

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 CLEANOUT OR VENT
	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	
	DELMARVA POWER GAS UNDERGROUND
	DELMARVA POWER ELECTRIC OVERHEAD
	EXISTING ELECTRIC OVERHEAD - SIGNAL
	CITY OF WILMINGTON ELECTRIC UNDERGROUND
	CITY OF WILMINGTON SEWER UNDERGROUND
	CITY OF WILMINGTON WATER UNDERGROUND
	DELMARVA POWER ELECTRIC UNDERGROUND
	EXISTING MULTIDUCT CONDUIT
	EXISTING FIBER OPTIC UNDERGROUND

PROPOSED SYMBOLS

CONSTRUCTION	
	CONCRETE SAFETY BARRIER - PERMANENT
	BIOFILTRATION SWALE
	BRICK PATTERNED SURFACE
	BUTT JOINT
	CLEAR ZONE
	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
	CURB OPENING
	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
	RELOCATE BY PROPERTY OWNER
	REMOVE BY CONTRACTOR
	REMOVE BY TRAFFIC CONTRACTOR
	REMOVE BY OTHERS
	UNDERDRAIN / LENGTH
	UNDERDRAIN OUTLET PIPE

LANDSCAPING	
	LANDSCAPE PLANTINGS
	SHRUBBERY
	CONIFEROUS TREE
	DECIDUOUS TREE

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

PAVEMENT SECTION(S)	
	MILL AND OVERLAY PAVEMENT - 2" BITUMINOUS CONCRETE SUPERPAVE TYPE C
	RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	PATCHING PCC PAVEMENT - SEE STANDARD CONSTRUCTION DETAILS

UTILITY COMPANY FACILITIES	
	DELMARVA POWER ELECTRIC OVERHEAD

LAST REVISED: 8/16/2018 P:\60323054 DelDOT AGR 1672 BDCS\T01 - Rehab Br. 1-577 Wilmington\900 Work\910 CAD\20-SHEETS\Civil\C01.dgn

GENERAL NOTES

1. 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 2014, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.

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

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

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

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

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

SECTION 600

4. STATION AND ELEVATION DATA GIVEN FOR DRAINAGE STRUCTURES ARE TO BE APPLIED TO THE CENTER OF THE GRATE FOR INLETS, AND TO THE CENTER OF THE STRUCTURE FOR JUNCTION BOXES AND MANHOLES.

SECTION 700

5. IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK, INCLUDING SAW CUTTING EXISTING CURB SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.

6. WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762001 - SAWCUTTING, CONCRETE, FULL DEPTH.

7. THE CONTRACTOR SHALL DELIVER ALL EXCESS MILLED MATERIAL TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S TALLEY MAINTENANCE YARD. THE MATERIAL SHALL BE NEATLY STOCKPILED AT THE YARD. COSTS FOR THIS WORK SHALL BE INCIDENTAL TO ITEM 760010 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT. CONTRACTOR SHOULD CONTACT STEWART DOUGLASS AT (302)894-6319 TO COORDINATE DELIVERY.

8. ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.

SECTION 900

9. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S STORMWATER SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

MISCELLANEOUS

10. THE CONTRACTOR SHALL CONTACT THE CHIEF OF SCHEDULING FOR DART FIRST STATE, 14 DAYS PRIOR TO THE START OF CONSTRUCTION AT 302-576-6191 OR BY EMAIL NOTIFICATION TO DOT_Detour@state.de.us.

PROJECT NOTES

SECTION 100

- ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
- 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

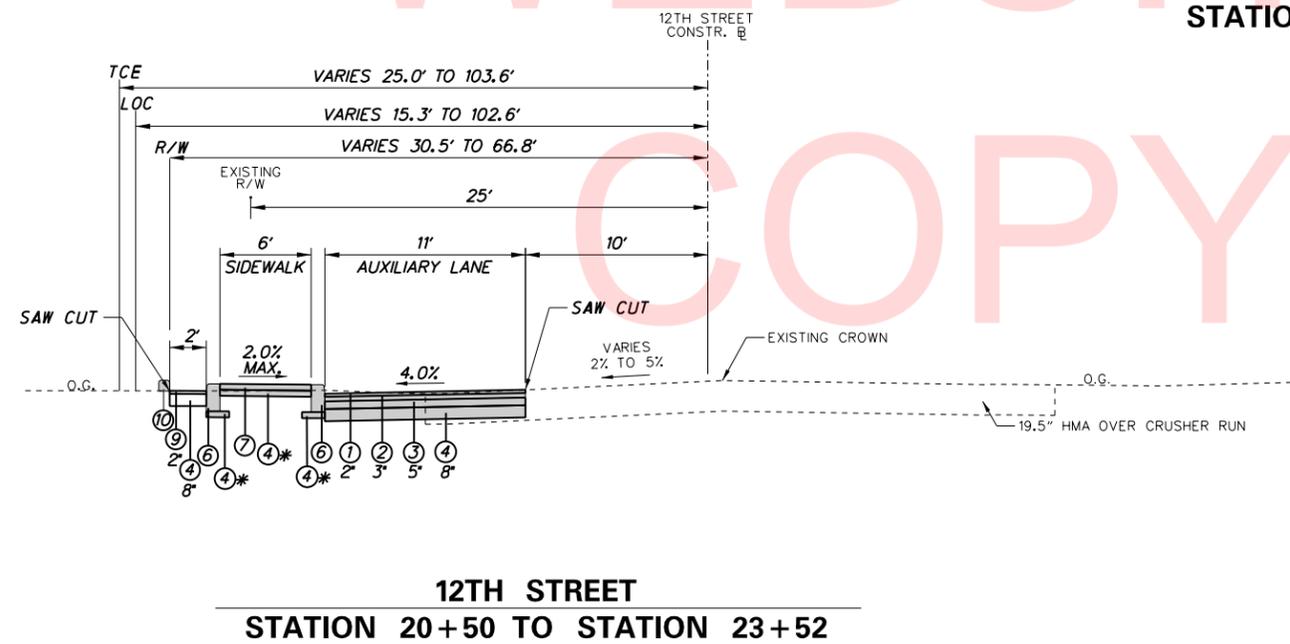
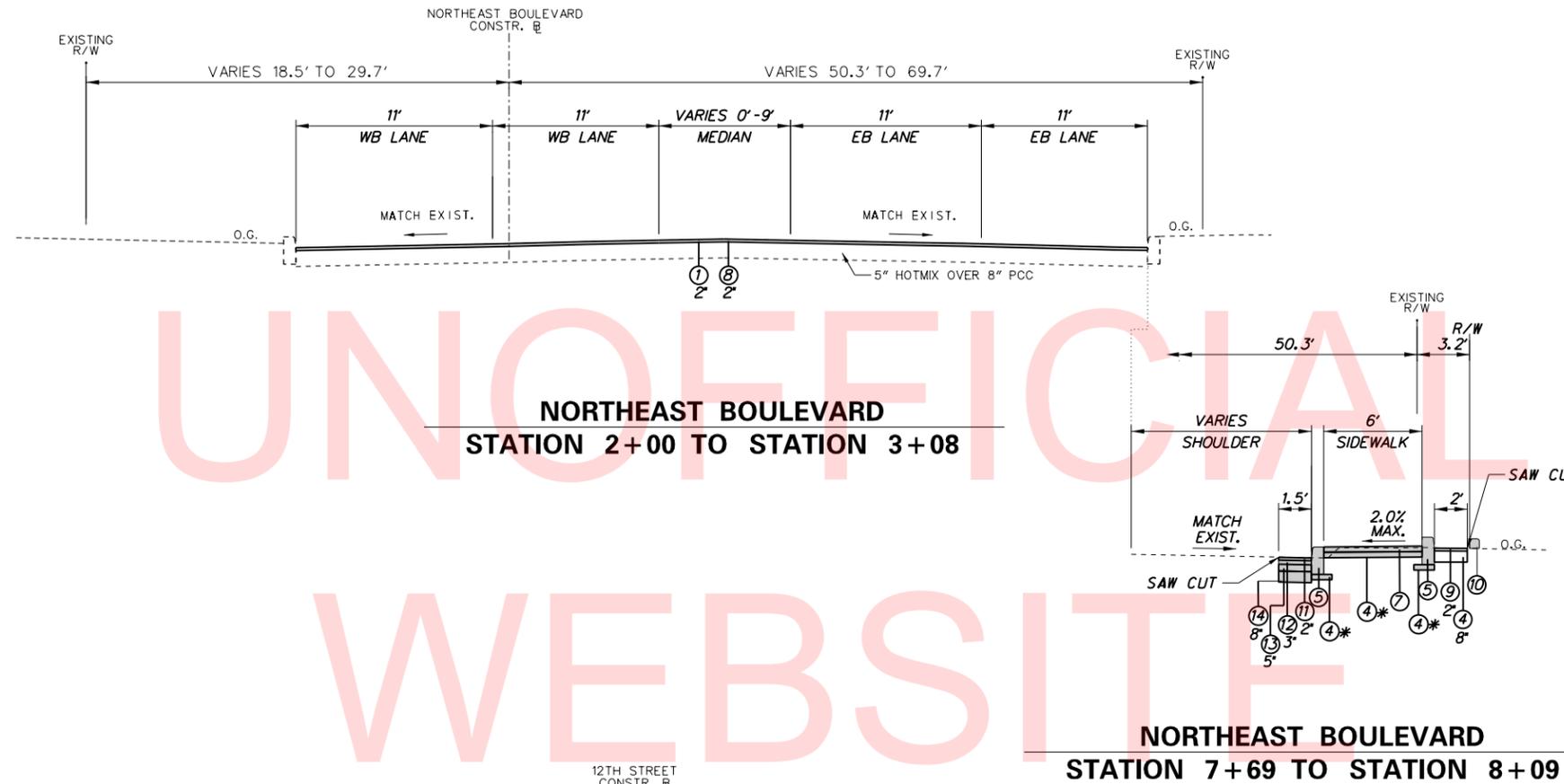
- ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
 - EXISTING T-BEAMS AS SHOWN
 - EXISTING ROCKER BEARING ASSEMBLIES AND ELASTOMERIC BEARINGS AS SHOWN
 - EXISTING SIP FORMS IN SPAN 1, BAY 9, AS DIRECTED.
 - EXISTING BOLLARDS
 - EXISTING LIGHT POLE BASES
 - EXISTING SIGNAL POLE BASES, CABINET BASES AND JUNCTION WELLS
 - EXISTING CHAIN LINK FENCE, AS SHOWN

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		NOT TO SCALE	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT	BRIDGE NO.	1-577	NOTES	SHEET NO.	3
	T201407403	DESIGNED BY: KMH			COUNTY	CHECKED BY: ADM	TOTAL SHTS.		65	
NEW CASTLE			NEW CASTLE	NEW CASTLE	NEW CASTLE	NEW CASTLE	NEW CASTLE			

MATERIAL	LIFT THICKNESS	
	MINIMUM	MAXIMUM
BITUMINOUS CONCRETE, TYPE 'C'	1.25"	2"
BITUMINOUS CONCRETE, TYPE 'B'	2.25"	4"
BITUMINOUS CONCRETE BASE COURSE	3"	6"
GRADED AGGREGATE BASE COURSE	-	8"



HC - HORIZONTAL CLEARANCE IS A MINIMUM OF 1.5' BEHIND FACE OF CURB AND A MINIMUM OF 3' BEHIND INTERSECTIONS AND ENTRANCES.

*INCIDENTAL ITEM

LEGEND	
①	ITEM 401046 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE C, PG 76-22, (NON-CARBONATE STONE)
②	ITEM 401016 - BITUMINOUS CONCRETE, SUPERPAVE, TYPE B, PG 76-22
③	ITEM 401021 - BITUMINOUS CONCRETE, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE, PG 64-22
④	ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE B
⑤	ITEM 701013 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-8
⑥	ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-6
⑦	ITEM 705001 - PORTLAND CEMENT CONCRETE SIDEWALK, 4"
⑧	ITEM 760010 - PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT
⑨	ITEM 401053 - SUPERPAVE, TYPE C, PG 64-22, THIN LIFT
⑩	ITEM 701505 - P.C.C. PARKING BUMPER
⑪	ITEM 401029 - SUPERPAVE, TYPE C, PG 64-22, PATCHING
⑫	ITEM 401030 - SUPERPAVE, TYPE B, PG 64-22, PATCHING
⑬	ITEM 401031 - SUPERPAVE BITUMINOUS CONCRETE BASE COURSE, PG 64-22, PATCHING
⑭	ITEM 301002 - GRADED AGGREGATE BASE COURSE, PATCHING

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	DEL AWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT	BRIDGE NO.	1-577	TYPICAL SECTION	SHEET NO.
						T201407403	DESIGNED BY: KMH		
					COUNTY	CHECKED BY: ADM			TOTAL SHTS.
					NEW CASTLE				65

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
1	21+55.00	21.00	34" x 24"	1	10.01	5.34

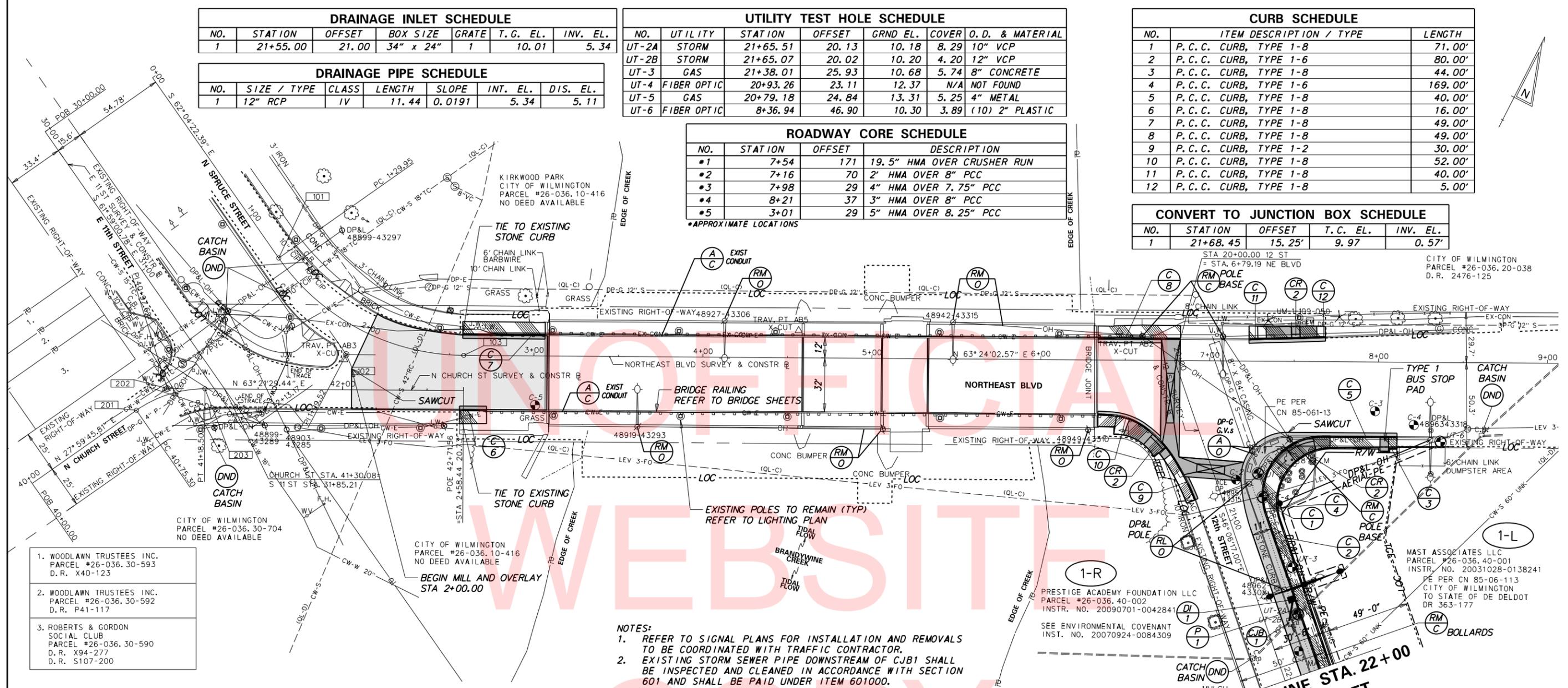
DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
1	12" RCP	IV	11.44	0.0191	5.34	5.11

UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O.D. & MATERIAL
UT-2A	STORM	21+65.51	20.13	10.18	8.29	10" VCP
UT-2B	STORM	21+65.07	20.02	10.20	4.20	12" VCP
UT-3	GAS	21+38.01	25.93	10.68	5.74	8" CONCRETE
UT-4	FIBER OPTIC	20+93.26	23.11	12.37	N/A	NOT FOUND
UT-5	GAS	20+79.18	24.84	13.31	5.25	4" METAL
UT-6	FIBER OPTIC	8+36.94	46.90	10.30	3.89	(10) 2" PLASTIC

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	P.C.C. CURB, TYPE 1-8	71.00'
2	P.C.C. CURB, TYPE 1-6	80.00'
3	P.C.C. CURB, TYPE 1-8	44.00'
4	P.C.C. CURB, TYPE 1-6	169.00'
5	P.C.C. CURB, TYPE 1-8	40.00'
6	P.C.C. CURB, TYPE 1-8	16.00'
7	P.C.C. CURB, TYPE 1-8	49.00'
8	P.C.C. CURB, TYPE 1-8	49.00'
9	P.C.C. CURB, TYPE 1-2	30.00'
10	P.C.C. CURB, TYPE 1-8	52.00'
11	P.C.C. CURB, TYPE 1-8	40.00'
12	P.C.C. CURB, TYPE 1-8	5.00'

ROADWAY CORE SCHEDULE				
NO.	STATION	OFFSET	DESCRIPTION	
*1	7+54	171	19.5" HMA OVER CRUSHER RUN	
*2	7+16	70	2" HMA OVER 8" PCC	
*3	7+98	29	4" HMA OVER 7.75" PCC	
*4	8+21	37	3" HMA OVER 8" PCC	
*5	3+01	29	5" HMA OVER 8.25" PCC	

CONVERT TO JUNCTION BOX SCHEDULE				
NO.	STATION	OFFSET	T.C. EL.	INV. EL.
1	21+68.45	15.25'	9.97	0.57'



- WOODLAWN TRUSTEES INC. PARCEL #26-036.30-593 D.R. X40-123
- WOODLAWN TRUSTEES INC. PARCEL #26-036.30-592 D.R. P41-117
- ROBERTS & GORDON SOCIAL CLUB PARCEL #26-036.30-590 D.R. X94-277 D.R. S107-200

NE BLVD CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
POB	0+00.00	0	634967.7825	621789.7365
POE	10+50.00	0	635259.9173	622736.0224

N CHURCH ST CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
POB	40+00.00	0	634722.1320	621834.9473
POE	42+71.56	0	634886.9620	622037.5180

12 ST CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
POB	20+00.00	0	635093.8881	622404.4593
POE	24+40.00	0	634788.8174	622721.5269

E 11 ST CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
POB	30+00.00	0	634910.5206	621747.5511
POE	32+13.17	0	634810.3873	621935.7441

HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
T.P. AB2	6+46.54	24.46 LT	635094.5724	622367.6044	17.48
T.P. AB3	1+94.45	20.18 RT	634871.0307	621966.2850	13.12
T.P. AB5	4+56.47	27.33 LT	635008.5971	622198.0832	22.06
T.P. AB7	22+71.79	21.39 LT	634920.8531	622615.1485	9.17
T.P. AB8	24+36.66	28.99 LT	634812.0215	622739.2249	8.28

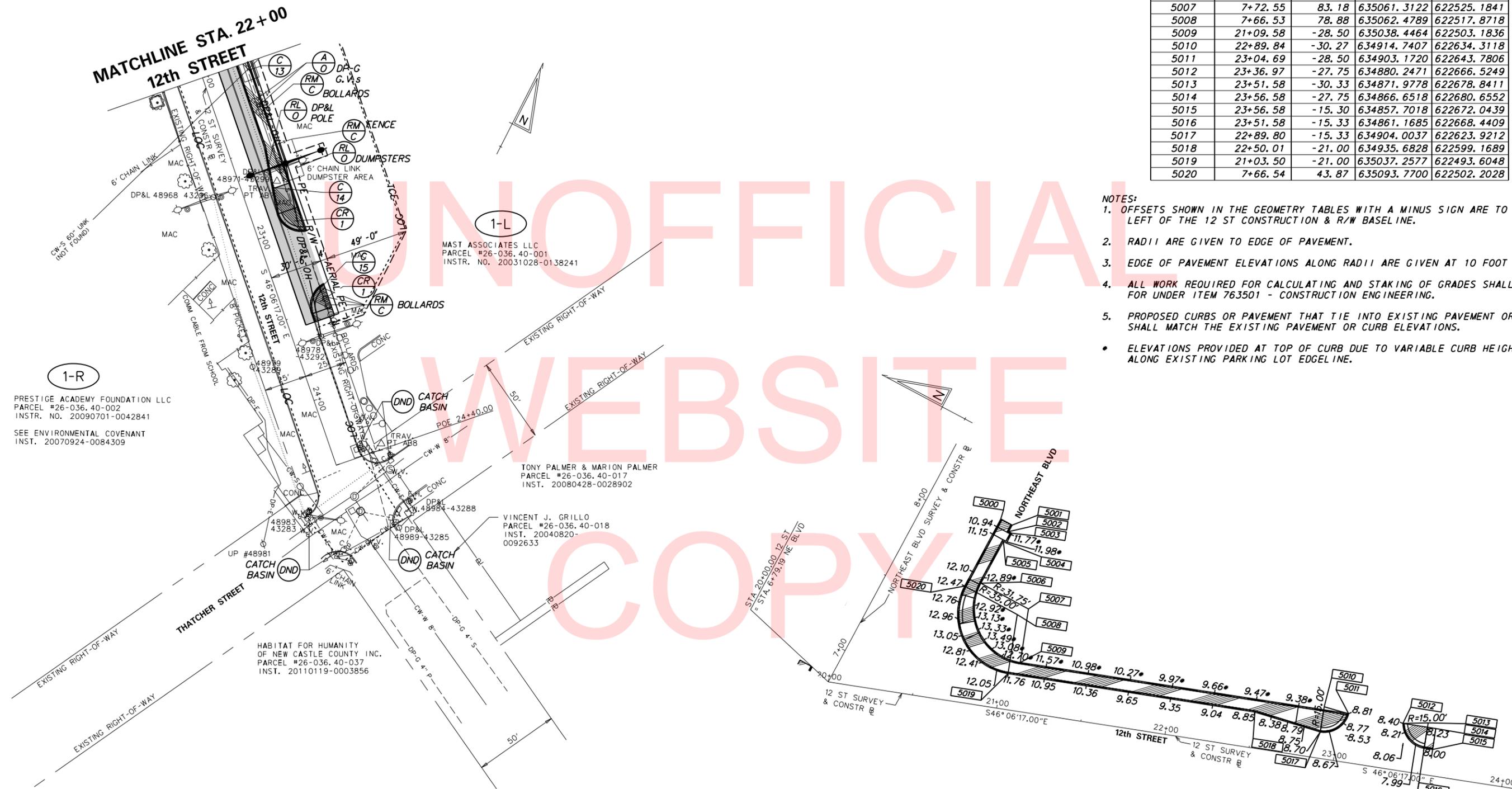
CIRCULAR CURVE No ①				
Element: Circular				
PC STA (101)	1+29.95	634906.9221	621904.5504	
PI STA (102)	1+99.52	634874.3397	621966.0176	
CC STA ()		635026.2006	621967.7774	
PT STA (103)	2+58.42	634905.4890	622028.2234	
Radius:	135.00			
Delta:	54° 31' 35.03" LEFT			
Degree of Curvature (Arc):	42° 26' 28.75"			
Length:	128.47			
Tangent:	69.57			
Chord:	123.68			
Middle Ordinate:	15.00			
External:	16.87			
Tangent Direction:	S 62° 04' 22.39" E			
Radial Direction:	S 27° 55' 37.61" W			
Chord Direction:	S 89° 20' 09.91" E			
Radial Direction:	S 26° 35' 57.43" E			
Tangent Direction:	N 63° 24' 02.57" E			

CIRCULAR CURVE No ②				
Element: Circular				
PC STA (201)	40+75.30	634788.6218	621870.2947	
PI STA (202)	40+97.62	634808.3249	621880.7693	
CC STA ()		634755.7630	621932.1033	
PT STA (203)	41+18.50	634818.3309	621900.7144	
Radius:	70.00			
Delta:	35° 21' 43.63" RIGHT			
Degree of Curvature (Arc):	91° 10' 09.78"			
Length:	43.20			
Tangent:	22.31			
Chord:	42.52			
Middle Ordinate:	3.31			
External:	3.47			
Tangent Direction:	N 27° 59' 45.81" E			
Radial Direction:	S 62° 00' 14.19" E			
Chord Direction:	N 45° 40' 37.63" E			
Radial Direction:	S 26° 38' 30.56" E			
Tangent Direction:	N 63° 21' 29.44" E			

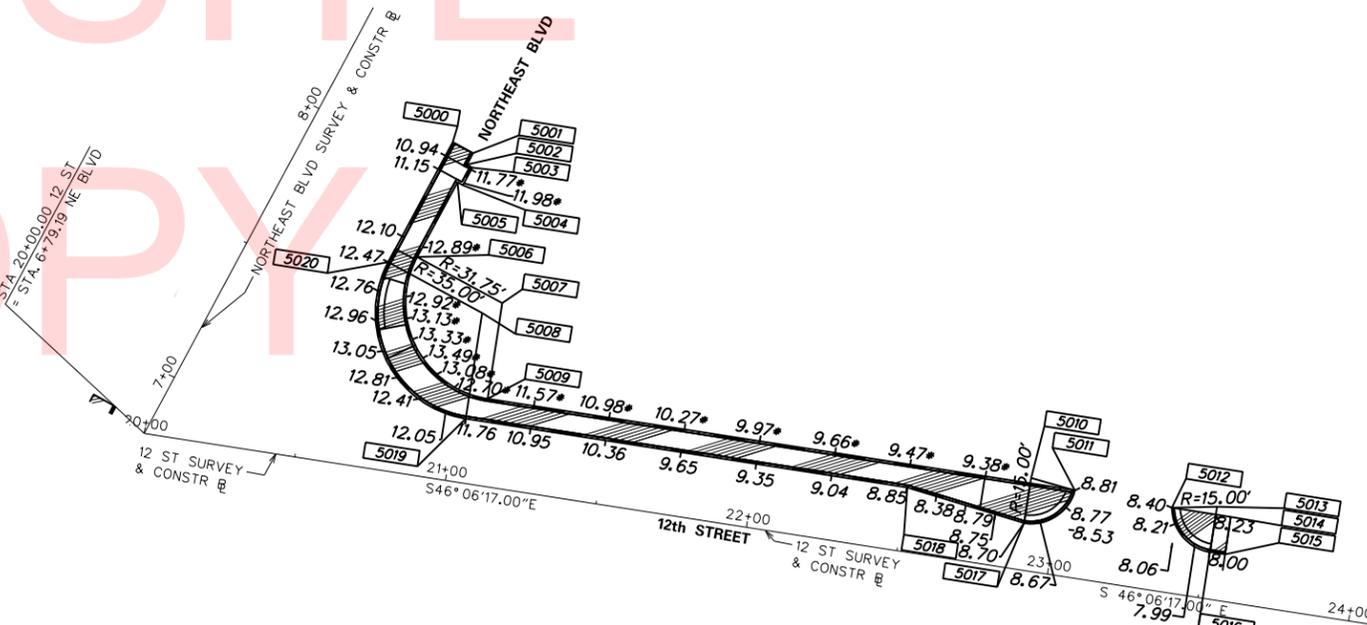
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CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
13	P. C. C. CURB, TYPE 1-6	104.00'
14	P. C. C. CURB, TYPE 1-6	110.00'
15	P. C. C. CURB, TYPE 1-6	26.00'

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
5000	8+11.13	43.87	635113.7362	622542.0756
5001	8+11.15	51.43	635106.9831	622545.4793
5002	8+06.89	51.43	635105.0737	622541.6661
5003	8+06.90	53.43	635103.2918	622542.5746
5004	8+00.37	53.43	635100.3661	622536.7318
5005	8+00.37	51.43	635102.1544	622535.8363
5006	7+72.55	51.43	635089.7017	622510.9681
5007	7+72.55	83.18	635061.3122	622525.1841
5008	7+66.53	78.88	635062.4789	622517.8718
5009	21+09.58	-28.50	635038.4464	622503.1836
5010	22+89.84	-30.27	634914.7407	622634.3118
5011	23+04.69	-28.50	634903.1720	622643.7806
5012	23+36.97	-27.75	634880.2471	622666.5249
5013	23+51.58	-30.33	634871.9778	622678.8411
5014	23+56.58	-27.75	634866.6518	622680.6552
5015	23+56.58	-15.30	634857.7018	622672.0439
5016	23+51.58	-15.33	634861.1685	622668.4409
5017	22+89.80	-15.33	634904.0037	622623.9212
5018	22+50.01	-21.00	634935.6828	622599.1689
5019	21+03.50	-21.00	635037.2577	622493.6048
5020	7+66.54	43.87	635093.7700	622502.2028



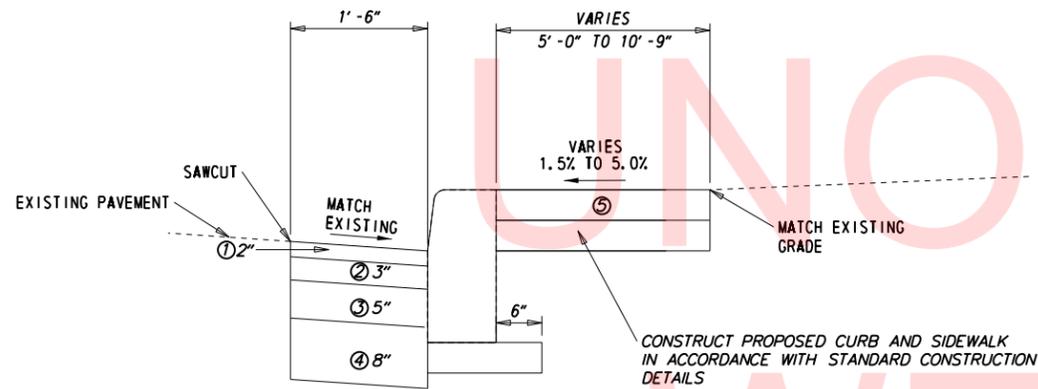
- NOTES:
- OFFSETS SHOWN IN THE GEOMETRY TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE 12 ST CONSTRUCTION & R/W BASELINE.
 - RADII ARE GIVEN TO EDGE OF PAVEMENT.
 - EDGE OF PAVEMENT ELEVATIONS ALONG RADII ARE GIVEN AT 10 FOOT INTERVALS.
 - ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
 - PROPOSED CURBS OR PAVEMENT THAT TIE INTO EXISTING PAVEMENT OR CURBS SHALL MATCH THE EXISTING PAVEMENT OR CURB ELEVATIONS.
 - ELEVATIONS PROVIDED AT TOP OF CURB DUE TO VARIABLE CURB HEIGHT REVEAL ALONG EXISTING PARKING LOT EDGELINE.



CURB DETAIL

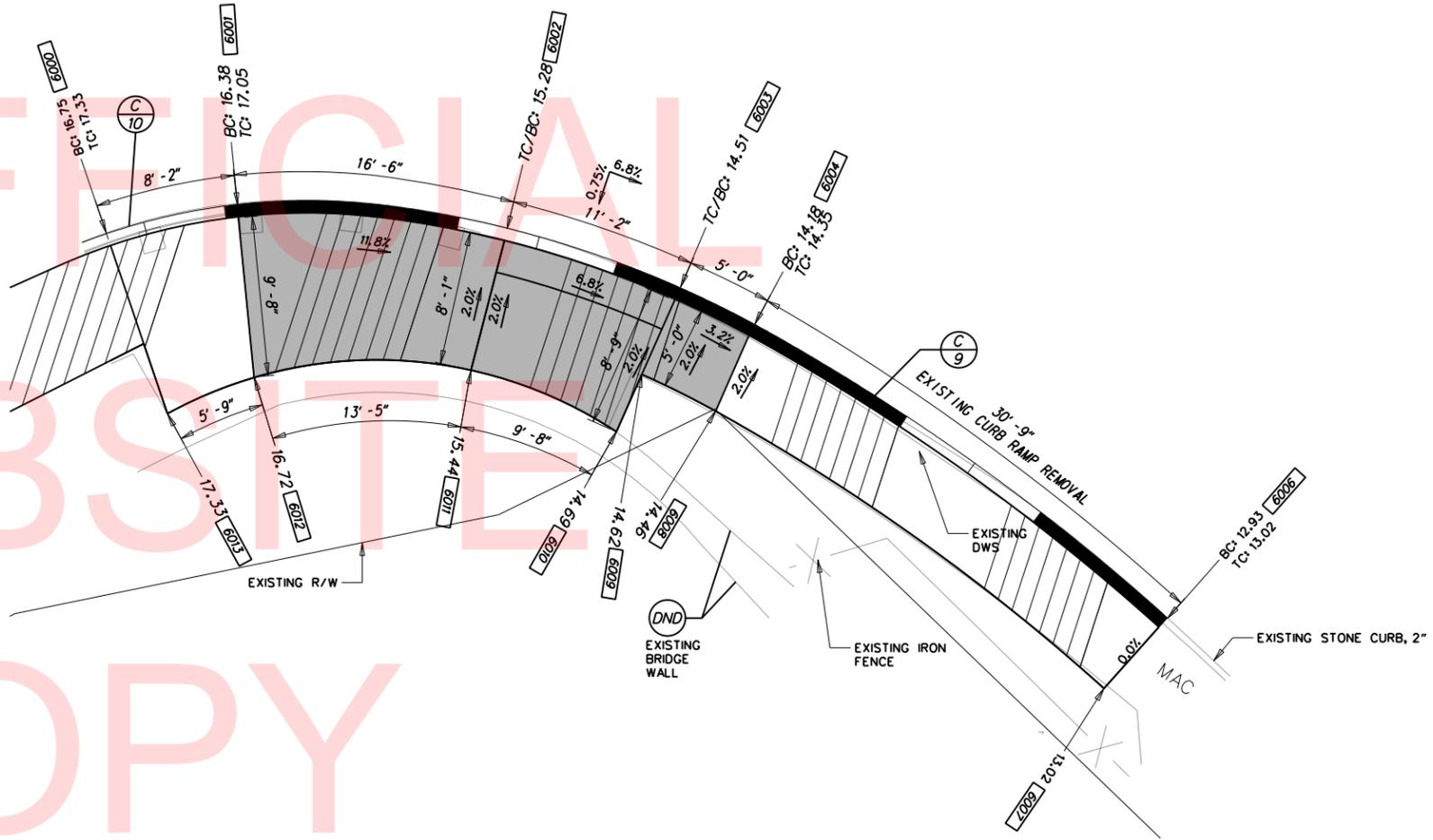
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COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
6000	20+19.11	42.97	635049.6798	622388.4378
6001	20+23.64	36.23	635051.3893	622396.3773
6002	20+36.44	25.85	635049.9959	622412.7942
6003	20+46.74	21.27	635046.1558	622423.3969
6004	20+51.60	19.86	635043.8050	622427.8715
6005	20+56.50	18.79	635041.1797	622432.1466
6006	20+81.68	15.07	635026.3961	622452.8671
6007	20+82.06	20.55	635022.1860	622449.3414
6008	20+52.97	25.47	635038.8066	622424.9654
6009	20+48.48	26.71	635041.0236	622420.8777
6010	20+49.58	30.18	635037.7620	622419.2590
6011	20+40.79	33.58	635041.4050	622410.5710
6012	20+31.59	43.01	635040.9903	622397.4031
6013	20+29.33	48.26	635038.7723	622392.1357



ROADWAY PAVEMENT PATCH AT CURB REPLACEMENT
NOT TO SCALE

NORTHEAST BOULEVARD
STA 6+34 TO STA 6+53, R
STA 6+34 TO STA 6+83, L
STA 7+23 TO STA 7+68, L



SOUTHWEST CURB RAMP

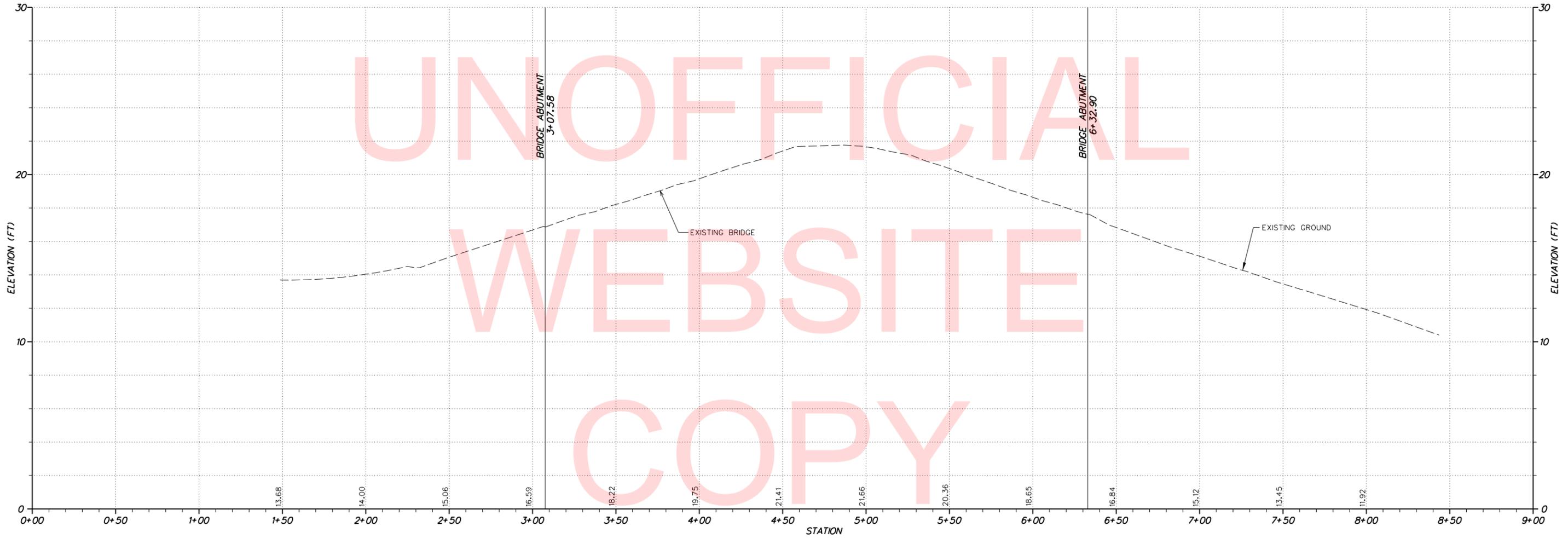


LEGEND	
①	ITEM 401029 - SUPERPAVE, TYPE C, PG 64-22, PATCHING
②	ITEM 401030 - SUPERPAVE TYPE B, PG 64-22 PATCHING
③	ITEM 401031 - SUPERPAVE BITUMINOUS CONCRETE BASE COURSE, PG 64-22 PATCHING
④	ITEM 301002 - GRADED AGGREGATE BASE COURSE, TYPE B, PATCHING
⑤	ITEM 705001 - PORTALND CEMENT CONCRETE SIDEWALK, 4"

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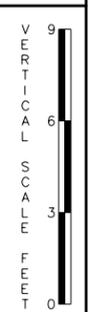
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT T201407403	BRIDGE NO. 1-577	CONSTRUCTION DETAIL	SHEET NO. 7
					COUNTY NEW CASTLE		DESIGNED BY: KMH

LAST REVISED: 8/16/2018
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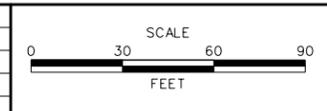
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BR 1-577 ON NORTHEAST BOULEVARD OVER BRANDYWINE CREEK



	DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	



**BR 1-577 ON N050
 NORTHEAST BOULEVARD OVER
 BRANDYWINE RIVER**

CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	KMH
COUNTY	CHECKED BY:	ADM
NEW CASTLE		

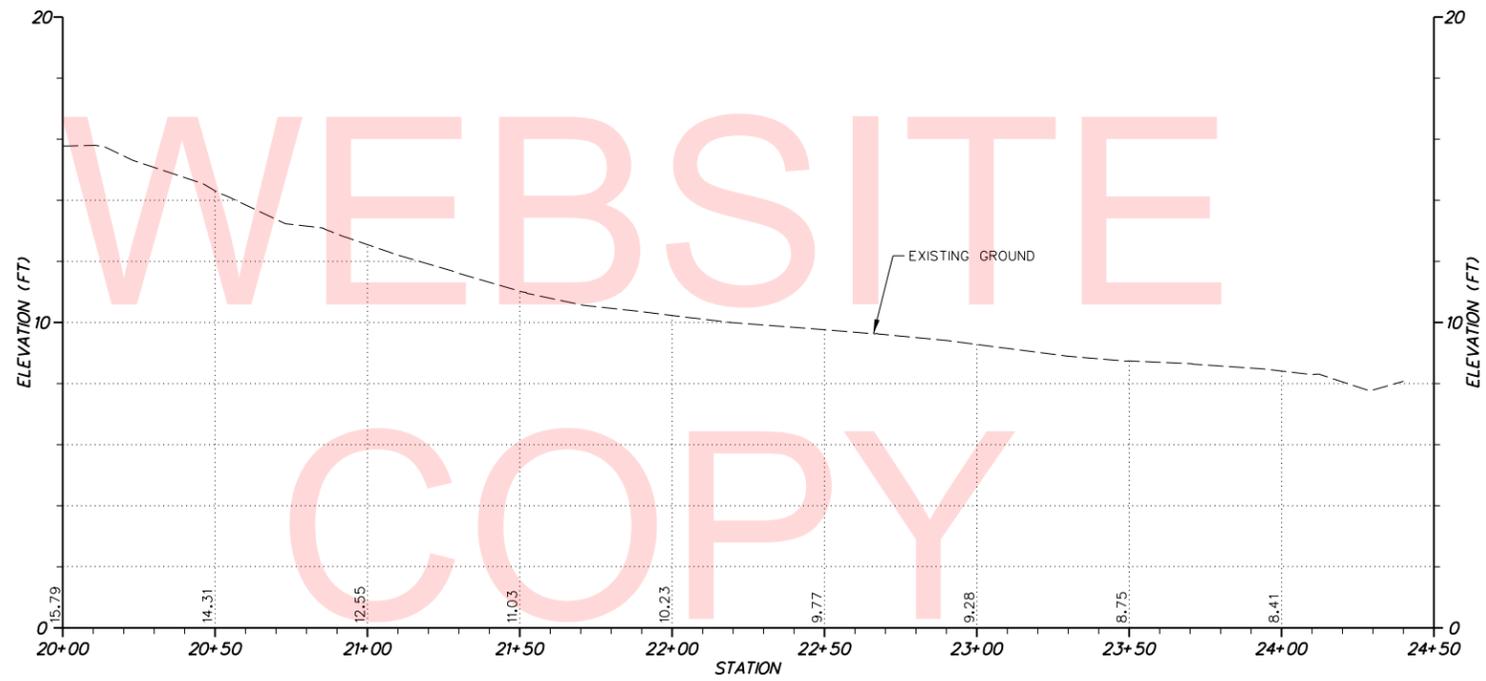
PROFILE

SHEET NO.	8
TOTAL SHTS.	65

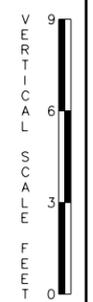
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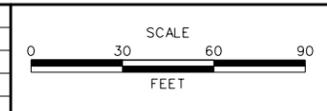
12TH STREET



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	DELWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	



**BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER**

CONTRACT T201407403	BRIDGE NO. 1-577
COUNTY NEW CASTLE	DESIGNED BY: KMH
	CHECKED BY: ADM

PROFILE

SHEET NO. 9
TOTAL SHTS. 65

PROJECT NOTES

1. DESIGN SPECIFICATIONS:

(A) 2017 DELDOT BRIDGE DESIGN MANUAL
 (B) 2014 AASHTO LRFD BRIDGE SPECIFICATIONS, 7TH EDITION, CUSTOMARY US UNITS INCLUDING THE 2015 AND 2016 INTERIMS.
 (C) PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE DELDOT STANDARD SPECIFICATIONS, AUGUST 2016 INCLUDING SUPPLEMENTAL SPECIFICATIONS.

2. LOADING:

VEHICLE LIVE LOAD IS AASHTO HL-93 DESIGN VEHICLE, WHICH CONSISTS OF A DESIGN TRUCK OR TANDEM WITH DYNAMIC LOAD ALLOWANCE AND A LANE LOAD. RATINGS SHALL USE ALL DELAWARE LEGAL LOADS SPECIFIED IN THE BRIDGE DESIGN MANUAL.

LIVE LOAD DISTRIBUTION TO BEAMS ARE BASED UPON AASHTO DISTRIBUTION FACTORS.

FOR THERMAL LOADS, CONSIDER THE MODERATE TEMPERATURE RANGE AS STIPULATED IN THE AASHTO LRFD DESIGN SPECIFICATIONS, THE NORMAL TEMPERATURE SHALL BE CONSIDERED TO BE 68°F.

FOR SEISMIC LOADS, CONSIDER SEISMIC PERFORMANCE ZONE 1, IMPORTANCE CATEGORY - TYPICAL.

3. PORTLAND CEMENT CONCRETE:

PORTLAND CEMENT CONCRETE FOR CAST-IN-PLACE ELEMENTS SHALL BE AS FOLLOWS:
 (28 DAY COMPRESSIVE STRENGTH)
 ITEM NO. 610004 (CLASS A, F'c=4500 PSI) - PIER PEDESTAL
 ITEM NO. 610017 (CLASS D, F'c=4500 PSI) - DECK AND DIAPHRAGMS

REFER TO SPECIAL PROVISION 612503 FOR PRECAST CONCRETE BEAMS

REFER TO DIAGRAMS CONTAINING CONCRETE SEALER LIMITS ON SHEET NO. 27. PAYMENT SHALL BE INCIDENTAL TO ITEM NO. 610017.

RAKE FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.

CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARING.

MIX REQUIREMENTS SHALL CONFORM TO SECTION 1022 OF THE STANDARD SPECIFICATIONS.

ALL EXPOSED EDGES SHALL BE CHAMFERED WITH 3/4" X 3/4" UNLESS NOTED OTHERWISE.

4. BAR REINFORCEMENT:

REINFORCING STEEL SHALL CONFORM TO AASHTO M31 ASTM A615, GRADE 60.

PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.

FUSION-BONDED EPOXY COATED REINFORCING STEEL SHALL CONFORM TO ASTM A775, AND SHALL BE DENOTED WITH A SUFFIX "E" IN THE BAR MARKS.

CLEAN AND PAINT EXISTING REINFORCEMENT EXPOSED DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 628 OF THE DELAWARE DEPARTMENT OF TRANSPORTATION. STANDARD SPECIFICATION.

DO NOT WELD GRADE 60 REINFORCING STEEL, UNLESS NOTED OTHERWISE.

5. STRUCTURAL STEEL:

PROVIDE STRUCTURAL STEEL CONFORMING TO AASHTO M270, GRADE 50 (ASTM A709, GRADE 50) DESIGNATION UNLESS NOTED OTHERWISE. THE ADDITIONAL REQUIREMENTS FOR CHARPY V-NOTCH TESTING OF AASHTO M270 PRIMARY LOAD CARRYING MEMBERS SHALL BE INCLUDED. SUPPLEMENTAL NOTCH TOUGHNESS REQUIREMENTS ARE MANDATORY FOR: GIRDER BEARING STIFFENER REPAIR PLATE.

ALL FASTENERS ARE 7/8" DIAMETER ASTM A325 HIGH STRENGTH BOLTS, TYPE 1 UNLESS NOTED OTHERWISE.

ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.

6. WELDING:

WELDING SPECIFICATION: AASHTO/AWS D1.5M/D1.5 BRIDGE WELDING CODE (2015), STANDARD SPECIFICATIONS AND THE CONTRACT SPECIAL PROVISIONS. DO NOT FIELD-WELD ON ANY PART OF THE EXISTING BRIDGE, EXCEPT WHERE SHOWN ON THE PLANS, WITHOUT PRIOR APPROVAL OF THE ENGINEER.

7. CLEAN AND PAINT EXISTING STRUCTURAL STEEL:

CLEANING AND ZONE PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SECTION 616.

8. BEARINGS:

ALL ELASTOMERIC BEARINGS SHALL BE STEEL LAMINATED ELASTOMERIC DESIGNED AS PER AASHTO 14.7.5, METHOD B, AND SHALL CONFORM TO SECTION 623 OF THE STANDARD SPECIFICATIONS. PAYMENT SHALL BE INCIDENTAL TO 623000.

9. SIGNING:

TO AVOID DAMAGE, SIGNS WITHIN PROJECT LIMITS MAY BE REMOVED DURING CONSTRUCTION IF NEEDED, BUT MUST BE REPLACED TO MATCH EXISTING CONDITIONS BEFORE REOPENING THE ROADWAY. ALL WORK RELATED TO MOVING AND REINSTALLING THE SIGN SHALL BE INCIDENTAL TO ITEM NO. 211000 "REMOVAL OF STRUCTURES AND OBSTRUCTIONS." IF THE SIGN IS DAMAGED DURING CONSTRUCTION, THE SIGN MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE.

10. DEMOLITION AND SHIELDING:

THE CONTRACTOR SHALL PREVENT DEBRIS FROM FALLING INTO THE BRANDYWINE CREEK. CONTRACTOR SHALL CONSTRUCT ADEQUATE PROTECTIVE SHIELDS TO PREVENT DEBRIS FROM FALLING FROM THE BRIDGE. THE CONTRACTOR SHALL PROMPTLY REMOVE FALLEN DEBRIS TO THE SATISFACTION OF THE ENGINEER. IF THE ENGINEER DETERMINES THAT ADEQUATE PROTECTIVE DEVICES ARE NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED. CONTRACTOR SHALL SUBMIT SHIELDING DESIGN CALCULATIONS AND PLANS IN ACCORDANCE WITH SECTION 604.03.1 OF THE STANDARD SPECIFICATIONS. SHIELDING SHALL BE PAID FOR UNDER ITEM NO. 604001. THE COST OF FURNISHING, INSTALLING, MAINTAINING, REMOVING AND DISPOSING OF ALL PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES SHALL BE INCLUDED UNDER PROTECTIVE SHIELD, ITEM 604001. DURING WORK THE CONTRACTOR SHALL USE CARE TO COLLECT ALL DEBRIS AND WATER USED FOR CONSTRUCTION PROMPTLY AND PREVENT ANY POLLUTION OF THE PROJECT AREA. THE CONTRACTOR SHALL BE HELD LIABLE FOR WATERWAY CONTAMINATION DUE TO NEGLIGENCE. THE COLLECTION AND DISPOSAL OF CONSTRUCTION WATER AND DEBRIS WILL NOT BE MEASURED, BUT WILL BE CONSIDERED INCIDENTAL TO THE WORK ITEM WHICH GENERATED THE WATER AND DEBRIS. CONTRACTOR SHALL USE WET DIAMOND BLADE SAW CUTTING FOR CONCRETE REMOVAL OPERATIONS. BLASTING OR USE OF EXPLOSIVES IS NOT PERMITTED FOR ANY PART OF THE CONCRETE REMOVAL OPERATIONS.

11. SAWCUTTING:

SAWCUTTING OF THE EXISTING DECK AND DIAPHRAGMS FOR SUPERSTRUCTURE REMOVAL SHALL BE PAID FOR UNDER ITEM NO. 211000.

12. STORAGE OR STOCKPILING OF MATERIALS OR EQUIPMENT ON THE BRIDGE DECK IS PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER. TO REQUEST STORAGE OR STOCKPILING AREAS ON THE BRIDGE, THE CONTRACTOR SHALL SUBMIT WRITTEN ANALYSIS PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF DELAWARE INDICATING THE RESULTANT STRESSES IN THE BRIDGE ALONG WITH SPECIFIC LOCATIONS, DIMENSIONS, AND WEIGHTS OF EQUIPMENT OR MATERIALS TO BE STORED. REFER TO DELDOT STANDARD SPECIFICATION 104.16.

13. EXISTING CONDITIONS:

ALL EXISTING DIMENSIONS AND ELEVATIONS SHOWN ARE BASED ON THE BEST AVAILABLE INFORMATION AND ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, GEOMETRY, AND ELEVATIONS AS NECESSARY PRIOR TO ORDERING ANY MATERIALS AND COMMENCING CONSTRUCTION TO ENSURE PROPER FIT OF THE PROPOSED CONSTRUCTION. PAYMENT SHALL BE INCIDENTAL TO THE ITEM BEING MANUFACTURED AND/OR INSTALLED.

DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT ANY MATERIALS WHICH ARE TO REMAIN IN PLACE, OR WHICH ARE TO REMAIN THE PROPERTY OF THE STATE, WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY MATERIALS WHICH ARE TO REMAIN IN PLACE OR WHICH ARE TO REMAIN THE PROPERTY OF THE STATE, THE DAMAGED MATERIALS SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT THE EXPENSE OF THE CONTRACTOR.

14. UTILITIES:

COORDINATE ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH SECTION 107.04 OF THE STANDARD SPECIFICATIONS.

VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING WORK. CONDUCT OPERATIONS IN A MANNER WHICH ENSURES THAT THE UTILITIES WILL NOT BE DISTURBED OR ENDANGERED AND ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO UTILITIES DURING CONSTRUCTION. THE DEPARTMENT DOES NOT ASSUME RESPONSIBILITY FOR REIMBURSEMENT, PARTICIPATION IN DESIGN AND/OR REVISION, OR LIABILITY FOR ACCURACY OF TYPE, SIZE AND LOCATION OF ANY UTILITY.

