 91-110-17. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT TELEPHONE NUMBER 1-800-282-8555 PRIOR TO ANY EXCAVATION. ALL EXISTING UTILITIES SHALL BE PROTECTED, TEMPORARILY SUPPORTED AND/OR RELOCATED AS NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE RESPECTIVE UTILITY COMPANY.
- AT LOCATIONS WHERE EXISTING GUARDRAIL IS BEING REPLACED, THE CONTRACTOR SHALL ENSURE THAT ALL EXISTING OBSTRUCTIONS REMAIN PROTECTED DURING CONSTRUCTION UNTIL THE NEW GUARDRAIL IS COMPLETELY INSTALLED. THIS INCLUDES, BUT IS NOT LIMITED TO, EXISTING SIGN STRUCTURES AND PCC BARRIER.
- AT LOCATIONS WHERE EXISTING GUARDRAIL IS BEING REMOVED AND REPLACED, THE CONTRACTOR SHALL FILL IN VOIDS FROM THE REMOVAL OF THE EXISTING POSTS WITH MILLINGS FROM THE REMOVAL OF THE MAINTENANCE STRIP OR WITH BORROW, TYPE F.

### ADDENDUMS / REVISIONS

NOT TO SCALE

SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: KGMA
NEW CASTLE	CHECKED BY: TAO

NOTES

PN-01

SHEET NO.

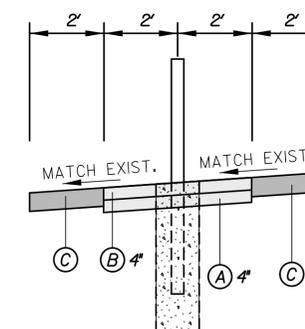
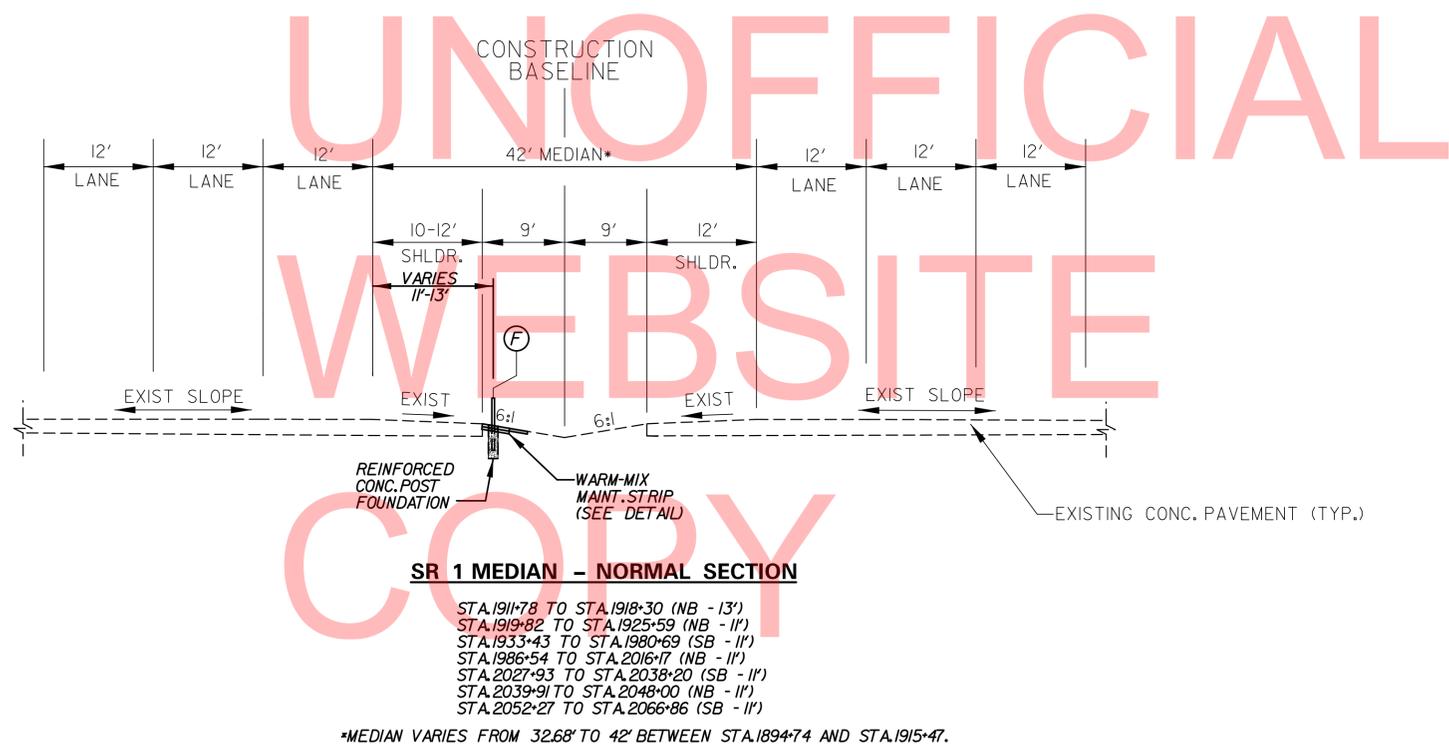
4

TOTAL SHTS.

25

**LEGEND**

- (A) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
- (B) ITEM 401810 - WMA, SUPERPAVE TYPE B, 160 GYRATIONS, PG 64-22
- (C) ITEM 733002 - TOPSOILING, 6" DEPTH  
ITEM 734013 - PERMANENT GRASS SEEDING, DRY GROUND
- (D) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
- (E) ITEM 720052 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 3-31
- (F) ITEM 720622 - HIGH TENSION CABLE BARRIER



No. 31911-006, CAD, North Project\TS01\_SFRN.dgn 2/27/2019 2:42:05 PM



ADDENDUMS / REVISIONS

NOT TO SCALE

**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT	BRIDGE NO.	
T201401001	DESIGNED BY:	GRP
COUNTY	CHECKED BY:	TAO
NEW CASTLE		

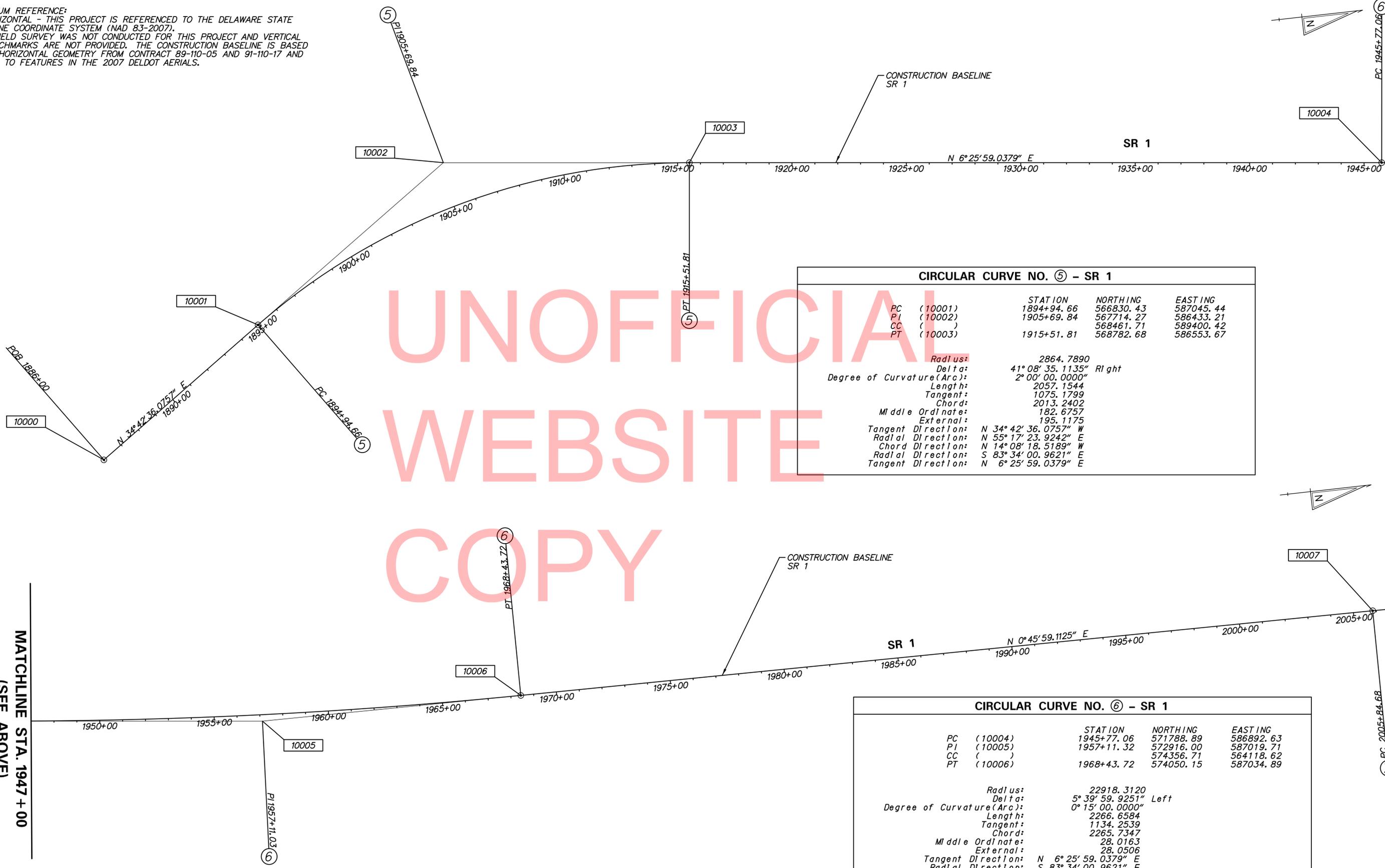
TYPICAL SECTIONS

TS-01
SHEET NO. 5
TOTAL SHTS. 25

DATUM REFERENCE:  
 HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83-2007).  
 A FIELD SURVEY WAS NOT CONDUCTED FOR THIS PROJECT AND VERTICAL BENCHMARKS ARE NOT PROVIDED. THE CONSTRUCTION BASELINE IS BASED ON HORIZONTAL GEOMETRY FROM CONTRACT 89-110-05 AND 91-110-17 AND TIED TO FEATURES IN THE 2007 DELDOT AERIALS.

MATCHLINE STA. 1947 + 00  
 (SEE BELOW)

MATCHLINE STA. 2007 + 00  
 (SEE ABOVE)



**CIRCULAR CURVE NO. ⑤ - SR 1**

	STATION	NORTHING	EASTING
PC (10001)	1894+94.66	566830.43	587045.44
PI (10002)	1905+69.84	567714.27	586433.21
CC ( )		568461.71	589400.42
PT (10003)	1915+51.81	568782.68	586553.67

Radius:	2864.7890
Delta:	41° 08' 35.1135" Right
Degree of Curvature (Arc):	2° 00' 00.0000"
Length:	2057.1544
Tangent:	1075.1799
Chord:	2013.2402
Middle Ordinate:	182.6757
External:	195.1175
Tangent Direction:	N 34° 42' 36.0757" W
Radial Direction:	N 55° 17' 23.9242" E
Chord Direction:	N 14° 08' 18.5189" W
Radial Direction:	S 83° 34' 00.9621" E
Tangent Direction:	N 6° 25' 59.0379" E

**CIRCULAR CURVE NO. ⑥ - SR 1**

	STATION	NORTHING	EASTING
PC (10004)	1945+77.06	571788.89	586892.63
PI (10005)	1957+11.32	572916.00	587019.71
CC ( )		574356.71	564118.62
PT (10006)	1968+43.72	574050.15	587034.89

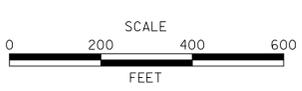
Radius:	22918.3120
Delta:	5° 39' 59.9251" Left
Degree of Curvature (Arc):	0° 15' 00.0000"
Length:	2266.6584
Tangent:	1134.2539
Chord:	2265.7347
Middle Ordinate:	28.0163
External:	28.0506
Tangent Direction:	N 6° 25' 59.0379" E
Radial Direction:	S 83° 34' 00.9621" E
Chord Direction:	N 3° 35' 59.0753" E
Radial Direction:	S 89° 14' 00.8874" E
Tangent Direction:	N 0° 45' 59.1125" E

**CONSTRUCTION ALIGNMENT CONTROL**

POINT	STATION	OFFSET	NORTHING	EASTING
10000	1886+00.00	0.0000'	566094.98	587554.88

ADDENDUMS / REVISIONS

NO.	DATE	DESCRIPTION



**SR 1  
 HIGH TENSION CABLE BARRIER,  
 ROTH BRIDGE TO US 13**

CONTRACT	T201401001	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	MEF
		CHECKED BY:	TAO

