

GENERAL LOCATION OF CONTRACT

# THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION

U.S. CUSTOMARY  
UNITS



CONSTRUCTION PLANS FOR:

## HSIP NCC, N54, HOWELL SCHOOL ROAD, SR 896 TO SR 71

CONTRACT NUMBER: T200504110  
FEDERAL AID PROJECT NUMBER: ESTP-N54(04)

COUNTY: NEW CASTLE M.R. #: 54

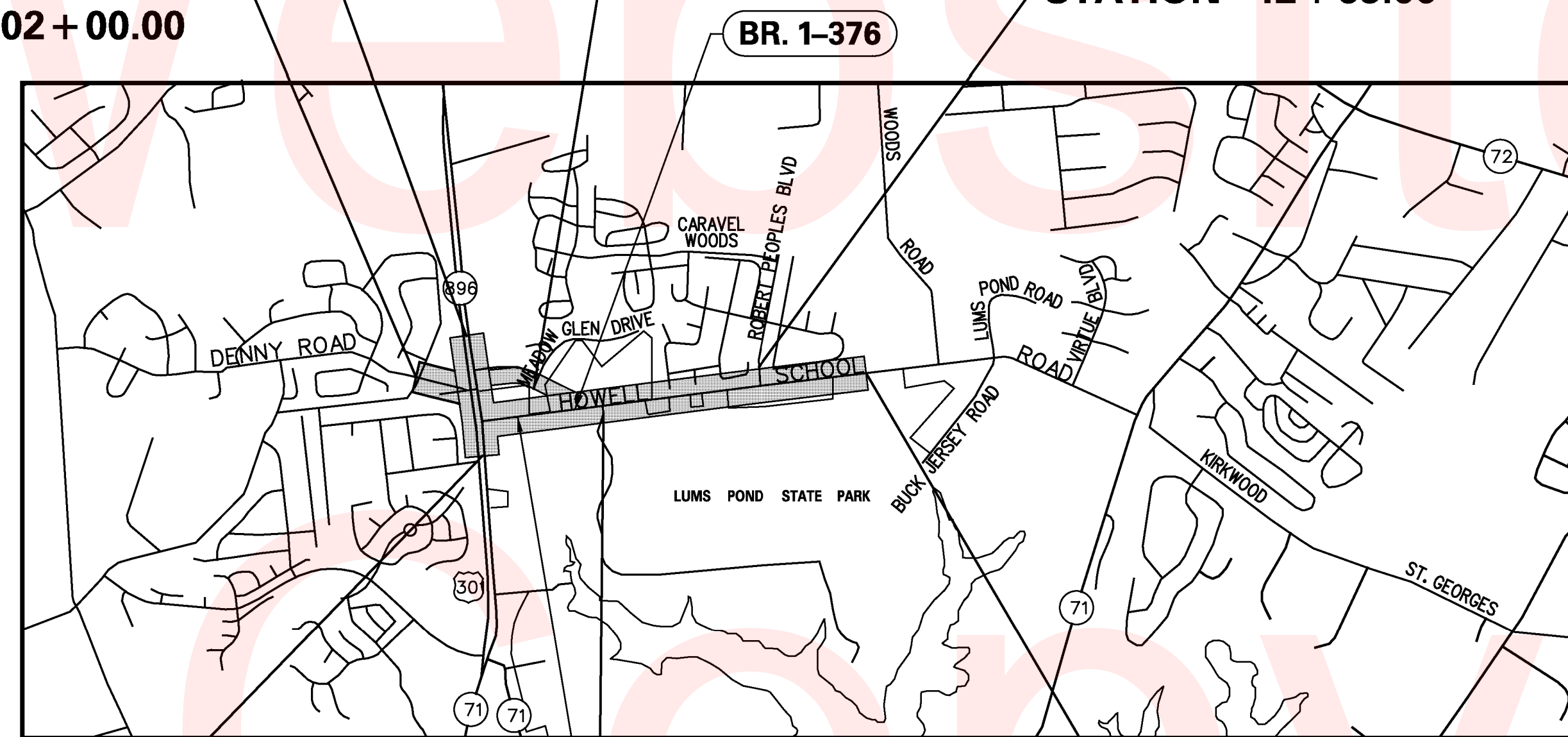
DESIGN DESIGNATION			
FUNCTIONAL CLASS: LOCAL	D.H.V. PROJECTED: 650	YEAR: 2033	
TYPE OF CONSTRUCTION: ROADWAY RECONSTRUCTION	DESIGN SPEED: 50 M.P.H.		
A.A.D.T. CURRENT: 5121	YEAR: 2013	TRUCKS: 11.4%	
A.A.D.T. PROJECTED: 6250	YEAR: 2033	DIRECTION OF DISTRIBUTION: 52.6%	
INDEX OF SHEETS			
SHEET NO	TABLE OF CONTENTS		
1	TITLE		
2-3	PLAN SHEET INDEX		
4	LEGEND		
5	NOTES		
6	EARTHWORK SUMMARY		
7-14	TYPICAL SECTIONS		
15-18	HORIZONTAL AND VERTICAL CONTROL		
19-32	CONSTRUCTION PLANS		
33-47	PROFILES		
48-63	GRADES AND GEOMETRICS		
64-68	CONSTRUCTION DETAILS		
69-77	BRIDGE PLANS		
78-86	ENVIRONMENTAL COMPLIANCE PLANS		
87-108	CONSTRUCTION PHASING, M.O.T. AND EROSION CONTROL PLANS		
109-111	DETOUR PLANS		
112-115	LIGHTING PLANS		
116-132	SIGNING, STRIPING AND CONDUIT PLANS		
133-138	SIGNALIZATION PLANS		
TOTAL SHEETS: 138			

**LIMIT OF CONTRACT**  
STATION 445 + 50.00

**BEGIN CONTRACT**  
CONTRACT T200504110  
STATION 102 + 00.00

**LIMIT OF CONTRACT**  
STATION 11 + 60.00

**LIMIT OF CONTRACT**  
STATION 42 + 65.00



**LOCATION MAP**  
SCALE: 1" = 600'

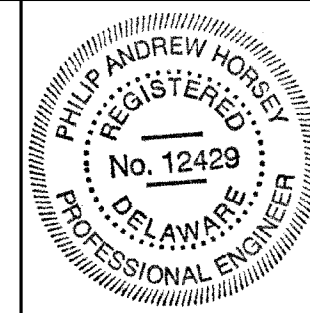
**LIMIT OF CONTRACT**  
STATION 31 + 60.00

**END CONTRACT**  
CONTRACT T200504110  
STATION 187 + 00.00

PREPARED BY  
THE CONSULTING FIRM OF

**Pennoni**

PENNONI ASSOCIATES INC.  
121 CONTINENTAL DRIVE  
SUITE 207  
NEWARK, DE 19713



SEAL

10/08/2014  
DATE

RECOMMENDED

*Paul H. Pahn*  
SQUAD MANAGER, CONSTRUCTION  
11/05/2014  
DATE

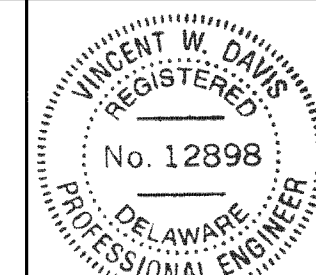
*Christopher Costello*  
GROUP ENGINEER, CONSTRUCTION  
11/05/2014  
DATE

*Jim A. Frazier*  
ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS  
(CONSTRUCTION)  
11/05/2014  
DATE

RECOMMENDED

*Vincent W. Davis*  
STORMWATER ENGINEER

DATE 10/10/2014

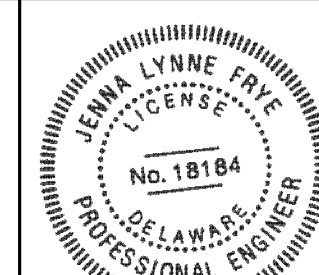


SEAL

RECOMMENDED

*Jenna Lynne Faye*  
SQUAD MANAGER, TRANSPORTATION SOLUTIONS  
(PROJECT DEVELOPMENT OR BRIDGE DESIGN)

DATE 10/08/2014

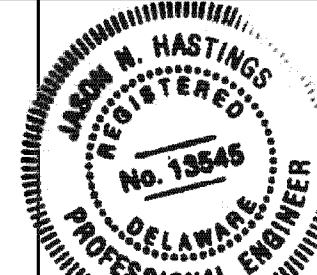


SEAL

RECOMMENDED

*Jay*  
BRIDGE DESIGN ENGINEER

DATE 10/14/2014

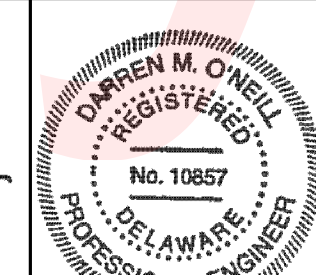


SEAL

RECOMMENDED

*Doreen M. O'Neil*  
GROUP ENGINEER, PROJECT DEVELOPMENT

DATE 11/06/2014

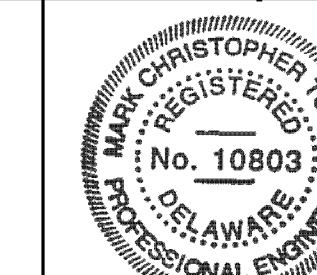


SEAL

RECOMMENDED

*Mark C. Sider*  
ASSISTANT DIRECTOR,  
TRANSPORTATION SOLUTIONS

DATE 11/07/2014

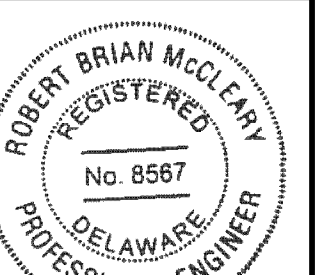


SEAL

APPROVED

*Robert Brian McClary*  
CHIEF ENGINEER

DATE 11/17/2014



SEAL

### APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE
SHOULDER WIDTH	8'	5'	10/24/14

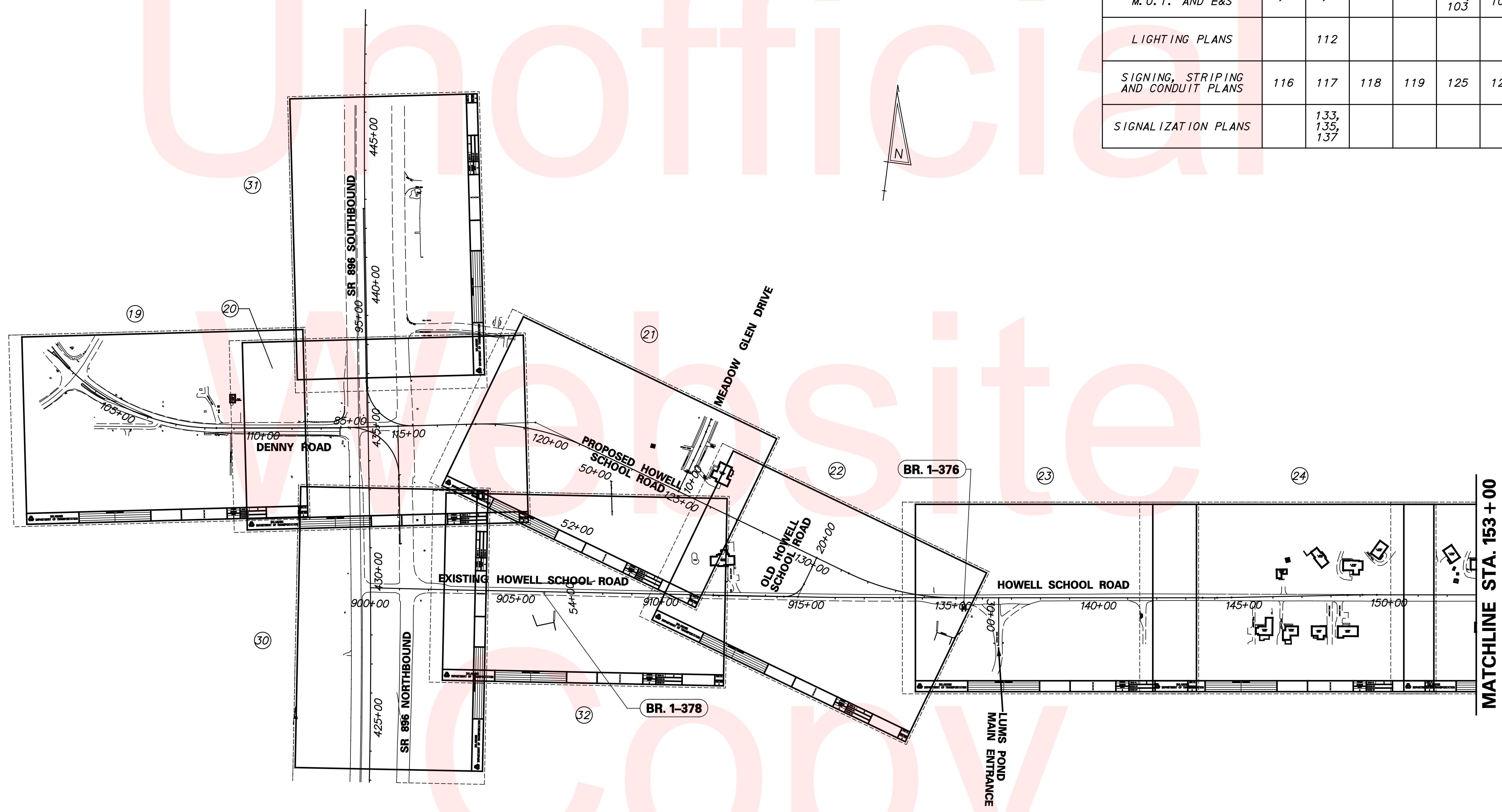
### ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

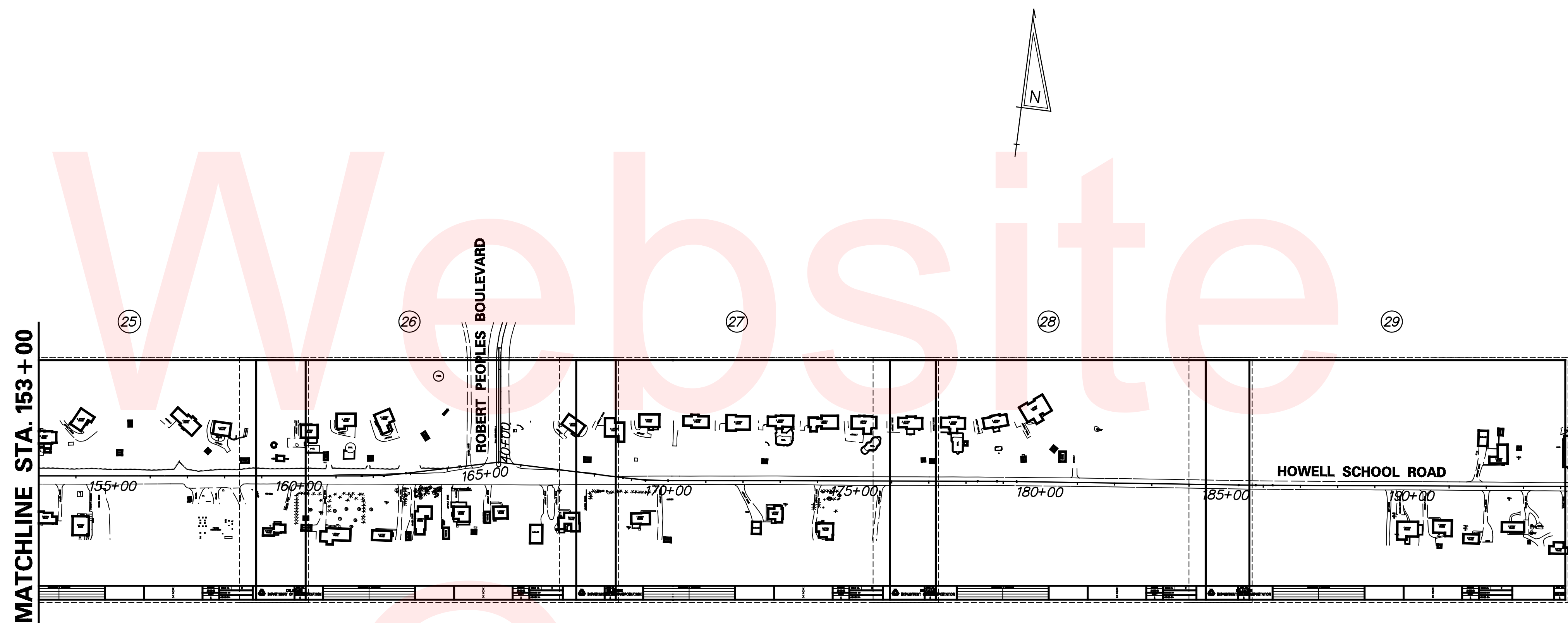
### ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
8-108-05 N532	SR 896, NORTH OF SUMMIT BRIDGE TO PORTER ROAD SIGNAL PLAN: DEL. RT. 896, HOWELL SCHOOL ROAD AND DENNY ROAD