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
201000	CLEARING AND GRUBBING	LS	1
201500	CLEANING OF PATHOGENICALLY CONTAMINATED DEBRIS	LS	1
211000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
604000	JACKING BRIDGE	LS	1
604001	PROTECTIVE SHIELD	LS	1
610004	PORTLAND CEMENT CONCRETE MASONRY, PIER ABOVE FOOTING, CLASS A	CY	32
610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	61
611001	BAR REINFORCEMENT, EPOXY COATED	LB	23990
612503	PRECAST CONCRETE BEAMS	LS	1
613001	SILICONE-BASED ACRYLIC CONCRETE SEALER	SF	1682
613501	SEAL AESTHETIC LIGHTING BASE PLATE	LS	1
615006	STEEL STRUCTURE REPAIR	LS	1
615511	BRIDGE RAIL REPAIRS	LS	1
615512	BRIDGE SCUPPERS	EA	2
615513	CLEAN EXISTING BRIDGE DRAINS	EA	10
615514	VARMINT SCREEN	SF	215
616000	CLEANING AND PAINTING EXISTING STEEL (STEEL REPAIR)	LS	1
621504	FENDER REPAIRS	LS	1
623000	ELASTOMERIC BEARINGS	EA	30
624000	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	64
628001	REPAIR OF CONCRETE STRUCTURES BY EPOXY INJECTION	LF	58
628040	SHALLOW SPALL REPAIR	CF	359
628041	DEEP SPALL REPAIR	CF	300
720030	RELOCATING GUARDRAIL	LF	127

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10. PROJECT NOTES
11. GENERAL PLAN AND ELEVATION
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13. TYPICAL SECTIONS-2
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16. PIER 1 CONCRETE REPAIRS
17. PIER 2 CONCRETE REPAIRS
18. PIER 3 CONCRETE REPAIRS
19. PIER 4 CONCRETE REPAIRS-1
20. PIER 4 CONCRETE REPAIRS-2
21. PIER 5 CONCRETE REPAIRS
22. EAST ABUTMENT CONCRETE REPAIRS
23. CONCRETE FRAMING PLAN
24. CONCRETE SUPERSTRUCTURE REPAIR DETAILS
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26. PRECAST BEAM DETAILS-2
27. DIAPHRAGM DETAIL-1
28. DIAPHRAGM DETAIL-2
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31. SUPERSTRUCTURE REINFORCEMENT SCHEDULE
32. STEEL FRAMING PLAN
33. STEEL REPAIR AND TEMPORARY SUPPORT BEAM DETAILS
34. BRIDGE RAILING REPAIR DETAILS
35. BEARING REPLACEMENT DETAILS-1
36. BEARING REPLACEMENT DETAILS-2
37. TEMPORARY JACKING DETAILS-1
38. TEMPORARY JACKING DETAILS-2
39. EXPANSION JOINT DETAILS-1
40. EXPANSION JOINT DETAILS-2
41. FENDER SYSTEM REPAIR DETAILS
42. VARVINT SCREEN DETAILS

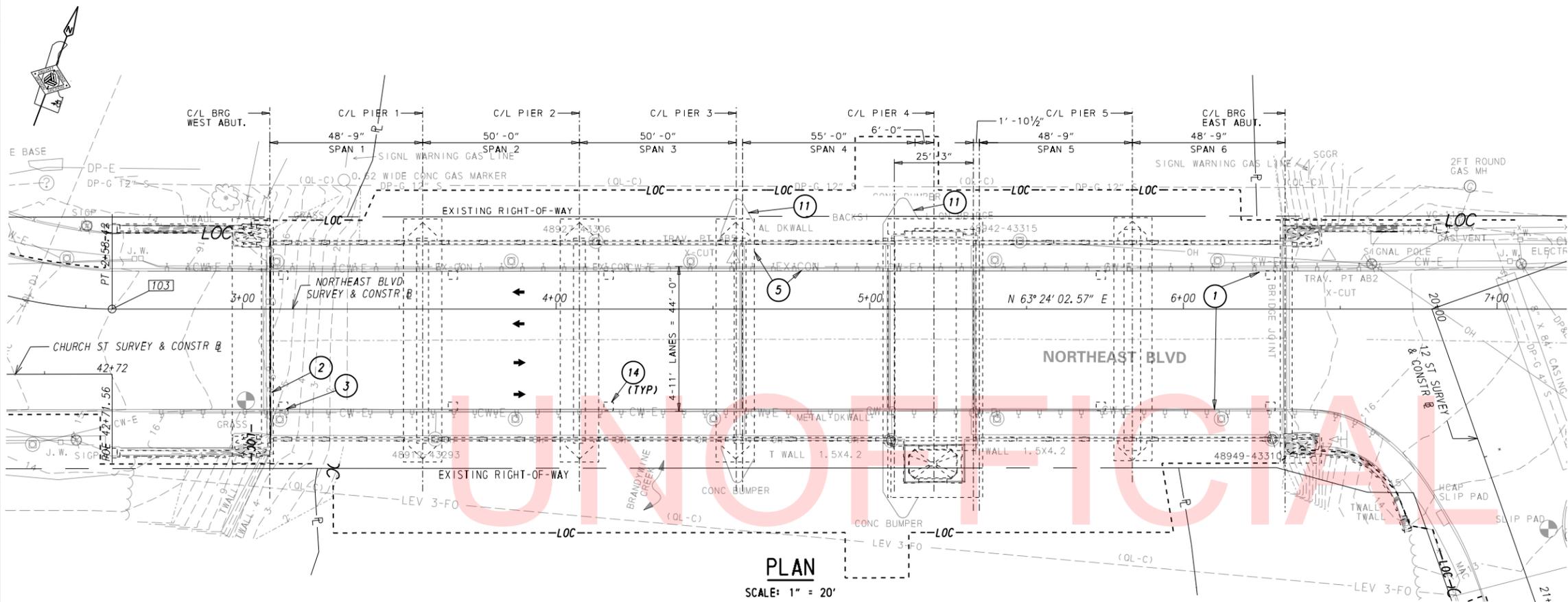
BRIDGE LOAD RATING TABLE

VEHICLE TYPE	RATING FACTOR	RATING WEIGHT (TONS)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	0.98	35.15	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
HL-93 TANDEM (INVENTORY)	0.98	24.49	SPAN 4 - STRINGER	400	SHEAR
HS20 (INVENTORY)	1.12	40.15	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
HL-93 TRUCK (OPERATING)	1.20	43.04	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
HL-93 TANDEM (OPERATING)	1.27	31.75	SPAN 4 - STRINGER	400	SHEAR
HS20 (OPERATING)	1.37	49.41	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
DE S220	2.06	41.28	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
DE S335	1.24	43.40	SPAN 4 - FB 5	105	FLEXURE
DE S437	1.22	45.14	SPAN 4 - FB 5	105	FLEXURE
DE T330	2.07	62.07	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
DE T435	1.62	56.56	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
DE T540	1.59	63.73	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
EV2	1.52	43.84	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
EV3	1.08	46.44	SPAN 4 - FB 5	105	FLEXURE
SU4	1.61	43.59	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
SU5	1.51	46.68	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
SU6	1.42	49.48	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT
SU7	1.41	54.75	SPAN 6 - C GIRDER	208	LONGITUDINAL REINFORCEMENT

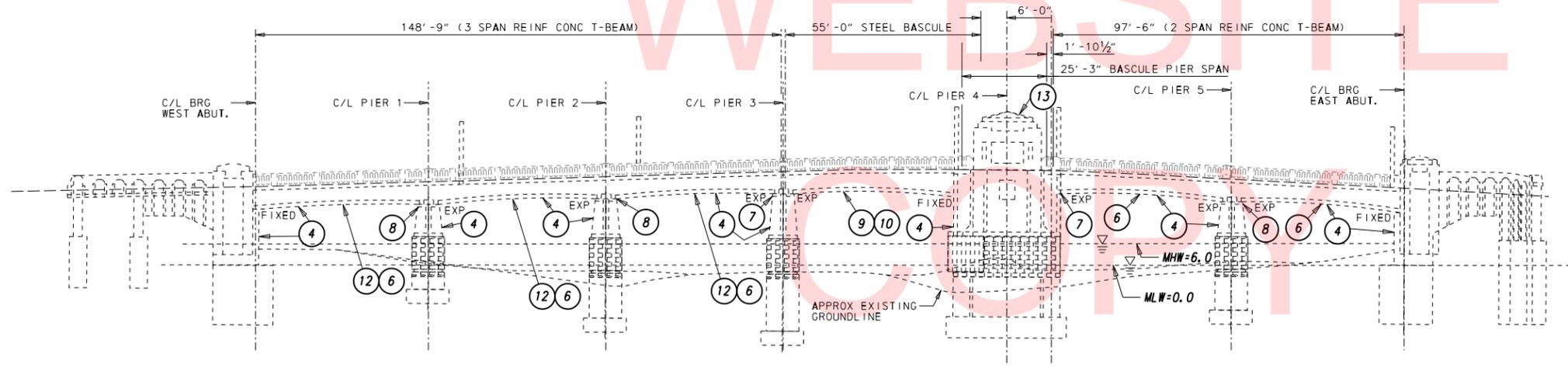
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	DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT T201407403 COUNTY NEW CASTLE	BRIDGE NO. 1-577 DESIGNED BY: RJH CHECKED BY: DPR	PROJECT NOTES	SHEET NO. 10 TOTAL SHTS. 65

LAST REVISED: 8/14/2018
 \\USP\PLIF\B02\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\101 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-PE01.DGN



PLAN
SCALE: 1" = 20'



ELEVATION
SCALE: 1" = 20'

ITEMS OF WORK:

- 1 REMOVE AND REPLACE DAMAGED BRIDGE RAIL SECTIONS AS INDICATED. (ITEM NO. 615511)
- 2 REMOVE AND REPLACE STRIP SEAL JOINT AT WEST ABUTMENT. (ITEM NO. 624000)
- 3 REMOVE LEAKING SIP FORM IN SPAN 1, BAY 9 ADJACENT TO WEST ABUTMENT, CAULK AROUND BASEPLATE OF ALL ASTHETIC LIGHTING ON THE BRIDGE. (ITEM NO. 211000 AND 613501)
- 4 REPAIR CONCRETE SPALLS AND DELAMINATION IN CONCRETE BEAMS, DIAPHRAGMS, ABUTMENTS, UNDERDECK SLAB, WINGWALLS, AND PIERS AS INDICATED. (ITEM NO. 628040 AND 628041)
- 5 REPAIR CONCRETE SPALLS IN SIDEWALKS, CURBS, AND PEDESTRIAN RAILING AS INDICATED. (ITEM NO. 628040 AND 628041)
- 6 REPAIR CRACKS IN CONCRETE BEAMS AND DIAPHRAGMS, AS INDICATED. (ITEM NO. 628001)
- 7 REMOVE AND REPLACE ELASTOMERIC BEARING PADS AT PIER 3 AND PIER 4. (ITEM NO. 604000 AND 623000)
- 8 REMOVE ROCKER BEARING, MODIFY BEAM SEAT, AND INSTALL ELASTOMERIC BEARINGS AT PIERS 1, 2, AND 5. (ITEM 211000, 604000, 610004, 611001, AND 623000)
- 9 INSTALL STEEL RETROFIT PLATES IN FLOORBEAM BEARING STIFFENERS, AS INDICATED. (ITEM NO. 615006)
- 10 PERFORM ZONE PAINTING ON STRUCTURAL STEEL IN SPAN 4 AS INDICATED. CLEAN EXISTING STEEL STRUCTURES. (ITEM NO. 616000)
- 11 REMOVE DEBRIS FROM FENDER SYSTEM AT PIER 3 AND 4 AND REPAIR FENDER BOARDS AS INDICATED. (ITEM NO. 211000 AND 621504)
- 12 REPLACE CONCRETE T-BEAMS, DIAPHRAGMS AND CONCRETE DECK AS INDICATED AND INSTALL NEW SCUPPERS. (ITEM NO. 604001, 610017, 611001, 612503, 615512 AND 720030)
- 13 CLEAN THE INTERIOR OF THE BASCULE HOUSE TO REMOVE PIGEON DEBRIS AND MISCELLANEOUS CONSTRUCTION DEBRIS. INSTALL YARMINT SCREEN AND APPLY ACRYLIC SEALER TO EXTERIOR SURFACES. (ITEM NO. 201000, 201500, 615514, 613001)
- 14 CLEAN EXISTING BRIDGE DRAINS. (ITEM NO. 615513)

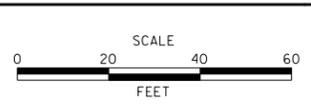
LEGEND:

- P — PROPERTY LINE
- OH — OVERHEAD UTILITY LINE
- EX-CON — UNDERGROUND FIBER OPTIC LINE
- CW-E — UNDERGROUND ELECTRIC LINE

NOTES:

1. FOR PROJECT NOTES, SEE SHEET 10.
2. LOCATIONS FOR "ITEMS OF WORK" ARE IDENTIFIED ON SHEETS 11-13.

ADDENDUMS / REVISIONS	



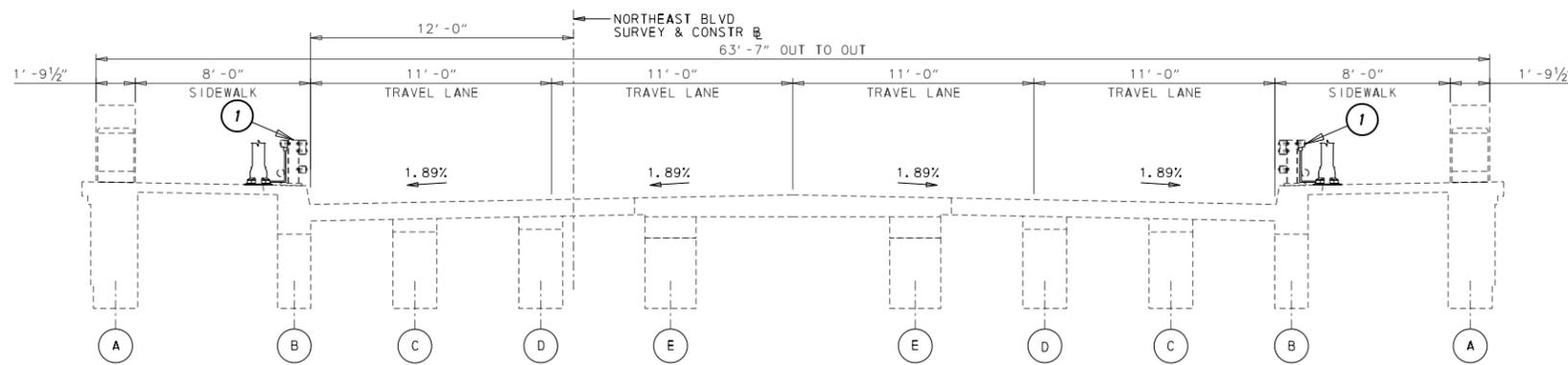
**BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER**

CONTRACT T201407403	BRIDGE NO. 1-577
COUNTY NEW CASTLE	DESIGNED BY: RJH
	CHECKED BY: DPR

**GENERAL PLAN
AND ELEVATION**

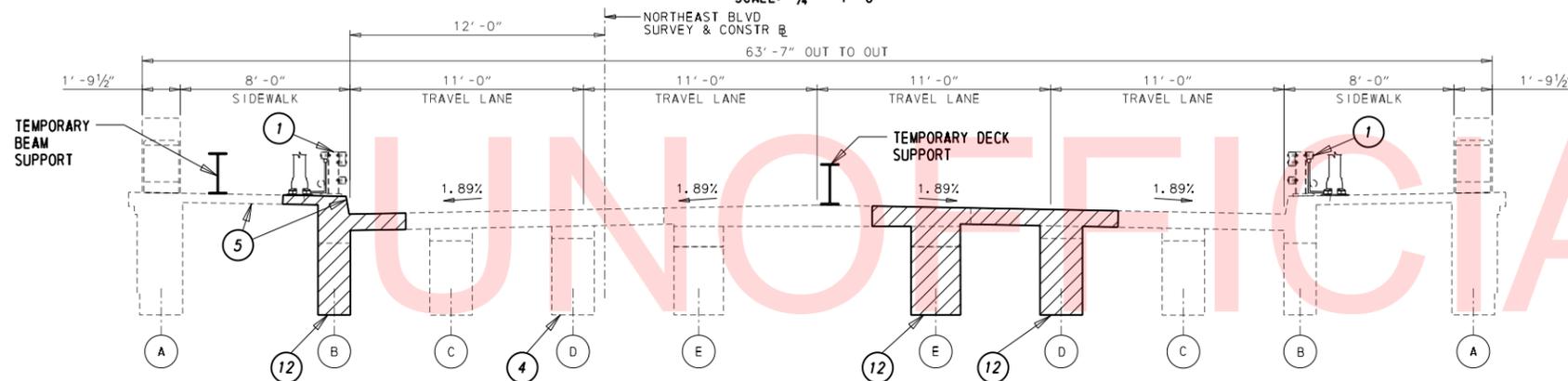
SHEET NO. 11
TOTAL SHTS. 65

LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-TS01.DGN



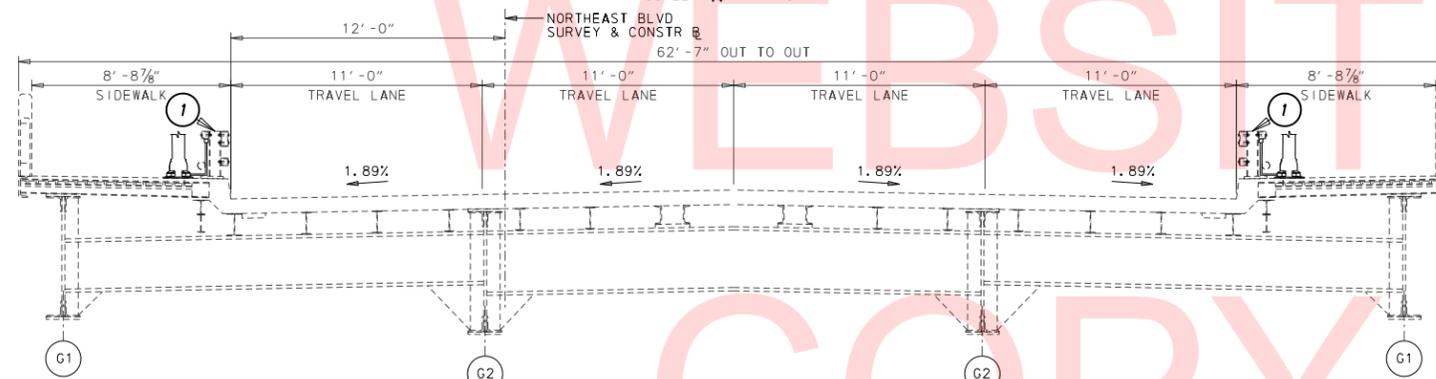
EXISTING TYPICAL SECTION - SPANS 1, 2, 3, 5 & 6

SCALE: 1/4" = 1'-0"



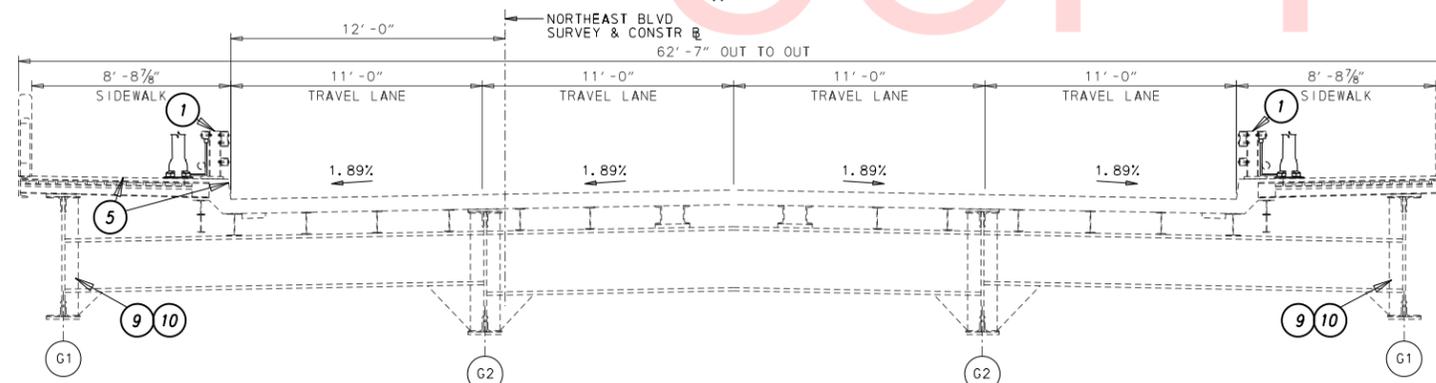
TYPICAL SECTION - SPANS 1, 2, 3, 5 & 6

SCALE: 1/4" = 1'-0"



EXISTING TYPICAL SECTION - SPAN 4

SCALE: 1/4" = 1'-0"



TYPICAL SECTION - SPAN 4

SCALE: 1/4" = 1'-0"

ITEMS OF WORK:

- 1 REMOVE AND REPLACE DAMAGED BRIDGE RAIL SECTIONS AS INDICATED. (ITEM NO. 615511)
- 2 REMOVE AND REPLACE STRIP SEAL JOINT AT WEST ABUTMENT. (ITEM NO. 624000)
- 3 REMOVE LEAKING SIP FORM IN SPAN 1, BAY 9 ADJACENT TO WEST ABUTMENT, CAULK AROUND BASEPLATE OF ALL ASTHETIC LIGHTING ON THE BRIDGE. (ITEM NO. 211000 AND 613501)
- 4 REPAIR CONCRETE SPALLS AND DELAMINATION IN CONCRETE BEAMS, DIAPHRAGMS, ABUTMENTS, UNDERDECK SLAB, WINGWALLS, AND PIERS AS INDICATED. (ITEM NO. 628040 AND 628041)
- 5 REPAIR CONCRETE SPALLS IN SIDEWALKS, CURBS, AND PEDESTRIAN RAILING AS INDICATED. (ITEM NO. 628040 AND 628041)
- 6 REPAIR CRACKS IN CONCRETE BEAMS AND DIAPHRAGMS, AS INDICATED. (ITEM NO. 628001)
- 7 REMOVE AND REPLACE ELASTOMERIC BEARING PADS AT PIER 3 AND PIER 4. (ITEM NO. 604000 AND 623000)
- 8 REMOVE ROCKER BEARING, MODIFY BEAM SEAT, AND INSTALL ELASTOMERIC BEARINGS AT PIERS 1, 2, AND 5. (ITEM 211000, 604000, 610004, 611001, AND 623000)
- 9 INSTALL STEEL RETROFITS PLATES IN FLOORBEAM BEARING STIFFENERS, AS INDICATED. (ITEM NO. 615006)
- 10 PERFORM ZONE PAINTING ON STRUCTURAL STEEL IN SPAN 4 AS INDICATED. CLEAN EXISTING STEEL STRUCTURES. (ITEM NO. 616000)
- 11 REMOVE DEBRIS FROM FENDER SYSTEM AT PIER 3 AND 4 AND REPAIR FENDER BOARDS AS INDICATED. (ITEM NO. 211000 AND 621504)
- 12 REPLACE CONCRETE T-BEAMS, DIAPHRAGMS AND CONCRETE DECK AS INDICATED AND INSTALL NEW SCUPPERS. (ITEM NO. 604001, 610017, 611001, 612503, 615512 AND 720030)
- 13 CLEAN THE INTERIOR OF THE BASCULE HOUSE TO REMOVE PIGEON DEBRIS AND MISCELLANEOUS CONSTRUCTION DEBRIS. INSTALL VARMINIT SCREEN AND APPLY ACRYLIC SEALER TO EXTERIOR SURFACES. (ITEM NO. 201000, 201500, 615514, 613001)
- 14 CLEAN EXISTING BRIDGE DRAINS. (ITEM NO. 615513)

LEGEND:

- LIMITS OF T-BEAM REPLACEMENT

T-BEAM REPLACEMENT NOTES:

1. GIRDER B NORTH TO BE REPLACED IN SPANS 1 AND 2 ONLY.
2. GIRDER E SOUTH TO BE REPLACED IN SPANS 1, 2 AND 3 ONLY.
3. GIRDER D SOUTH TO BE REPLACED IN SPAN 2 ONLY.
4. FOR CONCEPTUAL TEMPORARY SUPPORT BEAM DETAILS, SEE SHEET 33.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS



**BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER**

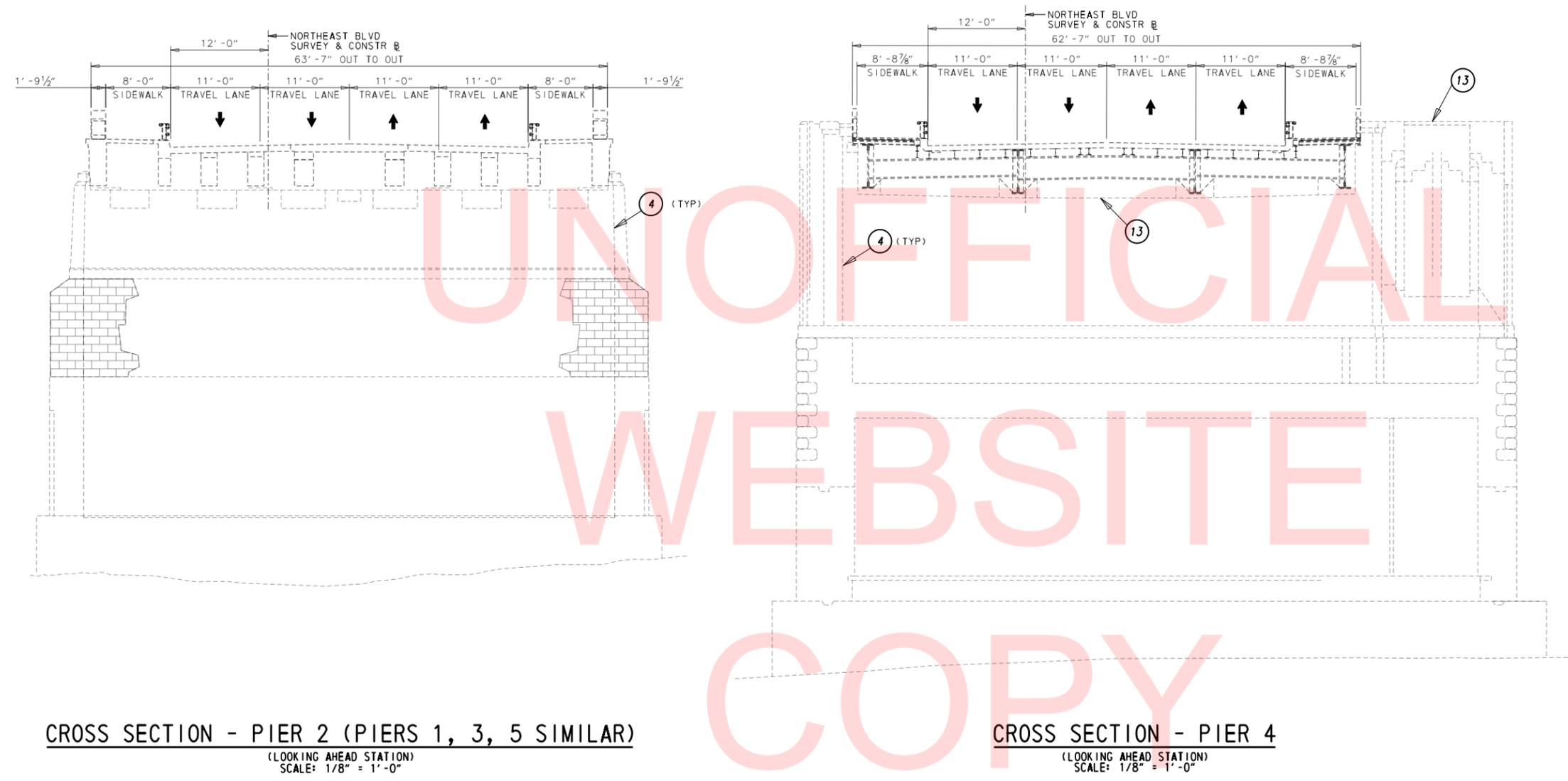
CONTRACT
T201407403
COUNTY
NEW CASTLE

BRIDGE NO. **1-577**
DESIGNED BY: **RJH**
CHECKED BY: **DPR**

TYPICAL SECTIONS - 1

SHEET NO.
12
TOTAL SHTS.
65

LAST REVISED: 8/14/2018
 \\USP\PL\IF\002\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-TS02.DGN



ITEMS OF WORK:

- 1 REMOVE AND REPLACE DAMAGED BRIDGE RAIL SECTIONS AS INDICATED. (ITEM NO. 615511)
- 2 REMOVE AND REPLACE STRIP SEAL JOINT AT WEST ABUTMENT. (ITEM NO. 624000)
- 3 REMOVE LEAKING SIP FORM IN SPAN 1, BAY 9 ADJACENT TO WEST ABUTMENT, CAULK AROUND BASEPLATE OF ALL ASTHETIC LIGHTING ON THE BRIDGE. (ITEM NO. 211000 AND 613501)
- 4 REPAIR CONCRETE SPALLS AND DELAMINATION IN CONCRETE BEAMS, DIAPHRAGMS, ABUTMENTS, UNDERDECK SLAB, WINGWALLS, AND PIERS AS INDICATED. (ITEM NO. 628040 AND 628041)
- 5 REPAIR CONCRETE SPALLS IN SIDEWALKS, CURBS, AND PEDESTRIAN RAILING AS INDICATED. (ITEM NO. 628040 AND 628041)
- 6 REPAIR CRACKS IN CONCRETE BEAMS AND DIAPHRAGMS, AS INDICATED. (ITEM NO. 628001)
- 7 REMOVE AND REPLACE ELASTOMERIC BEARING PADS AT PIER 3 AND PIER 4. (ITEM NO. 604000 AND 623000)
- 8 REMOVE ROCKER BEARING, MODIFY BEAM SEAT, AND INSTALL ELASTOMERIC BEARINGS AT PIERS 1, 2, AND 5. (ITEM 211000, 604000, 610004, 611001, AND 623000)
- 9 INSTALL STEEL RETROFITS PLATES IN FLOORBEAM BEARING STIFFENERS, AS INDICATED. (ITEM NO. 615006)
- 10 PERFORM ZONE PAINTING ON STRUCTURAL STEEL IN SPAN 4 AS INDICATED. CLEAN EXISTING STEEL STRUCTURES. (ITEM NO. 616000)
- 11 REMOVE DEBRIS FROM FENDER SYSTEM AT PIER 3 AND 4 AND REPAIR FENDER BOARDS AS INDICATED. (ITEM NO. 211000 AND 621504)
- 12 REPLACE CONCRETE T-BEAMS, DIAPHRAGMS AND CONCRETE DECK AS INDICATED AND INSTALL NEW SCUPPERS. (ITEM NO. 604001, 610017, 611001, 612503, 615512 AND 720030)
- 13 CLEAN THE INTERIOR OF THE BASCULE HOUSE TO REMOVE PIGEON DEBRIS AND MISCELLANEOUS CONSTRUCTION DEBRIS. INSTALL VARMINIT SCREEN AND APPLY ACRYLIC SEALER TO EXTERIOR SURFACES. (ITEM NO. 201000, 201500, 615514, 613001)
- 14 CLEAN EXISTING BRIDGE DRAINS. (ITEM NO. 615513)

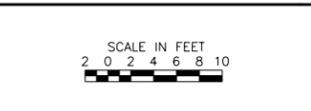
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CROSS SECTION - PIER 2 (PIERS 1, 3, 5 SIMILAR)
 (LOOKING AHEAD STATION)
 SCALE: 1/8" = 1'-0"

CROSS SECTION - PIER 4
 (LOOKING AHEAD STATION)
 SCALE: 1/8" = 1'-0"

	DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	



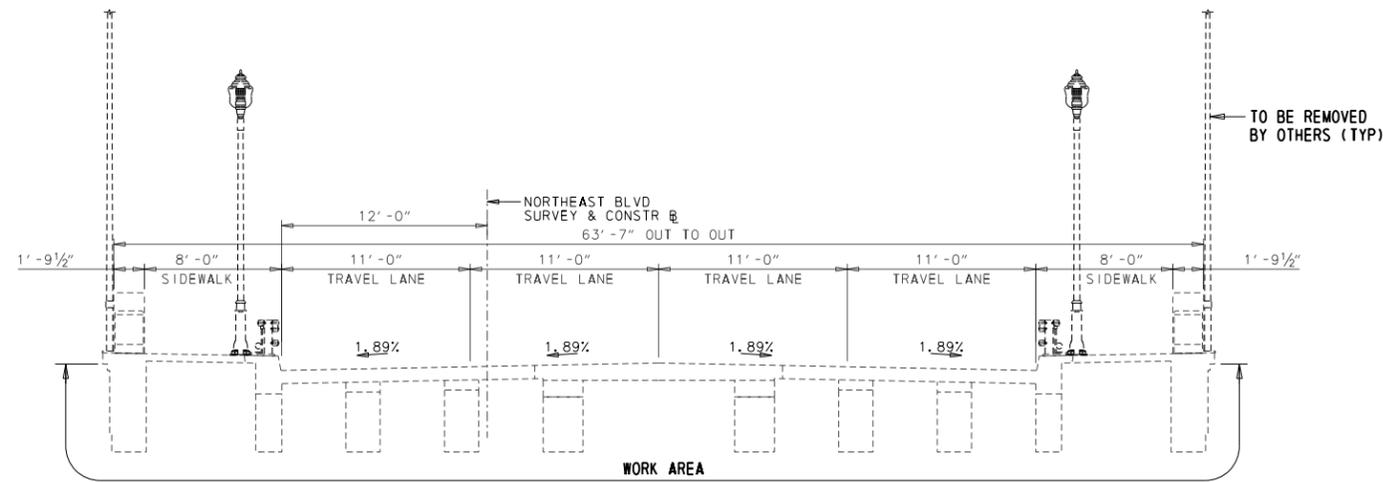
BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER

CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	RJH
COUNTY	CHECKED BY:	DPR
NEW CASTLE		

TYPICAL SECTIONS - 2

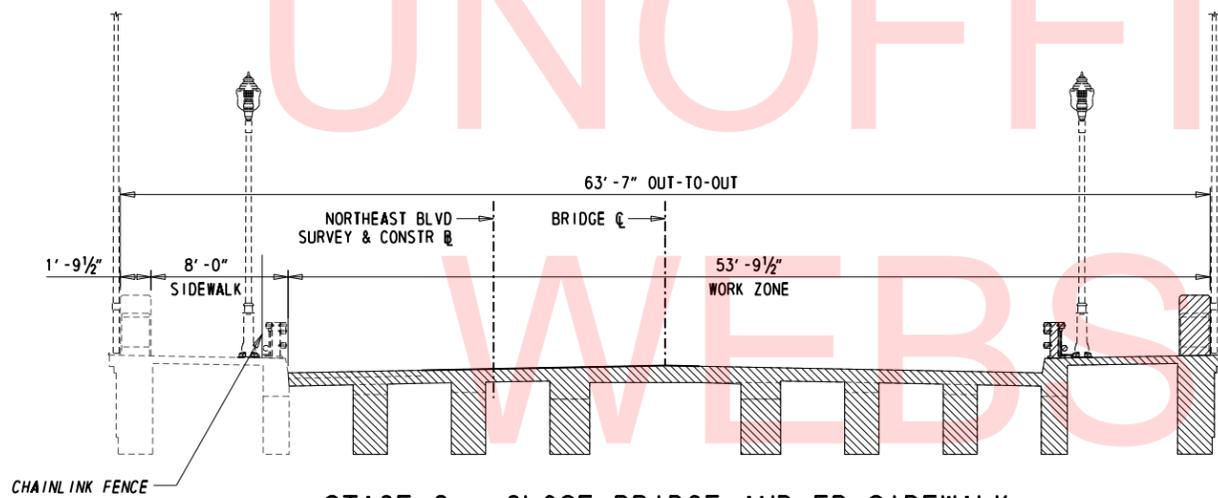
SHEET NO.	13
TOTAL SHTS.	65

LAST REVISED: 8/14/2018
 \\USP\PL\PROJECTS\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-ST02.DGN



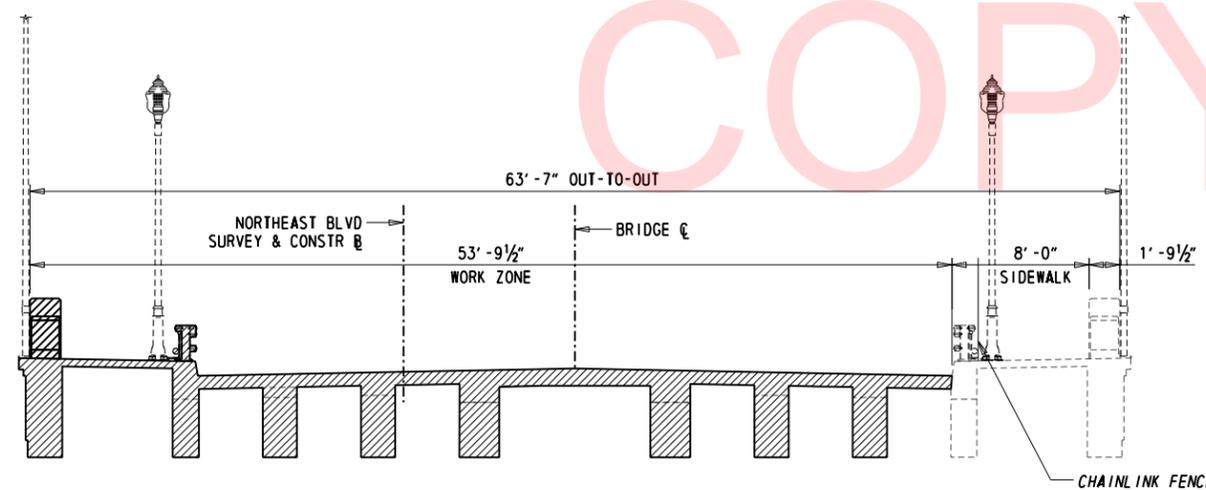
STAGE 1 - BELOW DECK CONSTRUCTION

SCALE: 1/8" = 1'-0"



STAGE 2 - CLOSE BRIDGE AND EB SIDEWALK

SCALE: 1/8" = 1'-0"



STAGE 3 - CLOSE BRIDGE AND WB SIDEWALK

SCALE: 1/8" = 1'-0"

LEGEND:

- ACTIVE WORK ZONE

SEQUENCE OF CONSTRUCTION:

STAGE 1 - BELOW DECK CONSTRUCTION

- COMPLETE SUPERSTRUCTURE SPALL AND CRACK REPAIRS
- COMPLETE SUBSTRUCTURE SPALL AND CRACK REPAIRS
- COMPLETE STEEL SUPERSTRUCTURE REPAIRS.
- COMPLETE CLEANING AND PAINTING OF SUPERSTRUCTURE STEEL AT REPAIR LOCATIONS.
- CLEAN THE TOP OF ALL PIER CAPS.
- REPLACE ELASTOMERIC BEARINGS AT PIER 3 BACK AND PIER 4 AHEAD.
- REMOVE ROCKER BEARINGS, MODIFY BEAM SEAT AND INSTALL NEW ELASTOMERIC BEARINGS AT PIERS 1, 2, AND 5.
- REMOVE DEBRIS FROM FENDER SYSTEM AT PIER 3 AND 4 AND COMPLETE FENDER REPAIRS.
- REMOVE EXISTING BRIDGE RAIL AND ALL BRIDGE RAIL COMPONENTS AT THE SOUTHWEST QUADRANT OF THE N.E. BLVD AND 12TH STREET INTERSECTION, AND REPLACE TO EXTENTS SHOWN ON SHEET 34.

STAGE 2 - CLOSE BRIDGE AND EB SIDEWALK

- CLOSE BRIDGE AND INSTALL EB SIDEWALK DETOUR.
- INSTALL CHAIN LINK FENCE.
- REPAIR EB BRIDGE RAIL AS INDICATED.
- CLEAN BASCULE HOUSE AND APPLY ACRYLIC SEALER.
- REMOVE AND REPLACE STRIP SEAL JOINT AT WEST ABUTMENT (EB SIDEWALK AND PORTION OF ROADWAY)
- BEGIN REMOVAL AND RECONSTRUCTION OF SOUTH GIRDER E IN SPANS 1, 2, AND 3.
- BEGIN REMOVAL AND RECONSTRUCTION OF SOUTH GIRDER D IN SPAN 2.
- CAULK THE BASE PLATES OF THE EXISTING AESTHETIC LIGHTING POLES LOCATED ON EB SIDEWALK.

STAGE 3 - CLOSE BRIDGE AND WB SIDEWALK

- INSTALL WB SIDEWALK DETOUR.
- INSTALL CHAIN LINK FENCE.
- REPAIR WB BRIDGE RAIL AS INDICATED.
- COMPLETE WB BARRIER AND SIDEWALK REPAIR.
- COMPLETE REMOVAL AND RECONSTRUCTION OF SOUTH GIRDER E IN SPANS 1, 2, AND 3.
- COMPLETE REMOVAL AND RECONSTRUCTION OF SOUTH GIRDER D IN SPAN 2.
- REMOVE AND REPLACE STRIP SEAL JOINT AT WEST ABUTMENT (WB SIDEWALK AND BALANCE OF ROADWAY)
- REMOVE AND RECONSTRUCT NORTH GIRDER B IN SPANS 1 AND 2. REMOVE AND RESTORE BRIDGE RAIL AND AESTHETIC LIGHT POLES FOR REINSTALLATION. DETACH FIBER OPTIC AND ELECTRICAL CONDUIT FROM BRIDGE RAIL THE ENTIRE LENGTH OF THE BRIDGE TO PROVIDE ENOUGH SLACK TO SHIFT AWAY FROM THE GIRDER B DEMOLITION LIMITS.
- CAULK THE BASE PLATES OF THE EXISTING AESTHETIC LIGHTING POLES LOCATED ON WB SIDEWALK.

NOTES:

1. FOR PROJECT NOTES, SEE SHEET 10.
2. THE SKETCHES ON THIS SHEET DISPLAY A PARTIAL IMAGE OF THE TRAFFIC CONTROL NECESSARY FOR CONSTRUCTION. FOR A COMPLETE DESCRIPTION OF TRAFFIC CONTROL NEEDS, REFER TO MOT DRAWINGS.
3. ONE SIDEWALK SHALL REMAIN OPEN TO PEDESTRIANS AT ALL TIMES THROUGHOUT CONSTRUCTION.
4. STAGE 1 WORK SHALL BE PERFORMED FROM BELOW THE STRUCTURE. SHORT TERM TEMPORARY LANE CLOSURES ARE PERMITTED FOR DELIVERY OF MATERIALS AND EQUIPMENT ONLY.
5. REFER TO CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS, SHEETS 44-47 FOR STAGING DETAILS.

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS



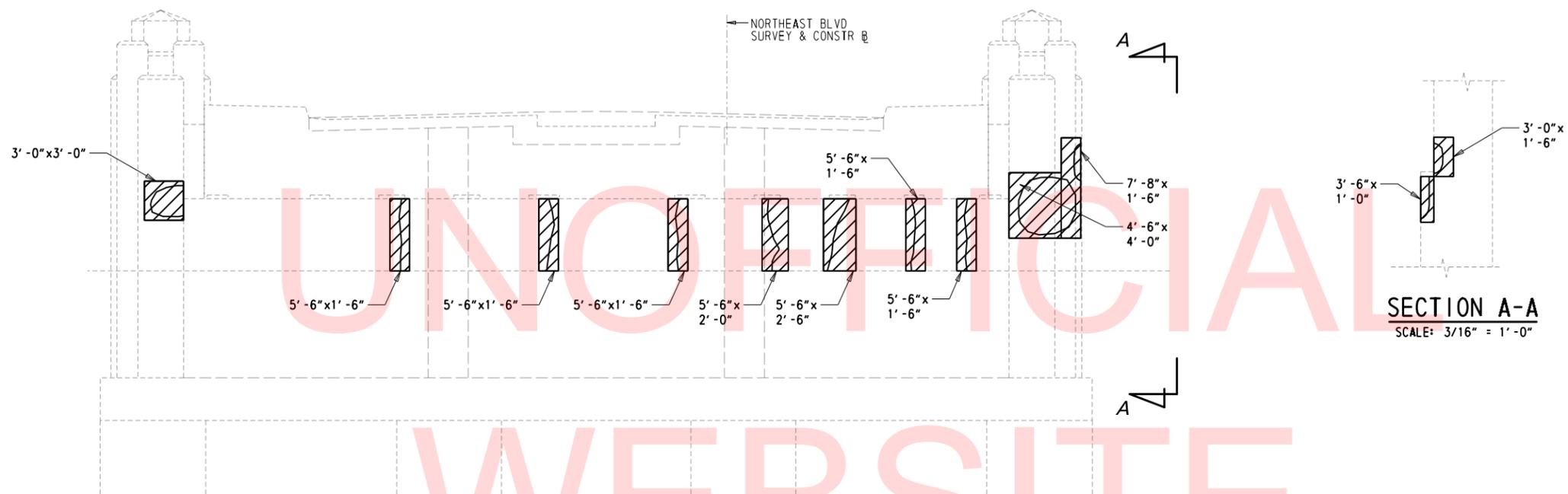
**BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER**

CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	RJH
COUNTY	CHECKED BY:	DPR
NEW CASTLE		

**SEQUENCE OF
CONSTRUCTION**

SHEET NO.
14
TOTAL SHTS.
65

LAST REVISED: 8/14/2018
 \\USP\PLIF\PO2\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-ABO1.DGN



WEST ABUTMENT
 (LOOKING BACK STATION)
 SCALE: 3/16" = 1'-0"

SECTION A-A
 SCALE: 3/16" = 1'-0"

UNOFFICIAL
 WEBSITE
 COPY

LEGEND:

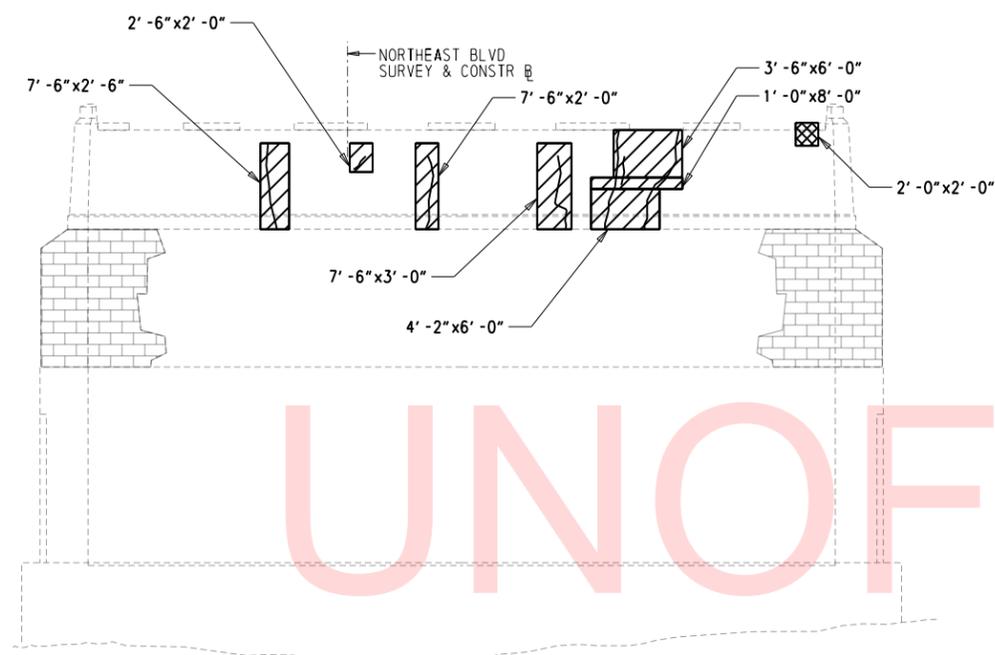
- (LENGTH x WIDTH)
 DEEP SPALL REPAIR
- (LENGTH x WIDTH)
 SHALLOW SPALL REPAIR

NOTES:

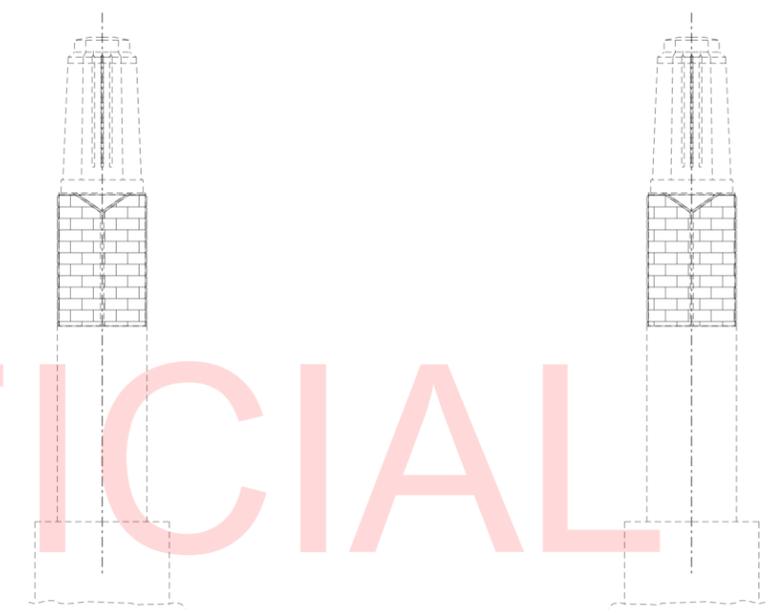
1. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
2. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
3. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
4. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
5. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
6. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
7. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

CONCRETE REPAIR QUANTITIES	
WEST ABUTMENT	
SHALLOW SPALL REPAIR	29 CF
DEEP SPALL REPAIR	0 CF

LAST REVISED: 8/14/2018
 \\USP\PLIF\002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-PRO1.DGN

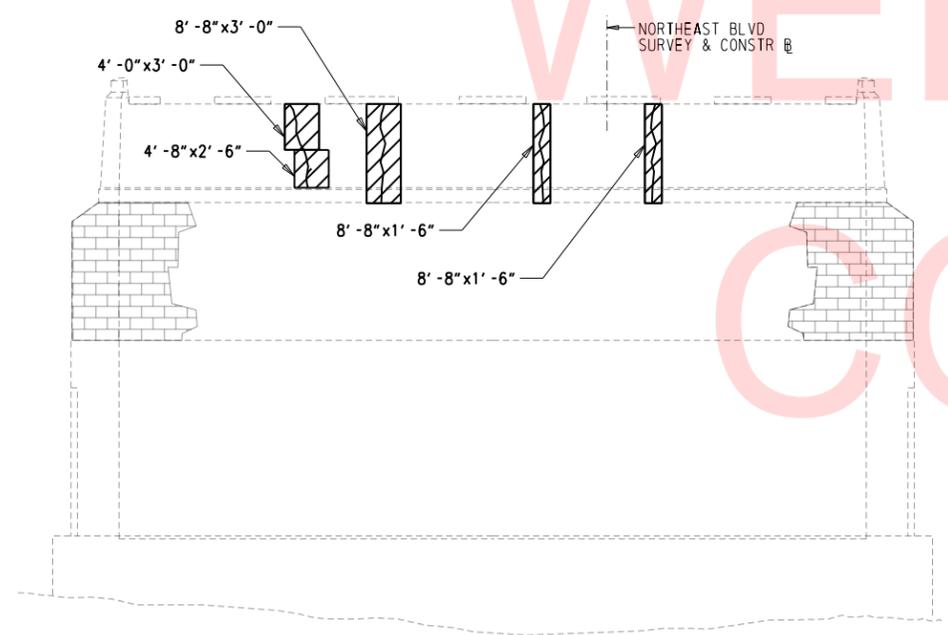


PIER 1 WEST FACE
 (LOOKING AHEAD STATION)
 SCALE: 1/8" = 1'-0"



PIER 1 NORTH FACE
 SCALE: 1/8" = 1'-0"

PIER 1 SOUTH FACE
 SCALE: 1/8" = 1'-0"



PIER 1 EAST FACE
 (LOOKING BACK STATION)
 SCALE: 1/8" = 1'-0"

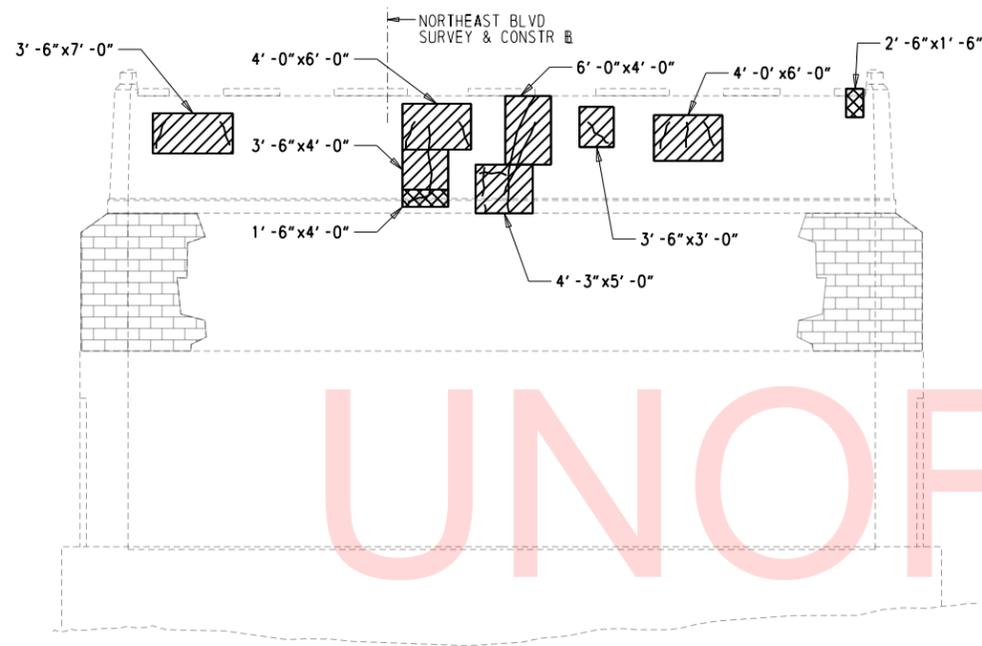
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- LEGEND:**
- (LENGTH x WIDTH) DEEP SPALL REPAIR
 - (LENGTH x WIDTH) SHALLOW SPALL REPAIR

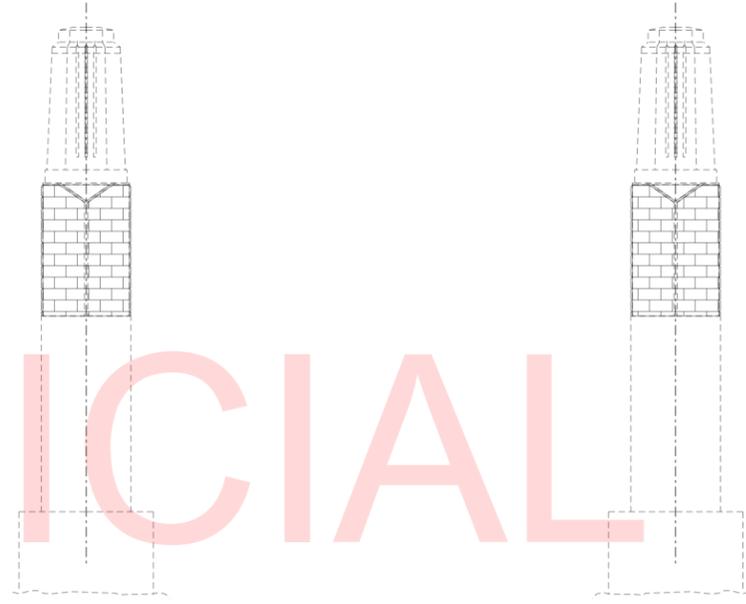
- NOTES:**
1. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
 2. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
 3. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
 4. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
 5. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
 6. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
 7. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

CONCRETE REPAIR QUANTITIES	
PIER 1	
SHALLOW SPALL REPAIR	32 CF
DEEP SPALL REPAIR	3 CF

LAST REVISED: 8/14/2018
 \\USPPL\F\FOOD\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-PRO2.DGN

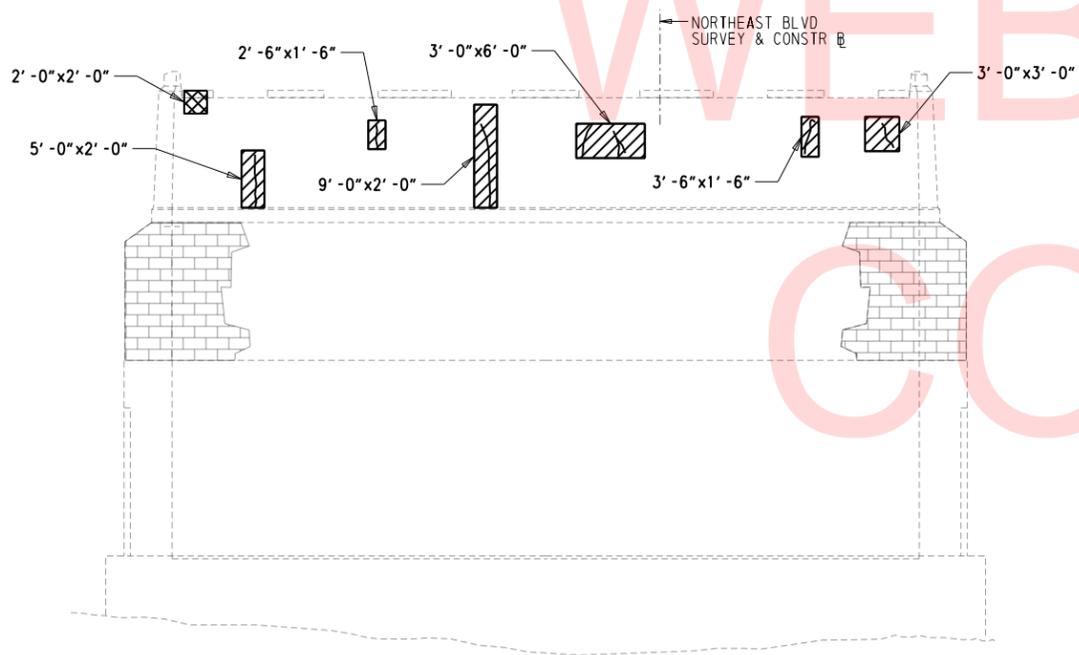


PIER 2 WEST FACE
 (LOOKING AHEAD STATION)
 SCALE: 1/8" = 1'-0"



PIER 2 NORTH FACE
 SCALE: 1/8" = 1'-0"

PIER 2 SOUTH FACE
 SCALE: 1/8" = 1'-0"



PIER 2 EAST FACE
 (LOOKING BACK STATION)
 SCALE: 1/8" = 1'-0"

UNOFFICIAL
 WEBSITE
 COPY

LEGEND:

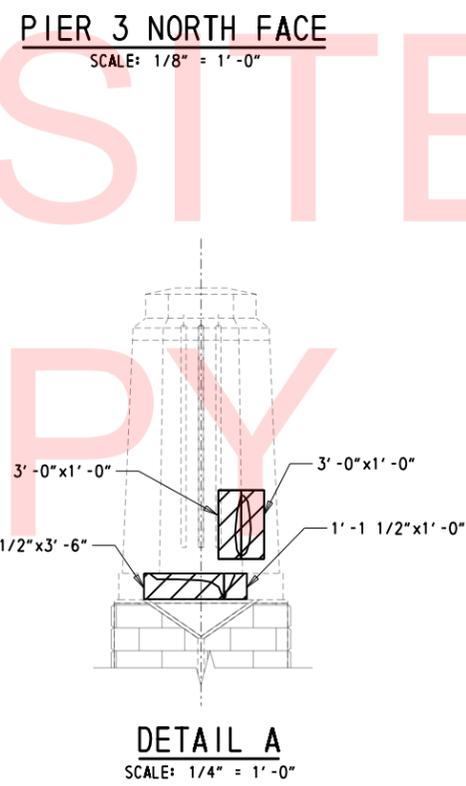
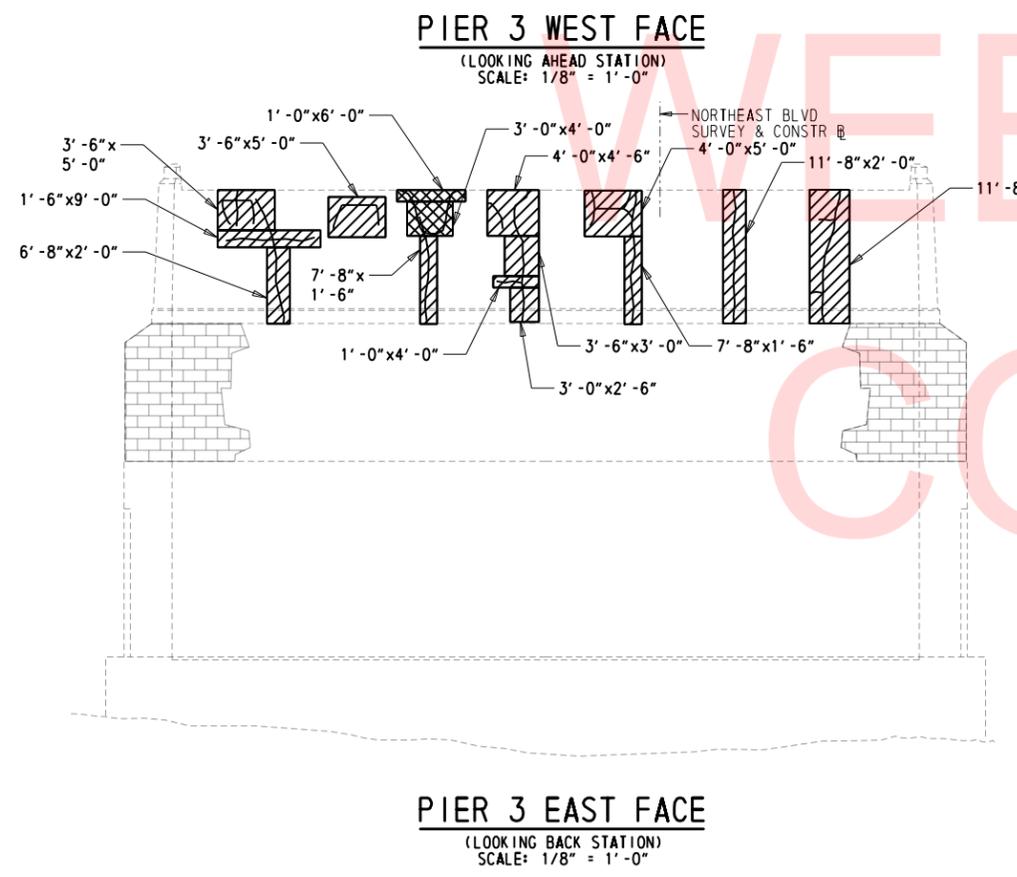
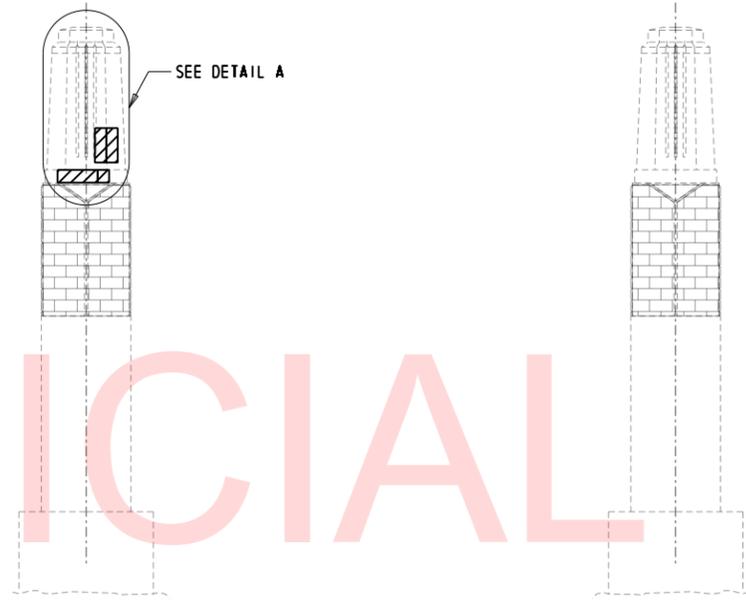
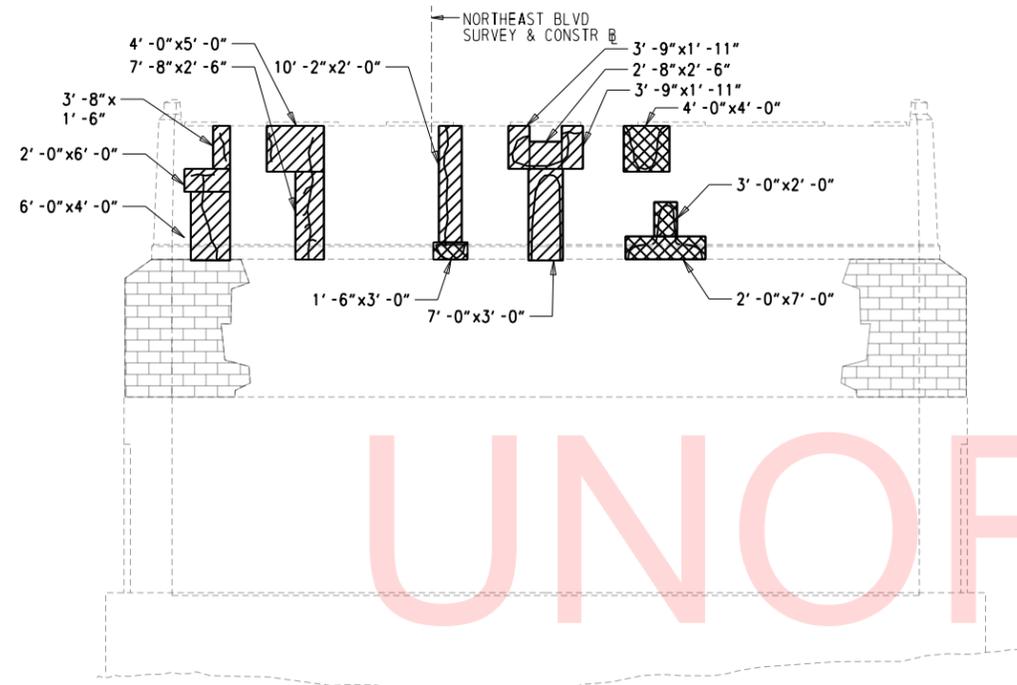
- (LENGTH x WIDTH) DEEP SPALL REPAIR
- (LENGTH x WIDTH) SHALLOW SPALL REPAIR