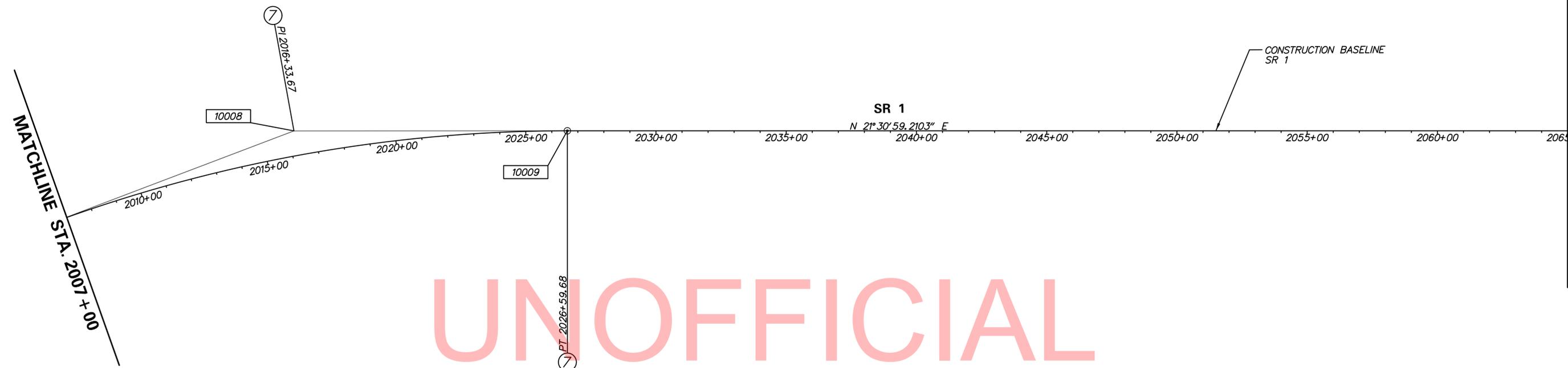
**HORIZONTAL AND VERTICAL CONTROL**

HV-01	SHEET NO.	6
	TOTAL SHTS.	25

No. 31611-006 CAD\North Project\HV01\_LSRN.dgn  
 9/23/2015 2:42:06 PM



CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
10013	2092+00.00	0.0000'	585814.08	590067.20

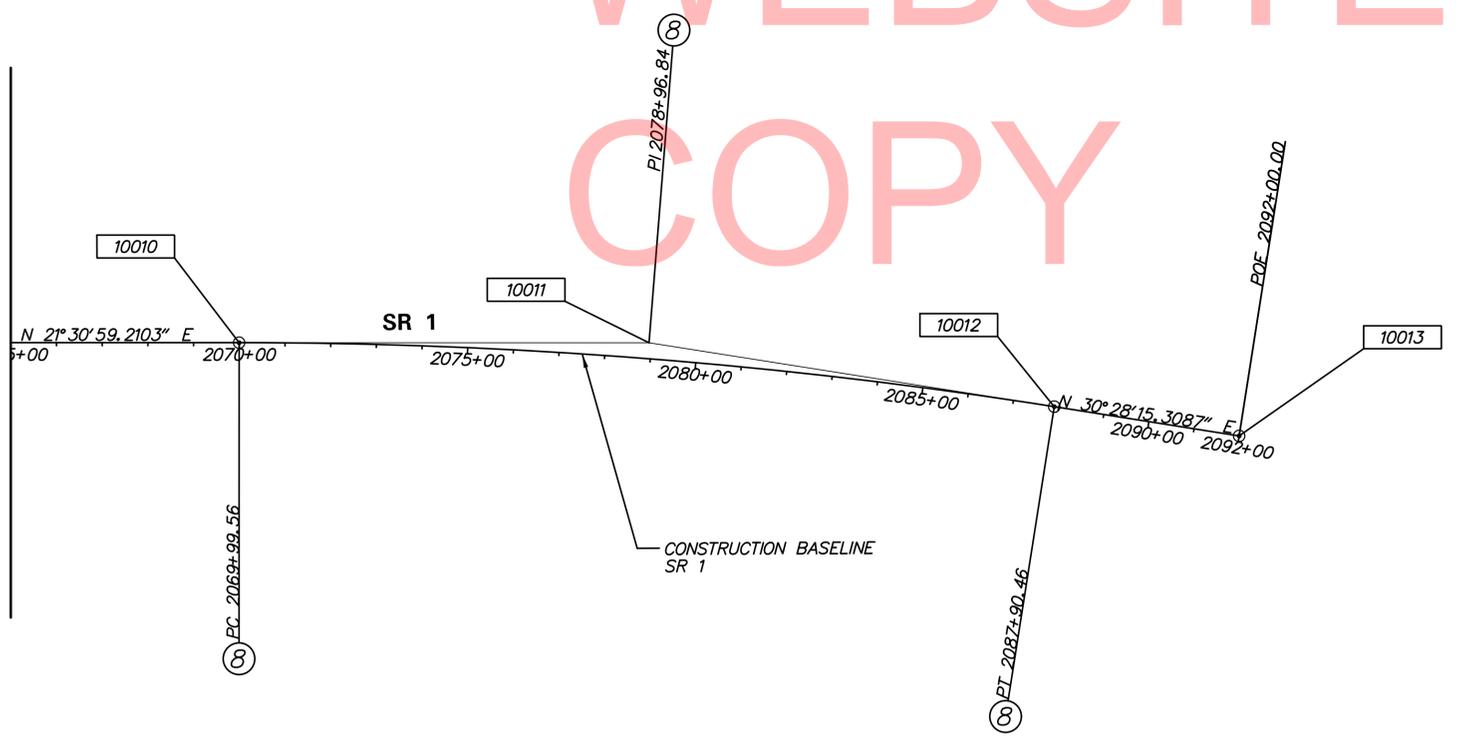


MATCHLINE STA. 2065 + 00  
(SEE BELOW)

UNOFFICIAL  
WEBSITE  
COPY

CIRCULAR CURVE NO. ⑦ - SR 1			
PC (10007)	STATION	NORTHING	EASTING
PI (10008)	2005+84.68	577790.77	587084.92
CC ( )	2016+33.67	578839.67	587098.96
PT (10009)	2026+59.68	577714.13	592813.99
		579815.56	587483.69
Radius:	5729.5780		
Delta:	20° 45' 00.0976" Right		
Degree of Curvature (Arc):	0° 59' 59.9999"		
Length:	2075.0027		
Tangent:	1048.9917		
Chord:	2063.6817		
Middle Ordinate:	93.6780		
External:	95.2351		
Tangent Direction:	N 0° 45' 59.1125" E		
Radial Direction:	S 89° 14' 00.8874" E		
Chord Direction:	N 11° 08' 29.1614" E		
Radial Direction:	S 68° 29' 00.7898" E		
Tangent Direction:	N 21° 30' 59.2103" E		

MATCHLINE STA. 2065 + 00  
(SEE ABOVE)

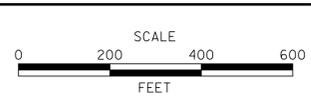


CIRCULAR CURVE NO. ⑧ - SR 1			
PC (10010)	STATION	NORTHING	EASTING
PI (10011)	2069+99.56	583853.01	589075.43
CC ( )	2078+96.84	584687.75	589404.52
PT (10012)	2087+90.46	579650.15	599736.02
		585461.10	589859.53
Radius:	11459.1560		
Delta:	8° 57' 16.0990" Right		
Degree of Curvature (Arc):	0° 29' 59.9999"		
Length:	1790.8944		
Tangent:	897.2743		
Chord:	1789.0723		
Middle Ordinate:	34.9684		
External:	35.0755		
Tangent Direction:	N 21° 30' 59.2103" E		
Radial Direction:	S 68° 29' 00.7898" E		
Chord Direction:	N 25° 59' 37.2596" E		
Radial Direction:	S 59° 31' 44.6909" E		
Tangent Direction:	N 30° 28' 15.3091" E		

No. 201401001-006-CADD North Project: HV02\_SRR1.dgn  
7/23/2015 2:42:06 PM



ADDENDUMS / REVISIONS	



**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: MEF
NEW CASTLE	CHECKED BY: TAO

**HORIZONTAL AND  
VERTICAL CONTROL**

HV-02
SHEET NO.
7
TOTAL SHTS.
25

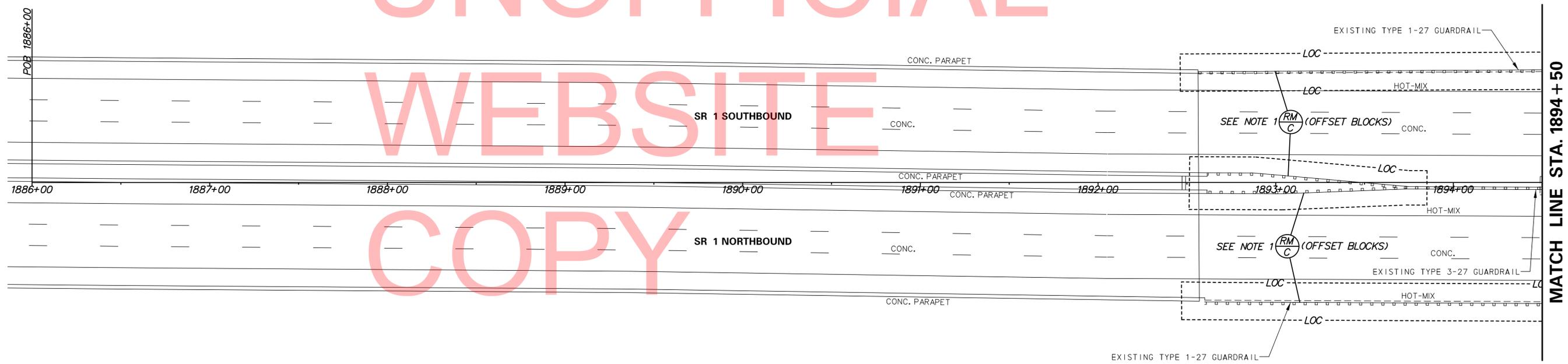
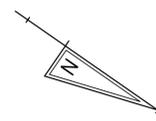
**NOTES:**

- BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY  
 -STA. 1892+56 TO STA. 1906+13 (LEFT)  
 -STA. 1892+57 TO STA. 1905+70 (RIGHT)  
 -STA. 1892+61 TO STA. 1893+75 (MEDIAN)  
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

UNOFFICIAL

WEBSITE

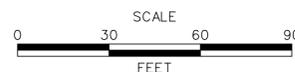
COPY



No. 31811-006 CAD North Project CP01\_SRN.dgn  
 2/27/2015 2:42:07 PM



ADDENDUMS / REVISIONS	



**SR 1**  
**HIGH TENSION CABLE BARRIER,**  
**ROTH BRIDGE TO US 13**

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: GRP
NEW CASTLE	CHECKED BY: TAO

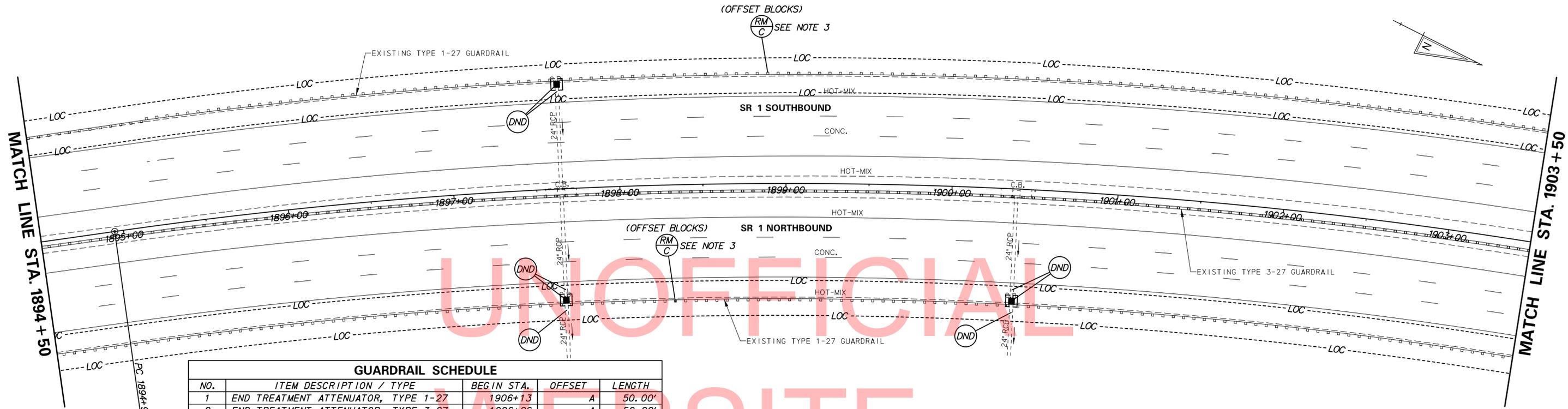
**CONSTRUCTION PLAN**

CP-01
SHEET NO.
8
TOTAL SHTS.
25

BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
2	TL-4 HIGH TENSION CABLE BARRIER	72.00'