PLAN SHEET INDEX CROSS REFERENCE									
CONSTRUCTION PLANS	(19)	(20)	(21)	(22)	(23)	(24)	(30)	(31)	(32)
PROFILES	33	34, 42, 43	35, 46	35, 36 44, 45 46	36, 45	36, 37	42, 43	42	44
GRADES AND GEOMETRICS	48	49, 50	51	52	53	54	61	62	63
ENVIRONMENTAL COMPLIANCE PLANS	80	80	81	83	83, 84	84, 85	80, 82	80	82
CONSTRUCTION PHASING, M. O. T. AND E&S	89, 99	90, 99	91	92	93, 102, 103	103, 104	94, 100	95, 101	93
LIGHTING PLANS		112					113	114	
SIGNING, STRIPING AND CONDUIT PLANS	116	117	118	119	125	126	127	128	129
SIGNALIZATION PLANS		133, 135, 137					134, 136, 138		



PLAN SHEET INDEX CROSS REFERENCE					
CONSTRUCTION PLAN	(25)	(26)	(27)	(28)	(29)
PROFILES	37, 38	38, 39	39, 40	40, 41	41
GRADES AND GEOMETRICS	55	56, 57	58	59	60
ENVIRONMENTAL COMPLIANCE PLANS	85			86	86
CONSTRUCTION PHASING, M. O. T. AND E&S	104, 105	96, 105, 106, 107, 108	96, 97	97, 98	98
LIGHTING PLANS		118			
SIGNING, STRIPING AND CONDUIT PLAN	122	123	124	125	126
SIGNALIZATION PLANS					



## EXISTING SYMBOLS

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

MANMADE ROADSIDE FEATURES	
	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
	PILLAR - STONE OR MASONRY
	POST - MISCELLANEOUS
	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
	ORDINARY HIGH WATER
	ORD. HIGH WATER / WETLAND

RIGHT-OF-WAY SYMBOLS	
	PROPERTY MARKER - CONCRETE MON.
	PROPERTY MARKER - IRON PIPE
	PROPERTY MARKER - CAP AND PIN
	PROPERTY MARKER - ROW STAKE
	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 TRANSFORMER
	POLE MOUNTED LUMINAIRE
	GAS MANHOLE
	GAS METER
	GAS VALVE
	GAS PUMP - SERVICE STATION
	RAILROAD TRACKS
	SANITARY SEWER MANHOLE
	SANITARY SEWER VALVE
	SANITARY SEWER VENT OR CLEANOUT
	SEPTIC DRAIN FIELD
	TELEPHONE BOOTH
	TELEPHONE MANHOLE
	TELEPHONE TEST POINT
	TRAFFIC - CONDUIT JUNCTION WELL
	TRAFFIC - LIGHT POLE AND BASE
	TRAFFIC - PEDESTRIAN POLE & BASE
	TRAFFIC - SIGNAL CABINET & BASE
	TRAFFIC - SIGNAL POLE AND BASE
	UTILITY BOX
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
	WATER - FIRE HYDRANT
	WATER METER
	WATER VALVE
	WELL HEAD

EXISTING UTILITIES	
	VERIZON DELAWARE TELEPHONE (UNDERGROUND)
	DELMARVA POWER DELIVERY (ELECTRIC-UNDERGROUND)
	DELMARVA POWER ELECTRIC
	DELMARVA POWER GAS DISTRIBUTION
	NEW CASTLE COUNTY SANITARY SEWER
	ARTESIAN WATER COMPANY
	COMCAST CABLE TELEVISION
	ITMS CONDUIT (UNDERGROUND)
	AT&T (UNDERGROUND)
	EASTERN SHORE NATURAL GAS

## PROPOSED SYMBOLS

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

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

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

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 & OVERLAY PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	RECONSTRUCTED PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS
	DRIVEWAY, MULTI-USE PATH AND ENTRANCE PAVEMENT - SEE TYPICAL SECTIONS FOR MATERIALS AND DEPTHS

MISCELLANEOUS	
	PROPOSED ORDINARY HIGH WATER LINE
	PROPOSED ORDINARY HIGH WATER/WETLAND
	ENDWALL, TYPE EW
	FENCE
	BOLLARD
	REMOVAL OF EXISTING PAVEMENT
	FILTER STRIP
	TURF REINFORCEMENT MATTING, TYPE I
	PROFILE GRADE APPLIED
	PROFILE DITCH GRADE APPLIED

UTILITY COMPANY FACILITIES	
	DELMARVA POWER - ELECTRIC (OVERHEAD)
	DELMARVA POWER - ELEC. (UNDERGROUND)
	DELDOT SIGNAL CONDUIT
	ARTESIAN WATER
	NEW CASTLE COUNTY SANITARY SEWER



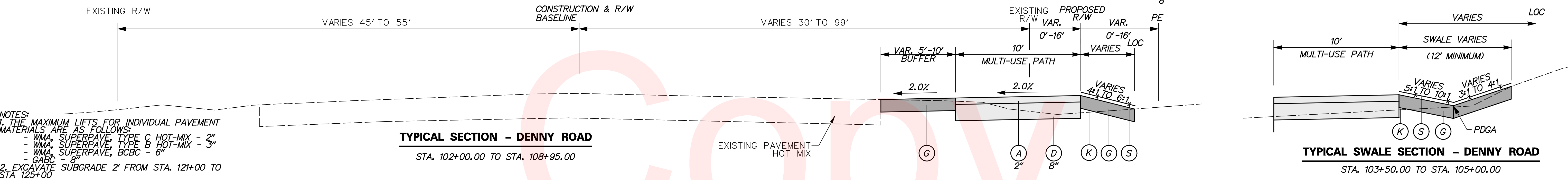
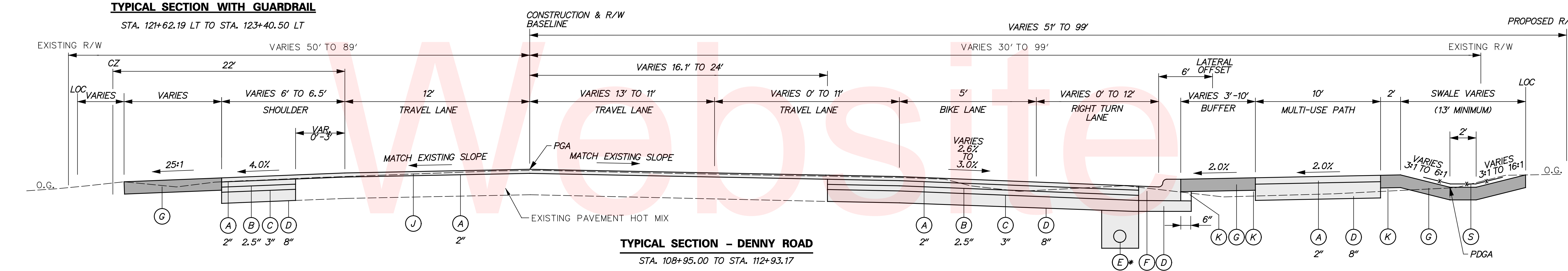
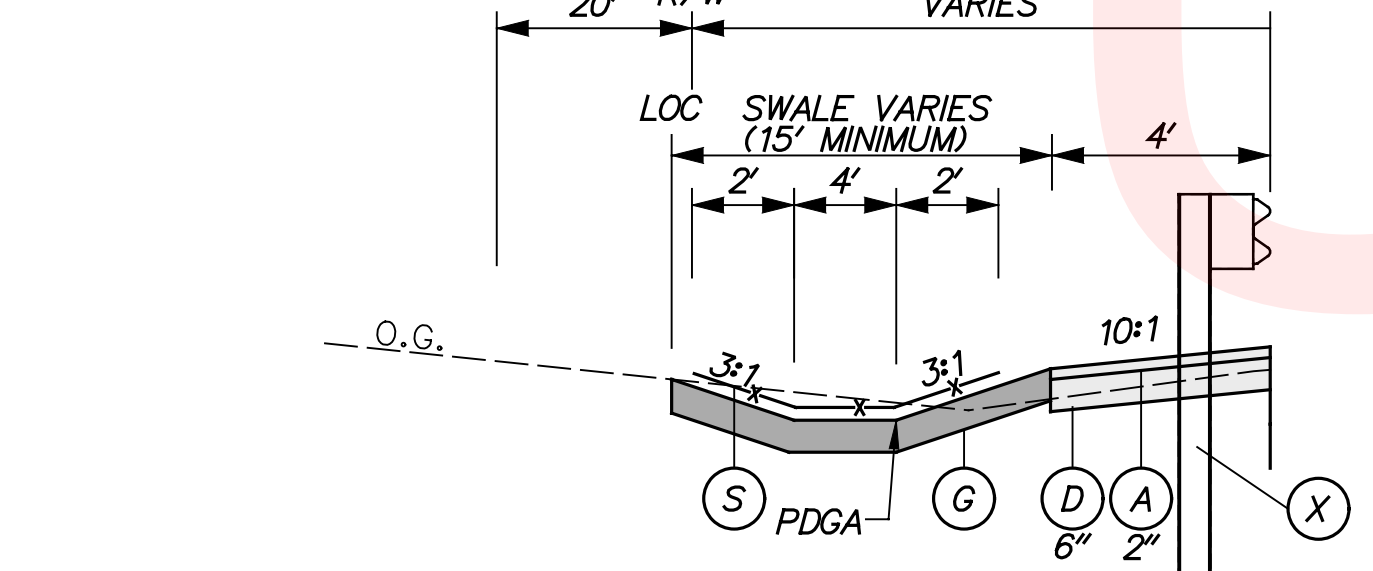
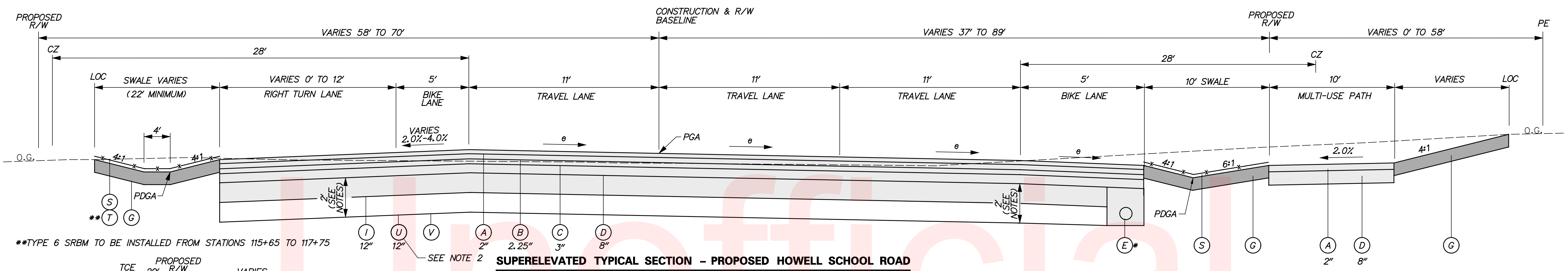
	SHT 1 STA. 102+00 TO STA. 110+50	SHT 2 STA. 110+50 TO STA. 118+50	SHT 3 STA. 118+50 TO STA. 126+50	SHT 4 STA. 126+50 TO STA. 134+50	SHT 5 STA. 134+50 TO STA. 142+50	SHT 6 STA. 142+50 TO STA. 151+00	SHT 7 STA. 151+00 TO STA. 159+50	SHT 8 STA. 159+50 TO STA. 168+00	SHT 9 STA. 168+00 TO STA. 176+50	SHT 10 STA. 176+50 TO STA. 185+00	SHT 11 STA. 185+00 TO STA. 187+50	SHT 12 STA. 428+50 TO STA. 432+50	SHT 13 STA. 437+50 TO STA. 445+50	SHT 14 STA. 903+22 TO STA. 911+73	PROJECT TOTALS
<b>EXCAVATION - ITEM 202000 (CY) [NEED = '-' / EXCESS = '+']</b>															
EX01: FROM CROSS SECTIONS / MODELS (+)	460	9132	10121	7475	3534	1816	1743	1398	714	306	9	1348	6414	589	45060
EX02: BITUMINOUS PAVEMENT REMOVED IN FILL SECTIONS (+)	91	897	0	707	1091	787	889	1623	239	0	0	520	687	712	8243
EX03: TOPSOIL REMOVED UNDER FILL SECTIONS (+) [ITEM 733002]	0	529	1061	0	0	0	0	0	0	0	0	0	0	0	1590
EX04: TOPSOIL PLACED IN CUT SECTIONS (+)	181	953	701	660	404	383	233	260	403	269	40	506	955	182	6129
EX05: ROOT MAT REMOVED IN CUT SECTIONS (-) [ITEM 201000]	0	-2377	-2386	-2159	-172	0	0	0	0	0	0	0	0	0	-7093
EX06: CURB AND/OR CURB AND GUTTER EXCAVATION (-) *(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EX07: UNDERDRAIN EXCAVATION (-) *(1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EX08: ROCK EXCAVATION (-)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EX09: REMOVAL OF PCC PAVEMENT, CURBS, SIDEWALK, ETC. (-) [ITEM 758000]	-75	-652	0	0	0	0	0	0	0	0	0	0	0	0	-1095
EXTOTAL: TOTAL EXCAVATION	657	8483	9497	6683	4858	2986	2865	2913	1357	575	49	2375	8056	1482	52835
<b>STORMWATER MANAGEMENT POND EXCAVATION - ITEM 271000 (CY) [NEED = '-' / EXCESS = '+']</b>															
SWEX01: FROM CROSS SECTIONS / MODELS (+)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWEX02: TOPSOIL REMOVED UNDER FILL SECTIONS (+)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWEX03: TOPSOIL PLACED IN CUT SECTIONS (+)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWEX04: ROOT MAT REMOVED (-)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWEX05: ROCK EXCAVATION (-)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWEXTOTAL: TOTAL STORMWATER MANAGEMENT POND EXCAVATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>EXCAVATION AVAILABLE FOR EMBANKMENT (CY) [NEED = '-' / EXCESS = '+']</b>															
EXTOTAL: TOTAL EXCAVATION (+) [ITEM 202000]	657	8483	9497	6683	4858	2986	2865	2913	1357	575	49	2375	8056	1482	52835
SWEXTOTAL: TOTAL STORMWATER MANAGEMENT POND EXCAVATION (+) [ITEM 271000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVEX01: EXCAVATION AND BACKFILLING FOR STRUCTURES (+) [ITEM 207000]	0	0	0	0	715	0	0	0	0	0	0	0	0	0	715
AVEX02: EXCAVATION AND BACKFILLING FOR PIPE TRENCHES (+) [ITEM 208000]	0	516	278	0	449	441	328	1204	1519	836	42	0	0	0	5613
AVEX03: CHANNEL EXCAVATION (+) [ITEM 203000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVEX04: EXCAVATION FROM LATERAL OR LONGITUDINAL DITCHING (+) [ITEM 714000]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVEX05: EXCAVATION FROM CURBS AND/OR CURB AND GUTTER (+)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVEX06: EXCAVATION FROM UNDERDRAINS (+) [ITEM 71500X]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVEX07: MISCELLANEOUS EXCAVATIONS (+)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVEX08: TOPSOIL REMOVED IN CUT AND/OR FILL SECTIONS (-)	0	-529	-1061	0	0	0	0	0	0	0	0	0	0	0	-1590
AVEX09: TOPSOIL REMOVED IN CUT AND/OR FILL SECTIONS FOR STORMWATER MANAGEMENT PONDS (-)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVEX10: UNSUITABLE MATERIALS (-)	-657	-8470	-4783	-3076	-6022	-3427	-3193	-4117	-2876	-1411	-91	-2375	-8056	-1482	-50035
AVEXTOTAL: TOTAL EXCAVATION AVAILABLE FOR EMBANKMENT	0	0	3931	3607	0	0	0	0	0	0	0	0	0	0	7538
<b>EMBANKMENT AND BORROW REQUIRED (CY) [NEED = '-' / EXCESS = '+']</b>															
BORROW, TYPE 'A' (-)	0	-735	-1384	-648	-231	0	-39	-917	0	0	0	0	-171	0	-4125
BORROW, TYPE 'B' (-)	0	-1118	-3602	-920	0	0	0	0	0	0	0	0	0	0	-5640
BORROW, TYPE 'C' (-)	0	-417	-208	0	-311	-327	-269	-952	-1373	-690	-33	0	0	0	-4580
BORROW, TYPE 'F' (-)	-97	-921	-611	-1327	-589	-217	-253	-389	0	0	0	-89	-783	-353	-5632
COMPACTION FACTOR APPLIED TO THE SUBTOTAL (%)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
TOTAL EMBANKMENT AND BORROW REQUIRED (-)	-117	-3829	-6967	-3474	-1358	-653	-673	-2710	-1648	-828	-40	-107	-1146	-424	-23972
<b>TOPSOIL SUMMARY (CY) [NEED = '-' / EXCESS = '+']</b>															
TOP01 & TP02: TOPSOIL SALVAGED FROM CUT AND FILL SECTIONS (+)	0	529	1061	0	0	0	0	0	0	0	0	0	0	0	1590
TOP03: TOPSOIL SALVAGED FROM STORMWATER MANAGEMENT PONDS (+)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOP04: TOPSOIL REQUIRED (-)	-265	-1117	-569	-1000	-580	-505	-351	-734	-410	-271	-43	-594	-1239	-534	-8211
TOPTOTAL: TOTAL TOPSOIL	-265	-588	492	-1000	-580	-505	-351	-734	-410	-271	-43	-594	-1239	-534	-6621
<b>MATERIAL BALANCE (CY) [NEED = '-' / EXCESS = '+']</b>															
BORROW, TYPE 'A'	0	-735	-1384	-648	-231	0	-39	-917	0	0	0	0	-171	0	-4950
BORROW, TYPE 'B'	0	-1118	-3602	-920	0	0	0	0	0	0	0	0	0	0	-6768
BORROW, TYPE 'C' *(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-4716
BORROW, TYPE 'F' *(2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
TOPSOIL	-265	-588	492	-1000	-580	-505	-351	-734	-410	-271	-43	-594	-1239	-534	-6621
UNSUITABLE MATERIAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NOTES:

\*(1) QUANTITY COVERED UNDER "EX01: FROM CROSS SECTIONS/MODELS (+)".

