



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

JENNIFER COHAN
SECRETARY

VIA WEBSITE POSTING AND OVERNIGHT DELIVERY

October 15, 2019

Contract No. T201507402.01
Federal Aid Project No. BHN-N347(03)
BR 1-714 on N347 Chapman Road over I-95
New Castle County

Ladies and Gentlemen:

Enclosed is Addendum No. 1 for the referenced contract consisting of the following:

1. The Bid Proposal Cover, revised, to be substituted for the same page of the Proposal.
2. Thirteen (13) pages, Bid Proposal Forms, pages 4 through 16, revised, to be substituted for same pages in the Proposal.

Item 601130 has been added. Items 605507 and 605508 have revised quantities.

Item 202560 was deleted from the ebsx file.

4. Four (4) sheets, Construction Plans, sheets 3, 26, 66 and 105, revised, to be substituted for the same sheets in the Plans.
5. Amendment File No. 1.

Please note the revisions listed above and submit your bid based upon this information.

Sincerely,

~signature on file~

Connie Ivins
Competitively Bid Contracts Coordinator
Delaware Department of Transportation

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

BID PROPOSAL

for

CONTRACT T201507402.01

FEDERAL AID PROJECT NO. BHN-N347(03)

CFDA NO. 20.205

BR 1-714 ON N347 CHAPMAN ROAD OVER I-95

NEW CASTLE COUNTY

ADVERTISEMENT DATE: September 23, 2019

COMPLETION TIME: 565 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
DELAWARE DEPARTMENT OF TRANSPORTATION
AUGUST 2016

Bids will be received in the Bidder's Room at the Delaware Department of Transportation's Administration Building, 800 Bay Road, Dover, Delaware prior to 2:00 P.M. local time October 22, 2019

DELAWARE DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF ITEMS

PAGE: 4
 DATE:

CONTRACT ID: T201507402.01 PROJECT(S): BHN-N347(03)

All figures must be typewritten.

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0300	601130 REINFORCED CONCRETE ELLIPTICAL PIPE, 14"X23", CLASS V	179.000 LF				
0310	601141 REINFORCED CONCRETE FLARED END SECTION, 15"	2.000 EACH				
0320	601142 REINFORCED CONCRETE FLARED END SECTION, 18"	9.000 EACH				
0330	601144 REINFORCED CONCRETE FLARED END SECTION, 24"	4.000 EACH				
0340	601170 REINFORCED CONCRETE FLARED END SECTION, 14" X 23"	1.000 EACH				
0350	601261 GALVANIZED CORRUGATED STEEL PIPE, 15", 16GAGE, 2-2/3" X 1/2" CORRUGATION	35.000 LF				
0360	602003 DRAINAGE INLET, 34" X 24"	8.000 EACH				
0370	602004 DRAINAGE INLET, 48" X 30"	10.000 EACH				
0380	602005 DRAINAGE INLET, 48" X 48"	2.000 EACH				
0390	602030 MANHOLE, 48" X 30"	1.000 EACH				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE:
DATE:

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CONTRACT ID: T201507402.01

PROJECT(S): BHN-N347(03)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0400	602509 ELECTRIC DUCTBANK AND MANHOLE SYSTEM	LUMP	LUMP			
0410	604000 JACKING BRIDGE	LUMP	LUMP			
0420	604003 SHORING	LUMP	LUMP			
0430	604503 TEMPORARY PROTECTIVE SHIELD	LUMP	LUMP			
0440	605201 DYNAMIC PILE TESTING BY CONTRACTOR	EACH 8.000				
0450	605505 FURNISH STEEL PIPE PILES, 20"	LF 5280.000				
0460	605506 INSTALL STEEL PIPE PILES, 20"	LF 5280.000				
0470	605507 FURNISH STEEL PIPE INDICATOR OR TEST PILES, 20"	LF 480.000				
0480	605508 INSTALL STEEL PIPE INDICATOR OR TEST PILES, 20"	LF 480.000				
0490	606003 DRILLED SHAFT, 48"	LF 23.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE:
DATE:

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PROJECT(S): BHN-N347(03)

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0500	607001 MECHANICALLY STABILIZED EARTH WALLS	LUMP	LUMP			
0510	610002 PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY 180.000				
0520	610008 PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY 420.000				
0530	610017 PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY 680.000				
0540	610018 PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY 550.000				
0550	611001 BAR REINFORCEMENT, EPOXY COATED	LB 402970.000				
0560	613001 SILICONE-BASED ACRYLIC CONCRETE SEALER	SF 10800.000				
0570	613003 HIGH MOLECULAR WEIGHT METHACRYLATE CONCRETE SEALER	SF 23860.000				
0580	615001 STEEL STRUCTURES	LUMP	LUMP			