NOTES:

1. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
2. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
3. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
4. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
5. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
6. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
7. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

CONCRETE REPAIR QUANTITIES	
PIER 2	
SHALLOW SPALL REPAIR	34 CF
DEEP SPALL REPAIR	8 CF

LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-PROJ3.DGN



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- LEGEND:**
- (LENGTH x WIDTH) DEEP SPALL REPAIR
 - (LENGTH x WIDTH) SHALLOW SPALL REPAIR

- NOTES:**
1. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
 2. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
 3. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
 4. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
 5. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
 6. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
 7. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

CONCRETE REPAIR QUANTITIES	
PIER 3	
SHALLOW SPALL REPAIR	59 CF
DEEP SPALL REPAIR	36 CF

ADDENDUMS / REVISIONS

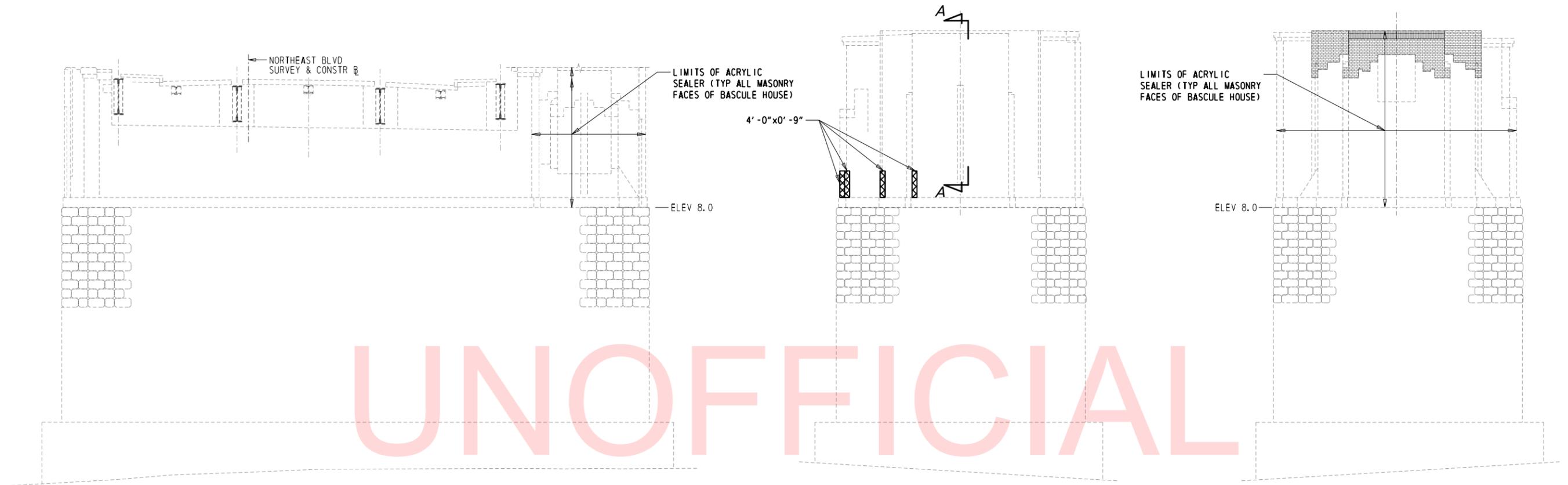
SCALE AS NOTED

**BR 1-577 ON N050
 NORTHEAST BOULEVARD OVER
 BRANDYWINE RIVER**

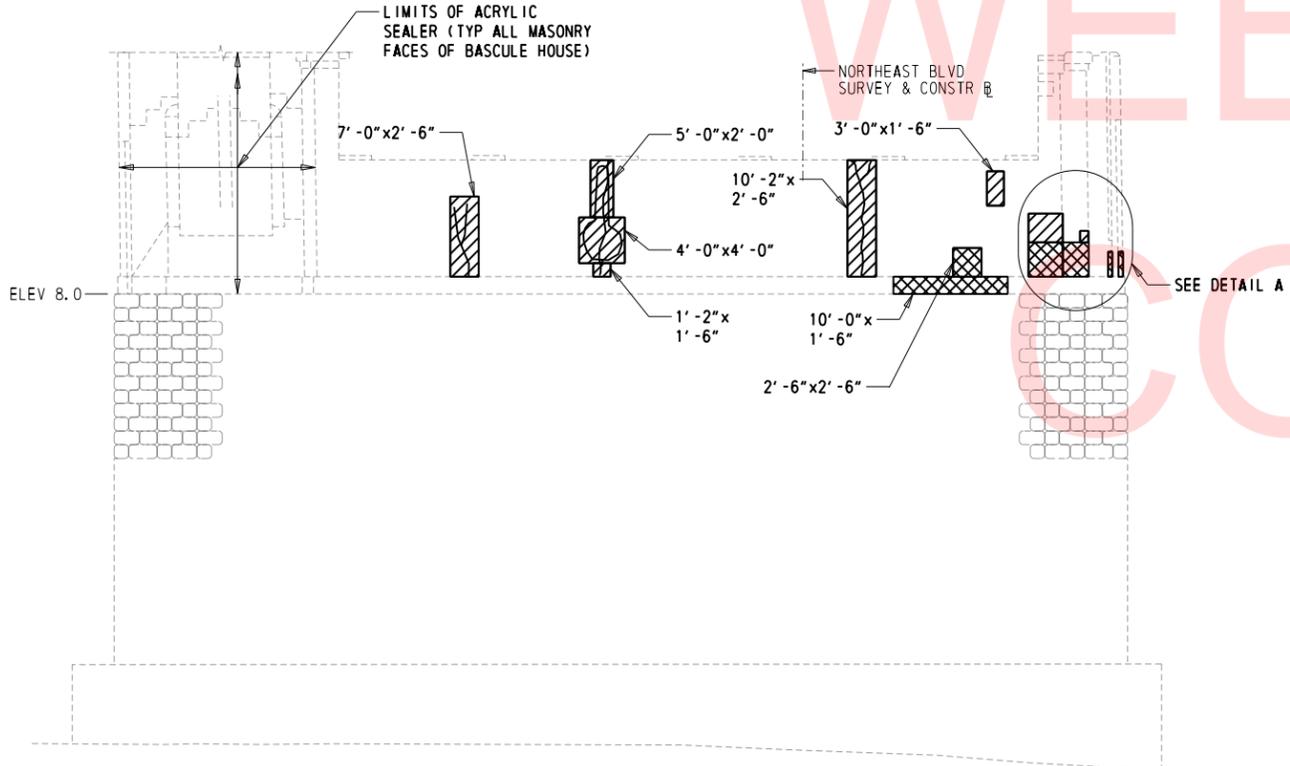
CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	JGW
COUNTY	CHECKED BY:	RJH
NEW CASTLE		

PIER 3 CONCRETE REPAIRS	SHEET NO. 18
	TOTAL SHTS. 65

LAST REVISED: 8/14/2018
 \\USP\PL\IF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-PRO4.DGN

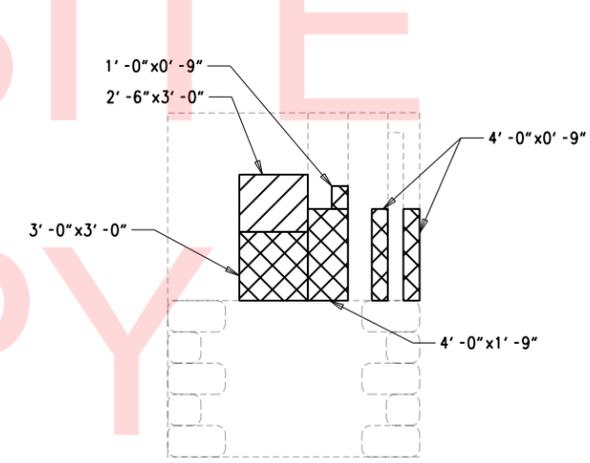


PIER 4 WEST FACE
 (LOOKING AHEAD STATION)
 SCALE: 1/8" = 1'-0"



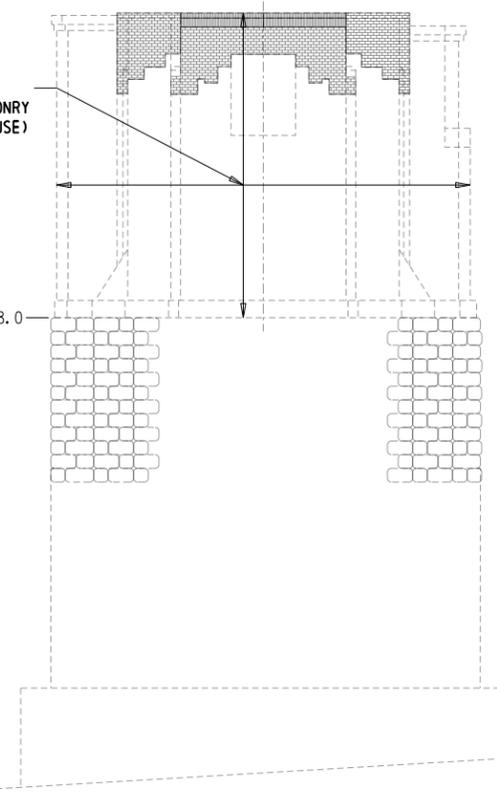
PIER 4 EAST FACE
 (LOOKING BACK STATION)
 SCALE: 1/8" = 1'-0"

PIER 4 NORTH FACE
 SCALE: 1/8" = 1'-0"



DETAIL A
 SCALE: 1/4" = 1'-0"

PIER 4 SOUTH FACE
 SCALE: 1/8" = 1'-0"



LEGEND:

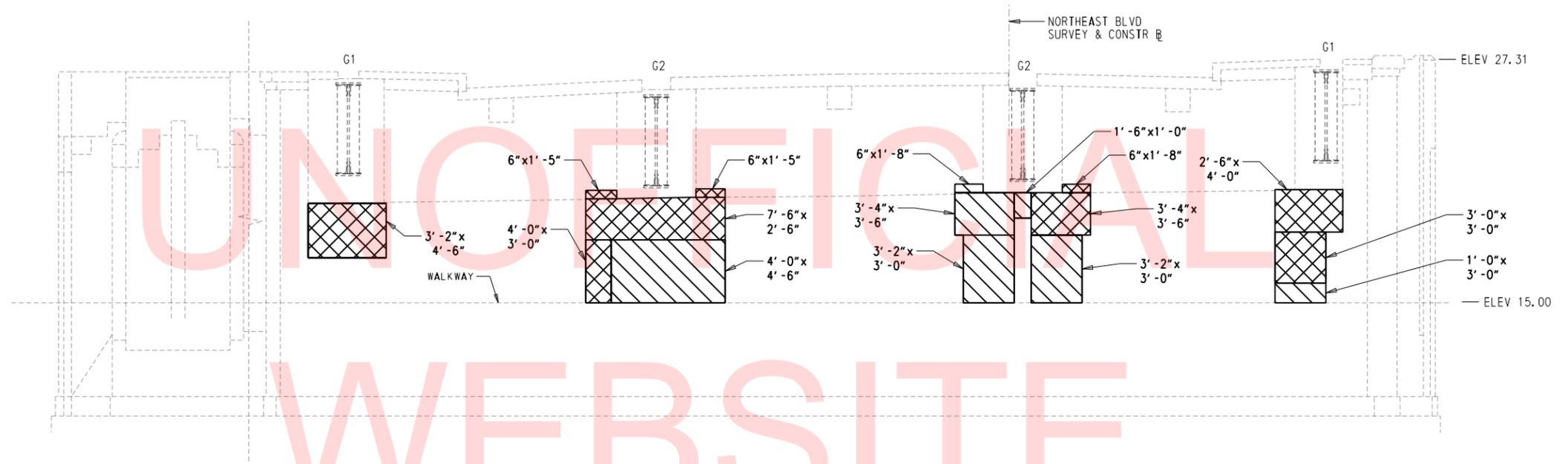
- (LENGTH x WIDTH) DEEP SPALL REPAIR
- (LENGTH x WIDTH) SHALLOW SPALL REPAIR

NOTES:

1. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
2. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
3. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
4. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
5. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
6. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
7. SPECIFIED LIMITS SHALL BE COATED WITH ACRYLIC SEALER, MATCHING STANDARD COLOR NO. 26424, FEDERAL STANDARD NO. 595.
8. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

CONCRETE REPAIR QUANTITIES	
PIER 4	
SHALLOW SPALL REPAIR	14 CF
DEEP SPALL REPAIR	26 CF

LAST REVISED: 8/14/2018
 \\USPPL\IF\002\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-PRO4.ADCN



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PIER 4 INTERIOR / EAST FACE

(LOOKING BACK STATION)
 SCALE: 1/4" = 1'-0"

LEGEND:

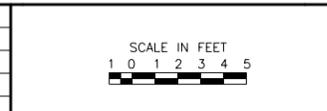
- (LENGTH x WIDTH)
DEEP SPALL REPAIR
- (LENGTH x WIDTH)
SHALLOW SPALL REPAIR

NOTES:

1. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
2. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
3. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
4. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
5. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
6. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
7. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

CONCRETE REPAIR QUANTITIES	
PIER 4 - INTERIOR WALL	
SHALLOW SPALL REPAIR	9 CF
DEEP SPALL REPAIR	39 CF

ADDENDUMS / REVISIONS	



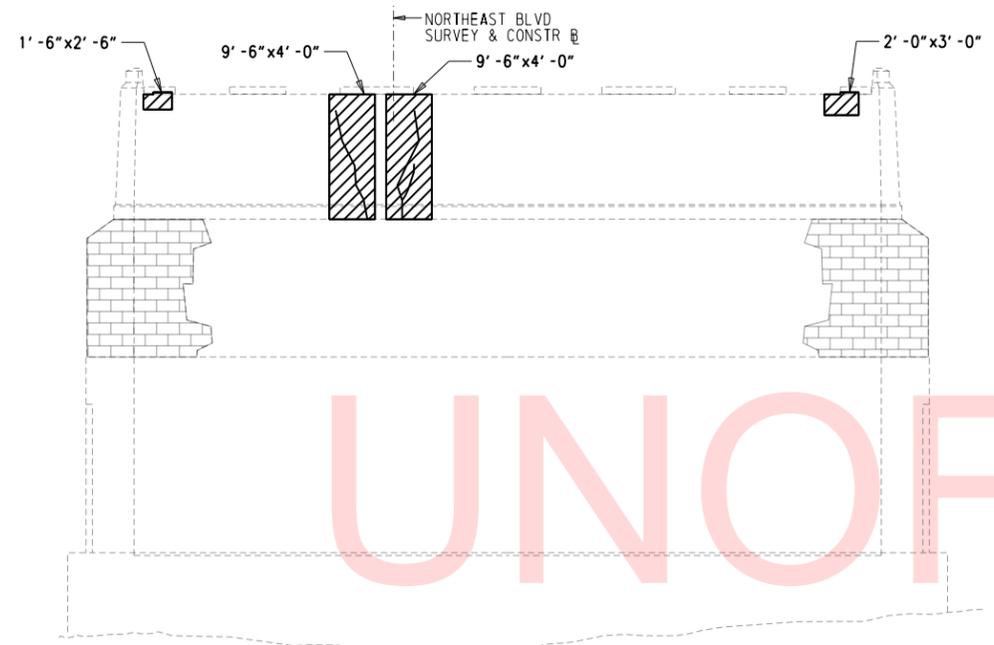
**BR 1-577 ON N050
 NORTHEAST BOULEVARD OVER
 BRANDYWINE RIVER**

CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	JGW
COUNTY	CHECKED BY:	RJH
NEW CASTLE		

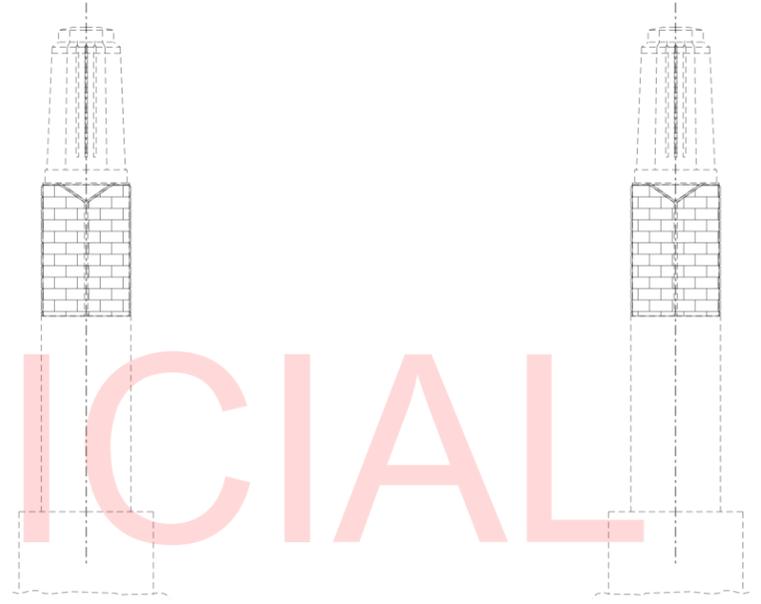
**PIER 4
 CONCRETE REPAIRS - 2**

SHEET NO.	20
TOTAL SHTS.	65

LAST REVISED: 8/14/2018
 \\USP\PL\IF\002\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-PROJ5.DGN

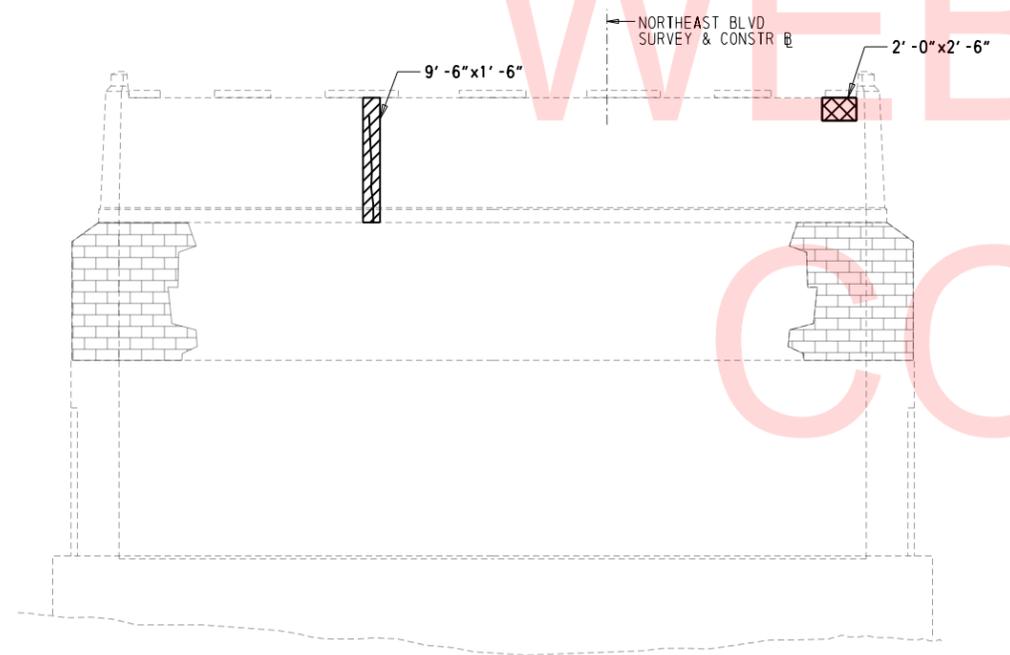


PIER 5 WEST FACE
 (LOOKING AHEAD STATION)
 SCALE: 1/8" = 1'-0"



PIER 5 NORTH FACE
 SCALE: 1/8" = 1'-0"

PIER 5 SOUTH FACE
 SCALE: 1/8" = 1'-0"



PIER 5 EAST FACE
 (LOOKING BACK STATION)
 SCALE: 1/8" = 1'-0"

UNOFFICIAL
 WEBSITE
 COPY

LEGEND:

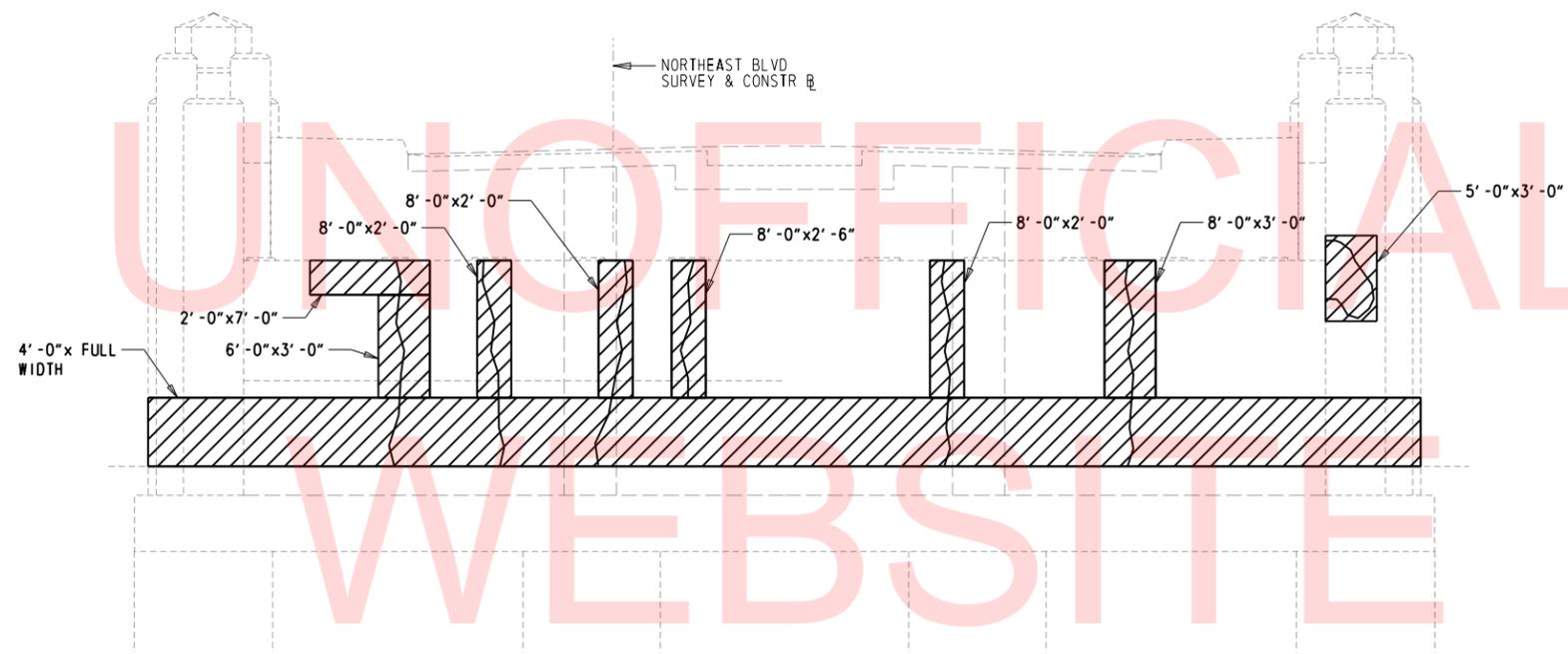
- (LENGTH x WIDTH) DEEP SPALL REPAIR
- (LENGTH x WIDTH) SHALLOW SPALL REPAIR

NOTES:

1. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
2. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
3. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
4. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
5. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
6. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
7. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

CONCRETE REPAIR QUANTITIES	
PIER 5	
SHALLOW SPALL REPAIR	17 CF
DEEP SPALL REPAIR	3 CF

LAST REVISED: 8/14/2018
 \\USPPLIF002\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-AB02.DGN



EAST ABUTMENT
 (LOOKING AHEAD STATION)
 SCALE: 3/16" = 1'-0"

LEGEND:

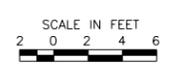
- (LENGTH x WIDTH)
DEEP SPALL REPAIR
- (LENGTH x WIDTH)
SHALLOW SPALL REPAIR

NOTES:

1. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
2. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
3. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
4. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
5. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
6. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
7. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

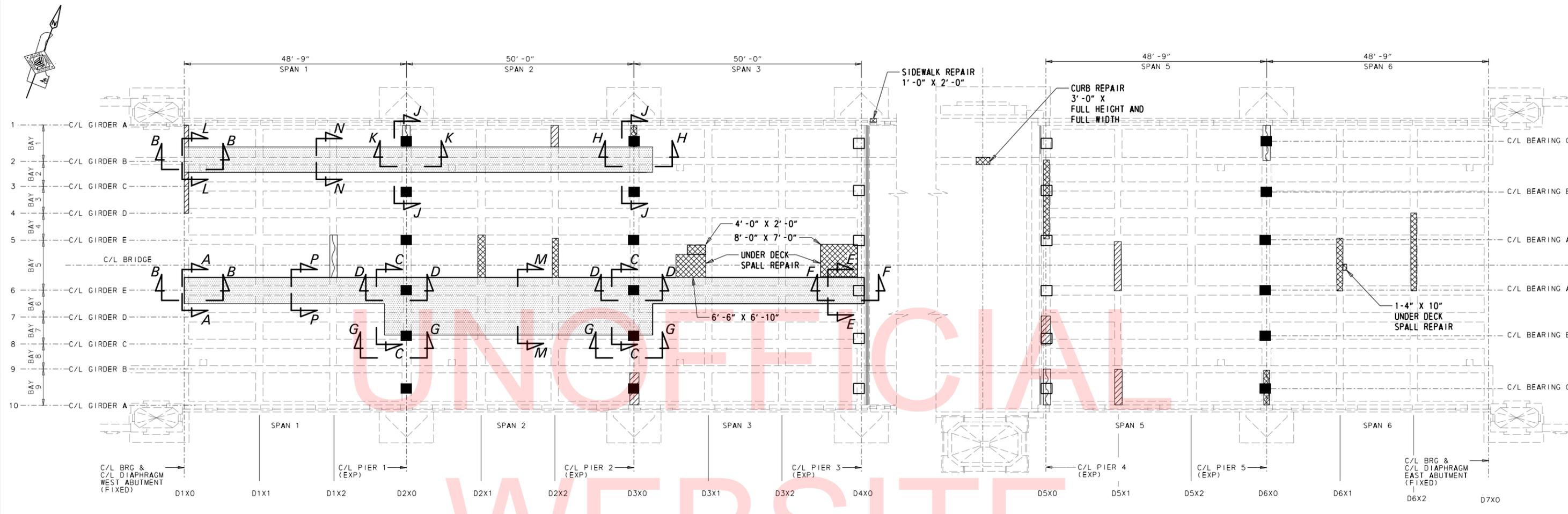
CONCRETE REPAIR QUANTITIES	
EAST ABUTMENT	
SHALLOW SPALL REPAIR	133 CF
DEEP SPALL REPAIR	0 CF

ADDENDUMS / REVISIONS



CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	JGW
COUNTY	CHECKED BY:	RJH
NEW CASTLE		

LAST REVISED: 8/14/2018
 \\USP\PL\PROJECTS\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-FP01.DGN



PLAN - WEST APPROACH SPANS
SCALE: 3/32" = 1'-0"

PLAN - EAST APPROACH SPANS
SCALE: 3/32" = 1'-0"

DIAPHRAGM SPALL REPAIRS			
DIAPHRAGM	FACES	REPAIR DIM.	REPAIR TYPE
D110	UNDERSIDE	6'-4" x 1'-9"	SHALLOW
	NORTHFACE	6'-4" x 1'-3"	
D120	UNDERSIDE	3'-9" x 1'-0"	SHALLOW
	NORTHFACE	3'-9" x 1'-0"	
D130	UNDERSIDE	2'-6" x 0'-11"	SHALLOW
	NORTHFACE	2'-6" x 0'-11"	
D152	SOUTHFACE	6 LF	CRACK REPAIR
D210	SOUTHFACE	5 LF	
D212	NORTHFACE	6'-4" x 1'-0"	SHALLOW
	UNDERSIDE	6'-4" x 1'-6"	
D251	NORTHFACE	3'-6" x 1'-2"	DEEP
	UNDERSIDE	3'-6" x 1'-0"	
D252	UNDERSIDE	4'-0" x 0'-10"	DEEP
	NORTHFACE	4'-0" x 0'-11"	
	SOUTHFACE	4'-0" x 0'-11"	
D310	SOUTHFACE	10 LF	CRACK REPAIR
		2'-0" x 2'-0"	DEEP
D390	NORTHFACE	4'-9" x 2'-2"	SHALLOW
		2'-0" x 2'-0"	
D520	UNDERSIDE	5'-8" x 1'-5"	DEEP
	SOUTHFACE	5'-8" x 1'-1"	
D530	UNDERSIDE	2'-8" x 2'-0"	DEEP
	SOUTHFACE	2'-8" x 2'-0"	

DIAPHRAGM SPALL REPAIRS			
DIAPHRAGM	FACES	REPAIR DIM.	REPAIR TYPE
D540	UNDERSIDE	5'-0" x 1'-8"	DEEP
	SOUTHFACE	5'-0" x 1'-3"	
D551	SOUTHFACE	20 SF	SHALLOW
D570	NORTHFACE	2'-5" x 1'-2"	SHALLOW
D590	NORTHFACE	5 LF	CRACK REPAIR
D591	SOUTHFACE	0'-9" x 2'-2"	SHALLOW
D610	NORTHFACE	5 LF	CRACK REPAIR
	SOUTHFACE	5 LF	CRACK REPAIR
D642	NORTHFACE	1'-3" x 1'-3"	DEEP
D651	NORTHFACE	5'-0" x 1'-6"	DEEP
		5'-0" x 1'-4"	
		5'-0" x 1'-4"	
D652	UNDERSIDE	2'-0" x 1'-6"	DEEP
		3'-4" x 1'-6"	
		2'-7" x 1'-1"	
D690	SOUTHFACE	2'-3" x 2'-4"	DEEP
		4 LF	CRACK REPAIR

CONCRETE REPAIR QUANTITIES	
DIAPHRAGM	
SHALLOW SPALL REPAIR	11 CF
DEEP SPALL REPAIR	40 CF
CRACK REPAIR	40 LF
UNDER DECK	
DEEP SPALL REPAIR	36 CF
SIDEWALK	
DEEP SPALL REPAIR	2 CF
CURB	
FULL DEPTH REPAIR	3 CF

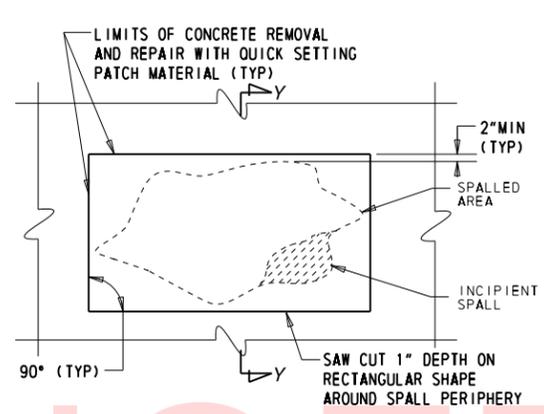
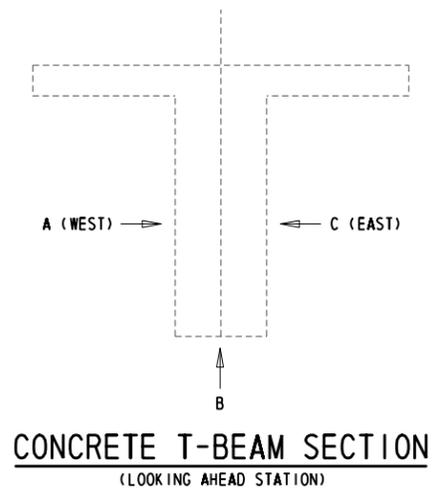
NOTES:

- FOR BRIDGE PROJECTS NOTE, SEE SHEET 10.
- "X" NOMENCLATURE FOR DIAPHRAGM LOCATION REFERS TO BAY NO.
- FOR BEAM DETAILS, SEE SHEETS 25 AND 26.
- FOR DIAPHRAGM DETAILS, SEE SHEETS 27 AND 28.
- FOR ALL PLAN VIEW SECTION CUT DETAILS, SEE SHEETS 27 AND 28.
- FOR DECK DETAILS, SEE SHEETS 29 AND 30.
- FOR BEARING REPLACEMENT AND ANCHOR BOLT REPAIR DETAILS, SEE SHEETS 35 AND 36.
- FOR BRIDGE JACKING DETAILS, SEE SHEETS 37 AND 38.
- ALL REPAIRS ARE DIAPHRAGM REPAIRS UNLESS NOTED OTHERWISE.
- SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
- DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
- CRACK REPAIR PAID FOR UNDER ITEM NO. 628001.
- REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)
- PROVIDE TEMPORARY DECK SUPPORT IN BAY 1 AND BAY 5 TO FACILITATE T-BEAM DEMOLITION.
- CONTRACTOR SHALL SUBMIT TEMPORARY DECK AND BEAM SUPPORT DESIGN AND MEANS AND METHODS SUBMITTALS PREPARED BY A LICENSED ENGINEER IN THE STATE OF DELAWARE FOR REVIEW AND APPROVAL IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS.

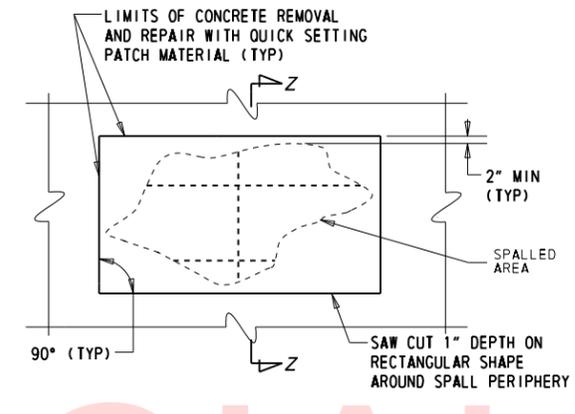
LEGEND:

- (LENGTH x WIDTH) DEEP SPALL REPAIR
- (LENGTH x WIDTH) SHALLOW SPALL REPAIR
- (LENGTH) CRACK REPAIR
- T-BEAM REMOVAL AND REPLACEMENT
- BEARING REPLACEMENT AND BEAM SEAT MODIFICATION
- BEARING REPLACEMENT

LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-DJ03.DGN



PLAN - SHALLOW SPALL REPAIR



PLAN - DEEP SPALL REPAIR

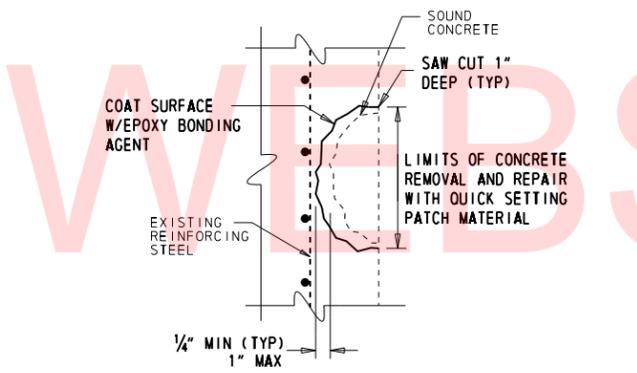
SHALLOW SPALL REPAIRS

1. SHALLOW SPALLS ARE DEFINED AS PATCHES THAT DO NOT EXTEND BELOW THE TOP MAT OF REBAR.
2. ALL WORK INVOLVING METHODS OF CONCRETE REMOVAL; CLEANING OF CONCRETE SURFACE; SURFACE PREPARATION; AND CONCRETE PLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 628.03(E) OF THE STANDARD SPECIFICATIONS. PAYMENT INCIDENTAL TO 628040 - SHALLOW SPALL REPAIR.
3. FOR ANY SHALLOW SPALL REPAIR TO TAKE PLACE WITHIN THE SPLASH ZONE OR UNDERWATER, THE CONTRACTOR SHALL SUBMIT A WORKING DRAWING FOR APPROVAL IN ACCORDANCE WITH SUBSECTION 628.03(E)(2).

DEEP SPALL REPAIRS

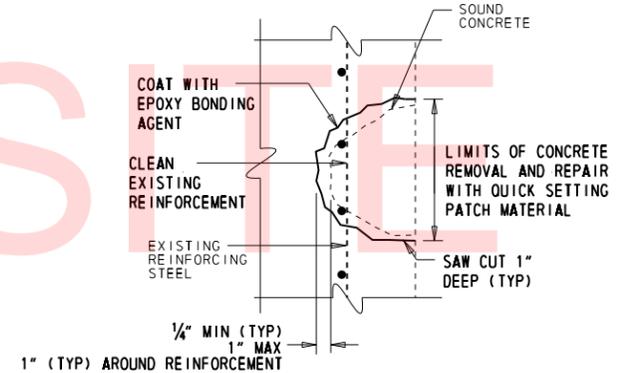
1. DEEP SPALLS ARE DEFINED AS PATCHES THAT EXTEND BELOW THE TOP MAT OF REINFORCEMENT.
2. ALL WORK INVOLVING METHODS OF CONCRETE REMOVAL; CLEANING OF CONCRETE SURFACE AND EXISTING REINFORCEMENT; REPAIRING OR REPLACING DAMAGED REINFORCEMENT AS RESULT OF CONSTRUCTION ACTIVITIES OR SECTION LOSS; PRESENCE OF CONTRACTION OR EXPANSION JOINTS; SURFACE PREPARATION; AND CONCRETE PLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 628.03(E) OF THE STANDARD SPECIFICATIONS. PAYMENT INCIDENTAL TO 628041 - DEEP SPALL REPAIR.
3. FOR ANY DEEP SPALL REPAIR TO TAKE PLACE WITHIN THE SPLASH ZONE OR UNDERWATER, THE CONTRACTOR SHALL SUBMIT A WORKING DRAWING IN ACCORDANCE WITH SUBSECTION 628.03(E)(2).

T-BEAM SPALL REPAIRS					
SPAN	GIRDER	FACES TO BE REPAIRED	VOLUME (SHALLOW) (CF)	VOLUME (DEEP) (CF)	CRACK REPAIR (LF)
1	1	A,C	2.90	0.00	0
1	3	B,C	0.54	0.00	0
1	4	A,B,C	0.91	0.00	0
1	5	A,B,C	0.76	0.28	0
1	7	A,B,C	0.75	0.65	0
1	8	A	0.33	0.00	0
1	9	B,C	1.24	1.28	0
2	1	B,C	0.20	0.00	0
2	8	B,C	0.67	0.00	0
2	9	B,C	1.95	4.83	0
3	1	A	0	13.71	0
3	2	A,B	4.23	3.91	0
3	4	C	0.33	0.00	0
3	10	A,B	0	3.13	0
5	1	B,C	0.39	0.00	0
5	2	B,C	0	3.39	0
5	4	A,B	0.65	0.00	0
5	5	B	0	0.93	0
5	6	B,C	1.17	0.00	0
5	7	A,B,C	0.61	11.62	0
5	10	A,B	0.42	11.46	0
6	1	A	0	0.94	0
6	2	B,C	0	3.61	0
6	5	A,B,C	1.01	1.08	0
6	6	B,C	1.59	0.00	0
6	8	C	0	1.28	0
6	9	C	0	1.13	11
6	10	A,C	0	1.39	7



SECTION Y-Y - SHALLOW SPALL REPAIRS

NOTE: SOUND REPAIRS AFTER CURING TO ENSURE BOND.



SECTION Z-Z - DEEP SPALL REPAIR

NOTE: SOUND REPAIRS AFTER CURING TO ENSURE BOND.

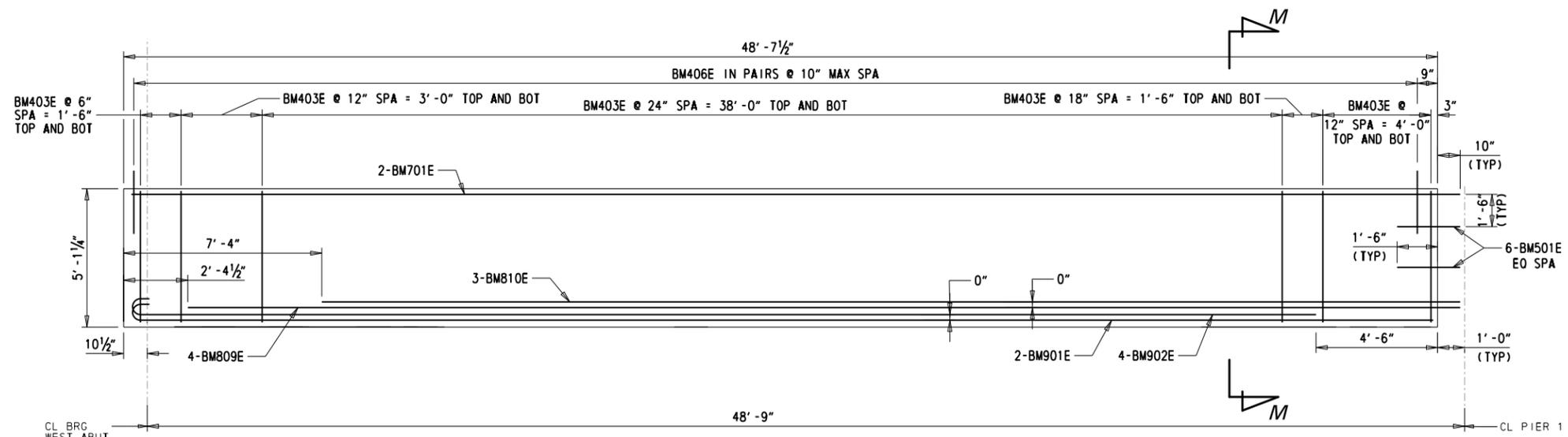
CONCRETE REPAIR QUANTITIES	
CONCRETE T-BEAM	
SHALLOW SPALL REPAIR	21 CF
DEEP SPALL REPAIR	65 CF
CRACK REPAIR	18 LF

NOTES:

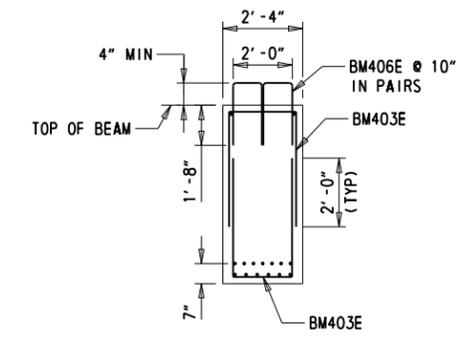
1. FOR PROJECT NOTES, SEE SHEET 10.
2. CONCRETE REPAIR DIMENSIONS IN FEET AND INCHES.
3. CONTRACTOR TO FIELD VERIFY ALL REPAIR DIMENSIONS.
4. ENGINEER SHALL CONFIRM CONTRACTOR DELINEATION OF CRACK AND SPALL AREAS PRIOR TO COMMENCEMENT OF REPAIRS.
5. WHERE CRACKS AND SPALLS ARE SHOWN CONCURRENTLY, COMPLETE THE SPALL REPAIR AND THEN COMPLETE ANY REMAINING CRACK REPAIR.
6. SHALLOW SPALL REPAIR PAID FOR UNDER ITEM NO. 628040.
7. DEEP SPALL REPAIR PAID FOR UNDER ITEM NO. 628041.
8. CRACK REPAIR PAID FOR UNDER ITEM NO. 628001
9. REPAIR QUANTITIES IN THE TABLE HAVE BEEN INCREASED BY 30% TO ACCOUNT FOR PROGRESSED DETERIORATION SINCE THE TIME OF THE BRIDGE INSPECTION (NOV. 2014)

	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT T201407403	BRIDGE NO. 1-577	CONCRETE SUPERSTRUCTURE REPAIR DETAILS	SHEET NO. 24
					COUNTY NEW CASTLE		DESIGNED BY: JGW/RJH

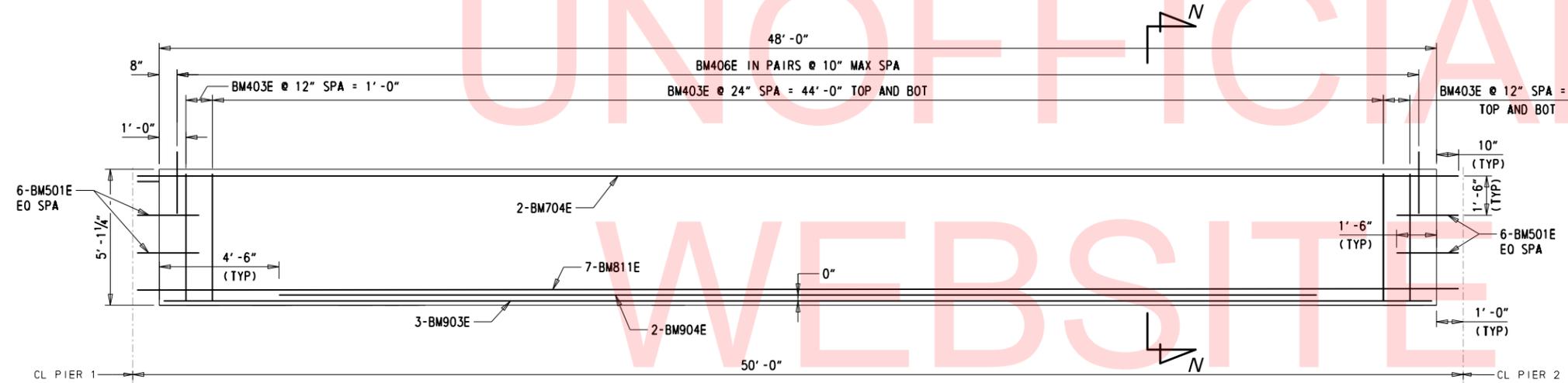
LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-BMD1.DGN



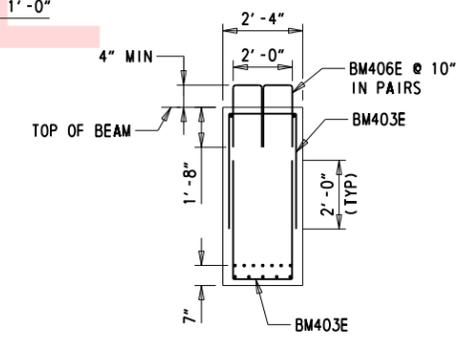
GIRDER E (SPAN 1)
SCALE: 3/8" = 1'-0"



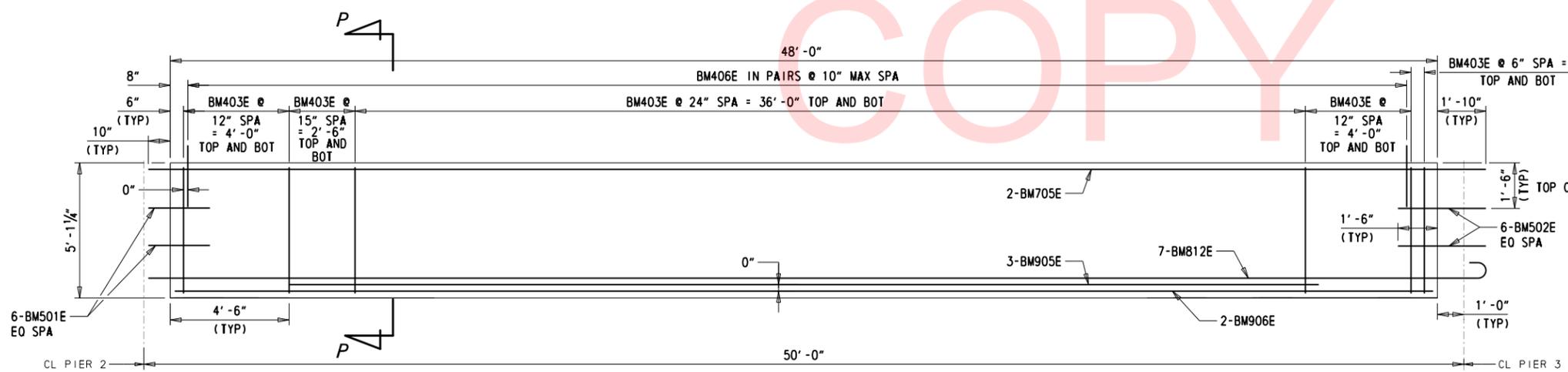
SECTION M-M
SCALE: 3/8" = 1'-0"



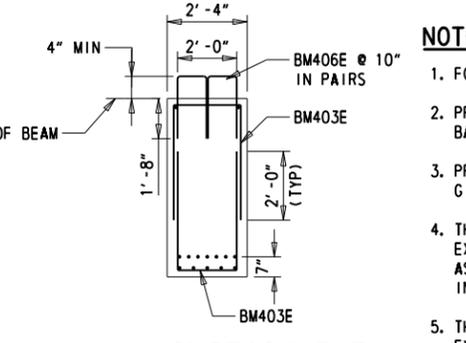
GIRDER E (SPAN 2)
SCALE: 3/8" = 1'-0"



SECTION N-N
SCALE: 3/8" = 1'-0"



GIRDER E (SPAN 3)
SCALE: 3/8" = 1'-0"

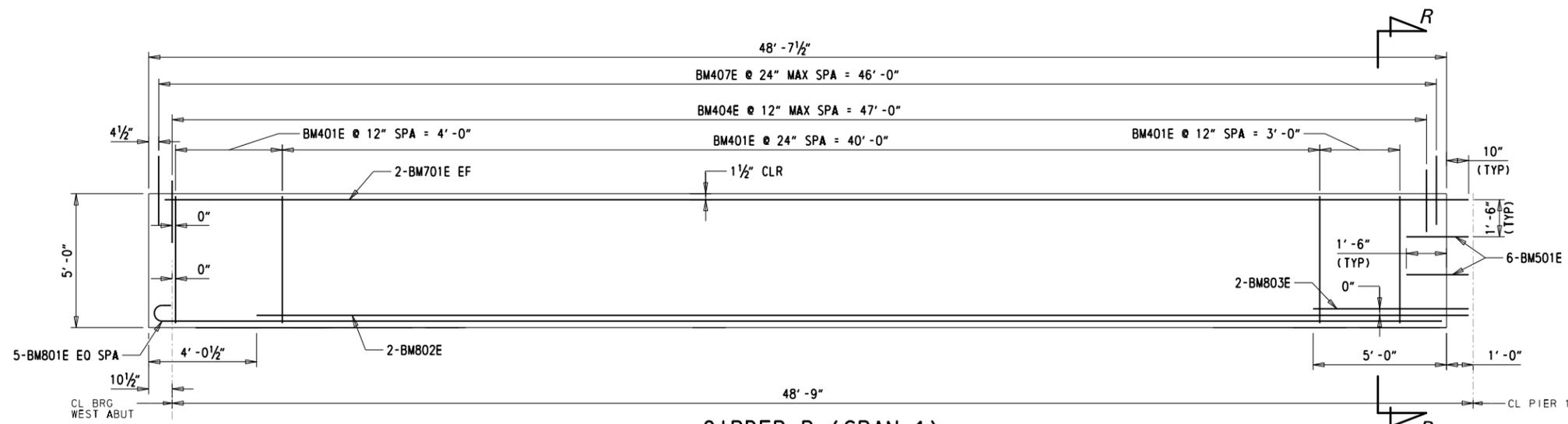


SECTION P-P
SCALE: 3/8" = 1'-0"

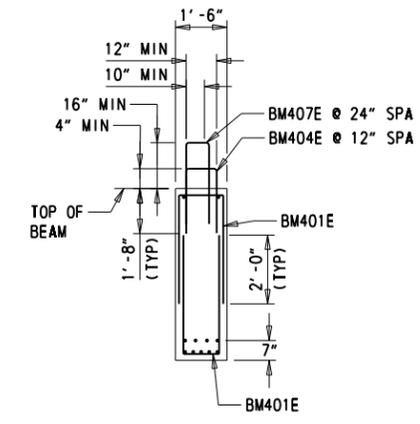
NOTES:

1. FOR PROJECT NOTES, SEE SHEET 10.
2. PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS EXCEPT AS NOTED.
3. PROVIDE 1" MINIMUM HAUNCH DEPTH OVER GIRDERS.
4. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING BEAM DEPTHS TO CONFIRM THE AS-DESIGNED BEAMS CAN BE INSTALLED AS INDICATED PRIOR TO BEAM FABRICATION.
5. THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING DIAPHRAGM LOCATION AND DIMENSIONS PRIOR TO BEAM FABRICATION.
6. PROVIDE THREADED INSERTS IN THE PRECAST BEAM FOR INTERMEDIATE DIAPHRAGMS AND END DIAPHRAGM AT THE WEST ABUTMENT, SEE SHEET 27 AND 28.