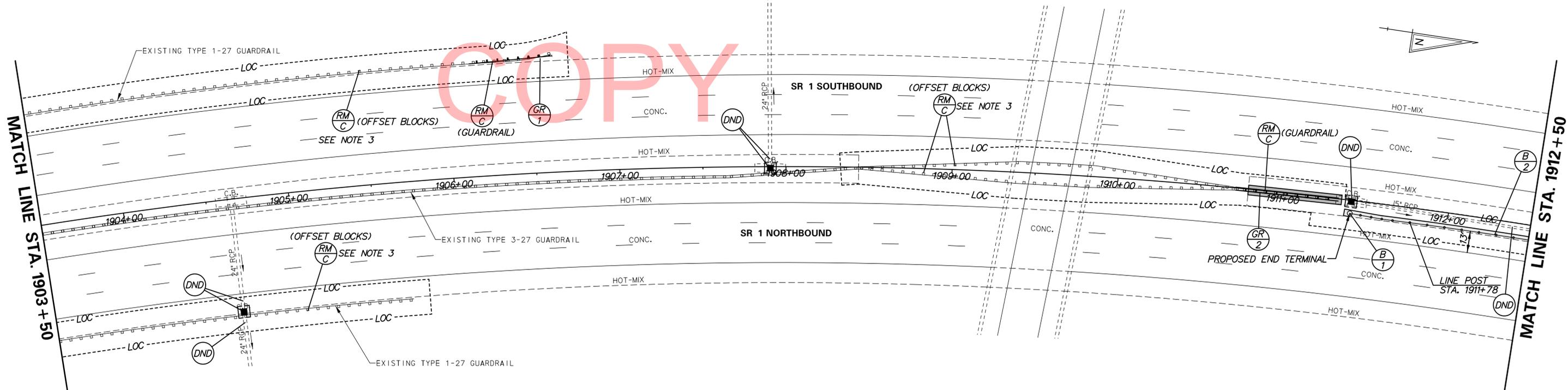
BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	TL-3 END ANCHOR TERMINAL	+

+ NOTE: LENGTH DEPENDS ON MANUFACTURER



GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
1	END TREATMENT ATTENUATOR, TYPE 1-27	1906+13	A	50.00'
2	END TREATMENT ATTENUATOR, TYPE 3-27	1906+26	A	50.00'

NOTES:  
 1. ALL BEGINNING STATIONS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.  
 2. A = OFFSET ATTENUATOR AS PER STANDARD DETAILS.

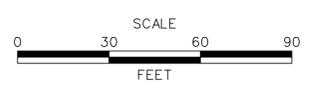


NOTES:  
 3. BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY  
 -STA. 1892+56 TO STA. 1906+13 (LEFT)  
 -STA. 1892+57 TO STA. 1905+70 (RIGHT)  
 -STA. 1908+44 TO STA. 1910+71 (MEDIAN)  
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

No. 1511-006 CAD North Project: CP02\_SRR1.dgn  
 9/23/2015 2:42:07 PM



ADDENDUMS / REVISIONS



**SR 1**  
**HIGH TENSION CABLE BARRIER,**  
**ROTH BRIDGE TO US 13**

CONTRACT T201401001	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: GRP
	CHECKED BY: TAO

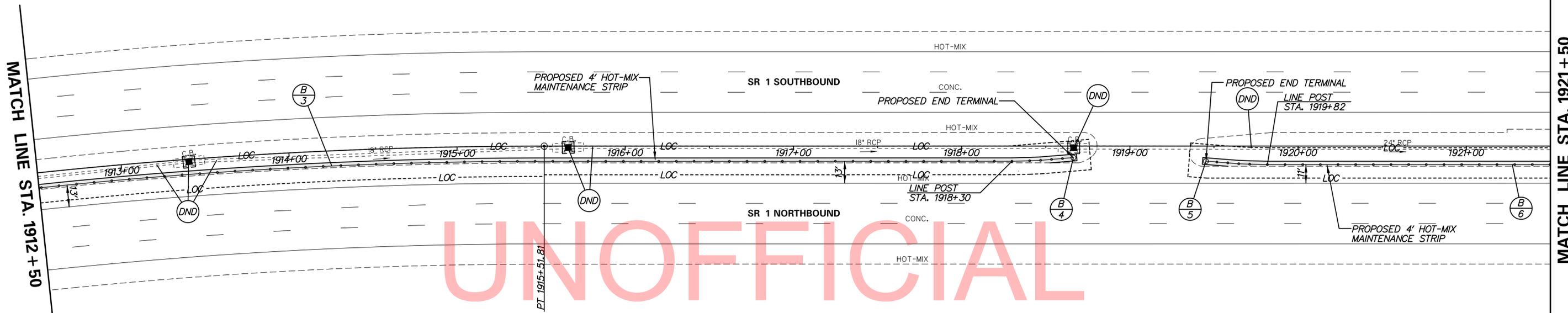
**CONSTRUCTION PLAN**

CP-02
SHEET NO. 9
TOTAL SHTS. 25

BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
3	TL-4 HIGH TENSION CABLE BARRIER	580.00'
6	TL-4 HIGH TENSION CABLE BARRIER	168.00'
7	TL-4 HIGH TENSION CABLE BARRIER	409.00'

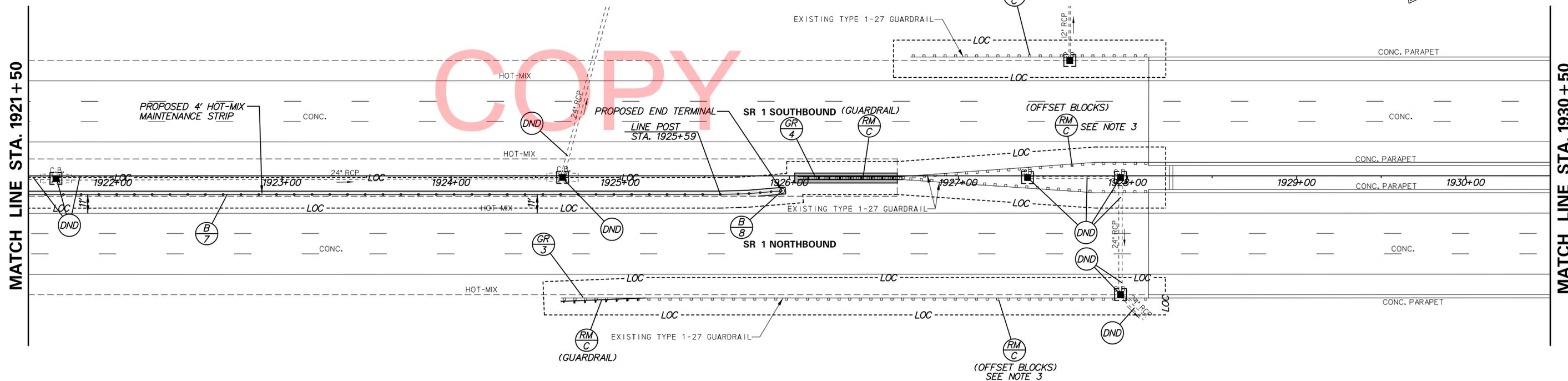
BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
4	TL-3 END ANCHOR TERMINAL	+
5	TL-3 END ANCHOR TERMINAL	+
8	TL-3 END ANCHOR TERMINAL	+

+ NOTE: LENGTH DEPENDS ON MANUFACTURER



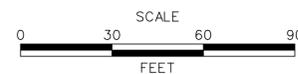
GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
3	END TREATMENT ATTENUATOR, TYPE 1-27	1924+65	A	50.00'
4	END TREATMENT ATTENUATOR, TYPE 3-27	1926+05	A	50.00'

NOTES:  
 1. ALL BEGINNING STATIONS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.  
 2. A = OFFSET ATTENUATORS AS PER STANDARD DETAILS.



NOTES:  
 3. BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY  
 -STA. 1926+72 TO STA. 1928+13 (LEFT)  
 -STA. 1925+15 TO STA. 1928+13 (RIGHT)  
 -STA. 1926+67 TO STA. 1928+13 (MEDIAN)  
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

ADDENDUMS / REVISIONS



SR 1  
 HIGH TENSION CABLE BARRIER,  
 ROTH BRIDGE TO US 13

CONTRACT	T201401001	BRIDGE NO.	
COUNTY	NEW CASTLE	DESIGNED BY:	GRP
		CHECKED BY:	TAO

CONSTRUCTION PLAN

CP-03
SHEET NO.
10
TOTAL SHTS.
25

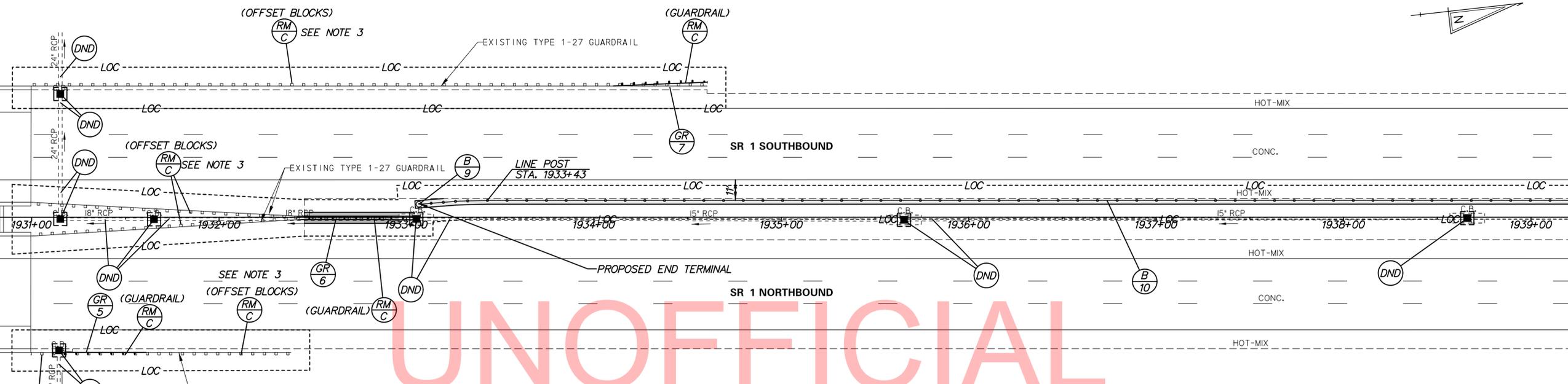
UNOFFICIAL  
WEBSITE  
COPY

MATCH LINE STA. 1930+50

MATCH LINE STA. 1939+50

MATCH LINE STA. 1939+50

MATCH LINE STA. 1948+50



NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
5	GALVANIZED SBG, TYPE 1-27	1931+11	72.0'	50.00'
6	END TREATMENT ATTENUATOR, TYPE 3-27	1932+42	A	50.00'
7	END TREATMENT ATTENUATOR, TYPE 1-27	1934+10	A	50.00'

- NOTES:
- ALL BEGINNING STATIONS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
  - A = OFFSET ATTENUATORS AS PER STANDARD DETAILS.

- NOTES:
- BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY  
 -STA. 1931+00 TO STA. 1934+10 (LEFT)  
 -STA. 1931+00 TO STA. 1931+11 (RIGHT)  
 -STA. 1931+61 TO STA. 1932+38 (RIGHT)  
 -STA. 1931+00 TO STA. 1932+42 (MEDIAN)  
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

UNOFFICIAL WEBSITE COPY

NO.	ITEM DESCRIPTION / TYPE	LENGTH
10	TL-4 HIGH TENSION CABLE BARRIER	519.00'
11	TL-4 HIGH TENSION CABLE BARRIER	900.00'

NO.	ITEM DESCRIPTION / TYPE	LENGTH
9	TL-3 END ANCHOR TERMINAL	+

+ NOTE: LENGTH DEPENDS ON MANUFACTURER

ADDENDUMS / REVISIONS



**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT T201401001	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: GRP
	CHECKED BY: TAO

**CONSTRUCTION PLAN**

CP-04

SHEET NO.

11

TOTAL SHTS.