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 7
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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0590	617000 STEEL SIGN STRUCTURE, TUBULAR ARCH, CANTILEVER	LUMP	LUMP			
0600	623000 ELASTOMERIC BEARINGS	EACH 28.000				
0610	624000 PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF 330.000				
0620	626011 ALUMINUM HAND RAILING, TYPE 1	LF 1100.000				
0630	701013 PORTLAND CEMENT CONCRETE CURB, TYPE 1-8	LF 147.000				
0640	701014 PORTLAND CEMENT CONCRETE CURB, TYPE 2	LF 1405.000				
0650	701018 INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 1-8	LF 1369.000				
0660	701019 INTEGRAL PORTLAND CEMENT CONCRETE CURB AND GUTTER, TYPE 2	LF 136.000				
0670	705001 PORTLAND CEMENT CONCRETE SIDEWALK, 4"	SF 10199.000				
0680	705002 PORTLAND CEMENT CONCRETE SIDEWALK, 6"	SF 400.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0690	705007 SIDEWALK SURFACE DETECTABLE WARNING SYSTEM	SF 50.000				
0700	705008 PEDESTRIAN CONNECTION, TYPE 1	SF 150.000				
0710	707001 RIPRAP, R-4	SY 215.000				
0720	708003 GEOTEXTILES, RIPRAP	SY 304.000				
0730	720021 GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	LF 2182.000				
0740	720024 GUARDRAIL OVER CULVERTS, TYPE 1-31	EACH 2.000				
0750	721001 GUARDRAIL END TREATMENT, TYPE 1-31, TEST LEVEL 3	EACH 8.000				
0760	721006 END ANCHORAGE 31	EACH 5.000				
0770	721007 ENTRANCE SPECIAL END ANCHORAGE	EACH 1.000				
0780	721010 GUARDRAIL TO BARRIER CONNECTION, APPROACH TYPE 1-31	EACH 6.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0790	727000 CHAIN LINK FENCE	1305.000 LF				
0800	727008 BRIDGE SAFETY FENCE, TYPE 2	900.000 LF				
0810	727557 CANTILEVER SLIDE GATE, 45'	1.000 EACH				
0820	760012 PAVEMENT MILLING, BITUMINOUS CONCRETE PAVEMENT, VARIABLE DEPTH	6523.000 SYIN				
0830	762000 SAW CUTTING, BITUMINOUS CONCRETE	3469.000 LF				
0840	762001 SAW CUTTING, CONCRETE, FULL DEPTH	18.000 LF				
0850	763000 INITIAL EXPENSE/DE-MOBILIZATION	LUMP	LUMP			
0860	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
0870	763503 TRAINEE	1040.000 HOUR		0.80000		832.00
0880	763508 PROJECT CONTROL SYSTEM DEVELOPMENT PLAN	LUMP	LUMP			

DELAWARE DEPARTMENT OF TRANSPORTATION
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0890	763509 CPM SCHEDULE UPDATES AND/OR REVISED UPDATES	EAMO 18.000				
0900	763598 FIELD OFFICE, SPECIAL I	EAMO 18.000				
0910	801000 MAINTENANCE OF TRAFFIC	LUMP	LUMP			
0920	802003 ARROW PANELS TYPE C	EADY 638.000				
0930	803001 FURNISH AND MAINTAIN PORTABLE CHANGEABLE MESSAGE SIGN	EADY 392.000				
0940	804001 FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY (FLOOD LIGHTS)	EADY 3210.000				
0950	805001 PLASTIC DRUMS	EADY 84947.000				
0960	806001 TRAFFIC OFFICERS	HOUR 700.000	75.00000		52500.00	
0970	807001 FURNISH AND INSTALL TEMPORARY PORTLAND CEMENT CONCRETE SAFETY BARRIER, UNPINNED	LF 1487.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0980	807002 FURNISH AND INSTALL TEMPORARY PORTLAND CEMENT CONCRETE SAFETY BARRIER, PINNED IN BITUMINOUS PAVEMENT	LF 2293.000				
0990	807005 RELOCATE TEMPORARY PORTLAND CEMENT CONCRETE SAFETY BARRIER, PINNED IN BITUMINOUS PAVEMENT	LF 922.000				
1000	808002 FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	EADY 1157.000				
1010	809001 INSTALL TEMPORARY IMPACT ATTENUATOR	EACH 8.000				
1020	809005 FURNISH TEMPORARY IMPACT ATTENUATOR - NON-GATING, REDIRECTIVE, TEST LEVEL 3	EACH 8.000				
1030	810001 TEMPORARY WARNING SIGNS AND PLAQUES	EADY 38203.000				
1040	811007 FLAGGER, NEW CASTLE COUNTY, FEDERAL	HOUR 2112.000				
1050	811016 FLAGGER, NEW CASTLE COUNTY, FEDERAL, OVERTIME	HOUR 423.000				
1060	813001 TEMPORARY BARRICADES, TYPE III	LFDY 13528.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1070	813500 PEDESTRIAN CHANNELIZING BARRICADE SYSTEM	83504.000 LFDY				
1080	813503 TEMPORARY PEDESTRIAN PATHWAY	88.000 SY				
1090	817002 PERMANENT PAVEMENT STRIPING, SYMBOL/LEGEND, ALKYD-THERMOPLASTIC	1051.000 SF				
1100	817003 TEMPORARY MARKINGS, PAINT, 4"	1781.000 LF				
1110	817004 TEMPORARY MARKINGS, PAINT, SYMBOL/LEGEND	77.000 SF				
1120	817013 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 5"	29539.000 LF				
1130	817014 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, WHITE/YELLOW, 10"	630.000 LF				
1140	817015 PREFORMED RETROREFLECTIVE THERMOPLASTIC MARKINGS, BIKE SYMBOL	7.000 EACH				
1150	817018 PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, BLACK, 3"	900.000 LF				