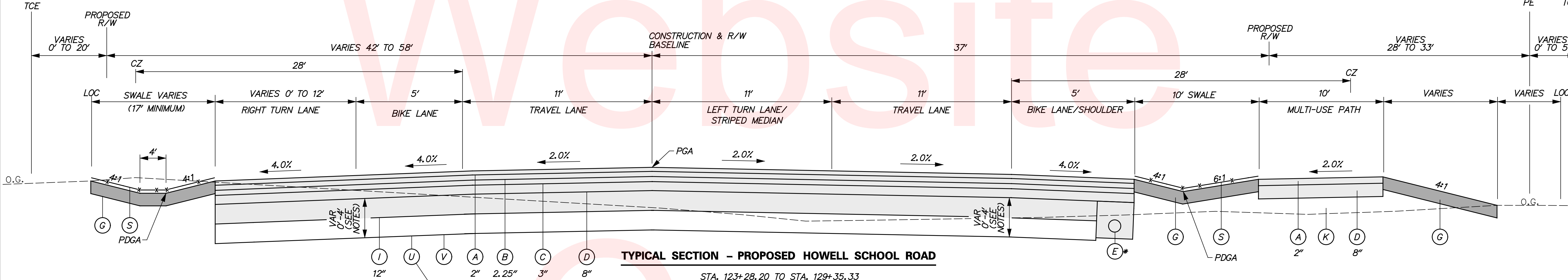
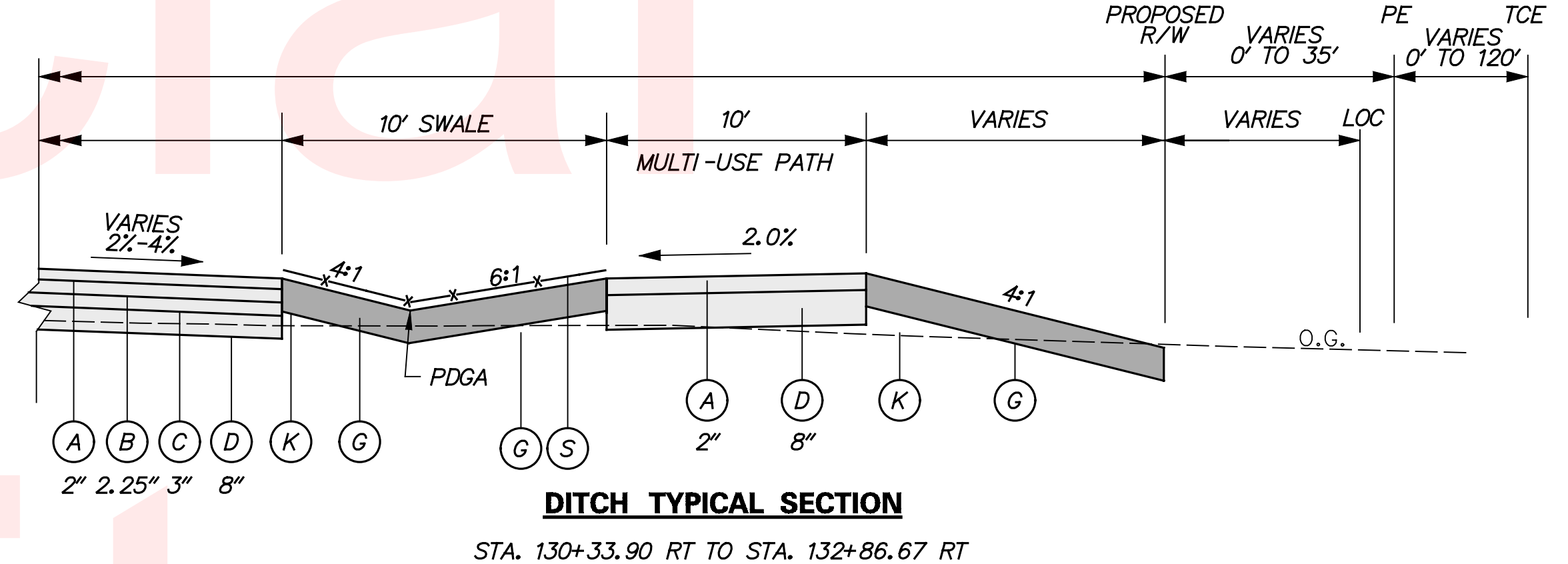
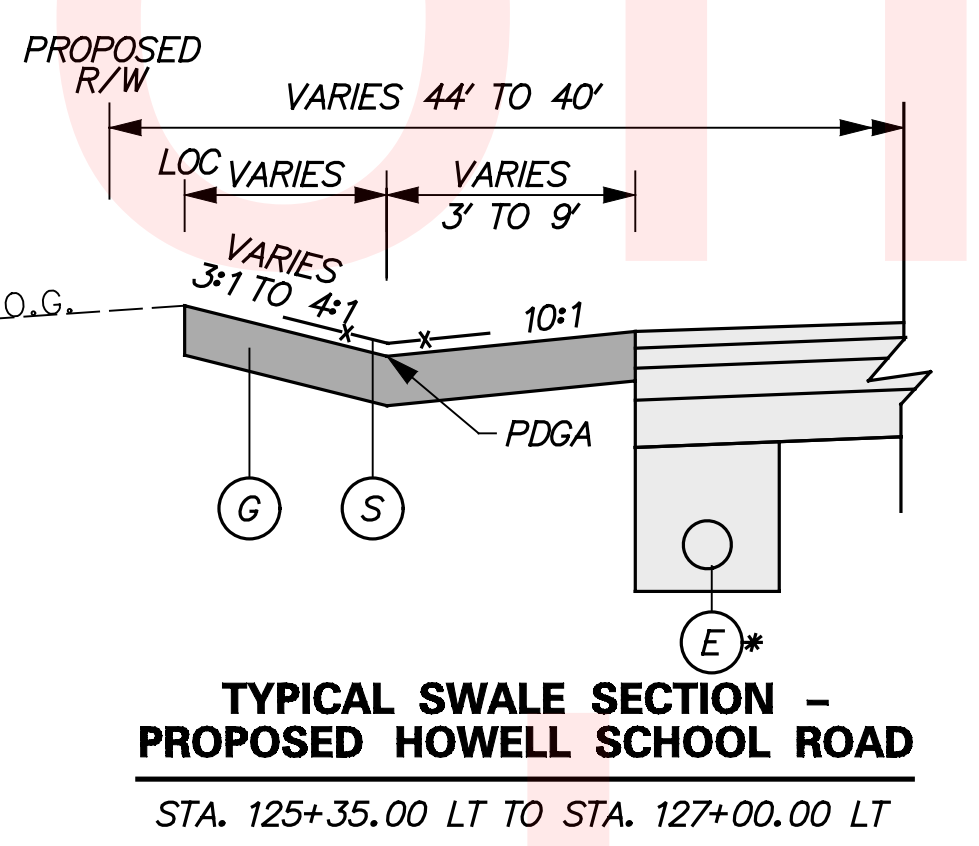
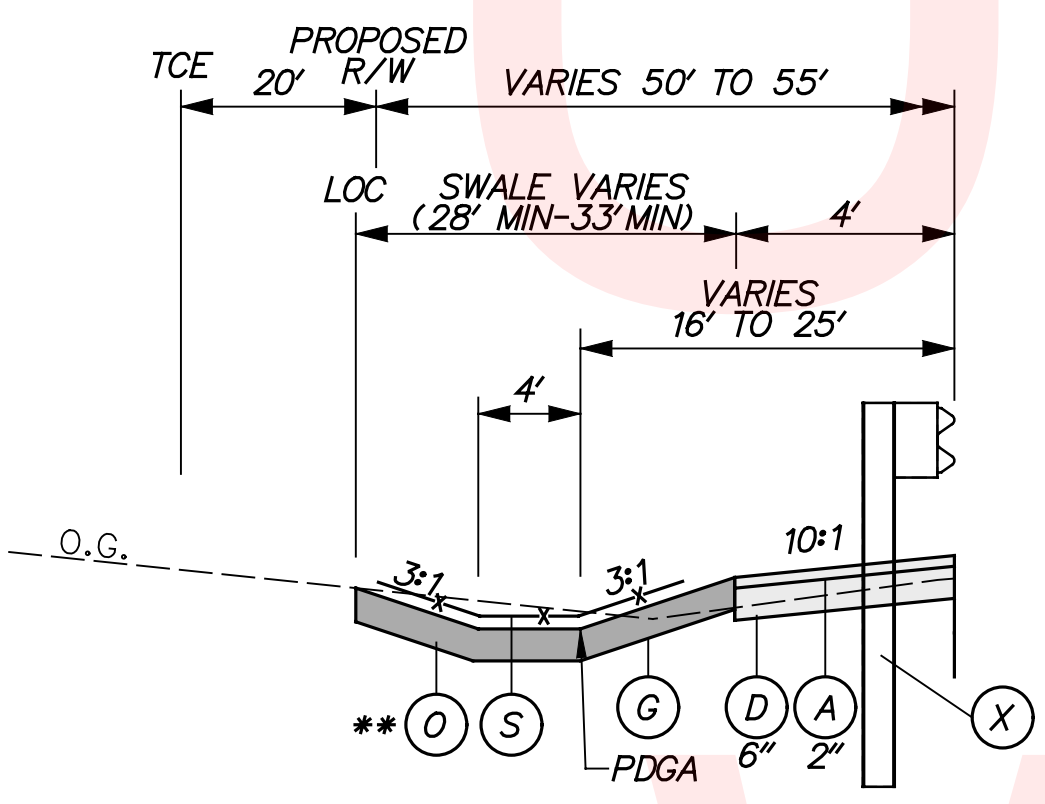
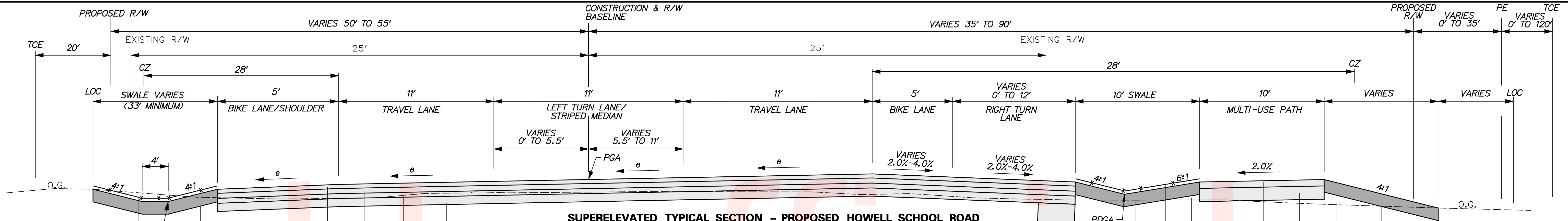
\*(2) IT IS ASSUMED THAT THE QUANTITY OF SUITABLE MATERIAL SHALL FIRST BE USED FOR EMBANKMENT AS "BORROW, TYPE 'F'". REMAINING MATERIAL WILL THEN BE SUFFICIENT FOR USE AS "BORROW, TYPE 'C'". MATERIAL TO BE VERIFIED IN FIELD AS SUITABLE IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.





NOTES:  
 1. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:  
 - WMA, SUPERPAVE TYPE C HOT-MIX - 2"  
 - WMA, SUPERPAVE TYPE B HOT-MIX - 3"  
 - WMA, SUPERPAVE, BCBC - 6"  
 - GABC - 8"  
 2. EXCAVATE SUBGRADE 2' FROM STA. 121+00 TO STA. 125+00

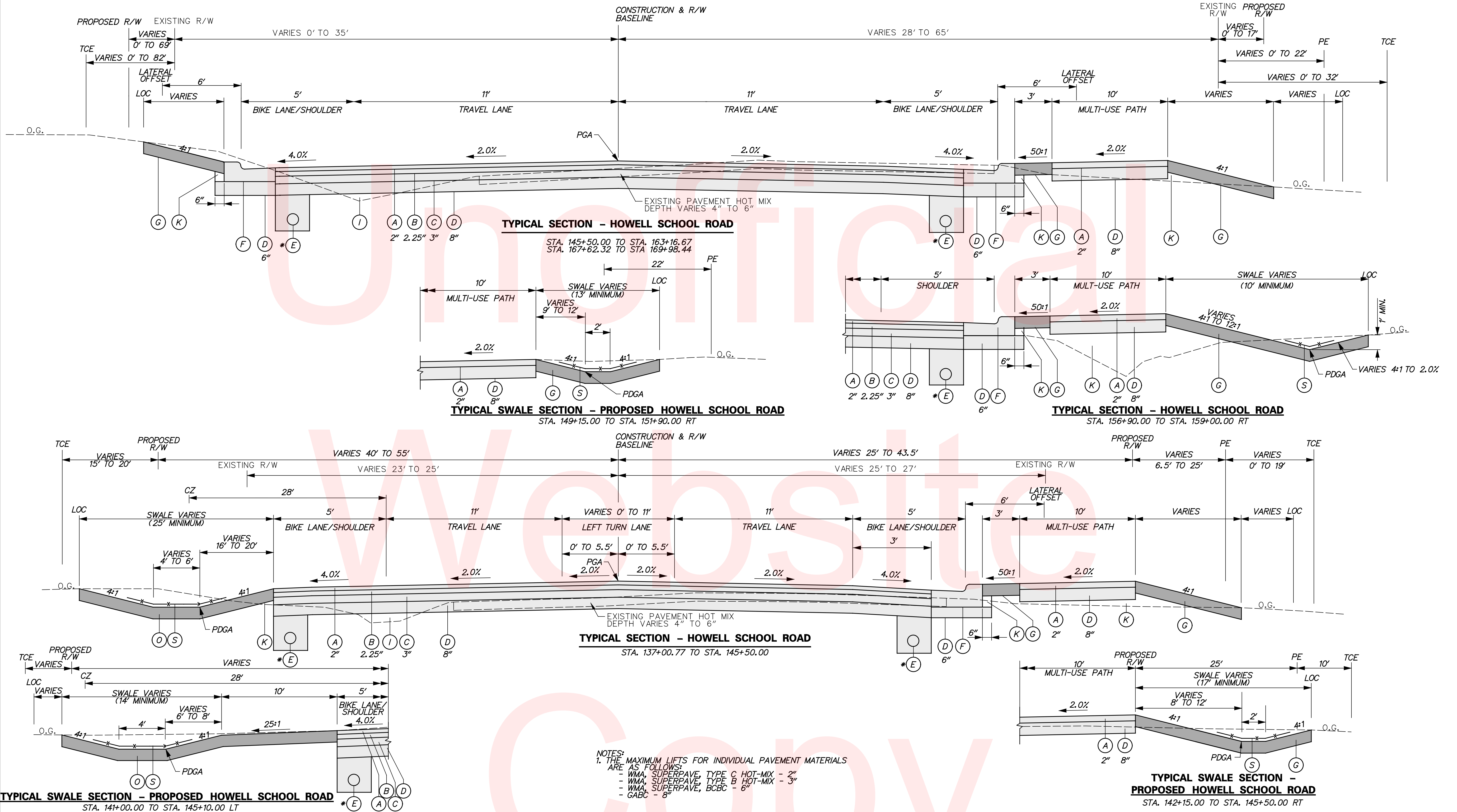
- LEGEND**
- (A) ITEM 401801 - WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATION PG 64-22 CARBONATE STONE
  - (B) ITEM 401810 - WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATION PG 64-22
  - (C) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE 160 GYRATIONS PG 64-22
  - (D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
  - (E) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" \*TO BE INSTALLED WHERE IDENTIFIED ON THE CONSTRUCTION PLANS
  - (F) ITEM 701016 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-4
  - (G) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  - (H) ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH
  - (I) ITEM 209001 - BORROW, TYPE A OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE A
  - (J) ITEM 760507 - PROFILE MILLING, HOT-MIX
  - (K) ITEM 209006 - BORROW, TYPE F OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE F
  - (L) ITEM 701025 - P.C.C. CURB TYPE 2, MODIFIED (SEE SHEET 67)
  - (M) ITEM 501001 - PORTLAND CEMENT CONCRETE PAVEMENT, 8"
  - (N) ITEM 701011 - P.C.C. CURB, TYPE 2
  - (O) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH
  - (P) ITEM 705002 - P.C.C. SIDEWALK, 6"
  - (Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
  - (R) ITEM 701010 - P.C.C. CURB, TYPE 1-8
  - (S) ITEM 908020 - EROSION CONTROL BLANKET MULCH
  - (T) ITEM 908021 - TURF REINFORCEMENT MATTING, TYPE 1
  - (U) ITEM 209002 - BORROW, TYPE B OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE B
  - (V) ITEM 713001 - GEOTEXTILES, STABILIZATION
  - (W) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
  - (X) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 (FUSION BONDED POLYESTER COATING - SEE PROJECT NOTES)