25

BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
12	TL-4 HIGH TENSION CABLE BARRIER	900.00'
13	TL-4 HIGH TENSION CABLE BARRIER	900.00'



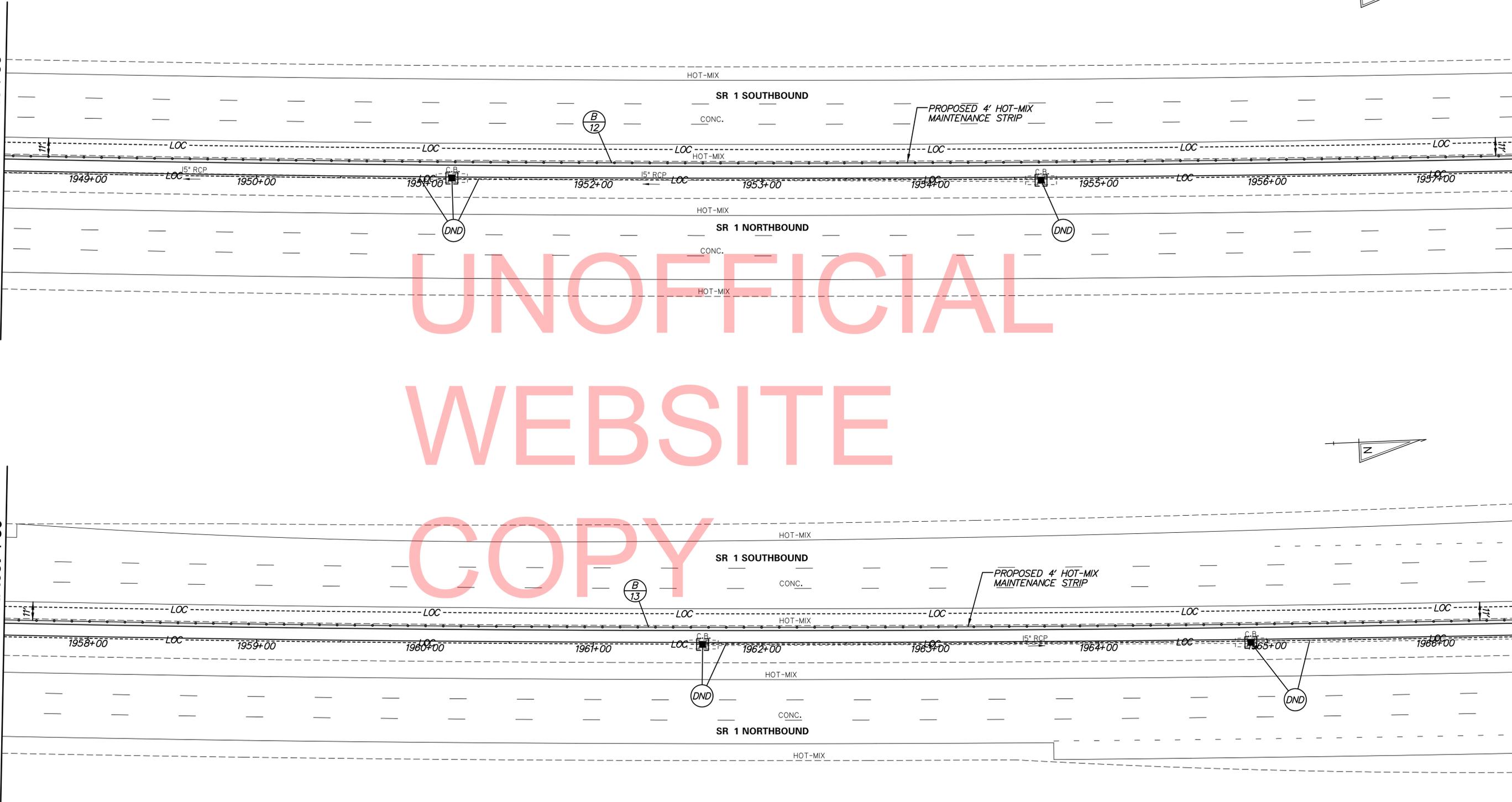
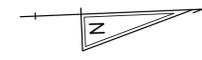
MATCH LINE STA. 1948+50

MATCH LINE STA. 1957+50

MATCH LINE STA. 1957+50

MATCH LINE STA. 1966+50

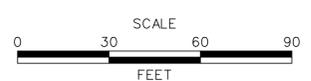
UNOFFICIAL  
WEBSITE  
COPY



No. 21011-006 CAD North Project CP05\_SRM.dgn 2/27/2019 2:42:09 PM



ADDENDUMS / REVISIONS	



**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT T201401001	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: GRP
	CHECKED BY: TAO

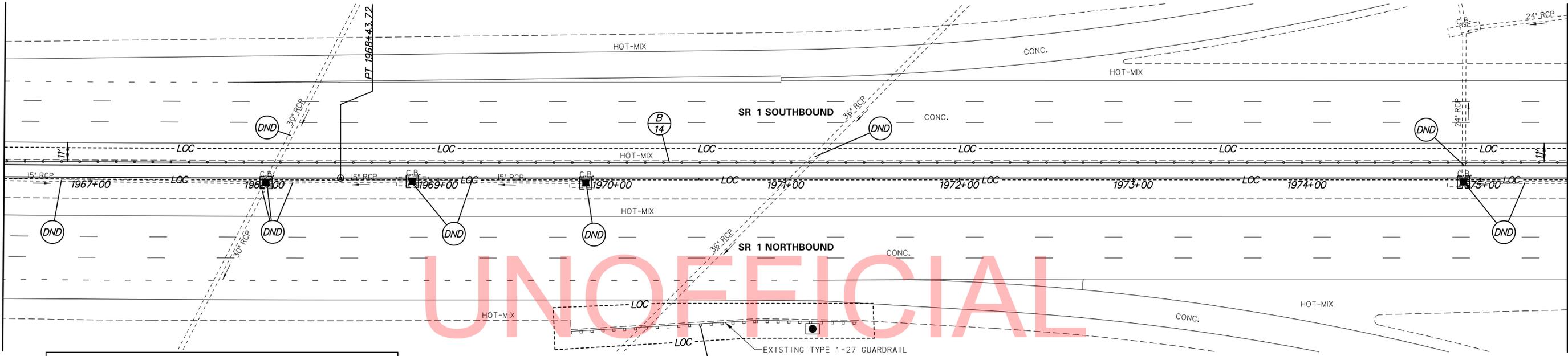
**CONSTRUCTION PLAN**

CP-05
SHEET NO. 12
TOTAL SHTS. 25



MATCH LINE STA. 1966 +50

MATCH LINE STA. 1975 +50



BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
14	TL-4 HIGH TENSION CABLE BARRIER	900.00'
15	TL-4 HIGH TENSION CABLE BARRIER	645.00'

BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
16	TL-3 END ANCHORAGE TERMINAL	+

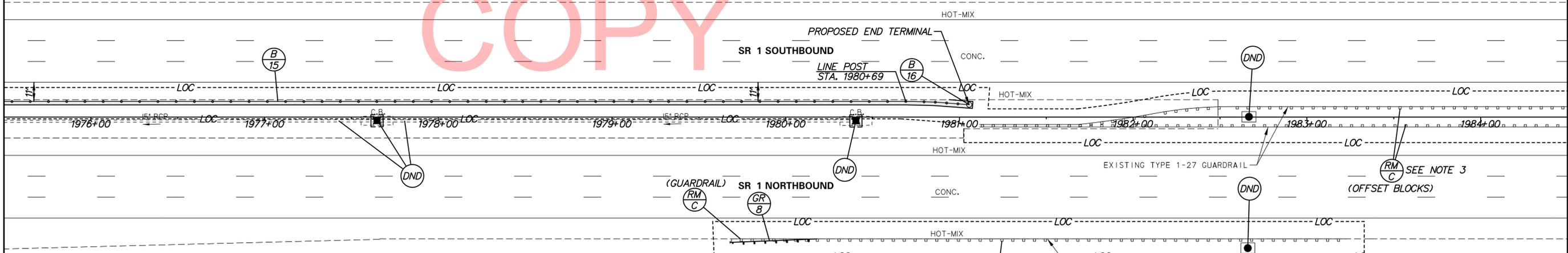
+ NOTE: LENGTH DEPENDS ON MANUFACTURER

**NOTES:**  
 3. BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY  
 - STA. 1969+77 TO STA. 1971+41 (RIGHT)  
 - STA. 1980+18 TO STA. 1983+23 (RIGHT)  
 - STA. 1981+12 TO STA. 1986+10 (MEDIAN)  
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.



MATCH LINE STA. 1975 +50

MATCH LINE STA. 1984 +50



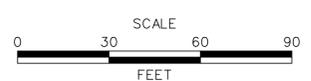
GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
8	END TREATMENT ATTENUATOR, TYPE 1-27	1979+68	A	50.00'

**NOTES:**  
 1. ALL BEGINNING STATIONS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.  
 2. A = OFFSET ATTENUATORS AS PER STANDARD DETAILS.

UNOFFICIAL  
WEBSITE  
COPY



ADDENDUMS / REVISIONS



**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT T201401001	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: GRP
	CHECKED BY: TAO

**CONSTRUCTION PLAN**

CP-06
SHEET NO. 13
TOTAL SHTS. 25

No. 231511-006 CADWorth Project\CP06\_SRM.dgn 9/27/2015 2:42:09 PM

BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
18	TL-4 HIGH TENSION CABLE BARRIER	822.00'
19	TL-4 HIGH TENSION CABLE BARRIER	900.00'

BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
17	TL-3 END ANCHOR TERMINAL	+

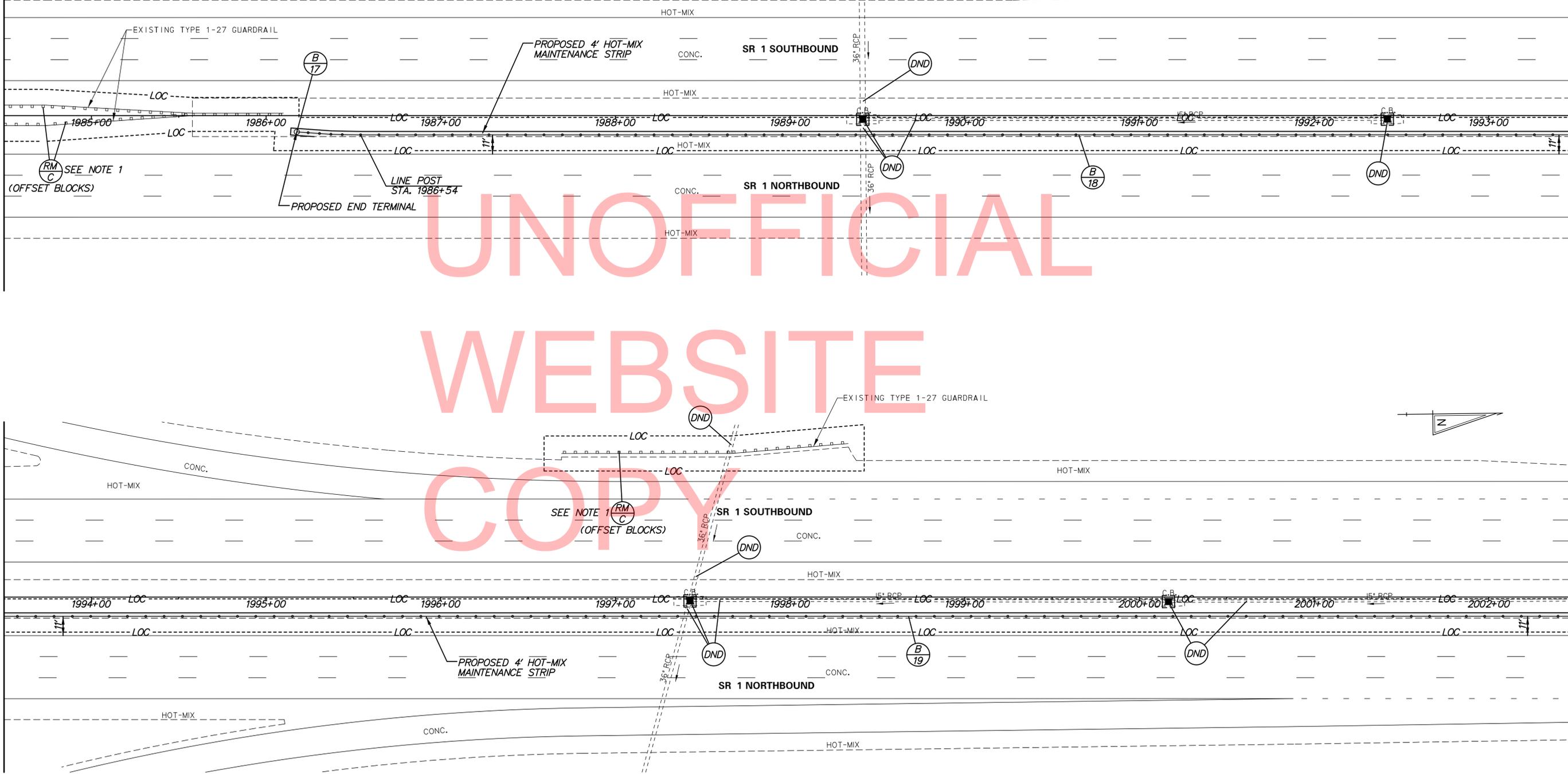
+ NOTE: LENGTH DEPENDS ON MANUFACTURER

MATCH LINE STA. 1984+50

MATCH LINE STA. 1993+50

MATCH LINE STA. 1993+50

MATCH LINE STA. 2002+50



**NOTES:**  
 1. BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY  
 -STA. 1996+69 TO STA. 1998+33 (LEFT)  
 -STA. 1981+12 TO STA. 1986+10 (MEDIAN)  
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM  
 WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

No. 1911-006, CAD, North Project, CP07\_SRR1.dgn  
 2/27/2015 2:42:10 PM



ADDENDUMS / REVISIONS



**SR 1  
 HIGH TENSION CABLE BARRIER,  
 ROTH BRIDGE TO US 13**

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: GRP
NEW CASTLE	CHECKED BY: TAO

**CONSTRUCTION PLAN**

CP-07
SHEET NO.
14
TOTAL SHTS.
25

BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
20	TL-4 HIGH TENSION CABLE BARRIER	900.00'
21	TL-4 HIGH TENSION CABLE BARRIER	394.00'

BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
22	TL-3 END ANCHOR TERMINAL	+

+ NOTE: LENGTH DEPENDS ON MANUFACTURER

MATCH LINE STA. 2002+50

MATCH LINE STA. 2011+50

MATCH LINE STA. 2011+50

MATCH LINE STA. 2020+50

GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
9	END TREATMENT ATTENUATOR, TYPE 1-27	2006+70	A	50.00'
10	GALVANIZED SBG, TYPE 1-27	2007+21	75.3'	50.00'

NOTES:

- ALL BEGINNING STATIONS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
- A = OFFSET ATTENUATORS AS PER STANDARD DETAILS.