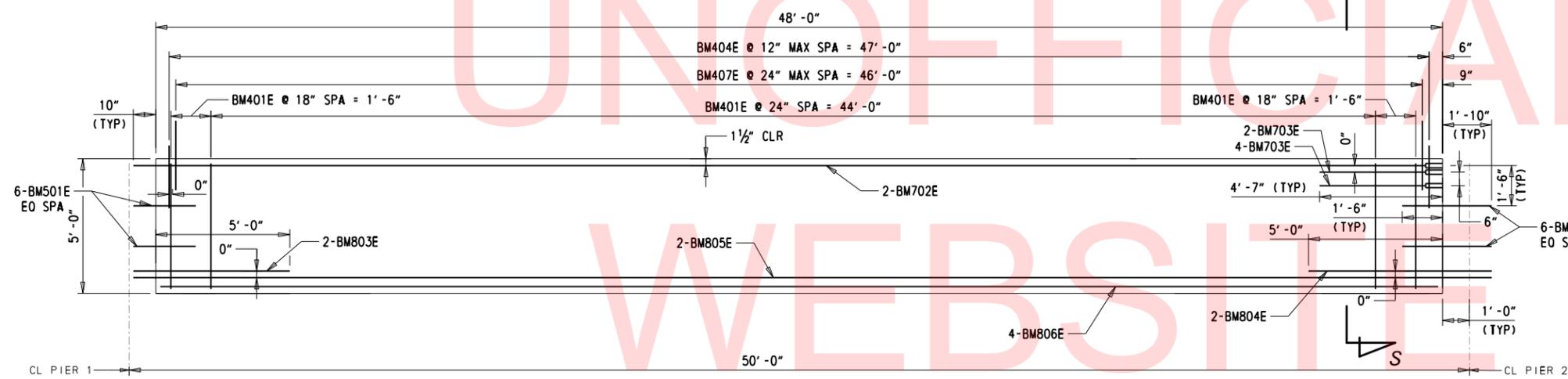
LAST REVISED: 8/14/2018
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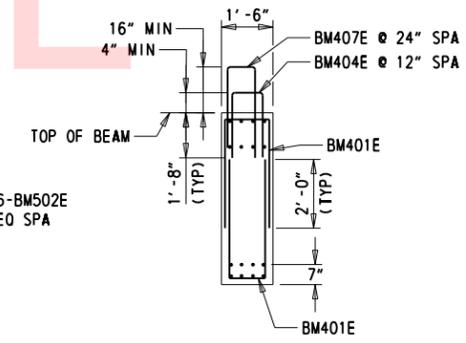
GIRDER B (SPAN 1)
SCALE: 3/8" = 1'-0"



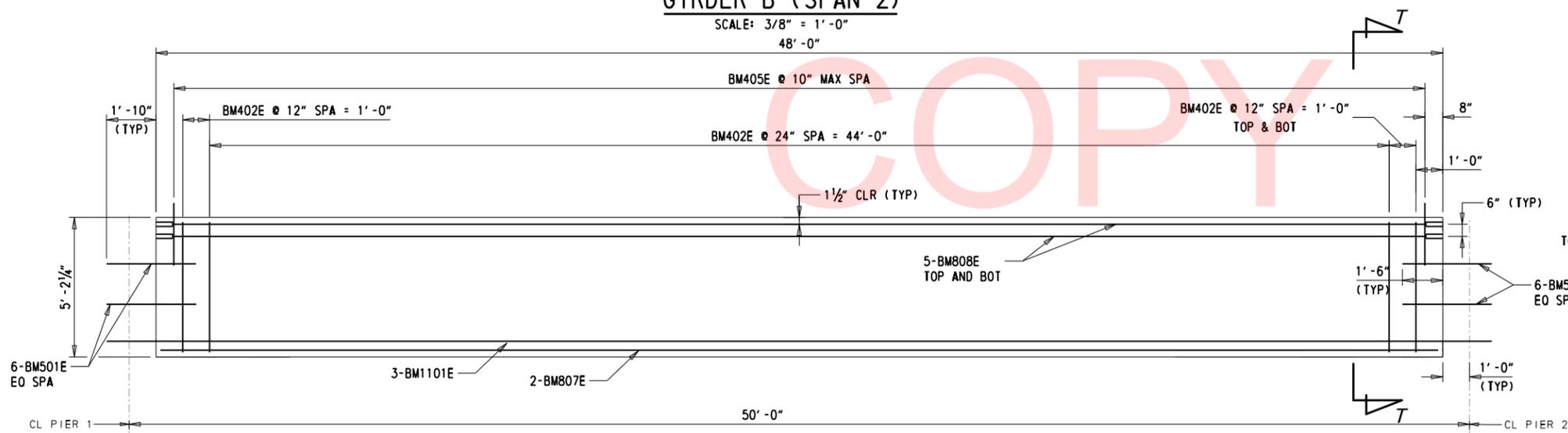
SECTION R-R
SCALE: 3/8" = 1'-0"



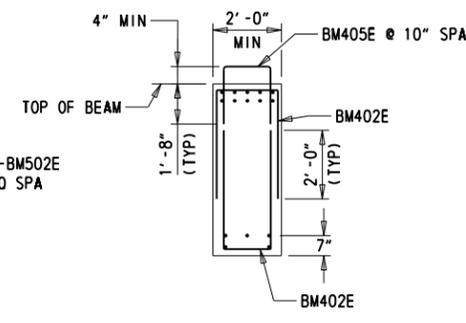
GIRDER B (SPAN 2)
SCALE: 3/8" = 1'-0"



SECTION S-S
SCALE: 3/8" = 1'-0"



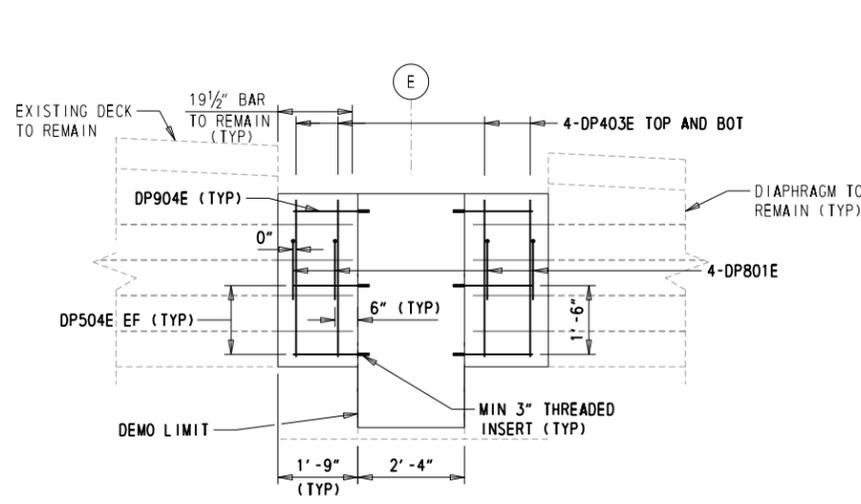
GIRDER D (SPAN 2)
SCALE: 3/8" = 1'-0"



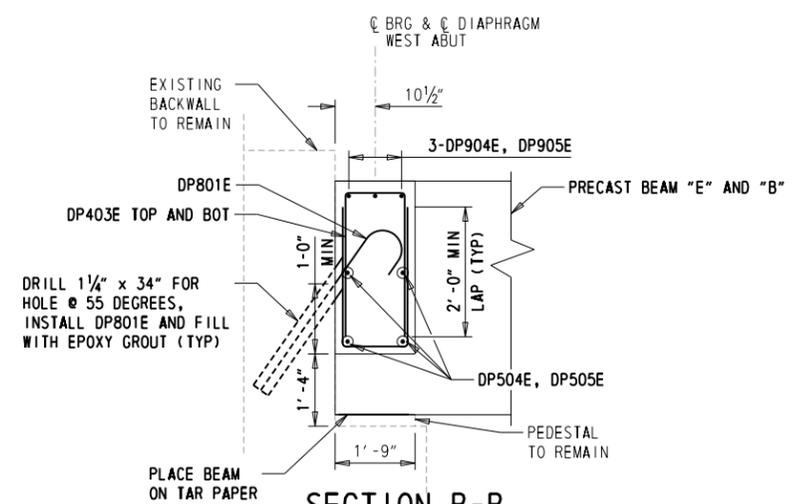
SECTION T-T
SCALE: 3/8" = 1'-0"

- NOTES:**
- FOR PROJECT NOTES, SEE SHEET 10.
 - PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS EXCEPT AS NOTED.
 - PROVIDE 1" MINIMUM HAUNCH DEPTH OVER GIRDERS.
 - PROVIDE THREADED INSERTS FOR BAR CONTINUITY AS DEPICTED IN GIRDER B AT PIER 2 AND GIRDER D AT BOTH ENDS.
 - BM407E SHALL EXTEND 16" ABOVE TOP OF BEAM TO FACILITATE CURB RECONSTRUCTION.
 - THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING BEAM DEPTHS TO CONFIRM THE AS-DESIGNED BEAMS CAN BE INSTALLED AS INDICATED PRIOR TO BEAM FABRICATION.
 - THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING DIAPHRAGM LOCATION AND DIMENSIONS PRIOR TO BEAM FABRICATION.
 - PROVIDE THREADED INSERTS IN THE PRECAST BEAM FOR INTERMEDIATE DIAPHRAGMS AND END DIAPHRAGM AT THE WEST ABUTMENT, SEE SHEET 27 AND 28.

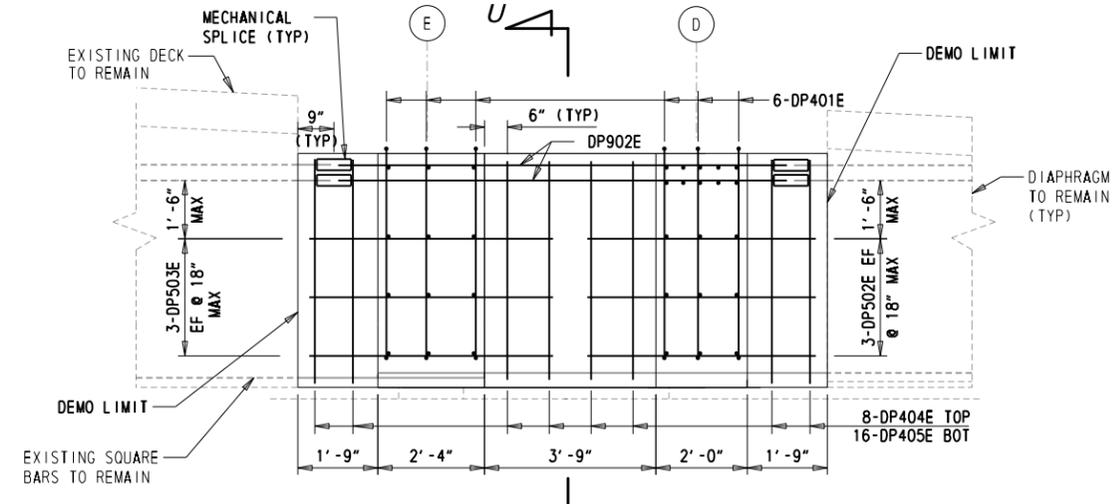
LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-BM03.DGN



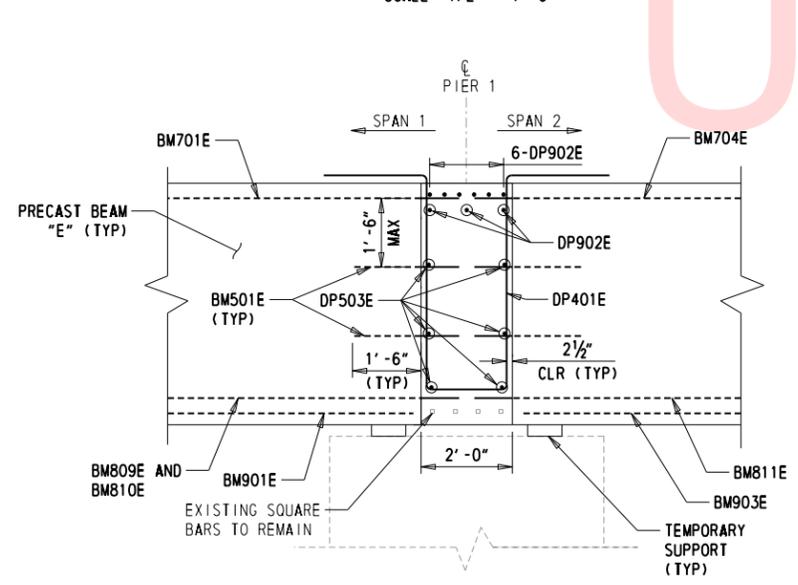
SECTION A-A
SCALE: 1/2" = 1'-0"



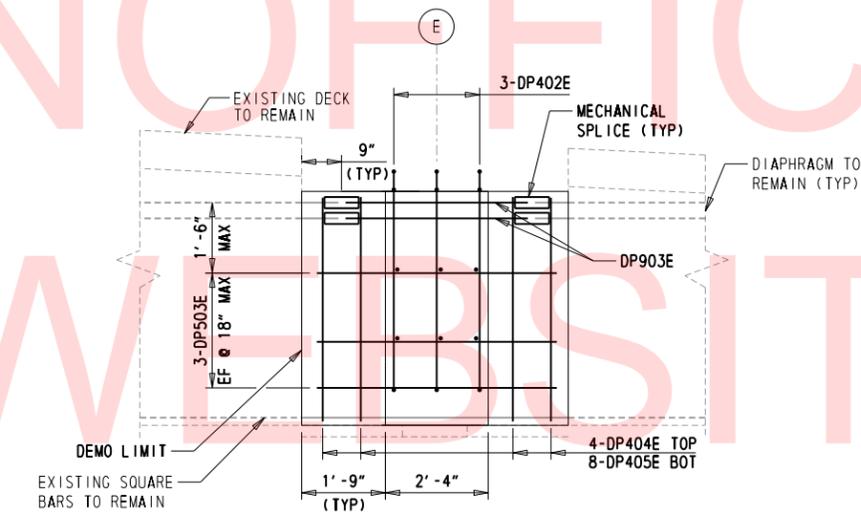
SECTION B-B
SCALE: 1/2" = 1'-0"



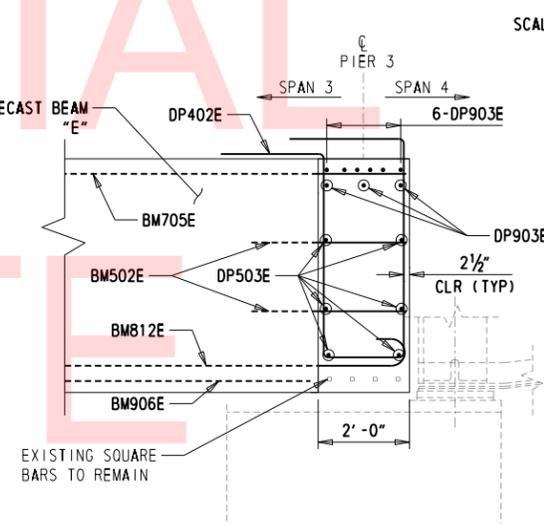
SECTION C-C
SCALE: 1/2" = 1'-0"



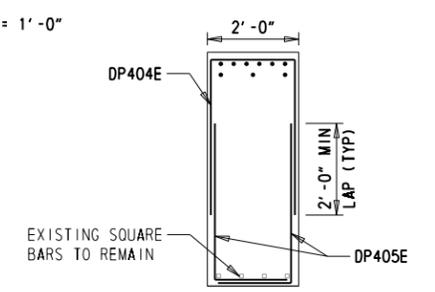
SECTION D-D
PIER 2 SIMILAR
SCALE: 1/2" = 1'-0"



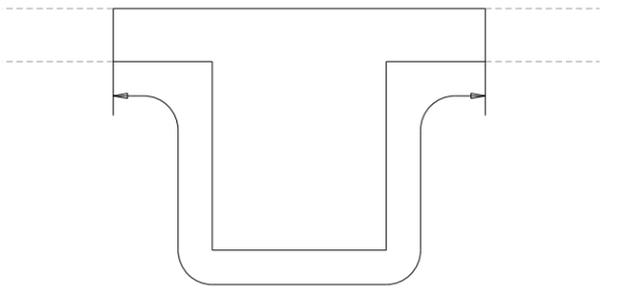
SECTION E-E
SCALE: 1/2" = 1'-0"



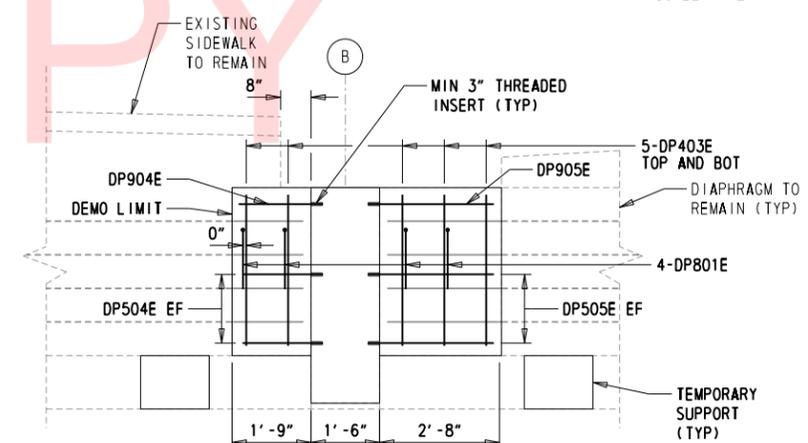
SECTION F-F
SCALE: 1/2" = 1'-0"



SECTION U-U
SCALE: 1/2" = 1'-0"



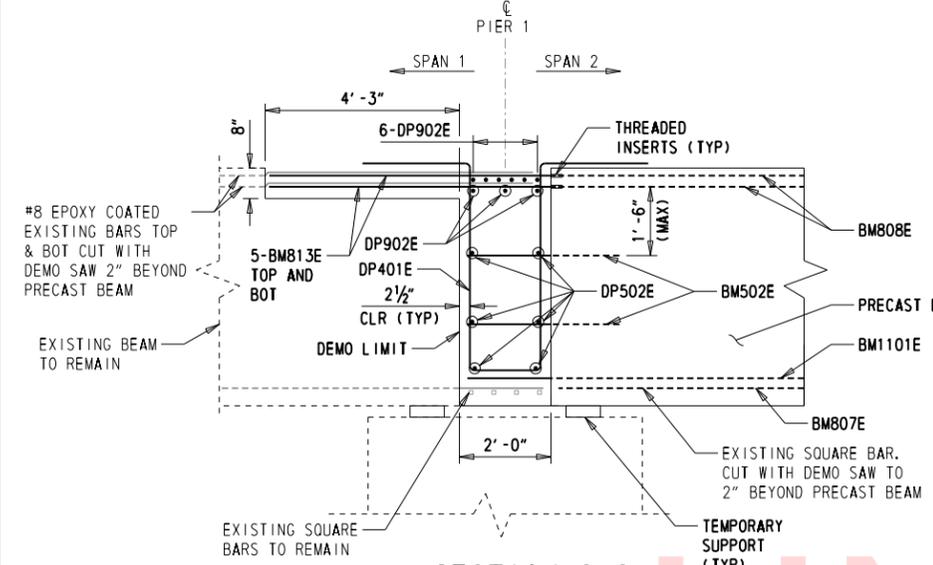
TYPICAL PROTECTIVE COATING LIMITS
NTS



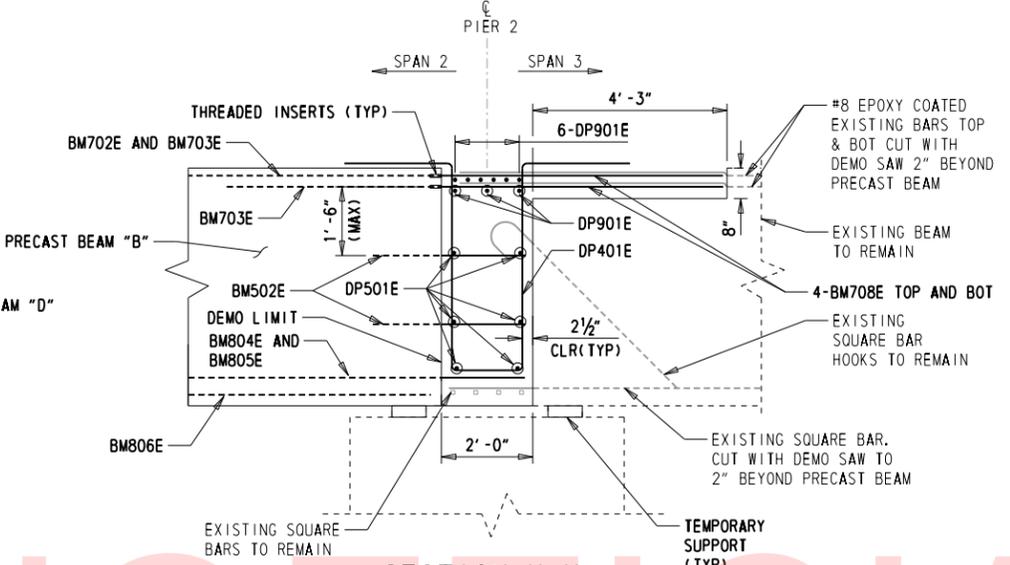
SECTION L-L
SCALE: 1/2" = 1'-0"

- NOTES:**
- FOR PROJECT NOTES, SEE SHEET 10.
 - ALL EXISTING STEEL IDENTIFIED TO REMAIN SHALL BE CLEANED AND EPOXY COATED IN THE FIELD. THIS WORK IS INCIDENTAL TO ITEM NO. 610017.
 - CONTRACTOR SHALL PROVIDE TIMBER BLOCKING TO SUPPORT THE EXISTING DIAPHRAGMS OVER THE PIERS TO REMAIN PRIOR TO THE START OF BEAM AND DIAPHRAGM DEMOLITION.
 - MECHANICAL SPLICE LOCATIONS MAY BE ADJUSTED TO FACILITATE CONSTRUCTION.
 - INSTALL TEMPORARY SUPPORT FOR PRECAST BEAMS PRIOR TO ERECTION AND MAINTAIN TEMPORARY SUPPORT UNTIL ALL SUPERSTRUCTURE CONCRETE HAS BEEN PLACED, CURED, AND ACCEPTED BY THE ENGINEER.
 - CONTRACTOR TO PROVIDE METHOD OF TEMPORARY SUPPORT FOR THE SIDEWALK AND GIRDER "E" OVERHANG. THE TEMPORARY SUPPORT PLAN AND SUPPORTING CALCULATIONS SHALL BE SUBMITTED FOR REPRESENTATIVE REVIEW AND APPROVAL PRIOR TO INSTALLATION. THIS WORK IS INCIDENTAL TO ITEM NO. 211000.
 - FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.
 - PROVIDE PROTECTIVE COATING IN ACCORDANCE WITH SECTION 613 OF THE STANDARD SPECIFICATION TO THE LIMITS DEPICTED IN THE PLANS. THIS INCLUDES ALL NEW BEAM, DIAPHRAGM AND UNDER DECK CONCRETE SURFACES. THIS WORK IS INCIDENTAL TO ITEM NO. 610017.

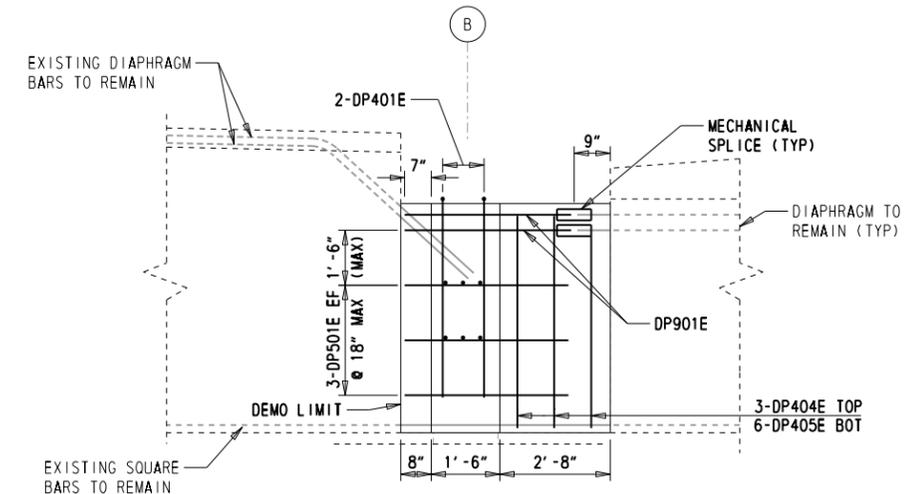
LAST REVISED: 8/14/2018
 \\USP\PL\PROJECTS\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-BM04.DGN



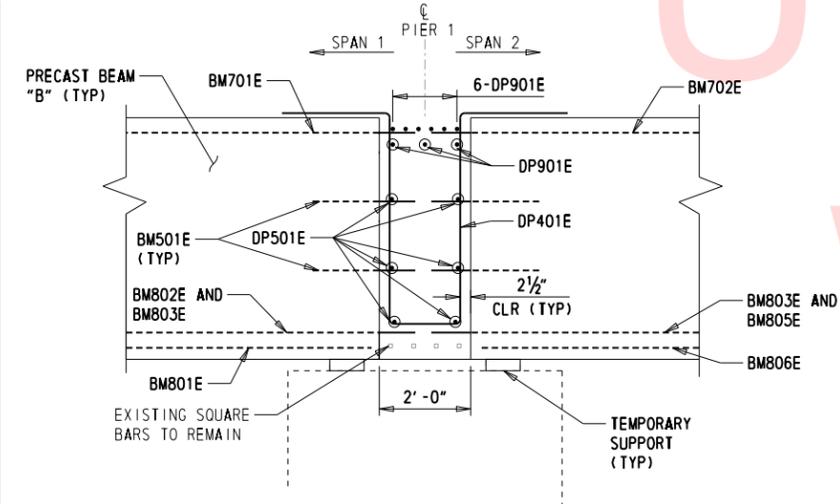
SECTION G-G
 PIER 2 OPPOSITE HAND
 SCALE: 1/2" = 1'-0"



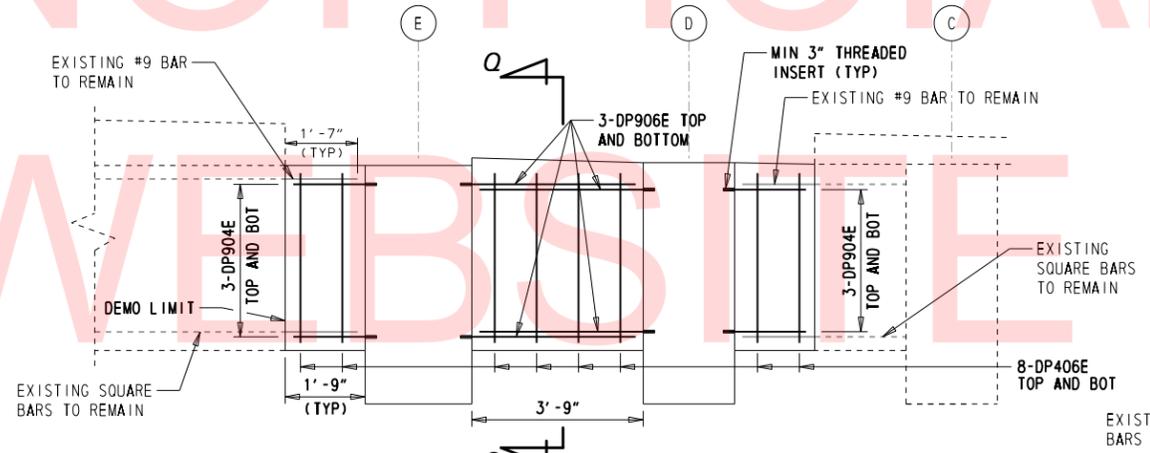
SECTION H-H
 SCALE: 1/2" = 1'-0"



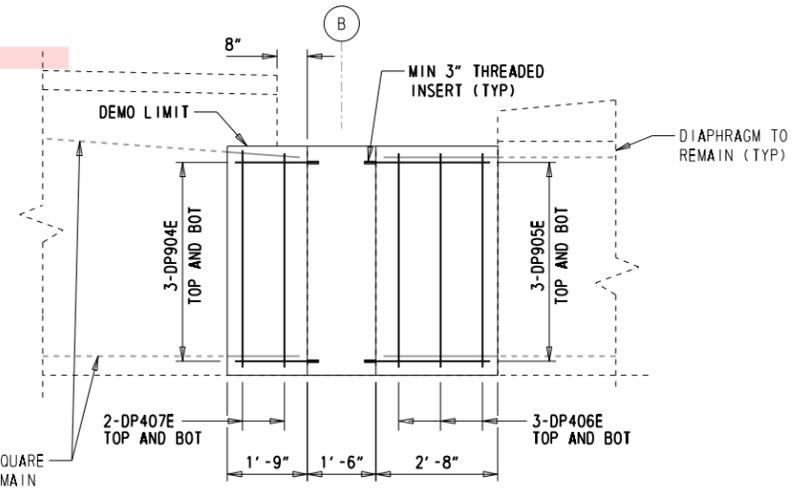
SECTION J-J
 SCALE: 1/2" = 1'-0"



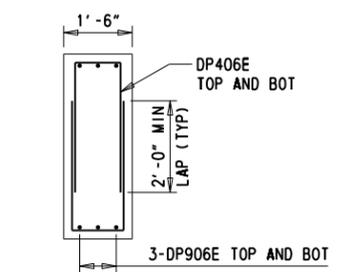
SECTION K-K
 SCALE: 1/2" = 1'-0"



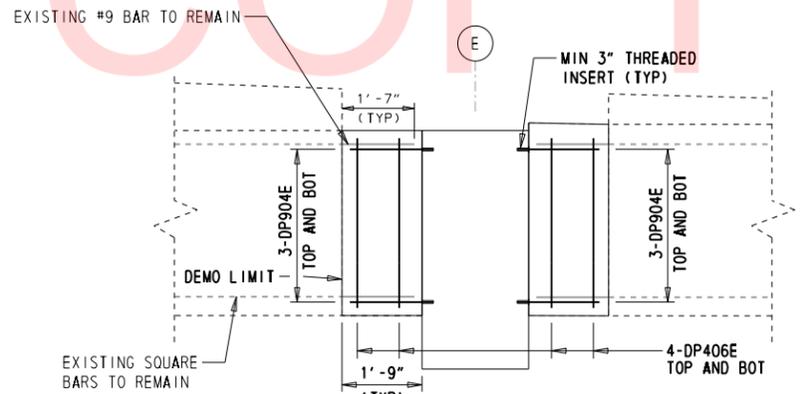
SECTION M-M
 SCALE: 1/2" = 1'-0"



SECTION N-N
 SCALE: 1/2" = 1'-0"



SECTION Q-Q
 SCALE: 1/2" = 1'-0"

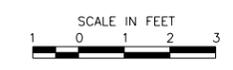


SECTION P-P
 SCALE: 1/2" = 1'-0"

NOTES:

- FOR PROJECT NOTES, SEE SHEET 10.
- ALL EXISTING STEEL IDENTIFIED TO REMAIN SHALL BE CLEANED AND EPOXY COATED IN THE FIELD. THIS WORK IS INCIDENTAL TO ITEM NO. 610017.
- CONTRACTOR SHALL PROVIDE TIMBER BLOCKING TO SUPPORT THE EXISTING DIAPHRAGMS OVER THE PIERS TO REMAIN PRIOR TO THE START OF BEAM AND DIAPHRAGM DEMOLITION.
- ALL MECHANICAL SPLICES MAY BE LOCATED CLOSER TO THE DEMO LIMITS TO FACILITATE FIT UP.
- INSTALL TEMPORARY SUPPORT FOR PRECAST BEAMS PRIOR TO ERECTION AND MAINTAIN TEMPORARY SUPPORT UNTIL ALL SUPERSTRUCTURE CONCRETE HAS BEEN PLACED, CURED, AND ACCEPTED BY THE ENGINEER.
- CONTRACTOR TO PROVIDE METHOD OF TEMPORARY SUPPORT FOR THE SIDEWALK AND GIRDER "E" OVERHANG. THE TEMPORARY SUPPORT PLAN AND SUPPORTING CALCULATIONS SHALL BE SUBMITTED FOR REPRESENTATIVE REVIEW AND APPROVAL PRIOR TO INSTALLATION. THIS WORK IS INCIDENTAL TO ITEM NO. 211000.
- FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	

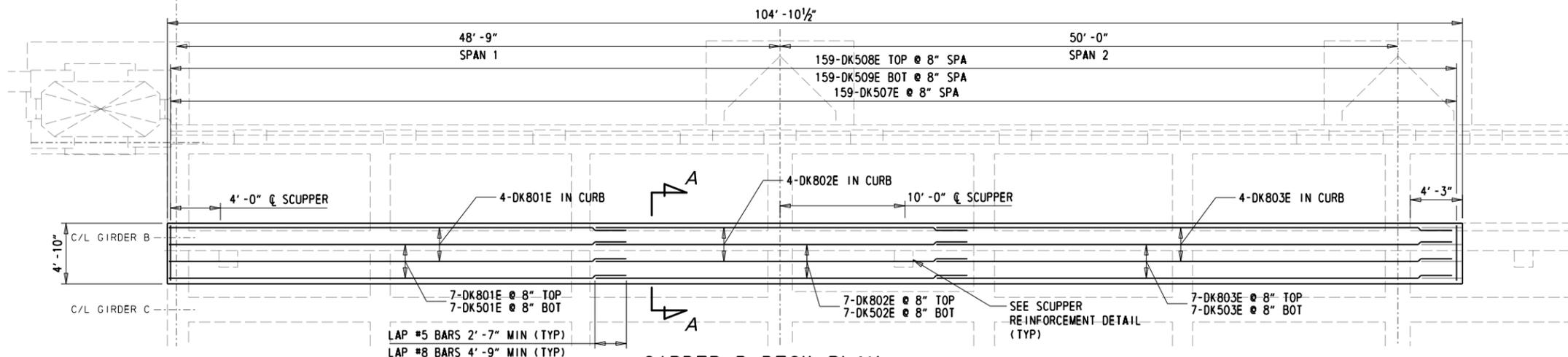


**BR 1-577 ON N050
 NORTHEAST BOULEVARD OVER
 BRANDYWINE RIVER**

CONTRACT T201407403	BRIDGE NO. 1-577	DIAPHRAGM DETAILS - 2
COUNTY NEW CASTLE	DESIGNED BY: RJH	
	CHECKED BY: DPR	

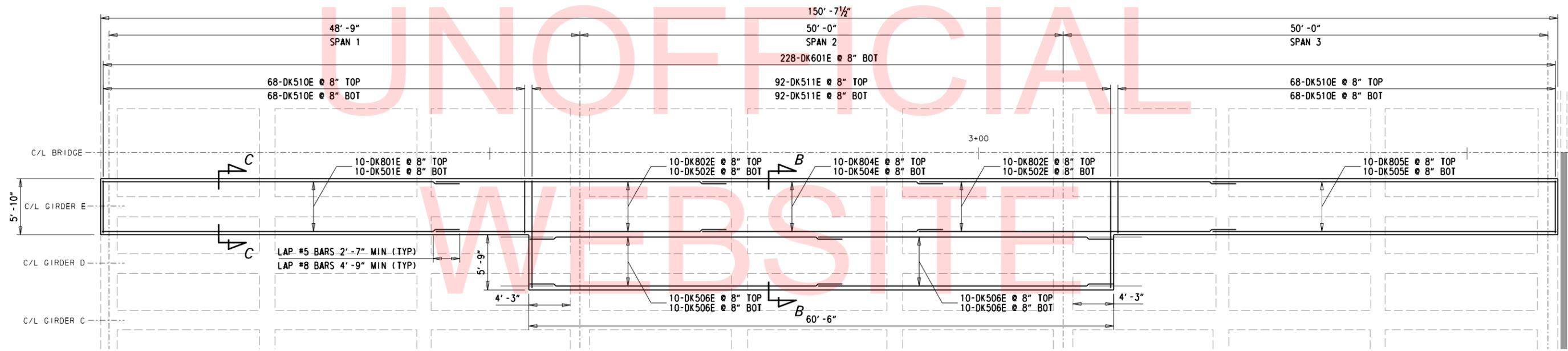
SHEET NO. 28
TOTAL SHTS. 65

LAST REVISED: 8/14/2018
 \\USPPL\IF002\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-BM05.DGN



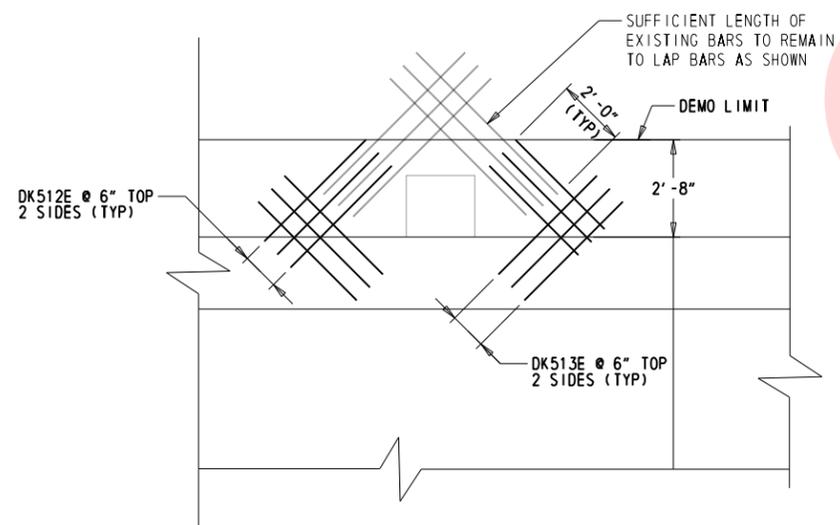
GIRDER B DECK PLAN

SCALE: 3/16" = 1'-0"



GIRDER D & E DECK PLAN

SCALE: 3/16" = 1'-0"



SCUPPER REINFORCEMENT DETAIL

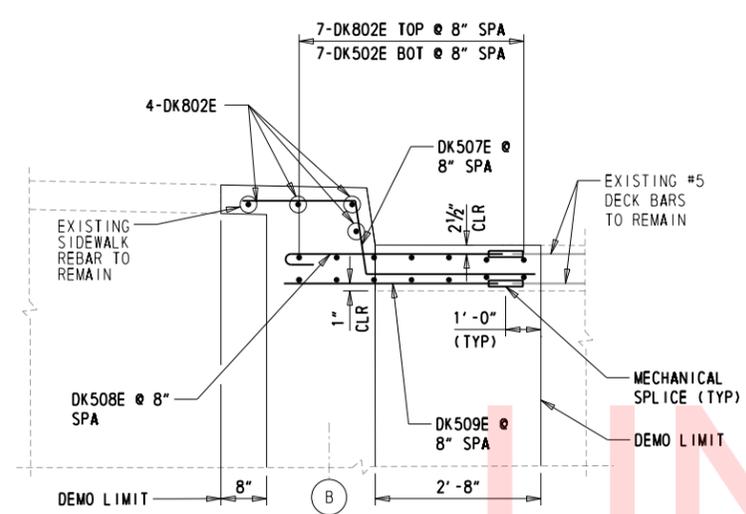
SCALE: 3/8" = 1'-0"

NOTES:

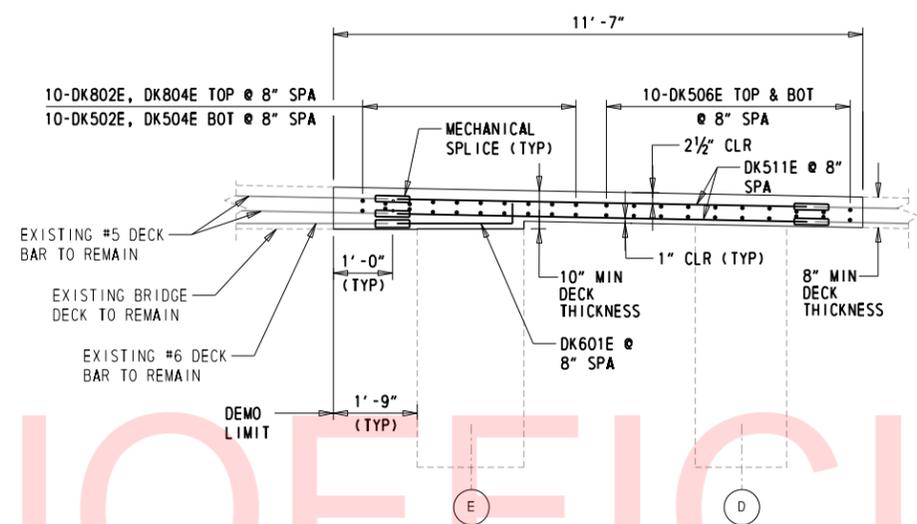
1. FOR PROJECT NOTES, SEE SHEET 10.
2. FOR DECK SECTION DETAILS, SEE SHEET 30.
3. ALL EXISTING STEEL IDENTIFIED TO REMAIN SHALL BE CLEANED AND EPOXY COATED. DAMAGED OR DETERIORATED REINFORCEMENT SHALL BE REPLACED. THIS WORK IS INCIDENTAL TO ITEM NO. 610017.
4. FOR REPLACEMENT SCUPPER DETAILS, SEE SHEET 30.
5. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

	DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT	BRIDGE NO.	1-577	CONCRETE DECK DETAILS - 1	SHEET NO.
						T201407403	DESIGNED BY:		RJH
					COUNTY	CHECKED BY:	DPR		TOTAL SHTS.
					NEW CASTLE			65	

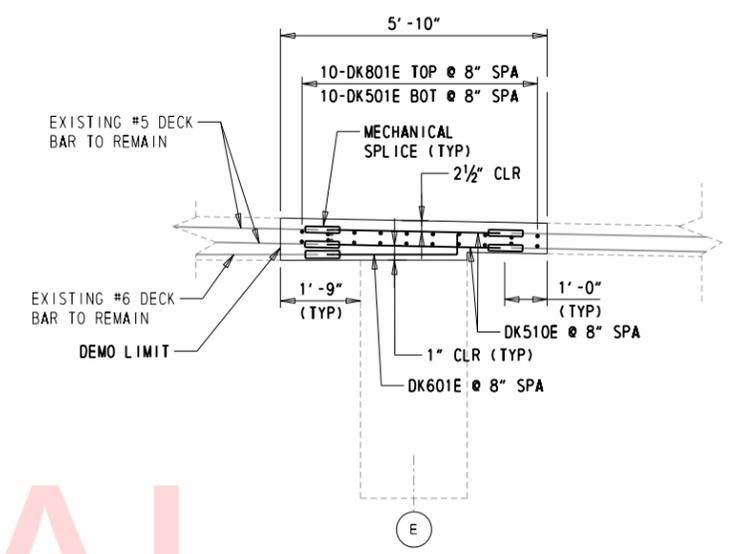
LAST REVISED: 8/14/2018
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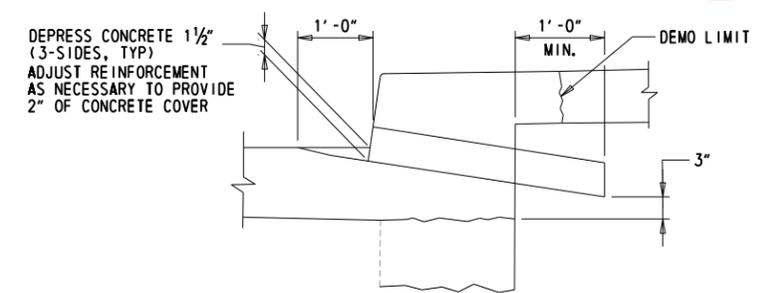
SECTION A-A
SCALE: 3/4" = 1'-0"



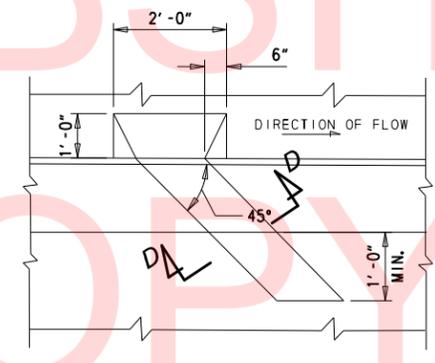
SECTION B-B
SCALE: 1/2" = 1'-0"



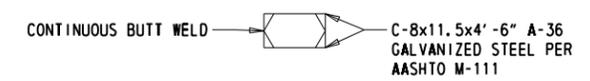
SECTION C-C
SCALE: 1/2" = 1'-0"



SCUPPER THROUGH CURB
SCALE: 3/4" = 1'-0"



SCUPPER PLAN
SCALE: 1/2" = 1'-0"



SECTION D-D
SCALE: 1" = 1'-0"

- NOTES:**
1. FOR PROJECT NOTES, SEE SHEET 10.
 2. ALL EXISTING STEEL IDENTIFIED TO REMAIN SHALL BE CLEANED AND EPOXY COATED. DAMAGED OR DETERIORATED REINFORCEMENT SHALL BE REPLACED. THIS WORK IS INCIDENTAL TO ITEM NO. 610017.
 3. SCUPPERS SHALL BE PAID FOR UNDER ITEM NO. 615512.
 4. FOR REINFORCEMENT BAR SCHEDULE, SEE SHEET 31.

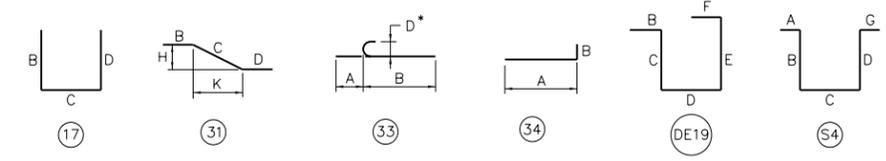
DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT	BRIDGE NO.	1-577	SHEET NO.
					T201407403		
				COUNTY	CHECKED BY:	DPR	TOTAL SHTS.
				NEW CASTLE			65

**CONCRETE DECK
DETAILS - 2**

REINFORCEMENT SCHEDULE

MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	REMARKS
DECK														
DK501E	5	17	37' -6"	STR										
DK502E	5	27	30' -0"	STR										
DK503E	5	7	42' -3"	STR										
DK504E	5	10	25' -0"	STR										
DK505E	5	10	38' -3"	STR										
DK506E	5	40	31' -5"	STR										
DK507E	5	159	5' -4"	31		1' -8"	1' -2"	2' -6"				1' -2"	2"	
DK508E	5	159	3' -7"	33	7"	3' -0"								STANDARD HOOK/MECHANICAL COUPLER
DK509E	5	159	3' -0"	STR										MECHANICAL COUPLER
DK510E	5	272	3' -10"	STR										MECHANICAL COUPLER
DK511E	5	184	9' -7"	STR										MECHANICAL COUPLER
DK512E	5	12	3' -8"	STR										
DK513E	5	12	3' -0"	STR										
DK601E	6	228	3' -4"	34	2' -11"	5"								MECHANICAL COUPLER
DK801E	8	21	37' -6"	STR										
DK802E	8	31	34' -9"	STR										
DK803E	8	11	41' -10"	STR										
DK804E	8	10	24' -1"	STR										
DK805E	8	10	38' -3"	STR										
DIAPHRAGM														
DP401E	4	16	15' -9"	S4	2' -4"	4' -9"	1' -7"	4' -9"					2' -4"	
DP402E	4	3	16' -0"	DE19		2' -4"	4' -9"	1' -7"	5' -0"	2' -4"				
DP403E	4	18	6' -5"	17		2' -6"	1' -5"	2' -6"						
DP404E	4	26	8' -10"	17		3' -7"	1' -8"	3' -7"						
DP405E	4	52	5' -3"	34		3' -7"	1' -8"							
DP406E	4	88	7' -2"	17		3' -0"	1' -2"	3' -0"						
DP407E	4	16	8' -2"	17		3' -6"	1' -2"	3' -6"						
DP501E	5	12	3' -7"	STR										
DP502E	5	12	5' -0"	STR										
DP503E	5	18	5' -4"	STR										
DP504E	5	12	1' -8"	STR										
DP505E	5	4	2' -7"	STR										THREAD ONE END
														THREAD ONE END
DP801E	8	8	5' -5"	33	11"	4' -6"								STANDARD HOOK
DP901E	9	18	4' -1"	STR										
DP902E	9	18	10' -1"	STR										MECHANICAL COUPLER
DP903E	9	9	4' -4"	STR										MECHANICAL COUPLER
DP904E	9	105	1' -7"	STR										MECHANICAL COUPLER
DP905E	9	27	2' -6"	STR										THREAD ONE END
DP906E	9	24	3' -8"	STR										THREAD ONE END
														THREAD ONE END
BEAM														
BM708E	7	8	6' -5"	STR										THREAD ONE END
BM813E	8	20	6' -5"	STR										THREAD ONE END

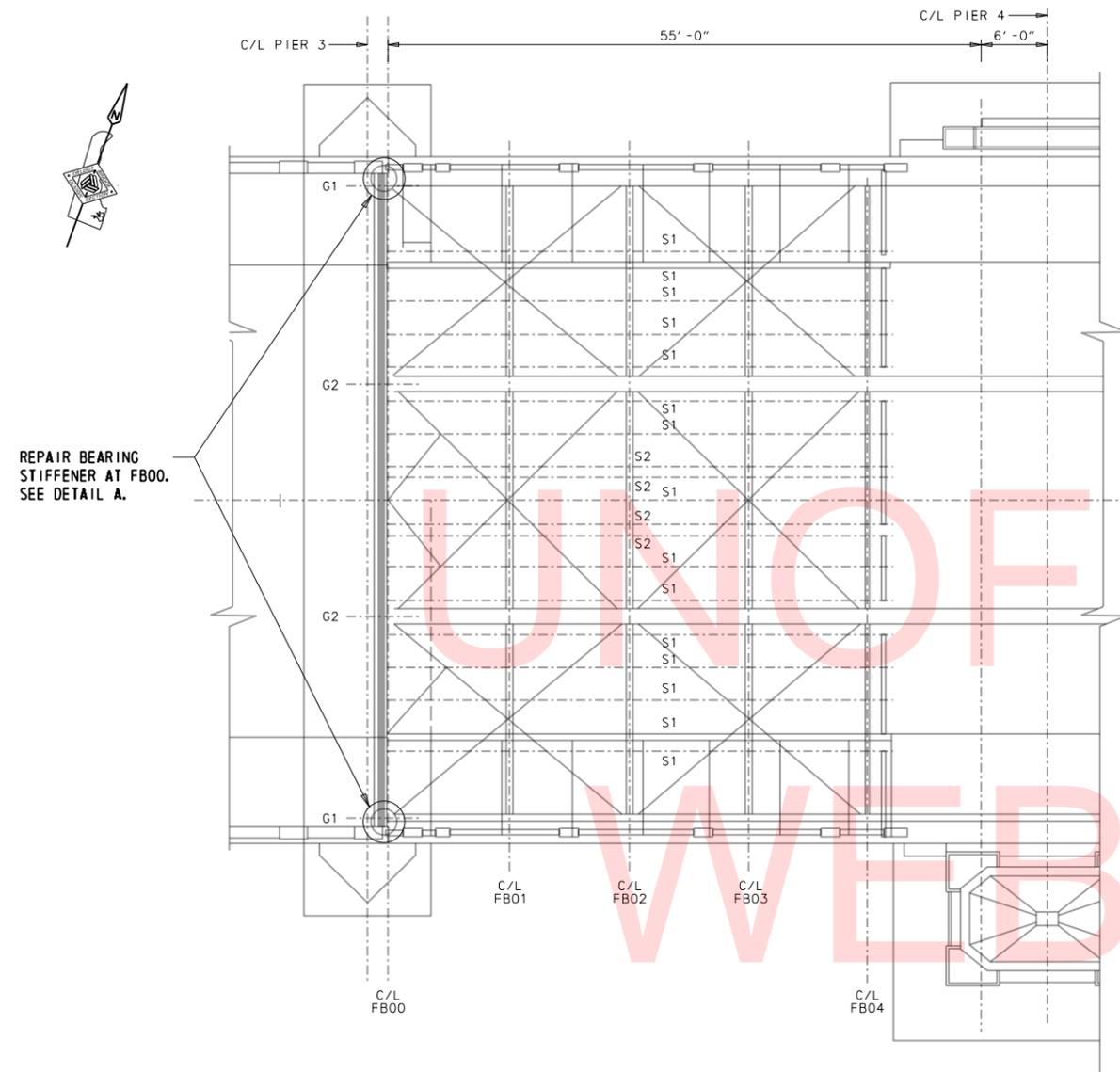
UNOFFICIAL
WEBSITE
COPY



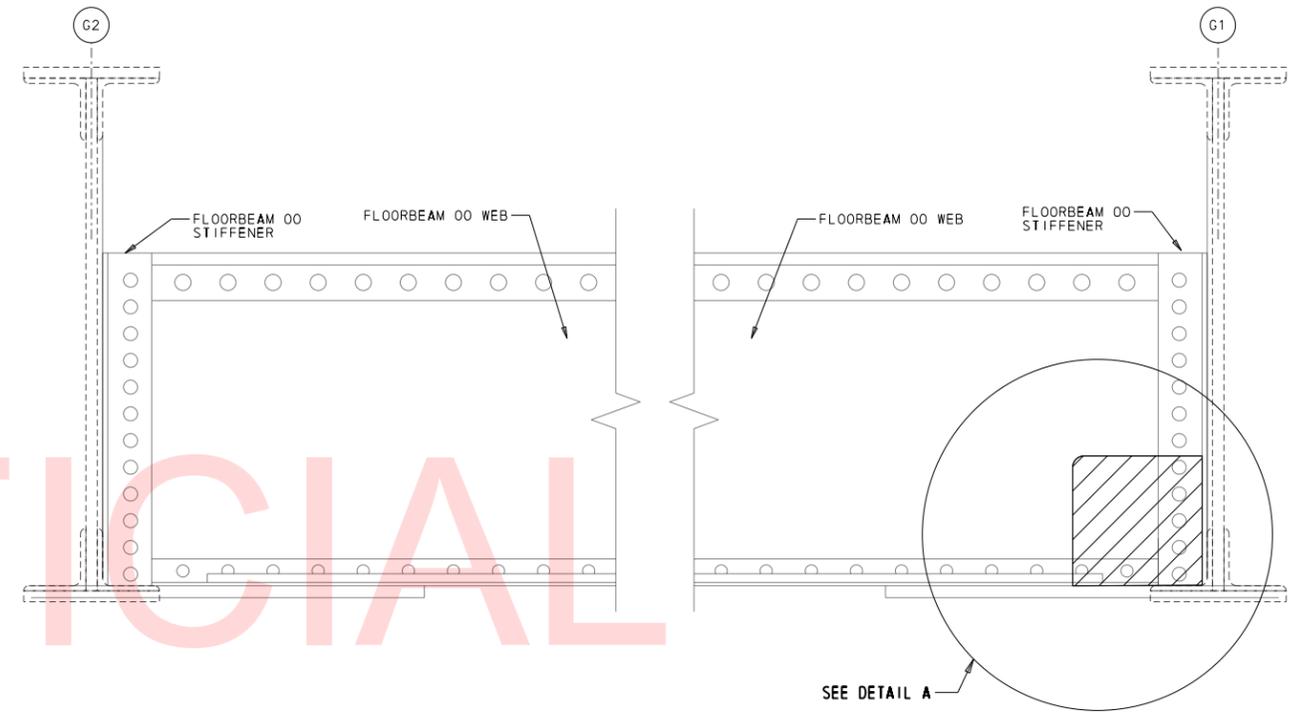
- NOTES:**
- 'E' DENOTES EPOXY REINFORCEMENT.
 - FIGURES IN CIRCLES SHOW BEND TYPES.
 - ALL REINFORCEMENT SHALL BE ASTM A615 GRADE 60.
 - REINFORCEMENT BAR SCHEDULE IS FOR INFORMATIONAL PURPOSES ONLY. DIMENSIONS SHALL BE VERIFIED PRIOR TO FABRICATION.
 - DIMENSIONS ON 180 HOOKS ARE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE STANDARD HOOKS ARE USED.
 - BAR LENGTH INCLUDES THREADED END.

LAST REVISED: 8/14/2018 \\USP\PLIF\PO2\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-RE01.DGN

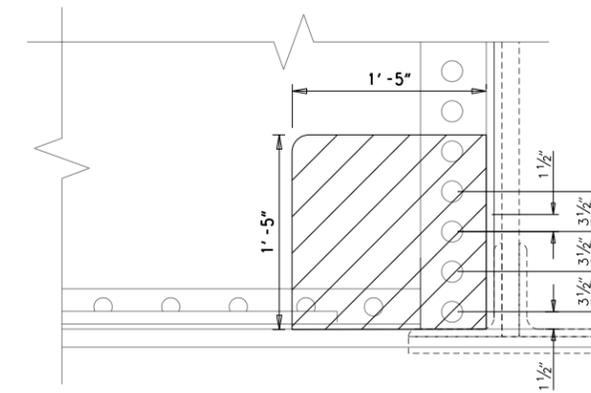
LAST REVISED: 8/14/2018
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EXISTING STEEL FRAMING PLAN
 SCALE: 1/8" = 1'-0"



**BEARING STIFFENER REPAIR
 CLEANING AND PAINTING LIMITS**
 (LOOKING BACK STATION)
 (EASTBOUND GIRDERS OPPOSITE HAND)
 SCALE: 1" = 1'-0"



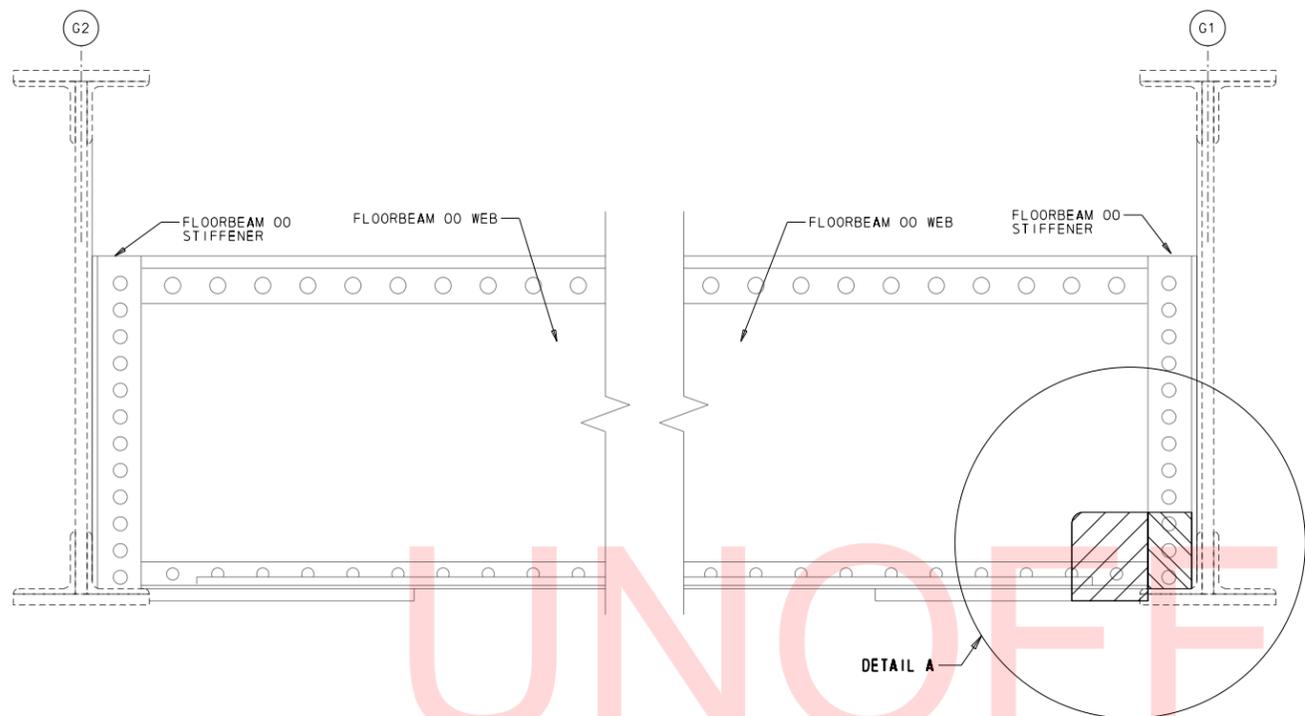
DETAIL A
 SCALE: 1 1/2" = 1'-0"

LEGEND:
 CLEANING AND PAINTING LIMITS

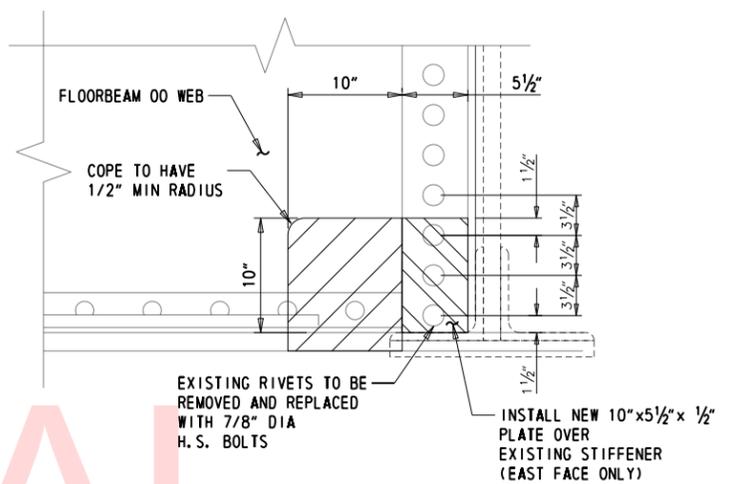
NOTES:
 1. FOR PROJECT NOTES, SEE SHEET 10.
 2. FOR STEEL REPAIR DETAILS, SEE SHEET 33.

	DELWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT T201407403	BRIDGE NO. 1-577	STEEL FRAMING PLAN	SHEET NO. 32
						NEW CASTLE		DESIGNED BY: JGW

LAST REVISED: 8/14/2018
 \USP\PLIF\FOO2\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-FP03.DGN



BEARING STIFFENER REPAIR
 (NORTH FASCIA GIRDER SHOWN, SOUTH FASCIA GIRDER SIMILAR OPPOSITE HAND)
 SCALE: 1" = 1'-0"



DETAIL A
 SCALE: 1 1/2" = 1'-0"

REPAIR PROCEDURE NOTES:

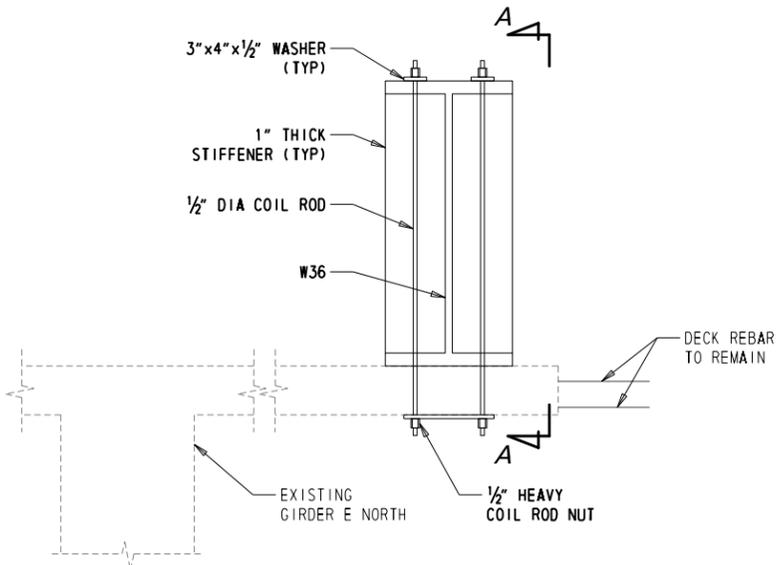
1. THE CONTRACTOR SHALL PREPARE THE REPAIR AREA BY REMOVING THE EXISTING PAINT SYSTEM FROM AREAS OF EXISTING RIVETED CONNECTIONS DESIGNATED FOR REMOVAL AND FROM AREAS TO BE CUT FOR ACCESS. SEE SHEET 32 FOR REMOVAL LIMITS.
2. CUT AND REMOVE FLOORBEAM 00 AT LIMITS SHOWN ON DETAIL A TO PROVIDE AN ACCESS HOLE TO CONNECT THE PROPOSED PLATE TO THE EXISTING BEARING STIFFENER.
3. PREPARE THE EXISTING BEARING STIFFENER SURFACE BY REMOVING THE EXISTING RIVETS FROM THE FLOORBEAM 00 BEARING STIFFENER TO THE LIMITS SHOWN ON DETAIL A.
4. FIELD VERIFY BOLT HOLE LOCATIONS AND ENSURE THAT ALL EXISTING BEARING STIFFENER HOLE LOCATIONS ARE CONCENTRIC WITH THE PROPOSED BEARING STIFFENER REPAIR PLATE HOLES.
5. BOLT THE REPAIR PLATE TO THE EXISTING BEARING STIFFENER USING 7/8" DIA. ASTM A-325 BOLTS THROUGH THE EXISTING RIVET HOLES.
6. PAINT THE AREAS OF EXPOSED STEEL.
7. ALL STEEL REPAIR WORK PAID FOR UNDER ITEM NO. 615006 AND 616000.
8. ALL WORK RELATING TO THE TEMPORARY SUPPORT BEAM IS INCIDENTAL TO ITEM NO. 211000.

LEGEND:

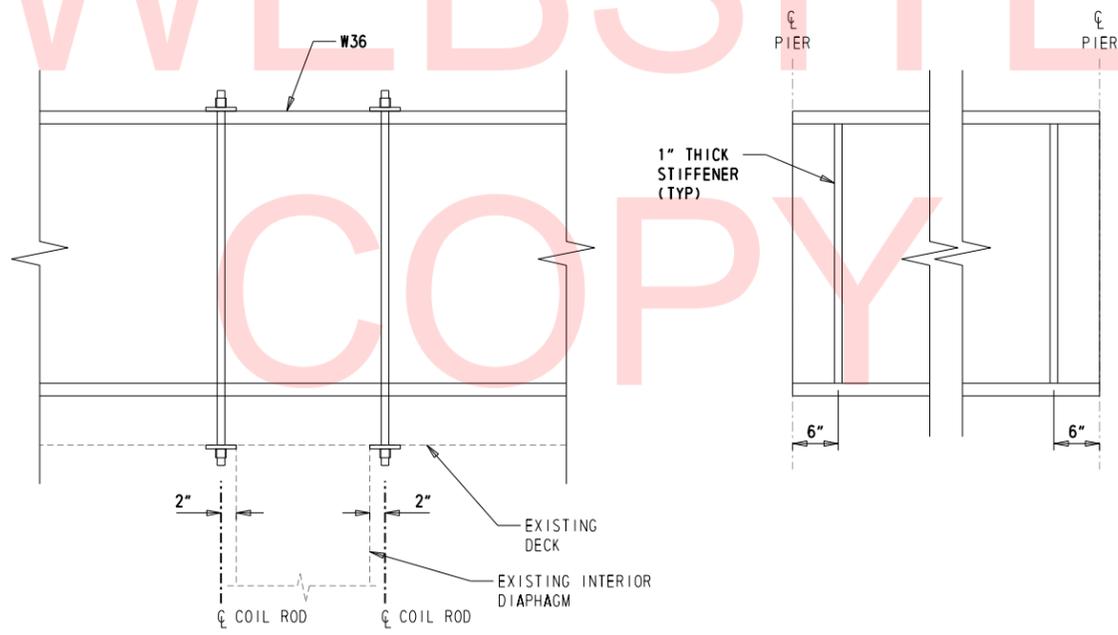
- NEW BEARING STIFFENER PLATE TO BE FIT OVER EXISTING
- LIMITS OF ACCESS HOLE TO BE CUT IN FLOORBEAM 00.

NOTES:

1. FOR PROJECT NOTES, SEE SHEET 10.



CONCEPTUAL TEMPORARY SUPPORT BEAM SECTION
 SCALE: 1" = 1'-0"

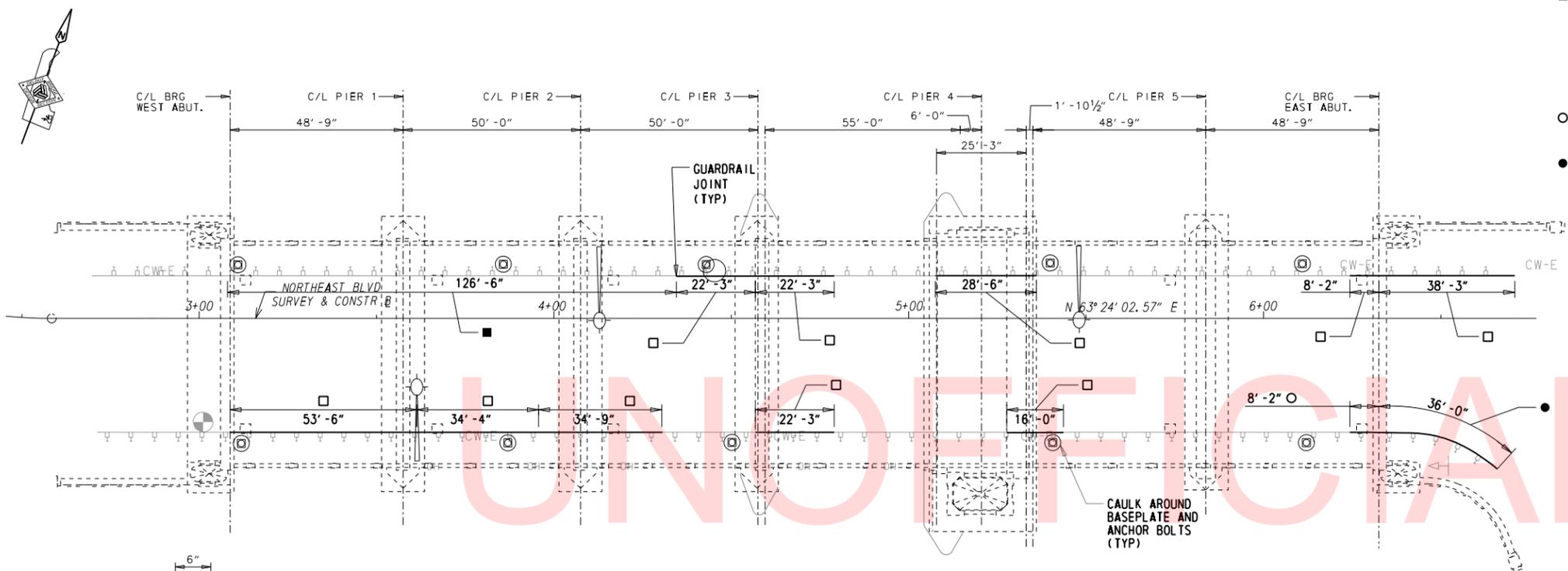


SECTION A-A
 SCALE: 1" = 1'-0"

CONCEPTUAL TEMPORARY SUPPORT BEAM ELEVATION
 SCALE: 1" = 1'-0"

	DELWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT T201407403	BRIDGE NO. 1-577	STEEL REPAIR AND TEMPORARY SUPPORT BEAM DETAILS	SHEET NO. 33
						COUNTY NEW CASTLE		DESIGNED BY: JGW

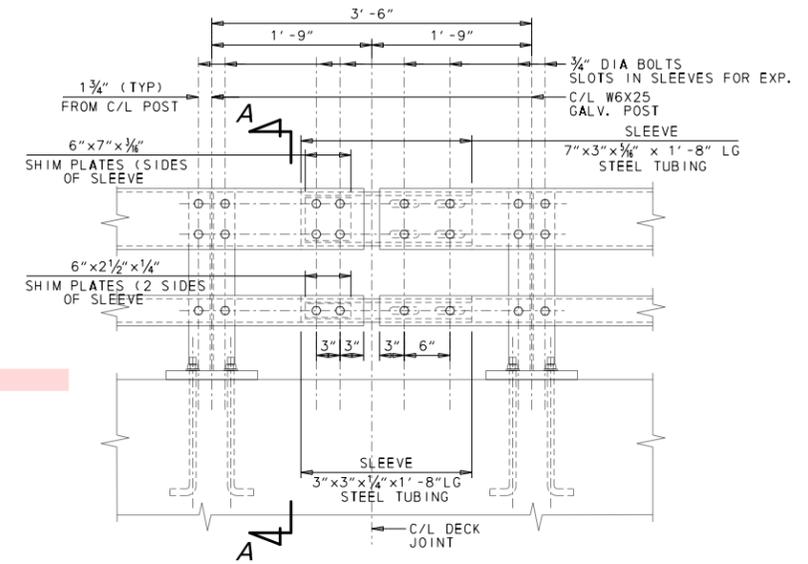
LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-DP01.DGN



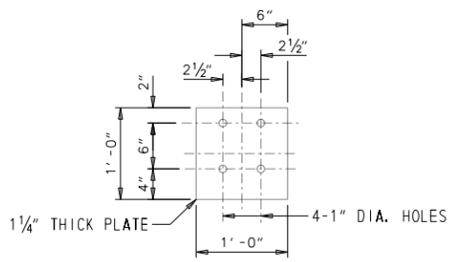
PLAN - EXISTING
SCALE: 1" = 20'

- LEGEND:**
- REPLACE BOTTOM RAIL (PAID FOR UNDER ITEM NO. 615511)
 - REMOVE AND TEMP. STORE ALL GUARDRAIL COMPONENTS FOR GIRDER B REPLACEMENT. EXISTING GUARDRAIL POST ANCHOR BOLTS ARE TO BE REPLACED. RE-INSTALL GUARDRAIL COMPONENTS FOLLOWING GIRDER B REPLACEMENT (PAID FOR UNDER ITEM NO. 720030)
 - REPLACE TOP AND BOTTOM RAIL (PAID FOR UNDER ITEM NO. 615511)
 - REMOVE ALL EXISTING GUARDRAIL COMPONENTS AND REPLACE GUARDRAIL COMPONENTS TO EXTENTS SHOWN IN DETAIL A. (PAID FOR UNDER ITEM NO. 615511)

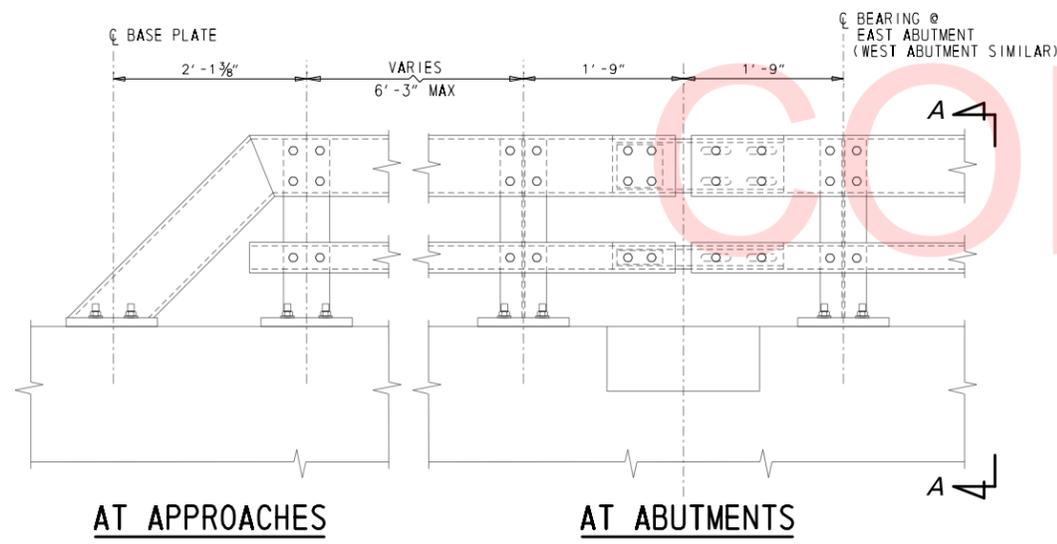
GUARDRAIL REPAIRS		
LOCATION	REPAIR	LENGTH (LF)
NORTH	□	119.42
	■	126.50
	○	0.00
SOUTH	□	160.83
	■	0.00
	○	8.17
	●	36.00



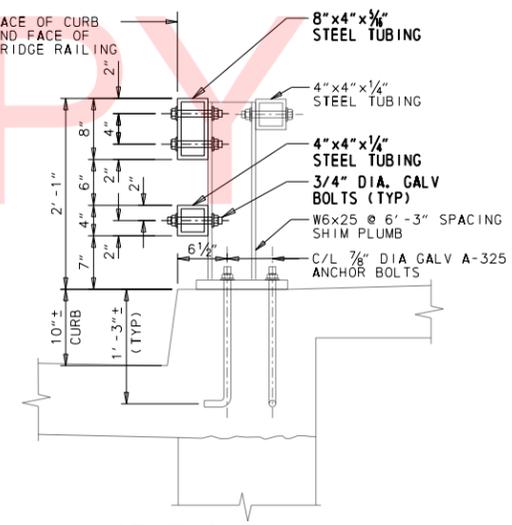
ELEVATION - EXISTING RAIL AT EXPANSION JOINTS
SCALE: 1" = 1'-0"



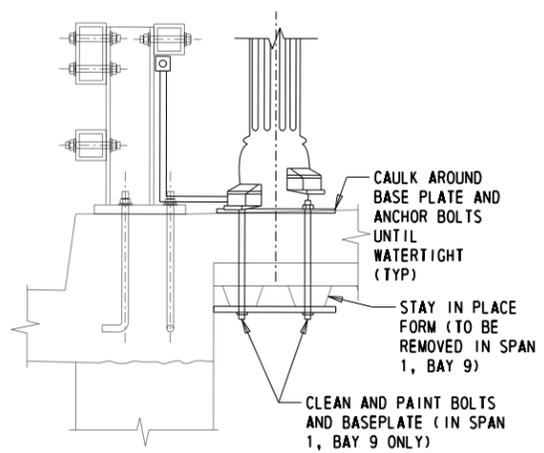
TYPICAL EXISTING BASE PLATE BRIDGE RAILING
SCALE: 1" = 1'-0"



TYPICAL EXISTING ELEVATION - BRIDGE RAILING
SCALE: 1" = 1'-0"



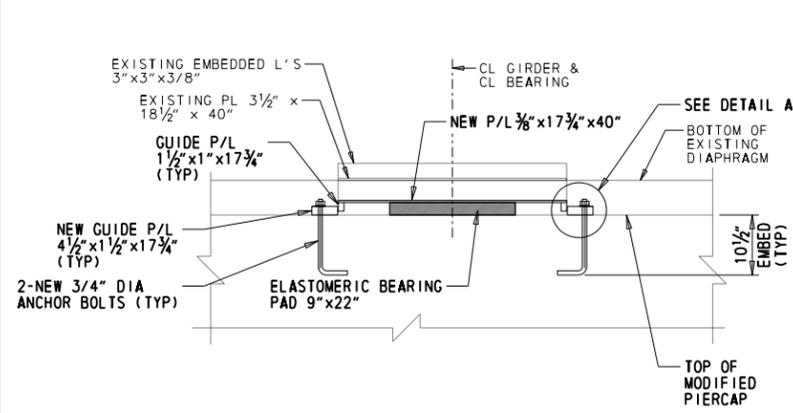
SECTION A-A
SCALE: 1" = 1'-0"



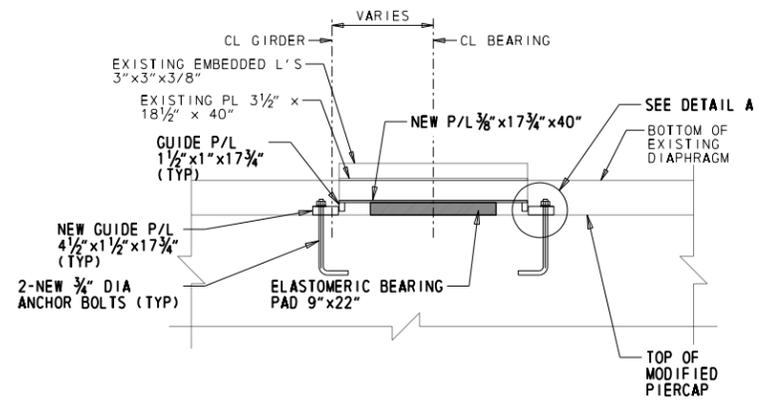
BRIDGE LIGHTING POST WATERPROOFING DETAIL
NTS

- NOTES:**
- FOR PROJECT NOTES, SEE SHEET 10.
 - EXISTING RAIL SHALL BE REMOVED FROM THE EXISTING FIXED JOINT TO THE EXPANSION JOINT TO FACILITATE RAIL ELEMENT REPLACEMENT.
 - CONTRACTOR SHALL FIELD VERIFY ALL REPAIR LENGTHS WITH THE ENGINEER.
 - ALL NEW BOLTS SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 615 AND 1039 OF THE STANDARD SPECIFICATION.
 - ALL GUARDRAIL DIMENSIONS SHOWN INDICATE JOINT TO JOINT LENGTHS.
 - USE DETAIL A IN CONJUNCTION WITH THE TYPICAL ELEVATION - BRIDGE RAILING FOR EXTENT OF RAILING TO BE REINSTALLED.
 - SEE LEGEND FOR DESCRIPTION OF WORK AT EACH LOCATION.
 - REMOVAL OF STAY IN PLACE FORM TO BE PAID FOR UNDER ITEM NO. 211000.

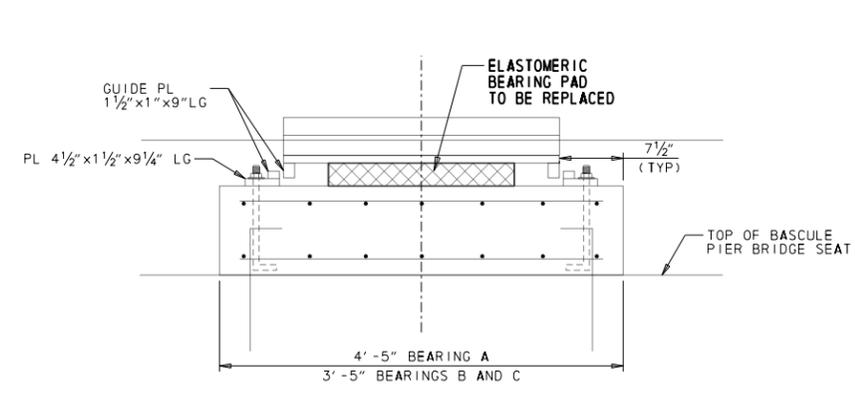
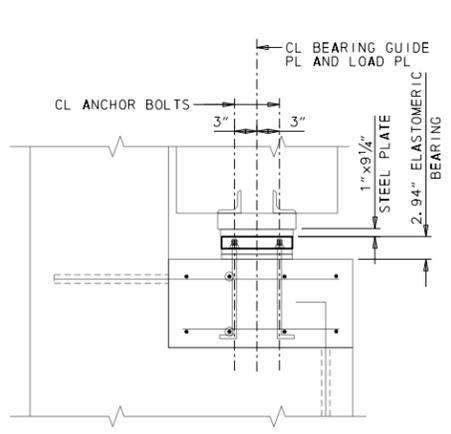
LAST REVISED: 8/14/2018
 \\USPPLIF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-BR01.DGN



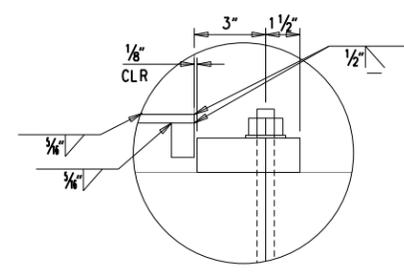
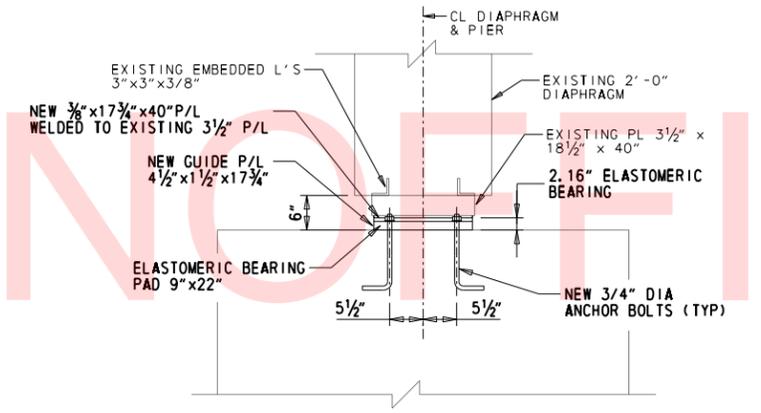
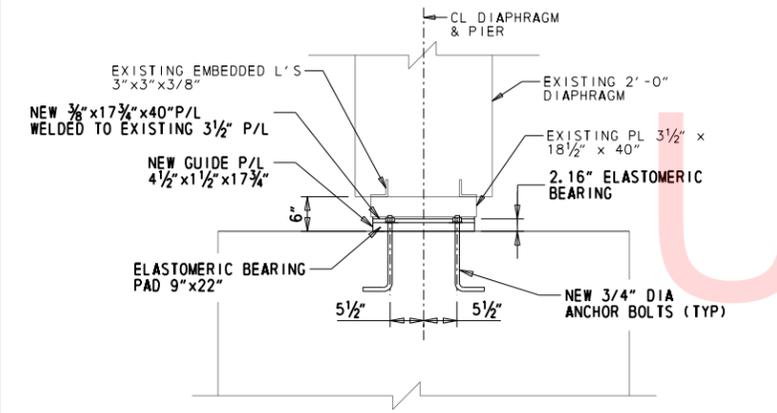
BEARING A RETROFIT - PIERS 1, 2 AND 5
SCALE: 3/4" = 1'-0"



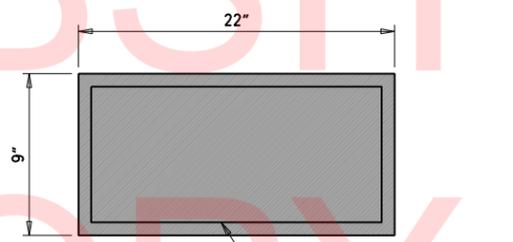
BEARINGS B & C RETROFIT - PIERS 1, 2 AND 5
SCALE: 3/4" = 1'-0"



EXISTING ELASTOMERIC BEARING PIER 4 (PIER 3 SIMILAR)
SCALE: 1" = 1'-0"



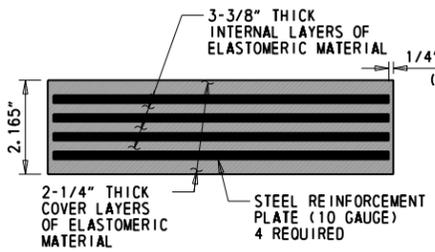
DETAIL A
SCALE: NTS



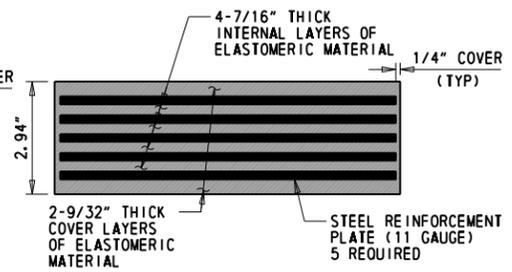
BEARING PAD PLAN VIEW
SCALE: NTS

STEEL REINFORCED ELASTOMERIC BEARING SCHEDULE												
LOCATION	BEARING DESIGNATION				DIMENSION				TOTAL PAD THICKNESS "T"			
	MARK	TYPE	NEOPRENE HARDNESS (SHORE A)	TOTAL NO. REOD	CAPACITY PER PAD		"L"	"W"		LAYER THICKNESS		INTERIOR LAYERS
					REACTION \otimes	MOVEMENT \boxtimes				"T1"	"Te"	
PIER 1	E1	EXP.	60 ± 5 DURO	6	368 KIP	0.268"	9"	22"	3/8"	1/4"	3	2.165"
PIER 2	E1	EXP.	60 ± 5 DURO	6	368 KIP	0.574"	9"	22"	3/8"	1/4"	3	2.165"
PIER 3	E2	EXP.	60 ± 5 DURO	6	187 KIP	0.868"	9"	22"	7/16"	9/32"	4	2.940"
PIER 4	E2	EXP.	60 ± 5 DURO	6	181 KIP	0.572"	9"	22"	7/16"	9/32"	4	2.940"
PIER 5	E1	EXP.	60 ± 5 DURO	6	395 KIP	0.286"	9"	22"	3/8"	1/4"	3	2.165"

LEGEND:
 \otimes MAX. UN-FACTORED SERVICE 1 REACTION (INCLUDES DYNAMIC LOAD ALLOWANCE).
 \boxtimes TEMPERATURE MOVEMENT.



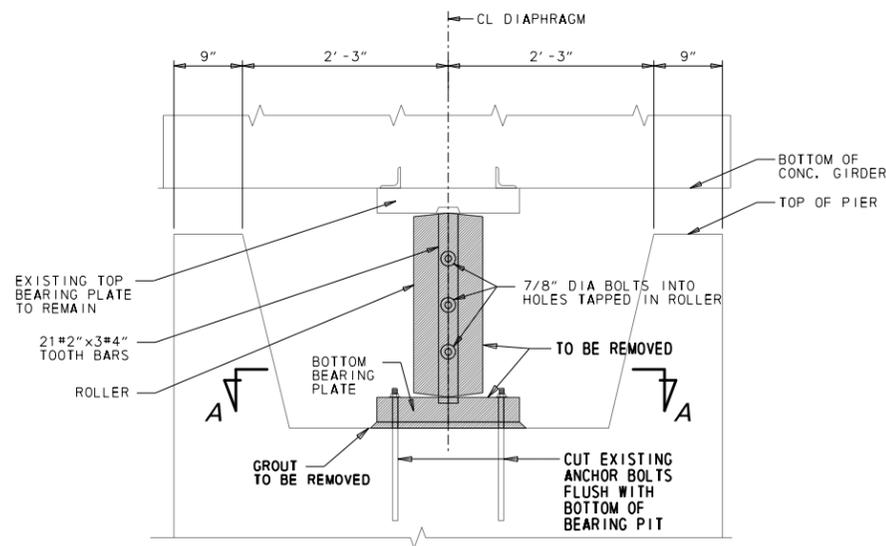
TYPICAL SECTION THROUGH ELASTOMERIC BEARING PAD
SCALE: NTS



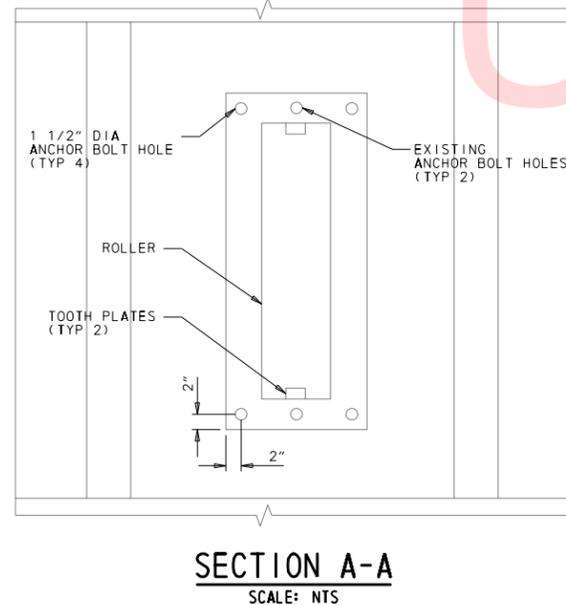
TYPICAL SECTION THROUGH ELASTOMERIC BEARING PAD
SCALE: NTS

- NOTES:**
- EXISTING ELASTOMERIC BEARINGS AT PIER 3 AND 4 TO BE REPLACED WITH NEW ELASTOMERIC BEARING IN ACCORDANCE WITH BEARING SCHEDULE.
 - EXISTING ROCKER BEARINGS AT PIERS 1, 2 AND 5 TO BE REPLACED WITH NEW ELASTOMERIC BEARINGS IN ACCORDANCE WITH BEARING SCHEDULE.
 - CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
 - BRIDGE BEARING REPLACEMENT PAID FOR UNDER ITEM NOS. 623000, 604000, AND 211000.
 - BEAM SEAT MODIFICATIONS PAID FOR UNDER ITEM NOS. 611001 AND 610004.
 - FOR PROJECT NOTES, SEE SHEET 10.
 - FOR BEAM SEAT MODIFICATION DETAILS, SEE SHEET 36.
 - FOR JACKING DETAILS AND INFORMATION, SEE SHEETS 37-38.

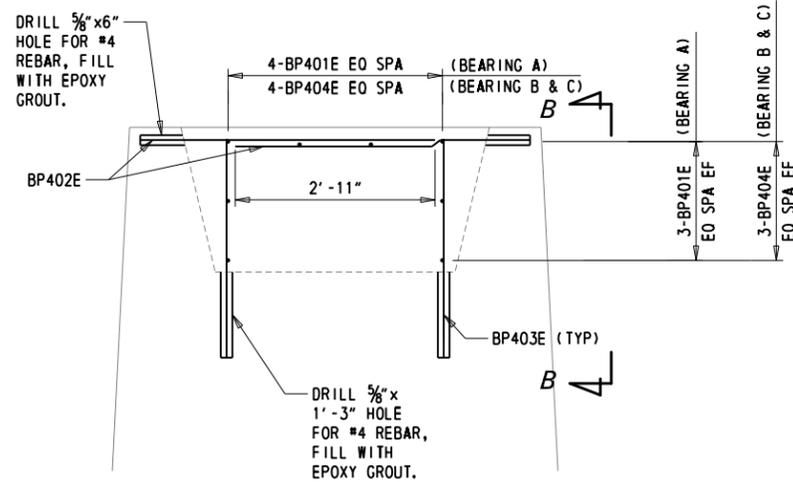
LAST REVISED: 8/14/2018
 \\USPPL\FI\PROJECTS\0323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-BR02.DGN



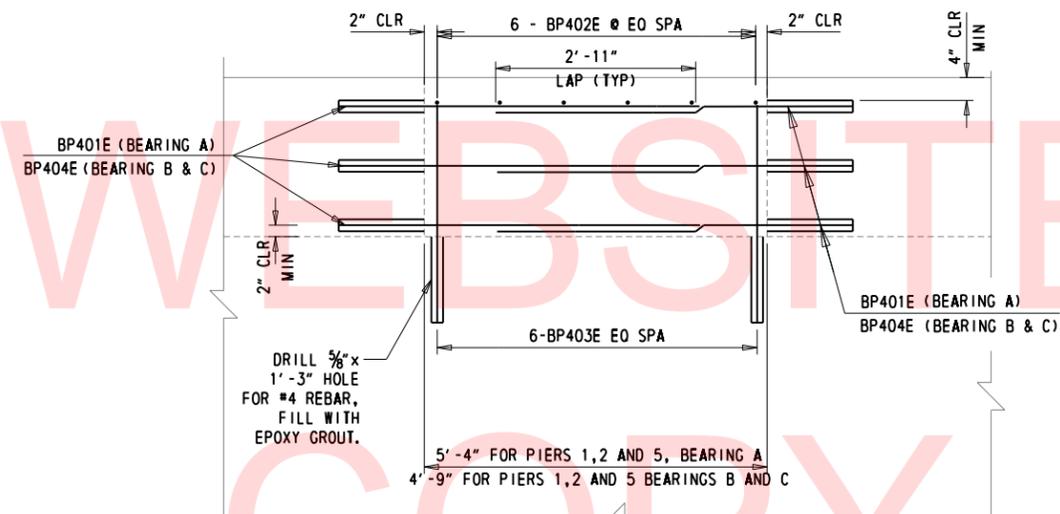
EXISTING ROCKER BEARING - PIER 1, 2 & 5
SCALE: NTS



SECTION A-A
SCALE: NTS



PIERS 1, 2 & 5 PROPOSED BEAM SEAT MODIFICATION - SECTION
SCALE: NTS



PIERS 1, 2 & 5 PROPOSED BEAM SEAT MODIFICATION - ELEVATION (B-B)
SCALE: NTS

BEARING REPLACEMENT NOTES

1. FIELD MEASURE EXISTING BEARING COMPONENTS AND SUBMIT FINDINGS TO THE ENGINEER.
2. PROVIDE ALL STEEL REINFORCED ELASTOMERIC BEARINGS IN ACCORDANCE WITH SECTION 623 - "BEARING DEVICES" OF STANDARD SPECIFICATIONS.
3. ANCHOR BOLTS AND WASHERS SHALL BE UNPAINTED A709 GRADE 36 GALVANIZED STEEL. SET NUTS 1/4" CLEAR OF SOLE PLATES AND BURR THREADS ABOVE AND BELOW NUTS.
4. BEARING SHALL BE PLACED NORMAL CENTERLINE OF BEAM.
5. PAYMENT FOR FABRICATION OF STEEL REINFORCED ELASTOMERIC BEARINGS, ANCHOR BOLTS, NUTS AND WASHERS AND SHALL BE INCIDENTAL TO ITEM NO. 623000.

BEARING REPLACEMENT SEQUENCE (PIERS 1, 2, AND 5)

1. INSTALL JACKING MEASURES AT EACH PIER BEARING LINE.
2. JACK BEAMS AT PIERS 1, 2, AND 5 AS INDICATED IN THE PLANS AND BLOCK THE SUPERSTRUCTURE.
3. MAINTAIN BLOCKED CONDITION AND REMOVE JACKS AT PIERS 1, 2, AND 5.
4. CONSTRUCT NEW CONCRETE BEAM SEAT AND NEW ANCHOR BOLTS AS INDICATED IN THE PLANS.
5. INSTALL TEMPORARY SHIM STACKS AT PIER 1 AND PIER 2 - BEARING A SOUTH.
6. INSTALL NEW FILL PLATE WITH GUIDE PLATES FOR ALL NEW BEARINGS, EXCEPT WHERE INDICATED IN NOTE 5.
7. WELD FILL PLATE TO EXISTING TOP BEARING PLATE EXCEPT WHERE INDICATED IN NOTE 5.
8. INSTALL NEW ELASTOMERIC BEARING PADS, EXCEPT WHERE INDICATED IN NOTE 5.
9. JACK BEAMS AND REMOVE TEMPORARY BLOCKING.
10. RELEASE JACKS AND LOWER ON TO NEW BEARINGS AND TEMPORARY SHIM STACKS.
11. COMPLETE CONCRETE BEAM INSTALLATION AND POURED CONCRETE DIAPHRAGM REPLACEMENT INSTALLING NEW EMBEDDED TOP BEARING PLATES AND ANGLES AT PIER 1 AND PIER 2, BEARING A SOUTH.
12. REPEAT STEPS 1-9 FOR COMPLETION OF PIER 1 AND PIER 2, BEARING A SOUTH REPLACEMENT.

BEARING REPLACEMENT SEQUENCE (PIER 3 AHEAD AND PIER 4 BACK)

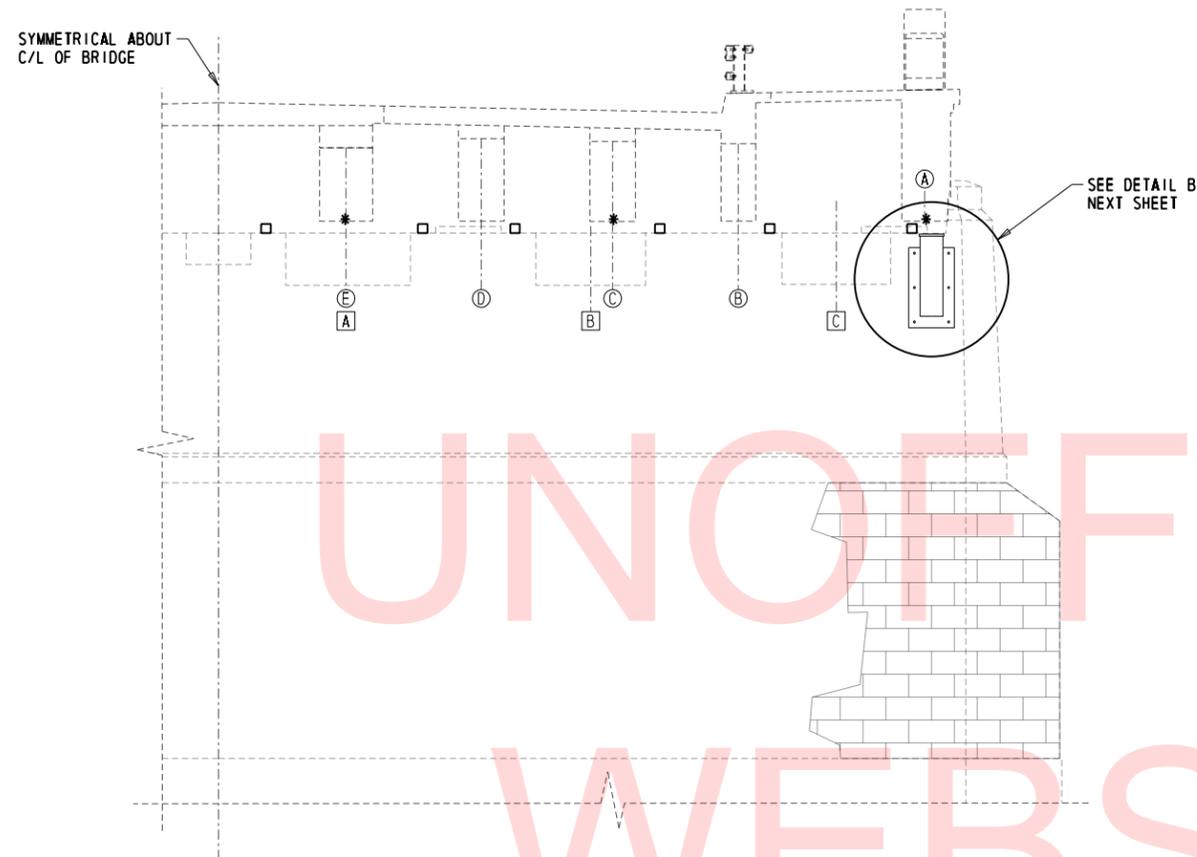
1. INSTALL JACKING MEASURES AT EACH PIER BEARING LINE.
2. JACK BEAMS AT PIERS 3 AHEAD AND PIER 4 BACK AS INDICATED IN THE PLANS. LOCK-OFF JACKS.
3. REMOVE EXISTING BEARING PADS AND INSTALL NEW ELASTOMERIC BEARINGS.
4. RELEASE JACKS AND LOWER SUPERSTRUCTURE ON NEW BEARINGS.
5. REMOVE JACKS AND SHIMS TO COMPLETE THIS ITEM OF WORK.

NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
2. BEAM SEAT MODIFICATIONS PAID FOR UNDER ITEM NOS. 611001 AND 610004.
3. FOR PROJECT NOTES, SEE SHEET 10.
4. FOR JACKING DETAILS AND INFORMATION, SEE SHEETS 37-38.

REINFORCEMENT SCHEDULE											
MARK	SIZE	NUMBER	LENGTH	TYPE	A	B	C	D	E	R	REMARKS
PIER 1, PIER 2, PIER 5											
BP401E	4	96	5' - 10 3/4"	STR							
BP402E	4	216	4' - 3 1/2"	STR							
BP403E	4	216	3' - 2 1/4"	STR							
BP404E	4	192	5' - 7 1/4"	STR							

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PIER JACKING DETAIL
 (PIER 1, 2 & 5 SHOWN, PIER 3 & 4 SIMILAR)
 SCALE: 1/4" = 1'-0"

UNFACTORED LOADS FOR JACKING			
LOCATION	GIRDER	STAGE 1	
		DL + 15%	DL + LL + IM
PIER 1	A	94.7	95.9
	C	167.2	203.0
	E	150.5	187.4
PIER 2	A	94.7	95.9
	C	167.2	203.1
	E	152.5	189.3
PIER 3	A	75.0	79.7
	C	131.9	204.8
	E	119.4	194.2
PIER 4	A	69.5	74.5
	C	122.1	197.9
	E	107.6	184.5
PIER 5	A	104.8	105.7
	C	185.2	218.4
	E	164.7	200.2

FACTORED LOADS FOR JACKING			
LOCATION	GIRDER	STAGE 1	
		DL + 15%	DL + LL + IM
PIER 1	A	118.4	126.7
	C	209.1	282.5
	E	188.1	262.5
PIER 2	A	118.4	126.7
	C	209.1	282.8
	E	190.6	264.9
PIER 3	A	93.8	106.9
	C	164.9	301.1
	E	149.3	287.9
PIER 4	A	86.9	100.2
	C	152.7	293.2
	E	134.4	276.1
PIER 5	A	131.0	139.4
	C	231.4	301.8
	E	205.9	278.7

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JACKING LOAD NOTES:

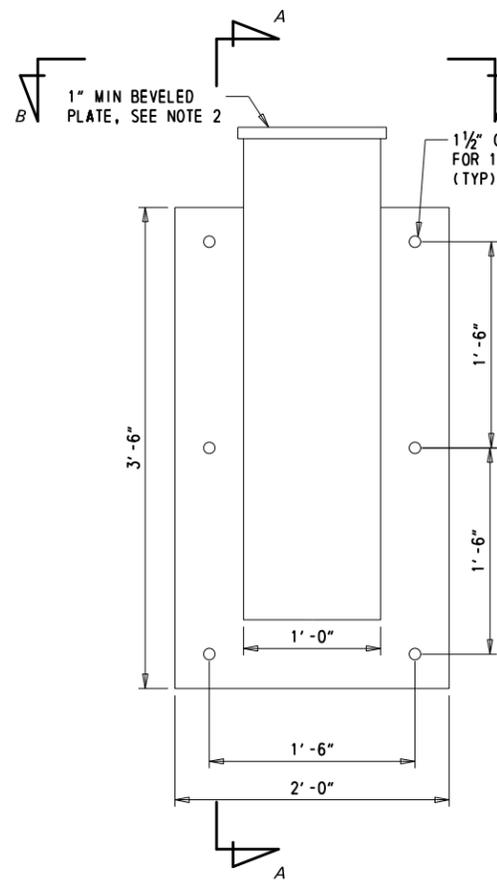
- JACKS MUST PROVIDE A SAFETY FACTOR NOT LESS THAN 1.65 (=1.5*1.10) FOR "STICKY FORCE" BASED ON THE CALCULATED UNFACTORED DESIGN JACKING LOADS.
- FACTORED LOADS MAY BE USED FOR CONTRACTOR DESIGN OF TEMPORARY STRUCTURAL SUPPORTS.
- LIFTING OF THE BRIDGE VIA HYDRAULIC PRESSURE UNDER LIVE LOAD IS PROHIBITED.
- LOADS ARE PER JACKING LOCATION. FOR PIERS 1, 2 AND 5 PROVIDE 2 JACKING POINTS PER BEAM END.
- REFER TO PIER JACKING DETAIL FOR SUGGESTED LOCATIONS OF TEMPORARY SHIMS TO SUPPORT BRIDGE DURING BEARING SEAT MODIFICATIONS AND BEARING REPLACEMENT, SEE TEMPORARY SUPPORT DETAILS ON SHEET 38.
- JACKING CONCEPTS SHOWN ON SHEETS 37 AND 38 FOR BEARING REPLACEMENT MUST BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR. THE CONTRACTOR MAY DESIGN AND CONSTRUCT ALTERNATE JACKING AND TEMPORARY SUPPORT SCHEMES. SUBMIT DRAWINGS INDICATING ALL DIMENSIONS AND JACKING PROCEDURE FOR APPROVAL PRIOR TO WORK, IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATION, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF DELAWARE.
- ALL WORK ASSOCIATED WITH JACKING THE BRIDGE INCLUDING TEMPORARY SUPPORT IS PAID FOR UNDER ITEM NO. 604000.

LEGEND:

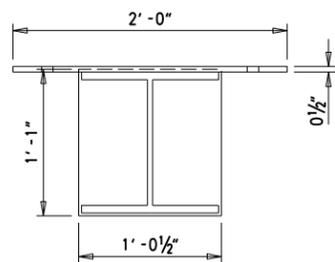
- * JACKING LOCATION
- SHIM LOCATION
- ⓐ BEAM DESIGNATION
- ⓑ BEARING DESIGNATION

	DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE IN FEET 	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">CONTRACT</td> <td style="font-size: 8px;">BRIDGE NO.</td> <td style="font-size: 8px;">1-577</td> </tr> <tr> <td style="font-size: 8px;">T201407403</td> <td style="font-size: 8px;">DESIGNED BY:</td> <td style="font-size: 8px;">JRE</td> </tr> <tr> <td style="font-size: 8px;">COUNTY</td> <td style="font-size: 8px;">CHECKED BY:</td> <td style="font-size: 8px;">DPR</td> </tr> <tr> <td style="font-size: 8px;">NEW CASTLE</td> <td></td> <td></td> </tr> </table>	CONTRACT	BRIDGE NO.	1-577	T201407403	DESIGNED BY:	JRE	COUNTY	CHECKED BY:	DPR	NEW CASTLE			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">SHEET NO.</td> <td style="font-size: 8px;">37</td> </tr> <tr> <td style="font-size: 8px;">TOTAL SHTS.</td> <td style="font-size: 8px;">65</td> </tr> </table>	SHEET NO.	37	TOTAL SHTS.	65
	CONTRACT	BRIDGE NO.	1-577																			
T201407403	DESIGNED BY:	JRE																				
COUNTY	CHECKED BY:	DPR																				
NEW CASTLE																						
SHEET NO.	37																					
TOTAL SHTS.	65																					
				TEMPORARY JACKING DETAILS - 1																		

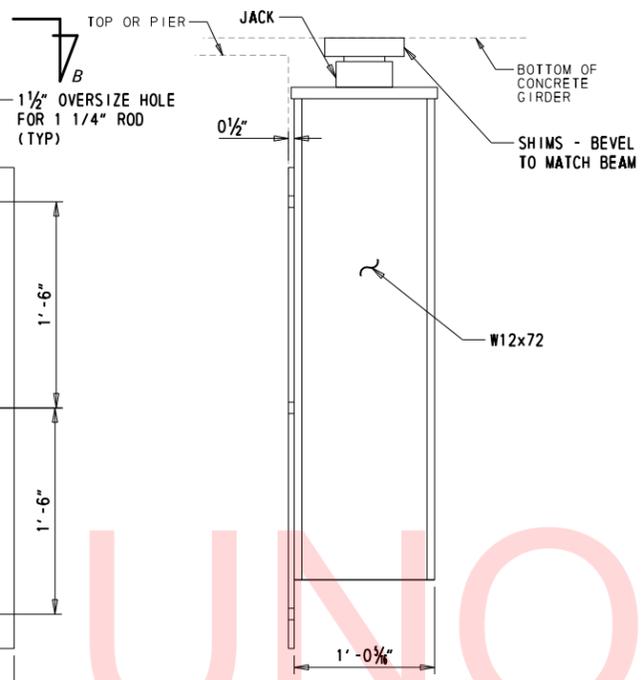
LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-JK02.DGN



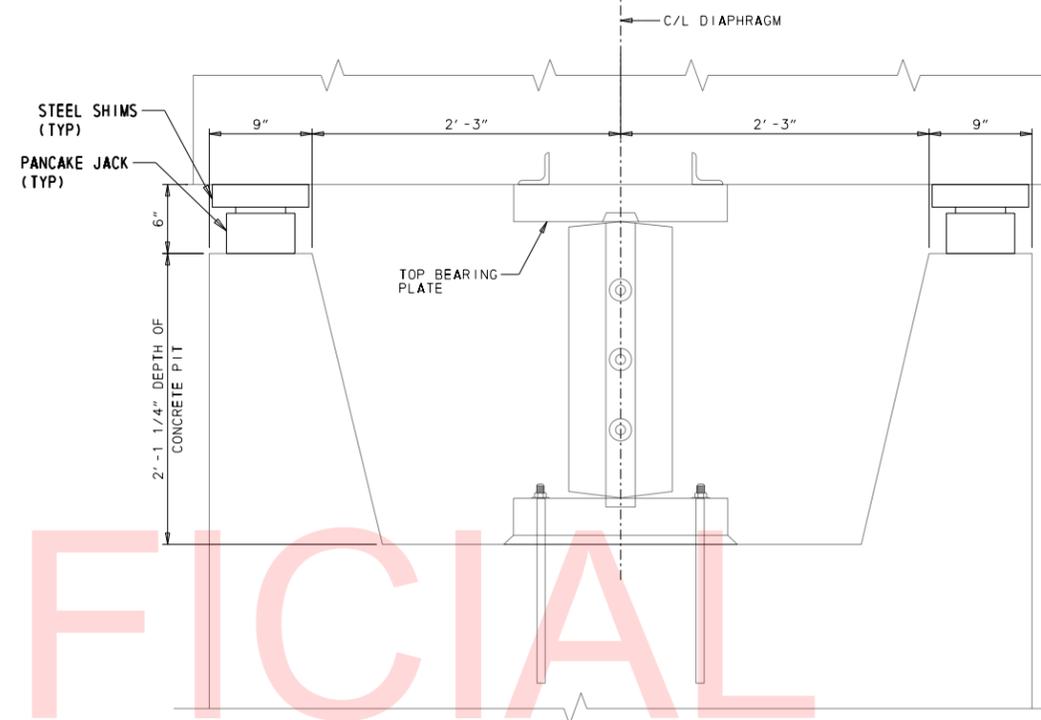
DETAIL B
SCALE: 1 1/2" = 1'-0"



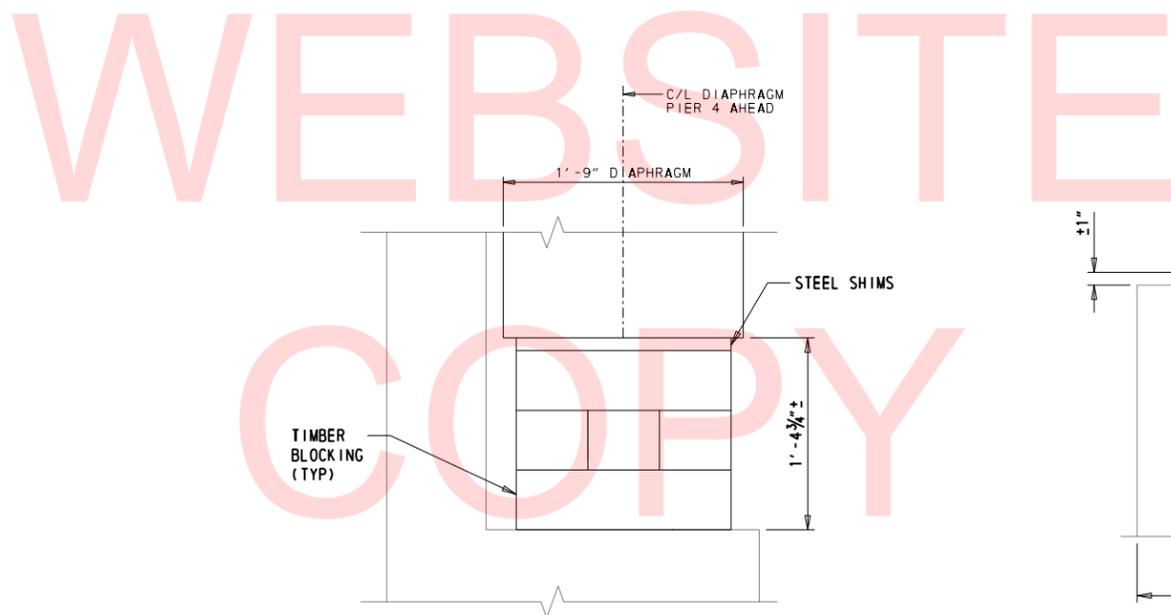
SECTION B-B
SCALE: 1 1/2" = 1'-0"



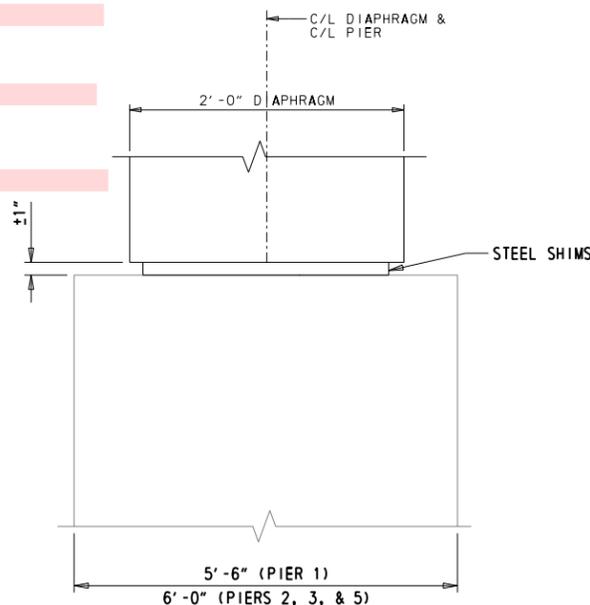
SECTION A-A
SCALE: 1 1/2" = 1'-0"



JACKING UNDER BEAM, PIERS 1, 2 AND 5
SCALE: 1 1/2" = 1'-0"



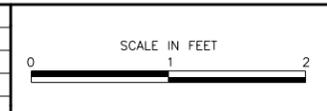
TEMPORARY SUPPORT DETAIL - PIER 4
SCALE: 1 1/2" = 1'-0"



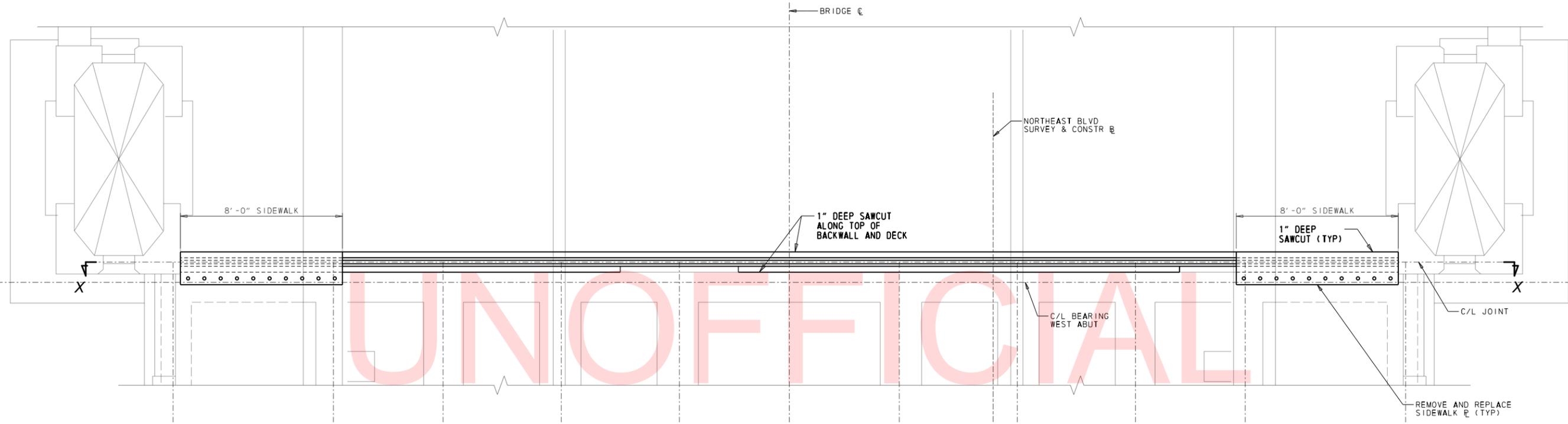
TEMPORARY SUPPORT DETAIL - PIERS 1, 2, 3 AND 5
SCALE: 1 1/2" = 1'-0"

- NOTES:**
- 1 1/4" THREADED ROD FOR GIRDER LINE A SUPPORT SHALL BE A307 GR 100. ROD TO EXTEND THROUGH PIER AND SUPPORT BOTH JACKING BRACKETS.
 - BEVEL PLATE TO PROVIDE LEVEL SEAT FOR JACK.

ADDENDUMS / REVISIONS	

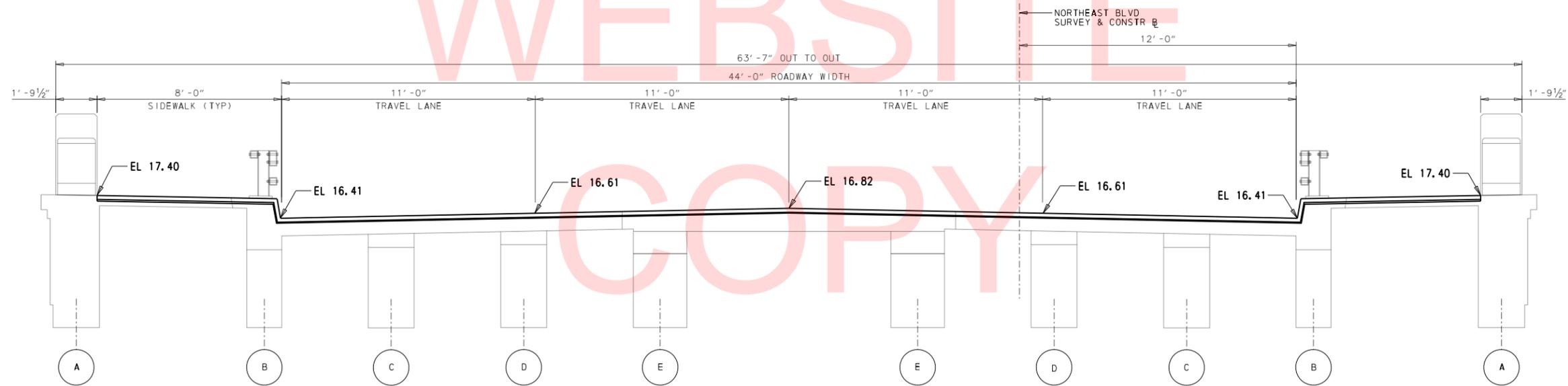


CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	JRE
COUNTY	CHECKED BY:	DPR
NEW CASTLE		



PLAN - WEST ABUTMENT

SCALE: 3/8" = 1' - 0"



SECTION X-X - ALONG C/L OF DECK JOINT

SCALE: 3/8" = 1' - 0"

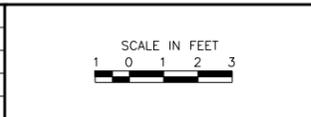
NOTES:

1. FOR PROJECT NOTES, SEE SHEET 10.
2. FOR BLOCKOUT LIMITS AND JOINT DETAILS SEE SHEET 40.
3. REMOVAL AND REPLACEMENT OF THE SIDEWALK PLATE IS INCIDENTAL TO ITEM NO. 624000.

LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-DJ01.DGN

	DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

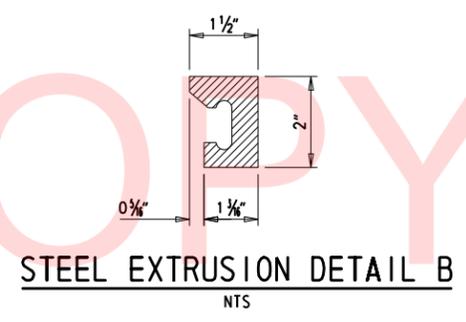
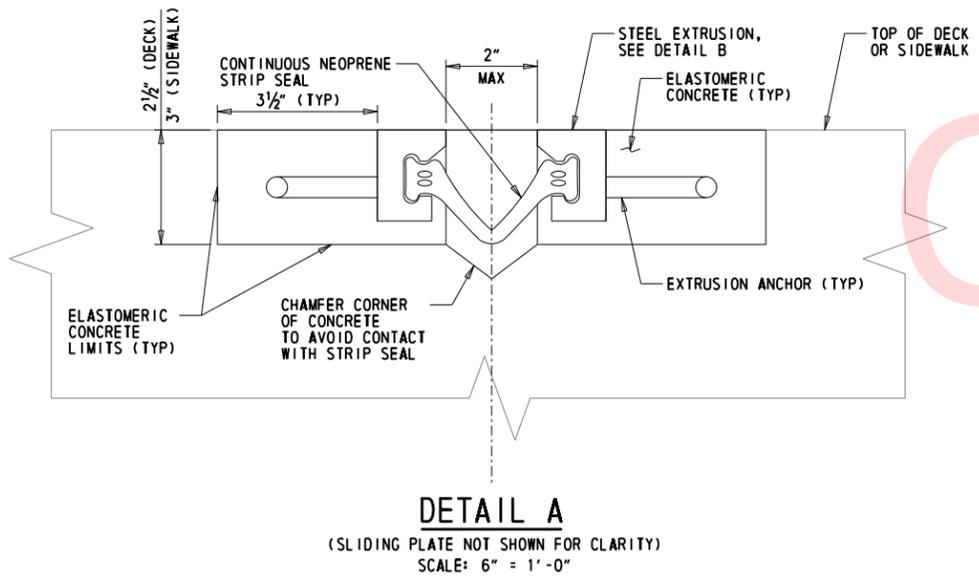
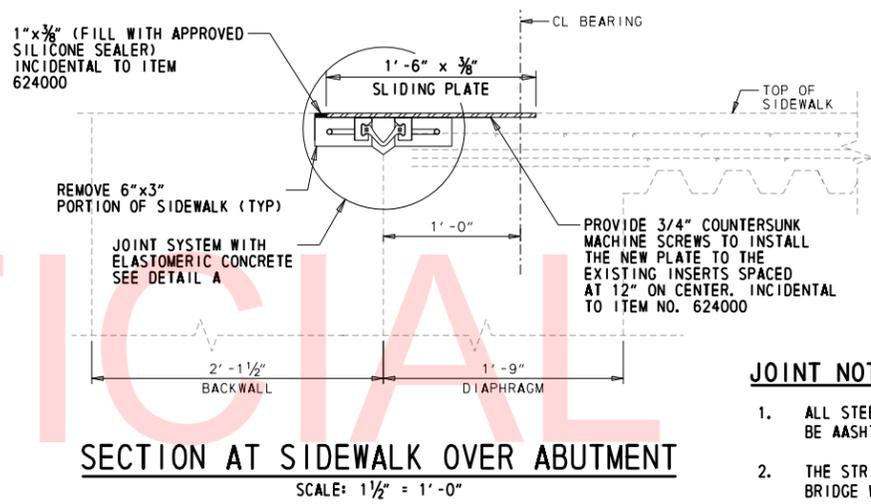
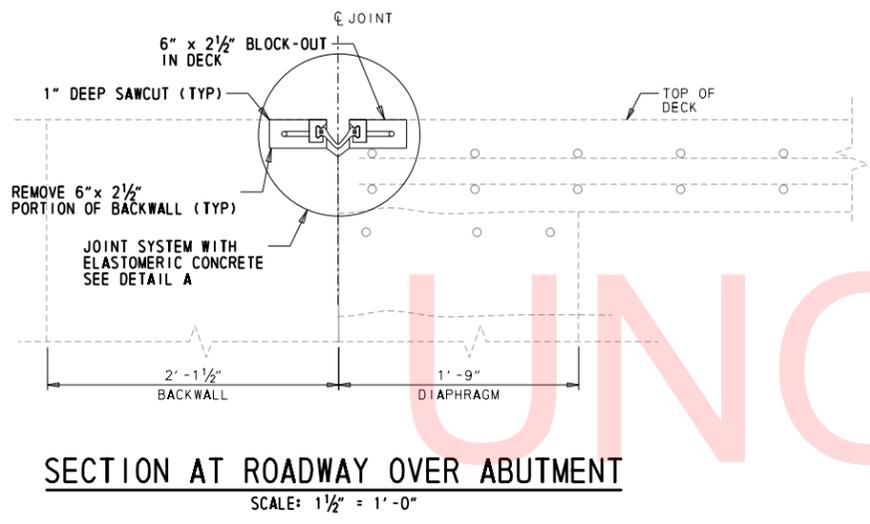


**BR 1-577 ON N050
 NORTHEAST BOULEVARD OVER
 BRANDYWINE RIVER**

CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	JGW
COUNTY	CHECKED BY:	RJH/DPR
NEW CASTLE		

EXPANSION JOINT DETAILS - 1	
SHEET NO.	39
TOTAL SHTS.	65

LAST REVISED: 8/14/2018
 \\USPPL\IF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-DJ02.DGN



JOINT NOTES:

1. ALL STEEL MEMBERS OF THE EXPANSION JOINT SYSTEM SHALL BE AASHTO M270/M270M GRADE 36.
2. THE STRIP SEAL SHALL BE INSTALLED IN ONE PIECE ACROSS THE BRIDGE WIDTH. SPLICING OF THE STRIP SEAL IS NOT PERMITTED.
3. NEOPRENE SEAL TO MEET D-2628-81 MODIFIED (RECOVERY TESTS EXCLUDED).
4. THE DECK JOINT SHALL BE CAPABLE OF SEALING THE DECK TO PREVENT MOISTURE AND OTHER CONTAMINANTS FROM DESCENDING THROUGH THE JOINT.
5. THE CONTRACTOR SHALL ADJUST THE OPEN JOINT AS REQUIRED BY THE WIDTH OF STEEL EXTRUSION USED TO PROVIDE A 2" OPENING.
6. ENTIRE DECK JOINT SHALL BE PAINTED AFTER FABRICATION USING URETHANE SYSTEM.
7. LUBRICANT-ADHESIVE FOR USE IN INSTALLING AND BONDING NEOPRENE SEAL ELEMENTS TO STEEL JOINT COMPONENTS SHALL BE A ONE QUART MOISTURE-CURING POLYURETHANE AND HYDROCARBON SOLVENT MIXTURE HAVING THE FOLLOWING PHYSICAL PROPERTIES:

AVERAGE WEIGHT, POUNDS PER GALLON	8 +/- 10%
SOLIDS CONTENT	65%
ADHESIVE SHALL REMAIN LIQUID FROM	5°F TO 120°F
FILM STRENGTH, AS PER ASTM D-412	2,000 PSI
ELONGATION	250%
8. NEW SHEAR STUDS WHICH INTERFERE WITH THE INSTALLATION OF THE NEW EXPANSION JOINT ASSEMBLY SHALL BE REMOVED AND GROUND SMOOTH.
9. ELASTOMERIC CONCRETE BINDER SHALL HAVE THE FOLLOWING PHYSICAL PROPERTIES:

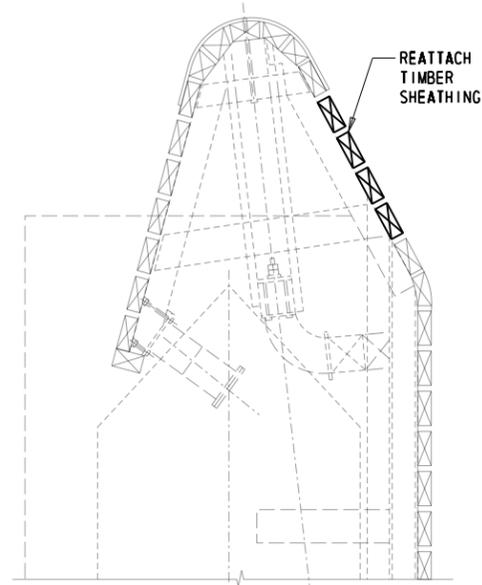
TENSILE STRENGTH =	1500 PSI (ASTM D638)
TENSILE STRESS =	500 PSI (ASTM D638)
ELONGATION =	200% (ASTM D638)
HARDNESS =	90 +/- 3A (ASTM D2240)

NOTES:

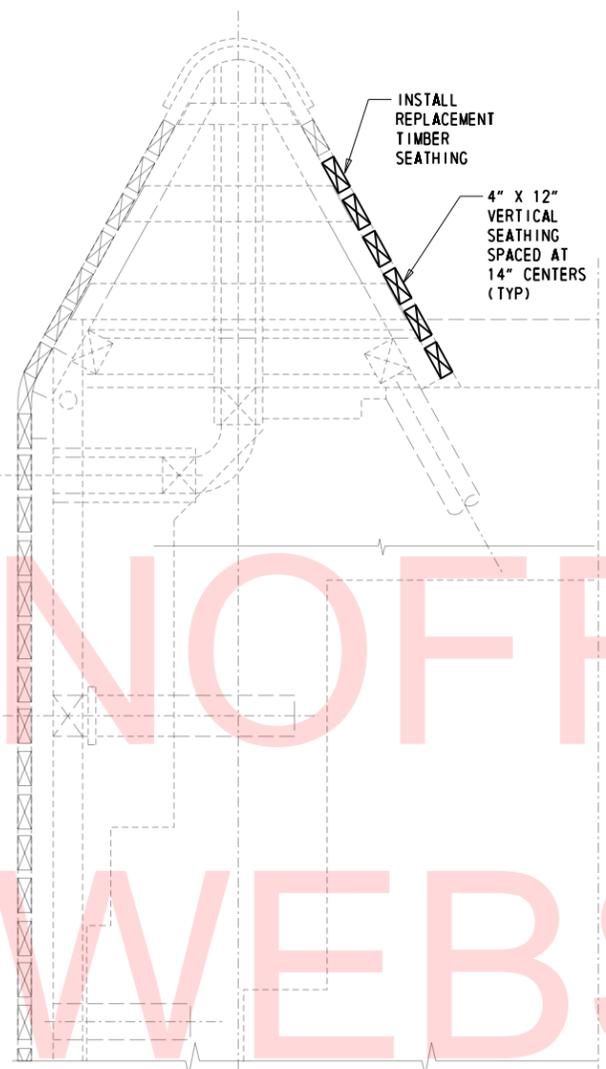
1. FOR BRIDGE PROJECT NOTES, SEE SHEET 10.
2. FOR DECK JOINT ELEVATIONS, SEE SHEET 39.

	DELWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT	BRIDGE NO.	1-577	EXPANSION JOINT DETAILS - 2	SHEET NO.
						T201407403	DESIGNED BY:		JGW
					COUNTY	CHECKED BY:	RJH/DPR	TOTAL SHTS.	
					NEW CASTLE			65	

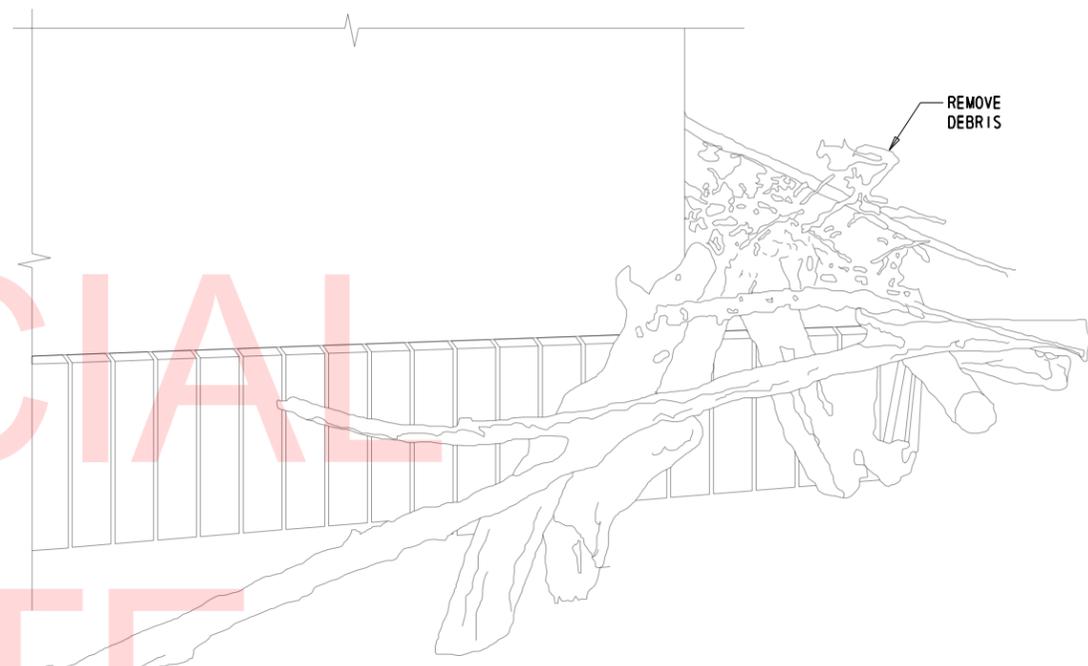
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 \\USPFLIF002\DATA\PROJECTS\60323054 DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-PRO6.DGN



PARTIAL PLAN AT NORTH END PIER 3
(DEBRIS NOT SHOWN FOR CLARITY)



PLAN AT NORTH END OF PIER 4
(DEBRIS NOT SHOWN FOR CLARITY)



PIER 3 UPSTREAM

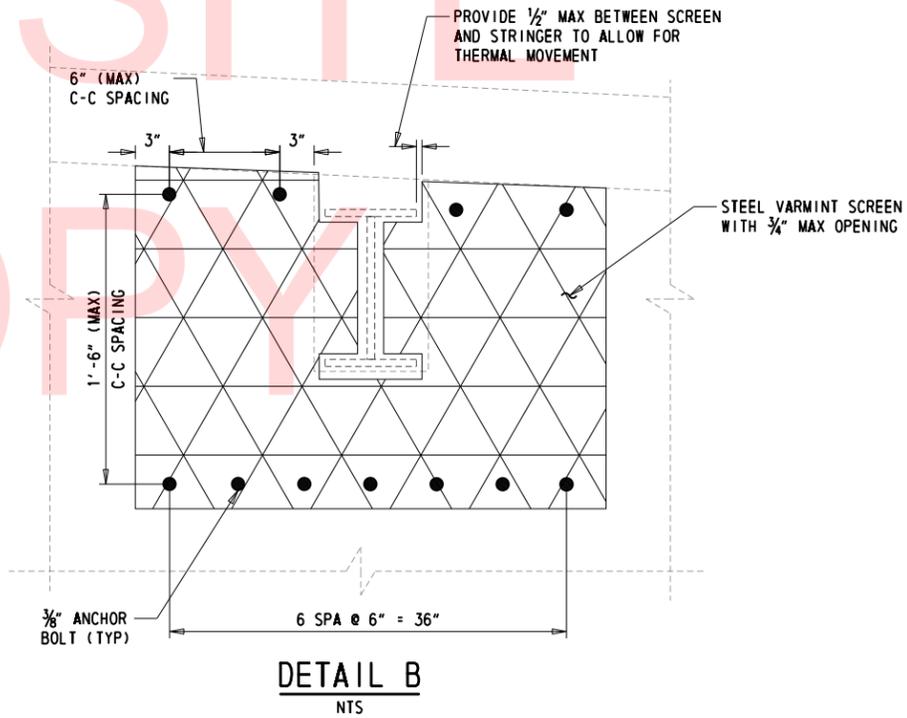
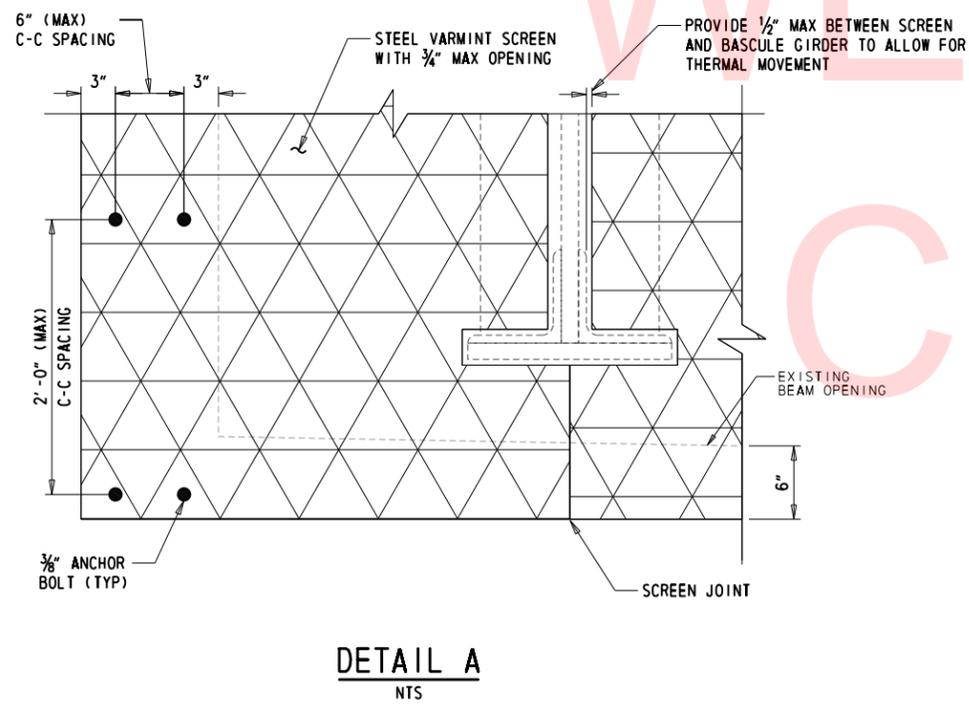
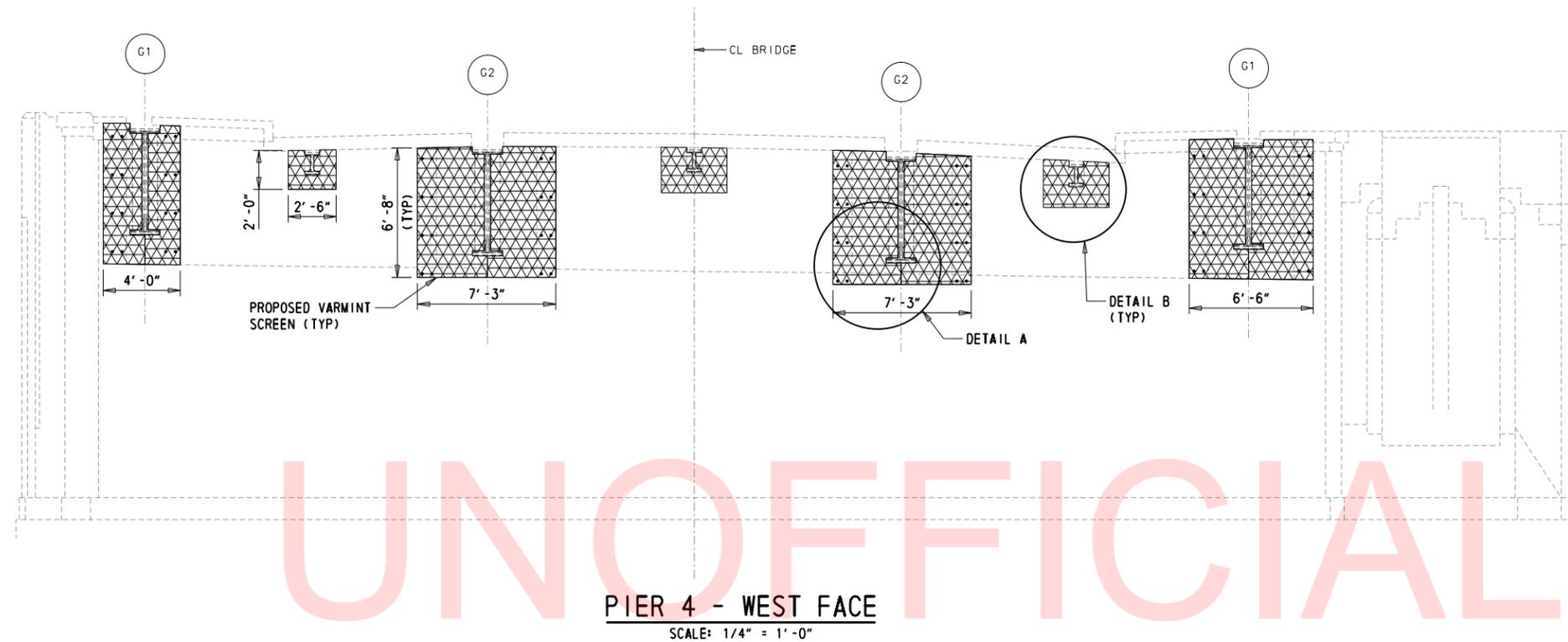
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NOTES:

1. FOR PROJECT NOTES, SEE SHEET 10.
2. REMOVE DEBRIS ACCUMULATION AS DIRECTED BY ENGINEER. DEBRIS REMOVAL WILL BE PAID UNDER ITEM NO. 201000.
3. CONTRACTOR TO REATTACH OR REPLACE TIMBER SHEATHING AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK WILL BE PAID UNDER ITEM NO. 621504.

	DELWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT	BRIDGE NO.	1-577	FENDER SYSTEM REPAIR DETAILS	SHEET NO.	41
						T201407403	DESIGNED BY:		RJH	TOTAL SHTS.
					COUNTY	CHECKED BY:	DPR			
					NEW CASTLE					

LAST REVISED: 8/14/2018
 \\USPFLIF002\DATA\PROJECTS\60323054\DELDOT AGR 1672 BDS\T01 - REHAB BR. 1-577 WILMINGTON\900 WORK\910 CAD\20-SHEETS\STRUCTURE\BR-577-VS01.DGN



NOTES:

1. FOR PROJECT NOTES, SEE SHEET 10.
2. THE CONTRACTOR SHALL UTILIZE A PACHOMETER PRIOR TO INSTALLATION TO LOCATE AND AVOID CONFLICT WITH THE EXISTING REBAR
3. ANCHOR BOLT EMBEDMENT DEPTH SHALL BE A MINIMUM OF 2 1/2" INTO CONCRETE.

	DELWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	SCALE AS NOTED	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT T201407403	BRIDGE NO.	1-577	VARMINT SCREEN DETAILS	SHEET NO.	42
						NEW CASTLE	DESIGNED BY:		JGW	TOTAL SHTS.
					CHECKED BY:	RJH				

PERMANENT OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
1-01	REPAIR EX. TIMBER FENDER	33.85	0.0008	2.51	COE/DNREC
1-02	REPAIR EX. TIMBER FENDER	21.04	0.0005	1.56	COE/DNREC
PERMANENT OPEN WATER IMPACTS		54.89	0.0013	4.07	COE/DNREC

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
1-OT1	BARGE*	240.0	0.0055	26.67	COE/DNREC
TEMPORARY OPEN WATER IMPACTS		240.0	0.0055	26.67	COE/DNREC

*NOTE: BARGE LOCATION DEPICTED AT PIER 4 FOR IMPACT PURPOSES. LOCATION WILL VARY AS NEEDED FOR WORK INDICATED AT EACH PIER.

LEGEND

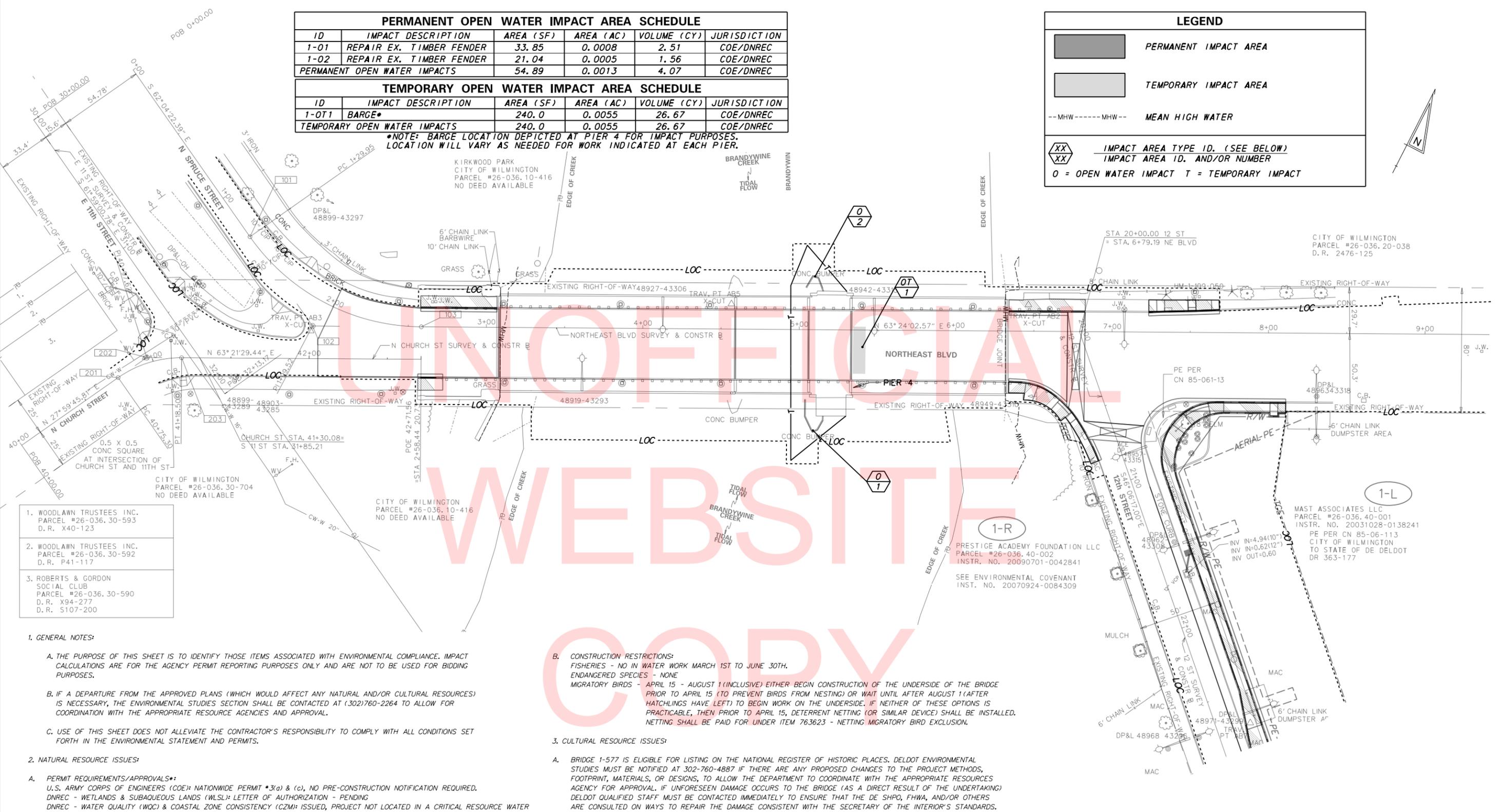
PERMANENT IMPACT AREA

TEMPORARY IMPACT AREA

--MHW-----MHW-- MEAN HIGH WATER

XX XX IMPACT AREA TYPE ID. (SEE BELOW)
IMPACT AREA ID. AND/OR NUMBER

O = OPEN WATER IMPACT T = TEMPORARY IMPACT



- WOODLAWN TRUSTEES INC. PARCEL #26-036.30-593 D.R. X40-123
- WOODLAWN TRUSTEES INC. PARCEL #26-036.30-592 D.R. P41-117
- ROBERTS & GORDON SOCIAL CLUB PARCEL #26-036.30-590 D.R. X94-277 D.R. S107-200

1. GENERAL NOTES:

- THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
- 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.
- USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

2. NATURAL RESOURCE ISSUES:

- PERMIT REQUIREMENTS/APPROVALS*:
U.S. ARMY CORPS OF ENGINEERS (COE): NATIONWIDE PERMIT #3(a) & (c), NO PRE-CONSTRUCTION NOTIFICATION REQUIRED.
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): LETTER OF AUTHORIZATION - PENDING
DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED, PROJECT NOT LOCATED IN A CRITICAL RESOURCE WATER CITY OF WILMINGTON FLOODPLAIN: PENDING
- THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THIS APPROVAL.
- THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE IT IS DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.

- CONSTRUCTION RESTRICTIONS:
FISHERIES - NO IN WATER WORK MARCH 1ST TO JUNE 30TH.
ENDANGERED SPECIES - NONE
MIGRATORY BIRDS - APRIL 15 - AUGUST 1 (INCLUSIVE) EITHER BEGIN CONSTRUCTION OF THE UNDERSIDE OF THE BRIDGE PRIOR TO APRIL 15 (TO PREVENT BIRDS FROM NESTING) OR WAIT UNTIL AFTER AUGUST 1 (AFTER HATCHLINGS HAVE LEFT) TO BEGIN WORK ON THE UNDERSIDE. IF NEITHER OF THESE OPTIONS IS PRACTICABLE, THEN PRIOR TO APRIL 15, DETERRENT NETTING (OR SIMILAR DEVICE) SHALL BE INSTALLED. NETTING SHALL BE PAID FOR UNDER ITEM 763623 - NETTING MIGRATORY BIRD EXCLUSION.

3. CULTURAL RESOURCE ISSUES:

- BRIDGE 1-577 IS ELIGIBLE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES. DELDOT ENVIRONMENTAL STUDIES MUST BE NOTIFIED AT 302-760-4887 IF THERE ARE ANY PROPOSED CHANGES TO THE PROJECT METHODS, FOOTPRINT, MATERIALS, OR DESIGNS, TO ALLOW THE DEPARTMENT TO COORDINATE WITH THE APPROPRIATE RESOURCES AGENCY FOR APPROVAL. IF UNFORESEEN DAMAGE OCCURS TO THE BRIDGE (AS A DIRECT RESULT OF THE UNDERTAKING) DELDOT QUALIFIED STAFF MUST BE CONTACTED IMMEDIATELY TO ENSURE THAT THE DE SHPO, FHWA, AND/OR OTHERS ARE CONSULTED ON WAYS TO REPAIR THE DAMAGE CONSISTENT WITH THE SECRETARY OF THE INTERIOR'S STANDARDS.

THERE ARE NO DNREC JURISDICTIONAL WETLANDS WITHIN THE LIMITS OF CONSTRUCTION. WATERS ARE USAGE/DNREC.

SHEET PREPARED BY KH ON 12/29/2015
SHEET LAST UPDATED BY KH ON 08/08/2018

BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER

EC-01

LAST REVISED: 8/14/2018 P:\60325054 DelDOT AGR 1672 BDCS\T01 - Rehab Br. 1-577 Wilmington\900 Work 910 CAD\20-SHEETS\Civil\EC01.dgn

<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS		<p>SCALE</p> <p>0 30 60 90</p> <p>FEET</p>	<p>BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER</p>		<p>CONTRACT</p> <p>T201407403</p>	<p>BRIDGE NO.</p> <p>1-577</p>	<p>ENVIRONMENTAL COMPLIANCE PLAN</p>	<p>SHEET NO.</p> <p>43</p>
					<p>COUNTY</p> <p>NEW CASTLE</p>	<p>DESIGNED BY:</p> <p>KMH</p>	<p>TOTAL SHTS.</p> <p>65</p>		
					<p>CHECKED BY:</p> <p>ADM</p>				

MOT GENERAL NOTES

1. MAINTENANCE OF TRAFFIC DURING SHOULDER CLOSURES, LANE CLOSURES, AND LANE SHIFTS SHALL CONFORM TO TYPICAL APPLICATION TA-10, TA-3, TA-3A, TA-21, TA-23, AND TA-27, OF THE DELAWARE MUTCD.
2. ON ALL INTERSECTING STREETS APPROACHING THE WORK AREA, "ROAD WORK AHEAD" SIGNS SHALL BE PLACED AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER. AN "END ROAD WORK" SIGN SHALL BE PLACED ACROSS THE STREET FROM THE "ROAD WORK AHEAD," SIGN, VISIBLE TO TRAFFIC OPERATING THE WORK ZONE.

3. THE USE OF MILLINGS AND GRADED AGGREGATE BASE COURSE (GABC) IN THE TRAVEL WAY, TEMPORARY TRAVEL WAY, HIGH VOLUME ENTRANCES AND ACCESS RAMP FOR THE PURPOSE OF PROVIDING A TEMPORARY ROADWAY SURFACE, POTHOLE REPAIR, TAPERED EDGE FOR UTILITIES, BUTT JOINTS, AND LONGITUDINAL DROP-OFFS (MILLING AND PAVING OPERATIONS) IS PROHIBITED UNLESS IT IS OTHERWISE DESIGNATED TO BE USED IN THE CONTRACT PLANS. USE COLD PATCH, BITUMINOUS CONCRETE, BITUMINOUS CONCRETE WEDGE, OR TAPER MILL, AS NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE ENGINEER. PAYMENT FOR COLD PATCH, BITUMINOUS CONCRETE OR BITUMINOUS CONCRETE WEDGE SHALL BE PAID AS NOTED IN THE CONTRACT DOCUMENTS. TAPER MILL BITUMINOUS CONCRETE SHALL BE PAID UNDER THE BITUMINOUS CONCRETE MILLING ITEM.

MILLINGS OR GABC SHALL BE USED AT THE FOLLOWING LOCATIONS WHERE ACCESS TO A BUSINESS, RESIDENCE, OR EDGE DROP OFF NEEDS TO BE MAINTAINED UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE ENGINEER TO USE BITUMINOUS CONCRETE OR COLD PATCH. ALL MILLINGS AND GABC WILL BE ROLLED AND COMPACTED TO HELP PREVENT THE MATERIAL FROM UNRAVELLING:

- a. DRIVEWAYS
- b. ENTRANCES
- c. LOW VOLUME ACCESS RAMPS (IDENTIFIED IN THE CONTRACT DOCUMENTS)
- d. EDGE DROP-OFFS ADJACENT TO LIVE ROADWAY (LANES AND SHOULDER) AND THE PROPOSED ROAD CONSTRUCTION
- e. EDGE OF ROADWAY DROP-OFF

GRADING AND MAINTAINING BASE COURSE THAT IS BEING USED FOR ROADWAY WEDGE/FILLET BETWEEN TRAVEL LANES AND PAVEMENT BOX, EDGE OF TRAVELWAY, DRIVEWAY OR ENTRANCE ACCESS SHALL BE INCIDENTAL TO ITEM NO. 801000 -MAINTENANCE OF TRAFFIC. THE BASE COURSE MATERIAL SHALL BE PLACED AT NO GREATER THAN THE SLOPE SPECIFIED IN TABLE 6G-1 AND SHALL BE COMPACTED. EXCESS BASE COURSE MATERIAL SHALL BE PUSHED AHEAD AND USED IN THE NEXT SEGMENT AND SHALL BE INCIDENTAL TO THE PARTICULAR BASE COURSE PAY ITEM. NO SEPARATE PAYMENT SHALL BE MADE FOR MILLINGS OR GABC TEMPORARY ROADWAY MATERIAL (TRM) USED TO PROTECT EDGE DROP-OFFS, UNLESS THE MATERIAL IS EVENTUALLY UTILIZED AS PART OF A PERMANENT ROADWAY AT WHICH TIME THE MATERIAL WOULD BE PAID FOR UNDER THE RESPECTIVE CONTRACT MATERIAL ITEM.

VERTICAL DIFFERENCES SHALL BE CORRECTED IN ACCORDANCE WITH TABLE 6G-1 OF THE DELAWARE MUTCD.

4. 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 PROGRAMS 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.

5. ACCEPTABLE MATERIALS FOR TEMPORARY PEDESTRIAN PATHS SHALL INCLUDE CONCRETE, HOT-MIX, COMPACTED MILLINGS OR PLYWOOD WALKWAY STRUCTURE. PLYWOOD WALKWAY STRUCTURES SHALL ALSO INCLUDE DETECTABLE EDGING AND RAILINGS IN ACCORDANCE WITH ADA GUIDELINES AND THE DELAWARE MUTCD. TEMPORARY PEDESTRIAN PATHS SHALL BE INCIDENTAL TO ITEM 801000 UNLESS OTHERWISE SPECIFIED IN THE PLANS. STONE OR GRADED AGGREGATE BASE COURSE SHALL NOT BE USED FOR TEMPORARY PEDESTRIAN PATHS.

6. ALL NECESSARY SIGNS, PAVEMENT MARKINGS AND ROADSIDE APPURTENANCES SHALL BE INSTALLED PRIOR TO THE OPENING/REOPENING OF A ROADWAY OR RAMP. A WALKTHROUGH WITH THE ENGINEER, TRAFFIC SAFETY, TRAFFIC CONSTRUCTION AND OTHER PERSONNEL SHALL OCCUR NO LESS THAN 48 HOURS PRIOR TO THE OPENING/REOPENING OF ANY ROAD OR RAMP.

7. THE CONTRACTOR SHALL SUPPLY MESSAGE BOARDS TO PLACE AT LOCATIONS WITHIN 1 MILE OF THE PROJECT LIMITS AS DIRECTED BY THE ENGINEER 10 DAYS IN ADVANCE OF NEW TRAFFIC PATTERNS OR ROAD CLOSURES. MESSAGE BOARDS FOR ROAD CLOSURES SHALL REMAIN IN PLACE 5 DAYS AFTER THE CLOSURE OCCURS. THE ENGINEER MAY LENGTHEN OR SHORTEN THE REQUIRED DURATIONS FOR THE MESSAGE BOARDS BASED ON CONDITIONS IN THE FIELD. PAYMENT FOR THESE MESSAGE BOARDS WILL BE MADE UNDER ITEM NUMBER 803001. THE CONTRACTOR SHALL PROVIDE A PERSON TO PERFORM MAINTENANCE ON THE MESSAGE BOARDS THAT THE ENGINEER CAN CONTACT AT ALL TIMES. MESSAGE BOARD LOCATIONS AND MESSAGE SHOULD BE COORDINATED AND APPROVED BY THE DISTRICT TRAFFIC SAFETY OFFICER.

8. DELDOT TRAFFIC RESERVES THE RIGHT TO MODIFY THE TRAFFIC CONTROL AS FIELD CONDITIONS DICTATE.

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

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

()	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
(X)	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 801000.

11. THE DISTURBED AREA FOR THIS PROJECT IS 0.226 ACRES.
12. THE ADDITIONAL IMPERVIOUS AREA FOR THIS PROJECT IS 0 SF.

SEQUENCE OF CONSTRUCTION

STAGE 1

1. THE CONTRACTOR SHALL NOTIFY THE DELAWARE SEDIMENT & STORMWATER PROGRAM INSPECTOR AT 302-739-9921 PRIOR TO ANY EARTH DISTURBANCE TO SET UP A PRE-CONSTRUCTION MEETING.
2. INSTALL INLET SEDIMENT CONTROL ON DRAINAGE INLETS AS IDENTIFIED ON EROSION CONTROL SHEETS, PER DELDOT CONSTRUCTION STANDARD DETAIL E-4.
3. INSTALL TURBIDITY CURTAIN AS IDENTIFIED ON EROSION CONTROL SHEETS, PER DELDOT CONSTRUCTION STANDARD DETAIL E-18.
4. PLACE ALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE CONSTRUCTION, M.O.T., PEDESTRIAN DETOUR, AND EROSION CONTROL SHEETS.
5. PERFORM BRIDGE REPAIRS AS SHOWN IN THE BRIDGE CONSTRUCTION SEQUENCE ON PLAN SHEET 14. FOLLOW TYPICAL APPLICATIONS TA-3, TA-3A, TA-10, TA-21, TA-23, AND TA-27 OF THE DELAWARE MUTCD. NO LONG-TERM LANE CLOSURES ARE PERMITTED.

STAGE 1, PHASE A

1. CLOSE SIDEWALK AND IMPLEMENT PEDESTRIAN DETOUR AS SHOWN ON THE PEDESTRIAN DETOUR PLANS.
2. CONSTRUCT TEMPORARY CURB RAMP ON THE SOUTHWEST QUADRANT AT THE INTERSECTION OF NORTHEAST BOULEVARD AND 13TH STREET. FOLLOW TYPICAL APPLICATION TA-3A OF THE DELAWARE MUTCD.

STAGE 1, PHASE B

1. CLOSE SIDEWALK AND IMPLEMENT PEDESTRIAN DETOUR AS SHOWN ON THE PEDESTRIAN DETOUR PLANS.
2. CONSTRUCT NEW SIDEWALK, CURB RAMP, AND TRAFFIC SIGNAL EQUIPMENT ON THE SOUTHWEST QUADRANT AT THE INTERSECTION OF NORTHEAST BOULEVARD AND 12TH STREET. FOLLOW TYPICAL APPLICATION TA-21 OF THE DELAWARE MUTCD.

STAGE 1, PHASE C

1. PLACE TEMPORARY CROSSWALK MARKINGS AT THE INTERSECTION OF NORTHEAST BOULEVARD AND 13TH STREET.
2. CLOSE SIDEWALK AND IMPLEMENT PEDESTRIAN DETOUR AS SHOWN ON THE PEDESTRIAN DETOUR PLANS.
3. CONSTRUCT NEW SIDEWALK, CURB RAMP, AND TRAFFIC SIGNAL EQUIPMENT ON TO THE NORTH SIDE OF THE INTERSECTION AT NORTHEAST BOULEVARD AND 12TH STREET. FOLLOW TYPICAL APPLICATION TA-23 OF THE DELAWARE MUTCD.

STAGE 1, PHASE D

1. PLACE TEMPORARY PAVEMENT MARKINGS ALONG 12TH STREET.
2. CLOSE SIDEWALK AND IMPLEMENT PEDESTRIAN DETOUR AS SHOWN ON THE PEDESTRIAN DETOUR PLANS.
3. CONSTRUCT NEW SIDEWALK, CURB RAMPS, AND TRAFFIC SIGNAL EQUIPMENT ON THE SOUTHWEST QUADRANT AT THE INTERSECTION OF NORTHEAST BOULEVARD AND 12TH STREET. FOLLOW TYPICAL APPLICATION TA-3 OF THE DELAWARE MUTCD.

STAGE 1, PHASE E

1. CLOSE NEWLY CONSTRUCTED SIDEWALK AND IMPLEMENT PEDESTRIAN DETOUR AS SHOWN ON THE PEDESTRIAN DETOUR PLANS.
2. RELOCATE AND/OR INSTALL NEW DELMARVA POWER UTILITY POLES AND AERIAL FACILITIES AS SHOWN ON THE CONSTRUCTION PLANS.
3. CONSTRUCT ROADWAY WIDENING ALONG 12TH STREET AS SHOWN ON THE CONSTRUCTION PLANS. FOLLOW TYPICAL APPLICATIONS TA-10 AND TA-27 OF THE DELAWARE MUTCD WHEN EXCAVATING MATERIAL ON 12TH STREET, BACKFILL WITH APPROVED MATERIAL TO SATISFY DROP-OFF REQUIREMENTS BEFORE RESTORING TWO-WAY, TWO-LANE TRAFFIC PATTERNS.
4. INSTALL LIGHTING AS SHOWN ON THE LIGHTING PLANS.

STAGE 1, PHASE E (CONTINUED)

5. INSTALL PROPOSED SIGNS AS SHOWN ON THE SIGNING STRIPING AND CONDUIT PLANS. COVER CONFLICTING SIGNS.
6. IMPLEMENT ULTIMATE TRAFFIC SIGNAL PHASING AT THE INTERSECTION OF NORTHEAST BOULEVARD AND 12TH STREET AS SHOWN ON THE ULTIMATE TRAFFIC SIGNAL PLANS AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT SIGNAL.
7. APPLY WEARING COURSE AND FINAL PAVEMENT MARKINGS ON 12TH STREET. FOLLOW TYPICAL APPLICATIONS TA-10 AND TA-27 OF THE DELAWARE MUTCD.
8. UPON COMPLETION OF PHASE E, CLOSE SIDEWALK AND IMPLEMENT SAME PEDESTRIAN DETOUR USED DURING STAGE 1 PHASE A.
9. REMOVE TEMPORARY CURB RAMP, TEMPORARY PAVEMENT MARKINGS, AND RECONSTRUCT SIDEWALK AT THE INTERSECTION OF NORTHEAST BOULEVARD AND 13TH STREET. FOLLOW TYPICAL APPLICATION TA-3A OF THE DELAWARE MUTCD.

STAGE 2

1. PLACE ALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE CONSTRUCTION, M.O.T., PEDESTRIAN DETOUR, AND EROSION CONTROL SHEETS.
2. REMOVE EXISTING STRIPING USING BLACKOUT TAPE AND PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN ON THE STAGE 2 MAINTENANCE OF TRAFFIC PLANS.
3. PLACE CHANNELIZING DRUMS AND SHIFT TRAFFIC TO NEW LANES DESIGNATED.
4. PROGRAM TRAFFIC SIGNAL CONTROLLER AT THE INTERSECTION OF NORTHEAST BOULEVARD AND 12TH STREET TO OPERATE WITH STAGE 2 SIGNAL PHASINGS AS SHOWN ON THE TEMPORARY SIGNAL PLANS.
5. DISCONNECT AND BAG, TRAFFIC AND PEDESTRIAN SIGNALS, AND PEDESTRIAN PUSHBUTTONS ON THE WESTBOUND NORTHEAST BOULEVARD APPROACH AT THE INTERSECTION OF E. 11TH STREET.
6. DISCONNECT AND BAG PEDESTRIAN SIGNALS ON THE EASTBOUND E. 11TH STREET APPROACH AT THE INTERSECTION OF N. CHURCH STREET.
7. CLOSE EASTBOUND SIDEWALK AND IMPLEMENT PEDESTRIAN DETOUR AS SHOWN ON THE STAGE 2 PEDESTRIAN DETOUR PLANS.
8. CLOSE BRIDGE AND IMPLEMENT TRAFFIC DETOUR AS ON THE DETOUR PLAN.
9. INSTALL INLET SEDIMENT CONTROL ON DRAINAGE INLETS AS IDENTIFIED ON EROSION CONTROL SHEETS, PER DELDOT CONSTRUCTION STANDARD DETAIL E-4.
10. RESET/RELOCATE TURBIDITY CURTAIN AS BRIDGE REPAIR PROGRESSES.

11. PERFORM BRIDGE REPAIRS AS SHOWN IN THE BRIDGE CONSTRUCTION SEQUENCE ON PLAN SHEET 14 AND APPROACH ROADWAY WORK FROM STATION 2+30 TO STA 3+08.

STAGE 3

1. PLACE ALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE CONSTRUCTION, M.O.T., PEDESTRIAN DETOUR, AND EROSION CONTROL SHEETS.
2. OPEN EASTBOUND SIDEWALK, CLOSE WESTBOUND SIDEWALK, AND IMPLEMENT PEDESTRIAN DETOUR AS SHOWN ON THE STAGE 3 PEDESTRIAN DETOUR PLANS.
3. RESET/RELOCATE TURBIDITY CURTAIN AS BRIDGE REPAIR PROGRESSES.
4. PERFORM BRIDGE REPAIRS AS SHOWN IN THE BRIDGE CONSTRUCTION SEQUENCE ON PLAN SHEET 14 AND APPROACH ROADWAY WORK FROM STATION 2+30 TO STA 3+08.
5. RESTORE TRAFFIC SIGNAL EQUIPMENT AT THE INTERSECTION OF NORTHEAST BOULEVARD/SPRUCE STREET AND 11TH STREET.
6. REMOVE TEMPORARY PAVEMENT MARKINGS AND RESTORE TRAFFIC TO EXISTING CONDITIONS.
7. WITH APPROVAL FROM THE DELAWARE SEDIMENT & STORMWATER PROGRAM INSPECTOR AND ALL BRIDGE/PAVEMENT DISTURBANCE COMPLETE, REMOVE ALL SEDIMENT CONTROLS.
8. REMOVE ALL TRAFFIC CONTROL DEVICES.

EROSION AND SEDIMENT CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL INLET PROTECTION ON ALL EXISTING AND PROPOSED DRAINAGE INLETS SHOWN ON THE CONSTRUCTION PLANS.
2. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES FOLLOWING STABILIZATION OF ENTIRE DISTURBED AREA AND UPON THE APPROVAL OF THE EROSION AND SEDIMENT CONTROL INSPECTOR.
3. 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.

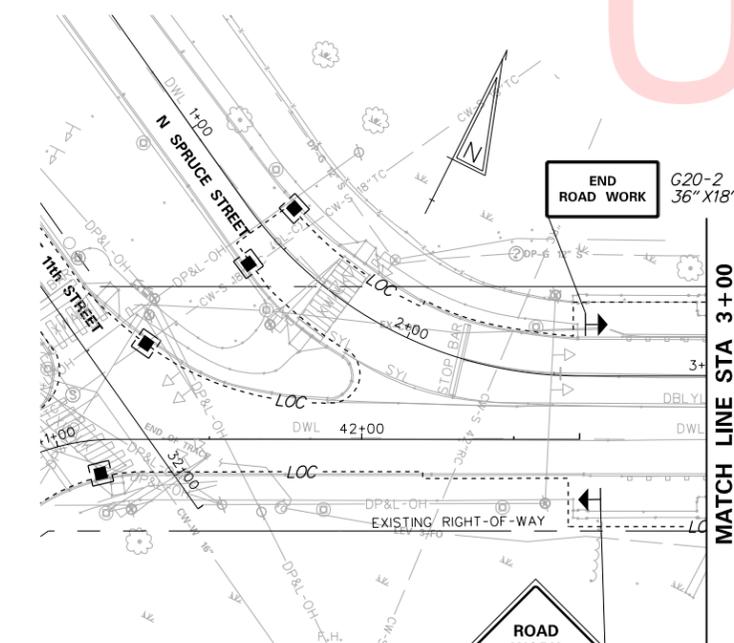
ALLOWABLE DAILY LANE CLOSURE SCHEDULE

LANE OPEN LANE CLOSED	NORTHEAST BLVD 12TH STREET																							
	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MONDAY	X	X	X	X	X						X	X	X	X							X	X	X	X
TUESDAY	X	X	X	X	X						X	X	X	X							X	X	X	X
WEDNESDAY	X	X	X	X	X						X	X	X	X							X	X	X	X
THURSDAY	X	X	X	X	X						X	X	X	X							X	X	X	X
FRIDAY	X	X	X	X	X						X	X	X	X							X	X	X	X
SATURDAY	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

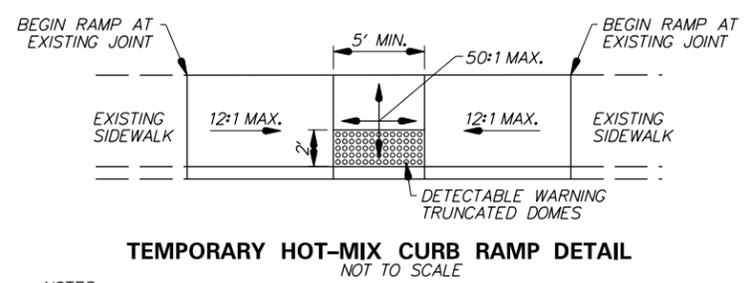
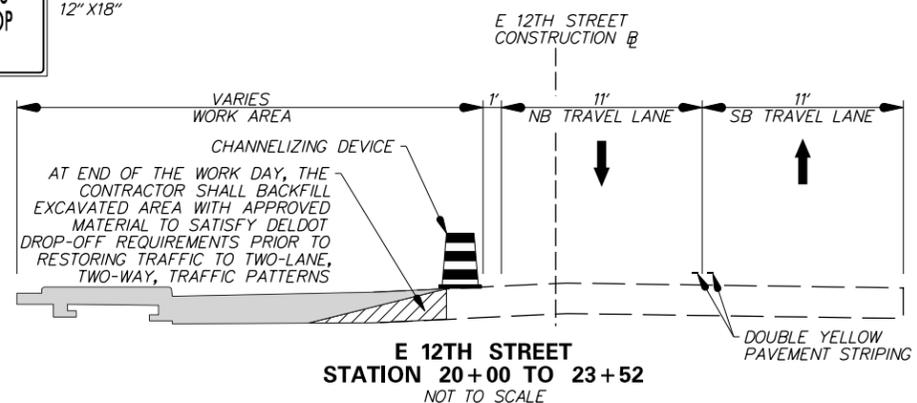
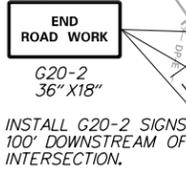
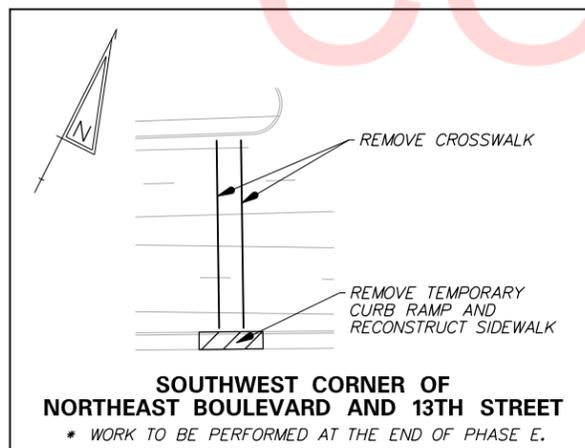
EROSION & SEDIMENT CONTROL	
	DEWATERING BAG
	DEWATERING BASIN
	EARTH DIKE
	INLET SEDIMENT CONTROL
	PERIMETER DIKE/SWALE
	PORTABLE SEDIMENT TANK
	SANDBAG DIKE
	SANDBAG DIVERSION
	STONE CHECK DAM
	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE / LENGTH
	SILT FENCE
	SILT FENCE - REINFORCED
	SUMP PIT
	SEDIMENT 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

CONSTRUCTION PHASING & M.O.T	
	BARRICADE, TYPE 3
	CONCRETE SAFETY BARRIER - PORTABLE
	CONSTRUCTION SAFETY FENCE / LENGTH
	CONSTRUCTION SAFETY FENCE
	CONSTRUCTION WARNING SIGN LOCATION
	CONSTRUCTION WARNING SIGN
	CRASH CUSHION ARRAY
	DRUM - TRAFFIC CONTROL
	FLAGGER LOCATION
	PHASING TRAFFIC FLOW ARROW
	TEMPORARY CONSTRUCTION
	TEMPORARY PAVEMENT MARKING ARROW
	TRUCK WITH MOUNTED ATTENUATOR
	WORK AREA - ACTIVE PHASE

MATCH LINE STA 3+00

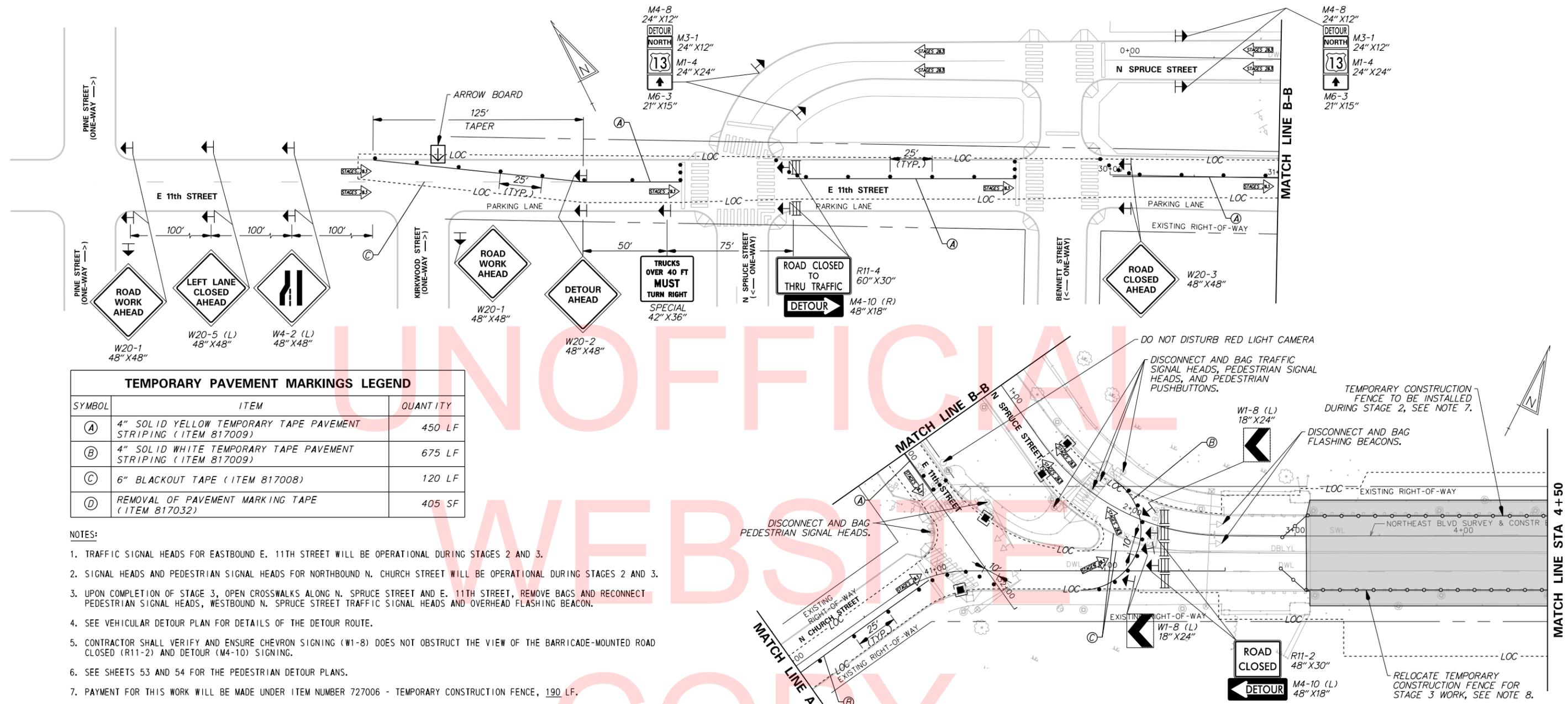


TEMPORARY PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	4" SOLID DOUBLE YELLOW TEMPORARY TAPE PAVEMENT STRIPING (ITEM 817009)	630 LF
(C)	6" BLACKOUT TAPE (ITEM 817008)	630 LF
(D)	REMOVAL OF PAVEMENT MARKING TAPE (ITEM 817032)	490 SF
(G)	12" SOLID WHITE TEMPORARY TAPE CROSSWALK MARKINGS (ITEM 817010)	120 SF



- NOTES:
- CONTRACTOR TO CONSTRUCT TEMPORARY CURB RAMP AT THE SOUTHWEST CORNER OF NORTHEAST BOULEVARD AND 13TH STREET DURING STAGE 1 PHASE A.
 - AT THE END OF STAGE 1 PHASE E, THE CONTRACTOR SHALL REMOVE THE TEMPORARY CURB RAMP AND RECONSTRUCT CONCRETE SIDEWALK.
 - PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM NUMBER 705528 - TEMPORARY CURB RAMP.