**NOTES:**  
 1. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:  
 - WMA, SUPERPAVE, TYPE C HOT-MIX - 2"  
 - WMA, SUPERPAVE, TYPE B HOT-MIX - 3"  
 - WMA, SUPERPAVE, BCBC - 6"  
 - GABC - 8"  
 2. EXCAVATE SUBGRADE 2' FROM STA 121+00 TO STA 125+00  
 EXCAVATE SUBGRADE 4' FROM STA 125+00 TO STA 126+50  
 EXCAVATE SUBGRADE 2' FROM STA 127+50 TO STA 128+50

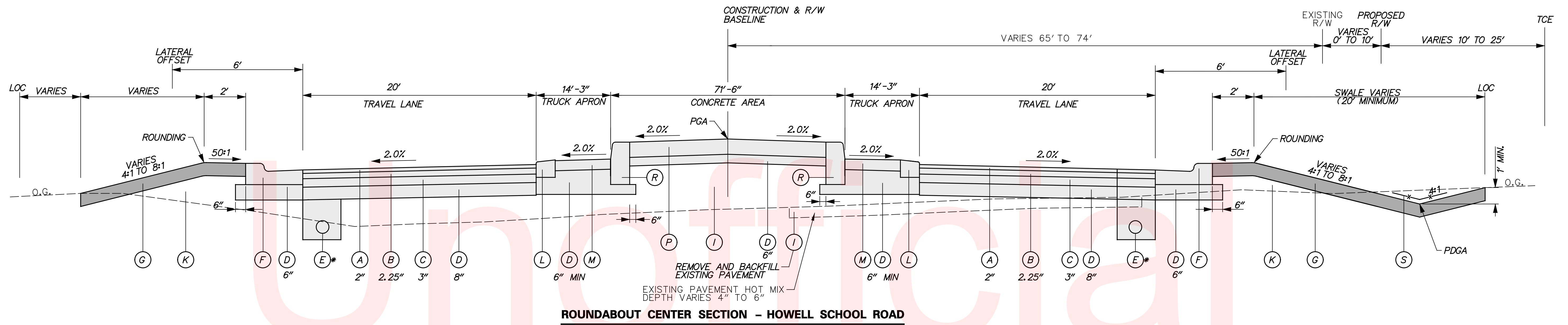
LEGEND	
(A) ITEM 401801 - WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATION PG 64-22 CARBONATE STONE	(E) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" *TO BE INSTALLED WHERE IDENTIFIED ON THE CONSTRUCTION PLANS
(B) ITEM 401810 - WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATION PG 64-22	(F) ITEM 701016 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-4
(C) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE 160 GYRATIONS PG 64-22	(G) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
(D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B	(H) ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH
	(I) ITEM 209001 - BORROW, TYPE A OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE A
	(J) ITEM 760507 - PROFILE MILLING, HOT-MIX
	(K) ITEM 209006 - BORROW, TYPE F OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE F
	(L) ITEM 701025 - P.C.C. CURB TYPE 2, MODIFIED (SEE SHEET 67)
	(M) ITEM 501001 - PORTLAND CEMENT CONCRETE PAVEMENT, 8"
	(N) ITEM 701011 - P.C.C. CURB, TYPE 2
	(O) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH
	(P) ITEM 705002 - P.C.C. SIDEWALK, 6"
	(Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
	(R) ITEM 701010 - P.C.C. CURB, TYPE 1-8
	(S) ITEM 908020 - EROSION CONTROL BLANKET MULCH
	(T) ITEM 908021 - TURF REINFORCEMENT MATTING, TYPE 1
	(U) ITEM 209002 - BORROW, TYPE B OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE B
	(V) ITEM 713001 - GEOTEXTILES, STABILIZATION
	(W) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
	(X) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 (FUSION BONDED POLYESTER COATING - SEE PROJECT NOTES)



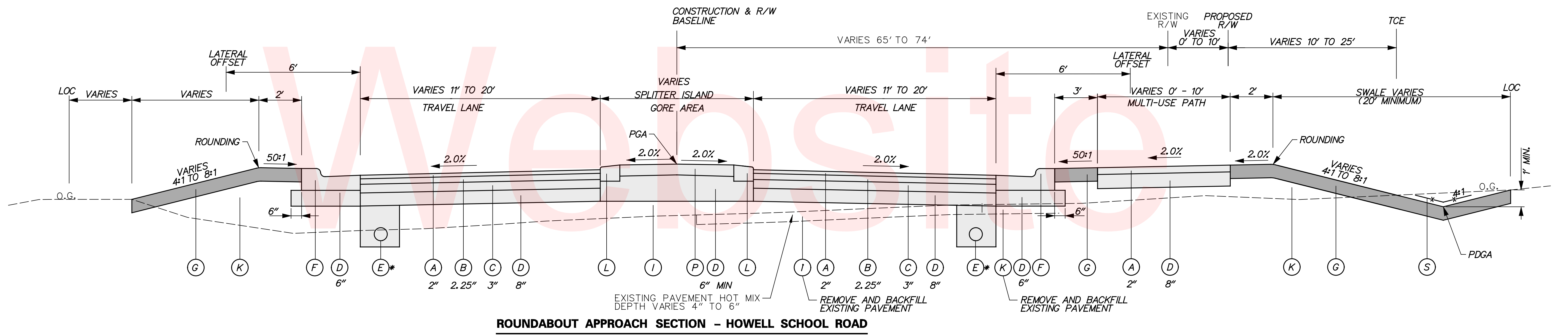


**NOTES:**  
 1. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:  
 - WMA, SUPERPAVE, TYPE C HOT-MIX - 2"  
 - WMA, SUPERPAVE, TYPE B HOT-MIX - 3"  
 - WMA, SUPERPAVE, BCBC - 6"  
 - GABC - 8"

- |   |   |  |
|---|---|--|
| <p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li>(A) ITEM 401801 - WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATION PG 64-22 CARBONATE STONE</li> <li>(B) ITEM 401810 - WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATION PG 64-22</li> <li>(C) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE 160 GYRATIONS PG 64-22</li> <li>(D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B</li> <li>(E) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" *TO BE INSTALLED WHERE IDENTIFIED ON THE CONSTRUCTION PLANS</li> <li>(F) ITEM 701016 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-4</li> <li>(G) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND</li> <li>(H) ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH</li> </ul> | <ul style="list-style-type: none"> <li>(I) ITEM 209001 - BORROW, TYPE A OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE A</li> <li>(J) ITEM 760507 - PROFILE MILLING, HOT-MIX</li> <li>(K) ITEM 209006 - BORROW, TYPE F OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE F</li> <li>(L) ITEM 701025 - P.C.C. CURB TYPE 2, MODIFIED (SEE SHEET 67)</li> <li>(M) ITEM 501001 - PORTLAND CEMENT CONCRETE PAVEMENT, 8"</li> <li>(N) ITEM 701011 - P.C.C. CURB, TYPE 2</li> </ul> | <ul style="list-style-type: none"> <li>(O) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH</li> <li>(P) ITEM 705002 - P.C.C. SIDEWALK, 6"</li> <li>(Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31</li> <li>(R) ITEM 701010 - P.C.C. CURB, TYPE 1-8</li> <li>(S) ITEM 908020 - EROSION CONTROL BLANKET MULCH</li> <li>(T) ITEM 908021 - TURF REINFORCEMENT MATTING, TYPE 1</li> <li>(U) ITEM 209002 - BORROW, TYPE B OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE B</li> <li>(V) ITEM 713001 - GEOTEXTILES, STABILIZATION</li> <li>(W) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4</li> <li>(X) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 (FUSION BONDED POLYESTER COATING - SEE PROJECT NOTES)</li> </ul> |
|---|---|--|



**ROUNDABOUT CENTER SECTION - HOWELL SCHOOL ROAD**

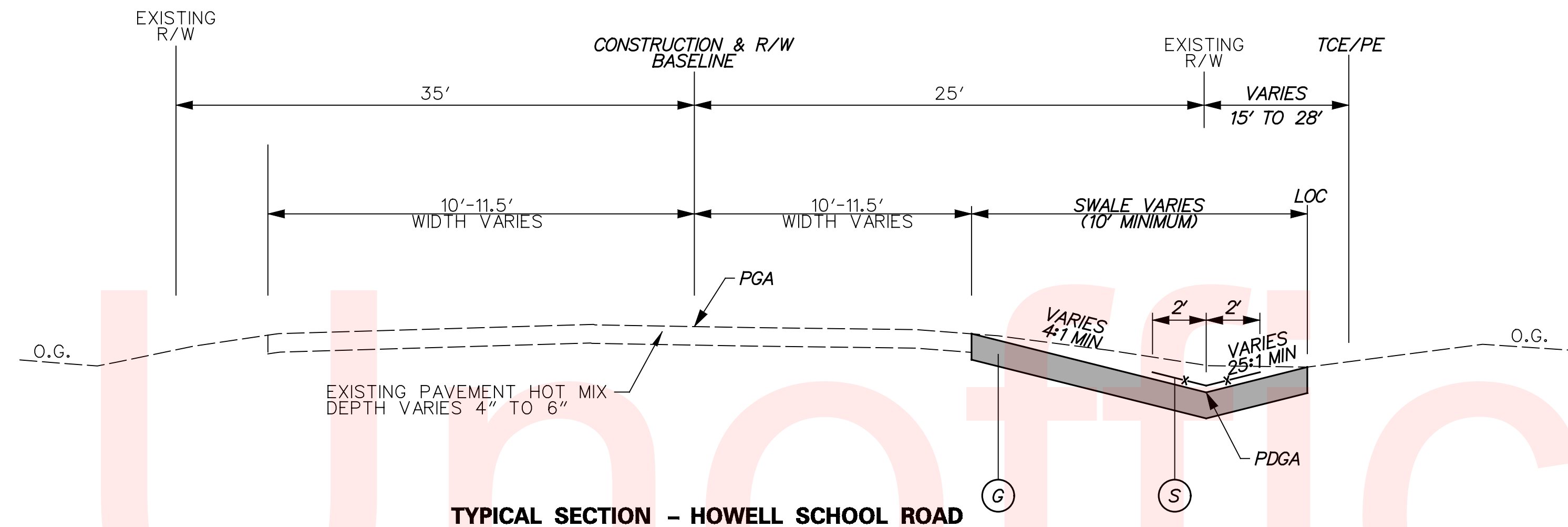


**ROUNDABOUT APPROACH SECTION - HOWELL SCHOOL ROAD**

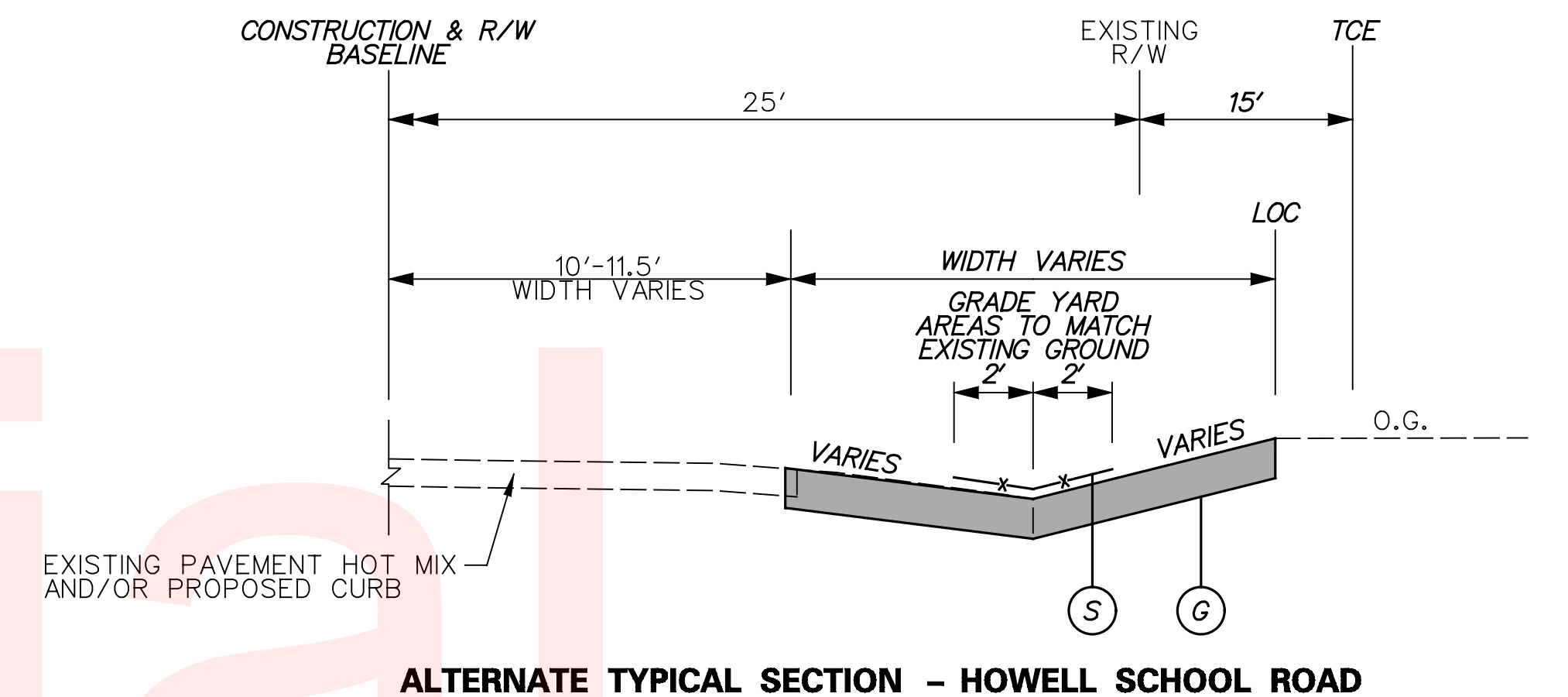
STA. 163+16.67 TO STA. 164+66.52  
 STA. 166+12.49 TO STA. 167+62.32

NOTES:  
 1. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:  
 - WMA, SUPERPAVE, TYPE C HOT-MIX - 2"  
 - WMA, SUPERPAVE, TYPE B HOT-MIX - 3"  
 - WMA, SUPERPAVE, BCBC - 6"  
 - GABC - 8"

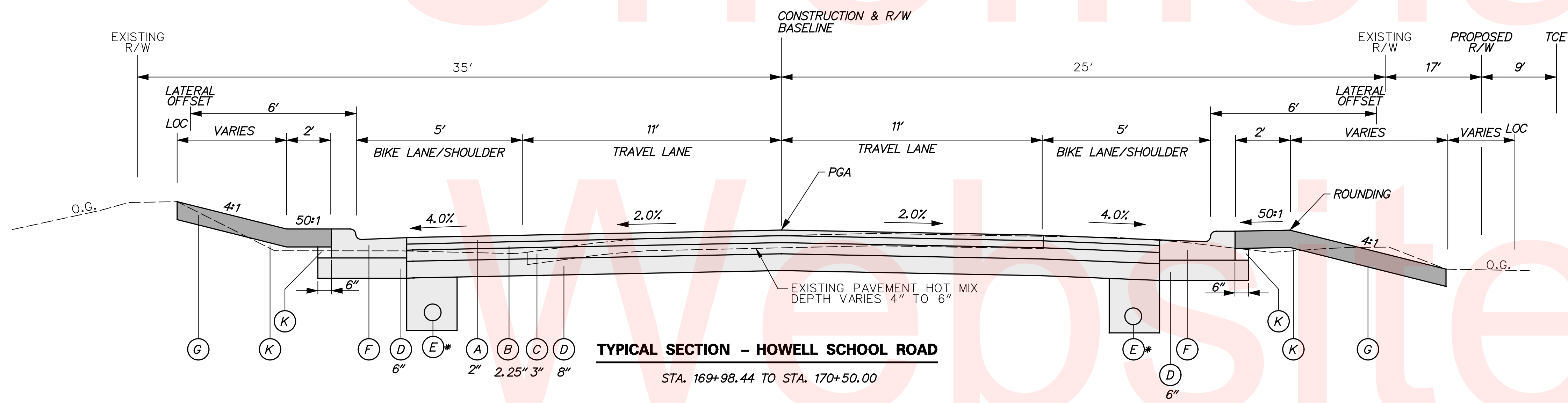
LEGEND			
(A) ITEM 401801 - WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATION PG 64-22 CARBONATE STONE	(E) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" *TO BE INSTALLED WHERE IDENTIFIED ON THE CONSTRUCTION PLANS	(I) ITEM 209001 - BORROW, TYPE A OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE A	(O) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH PERMANENT GRASS SEEDING, WET GROUND
(B) ITEM 401810 - WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATION PG 64-22	(F) ITEM 701016 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-4	(J) ITEM 760507 - PROFILE MILLING, HOT-MIX	(P) ITEM 705002 - P.C.C. SIDEWALK, 6"
(C) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE 160 GYRATIONS PG 64-22	(G) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND	(K) ITEM 209006 - BORROW, TYPE F OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE F	(Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
(D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B	(H) ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH	(L) ITEM 701025 - P.C.C. CURB TYPE 2, MODIFIED (SEE SHEET 67)	(R) ITEM 701010 - P.C.C. CURB, TYPE 1-8
		(M) ITEM 501001 - PORTLAND CEMENT CONCRETE PAVEMENT, 8"	(S) ITEM 908020 - EROSION CONTROL BLANKET MULCH
		(N) ITEM 701011 - P.C.C. CURB, TYPE 2	(T) ITEM 908021 - TURF REINFORCEMENT MATTING, TYPE 1
			(U) ITEM 209002 - BORROW, TYPE B OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE B
			(V) ITEM 713001 - GEOTEXTILES, STABILIZATION
			(W) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
			(X) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 (FUSION BONDED POLYESTER COATING - SEE PROJECT NOTES)