DELAWARE DEPARTMENT OF TRANSPORTATION
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1160	817027 RAISED/RECESSED PAVEMENT MARKER	53.000 EACH				
1170	817031 REMOVAL OF PAVEMENT STRIPING	11380.000 SF				
1180	819016 INSTALLATION OF 4" DIAMETER HOLE, LESS THAN OR EQUAL TO 6" DEPTH	2.000 EACH				
1190	819018 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	56.000 EACH				
1200	819019 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON MULTIPLE SIGN POSTS	18.000 SF				
1210	830001 CONDUIT JUNCTION WELL, TYPE 1, 20" X 20" PRECAST CONCRETE	2.000 EACH				
1220	830002 CONDUIT JUNCTION WELL, TYPE 4, 20" X 42-1/2" PRECAST CONCRETE	5.000 EACH				
1230	830004 CONDUIT JUNCTION WELL, TYPE 7, 36" X 60" PRECAST POLYMER CONCRETE	2.000 EACH				
1240	831513 FURNISH AND INSTALL 2" SCHEDULE 80 PVC CONDUIT (TRENCH)	205.000 LF				

DELAWARE DEPARTMENT OF TRANSPORTATION
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1250	831516 FURNISH AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (TRENCH)	LF 825.000				
1260	831521 FURNISH AND INSTALL 4" SCHEDULE 80 PVC CONDUIT (ON STRUCTURE)	LF 615.000				
1270	831542 FURNISH AND INSTALL 2" HDPE SDR-13.5 CONDUIT (BORE)	LF 200.000				
1280	831545 FURNISH AND INSTALL 4" HDPE SDR-13.5 CONDUIT (BORE)	LF 220.000				
1290	832003 FURISH AND INSTALL 1-CONDUCTOR #2/0 AWG STRANDED COPPER, TYPE USE-2	LF 840.000				
1300	832006 FURNISH AND INSTALL 1-CONDUCTOR #2 AWG STRANDED COPPER, TYPE USE-2	LF 420.000				
1310	832029 FURNISH AND INSTALL #8/2 WIRE UF W/GROUND	LF 205.000				
1320	835003 CABINET BASE TYPE P	EACH 1.000				
1330	842501 FURNISH AND INSTALL ELECTRIC UTILITY SERVICE EQUIPMENT 120/240 (100 AMP)	EACH 2.000				
1340	905001 SILT FENCE	LF 2870.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
SCHEDULE OF ITEMS

PAGE: 15
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1350	905004 INLET SEDIMENT CONTROL, DRAINAGE INLET	EACH 14.000				
1360	905005 INLET SEDIMENT CONTROL, CURB INLET	EACH 6.000				
1370	906002 DEWATERING BAG	EACH 10.000				
1380	907013 TEMPORARY SLOPE DRAIN, 18"	LF 50.000				
1390	907017 COMPOST FILTER LOGS	LF 415.000				
1400	908004 TOPSOIL, 6" DEPTH	SY 18215.000				
1410	908014 PERMANENT GRASS SEEDING, DRY GROUND	SY 51450.000				
1420	908015 PERMANENT GRASS SEEDING, STORMWATER	SY 5780.000				
1430	908017 TEMPORARY GRASS SEEDING	SY 179260.000				
1440	908020 EROSION CONTROL BLANKET MULCH	SY 28620.000				

DELAWARE DEPARTMENT OF TRANSPORTATION
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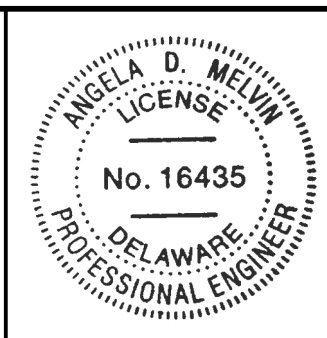
CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1450	908021 TURF REINFORCEMENT MATTING, TYPE 1	60.000 SY				
1460	908023 STABILIZED CONSTRUCTION ENTRANCE	560.000 SY				
1470	910006 OUTLET STRUCTURE	2.000 EACH				
1480	910010 BIORETENTION AREA	155.000 CY				
	SECTION 0001 TOTAL					
	TOTAL BID					

ADDENDUM PREPARED BY
AECOM TECHNICAL SERVICES, INC.