NOTES:

- BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY
  - STA. 2008+15 TO STA. 2018+39 (LEFT)
  - STA. 2019+64 TO STA. 2023+13 (LEFT)
  - STA. 2007+72 TO STA. 2018+70 (RIGHT)
  - STA. 2016+65 TO STA. 2018+60 (MEDIAN)
  - STA. 2019+75 TO STA. 2022+23 (MEDIAN)
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

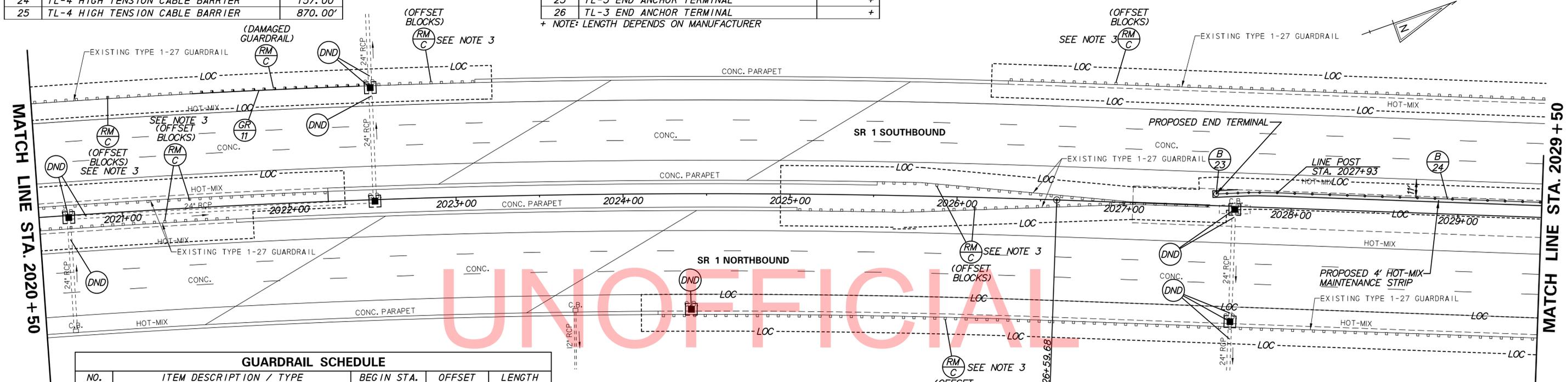
UNOFFICIAL WEBSITE COPY

No. 31611-006-CAD02 Worth Project\CP08\_SRM.dgn 9/22/2019 2:42:15 PM

BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
24	TL-4 HIGH TENSION CABLE BARRIER	157.00'
25	TL-4 HIGH TENSION CABLE BARRIER	870.00'

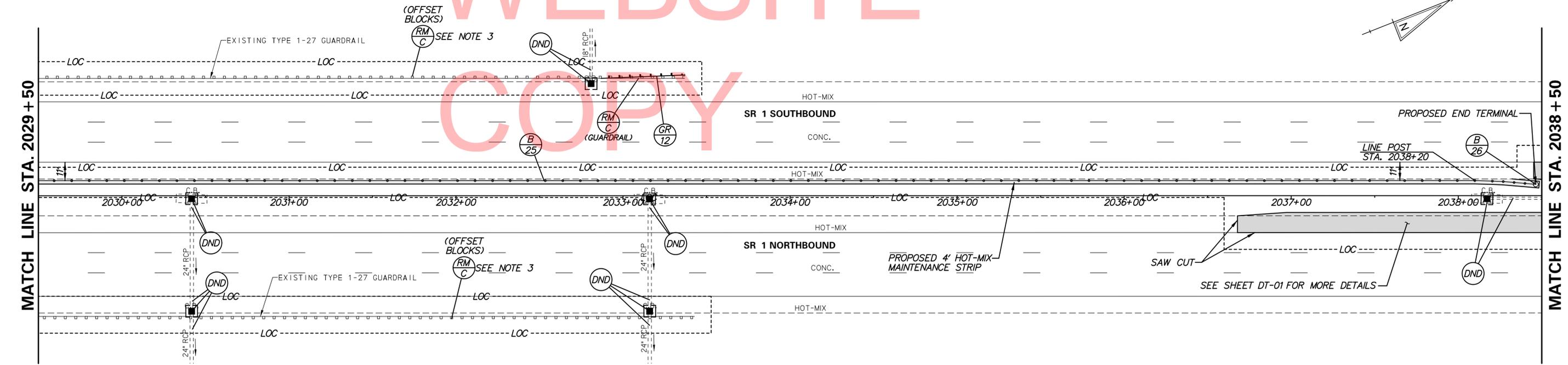
BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
23	TL-3 END ANCHOR TERMINAL	+
26	TL-3 END ANCHOR TERMINAL	+

+ NOTE: LENGTH DEPENDS ON MANUFACTURER



GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
11	GALVANIZED SBG, TYPE 1-27	2021+46	-68.0'	100.00'
12	END TREATMENT ATTENUATOR, TYPE 1-27	2032+87	A	50.00'

NOTES:  
 1. ALL BEGINNING STATIONS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.  
 2. A = OFFSET ATTENUATORS AS PER STANDARD DETAILS.



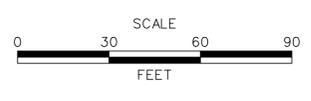
NOTES:  
 3. BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY  
 -STA. 2019+64 TO STA. 2023+13 (LEFT)  
 -STA. 2026+29 TO STA. 2023+87 (LEFT)  
 -STA. 2024+21 TO STA. 2033+43 (RIGHT)  
 -STA. 2019+75 TO STA. 2022+23 (MEDIAN)  
 -STA. 2025+04 TO STA. 2027+51 (MEDIAN)  
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

UNOFFICIAL  
WEBSITE  
COPY

No. 21011-006-CAD\North Project\CP09\_SRM.dgn 9/23/2019 2:42:15 PM



ADDENDUMS / REVISIONS	



**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT T201401001	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: GRP
	CHECKED BY: TAO

**CONSTRUCTION PLAN**

CP-09
SHEET NO. 16
TOTAL SHTS. 25

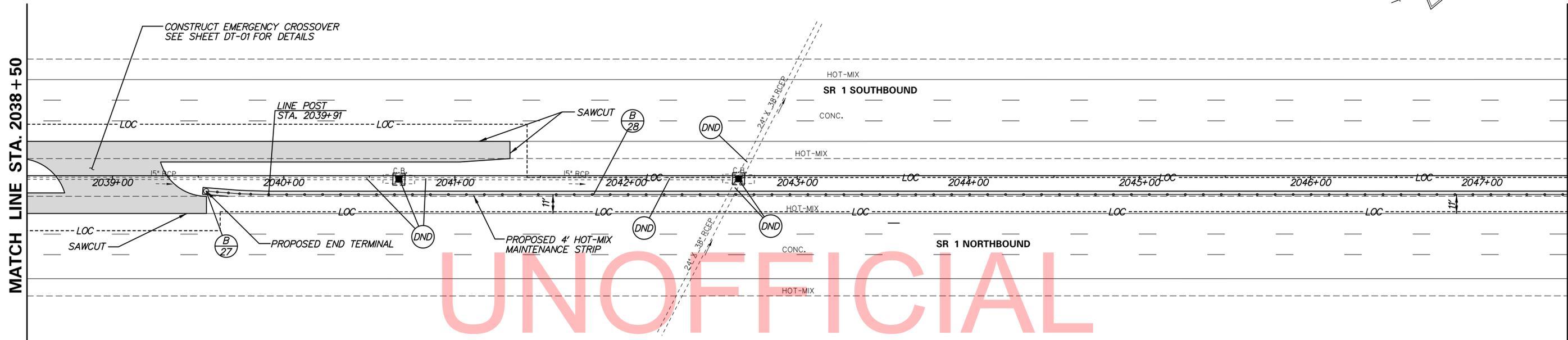
BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
28	TL-4 HIGH TENSION CABLE BARRIER	759.00'

BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
27	TL-3 END ANCHOR TERMINAL	+

+ NOTE: LENGTH DEPENDS ON MANUFACTURER

MATCH LINE STA. 2038+50

MATCH LINE STA. 2047+50



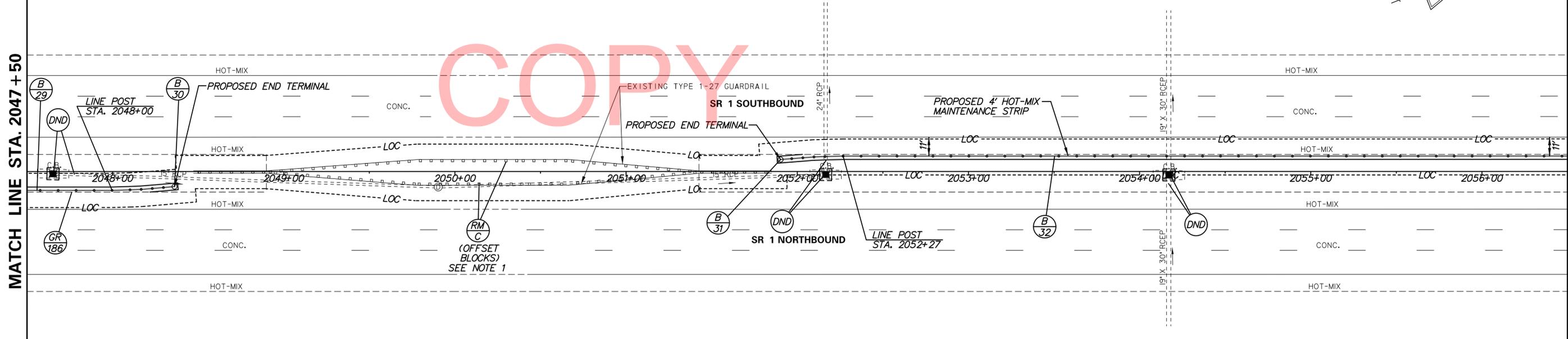
BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
29	TL-4 HIGH TENSION CABLE BARRIER	50.00'
32	TL-4 HIGH TENSION CABLE BARRIER	423.00'

BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
30	TL-3 END ANCHOR TERMINAL	+
31	TL-3 END ANCHOR TERMINAL	+

+ NOTE: LENGTH DEPENDS ON MANUFACTURER

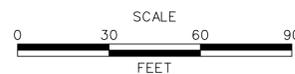
MATCH LINE STA. 2047+50

MATCH LINE STA. 2056+50



**NOTES:**  
 1. BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY STA. 2048+47 TO STA. 2051+85 (MEDIAN) THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

ADDENDUMS / REVISIONS



**SR 1  
 HIGH TENSION CABLE BARRIER,  
 ROTH BRIDGE TO US 13**

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: GRP
NEW CASTLE	CHECKED BY: TAO