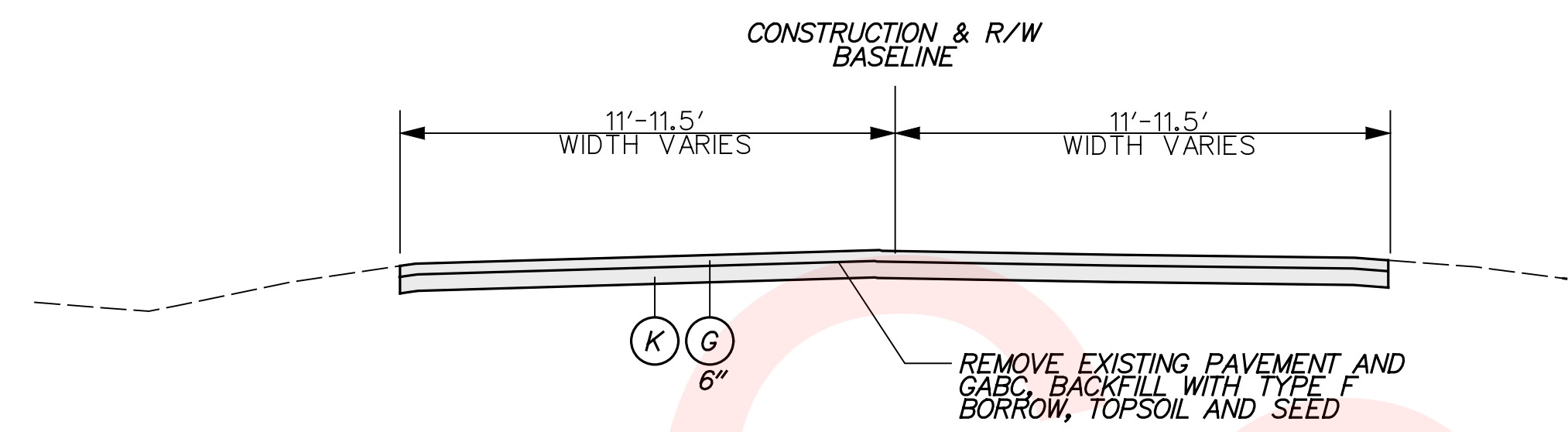
**TYPICAL SECTION - HOWELL SCHOOL ROAD**  
STA. 170+50.00 TO STA. 187+85.00



**ALTERNATE TYPICAL SECTION - HOWELL SCHOOL ROAD**  
STA. 170+50.00 TO STA. 174+00.00 RT



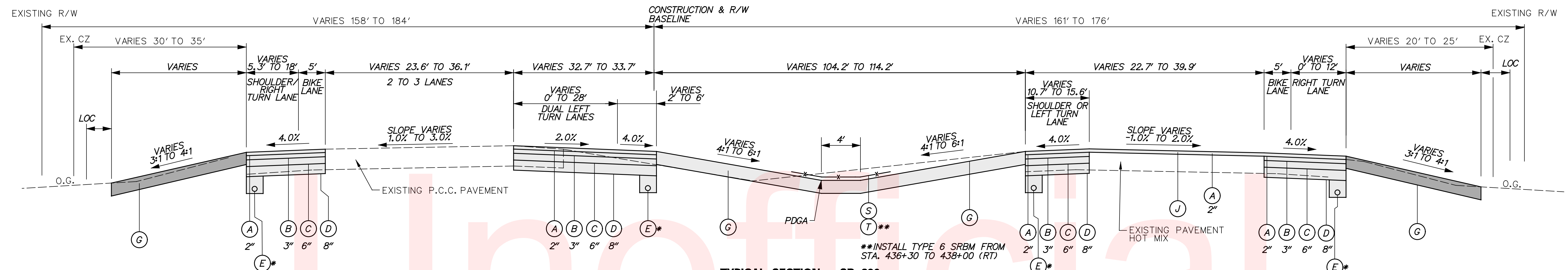
**TYPICAL SECTION - HOWELL SCHOOL ROAD**  
STA. 169+98.44 TO STA. 170+50.00



**TYPICAL SECTION - REMOVAL OF EXISTING HOWELL SCHOOL ROAD**  
STA. 914+25.16 TO STA. 917+28.65

NOTES:  
1. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:  
- WMA, SUPERPAVE, TYPE C HOT-MIX - 2"  
- WMA, SUPERPAVE, TYPE B HOT-MIX - 3"  
- WMA, SUPERPAVE, BCBC - 6"  
- GABC - 8"

- LEGEND**
- (A) ITEM 401801 - WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATION PG 64-22 CARBONATE STONE
  - (B) ITEM 401810 - WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATION PG 64-22
  - (C) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE 160 GYRATIONS PG 64-22
  - (D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
  - (E) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" \*TO BE INSTALLED WHERE IDENTIFIED ON THE CONSTRUCTION PLANS
  - (F) ITEM 701016 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-4
  - (G) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  - (H) ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH
  - (I) ITEM 209001 - BORROW, TYPE A OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE A
  - (J) ITEM 760507 - PROFILE MILLING, HOT-MIX
  - (K) ITEM 209006 - BORROW, TYPE F OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE F
  - (L) ITEM 701025 - P.C.C. CURB TYPE 2, MODIFIED (SEE SHEET 67)
  - (M) ITEM 501001 - PORTLAND CEMENT CONCRETE PAVEMENT, 8"
  - (N) ITEM 701011 - P.C.C. CURB, TYPE 2
  - (O) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH
  - (P) ITEM 705002 - P.C.C. SIDEWALK, 6"
  - (Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
  - (R) ITEM 701010 - P.C.C. CURB, TYPE 1-8
  - (S) ITEM 908020 - EROSION CONTROL BLANKET MULCH
  - (T) ITEM 908021 - TURF REINFORCEMENT MATTING, TYPE 1
  - (U) ITEM 209002 - BORROW, TYPE B OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE B
  - (V) ITEM 713001 - GEOTEXTILES, STABILIZATION
  - (W) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
  - (X) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 (FUSION BONDED POLYESTER COATING - SEE PROJECT NOTES)

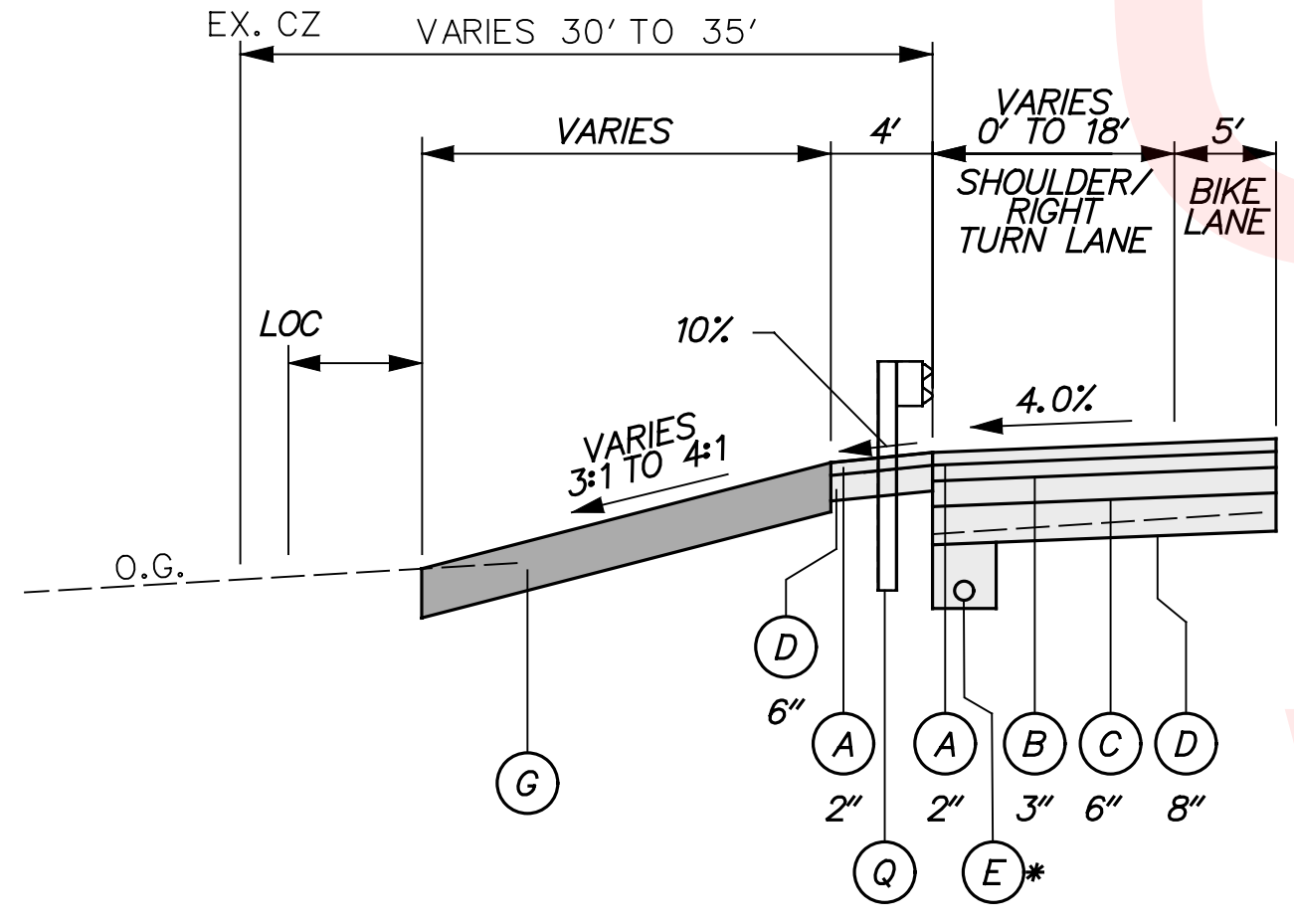


**TYPICAL SECTION - SR 896**

STA. 428+79.00 NB TO STA. 445+07.00 NB  
 AND  
 STA. 433+74.00 SB TO STA. 445+16.00 SB

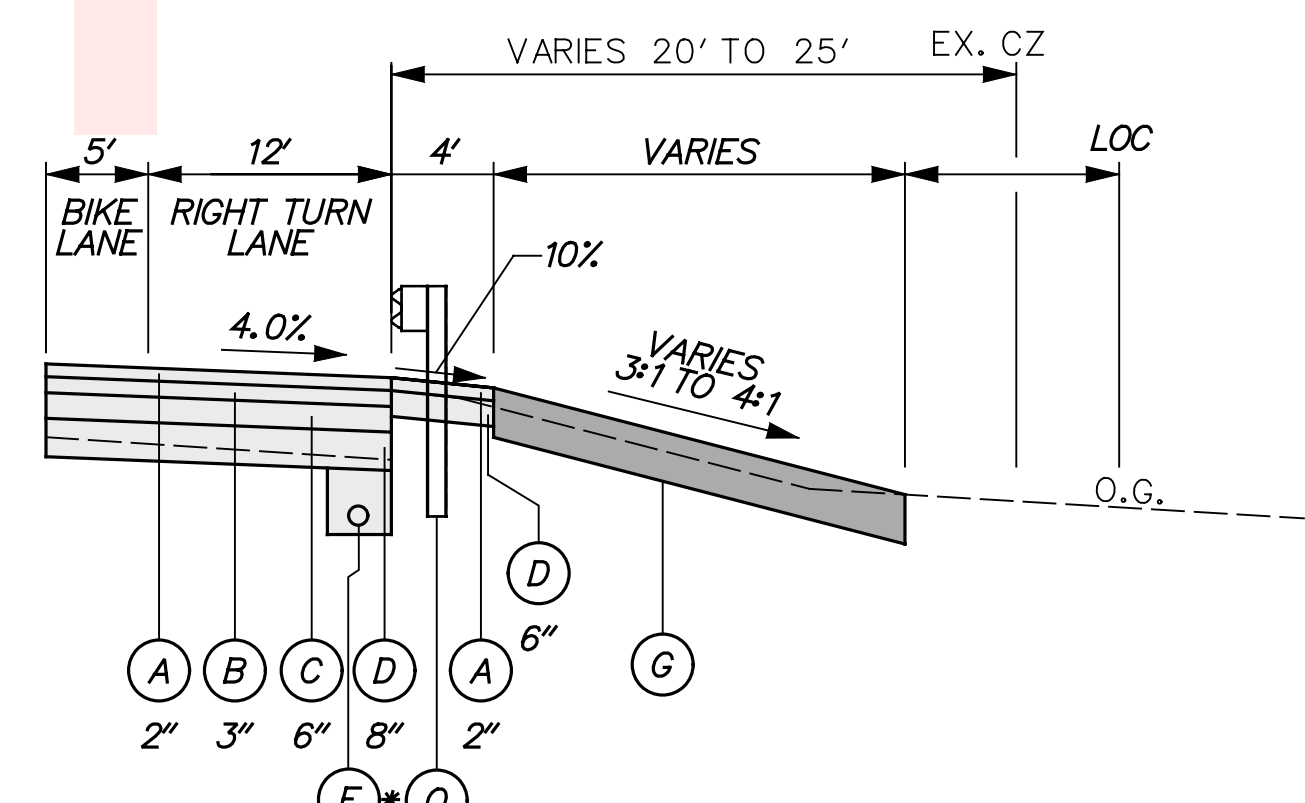
**FULL DEPTH WIDENING STATION LIMITS:**

(NORTHBOUND) STA. 428+79.00 RT TO STA. 445+07.00 RT  
 (NORTHBOUND) STA. 432+96.00 LT TO STA. 436+06.00 LT  
 (SOUTHBOUND) STA. 433+74.00 LT TO STA. 434+90.00 LT  
 (SOUTHBOUND) STA. 433+74.00 RT TO STA. 445+16.00 RT  
 (SOUTHBOUND) STA. 435+30.00 LT TO STA. 435+87.00 LT



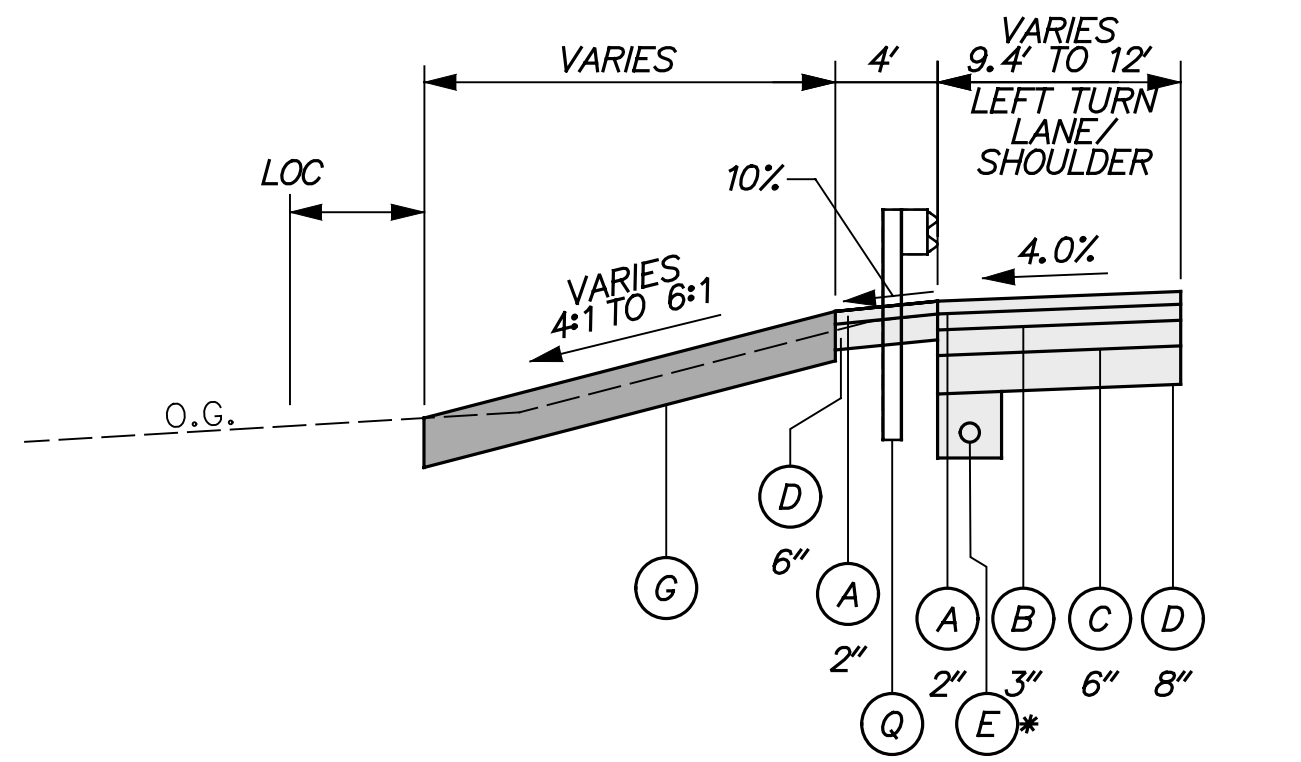
**TYPICAL SECTION WITH GUARDRAIL- SR 896**