Angela D. Melvin

10/09/19



THIS SEAL APPLIES TO THE FOLLOWING
SHEETS CHANGED UNDER ADDENDUM *1:
26, 66, 103

DATE

SEAL

ADDENDA / REVISIONS

NOT TO SCALE

BR 1-714 ON
CHAPMAN ROAD OVER I-95

CONTRACT	T201507402
COUNTY	NEW CASTLE

BRIDGE NO.	1-714 /1-714A
DESIGNED BY:	T. SINGLE
CHECKED BY:	D. SEMPLE

ADDENDA AND
REVISIONS

SECTION	AEC
SHEET NO.	3

ESTIMATED BRIDGE QUANTITIES

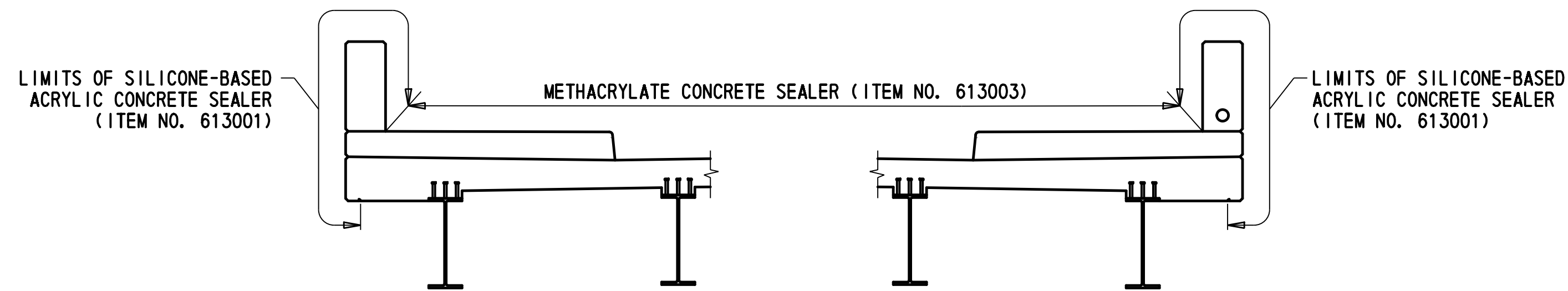
ITEM NO.	DESCRIPTION	UNIT	TOTAL
202560	CONTAMINATED MATERIAL *	NONE	—
211550	DEMOLITION OF EXISTING BRIDGE *	LS	1
604000	JACKING BRIDGE	LS	1
604XXX	TEMPORARY PROTECTIVE SHIELD *	LS	1
604003	SHORING	LS	1
605201	DYNAMIC PILE TESTING BY CONTRACTOR	EA	4
605505	FURNISH STEEL PIPE PILES, 20" *	LF	3,120
605506	INSTALL STEEL PIPE PILES, 20" *	LF	3,120
605507	FURNISH STEEL INDICATOR OR TEST PILES, 20" *	LF	240
605508	INSTALL STEEL PIPE INDICATOR OR TEST PILES, 20" *	LF	240
607001	MECHANICALLY STABILIZED EARTH WALLS	LS	1
610002	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	100
610008	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	240
610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	370
610018	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	310
611001	BAR REINFORCEMENT, EPOXY COATED	LB	211,650
613001	SILICONE-BASED ACRYLIC CONCRETE SEALER	SF	6,230
613003	HIGH MOLECULAR WEIGHT METHACRYLATE CONCRETE SEALER	SF	12,970
615001	STEEL STRUCTURES	LS	1
623000	ELASTOMERIC BEARINGS	EACH	14
624000	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	180
626011	ALUMINUM RAILING, TYPE 1	LF	630
727008	BRIDGE SAFETY FENCE, TYPE 2	LF	480

* SPECIAL PROVISION INCLUDED IN CONTRACT FOR THIS ITEM



BRIDGE LOAD RATING TABLE

VEHICLE TYPE	RATING FACTOR	RATING WEIGHT (TONS)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.47	N/A	EXTERIOR BEAM	105	STRENGTH I
HL-93 TANDEM (INVENTORY)	1.74	N/A	EXTERIOR BEAM	105	STRENGTH I
HS20 (INVENTORY)	2.41	86.76	EXTERIOR BEAM	105	STRENGTH I
HL-93 TRUCK (OPERATING)	1.91	N/A	EXTERIOR BEAM	105	STRENGTH I
HL-93 TANDEM (OPERATING)	2.26	N/A	EXTERIOR BEAM	105	STRENGTH I
HS20 (OPERATING)	3.12	112.32	EXTERIOR BEAM	105	STRENGTH I
DE S220	3.17	63.40	EXTERIOR BEAM	105	SERVICE II
DE S335	2.02	70.70	EXTERIOR BEAM	105	SERVICE II
DE S437	1.94	71.78	EXTERIOR BEAM	105	SERVICE II
DE T330	2.44	73.20	EXTERIOR BEAM	105	SERVICE II
DE T435	2.17	75.95	EXTERIOR BEAM	105	SERVICE II
DE T540	1.95	78.00	EXTERIOR BEAM	105	SERVICE II
EV2	2.4	69.00	EXTERIOR BEAM	105	SERVICE II
EV3	1.72	73.96	EXTERIOR BEAM	105	SERVICE II
SU4	2.49	67.23	EXTERIOR BEAM	105	SERVICE II
SU5	2.25	69.75	EXTERIOR BEAM	105	SERVICE II
SU6	2.06	71.59	EXTERIOR BEAM	105	SERVICE II
SU7	1.89	73.24	EXTERIOR BEAM	105	SERVICE II