**CONSTRUCTION PLAN**

CP-10
SHEET NO.
17
TOTAL SHTS.
25

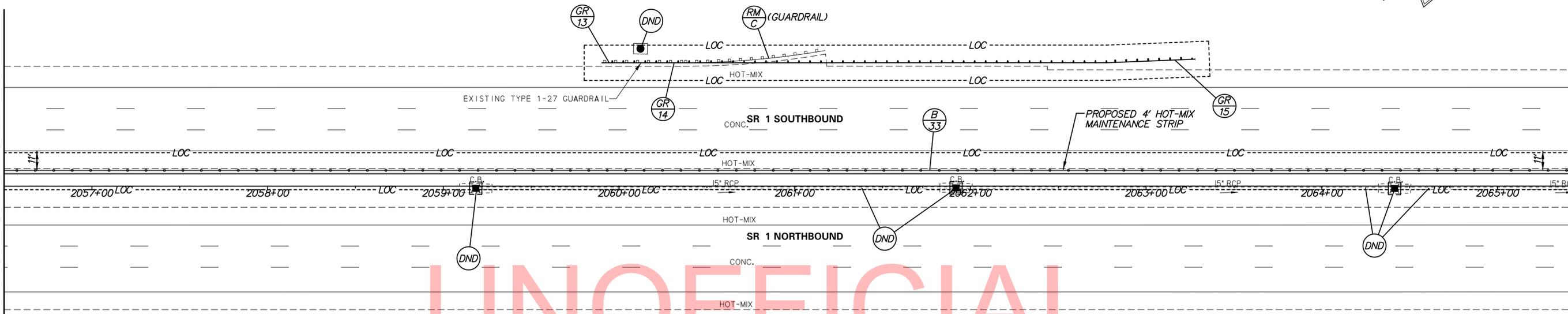
BARRIER SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
33	TL-4 HIGH TENSION CABLE BARRIER	900.00'
34	TL-4 HIGH TENSION CABLE BARRIER	136.00'

BARRIER END SECTION SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
35	TL-3 END ANCHOR TERMINAL	+

+ NOTE: LENGTH DEPENDS ON MANUFACTURER

MATCH LINE STA. 2056+50

MATCH LINE STA. 2065+50



GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
13	END ANCHORAGE 31	2059+90	-70.0'	12.50'
14	GALVANIZED SBG, TYPE 1-31	2060+03	-70.0'	275.00'
15	END TREATMENT ATTENUATOR, TYPE 1-31	2062+78	A	50.00'
16	END TREATMENT ATTENUATOR, TYPE 1-31	2065+95	A	50.00'
17	GALVANIZED SBG, TYPE 1-31	2066+45	68.0'	287.50'
18	END ANCHORAGE 31	2069+01	68.0'	12.50'

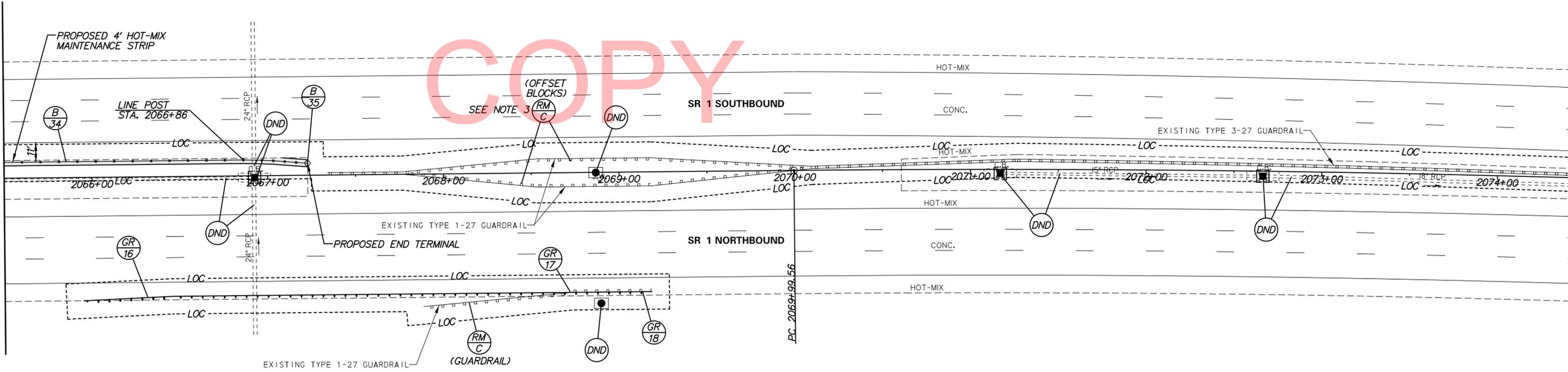
NOTES:  
 3. BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY STA. 2067+34 TO STA. 2081+70 (MEDIAN) THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

NOTES:  
 1. ALL BEGINNING STATIONS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.  
 2. A = OFFSET ATTENUATORS AS PER STANDARD DETAILS.

UNOFFICIAL  
WEBSITE  
COPY

MATCH LINE STA. 2065+50

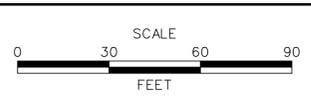
MATCH LINE STA. 2074+50



No. 21011-006 CAD North Project\CP11\_SRN.dgn 2/27/2018 2:42:16 PM



ADDENDUMS / REVISIONS



**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT T201401001	BRIDGE NO.
COUNTY NEW CASTLE	DESIGNED BY: GRP
	CHECKED BY: TAO

**CONSTRUCTION PLAN**

CP-11
SHEET NO. 18
TOTAL SHTS. 25

GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
19	END TREATMENT ATTENUATOR, TYPE 1-27	2074+70	A	50.00'
20	GALVANIZED SBG, TYPE 1-27	2085+11	-59.7'	50.00'

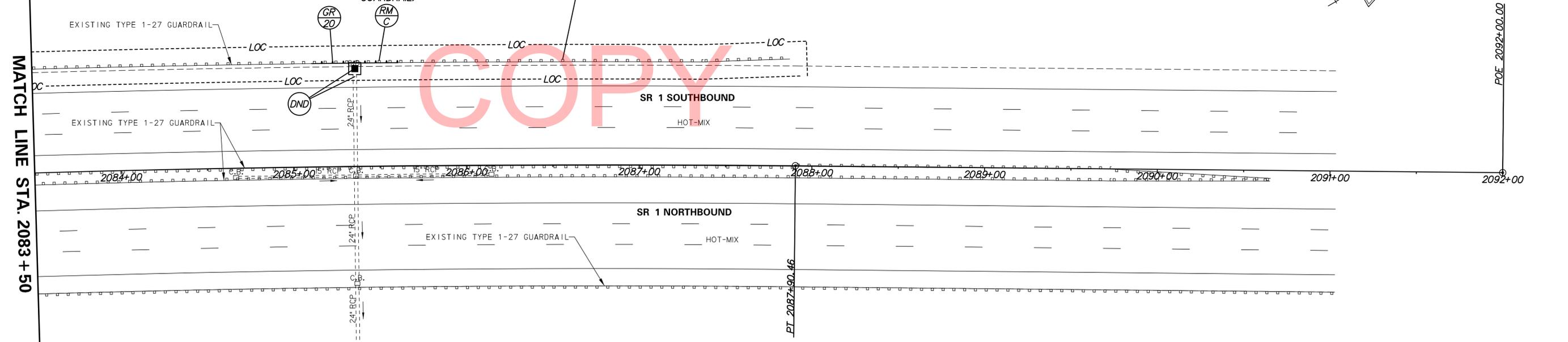
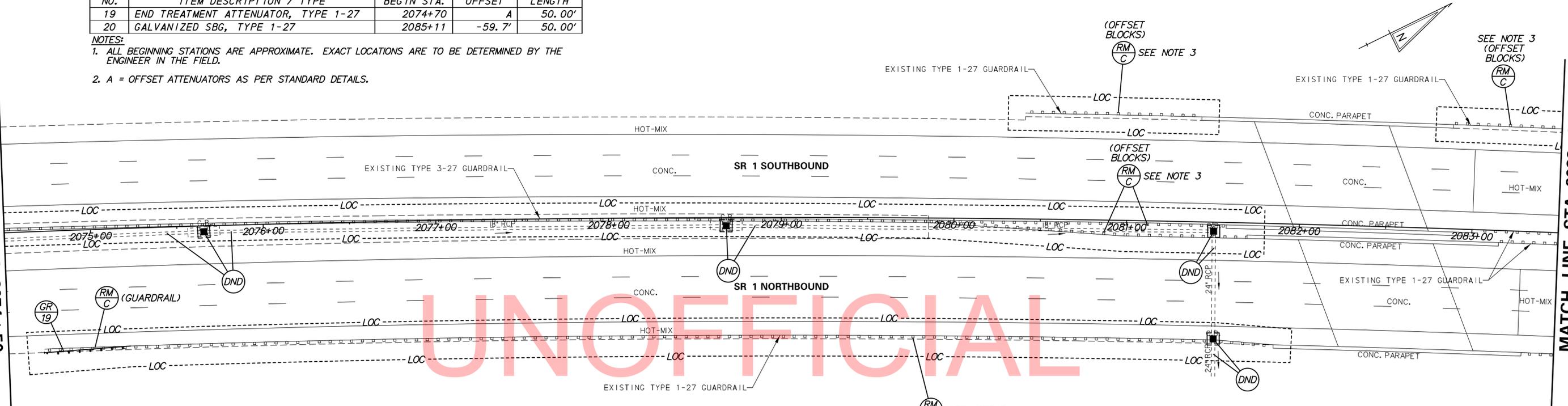
**NOTES:**

1. ALL BEGINNING STATIONS ARE APPROXIMATE. EXACT LOCATIONS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

2. A = OFFSET ATTENUATORS AS PER STANDARD DETAILS.

MATCH LINE STA. 2074+50

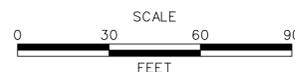
MATCH LINE STA. 2083+50



**NOTES:**

3. BEGINNING AT THE EXISTING GUARDRAIL END TERMINAL, ALONG SR 1 FROM APPROXIMATELY  
 -STA. 2080+41 TO STA. 2081+42 (LEFT)  
 -STA. 2082+87 TO STA. 2087+87 (LEFT)  
 -STA. 2075+21 TO STA. 2081+87 (RIGHT)  
 -STA. 2067+34 TO STA. 2081+70 (MEDIAN)  
 THE CONTRACTOR SHALL REMOVE THE EXISTING STEEL OFFSET BLOCKS AND REPLACE THEM WITH WOOD OR COMPOSITE OFFSET BLOCKS IN ACCORDANCE WITH ITEM 720634 - OFFSET BLOCK.

ADDENDUMS / REVISIONS

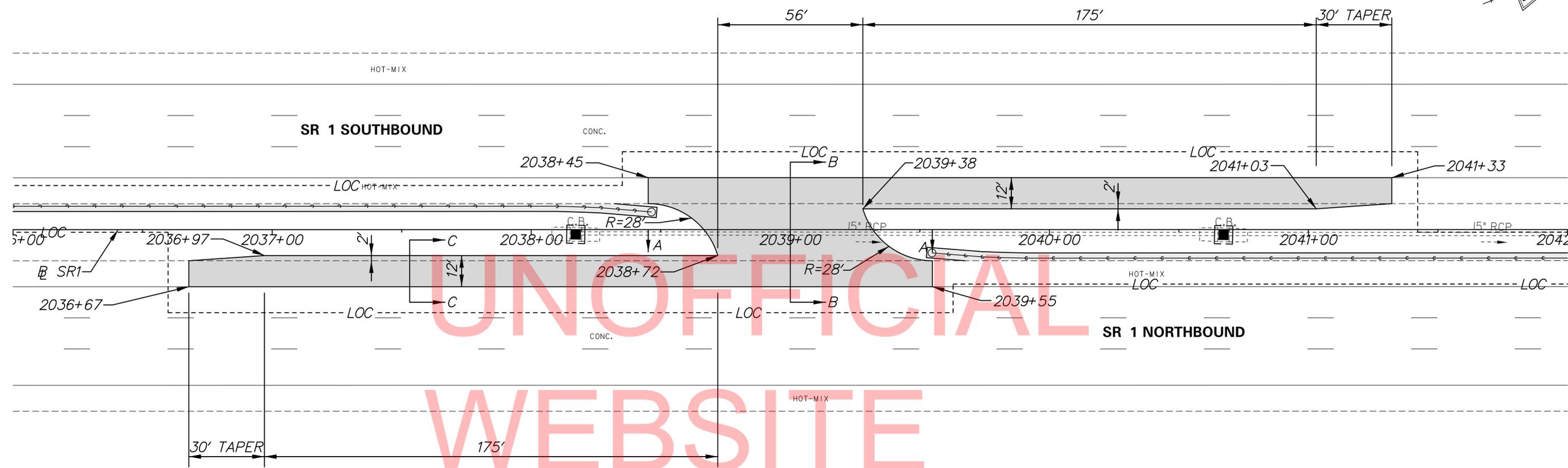
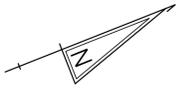