STA. 435+87.10 SB TO STA. 436+51.81 SB



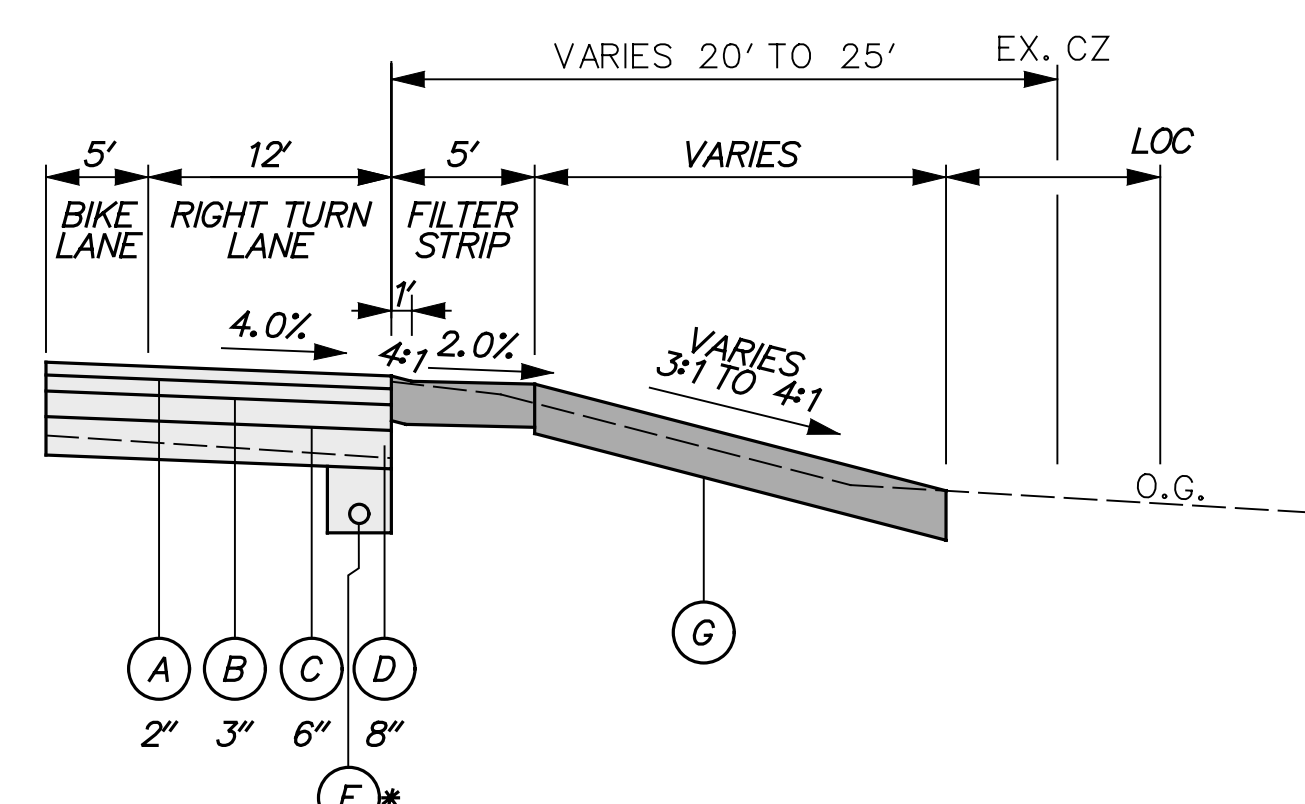
**TYPICAL SECTION WITH GUARDRAIL - SR 896**

STA. 431+93.85 NB TO STA. 433+61.20 NB



**TYPICAL SECTION WITH GUARDRAIL - SR 896**

STA. 432+03.45 NB TO STA. 433+51.50 NB

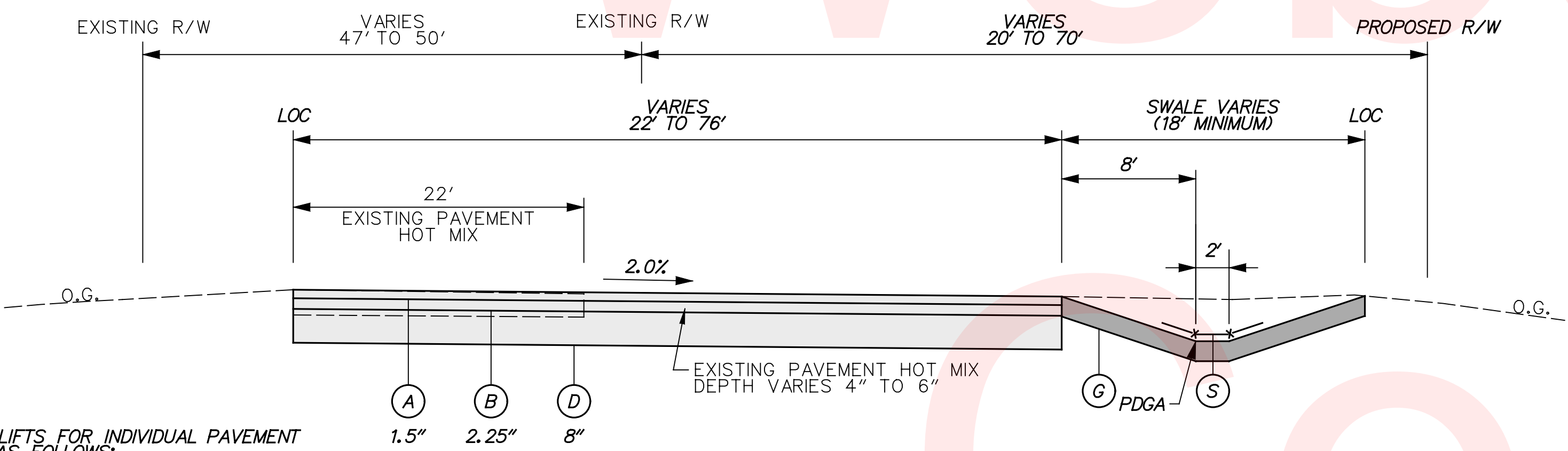
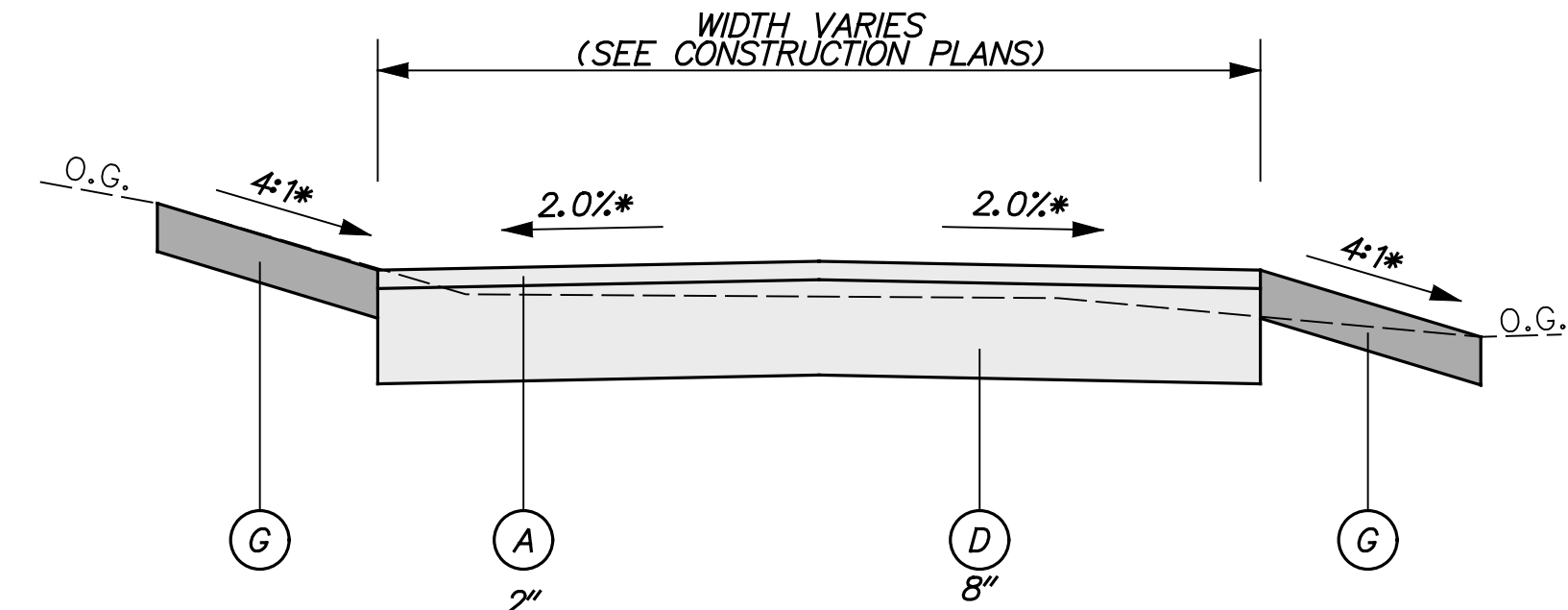
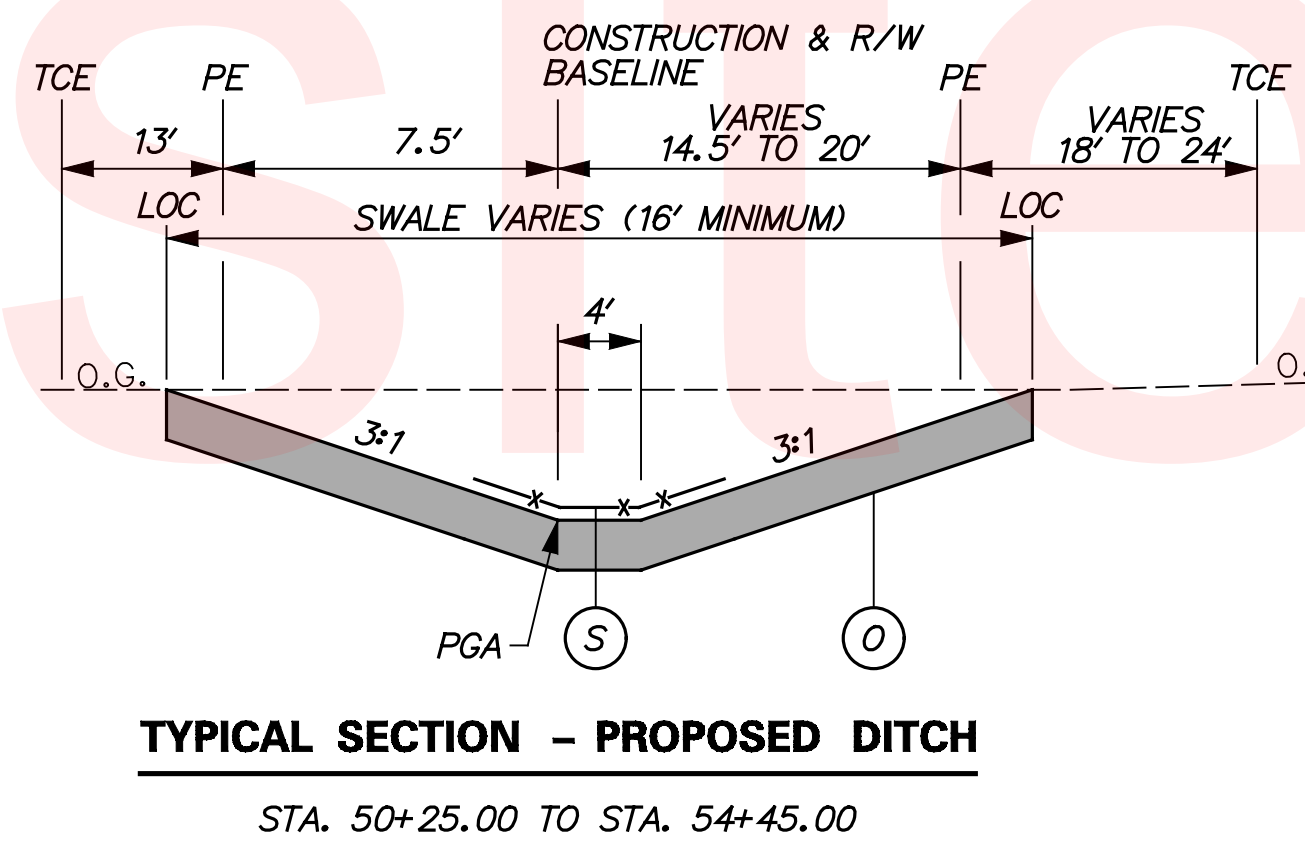
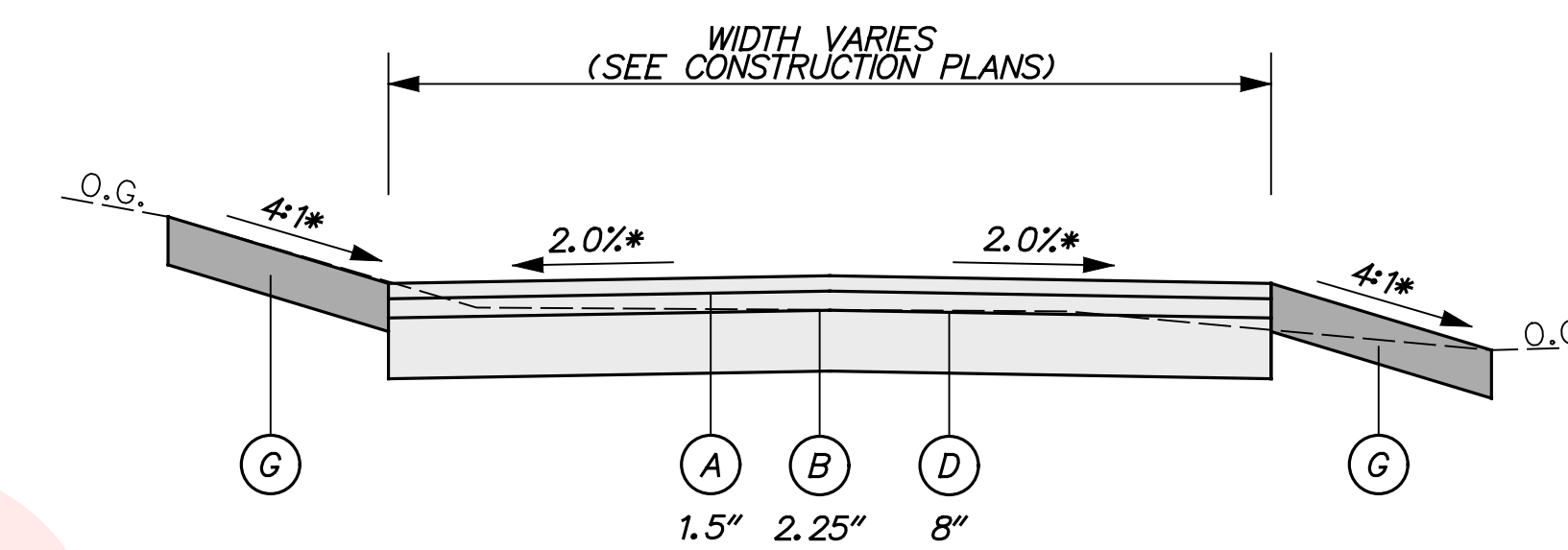
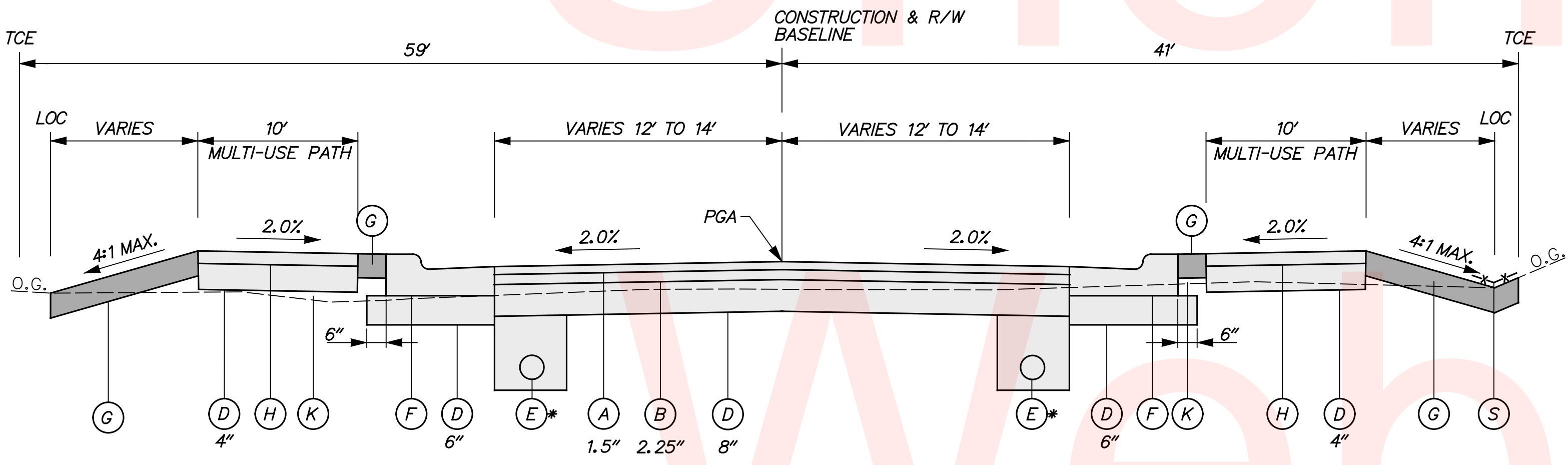
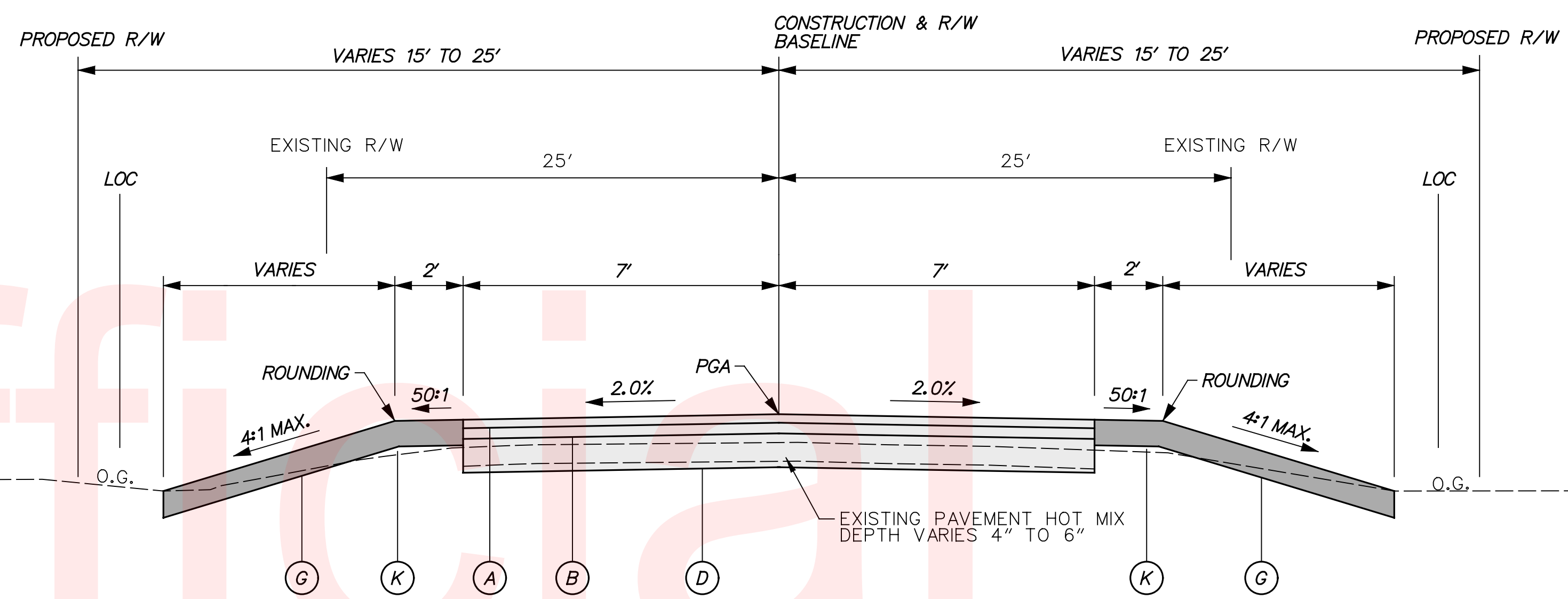
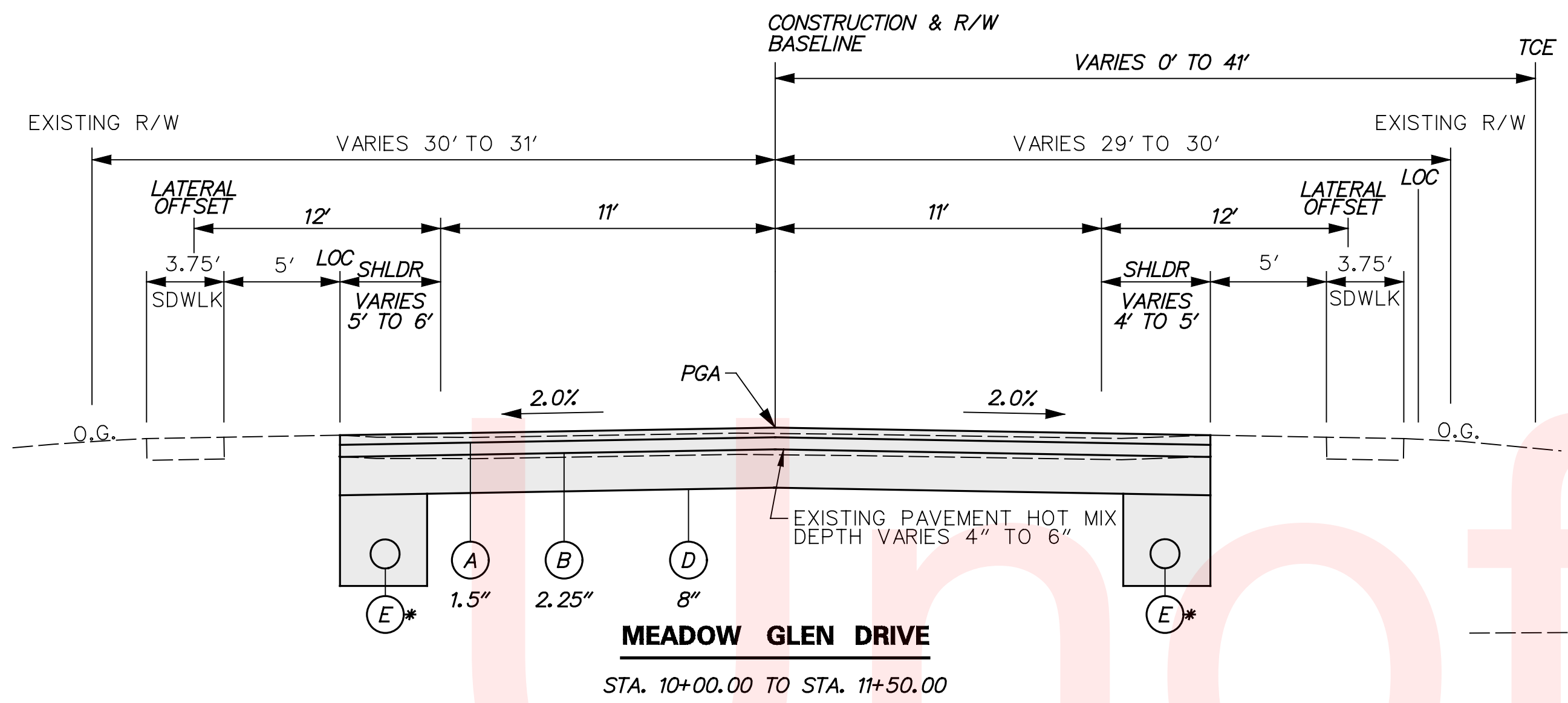