COATING LIMITS

PLAN LIMITS TO INCLUDE BRIDGE, APPROACH SLABS, SLEEPER SLABS & MOMENT SLABS
NOT TO SCALE

ABBREVIATIONS

T	=	TOP
B	=	BOTTOM
C/L	=	CENTER LINE
B/L	=	BASE LINE
BRG	=	BEARING
TYP.	=	TYPICAL
CLR.	=	CLEAR
CVN	=	CHARPY V-NOTCH
MSE	=	MECHANICALLY STABILIZED EARTH
EF	=	EACH FACE
FF	=	FRONT FACE
RF	=	REAR FACE
ELEV.	=	ELEVATION
TLP	=	TOP OF LEVELING PAD
RDWY	=	ROADWAY
R/W	=	RIGHT OF WAY
EXP.	=	EXPANSION
RCP	=	REINFORCED CONCRETE PIPE
WP	=	WORK POINT

ADDENDA / REVISIONS

TEST PILE QUANTITY REVISION	J. EBERLE 10/07/2019

NOT TO SCALE

**BR 1-714 ON
CHAPMAN ROAD OVER I-95 SB**

CONTRACT	BRIDGE NO.	1-714
T201507402	DESIGNED BY:	R.GANOVSKA
COUNTY	CHECKED BY:	R.DOMINICK/S.MUKHERJEE
NEW CASTLE		

**QUANTITIES AND
LOAD RATINGS**

BR 1-714
BD-02

SECTION	AEC
SHEET NO.	26

10/19/2019 10:44:54 AM PA 80323054 DeIDOT AGR 1672 BDS\T06 - Rehab Br. 1-714\900 WORK\910 CAD\20-SHEETS\Structures\Final Design\NB\BR1-714-NB-QN02.dgn