**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: GRP
NEW CASTLE	CHECKED BY: TAO

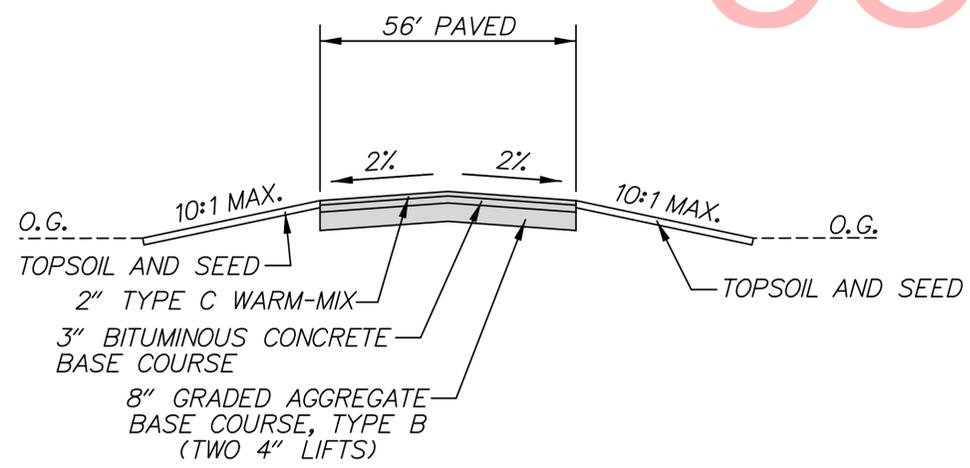
**CONSTRUCTION PLAN**

CP-12
SHEET NO.
19
TOTAL SHTS.
25

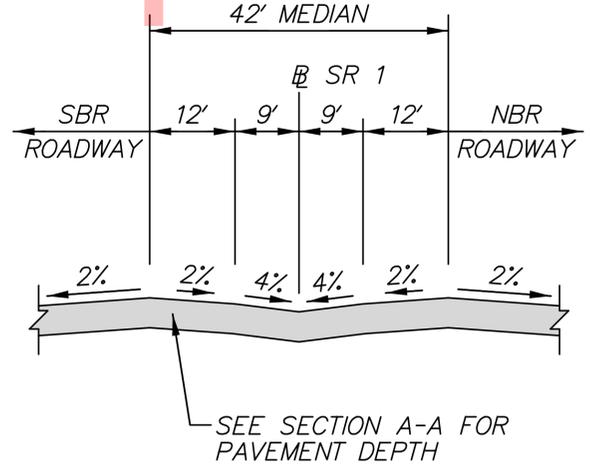


UNOFFICIAL  
WEBSITE  
COPY

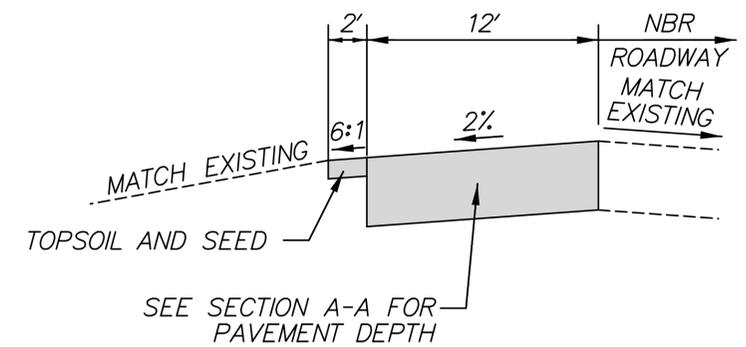
**SR 1 MEDIAN CROSSOVER  
PLAN VIEW**



SECTION A-A



SECTION B-B



SECTION C-C

No. 231911-006, CAD, North Project, DT01, SRN.dgn 2/23/2010 2:42:17 PM



ADDENDUMS / REVISIONS	

NOT TO SCALE

SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13

CONTRACT T201401001	BRIDGE NO. 
COUNTY NEW CASTLE	DESIGNED BY: GRP
	CHECKED BY: TAO

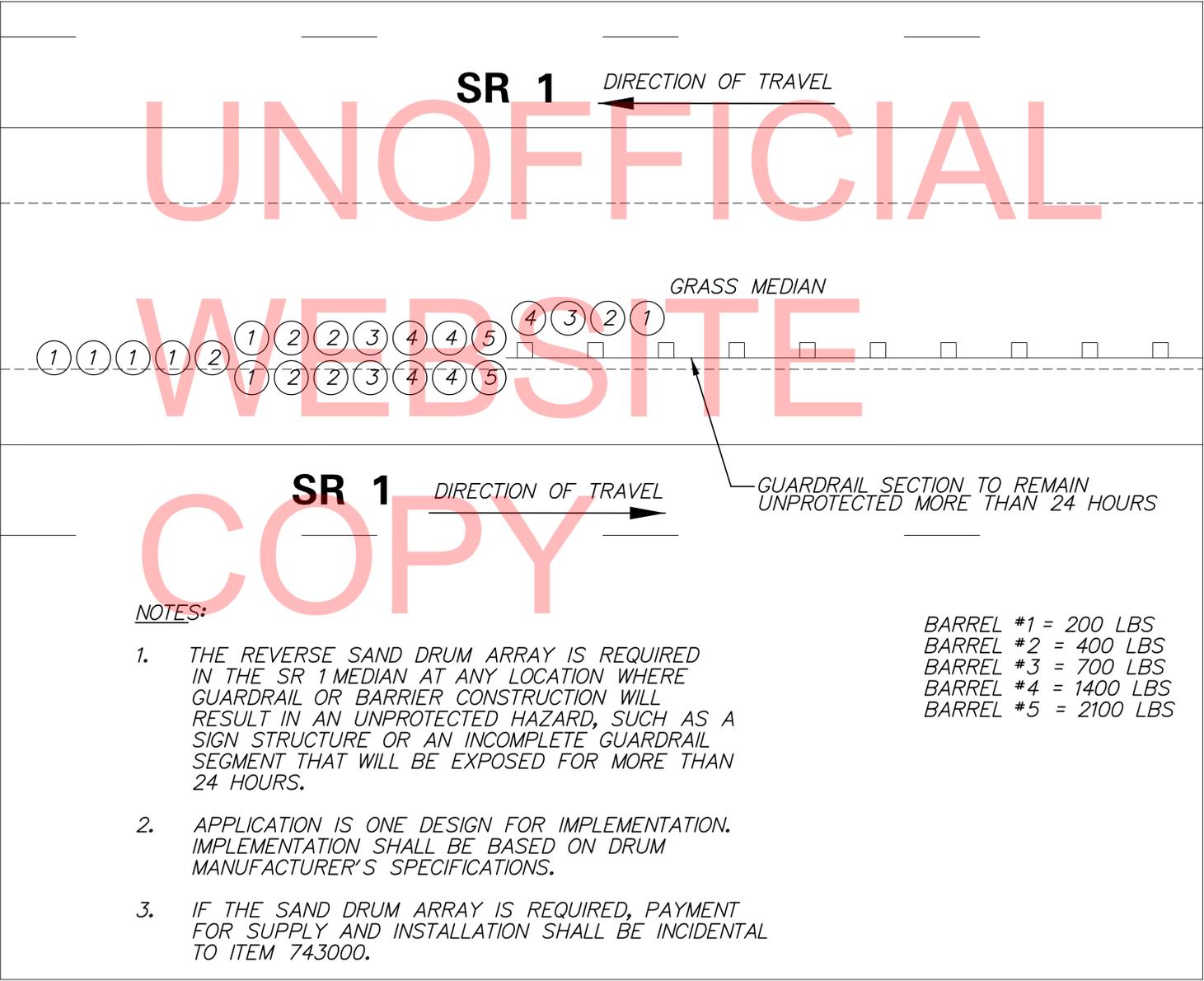
CONSTRUCTION DETAILS
SHEET NO. 20
TOTAL SHTS. 25

DT-01

UNOFFICIAL

WEBSITE

COPY



**NOTES:**

1. THE REVERSE SAND DRUM ARRAY IS REQUIRED IN THE SR 1 MEDIAN AT ANY LOCATION WHERE GUARDRAIL OR BARRIER CONSTRUCTION WILL RESULT IN AN UNPROTECTED HAZARD, SUCH AS A SIGN STRUCTURE OR AN INCOMPLETE GUARDRAIL SEGMENT THAT WILL BE EXPOSED FOR MORE THAN 24 HOURS.
2. APPLICATION IS ONE DESIGN FOR IMPLEMENTATION. IMPLEMENTATION SHALL BE BASED ON DRUM MANUFACTURER'S SPECIFICATIONS.
3. IF THE SAND DRUM ARRAY IS REQUIRED, PAYMENT FOR SUPPLY AND INSTALLATION SHALL BE INCIDENTAL TO ITEM 743000.

- BARREL #1 = 200 LBS
- BARREL #2 = 400 LBS
- BARREL #3 = 700 LBS
- BARREL #4 = 1400 LBS
- BARREL #5 = 2100 LBS

REVERSE SAND DRUM ARRAY (70MPH) DETAIL  
PLAN VIEW

No. 31911-006, CADWorx North Project\DT02\_SRM.dgn 7/22/2019 2:42:18 PM



ADDENDUMS / REVISIONS	

NOT TO SCALE

SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: GRP
NEW CASTLE	CHECKED BY: TAO

CONSTRUCTION DETAILS

DT-02
SHEET NO.
21
TOTAL SHTS.
25

1. MAINTENANCE OF TRAFFIC ON SR 1 DURING CONSTRUCTION ACTIVITIES OR OTHER OPERATIONS AS DIRECTED BY THE ENGINEER SHALL CONFORM TO:

TYPICAL APPLICATION 5A - SHOULDER CLOSURE ON AN INTERSTATE, FREEWAY, OR EXPRESSWAY FOR WORK BEYOND THE SHOULDER GREATER THAN 10 FEET FROM THE EDGE OF THE TRAVELED WAY

TYPICAL APPLICATION 5B - STATIONARY LANE CLOSURE FOR SHOULDER WORK 10 FEET FROM THE EDGE OF THE TRAVELED WAY ON AN INTERSTATE, FREEWAY OR EXPRESSWAY.

TYPICAL APPLICATION 33 - STATIONARY LANE CLOSURE ON A MULTI-LANE, DIVIDED HIGHWAY.

2. ANY CONSTRUCTION OPERATIONS THAT REQUIRE A LANE CLOSURE ON SR1 WILL NOT BE PERMITTED BETWEEN 7:00 AM AND 9:00 AM OR BETWEEN 3:00 PM AND 6:00 PM MONDAY THROUGH FRIDAY. WORK ON SATURDAY AND SUNDAY IS NOT ALLOWED AS PART OF THIS CONTRACT.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF EXISTING PAVEMENT WITHIN THE PROJECT LIMITS FOR THE DURATION OF THIS CONTRACT OR AS DIRECTED BY THE ENGINEER.

4. ACCESS TO ALL EXISTING PAVED EMERGENCY MEDIAN CROSSOVERS SHALL BE MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.

5. ALL WORK SHALL BE PERFORMED IN A MANNER SUCH THAT POSITIVE DRAINAGE OF THE ROADWAY SURFACE IS MAINTAINED THROUGHOUT CONSTRUCTION. ALL WORK AND MATERIALS TO PROVIDE AND MAINTAIN THIS DRAINAGE SHALL BE INCIDENTAL TO ITEM 743000 - MAINTENANCE OF TRAFFIC.

6. NO EQUIPMENT SHALL BE STORED IN THE MEDIAN, OR WITHIN THE CLEAR ZONE, AT ANY TIME DURING NON-WORKING HOURS.

7. A TRAFFIC OFFICER SHALL BE REQUIRED DURING THE SET UP AND REMOVAL OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ACTIVITIES THAT REQUIRE A LANE CLOSURE ON SR 1.

8. THIS PROJECT IS CONSIDERED A SIGNIFICANT PROJECT AS DEFINED BY DELDOT'S WORK ZONE MOBILITY PROCEDURES AND GUIDELINES. A TYPE B TRANSPORTATION MANAGEMENT PLAN (TMP) HAS BEEN PREPARED AND IS AVAILABLE FOR VIEWING BY CONTACTING THE DEPARTMENT'S SAFETY PROGRAM MANAGER AT (302) 659-4060. ALL MONITORING REQUIREMENTS OF THE TMP SHALL BE CONDUCTED BY DELDOT FORCES UNLESS OTHERWISE DIRECTED BY THE ENGINEER. MODIFICATIONS TO THE TMP SHALL BE COMPLETED BY THE CONTRACTOR IF CHANGES TO THE TIME RESTRICTIONS OR THE TRAFFIC CONTROL PLAN ARE DESIRED. THE MODIFIED TMP SHALL BE PREPARED BY A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF DELAWARE.

9. A TYPE II TRUCK MOUNTED ATTENUATOR (TMA) SHALL BE REQUIRED ON THIS PROJECT DURING THE FOLLOWING OPERATIONS: TEMPORARY/PERMANENT PAVEMENT MARKINGS, ROADSIDE SPRAYING, PATCHING, MILLING, SWEEPING, TEMPORARY TRAFFIC BARRIER PLACEMENT OR AS DIRECTED BY THE ENGINEER. THE ROLL AHEAD DISTANCE SHALL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE TMA SHALL CONFORM TO THE REQUIREMENTS OF SECTION 6F.82 OF THE DELAWARE MUTCD.