**TYPICAL SECTION WITH FILTER STRIP - SR 896**

STA. 436+15.44 NB TO STA. 441+02.84 NB

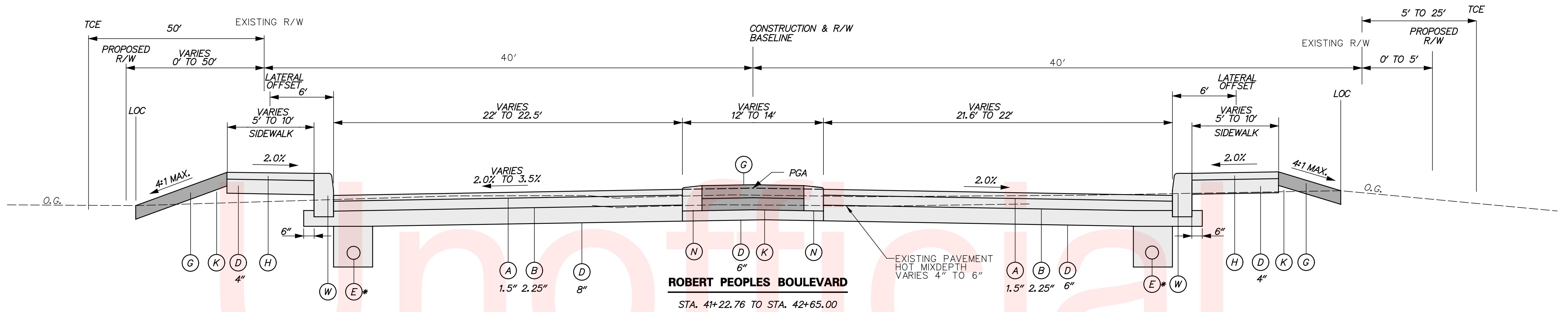
- NOTES:**  
 1. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:  
 - WMA, SUPERPAVE, TYPE C HOT-MIX - 2"  
 - WMA, SUPERPAVE, TYPE B HOT-MIX - 3"  
 - WMA, SUPERPAVE, BCBC - 6"  
 - GABC - 8"

- LEGEND**
- |  |   |   |   |  |
|--|---|---|---|--|
| (A) ITEM 401801 - WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATION PG 64-22 CARBONATE STONE  | (E) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" *TO BE INSTALLED WHERE IDENTIFIED ON THE CONSTRUCTION PLANS                   | (I) ITEM 209001 - BORROW, TYPE A OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE A | (O) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH | (T) ITEM 908021 - TURF REINFORCEMENT MATTING, TYPE 1   |
| (B) ITEM 401810 - WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATION PG 64-22                  | (F) ITEM 701016 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-4   | (J) ITEM 760507 - PROFILE MILLING, HOT-MIX  | (P) ITEM 705002 - P.C.C. SIDEWALK, 6"                                     | (U) ITEM 209002 - BORROW, TYPE B OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE B                          |
| (C) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE 160 GYRATIONS PG 64-22 | (G) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND | (K) ITEM 209006 - BORROW, TYPE F OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE F | (Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31              | (V) ITEM 713001 - GEOTEXTILES, STABILIZATION   |
| (D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B                                   | (H) ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH   | (L) ITEM 701025 - P.C.C. CURB TYPE 2, MODIFIED (SEE SHEET 67)                             | (R) ITEM 701010 - P.C.C. CURB, TYPE 1-8                                   | (W) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4  |
|  |   | (M) ITEM 501001 - PORTLAND CEMENT CONCRETE PAVEMENT, 8"                                   | (S) ITEM 908020 - EROSION CONTROL BLANKET MULCH                           | (X) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 (FUSION BONDED POLYESTER COATING - SEE PROJECT NOTES) |
|  |   | (N) ITEM 701011 - P.C.C. CURB, TYPE 2   |   |  |



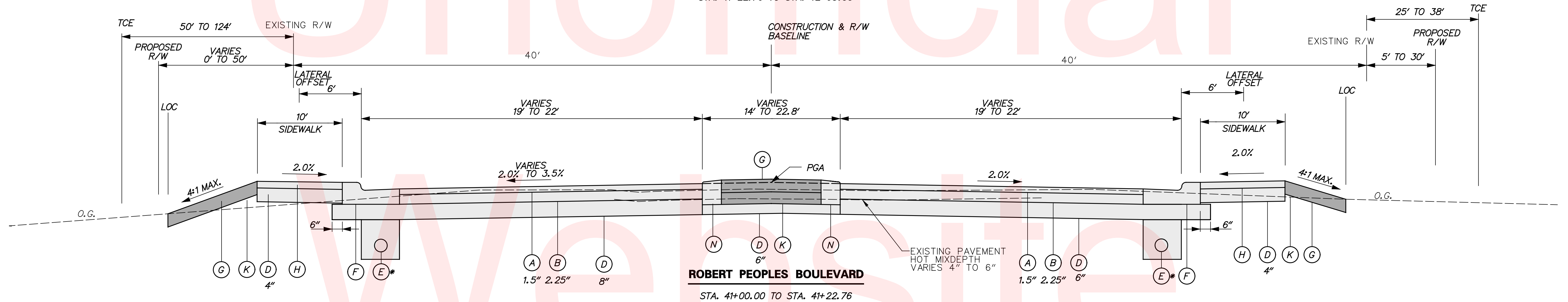
**NOTES:**  
1. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:  
- WMA, SUPERPAVE, TYPE C HOT-MIX - 2"  
- WMA, SUPERPAVE, TYPE B HOT-MIX - 3"  
- WMA, SUPERPAVE, BCBC - 6"  
- GABC - 8"

- |  |   |   |   |  |
|--|---|---|---|--|
| (A) ITEM 401801 - WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATION PG 64-22 CARBONATE STONE  | (E) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" *TO BE INSTALLED WHERE IDENTIFIED ON THE CONSTRUCTION PLANS                   | (I) ITEM 209001 - BORROW, TYPE A OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE A | (O) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH | (T) ITEM 908021 - TURF REINFORCEMENT MATTING, TYPE 1   |
| (B) ITEM 401810 - WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATION PG 64-22                  | (F) ITEM 701016 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-4   | (J) ITEM 760507 - PROFILE MILLING, HOT-MIX  | (P) ITEM 705002 - P.C.C. SIDEWALK, 6"                                     | (U) ITEM 209002 - BORROW, TYPE B OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE B                          |
| (C) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE 160 GYRATIONS PG 64-22 | (G) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND | (K) ITEM 209006 - BORROW, TYPE F OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE F | (Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31              | (V) ITEM 713001 - GEOTEXTILES, STABILIZATION   |
| (D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B                                   | (H) ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH   | (L) ITEM 701025 - P.C.C. CURB TYPE 2, MODIFIED (SEE SHEET 67)                             | (R) ITEM 701010 - P.C.C. CURB, TYPE 1-8                                   | (W) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4  |
|  |   | (M) ITEM 501001 - PORTLAND CEMENT CONCRETE PAVEMENT, 8"                                   | (S) ITEM 908020 - EROSION CONTROL BLANKET MULCH                           | (X) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 (FUSION BONDED POLYESTER COATING - SEE PROJECT NOTES) |
|  |   | (N) ITEM 701011 - P.C.C. CURB, TYPE 2   |   |  |



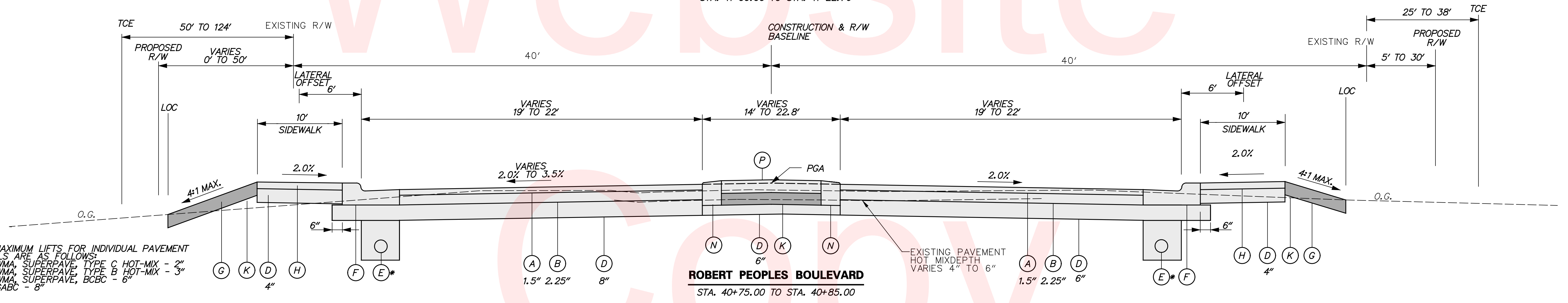
**ROBERT PEOPLES BOULEVARD**

STA. 41+22.76 TO STA. 42+65.00



**ROBERT PEOPLES BOULEVARD**

STA. 41+00.00 TO STA. 41+22.76



**ROBERT PEOPLES BOULEVARD**

STA. 40+75.00 TO STA. 40+85.00

NOTES:  
1. THE MAXIMUM LIFTS FOR INDIVIDUAL PAVEMENT MATERIALS ARE AS FOLLOWS:  
- WMA, SUPERPAVE, TYPE C HOT-MIX - 2"  
- WMA, SUPERPAVE, TYPE B HOT-MIX - 3"  
- WMA, SUPERPAVE, BCBC - 6"  
- GABC - 8"