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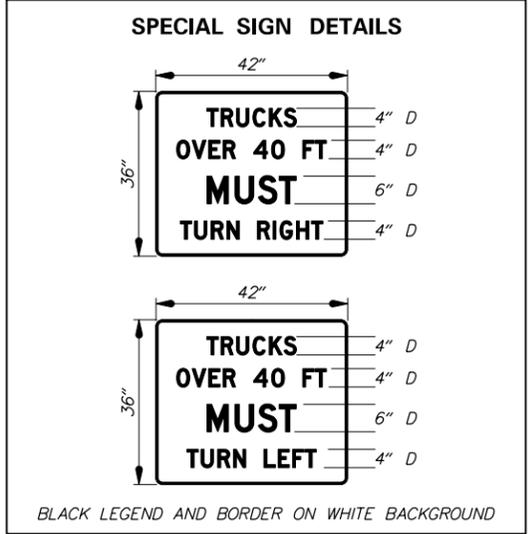
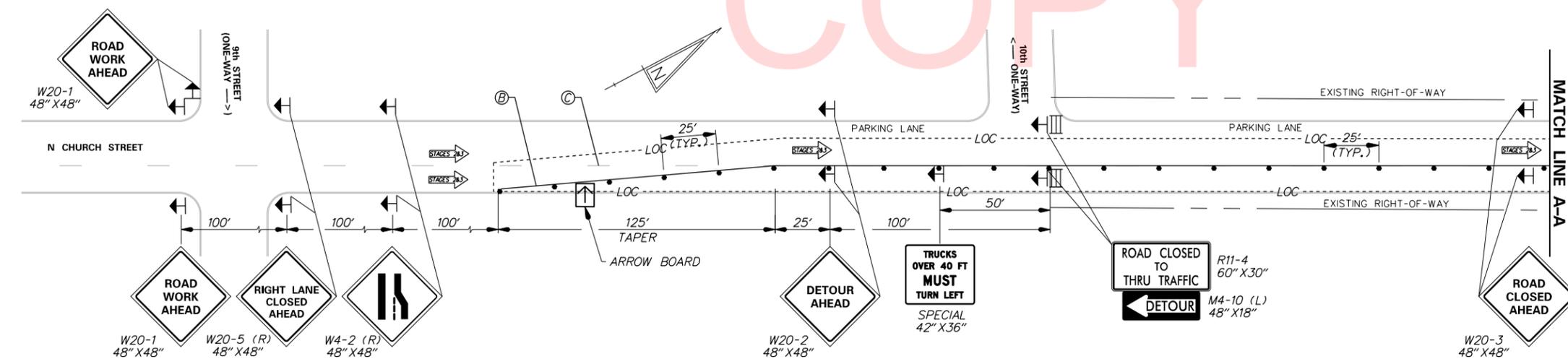


TEMPORARY PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
(A)	4" SOLID YELLOW TEMPORARY TAPE PAVEMENT STRIPING (ITEM 817009)	450 LF
(B)	4" SOLID WHITE TEMPORARY TAPE PAVEMENT STRIPING (ITEM 817009)	675 LF
(C)	6" BLACKOUT TAPE (ITEM 817008)	120 LF
(D)	REMOVAL OF PAVEMENT MARKING TAPE (ITEM 817032)	405 SF

NOTES:

1. TRAFFIC SIGNAL HEADS FOR EASTBOUND E. 11TH STREET WILL BE OPERATIONAL DURING STAGES 2 AND 3.
2. SIGNAL HEADS AND PEDESTRIAN SIGNAL HEADS FOR NORTHBOUND N. CHURCH STREET WILL BE OPERATIONAL DURING STAGES 2 AND 3.
3. UPON COMPLETION OF STAGE 3, OPEN CROSSWALKS ALONG N. SPRUCE STREET AND E. 11TH STREET, REMOVE BAGS AND RECONNECT PEDESTRIAN SIGNAL HEADS, WESTBOUND N. SPRUCE STREET TRAFFIC SIGNAL HEADS AND OVERHEAD FLASHING BEACON.
4. SEE VEHICULAR DETOUR PLAN FOR DETAILS OF THE DETOUR ROUTE.
5. CONTRACTOR SHALL VERIFY AND ENSURE CHEVRON SIGNING (W1-8) DOES NOT OBSTRUCT THE VIEW OF THE BARRICADE-MOUNTED ROAD CLOSED (R11-2) AND DETOUR (M4-10) SIGNING.
6. SEE SHEETS 53 AND 54 FOR THE PEDESTRIAN DETOUR PLANS.
7. PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM NUMBER 727006 - TEMPORARY CONSTRUCTION FENCE, 190 LF.
8. PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM NUMBER 727030 - FENCE RELOCATION, 190 LF.

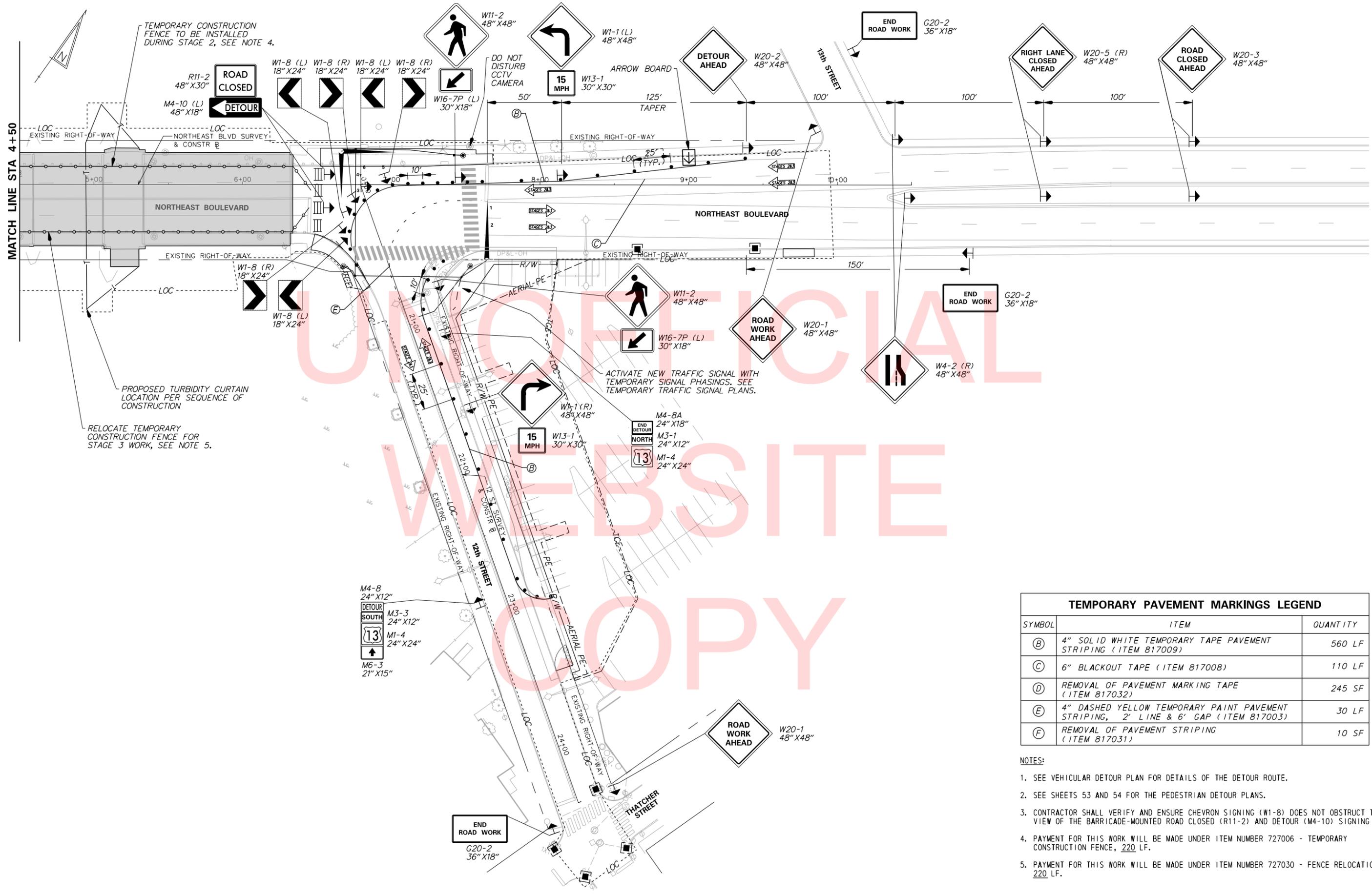


MATCH LINE STA 4+50

TEMPORARY CONSTRUCTION FENCE TO BE INSTALLED DURING STAGE 2, SEE NOTE 4.

PROPOSED TURBIDITY CURTAIN LOCATION PER SEQUENCE OF CONSTRUCTION

RELOCATE TEMPORARY CONSTRUCTION FENCE FOR STAGE 3 WORK, SEE NOTE 5.



TEMPORARY PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(B)	4" SOLID WHITE TEMPORARY TAPE PAVEMENT STRIPING (ITEM 817009)	560 LF
(C)	6" BLACKOUT TAPE (ITEM 817008)	110 LF
(D)	REMOVAL OF PAVEMENT MARKING TAPE (ITEM 817032)	245 SF
(E)	4" DASHED YELLOW TEMPORARY PAINT PAVEMENT STRIPING, 2' LINE & 6' GAP (ITEM 817003)	30 LF
(F)	REMOVAL OF PAVEMENT STRIPING (ITEM 817031)	10 SF

- NOTES:
- SEE VEHICULAR DETOUR PLAN FOR DETAILS OF THE DETOUR ROUTE.
 - SEE SHEETS 53 AND 54 FOR THE PEDESTRIAN DETOUR PLANS.
 - CONTRACTOR SHALL VERIFY AND ENSURE CHEVRON SIGNING (W1-8) DOES NOT OBSTRUCT THE VIEW OF THE BARRICADE-MOUNTED ROAD CLOSED (R11-2) AND DETOUR (M4-10) SIGNING
 - PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM NUMBER 727006 - TEMPORARY CONSTRUCTION FENCE, 220 LF.
 - PAYMENT FOR THIS WORK WILL BE MADE UNDER ITEM NUMBER 727030 - FENCE RELOCATION, 220 LF.

PORTABLE CHANGEABLE MESSAGE SIGNS

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

PCMS-1

US 13 SB
NE BLVD

TO CLOSE
STARTING
MM/DD/YY

DURING DETOUR

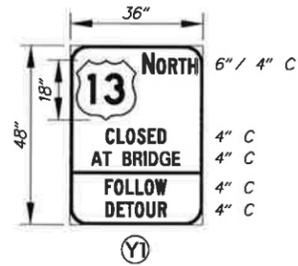
(DISPLAY FOR 5 DAYS AFTER IMPLEMENTATION OF DETOUR)

PCMS-1

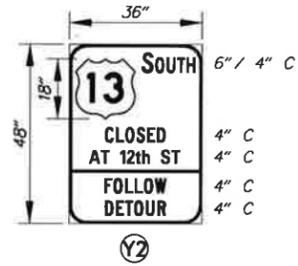
US 13 SB
CLOSED
AT 12TH ST

FOLLOW
DETOUR

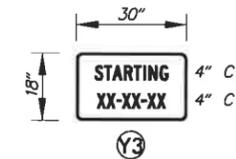
SPECIAL SIGNS



M3-1 NORTH
Z1

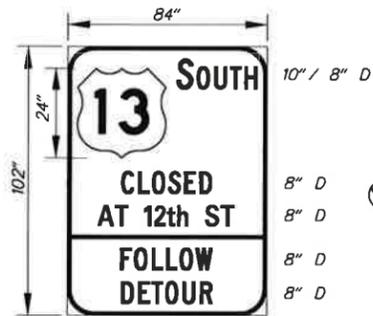


M3-3 SOUTH
Z2



M4-4 TRUCK
R3-2 AA

(10 DAYS PRIOR TO BEGINNING OF DETOUR)
REMOVE PLAQUE AT START OF DETOUR

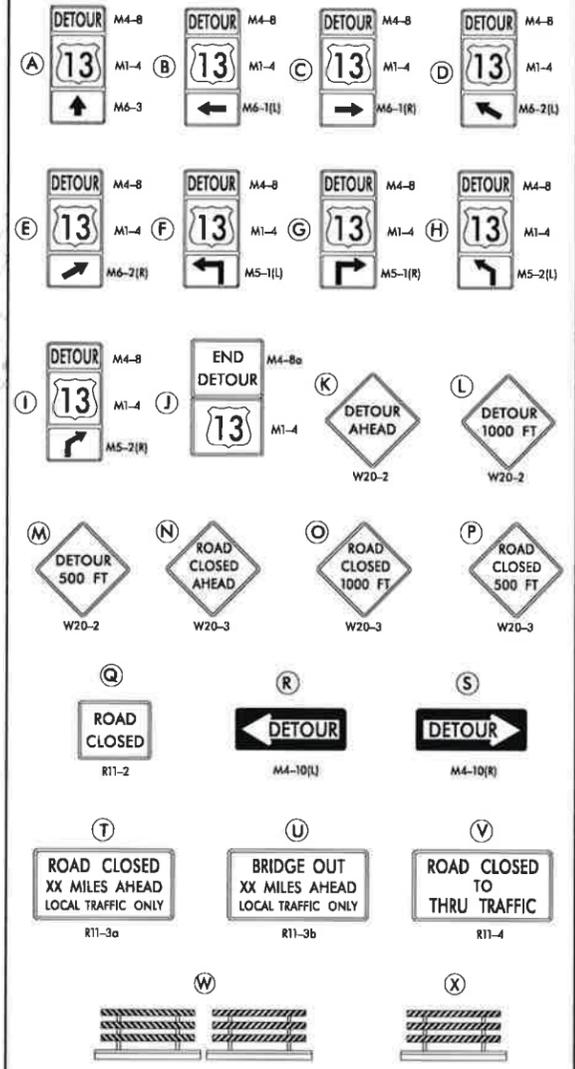


Y4

SIGNS Y1, Y2, Y3, AND Y4 SHALL BE DIAMOND GRADE RETROREFLECTIVE FLUORESCENT ORANGE BACKGROUND WITH BLACK LEGEND. ROUTE SHIELD TO HAVE WHITE BACKGROUND WITH BLACK LEGEND.



LEGEND



GENERAL NOTES

- ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD).
- THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
- DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
- SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
- THE COLORS, DIMENSIONS, AND CHARACTERISTICS OF ALL INTERSTATE, U.S. ROUTE, AND STATE ROUTE SHIELD SIGNS SHALL BE IN ACCORDANCE WITH SECTION 2D.11 OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
- SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
- FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
- SIGNS "N" THROUGH "Q" AND "T" AND "V", THE WORD "ROAD" SHOULD BE CHANGED TO "RAMP", "RR XING", OR "BRIDGE" WHERE APPLICABLE.
- WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
- "W" BARRICADES SHALL COMPLETELY RUN THE FULL WIDTH OF THE ROADWAY.
- BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

- NOTES:**
- THE DETOUR PLAN SHALL BE USED DURING STAGES 2 AND 3.
 - REFER TO THE RESPECTIVE MAINTENANCE OF TRAFFIC PLANS FOR ADDITIONAL DETOUR SIGNING INFORMATION.
 - SPECIAL SIGNS Z1 AND Z2 ARE TO BE INSTALLED BETWEEN DETOUR SIGN (M4-8) AND US ROUTE MARKER (M1-4).

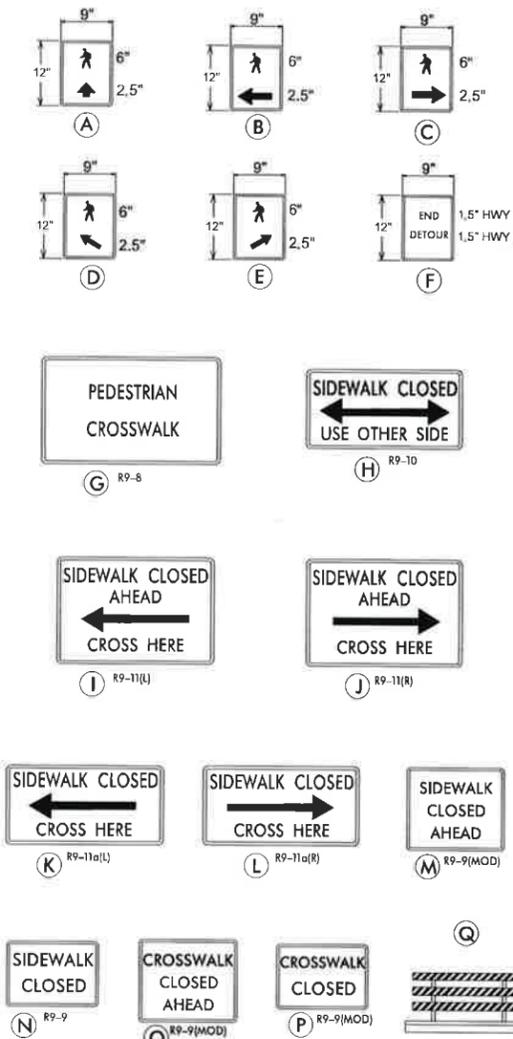
RECOMMENDED _____ DATE: _____	RECOMMENDED _____ DATE: _____	RECOMMENDED <i>EMOND</i> DATE: <i>8-14-18</i>	APPROVED CHIEF SAFETY OFFICER <i>[Signature]</i> DATE: <i>8-14-18</i>	APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: <i>8/14/18</i>
DELAWARE DEPARTMENT OF TRANSPORTATION		ADDENDUM / REVISIONS		VEHICULAR DETOUR PLAN
NOT TO SCALE		BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER		SHEET NO. 48
				TOTAL SHTS. 65

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SPECIAL SIGNS



LEGEND



SPECIAL NOTES

GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
5. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
6. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
7. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
8. "O" BARRICADE SHALL COMPLETELY RUN THE FULL WIDTH OF SIDEWALK OR PEDESTRIAN PATH.
9. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
10. PEDESTRIAN DETOUR TRAILBLAZERS NOT ATTACHED TO BARRICADES ARE TO EITHER BE GROUND MOUNTED OR ATTACHED TO AN EXISTING SIGN POST AT THE LOCATION SHOWN ON THE PLAN.
11. REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON PEDESTRIAN CHANNELIZING BARRICADE AND TEMPORARY PEDESTRIAN PATH.
12. REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON TEMPORARY PEDESTRIAN CURB RAMP AND TEMPORARY PEDESTRIAN CROSSWALK.

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: _____

RECOMMENDED *EMBUDA* DATE: *8-14-18*

APPROVED CHIEF SAFETY OFFICER *[Signature]* DATE: *8-14-18*

APPROVED TRAFFIC ENGINEER *[Signature]* DATE: *8/14/18*

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER

CONTRACT
T201407403
COUNTY
NEW CASTLE

BRIDGE NO.
1-577
DESIGNED BY: JAW
CHECKED BY: JJA

PEDESTRIAN DETOUR PLAN
STAGE 1 PHASE A

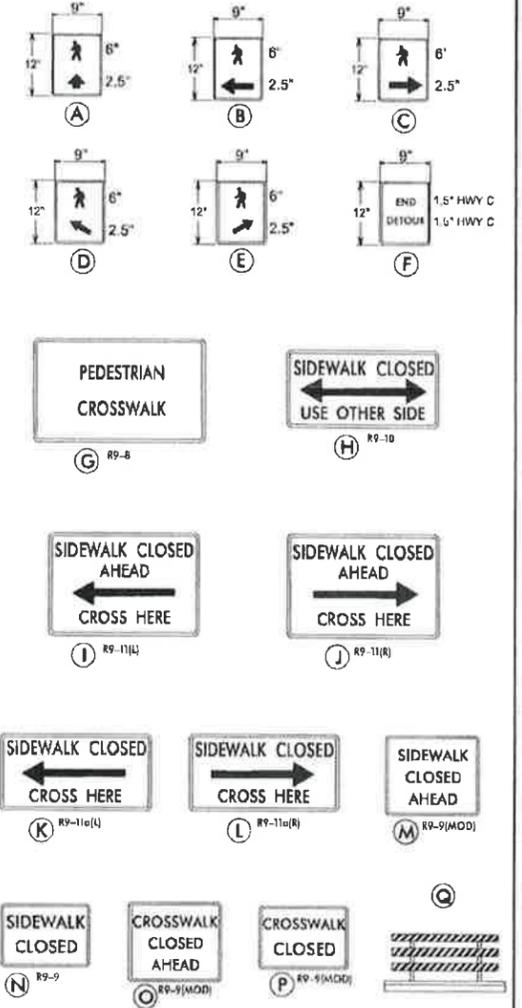
SHEET NO.
49
TOTAL SHTS.
65

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SPECIAL SIGNS



LEGEND



SPECIAL NOTES

GENERAL NOTES

- ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD).
- THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION).
- DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
- SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD). SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
- SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
- FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
- WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
- "O" BARRICADE SHALL COMPLETELY RUN THE FULL WIDTH OF SIDEWALK OR PEDESTRIAN PATH.
- BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
- PEDESTRIAN DETOUR TRAILBLAZERS NOT ATTACHED TO BARRICADES ARE TO EITHER BE GROUND MOUNTED OR ATTACHED TO AN EXISTING SIGN POST AT THE LOCATION SHOWN ON THE PLAN.
- REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON PEDESTRIAN CHANNELIZING BARRICADE AND TEMPORARY PEDESTRIAN PATH.
- REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON TEMPORARY PEDESTRIAN CURB RAMPS AND TEMPORARY PEDESTRIAN CROSSWALK.

RECOMMENDED _____ DATE: _____

RECOMMENDED _____ DATE: _____

RECOMMENDED *EMONDSON* DATE: *7-12-18*

APPROVED CHIEF SAFETY OFFICER *[Signature]* DATE: *8-6-18*

APPROVED TRAFFIC ENGINEER *[Signature]* DATE: *8/6/19*

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUM / REVISIONS

NOT TO SCALE

BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER

CONTRACT
T201407409
COUNTY
NEW CASTLE

BRIDGE NO.
1-577
DESIGNED BY: JAW
CHECKED BY: JUR

PEDESTRIAN DETOUR PLAN
STAGE 1 PHASE B

SHEET NO.
50
TOTAL SHTS.
65

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SPECIAL SIGNS

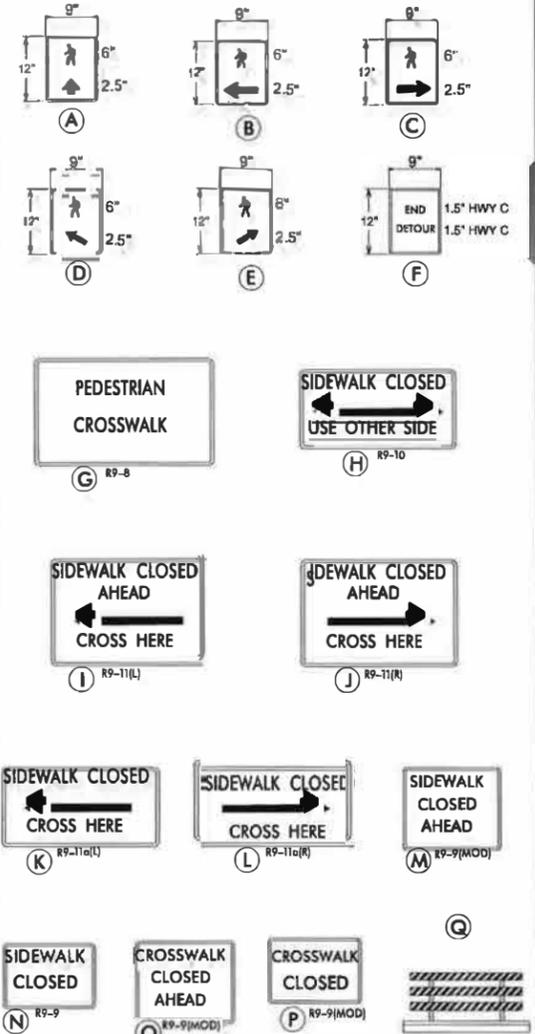


SPECIAL NOTES

1. WHEN PEDESTRIANS ARE PROHIBITED FROM CROSSING AT A SIGNALIZED INTERSECTION WITH A MARKED CROSSWALK, THE CORRESPONDING PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND REGULATORY EXCLUSION SIGN(S) SHALL BE INSTALLED. UPON COMPLETION OF THE CONSTRUCTION PHASE, RE-OPEN THE CROSSWALK, REMOVE BAGS FROM THE CORRESPONDING PEDESTRIAN SIGNAL HEADS AND REMOVE THE REGULATORY EXCLUSION SIGNING.



LEGEND



GENERAL NOTES

- ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
- THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) OR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
- DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
- SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
- SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
- FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
- WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
- "O" BARRICADE SHALL COMPLETELY RUN THE FULL WIDTH OF SIDEWALK OR PEDESTRIAN PATH.
- BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
- PEDESTRIAN DETOUR TRAILBLAZERS NOT ATTACHED TO BARRICADES ARE TO EITHER BE GROUND MOUNTED OR ATTACHED TO AN EXISTING SIGN POST AT THE LOCATION SHOWN ON THE PLAN.
- REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON PEDESTRIAN CHANNELIZING BARRICADE AND TEMPORARY PEDESTRIAN PATH.
- REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON TEMPORARY PEDESTRIAN CURB RAMPS AND TEMPORARY PEDESTRIAN CROSSWALK.

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RECOMMENDED _____ DATE: _____	RECOMMENDED _____ DATE: _____	RECOMMENDED <i>EMMAN</i> DATE: <i>8-10-18</i>	APPROVED CHIEF SAFETY OFFICER <i>W. Black</i> DATE: <i>8-10-18</i>	APPROVED TRAFFIC ENGINEER <i>M. J. [Signature]</i> DATE: <i>8/6/18</i>
DELAWARE DEPARTMENT OF TRANSPORTATION		NOT TO SCALE		BRIDGE NO. 1-577
ADDENDUM / REVISIONS		BRANDYWINE RIVER		PEDESTRIAN DETOUR PLAN
		NORtheast BOULEVARD OVER		STAGE 1 PHASE C
		NEW CASTLE		SHEET NO. 51
				TOTAL SHTS. 65

SPECIAL SIGNS



R1 R9-3A 18"x18"



R2 R9-3bPK 18"x12"



R3 R9-3bPL 18"x12"



T1 W11-2 36"x36"



T2 W16-7P(1) 24"x12"



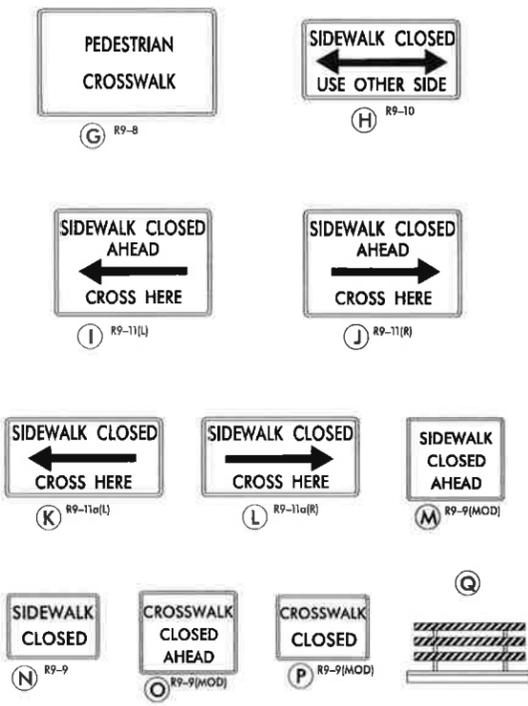
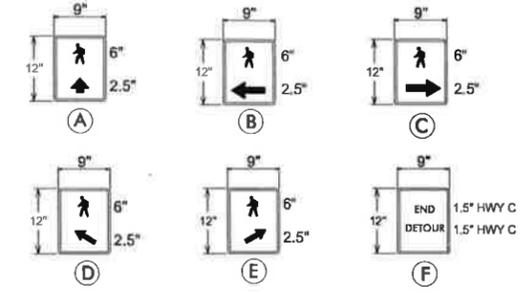
T3 R1-5 36"x36"

SPECIAL NOTES

1. WHEN PEDESTRIANS ARE PROHIBITED FROM CROSSING AT A SIGNALIZED INTERSECTION WITH A MARKED CROSSWALK, THE CORRESPONDING PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND REGULATORY EXCLUSION SIGN(S) SHALL BE INSTALLED. UPON COMPLETION OF THE CONSTRUCTION PHASE, RE-OPEN THE CROSSWALK, REMOVE BAGS FROM THE CORRESPONDING PEDESTRIAN SIGNAL HEADS AND REMOVE THE REGULATORY EXCLUSION SIGNING.



LEGEND



GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
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6. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
7. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
8. "O" BARRICADE SHALL COMPLETELY RUN THE FULL WIDTH OF SIDEWALK OR PEDESTRIAN PATH.
9. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
10. PEDESTRIAN DETOUR TRAILBLAZERS NOT ATTACHED TO BARRICADES ARE TO EITHER BE GROUND MOUNTED OR ATTACHED TO AN EXISTING SIGN POST AT THE LOCATION SHOWN ON THE PLAN.
11. REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON PEDESTRIAN CHANNELIZING BARRICADE AND TEMPORARY PEDESTRIAN PATH.
12. REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON TEMPORARY PEDESTRIAN CURB RAMP AND TEMPORARY PEDESTRIAN CROSSWALK.

RECOMMENDED _____ DATE: _____	RECOMMENDED _____ DATE: _____	RECOMMENDED <i>EMMORAN</i> DATE: <i>8-18</i>	C IEF OFFICER <i>[Signature]</i> <i>11-18</i>	EER <i>[Signature]</i> <i>9/14/18</i>
DELAWARE DEPARTMENT OF TRANSPORTATION		ADDENDUM / REVISIONS	CONTRACT T201407403	BRIDGE NO. 1-577
NOT TO SCALE		BRANDYWINE RIVER	COUNTY NEW CASTLE	DESIGNED BY: JAW
			CHECKED BY: JUI	PEDESTRIAN DETOUR PLAN STAGE 1 PHASE D AND PHASE E
				SHEET NO. 52
				TOTAL SHTS. 65

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SPECIAL SIGNS



R1 R9-3A 18"x18"



R2 R9-3bP2 18"x12"



R3 R9-3bPL 18"x12"

SPECIAL NOTES

1. WHEN PEDESTRIANS ARE PROHIBITED FROM CROSSING AT A SIGNALIZED INTERSECTION WITH A MARKED CROSSWALK, THE CORRESPONDING PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND REGULATORY EXCLUSION SIGN(S) SHALL BE INSTALLED. UPON COMPLETION OF THE CONSTRUCTION PHASE, RE-OPEN THE CROSSWALK, REMOVE BAGS FROM THE CORRESPONDING PEDESTRIAN SIGNAL HEADS AND REMOVE THE REGULATORY EXCLUSION SIGNING.
2. EXISTING WESTBOUND SIDEWALK ALONG THE BRIDGE SHALL BE MAINTAINED AND OPEN TO PEDESTRIAN TRAFFIC.
3. TEMPORARY CONSTRUCTION FENCE SHALL BE INSTALLED BETWEEN THE WORK AREA AND THE WESTBOUND SIDEWALK BEFORE STARTING STAGE 2.



LEGEND

GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
5. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
6. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
7. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
8. "O" BARRICADE SHALL COMPLETELY RUN THE FULL WIDTH OF SIDEWALK OR PEDESTRIAN PATH.
9. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
10. PEDESTRIAN DETOUR TRAILBLAZERS NOT ATTACHED TO BARRICADES ARE TO EITHER BE GROUND MOUNTED OR ATTACHED TO AN EXISTING SIGN POST AT THE LOCATION SHOWN ON THE PLAN.
11. REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON PEDESTRIAN CHANNELIZING BARRICADE AND TEMPORARY PEDESTRIAN PATH.
12. REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON TEMPORARY PEDESTRIAN CURB RAMP AND TEMPORARY PEDESTRIAN CROSSWALK.

RECOMMENDED _____ DATE: _____ RECOMMENDED _____ DATE: _____ RECOMMENDED *Emonan* DATE: *8-6-18* APPROVED CHIEF SAFETY OFFICER *[Signature]* DATE: *8-6-18* APPROVED TRAFFIC ENGINEER *[Signature]* DATE: *8/6/18*

DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUM / REVISIONS	NOT TO SCALE	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT	BRIDGE NO.	1-577	PEDESTRIAN DETOUR PLAN STAGE 2	SHEET NO.
				T201407403	DESIGNED BY: JAW			53
				COUNTY	CHECKED BY: JLR		TOTAL SHTS.	
				NEW CASTLE			65	

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SPECIAL SIGNS



R1 18"x18"



R2 18"x12"



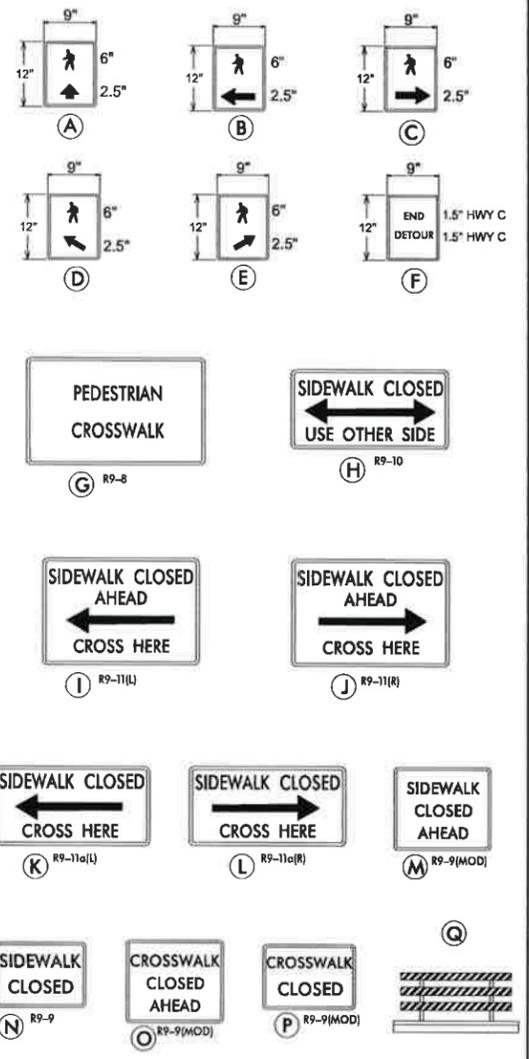
R3 18"x12"

SPECIAL NOTES

1. WHEN PEDESTRIANS ARE PROHIBITED FROM CROSSING AT A SIGNALIZED INTERSECTION WITH A MARKED CROSSWALK, THE CORRESPONDING PEDESTRIAN SIGNAL HEADS SHALL BE BAGGED AND REGULATORY EXCLUSION SIGN(S) SHALL BE INSTALLED. UPON COMPLETION OF THE CONSTRUCTION PHASE, RE-OPEN THE CROSSWALK, REMOVE BAGS FROM THE CORRESPONDING PEDESTRIAN SIGNAL HEADS AND REMOVE THE REGULATORY EXCLUSION SIGNING.
2. THE NEWLY CONSTRUCTED EASTBOUND SIDEWALK ALONG THE BRIDGE SHALL BE OPEN TO PEDESTRIAN TRAFFIC.
3. TEMPORARY CONSTRUCTION FENCE SHALL BE INSTALLED BETWEEN THE WORK AREA AND THE EASTBOUND SIDEWALK BEFORE STARTING STAGE 3.



LEGEND



GENERAL NOTES

1. ALL DETOUR SIGNING, INCLUDING TRAILBLAZERS, ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR IN COMPLIANCE WITH "THE DELAWARE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.)
2. THE CONTRACTOR SHALL COMPLY WITH GUIDELINES IN "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD PART 6) FOR BARRICADES AND SIGNS (AS PER LATEST REVISION.)
3. DESIGN OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE FHWA STANDARD HIGHWAY SIGNS BOOK.
4. SIZES OF ALL SIGNS SHALL BE IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD.) SIZE OF SIGN SHALL BE BASED ON TYPE OF ROADWAY ON WHICH THE SIGN IS INSTALLED.
5. SIGNS NO LONGER IN USE SHALL BE COMPLETELY COVERED WITH NO RETROREFLECTIVE MATERIAL SHOWING, OR SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER.
6. FIELD CONDITIONS MAY DICTATE CHANGES AT SOME TIME DURING THE LIFE OF THE CONTRACT. IN THE EVENT OF OMISSIONS OR CORRECTIONS, THE SIGNING PROVISIONS OF "THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (DE MUTCD) WILL PREVAIL.
7. WARNING SIGNS AND DETOUR TRAILBLAZERS SHALL BE MOUNTED ON BREAKAWAY POSTS AND HAVE RETROREFLECTIVE FLUORESCENT ORANGE SHEETING.
8. "Q" BARRICADE SHALL COMPLETELY RUN THE FULL WIDTH OF SIDEWALK OR PEDESTRIAN PATH.
9. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.
10. PEDESTRIAN DETOUR TRAILBLAZERS NOT ATTACHED TO BARRICADES ARE TO EITHER BE GROUND MOUNTED OR ATTACHED TO AN EXISTING SIGN POST AT THE LOCATION SHOWN ON THE PLAN.
11. REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON PEDESTRIAN CHANNELIZING BARRICADE AND TEMPORARY PEDESTRIAN PATH.
12. REFER TO CONSTRUCTION PLAN SHEETS FOR DETAILS ON TEMPORARY PEDESTRIAN CURB RAMPS AND TEMPORARY PEDESTRIAN CROSSWALK.

RECOMMENDED _____ DATE: _____	RECOMMENDED _____ DATE: _____	RECOMMENDED <i>EMM</i> DATE: <i>8-6-18</i>	APPROVED CHIEF SAFETY OFFICER <i>[Signature]</i> DATE: <i>8-6-18</i>	APPROVED TRAFFIC ENGINEER <i>[Signature]</i> DATE: <i>8/6/18</i>
DELAWARE DEPARTMENT OF TRANSPORTATION ADDENDUM / REVISIONS		NOT TO SCALE	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT: T201407403 COUNTY: NEW CASTLE BRIDGE NO.: 1-577 DESIGNED BY: JAW CHECKED BY: JUR
			PEDESTRIAN DETOUR PLAN STAGE 3	SHEET NO. 54 TOTAL SHTS. 65

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PANELBOARD - NORTHEAST BLVD/12TH STREET

120/240 SINGLE PHASE, 3 WIRE + GND
 200 AMP BUS
 100 AMP 2P CONTACTOR
 LUMINAIRE VOLTAGE: 120 VOLTS

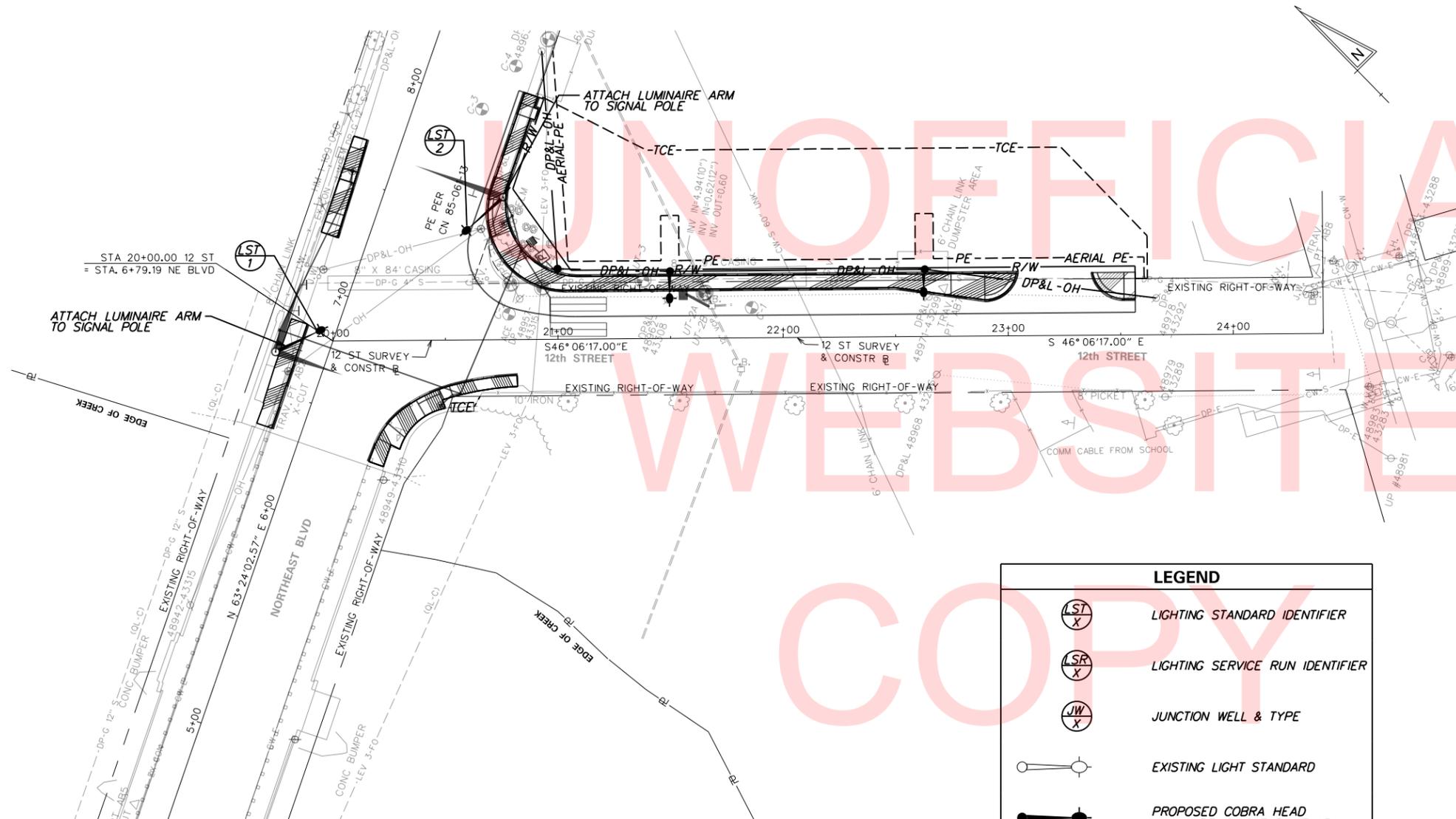
CKT. NO.	EQUIPMENT SERVED	CONNECTED LOAD		PHASE AND VOLTS	BRANCH CIRCUIT BREAKERS			REMARKS	CKT. NO.	EQUIPMENT SERVED	CONNECTED LOAD		PHASE AND VOLTS	BRANCH CIRCUIT BREAKERS			REMARKS
		KW	AMPS		NUMBER OF POLES	FRAME SIZE	TRIP SIZE				KW	AMPS		NUMBER OF POLES	FRAME SIZE	TRIP SIZE	
1	LST-1	0.25	2.7	A/120	2	100A	20A	1-250W HPS	2	SPACE							
3	LST-2	0.25	2.7	B/120					4	SPACE							
5	SPACE								6	SPACE							
7	SPACE								8	SPACE							

LIGHTING STANDARD SCHEDULE

NO.	CIRCUIT NO.	STATION	OFFSET	ARM	LIGHT STANDARD
1	1	6+66.00	22.5' LT	15	M-C-11 250W HPS COBRA HEAD
2	3	7+52.00	55' RT	15	M-C-11 250W HPS COBRA HEAD

NOTES:

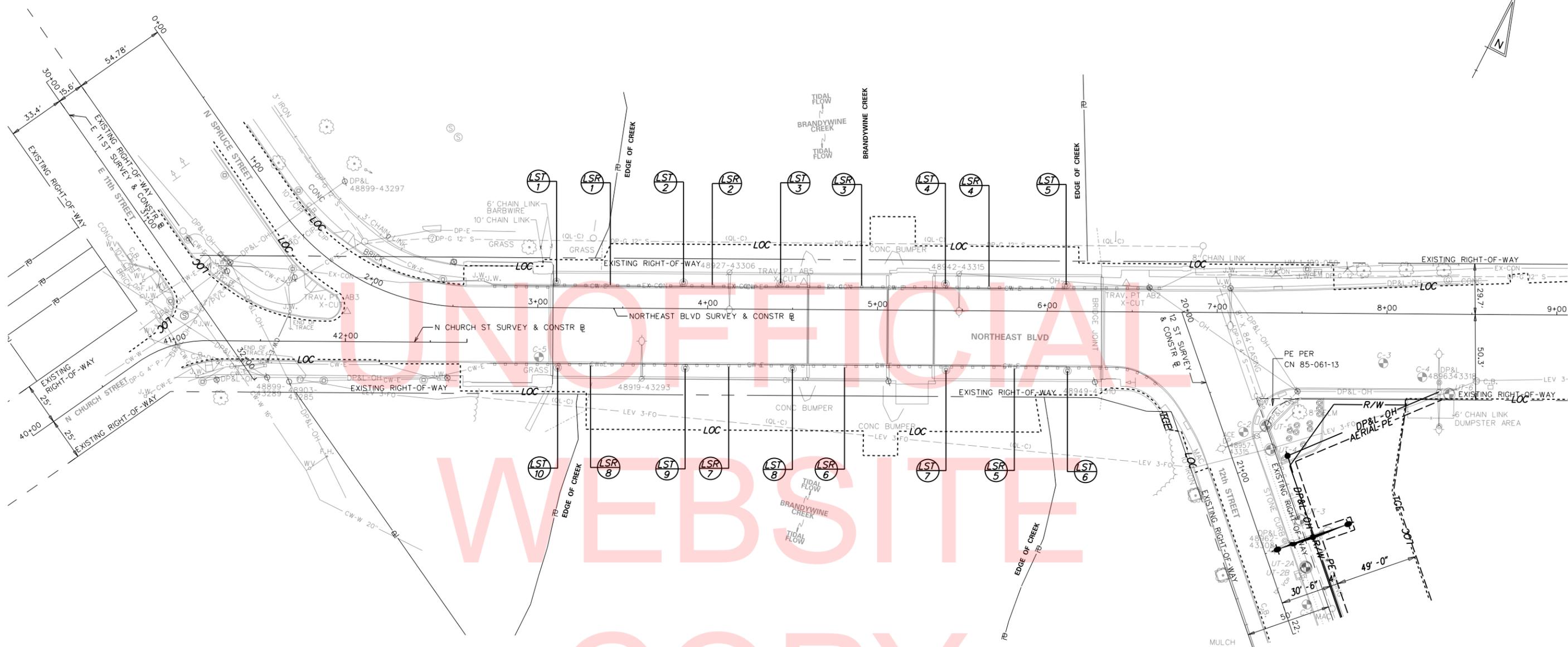
- ELECTRICAL WORK SHALL BE PERFORMED AND ALL MATERIAL PROVIDED SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE OF THE NATIONAL FIRE PROTECTION PUBLICATION, TO ALL LOCAL AND SPECIAL LAWS, AND/OR TO ORDINANCES GOVERNING SUCH ELECTRICAL CODE SHALL BE CONSIDERED THE MINIMUM REQUIREMENTS FOR THE ELECTRICAL WORK AND IF THERE IS A CONFLICT BETWEEN THE REQUIREMENTS SPECIFIED IN THE CONTRACT DOCUMENTS AND THE CODE, THE MORE STRINGENT REQUIREMENTS WILL APPLY AS DETERMINED AND APPROVED BY THE ENGINEER. WHEN THESE REQUIREMENTS DO NOT GOVERN, AND WHERE NOT OTHERWISE SPECIFIED, ELECTRICAL MATERIALS SHALL CONFORM TO THE STANDARDIZATION RULES OF THE INSTITUTE OF ELECTRICAL ENGINEERS.
- CONDUIT RUNS ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL LOCATE THE CONDUIT RUNS IN A MANNER THAT AVOIDS CONFLICTS WITH ALL EXISTING AND PROPOSED FEATURES APPROVED BY THE ENGINEER. ALL CONDUITS AND POLES SHALL BE LOCATED WITHIN EXISTING AND PROPOSED RIGHT-OF-WAY OR PERMANENT EASEMENT.
- THE CONTRACTOR SHALL PROVIDE AND SECURE ALL ELECTRICAL INSPECTIONS AS REQUIRED.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT SITE PRIOR TO WORK.
- ALL ELECTRICAL WORK INCLUDES FURNISHING LABOR, MATERIAL, EQUIPMENT AND SERVICE NECESSARY AND INCIDENTAL TO PROPER COMPLETION OF THE ELECTRICAL WORK AS SHOWN. MINOR ITEMS, ACCESSORIES OR DEVICES NECESSARY FOR THE COMPLETION AND PROPER OPERATION OF ANY SYSTEM SHALL BE PROVIDED WHETHER OR NOT THEY ARE SPECIFICALLY CALLED FOR BY SPECIFICATIONS OR DRAWINGS.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL THE CONTRACTORS INVOLVED ON THIS PROJECT. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND THE GENERAL SUPERINTENDENT THE LOCATIONS OF ALL CONDUIT AND POLE BASES TO ELIMINATE CONSTRUCTION CONFLICTS.
- THE ELECTRICAL CONTRACTOR SHALL OBTAIN AT HIS EXPENSE ALL NECESSARY PERMITS AND CERTIFICATES AS REQUIRED.
- EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXACT LOCATIONS PRIOR TO COMMENCING WORK.
- TERMINATE ALL CONDUITS WHEN ENTERING ENCLOSURES WITH LOCKNUT AND BONDING BUSHINGS. ALL OTHER CONDUITS SHALL BE PROVIDED WITH BONDING BUSHINGS. ALL CONDUITS SHALL BE BONDED WITH THE GROUND WIRE.
- COLOR CODING SHALL BE PROVIDED THROUGHOUT THE ENTIRE NETWORK FOR SERVICE, FEEDER, BRANCH AND CONTROL CONDUCTORS. EACH PHASE SHALL BE AN INDEPENDENT COLOR. CONDUCTORS SHALL HAVE FACTORY IMPREGNATED COLOR THROUGHOUT THEIR ENTIRE LENGTH. PHASE TAPING IS NOT PERMITTED.
- THE CONTRACTOR SHALL NOTIFY DELMARVA POWER TWO WEEKS IN ADVANCE TO ARRANGE FINAL POWER CONNECTIONS.
- ALL FUSED CONNECTIONS SHALL BE MADE IN THE POLE BASE. SPLICES IN JUNCTION WELLS SHALL NOT BE FUSED.
- USE CAUTION WHEN INSTALLING CONDUITS UNDER EXISTING CULVERTS. WHEN COMPLETE, ENSURE ALL STORM WATER MANAGEMENT FACILITIES ARE RESTORED TO EXISTING CONDITIONS.
- DO NOT SHARE HIGHWAY LIGHTING EQUIPMENT WITH SIGNAL OR ITMS EQUIPMENT.
- KEEP EXISTING LIGHTING ENERGIZED TO SERVE AS TEMPORARY LIGHTING UNTIL THE NEW LUMINAIRES ARE ENERGIZED.
- COORDINATE THE INSTALLATION OF LUMINAIRES ON UTILITY POLES WITH THE LOCAL ELECTRIC UTILITY.
- CONDUIT RUNS AND JUNCTION WELLS ARE SHOWN IN APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL LOCATE THE CONDUIT RUNS AND INSTALL JUNCTIONS WELLS IN A MANNER TO AVOID CONFLICTS WITH ALL EXISTING AND PROPOSED FEATURES AS DICTATED BY FIELD CONDITIONS.



LEGEND

- (LST X) LIGHTING STANDARD IDENTIFIER
- (SR X) LIGHTING SERVICE RUN IDENTIFIER
- (JW X) JUNCTION WELL & TYPE
- EXISTING LIGHT STANDARD
- PROPOSED COBRA HEAD LUMINAIRE, SINGLE DAVIT ARM
- P PROPOSED METER SERVICE PEDESTAL
- PROPOSED LIGHTING CONTROL CABINET
- PROPOSED JUNCTION WELL

LAST REVISED: 8/15/2018
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WEBSITE
COPY

LIGHTING STANDARD SCHEDULE (LST)

NO.	CIRCUIT NO.	STATION	OFFSET	NORTHING	EASTING	ARM	LIGHT STANDARD
1	X	3+10.00	15' LT	-	-	N/A	LUMEC 35W LED
2	X	3+83.00	15' LT	-	-	N/A	LUMEC 35W LED
3	X	4+42.00	15' LT	-	-	N/A	LUMEC 35W LED
4	X	5+40.00	15' LT	-	-	N/A	LUMEC 35W LED
5	X	6+10.00	15' LT	-	-	N/A	LUMEC 35W LED
6	X	6+10.00	35' RT	-	-	N/A	LUMEC 35W LED
7	X	5+40.00	35' RT	-	-	N/A	LUMEC 35W LED
8	X	4+42.00	35' RT	-	-	N/A	LUMEC 35W LED
9	X	3+83.00	35' RT	-	-	N/A	LUMEC 35W LED
10	X	3+10.00	35' RT	-	-	N/A	LUMEC 35W LED

LIGHTING SERVICE SCHEDULE (LSR)

SERVICE RUN	DISTANCE (L.F.)	DESCRIPTION	INSTALLATION
1	75	2-#6 & 1 #6 GND IN 2" RMC	MOUNTED ON METAL BARRIER
2	55	2-#6 & 1 #6 GND IN 2" RMC	MOUNTED ON METAL BARRIER
3	95	2-#6 & 1 #6 GND IN 2" RMC	MOUNTED ON METAL BARRIER
4	70	2-#6 & 1 #6 GND IN 2" RMC	MOUNTED ON METAL BARRIER
5	70	2-#6 & 1 #6 GND IN 2" RMC	EXISTING TO REMAIN
6	95	2-#6 & 1 #6 GND IN 2" RMC	EXISTING TO REMAIN
7	55	2-#6 & 1 #6 GND IN 2" RMC	EXISTING TO REMAIN
8	75	2-#6 & 1 #6 GND IN 2" RMC	EXISTING TO REMAIN

LEGEND

(LST X)	LIGHTING STANDARD IDENTIFIER
(LSR X)	LIGHTING SERVICE RUN IDENTIFIER

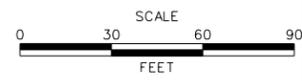
NOTES:

- REPLACE EXISTING TWIN MOUNTED ORNAMENTAL LIGHT POLES FIXTURES WITH LUMEC SERENADE 35W LED FIXTURE. ALL POLE FIXTURES TO BE REPLACED.
- REPLACE LIGHTING CONDUIT AND CABLE ON NORTH SIDE OF BRIDGE. PROVIDE 2" RMC CONDUIT ATTACHED TO METAL RAILING. PROVIDE 2-#6 AWG AND GND CONDUCTOR SPLICING IN EXISTING JUNCTION WELL.
- COORDINATE WITH THE CITY OF WILMINGTON DEPARTMENT OF PUBLIC WORK FOR INFORMATION REGARDING EXISTING LIGHTING SERVICE AND CIRCUIT INFORMATION.
- REFER TO BRIDGE PLANS FOR ADDITIONAL LIGHTING AND CONDUIT INFORMATION.