10. LANE CLOSURE TAPER BASED ON 70 MPH DESIGN SPEED. TAPER LENGTH SHALL BE A MINIMUM OF 840' WITH A 730' BUFFER PROVIDED.

11. A TYPE II TRUCK MOUNTED ATTENUATOR SHOULD BE USED AS END TREATMENT FOR ANY SECTIONS LEFT UNTREATED FOR LESS THAN 24 HOURS. A SAND DRUM ARRAY SHALL BE USED AS END TREATMENT FOR ANY SECTIONS LEFT UNTREATED FOR MORE THAN 24 HOURS. THE SAND DRUM ARRAY SHOULD BE CONFIGURED FOR REVERSE DIRECTIONS IMPACTS AS SHOWN ON DETAIL SHEET DT-02.

UNOFFICIAL  
WEBSITE  
COPY

No: 3:15:11-006-CA010 North Project: CS01\_SRRN.dgn 7/22/2015 2:42:18 PM



ADDENDUMS / REVISIONS	

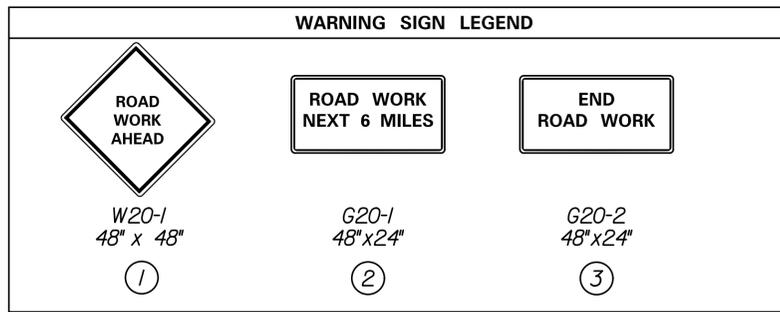
NOT TO SCALE

SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: GRP
NEW CASTLE	CHECKED BY: TAO

GENERAL TRAFFIC CONTROL NOTES	SHEET NO.
	22
	TOTAL SHTS.
	25

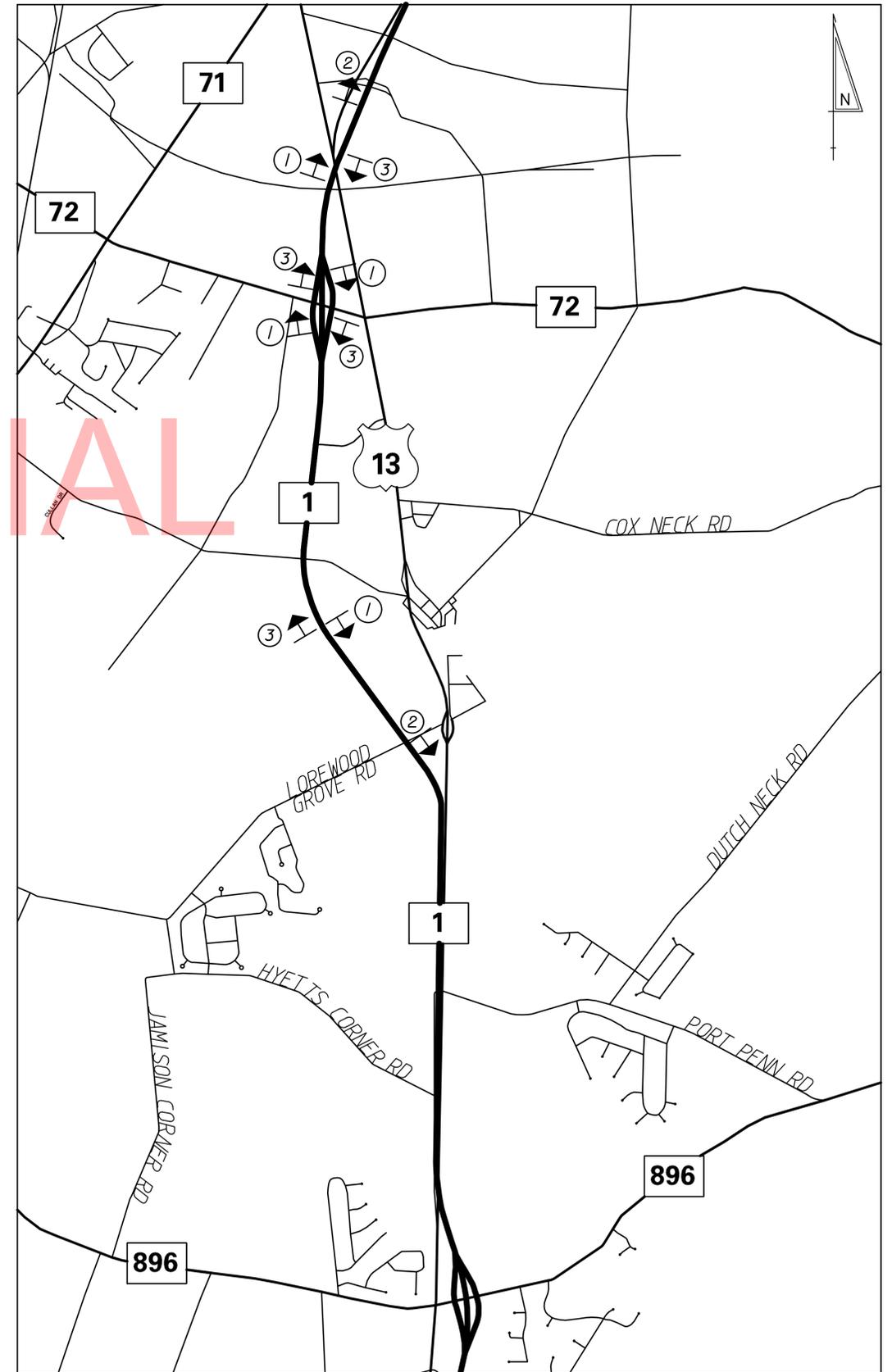
CS-01
-------



**NOTE:**

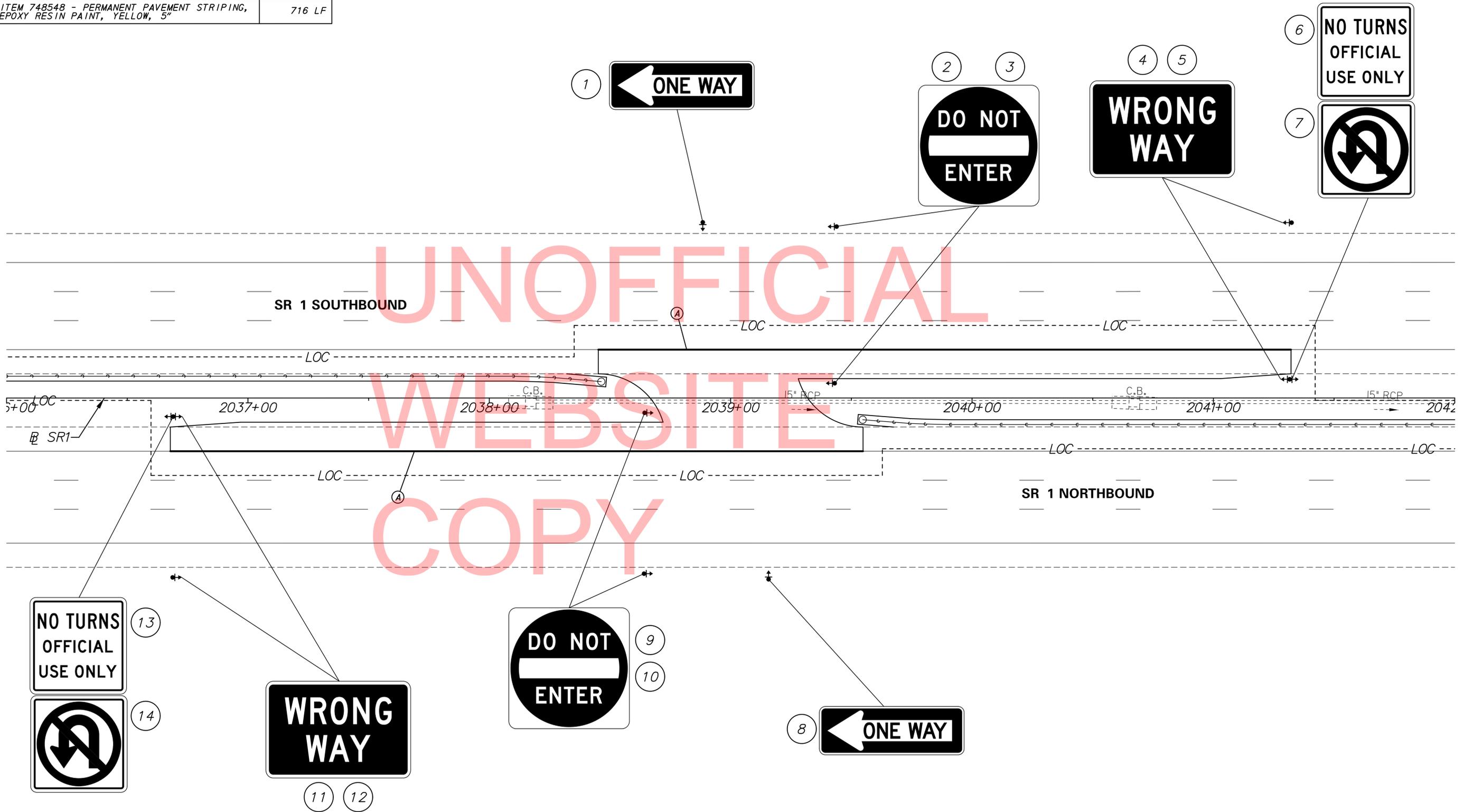
1. PLACE ALL WARNING SIGNS PRIOR TO THE BEGINNING OF CONSTRUCTION. ALL WARNING SIGNS SHALL BE PAID FOR UNDER ITEM 743024 - TEMPORARY WARNING SIGNS AND PLAQUES.
2. ALL WARNING SIGNS LOCATED ALONG SR 1 SHALL BE PLACED IN THE MEDIAN AND ALONG THE RIGHT SIDE OF THE ROADWAY.

UNOFFICIAL  
WEBSITE  
COPY



No. 21011-006, CAD, North Project, CS02\_SRM.dgn 2/27/2018 2:42:19 PM

PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	ITEM 748548 - PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, YELLOW, 5"	716 LF



No. 31911-006, CAD, North Project, SS01\_SRN.dgn 2/27/2019 2:42:19 PM

PERMANENT SIGN SCHEDULE

SHEET NO.	NO.	CODE	DESCRIPTION	ASSEMBLY NO.	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	SIGN AREA (SF)	SIGN DISPOSITION	ITEM 749687 SINGLE POST (EACH)		ITEM 749690 MULTI POST (SF)		ITEM 749688 4" HOLE, 0-6" (EACH)	ITEM 749689 4" HOLE, >6" (EACH)	REMARKS
									REMOVE	INSTALL	REMOVE	INSTALL			
25	1	R6-1L	ONE WAY (LEFT)		54	18	6.75	INSTALL				6.75			
25	2	R5-1	DO NOT ENTER		48	48	16	INSTALL				16			
25	3	R5-1	DO NOT ENTER		48	48	16	INSTALL				16			
25	4	R5-1a	WRONG WAY		42	30	8.75	INSTALL		1					
25	5	R5-1a	WRONG WAY		42	30	8.75	INSTALL		1					
25	6	R3-3-DE	NO TURNS OFFICIAL USE ONLY		36	36	9	INSTALL		1					
25	7	R3-4	NO U-TURNS		36	36	9	INSTALL		1					
25	8	R6-1L	ONE WAY (LEFT)		54	18	6.75	INSTALL				6.75			
25	9	R5-1	DO NOT ENTER		48	48	16	INSTALL				16			
25	10	R5-1	DO NOT ENTER		48	48	16	INSTALL				16			
25	11	R5-1a	WRONG WAY		42	30	8.75	INSTALL		1					
25	12	R5-1a	WRONG WAY		42	30	8.75	INSTALL		1					
25	13	R3-3-DE	NO TURNS OFFICIAL USE ONLY		36	36	9	INSTALL		1					
25	14	R3-4	NO U-TURNS		36	36	9	INSTALL		1					
TOTALS							148.5			0	8		77.5	0	

UNOFFICIAL  
WEBSITE  
COPY

No. 201401001 North Project SS02\_SRN.dgn 2/27/2015 2:42:58 PM



ADDENDUMS / REVISIONS



**SR 1  
HIGH TENSION CABLE BARRIER,  
ROTH BRIDGE TO US 13**

CONTRACT	BRIDGE NO.
T201401001	
COUNTY	DESIGNED BY: GRP
NEW CASTLE	CHECKED BY: TAO

**SIGNING SCHEDULE**

SS-02
SHEET NO.
25
TOTAL SHTS.
25