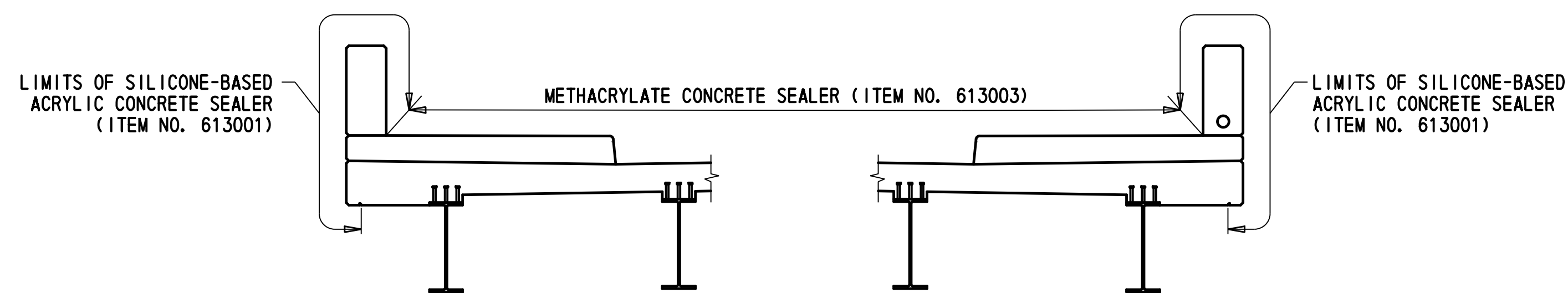
BRIDGE LOAD RATING TABLE

VEHICLE TYPE	RATING FACTOR	RATING WEIGHT (TONS)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK (INVENTORY)	1.32	N/A	EXTERIOR BEAM	105	SERVICE II
HL-93 TANDEM (INVENTORY)	1.56	N/A	EXTERIOR BEAM	105	SERVICE II
HS20 (INVENTORY)	2.04	73.44	EXTERIOR BEAM	105	SERVICE II
HL-93 TRUCK (OPERATING)	1.71	N/A	EXTERIOR BEAM	105	SERVICE II
HL-93 TANDEM (OPERATING)	2.03	N/A	EXTERIOR BEAM	105	SERVICE II
HS20 (OPERATING)	2.65	95.40	EXTERIOR BEAM	105	SERVICE II
DE S220	2.75	55.00	EXTERIOR BEAM	105	SERVICE II
DE S335	1.72	60.20	EXTERIOR BEAM	105	SERVICE II
DE S437	1.65	61.05	EXTERIOR BEAM	105	SERVICE II
DE T330	2.12	63.60	EXTERIOR BEAM	105	SERVICE II
DE T435	1.88	65.80	EXTERIOR BEAM	105	SERVICE II
DE T540	1.69	67.60	EXTERIOR BEAM	105	SERVICE II
EV 2	2.06	59.23	EXTERIOR BEAM	105	SERVICE II
EV 3	1.46	62.78	EXTERIOR BEAM	105	SERVICE II
SU 4	2.14	57.78	EXTERIOR BEAM	105	SERVICE II
SU 5	1.93	59.83	EXTERIOR BEAM	105	SERVICE II
SU 6	1.76	61.16	EXTERIOR BEAM	105	SERVICE II
SU 7	1.61	62.39	EXTERIOR BEAM	105	SERVICE II

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
604000	JACKING BRIDGE	LS	1
604XXX	TEMPORARY PROTECTIVE SHIELD *	LS	1
604003	SHORING	LS	1
605201	DYNAMIC PILE TESTING BY CONTRACTOR	EA	4
605505	FURNISH STEEL PIPE PILES, 20" *	LF	2,160
605506	INSTALL STEEL PIPE PILES, 20" *	LF	2,160
605507	FURNISH STEEL INDICATOR OR TEST PILES, 20" *	LF	240
605508	INSTALL STEEL PIPE INDICATOR OR TEST PILES, 20" *	LF	240
607001	MECHANICALLY STABILIZED EARTH WALLS	LS	1
610002	PORTLAND CEMENT CONCRETE MASONRY, ABUTMENT ABOVE FOOTING, CLASS A	CY	80
610008	PORTLAND CEMENT CONCRETE MASONRY, PARAPET, CLASS A	CY	180
610017	PORTLAND CEMENT CONCRETE MASONRY, SUPERSTRUCTURE, CLASS D	CY	310
610018	PORTLAND CEMENT CONCRETE MASONRY, APPROACH SLAB, CLASS D	CY	240
611001	BAR REINFORCEMENT, EPOXY COATED	LB	191,320
613001	SILICONE-BASED ACRYLIC CONCRETE SEALER	SF	4,570
613003	HIGH MOLECULAR WEIGHT METHACRYLATE CONCRETE SEALER	SF	10,890
615001	STEEL STRUCTURES	LS	1
623000	ELASTOMERIC BEARINGS	EACH	14
624000	PREFABRICATED EXPANSION JOINT SYSTEM, 3"	LF	150
626011	ALUMINUM RAILING, TYPE 1	LF	470
727008	BRIDGE SAFETY FENCE, TYPE 2	LF	420

* SPECIAL PROVISION INCLUDED IN CONTRACT FOR THIS ITEM



COATING LIMITS

PLAN LIMITS TO INCLUDE BRIDGE, APPROACH SLABS, SLEEPER SLABS & MOMENT SLABS NOT TO SCALE

ABBREVIATIONS

- T = TOP
- B = BOTTOM
- C/L = CENTER LINE
- B/L = BASE LINE
- BRG = BEARING
- TYP. = TYPICAL
- CLR. = CLEAR
- CVN = CHARPY V-NOTCH
- MSE = MECHANICALLY STABILIZED EARTH
- EF = EACH FACE
- FF = FRONT FACE
- RF = REAR FACE
- ELEV. = ELEVATION
- TLP = TOP OF LEVELING PAD
- RDWY = ROADWAY
- R/W = RIGHT OF WAY
- EXP. = EXPANSION
- RCP = REINFORCED CONCRETE PIPE
- WP = WORK POINT