LAST REVISED: 8/15/2018 P:\60323054 DelDOT AGR 1672 BDCS\101 - Rehab Br. 1-577 Wilmington\900 Work\910 CAD\20-SHEETS\Civil\102.dgn

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS



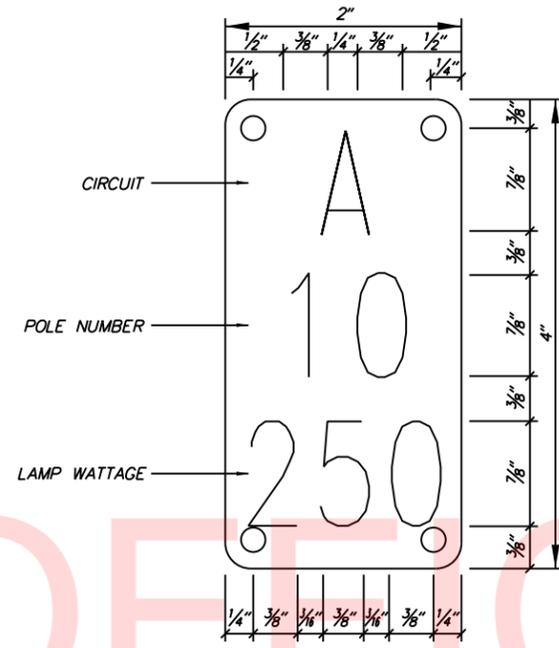
**BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER**

CONTRACT T201407403	BRIDGE NO. 1-577
COUNTY NEW CASTLE	DESIGNED BY: KMH CHECKED BY: ADM

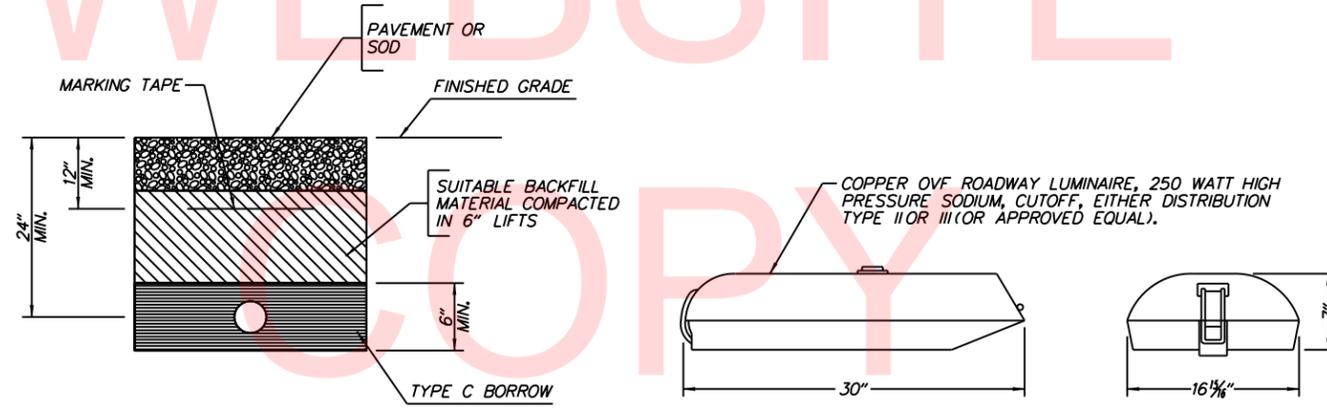
LIGHTING PLAN - 2

SHEET NO. 56
TOTAL SHTS. 65

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WEBSITE



TYPICAL POLE IDENTIFICATION TAG
NOT TO SCALE



DIRECT BURIED CONDUIT DETAIL
NOT TO SCALE

250 WATT HPS LUMINAIRE
NOT TO SCALE

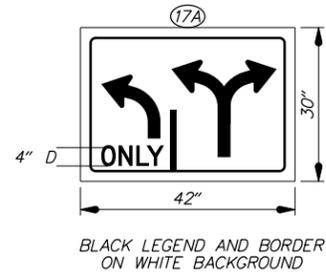
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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS		BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER	CONTRACT	BRIDGE NO.	1-577	LIGHTING PLAN - 3	SHEET NO.
				T201407403	DESIGNED BY:	STS		57
				COUNTY	CHECKED BY:	JPP	TOTAL SHTS.	65
				NEW CASTLE				

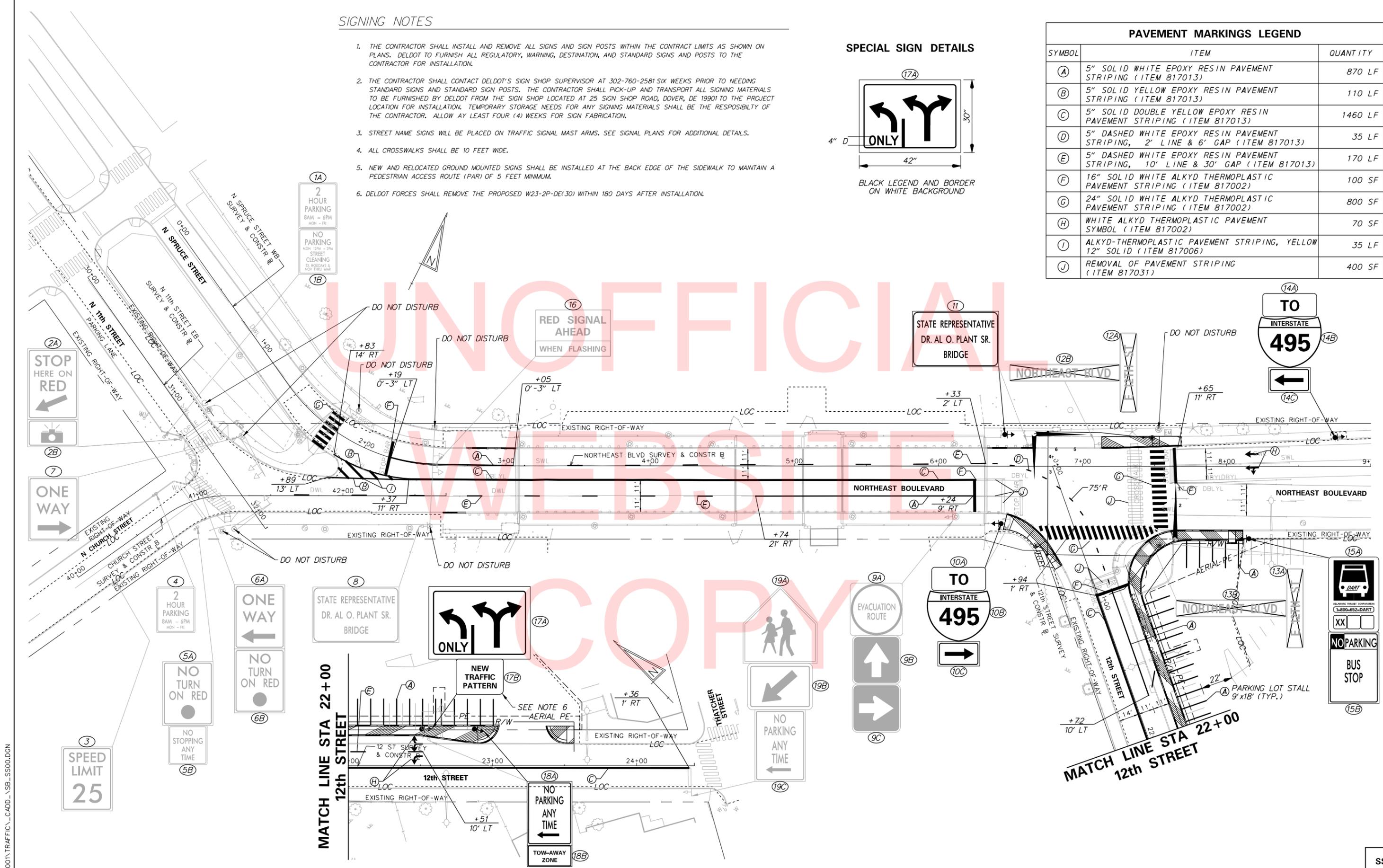
SIGNING NOTES

1. THE CONTRACTOR SHALL INSTALL AND REMOVE ALL SIGNS AND SIGN POSTS WITHIN THE CONTRACT LIMITS AS SHOWN ON PLANS. DELDOT TO FURNISH ALL REGULATORY, WARNING, DESTINATION, AND STANDARD SIGNS AND POSTS TO THE CONTRACTOR FOR INSTALLATION.
2. THE CONTRACTOR SHALL CONTACT DELDOT'S SIGN SHOP SUPERVISOR AT 302-760-2581 SIX WEEKS PRIOR TO NEEDING STANDARD SIGNS AND STANDARD SIGN POSTS. THE CONTRACTOR SHALL PICK-UP AND TRANSPORT ALL SIGNING MATERIALS TO BE FURNISHED BY DELDOT FROM THE SIGN SHOP LOCATED AT 25 SIGN SHOP ROAD, DOVER, DE 19901 TO THE PROJECT LOCATION FOR INSTALLATION. TEMPORARY STORAGE NEEDS FOR ANY SIGNING MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALLOW AT LEAST FOUR (4) WEEKS FOR SIGN FABRICATION.
3. STREET NAME SIGNS WILL BE PLACED ON TRAFFIC SIGNAL MAST ARMS. SEE SIGNAL PLANS FOR ADDITIONAL DETAILS.
4. ALL CROSSWALKS SHALL BE 10 FEET WIDE.
5. NEW AND RELOCATED GROUND MOUNTED SIGNS SHALL BE INSTALLED AT THE BACK EDGE OF THE SIDEWALK TO MAINTAIN A PEDESTRIAN ACCESS ROUTE (PAR) OF 5 FEET MINIMUM.
6. DELDOT FORCES SHALL REMOVE THE PROPOSED W23-2P-DE(30) WITHIN 180 DAYS AFTER INSTALLATION.

SPECIAL SIGN DETAILS



PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	5" SOLID WHITE EPOXY RESIN PAVEMENT STRIPING (ITEM 817013)	870 LF
(B)	5" SOLID YELLOW EPOXY RESIN PAVEMENT STRIPING (ITEM 817013)	110 LF
(C)	5" SOLID DOUBLE YELLOW EPOXY RESIN PAVEMENT STRIPING (ITEM 817013)	1460 LF
(D)	5" DASHED WHITE EPOXY RESIN PAVEMENT STRIPING, 2' LINE & 6' GAP (ITEM 817013)	35 LF
(E)	5" DASHED WHITE EPOXY RESIN PAVEMENT STRIPING, 10' LINE & 30' GAP (ITEM 817013)	170 LF
(F)	16" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	100 SF
(G)	24" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	800 SF
(H)	WHITE ALKYD THERMOPLASTIC PAVEMENT SYMBOL (ITEM 817002)	70 SF
(I)	ALKYD-THERMOPLASTIC PAVEMENT STRIPING, YELLOW 12" SOLID (ITEM 817006)	35 LF
(J)	REMOVAL OF PAVEMENT STRIPING (ITEM 817031)	400 SF



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	ADDENDUMS / REVISIONS	SCALE 	CONTRACT T201407403 COUNTY NEW CASTLE	BRIDGE NO. 1-577	DESIGNED BY: GNC CHECKED BY: JLR	SHEET NO. 58
	BR 1-577 ON N050 NORTHEAST BOULEVARD OVER BRANDYWINE RIVER			SIGNING, STRIPING AND CONDUIT PLAN		TOTAL SHTS. 65

SS-01

PERMANENT SIGN SCHEDULE

#	SHEET NO.	PLAN IDENTIFIER	SIGN DESIGNATION	QTY.	DESCRIPTION	SIGN WIDTH (IN)	SIGN HEIGHT (IN)	SIGN AREA (SF)	ITEM 819018 SINGLE POST (EACH)			ITEM 819019 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON MULTIPLE SIGN POSTS (SF)			POST INSTALLATION TYPE	Code X11 12' Post (W/ Basepost)	ITEM 819016 4" HOLE, 0-6" (EACH)	ITEM 819017 4" HOLE, >6" (EACH)	REMARKS	
									SIGN DISPOSITION	REMOVE	INSTALL	SIGN DISPOSITION	REMOVE	INSTALL						
425	SS-01	1A	R7-5	1	XX HOUR PARKING X:XX AM - X:XX PM	12"	18"		REMAIN											
-	SS-01	1B	SPECIAL	1	NO PARKING - STREET CLEANING	12"	18"		REMAIN											
561	SS-01	2A	R10-6(24)	1	STOP HERE ON RED (Straight Arrow) - 24x36	24"	36"		REMAIN											
594	SS-01	2B	R10-19P(24)	1	PHOTO ENFORCED - SYMBOL (plaque) - 24x12	24"	12"		REMAIN											
42	SS-01	3	R2-1-25(24)	1	SPEED LIMIT (25 MPH - 24x30)	24"	30"		REMAIN											
425	SS-01	4	R7-5	1	XX HOUR PARKING X:XX AM - X:XX PM	12"	18"		REMAIN											
572	SS-01	5A	R10-11(24)	1	NO TURN ON RED (Ball) - 24x30	24"	30"		REMAIN											
422	SS-01	5B	R7-4	1	NO STANDING ANY TIME	12"	18"		REMAIN											
402	SS-01	6A	R6-2_L(24)	1	ONE WAY (LEFT ARROW) - 24x30	24"	30"		REMAIN											
572	SS-01	6B	R10-11(24)	1	NO TURN ON RED (Ball) - 24x30	24"	30"		REMAIN											
397	SS-01	7	R6-2_R(24)	1	ONE WAY (RIGHT ARROW) - 24x30	24"	30"		REMAIN											
-	SS-01	8	SPECIAL	1	STATE REPRESENTATIVE DR. AL O. PLANT BRIDGE	36"	24"		REMAIN											
1924	SS-01	9A	EM-1-DE	1	EVACUATION ROUTE	24"	24"		REMAIN											
1921	SS-01	9B	EM-1	1	HURRICANE EVACUATION ROUTE (up arrow)	24"	24"		REMAIN											
1923	SS-01	9C	EM-1_R	1	HURRICANE EVACUATION ROUTE (right arrow)	24"	24"		REMAIN											
1534	SS-01	10A	M4-5(24)	1	TO - 24x12	24"	12"		REPOSITION	1	1			CONCRETE		1			INSTALL ON EXISTING SIGN POST	
1473	SS-01	10B	M1-1(30)	1	INTERSTATE ROUTE (3 - Digit Sign) - 30x24	30"	24"		REPOSITION	1	1									
1606	SS-01	10C	M6-1_R(30)	1	DIRECTIONAL ARROW (Right) - 30x21	30"	21"		REPOSITION	1	1									
-	SS-01	11	SPECIAL	1	STATE REPRESENTATIVE DR. AL O. PLANT BRIDGE	36"	24"		REPOSITION	1	1			CONCRETE	1	1			REPOSITION FROM STRAIN POLE	
1671	SS-01	12A	D3-1(6)	1	STREET NAME (1 Line)		6"		REMOVE	1									REMOVE FROM STRAIN POLE	
1671	SS-01	12B	D3-1(6)	1	STREET NAME (1 Line)		6"		REMOVE	1									REMOVE FROM STRAIN POLE	
1671	SS-01	13A	D3-1(6)	1	STREET NAME (1 Line)		6"		REMOVE	1										
1671	SS-01	13B	D3-1(6)	1	STREET NAME (1 Line)		6"		REMOVE	1										
1534	SS-01	14A	M4-5(24)	1	TO - 24x12	24"	12"	2.0	RENEW	1	1								INSTALL ON SAME UTILITY POLE	
1473	SS-01	14B	M1-1(30)	1	INTERSTATE ROUTE (3 - Digit Sign) - 30x24	30"	24"	5.0	RENEW	1	1								INSTALL ON SAME UTILITY POLE	
1607	SS-01	14C	M6-1_L(30)	1	DIRECTIONAL ARROW (Left) - 30x21	30"	21"	4.4	RENEW	1	1								INSTALL ON SAME UTILITY POLE	
1694	SS-01	15A	D4-3-DE	1	BUS STOP (DART)	12"	18"	1.5	RENEW	1	1			CONCRETE	1	1				
438	SS-01	15B	R7-107	1	NO PARKING BUS STOP	12"	18"	1.5	RENEW	1	1									
879	SS-01	16	W3-3-DE(60)	1	RED SIGNAL AHEAD WHEN FLASHING - 60x48	60"	48"		REMAIN										INSTALLED ON SPAN WIRES	
-	SS-01	17A	SPECIAL	1	ADVANCE INTERSECTION LANE CONTROL (Left, Left - Right) 42"x30"	42"	30"	8.8	NEW		1			CONCRETE	1	1				
1459	SS-01	17B	W23-2P-DE(30)	1	NEW TRAFFIC PATTERN (plaque) - 30x24	30"	24"	5.0	NEW											
418	SS-01	18A	R7-1	1	NO PARKING ANY TIME	12"	18"	1.5	RENEW	1	1			CONCRETE	1	1			RELOCATE SIGN	
445	SS-01	18B	R7-201P_R	1	TOW AWAY ZONE (plaque - red)	12"	6"	0.5	NEW		1									
1965	SS-01	19A	S1-1(30)	1	SCHOOL SIGN (Symbol) - 30x30	30"	30"		REMAIN											
1359	SS-01	19B	W16-7P_L(24)	1	LEFT DOWNWARD DIAGONAL ARROW (plaque) - 24x12	24"	18"		REMAIN											
422	SS-01	19C	R7-4	1	NO STANDING ANY TIME	12"	18"		REMAIN											
1675	Sht 61	S-1	D3-1(16)	2	STREET NAME (1 Line)	78"	24"	13.0	NEW		2								"E 12th ST" - Mast Arm Mounted	
1679	Sht 61	S-2	D3-1a(16)	1	STREET NAME + ROUTE SHIELD (1 Line)	120"	24"	20.0	NEW		1								"13", "Northeast Blvd" - Mast Arm Mounted	
140	Sht 61	S-3	SPECIAL	1	ADVANCE INTERSECTION LANE CONTROL (Left, Left - Right) 42"x30"	42"	30"	8.8	NEW		1								Install on Mast Arm	
PAGE TOTALS								72			14	16			0	0	4	5	0	

M:\PROJ\215016\0001\TRAFFIC\CADD_SB_SS00.DGN

DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

BR 1-577 ON N050
NORTHEAST BOULEVARD OVER
BRANDYWINE RIVER

CONTRACT
T201407403
COUNTY
NEW CASTLE

BRIDGE NO. 1-577
DESIGNED BY: GNC
CHECKED BY: JLR

SIGNING, STRIPING
AND CONDUIT PLAN

SS-02

SHEET NO.
59
TOTAL SHTS.
65

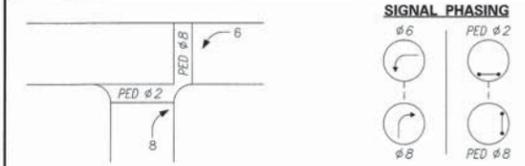
ADDITIONAL GENERAL SIGNAL NOTES

- SEE ULTIMATE TRAFFIC SIGNAL PLANS FOR CONSTRUCTION NOTES AND DETAILS.
- AT THE BEGINNING OF STAGE 2 PROGRAM TRAFFIC SIGNAL CONTROLLER TO OPERATE AS PER THE SIGNAL PHASING DIAGRAM AS SHOWN ON THIS SHEET.
- SIGNAL HEADS 1 AND 2 TO REMAIN BAGGED AND DISCONNECTED.
- SIGN S-3 TO REMAIN COVERED.
- UPON COMPLETION OF STAGE 3 AND RESTORING TRAFFIC PATTERNS ON NORTHEAST BLVD, UNCOVER SIGN S-3, REMOVE THE BAGS AND CONNECT SIGNAL HEADS 1 AND 2. PROGRAM THE TRAFFIC SIGNAL CONTROLLER AS SHOWN ON THE ULTIMATE TRAFFIC SIGNAL PLAN.

STAGES 2 AND 3



SIGNAL PHASING STAGE 2



PHASING NOTES

- PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.
- PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.

SIGNAL HEAD DIAGRAM



* SIGNAL HEADS 1 AND 2 TO REMAIN BAGGED AND DISCONNECTED.

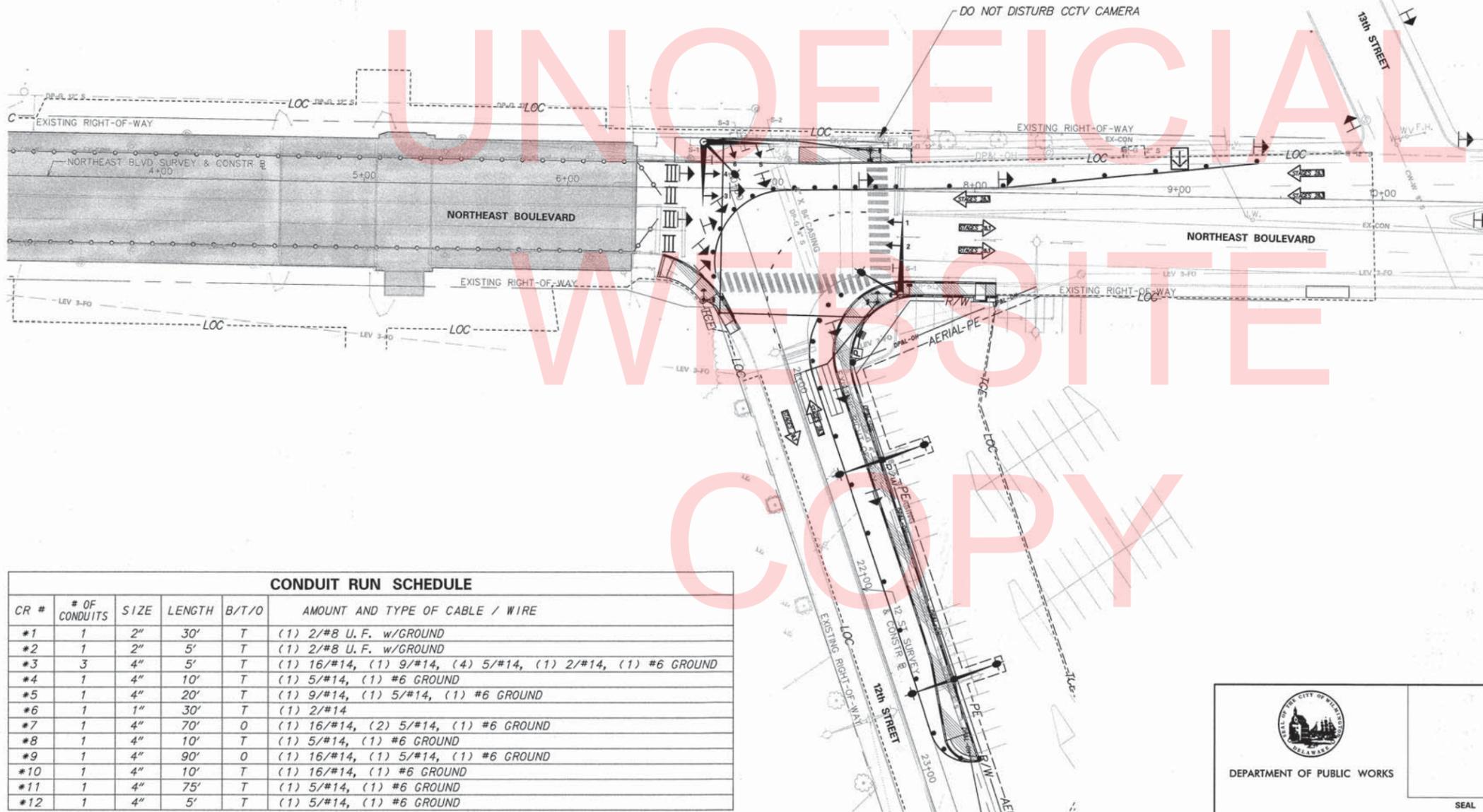
LEGEND

(AB)	ABANDON	(OH)	EXISTING OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
(CA)	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	(OP)	PROPOSED OVERHEAD RUN IDENTIFIER (# OF OVERHEAD RUN)
(CB)	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	(PB)	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
(CO)	EXISTING CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	(PB)	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
(CP)	PROPOSED CONDUIT RUN IDENTIFIER (# OF CONDUIT RUN)	(PL)	EXISTING POLE IDENTIFIER (# OF POLE)
(JW)	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	(PL)	PROPOSED POLE IDENTIFIER (# OF POLE)
(JW)	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	(RM)	REMOVE BY CONTRACTOR
(MA)	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	(RM)	REMOVE BY OTHERS
(MA)	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	(RM)	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1	□	□
LOOP DETECTOR, TYPE 2	□	□
LUMINAIRE	→	→
MAST ARM	→	→
MICROWAVE DETECTION	→	→
OPTICOM RECEIVER	→	→
OVERHEAD SIGNING	→	→
PEDESTRIAN POLE/BASE	○	○
PEDESTRIAN PUSHBUTTON	→	→
PEDESTRIAN SIGNAL HEAD	→	→
RIGHT-OF-WAY	---	—R/W—
SERVICE PEDESTAL	□	□
SIGNAL CABINET	□	□
SIGNAL HEAD	→	→
SIGNAL POLE/BASE	○	○
SPAN INSULATOR	◇	◇
SPAN WIRE	—XX—	—XX—
UTILITY POLE	⊗	⊗
VIDEO DETECTION	→	→

GENERAL SIGNAL NOTES

- LOOP DETECTORS: TYPE #2 - 6" x 25' - TO BE INSTALLED ON SIDE STREET THROUGH AND LEFT TURN MOVEMENTS.
- ALL SIGNAL POLES WILL BE 21 FEET, EXCEPT WHERE SHOWN.
- ALL SIGNAL EQUIPMENT REMOVED FROM THIS PROJECT IS TO BE RETURNED TO THE CITY OF WILMINGTON'S TRAFFIC SIGNAL SHOP.
- POLE BASES, CABINET BASE AND CONDUIT JUNCTION WELLS TO BE REMOVED IN ACCORDANCE WITH SECTION 211 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY ENGINEER. EXISTING CONDUIT IS TO BE ABANDONED.
- ALL GALVANIZED CONDUIT (GRC) SHALL BE REAMED AND THREADED. ALL GRC SHALL BE THREADED TOGETHER WITH APPROVED COUPLINGS, SET SCREW, BOLTED, AND COMPRESSION FITTING ARE NOT ACCEPTABLE.
- ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MGS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

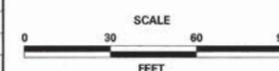


CR #	# OF CONDUITS	SIZE	LENGTH	B/T/O	AMOUNT AND TYPE OF CABLE / WIRE
*1	1	2"	30'	T	(1) 2/#8 U.F. w/GROUND
*2	1	2"	5'	T	(1) 2/#8 U.F. w/GROUND
*3	3	4"	5'	T	(1) 16/#14, (1) 9/#14, (4) 5/#14, (1) 2/#14, (1) #6 GROUND
*4	1	4"	10'	T	(1) 5/#14, (1) #6 GROUND
*5	1	4"	20'	T	(1) 9/#14, (1) 5/#14, (1) #6 GROUND
*6	1	1"	30'	T	(1) 2/#14
*7	1	4"	70'	O	(1) 16/#14, (2) 5/#14, (1) #6 GROUND
*8	1	4"	10'	T	(1) 5/#14, (1) #6 GROUND
*9	1	4"	90'	O	(1) 16/#14, (1) 5/#14, (1) #6 GROUND
*10	1	4"	10'	T	(1) 16/#14, (1) #6 GROUND
*11	1	4"	75'	T	(1) 5/#14, (1) #6 GROUND
*12	1	4"	5'	T	(1) 5/#14, (1) #6 GROUND

* EXISTING OR CONSTRUCTED IN PREVIOUS STAGE


 DEPARTMENT OF PUBLIC WORKS
 SEAL
 RECOMMENDED: [Signature]
 DATE: 7/30/18 2008

ADDENDUM / REVISIONS



**BR 1-577 ON
NORTHEAST BOULEVARD OVER
BRANDYWINE CREEK**

CONTRACT	PERMIT NO.
T201407403	DESIGNED BY: JAW
COUNTY	CHECKED BY: JLR
NEW CASTLE	

**SIGNAL PLAN
NORTHEAST BOULEVARD
at 12TH STREET**

SHEET NO.	60
TOTAL SHTS.	65



CITY OF WILMINGTON

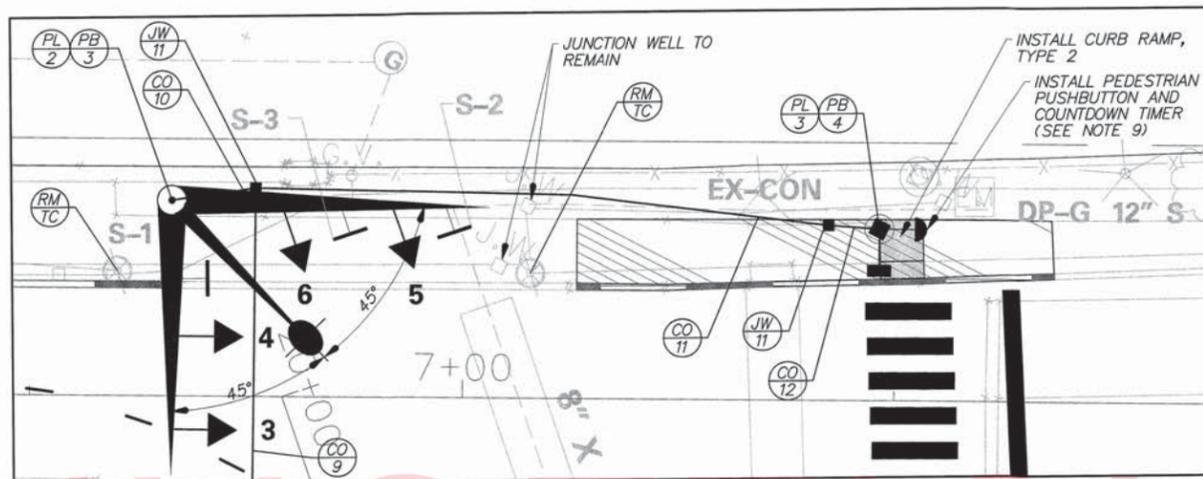
ADDITIONAL GENERAL SIGNAL NOTES

- POLE BASES SUPPORTING POLES WITH PEDESTRIAN PUSHBUTTONS SHALL BE CONSTRUCTED IMMEDIATELY ADJACENT TO THE FLAT (50:1 OR FLATTER) LANDING AREA OF THE CURB RAMP. THESE POLE BASES SHALL BE FLUSH WITH THE ADJOINING LANDING AREA. THE PEDESTRIAN PUSHBUTTON SHOULD BE INSTALLED AT A HEIGHT OF 42 TO 48 INCHES ABOVE THE LANDING AREA TO THE FACE OF THE PUSHBUTTON. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 7 FEET OR MORE THAN 10 FEET ABOVE.
- ALL PEDESTRIAN SIGNALS SHALL CONTAIN PEDESTRIAN COUNTDOWN DISPLAYS.
- THE CONTRACTOR SHALL INSTALL COUNTDOWN PEDESTRIAN SIGN (R10-3E) WITH PROPER PEDESTRIAN MOVEMENT ARROW FOR RELEVANT CROSSWALK DETECTION ABOVE EACH PEDESTRIAN PUSHBUTTON. THE FACE OF THE PUSHBUTTON AND SIGN SHALL BE INSTALLED PARALLEL WITH THE CROSSING.
- CONTRACTOR TO INSTALL LUMINAIRES. SEE LIGHTING PLANS FOR DETAILS.
- CONTRACTOR TO COORDINATE THE INSTALLATION OF TRAFFIC SIGNAL AND LIGHTING CONDUITS IN TRENCHES FOR CR# 2, 4, 5, 7 AND 8. REFER TO LIGHTING PLANS FOR LIGHTING CONDUIT DETAILS. TRAFFIC SIGNAL AND LIGHTING SHALL NOT SHARE THE SAME CONDUIT OR JUNCTION WELL.

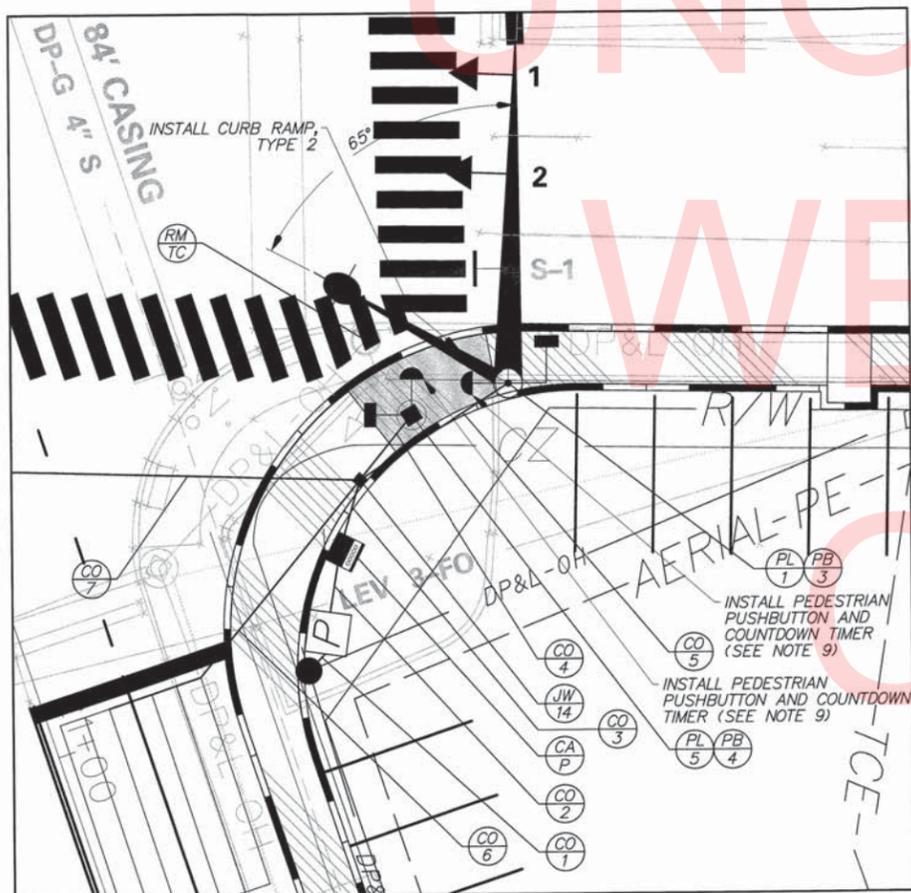
ADDITIONAL LEGEND

50:1 OR FLATTER

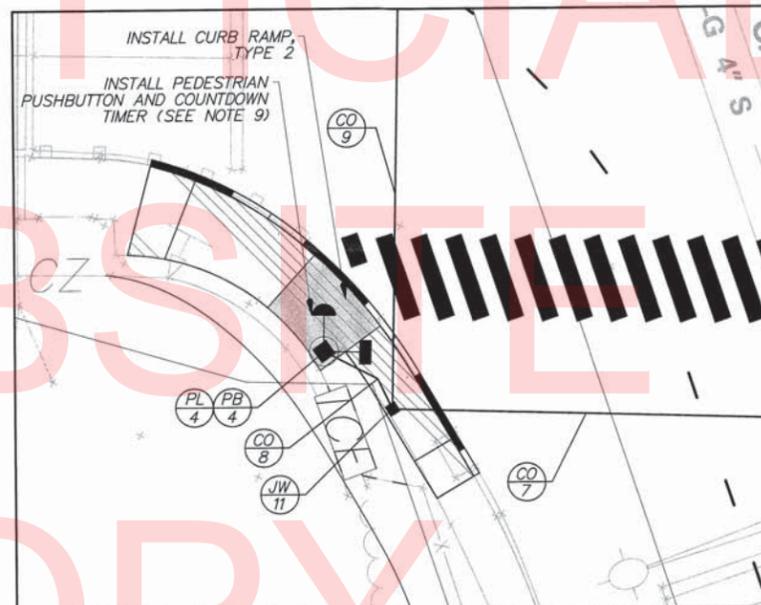
ULTIMATE



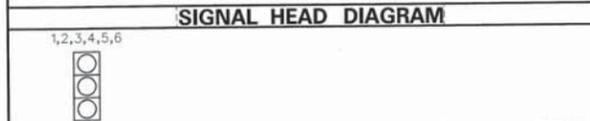
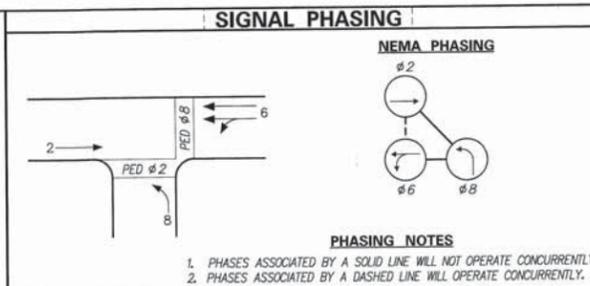
DETAIL 1 - CURB RAMP, TYPE 2



DETAIL 3 - CURB RAMP, TYPE 2



DETAIL 2 - CURB RAMP, TYPE 2



LEGEND

(AB)	ABANDON	(OH)	EXISTING OVERHEAD RUN IDENTIFIER (* OF OVERHEAD RUN)
(CA)	EXISTING CABINET IDENTIFIER (TYPE OF CABINET)	(PH)	PROPOSED OVERHEAD RUN IDENTIFIER (* OF OVERHEAD RUN)
(CP)	PROPOSED CABINET IDENTIFIER (TYPE OF CABINET)	(PB)	EXISTING POLE BASE IDENTIFIER (TYPE OF POLE BASE)
(CO)	EXISTING CONDUIT RUN IDENTIFIER (* OF CONDUIT RUN)	(PB)	PROPOSED POLE BASE IDENTIFIER (TYPE OF POLE BASE)
(CO)	PROPOSED CONDUIT RUN IDENTIFIER (* OF CONDUIT RUN)	(PL)	EXISTING POLE IDENTIFIER (* OF POLE)
(JW)	EXISTING JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	(PL)	PROPOSED POLE IDENTIFIER (* OF POLE)
(JW)	PROPOSED JUNCTION WELL IDENTIFIER (TYPE OF JUNCTION WELL)	(RM)	REMOVE BY CONTRACTOR
(MA)	EXISTING MAST ARM IDENTIFIER (LENGTH OF ARM)	(RM)	REMOVE BY OTHERS
(MA)	PROPOSED MAST ARM IDENTIFIER (LENGTH OF ARM)	(TC)	REMOVE BY TRAFFIC CONTRACTOR

	EXISTING SYMBOL	PROPOSED SYMBOL
JUNCTION WELL	J.W.	■
LOOP DETECTOR, TYPE 1	□	□
LOOP DETECTOR, TYPE 2	□	□
LUMINAIRE	◇	◇
MAST ARM	↗	↗
MICROWAVE DETECTION	↖	↖
OPTICOM RECEIVER	○	○
OVERHEAD SIGNING	—	—
PEDESTRIAN POLE/BASE	○	○
PEDESTRIAN PUSHBUTTON	→	→
PEDESTRIAN SIGNAL HEAD	⊂	⊂
RIGHT-OF-WAY	---	— R/W —
SERVICE PEDESTAL	□	□
SIGNAL CABINET	□	□
SIGNAL HEAD	→	→
SIGNAL POLE/BASE	○	○
SPAN INSULATOR	◇	◇
SPAN WIRE	— XX —	— XX —
UTILITY POLE	⊙	⊙
VIDEO DETECTION	⊂	⊂

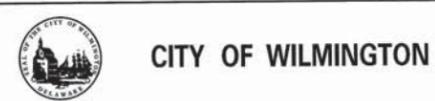
- GENERAL SIGNAL NOTES**
- LOOP DETECTORS: TYPE #2 - 6' x 25' - TO BE INSTALLED ON SIDE STREET THROUGH AND LEFT TURN MOVEMENTS.
 - ALL SIGNAL POLES WILL BE 21 FEET, EXCEPT WHERE SHOWN.
 - ALL SIGNAL EQUIPMENT REMOVED FROM THIS PROJECT IS TO BE RETURNED TO THE CITY OF WILMINGTON'S TRAFFIC SIGNAL SHOP.
 - POLE BASES, CABINET BASE AND CONDUIT JUNCTION WELLS TO BE REMOVED IN ACCORDANCE WITH SECTION 211 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY ENGINEER. EXISTING CONDUIT IS TO BE ABANDONED.
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 - ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY, AND/OR THE APPROPRIATE UTILITY PRIOR TO THE BEGINNING OF CONSTRUCTION FOR THE UTILITY MARKOUTS. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY DELDOT TRAFFIC IMMEDIATELY BEFORE CONSTRUCTION.

DEPARTMENT OF PUBLIC WORKS

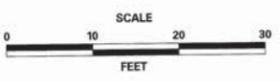
SEAL

RECOMMENDED *[Signature]* 7/30/18 2008 DATE

C:\USERS\MAX.SANTILL\DESKTOP\WILM_SIG_BORDER.DGN



ADDENDUM / REVISIONS

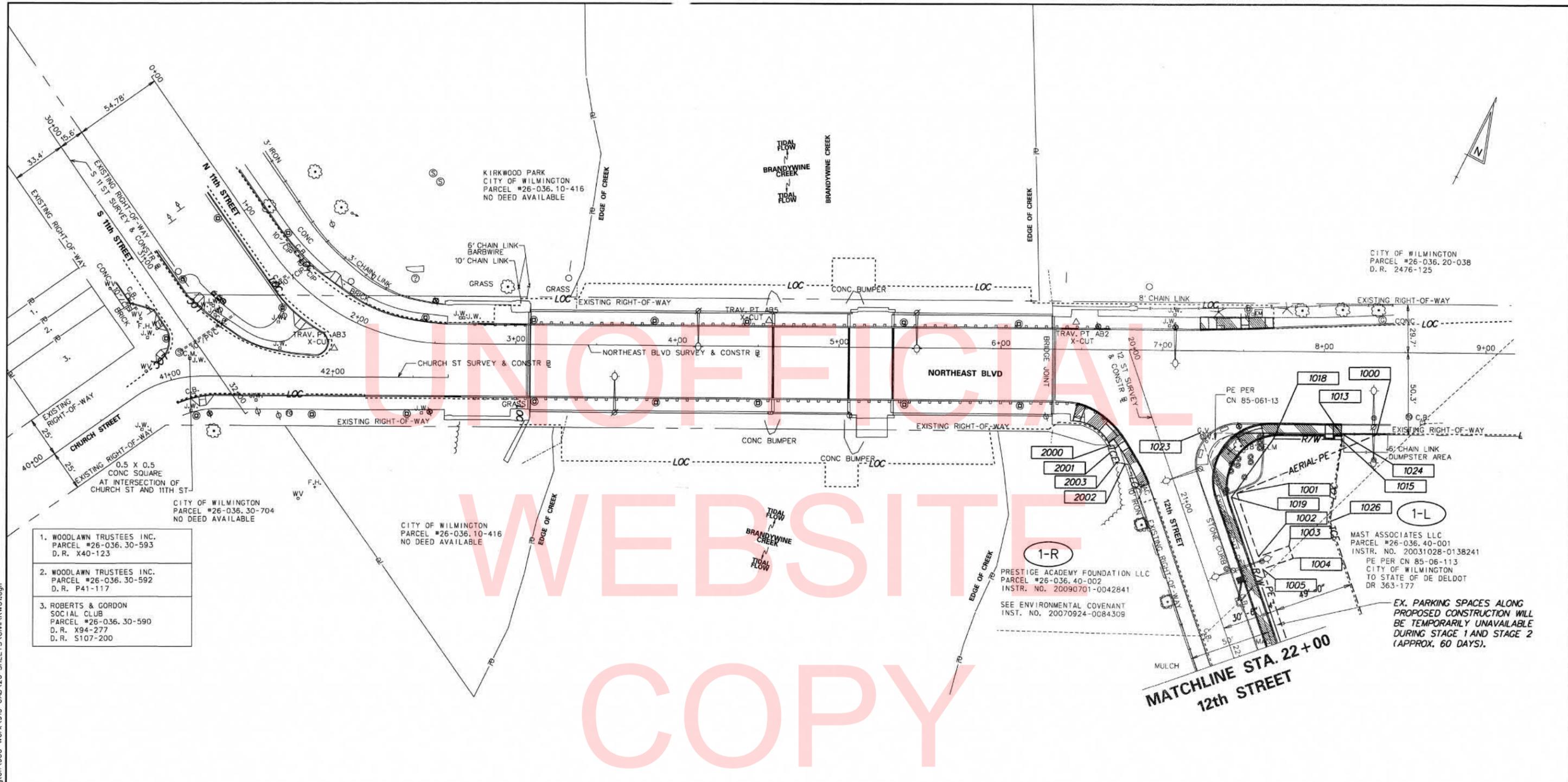


**BR 1-577 ON
NORTHEAST BOULEVARD OVER
BRANDYWINE CREEK**

CONTRACT	PERMIT NO.
T201407403	DESIGNED BY: JAW
COUNTY	CHECKED BY: JLR
NEW CASTLE	

SIGNAL PLAN	SHEET NO.
NORTHEAST BOULEVARD	62
at 12TH STREET	TOTAL SHTS.
	65

LAST REVISED: 6/12/2017
 P:\60323054 - DeDOT_AGR 1672_BDS\101 - Rehab Br. 1-577 Wilmington\900 Work\910 CAD\20-SHEETS\Civil\RW01.dgn



1. WOODLAWN TRUSTEES INC.
PARCEL #26-036.30-593
D. R. X40-123
2. WOODLAWN TRUSTEES INC.
PARCEL #26-036.30-592
D. R. P41-117
3. ROBERTS & GORDON
SOCIAL CLUB
PARCEL #26-036.30-590
D. R. X94-277
D. R. S107-200

CITY OF WILMINGTON
PARCEL #26-036.30-704
NO DEED AVAILABLE

CITY OF WILMINGTON
PARCEL #26-036.10-416
NO DEED AVAILABLE

CITY OF WILMINGTON
PARCEL #26-036.20-038
D. R. 2476-125

PRESTIGE ACADEMY FOUNDATION LLC
PARCEL #26-036.40-002
INSTR. NO. 20090701-0042841
SEE ENVIRONMENTAL COVENANT
INST. NO. 20070924-0084309

MAST ASSOCIATES LLC
PARCEL #26-036.40-001
INSTR. NO. 20031028-0138241
PE PER CN 85-06-113
CITY OF WILMINGTON
TO STATE OF DE DELDOT
DR 363-177

EX. PARKING SPACES ALONG
PROPOSED CONSTRUCTION WILL
BE TEMPORARILY UNAVAILABLE
DURING STAGE 1 AND STAGE 2
(APPROX. 60 DAYS).

NOTE:
1. THIS SHEET SHALL BE USED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY.

LEGEND	
FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING R/W
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT

THIS SHEET PREPARED BY
THE CONSULTING FIRM OF
AECOM TECHNICAL SERVICES, INC.
1700 MARKET STREET, SUITE 1600
PHILADELPHIA, PA 19103
(215) 735-0832



J. L. Cummings
PROJECT MANAGER
6/23/17
DATE

RECOMMENDED AS TO ENGINEERING NEED

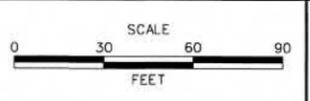
Manuel J. Hite III 6/23/17
MANAGER, ROW ENGINEERING DATE

Sheel Claude 6/23/17
PROGRAM MANAGER, TEAM SUPPORT DATE

B. J. ... 6/23/17
TECHNICAL REVIEWER, TEAM SUPPORT DATE



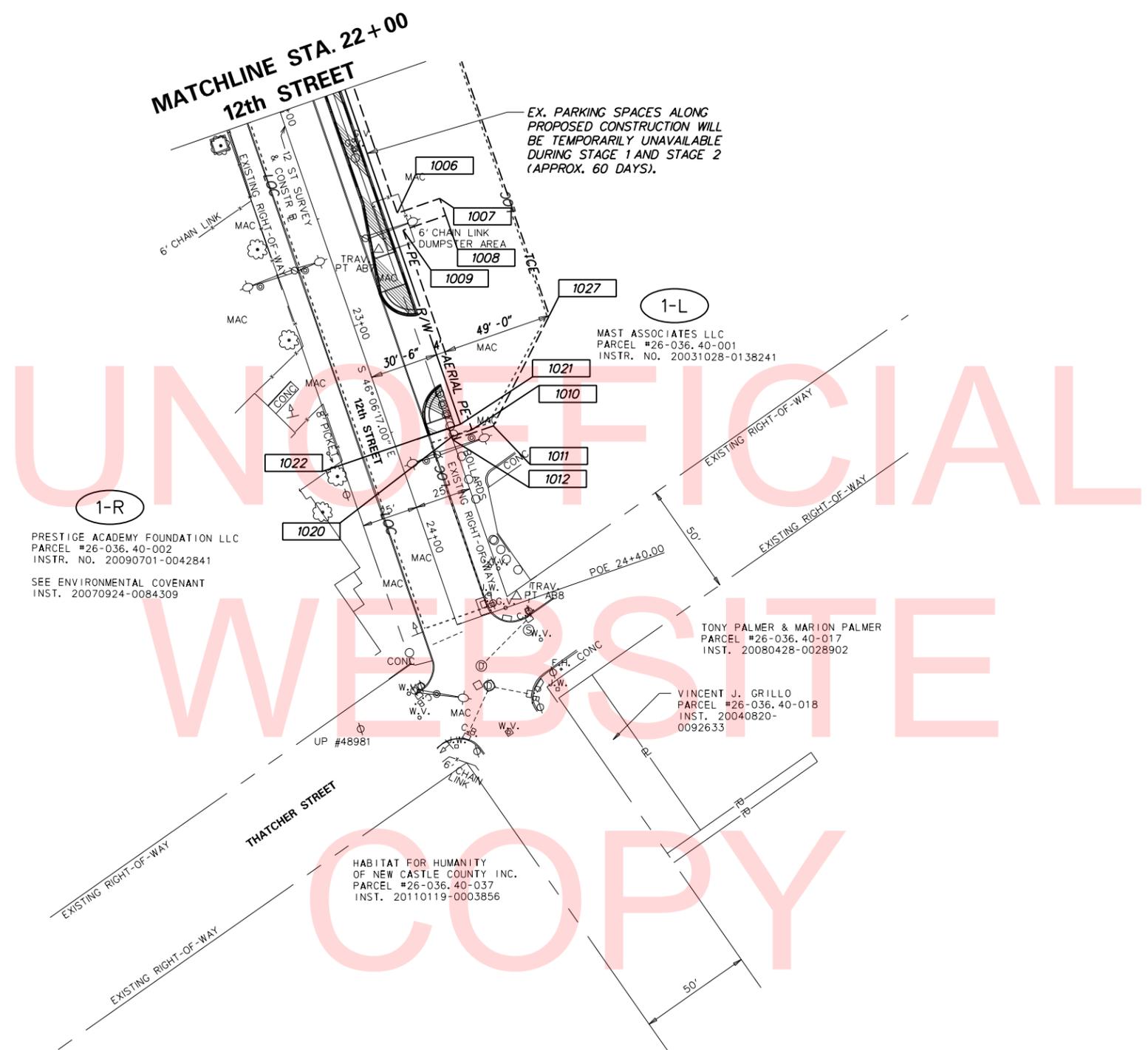
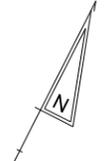
ADDENDUMS / REVISIONS



**BR 1-577 ON
NORTHEAST BOULEVARD OVER
BRANDYWINE CREEK**

CONTRACT T201407403	BRIDGE NO. 1-577
COUNTY NEW CASTLE	DESIGNED BY: KMH
	CHECKED BY: ADM

RIGHT-OF-WAY PLAN SHEET 1 OF 2	SHEET NO. 63
	TOTAL SHTS. 65



EX. PARKING SPACES ALONG PROPOSED CONSTRUCTION WILL BE TEMPORARILY UNAVAILABLE DURING STAGE 1 AND STAGE 2 (APPROX. 60 DAYS).

1-R
PRESTIGE ACADEMY FOUNDATION LLC
PARCEL #26-036.40-002
INSTR. NO. 20090701-0042841
SEE ENVIRONMENTAL COVENANT
INST. 20070924-0084309

1-L
MAST ASSOCIATES LLC
PARCEL #26-036.40-001
INSTR. NO. 20031028-0138241

TONY PALMER & MARION PALMER
PARCEL #26-036.40-017
INST. 20080428-0028902

VINCENT J. GRILLO
PARCEL #26-036.40-018
INST. 20040820-0092633

HABITAT FOR HUMANITY OF NEW CASTLE COUNTY INC.
PARCEL #26-036.40-037
INST. 20110119-0003856

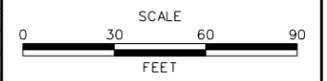
NOTE:

1. THIS SHEET SHALL BE USED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY.

LEGEND	
FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING R/W
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT



ADDENDUMS / REVISIONS



**BR 1-577 ON
NORTHEAST BOULEVARD OVER
BRANDYWINE CREEK**

CONTRACT	BRIDGE NO.	1-577
T201407403	DESIGNED BY:	KMH
COUNTY	CHECKED BY:	ADM
NEW CASTLE		

**RIGHT-OF-WAY PLAN
SHEET 2 OF 2**

SHEET NO.	64
TOTAL SHTS.	65

LAST REVISED: 6/13/2017 P:\60323054 DelDOT AGR 1672 BDS\T01 - Rehab Br. 1-577 Wilmington\900 Work\910 CAD\20-SHEETS\Civil\RW02.dgn

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
26-036.40-001	(1-L) MAST ASSOCIATES LLC					FEE	20031028-0138421	1.680			
ALIGNMENT NUMBER & DESCRIPTION: 12 ST - 12 ST CONST & RW BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
1013	12 S†	20+91.48	-107.56	635107.9710	622544.9623	S 26°35'57.43" E	3.18				
1015	12 S†	20+94.48	-106.50	635105.1254	622546.3872	S 63°24'02.57" W	42.13				
1018	12 S†	20+80.42	-66.79	635086.2618	622508.7164	S 8°42'44.41" W	44.40				
1019	12 S†	21+06.00	-30.50	635042.3723	622501.9907	S 46°06'17.00" E	250.58				
1021	12 S†	23+56.58	-30.50	634868.6334	622682.5619	S 43°53'35.29" W	5.50				
1022	12 S†	23+56.58	-25.00	634864.6706	622678.7493	N 46°06'17.73" W	294.28				
1023	12 S†	20+62.31	-25.00	635068.7041	622466.6907	N 63°21'29.44" E	87.57				
1013	12 S†	20+91.48	-107.56	635107.9710	622544.9623						
FIGURE RW.1L AREA = 2566.4618 SQ. FT. (0.0589 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
26-036.40-002	(1-R) PRESTIGE ACADEMY FOUNDATION LLC					TCE	20090701-0042841	2.460			
ALIGNMENT NUMBER & DESCRIPTION: 12 ST - 12 ST CONST & RW BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
2000	12 S†	20+51.28	29.98	635036.7323	622420.6234	N 63°58'01.12" E	5.30				
2001	12 S†	20+53.10	25.00	635039.0591	622425.3870	S 46°06'16.52" E	12.09				
2002	12 S†	20+65.19	25.00	635030.6740	622434.1018	S 73°14'25.24" W	5.15				
2003	12 S†	20+62.66	29.49	635029.1878	622429.1666	N 48°33'07.89" W	11.40				
2000	12 S†	20+51.28	29.98	635036.7323	622420.6234						
FIGURE TCE.1R AREA = 55.0753 SQ. FT. (0.0013 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
26-036.40-001	(1-L) MAST ASSOCIATES LLC					P/E	20031028-0138421	1.680			
ALIGNMENT NUMBER & DESCRIPTION: 12 ST - 12 ST CONST & RW BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
1000	12 S†	20+98.67	-127.91	635117.6475	622564.2505	S 40°12'37.40" W	93.60				
1001	12 S†	21+04.69	-34.50	635046.1635	622503.8196	S 46°06'17.00" E	41.31				
1002	12 S†	21+46.00	-34.50	635017.5210	622533.5884	N 43°53'43.00" E	20.00				
1003	12 S†	21+46.00	-54.50	635031.9332	622547.4553	S 46°06'17.00" E	8.00				
1004	12 S†	21+54.00	-54.50	635026.3865	622553.2201	S 43°53'43.00" W	20.00				
1005	12 S†	21+54.00	-34.50	635011.9743	622539.3533	S 46°06'17.00" E	105.00				
1006	12 S†	22+59.00	-34.50	634939.1734	622615.0172	N 43°53'43.00" E	20.00				
1007	12 S†	22+59.00	-54.50	634953.5855	622628.8840	S 46°06'17.00" E	8.00				
1008	12 S†	22+67.00	-54.50	634948.0388	622634.6489	S 43°53'43.00" W	20.00				
1009	12 S†	22+67.00	-34.50	634933.6266	622620.7820	S 46°06'17.00" E	93.58				
1010	12 S†	23+60.58	-34.50	634868.7425	622688.2177	S 43°53'43.00" W	9.50				
1020	12 S†	23+60.58	-25.00	634861.8961	622681.6304	N 46°04'47.49" W	4.00				
1022	12 S†	23+56.58	-25.00	634864.6706	622678.7493	N 43°53'35.29" E	5.50				
1021	12 S†	23+56.58	-30.50	634868.6334	622682.5619	N 46°06'17.00" W	250.58				
1019	12 S†	21+06.00	-30.50	635042.3723	622501.9907	N 8°42'44.41" E	44.40				
1018	12 S†	20+80.42	-66.79	635086.2618	622508.7164	N 63°24'02.57" E	42.13				
1015	12 S†	20+94.48	-106.50	635105.1254	622546.3872	N 26°35'57.43" W	3.18				
1013	12 S†	20+91.48	-107.56	635107.9710	622544.9623	N 63°21'29.44" E	21.58				
1000	12 S†	20+98.67	-127.91	635117.6475	622564.2505						
FIGURE PE.1L AREA = 2393.8602 SQ. FT. (0.0550 ACRES)											

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
26-036.40-001	(1-L) MAST ASSOCIATES LLC					TCE	20031028-0138421	1.680			
ALIGNMENT NUMBER & DESCRIPTION: 12 ST - 12 ST CONST & RW BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
1024	12 S†	20+91.81	-108.50	635108.4134	622545.8440	S 18°41'20.34" E	54.28				
1026	12 S†	21+40.00	-83.50	635056.9909	622563.2386	S 46°06'17.00" E	184.00				
1027	12 S†	23+24.00	-83.50	634929.4159	622695.8305	S 0°00'06.33" E	54.82				
1011	12 S†	23+62.01	-44.00	634874.5995	622695.8322	S 43°53'43.00" W	19.00				
1012	12 S†	23+62.01	-25.00	634860.9073	622682.6581	N 46°05'10.89" W	5.43				
1022	12 S†	23+56.58	-25.00	634864.6706	622678.7493	N 43°53'35.29" E	5.50				
1021	12 S†	23+56.58	-30.50	634868.6334	622682.5619	N 46°06'17.00" W	250.58				
1019	12 S†	21+06.00	-30.50	635042.3723	622501.9907	N 8°42'44.41" E	44.40				
1018	12 S†	20+80.42	-66.79	635086.2618	622508.7164	N 63°24'02.57" E	42.13				
1015	12 S†	20+94.48	-106.50	635105.1254	622546.3872	N 26°35'57.43" W	3.18				
1013	12 S†	20+91.48	-107.56	635107.9710	622544.9623	N 63°21'29.44" E	0.99				
1024	12 S†	20+91.81	-108.50	635108.4134	622545.8440						
FIGURE TCE.1L AREA = 14323.2787 SQ. FT. (0.3288 ACRES)											

COUNTY ASSESSMENT PARCEL NUMBER	PLAN SHEET NUMBER	OWNERSHIP OF RECORD	TITLE SOURCE	PROPERTY AREA BEFORE ACQUISITION (ACRE) D=DEED C=CALCULATED A=ASSESSMENT	ACQUISITION CODE FEE, R/W, P/E, TCE	AREA TO BE ACQUIRED		PROPERTY AREA REMAINING (SQ. FEET /ACRES)	DEED RECORD OF ACQUISITION	REMARKS				
						ACQUISITION (SQ. FEET /ACRES)	AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET /ACRES)							
26-036.40-001	61	(1-L) MAST ASSOCIATES LLC	20031028-0138421	D - 1.68	FEE	2566.4618 / 0.06				PERM. IMPACTS TO EXISTING PARKING SPACES = 0				
										P/E	TCE	2393.8602 / 0.05		AERIAL EASEMENT
													14323.2787 / 0.33	70614.3382 / 1.62
26-036.40-002	61	(1-R) PRESTIGE ACADEMY FOUNDATION LLC	20090701-0042841	C - 2.46	TCE	55.0753 / 0.00		107157.60 / 2.46						

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DELAWARE DEPARTMENT OF TRANSPORTATION	ADDENDUMS / REVISIONS	NOT TO SCALE	BR 1-577 ON NORTHEAST BOULEVARD OVER BRANDYWINE CREEK	CONTRACT T201407403	BRIDGE NO. 1-577	RIGHT-OF-WAY DATA SHEET AND TABULATION SHEET	SHEET NO. 65
				COUNTY NEW CASTLE	DESIGNED BY: KMH		CHECKED BY: ADM

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