BR 1-714A
BD-02

ADDENDA / REVISIONS

TEST PILE QUANTITY REVISION J. EBERLE 10/07/2019

NOT TO SCALE

BR 1-714A ON
CHAPMAN ROAD OVER I-95 NB

CONTRACT	BRIDGE NO.	1-714A
T201507402	DESIGNED BY:	R. GANOVSKA
COUNTY	CHECKED BY:	S.MUKHERJEE/R.DOMINICK
NEW CASTLE		

QUANTITIES AND
LOAD RATINGS

SECTION
AEC
SHEET NO.
66

SEQUENCE OF CONSTRUCTION PHASE 1

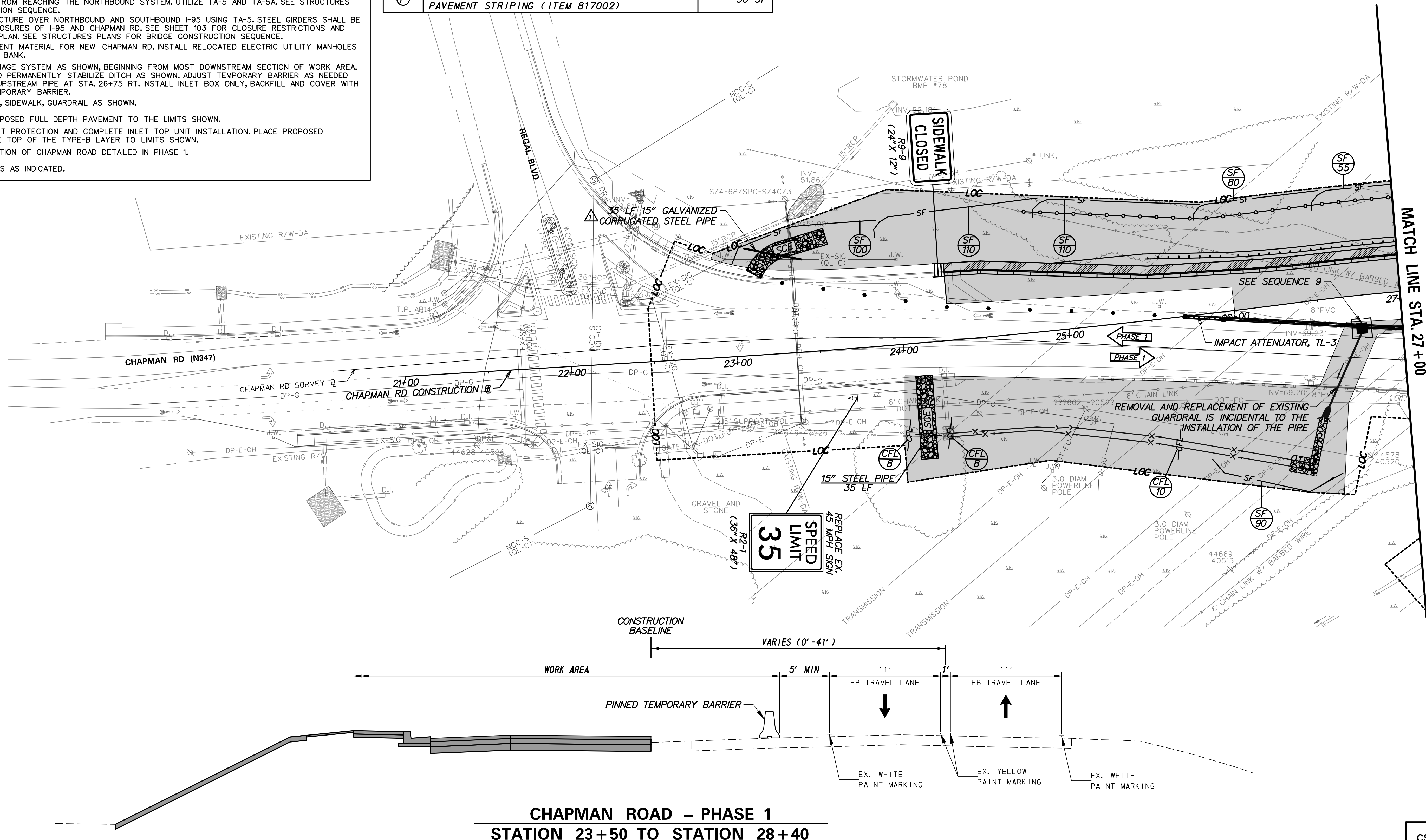
- 1 PLACE ALL PERMANENT WARNING SIGNS AS SHOWN ON THE PERMANENT WARNING SIGN PLAN SHEET AND TEMPORARY WARNING SIGNS AS SHOWN ON THE PHASE 1 MOT SHEETS.
- 2 INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON PHASE 1 TRAFFIC CONTROL PLANS CLEARING AND GRUBBING AS NECESSARY FOR INSTALLATION. PERFORM REMAINING CLEARING AND GRUBBING WHEN E&S IS IN PLACE.
- 3 REMOVE EXISTING STRIPING AS NECESSARY AND PLACE TEMPORARY PAVEMENT STRIPING AS SHOWN ON PHASE 1 TRAFFIC CONTROL PLANS USING TA-17A ON CHAPMAN ROAD AND TA-35G ON I-95. SHIFT CHAPMAN RD TRAFFIC TO NEW LANES DESIGNATED FOR PHASE 1.
- 4 PLACE TEMPORARY BARRIER ALONG BRIDGE APPROACHES AND I-95 AS SHOWN IN PHASE 1 TRAFFIC CONTROL PLANS CONFORMING TO TA-5 OF THE DELAWARE MUTCD.
- 5 CONSTRUCT AND STABILIZE RELOCATED SWALE AROUND NEW SIGN STRUCTURE LOCATION. CONSTRUCT NEW SIGN STRUCTURE ON SB I-95 AS SHOWN AND INSTALL NEW OVERHEAD SIGN. ONCE NEW SIGN IS INSTALLED REMOVE EXISTING OVERHEAD SIGN AND STRUCTURE USING TA-35H.
- 6 INSTALL PROPOSED DRAINAGE ALONG I-95 WITH THE CONSTRUCTION OF THE ABUTMENT FOUNDATIONS. INSTALL THE DIVERSION SWALE AND THE SOUTHBOUND MEDIAN DRAINAGE SYSTEM PRIOR TO THE NORTHBOUND MEDIAN DRAINAGE SYSTEM, PREVENTING RUNOFF FROM REACHING THE NORTHBOUND SYSTEM. UTILIZE TA-5 AND TA-5A. SEE STRUCTURES PLANS FOR BRIDGE CONSTRUCTION SEQUENCE.
- 7 CONSTRUCT NEW BRIDGE STRUCTURE OVER NORTHBOUND AND SOUTHBOUND I-95 USING TA-5. STEEL GIRDERS SHALL BE INSTALLED DURING NIGHTTIME CLOSURES OF I-95 AND CHAPMAN RD. SEE SHEET 103 FOR CLOSURE RESTRICTIONS AND SHEETS 126-130 FOR DETOUR PLAN. SEE STRUCTURES PLANS FOR BRIDGE CONSTRUCTION SEQUENCE.
- 8 PLACE AND COMPACT EMBANKMENT MATERIAL FOR NEW CHAPMAN RD. INSTALL RELOCATED ELECTRIC UTILITY MANHOLES AND CONCRETE ENCASED DUCT BANK.
- 9 CONSTRUCT CHAPMAN RD DRAINAGE SYSTEM AS SHOWN, BEGINNING FROM MOST DOWNSTREAM SECTION OF WORK AREA. INSTALL INLET PROTECTION AND PERMANENTLY STABILIZE DITCH AS SHOWN. ADJUST TEMPORARY BARRIER AS NEEDED FOR INLET INSTALLATION AND UPSTREAM PIPE AT STA. 26+75 RT. INSTALL INLET BOX ONLY, BACKFILL AND COVER WITH STEEL PLATE TO REPLACE TEMPORARY BARRIER.
- 10 CONSTRUCT CURB AND GUTTER, SIDEWALK, GUARDRAIL AS SHOWN.
- 11 GRADE AND BOX OUT FOR PROPOSED FULL DEPTH PAVEMENT TO THE LIMITS SHOWN.
- 12 PRIOR TO PAVING, REMOVE INLET PROTECTION AND COMPLETE INLET TOP UNIT INSTALLATION. PLACE PROPOSED PAVEMENT SECTION UP TO THE TOP OF THE TYPE-B LAYER TO LIMITS SHOWN.
- 13 PERFORM REMAINING CONSTRUCTION OF CHAPMAN ROAD DETAILED IN PHASE 1.
- 14 STABILIZE ALL DISTURBED AREAS AS INDICATED.

PERMANENT PAVEMENT MARKINGS LEGEND

SYMBOL	ITEM	QUANTITY
(A)	5" SOLID WHITE PERMANENT PAINT PAVEMENT STRIPING (ITEM 817013)	1,011 LF
(C)	5" SOLID DOUBLE YELLOW PERMANENT PAINT PAVEMENT STRIPING (ITEM 817013)	904 LF
(D)	5" DASHED WHITE PERMANENT PAINT PAVEMENT STRIPING, 2' LINE & 6' GAP (ITEM 748019)	58 LF
(E)	WHITE PERMANENT PAINT PAVEMENT SYMBOL (ITEM 817002)	47 SF
(F)	16" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	30 SF

NOTES:

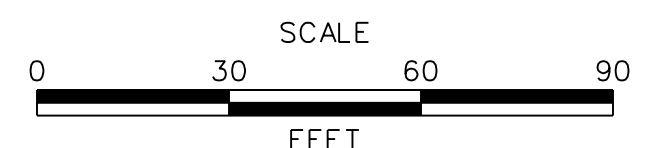
1. CONTRACTOR SHALL REPLACE EXISTING 45 MPH SPEED LIMIT SIGNS FROM REGAL BLVD TO WAKEFIELD DR WITH R2-1 35 MPH SIGNS



**CHAPMAN ROAD - PHASE 1
STATION 23+50 TO STATION 28+40**

ADDENDA / REVISIONS

NO.	DESCRIPTION	DATE
1	STABILIZED CONSTRUCTION ENTRANCE REVISION	D. SEMPLE 10/09/2019



**BR 1-714 ON
CHAPMAN ROAD OVER I-95**

CONTRACT T201507402	BRIDGE NO. 1-714 /1-714A
COUNTY NEW CASTLE	DESIGNED BY: T. SINGLE
	CHECKED BY: D. SEMPLE

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

SECTION AEC
SHEET NO. 105

10/9/2019 4:45:24 PM P:\60323054 DeIDOT AGR 1672 BDS\T06 - Rehab Br. 1-714-900 WORK\910 CAD\20-SHEETS\102_Traffic Control Plans\CS03-1.dgn