- LEGEND**
- (A) ITEM 401801 - WMA, SUPERPAVE, TYPE C HOT-MIX, 160 GYRATION PG 64-22 CARBONATE STONE
  - (B) ITEM 401810 - WMA, SUPERPAVE, TYPE B HOT-MIX, 160 GYRATION PG 64-22
  - (C) ITEM 401819 - WMA, SUPERPAVE, BITUMINOUS CONCRETE BASE COURSE 160 GYRATIONS PG 64-22
  - (D) ITEM 302007 - GRADED AGGREGATE BASE COURSE, TYPE B
  - (E) ITEM 715001 - PERFORATED PIPE UNDERDRAINS, 6" \*TO BE INSTALLED WHERE IDENTIFIED ON THE CONSTRUCTION PLANS
  - (F) ITEM 701016 - INTEGRAL P.C.C. CURB AND GUTTER, TYPE 1-4
  - (G) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH AND ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
  - (H) ITEM 705001 - P.C.C. SIDEWALK, 4" DEPTH
  - (I) ITEM 209001 - BORROW, TYPE A OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE A
  - (J) ITEM 760507 - PROFILE MILLING, HOT-MIX
  - (K) ITEM 209006 - BORROW, TYPE F OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE F
  - (L) ITEM 701025 - P.C.C. CURB TYPE 2, MODIFIED (SEE SHEET 67)
  - (M) ITEM 501001 - PORTLAND CEMENT CONCRETE PAVEMENT, 8"
  - (N) ITEM 701011 - P.C.C. CURB, TYPE 2
  - (O) ITEM 908004 - TOPSOIL, 6" DEPTH OR ITEM 908010 - TOPSOILING, 6" DEPTH
  - (P) ITEM 705002 - P.C.C. SIDEWALK, 6"
  - (Q) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
  - (R) ITEM 701010 - P.C.C. CURB, TYPE 1-8
  - (S) ITEM 908020 - EROSION CONTROL BLANKET MULCH
  - (T) ITEM 908021 - TURF REINFORCEMENT MATTING, TYPE 1
  - (U) ITEM 209002 - BORROW, TYPE B OR EXISTING EXCAVATED MATERIAL THAT MEETS BORROW, TYPE B
  - (V) ITEM 713001 - GEOTEXTILES, STABILIZATION
  - (W) ITEM 701012 - PORTLAND CEMENT CONCRETE CURB, TYPE 1-4
  - (X) ITEM 720050 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31 (FUSION BONDED POLYESTER COATING - SEE PROJECT NOTES)

CIRCULAR CURVE NO. 1A			
Element: Circular			
	STATION	NORTHING	EASTING
PC (50000)	101+13.6755	572841.7707	564147.2626
PI (50002)	105+10.2659	572451.3379	564475.7950
CC		573221.5791	564775.1899
PT (50003)	108+39.4779	572502.6802	564869.0479
Radius:		725.0000	
Delta:		57° 21' 33.0770" Left	
Degree of Curvature (Arc):		7° 54' 10.3181"	
Length:		725.8023	
Tangent:		396.5904	
Chord:		695.8711	
Middle Ordinate:		88.9451	
External:		101.3830	
Tangent Direction:		S 40° 04' 45.0000" E	
Radial Direction:		S 49° 55' 15.0000" W	
Chord Direction:		S 68° 45' 31.5385" E	
Radial Direction:		S 7° 26' 18.0770" E	
Tangent Direction:		N 82° 33' 41.9230" E	

CIRCULAR CURVE NO. 1			
Element: Circular			
	STATION	NORTHING	EASTING
PC (52002)	82+46.5773	572419.3513	565513.2133
PI (52003)	84+17.3027	572588.3227	565488.8041
CC		572395.1887	565345.9495
PT (52004)	85+13.7585	572562.1984	565320.0893
Radius:		169.0000	
Delta:		90° 34' 55.1003" Left	
Degree of Curvature (Arc):		33° 54' 10.1812"	
Length:		267.1812	
Tangent:		170.7254	
Chord:		240.2128	
Middle Ordinate:		50.1074	
External:		71.2252	
Tangent Direction:		N 8° 13' 11.8796" W	
Radial Direction:		N 81° 46' 48.1204" E	
Chord Direction:		N 53° 30' 39.4297" W	
Radial Direction:		N 8° 48' 06.9799" W	
Tangent Direction:		S 8° 11' 53.0201" W	

CIRCULAR CURVE NO. 2			
Element: Circular			
	STATION	NORTHING	EASTING
PC (53001)	90+27.6064	572595.8944	565537.7033
PI (53002)	91+84.1395	572571.9418	565383.0136
CC		572749.0690	565513.9853
PT (53003)	92+72.6054	572726.8598	565360.5847
Radius:		155.0000	
Delta:		90° 33' 50.1838" Right	
Degree of Curvature (Arc):		36° 57' 54.0685"	
Length:		244.9390	
Tangent:		156.5332	
Chord:		220.2792	
Middle Ordinate:		45.9392	
External:		65.2899	
Tangent Direction:		S 81° 11' 53.0201" W	
Radial Direction:		N 8° 48' 06.9799" W	
Chord Direction:		N 53° 31' 11.8880" E	
Radial Direction:		N 8° 45' 43.2039" E	
Tangent Direction:		N 8° 14' 16.7961" W	

CIRCULAR CURVE NO. 3			
Element: Circular			
	STATION	NORTHING	EASTING
PC (54002)	413+32.3315	570402.7333	565627.3692
PI (54003)	422+27.4054	571295.9496	565569.7320
CC		568926.9362	562756.6247
PT (54004)	431+21.5700	572181.9500	565442.6075
Radius:		22918.3100	
Delta:		4° 28' 23.1481" Left	
Degree of Curvature (Arc):		0° 15' 00.0001" Right	
Length:		1789.2385	
Tangent:		895.0739	
Chord:		1788.7842	
Middle Ordinate:		17.4586	
External:		17.4719	
Tangent Direction:		N 3° 41' 31.3711" W	
Radial Direction:		N 86° 18' 28.6289" E	
Chord Direction:		N 5° 55' 42.9451" W	
Radial Direction:		N 8° 09' 05.4808" E	
Tangent Direction:		N 8° 09' 54.5192" W	

CIRCULAR CURVE NO. 4			
Element: Circular			
	STATION	NORTHING	EASTING
PC (54004)	441+63.0001	573212.8228	565294.6966
PI (54005)	446+93.1781	573737.6264	565219.3971
CC		576467.8366	587980.6795
PT (54006)	452+23.1670	574265.3505	565168.4462
Radius:		22918.3100	
Delta:		2° 39' 01.5035" Right	
Degree of Curvature (Arc):		0° 15' 00.0001" Right	
Length:		1060.1670	
Tangent:		530.1780	
Chord:		1060.0724	
Middle Ordinate:		6.1299	
External:		6.1316	
Tangent Direction:		N 8° 09' 54.5192" W	
Radial Direction:		N 81° 50' 05.4808" E	
Chord Direction:		N 6° 50' 23.7674" E	
Radial Direction:		N 84° 29' 06.9843" E	
Tangent Direction:		N 5° 30' 53.0157" W	

CIRCULAR CURVE NO. 5			
Element: Circular			
	STATION	NORTHING	EASTING
PC (50005)	117+32.0339	572629.1593	565752.5335
PI (50006)	119+38.0125	572660.6780	565956.0863
CC		571789.1696	565882.5999
PT (50007)	121+36.2000	572595.5191	566151.4871
Radius:		850.0000	
Delta:		27° 14' 36.7623" Right	
Degree of Curvature (Arc):		6° 44' 26.4478"	
Length:		404.1661	
Tangent:		205.9786	
Chord:		400.3695	
Middle Ordinate:		23.9092	
External:		24.6012	
Tangent Direction:		N 81° 11' 53.0201" E	
Radial Direction:		S 8° 48' 06.9799" E	
Chord Direction:		S 85° 10' 48.5987" E	
Radial Direction:		S 18° 26' 29.7825" W	
Tangent Direction:		S 7° 33' 30.2175" E	

HORIZONTAL / VERTICAL CONTROL DATA					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
100	439+21.9358	199.7267	573002.5688	565526.5663	69.8792
101	115+24.4717	163.8219	572435.5057	565572.4836	63.2824
202	121+19.8565	107.4652	572497.9586	566103.9052	62.0350
209	118+22.0067	-120.6479	572758.7101	565836.2472	68.5637

CONSTRUCTION ALIGNMENT CONTROL					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
50001	105+00.0000	0.0000	572537.7012	564534.4909	
50004	112+68.1392	0.0000	572558.1745	565294.1020	
52001	82+00.0000	0.0000	572373.2524	565519.8727	
53004	93+00.0000	0.0000	572726.8598	565360.5847	
54001	427+00.0000	0.0000	571764.1263	565498.6405	
54003	437+00.0000	0.0000	572754.5163	565360.4550	
54005	446+00.0000	0.0000	573645.9583	565236.7586	
59001	900+00.0000	0.0000	572024.2473	565464.6761	
59002	903+05.3813	0.0000	572055.3125	565768.4732	

NOTE:  
HORIZONTAL - PROJECT BASED ON THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83)  
VERTICAL - PLAN ELEVATIONS ARE BASED ON N.G.S. SURVEY DATUM (NAVD 88)  
BASED ON THE FOLLOWING STATE OF DELAWARE BENCHMARKS:  
GPS-HSR1; GPS-HSR2; GPS-HSR3; GPS-DEN1

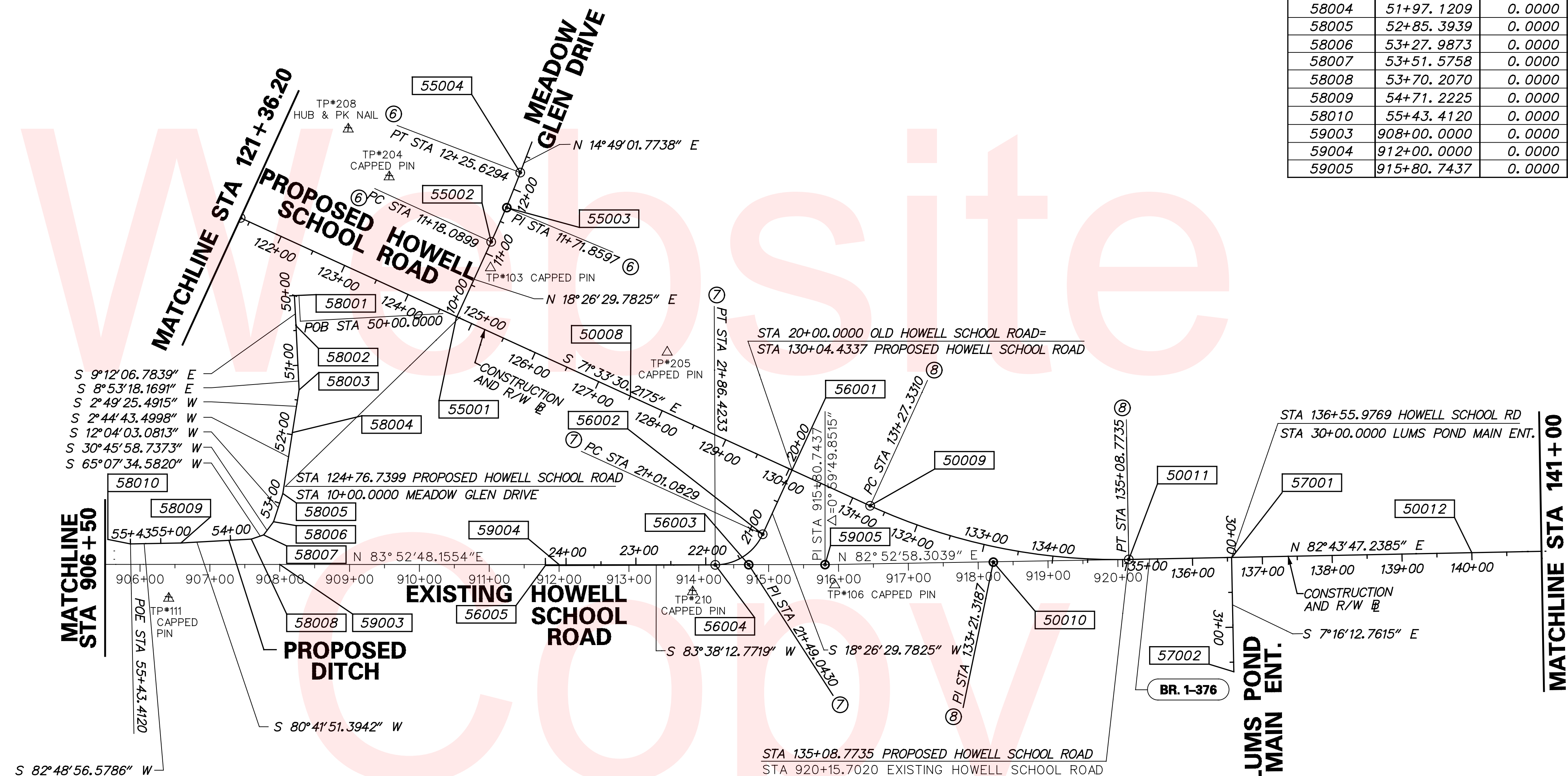
CIRCULAR CURVE NO. ⑥			
Element: Circular			
	STATION	NORTHING	EASTING
PC (55002)	11+18.0899	572599.8190	566511.8955
PI (55003)	11+71.8776	572650.8445	566528.9106
CC		573137.5936	564899.1963
PT (55004)	12+25.6294	572702.8436	566542.6660
Radius:		1700.0000	
Delta:		3° 37' 28.0086" Left	
Degree of Curvature (Arc):		3° 22' 13.2239"	
Length:		107.5395	
Tangent:		53.7877	
Chord:		107.5216	
Middle Ordinate:		0.8503	
External:		0.8507	
Tangent Direction:		N 18° 26' 29.7825" E	
Radial Direction:		S 71° 33' 30.2175" E	
Chord Direction:		N 16° 37' 45.7781" E	
Radial Direction:		S 75° 10' 58.2262" E	
Tangent Direction:		N 14° 49' 01.7738" E	

CIRCULAR CURVE NO. ⑦			
Element: Circular			
	STATION	NORTHING	EASTING
PC (56002)	21+01.0829	572224.9719	566943.1577
PI (56003)	21+49.0430	572179.4747	566927.9861
CC		572248.6973	566872.0092
PT (56004)	21+86.4233	572174.1593	566880.3214
Radius:		75.0000	
Delta:		65° 11' 42.9894" Right	
Degree of Curvature (Arc):		76° 23' 39.7417"	
Length:		85.3404	
Tangent:		47.9601	
Chord:		80.8104	
Middle Ordinate:		11.8144	
External:		14.0235	
Tangent Direction:		S 18° 26' 29.7825" W	
Radial Direction:		N 71° 33' 30.2175" W	
Chord Direction:		S 51° 02' 21.2772" W	
Radial Direction:		N 6° 21' 47.2281" W	
Tangent Direction:		S 83° 38' 12.7719" W	

CIRCULAR CURVE NO. ⑧			
Element: Circular			
	STATION	NORTHING	EASTING
PC (50009)	131+27.3310	572281.9868	567091.7201
PI (50010)	133+21.3187	572220.6211	567275.7459
CC		573068.3363	567360.6074
PT (50011)	135+08.7735	572245.1700	567468.1740
Radius:		850.0000	
Delta:		24° 42' 42.5440" Left	
Degree of Curvature (Arc):		6° 44' 26.4478"	
Length:		381.4425	
Tangent:		193.9877	
Chord:		378.2499	
Middle Ordinate:		21.3072	
External:		21.8550	
Tangent Direction:		S 71° 33' 30.2175" E	
Radial Direction:		S 18° 26' 29.7825" W	
Chord Direction:		S 84° 24' 51.4895" E	
Radial Direction:		S 7° 16' 12.7615" E	
Tangent Direction:		N 82° 43' 47.2385" E	

HORIZONTAL / VERTICAL CONTROL DATA					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
103	124+90.5860	-85.6705	572564.6844	566514.7750	68.2816
204	123+04.5276	-143.7342	572678.6237	566356.6391	64.9650
205	127+70.8897	-81.0344	572471.6157	566779.2176	63.9850
106	915+94.4278	27.1709	572166.0128	567053.5082	71.5293
208	122+22.6766	-181.5787	572740.4173	566290.9631	64.5514
210	913+91.1138	36.9639	572134.3097	566851.9587	72.1296
111	906+41.1011	46.4614	572044.9071	566107.2329	59.3860

CONSTRUCTION ALIGNMENT CONTROL				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
50008	127+50.0000	0.0000	572401.3509	566733.7664
50012	140+00.0000	0.0000	572307.3342	567955.4512
55001	10+00.0000	0.0000	572487.7934	566474.5391
56001	20+00.0000	0.0000	572320.8638	566975.1341
56005	24+29.6422	0.0000	572147.2035	566638.6009
57001	30+00.0000	0.0000	572263.7984	567614.1939
57002	31+63.8091	0.0000	572101.3063	567634.9238
58001	50+00.0000	0.0000	572493.1104	566239.9974
58002	50+43.2659	0.0000	572450.4013	566246.9162
58003	51+35.2726	0.0000	572359.4994	566261.1321
58004	51+97.1209	0.0000	572297.7262	566258.0852
58005	52+85.3939	0.0000	572209.5546	566253.8571
58006	53+27.9873	0.0000	572167.9024	566244.9524
58007	53+51.5758	0.0000	572147.6337	566232.8859
58008	53+70.2070	0.0000	572139.7971	566215.9831
58009	54+71.2225	0.0000	572123.4684	566116.2960
58010	55+43.4120	0.0000	572114.4403	566044.6733
59003	908+00.0000	0.0000	572108.0440	566260.2730
59004	912+00.0000	0.0000	572150.6882	566657.9933
59005	915+80.7437	0.0000	572191.2794	567036.5671



NOTE:  
 HORIZONTAL - PROJECT BASED ON THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83)  
 VERTICAL - PLAN ELEVATIONS ARE BASED ON N.G.S. SURVEY DATUM (NAVD 88)  
 BASED ON THE FOLLOWING STATE OF DELAWARE BENCHMARKS: GPS-HSR1; GPS-HSR2; GPS-HSR3; GPS-DEN1

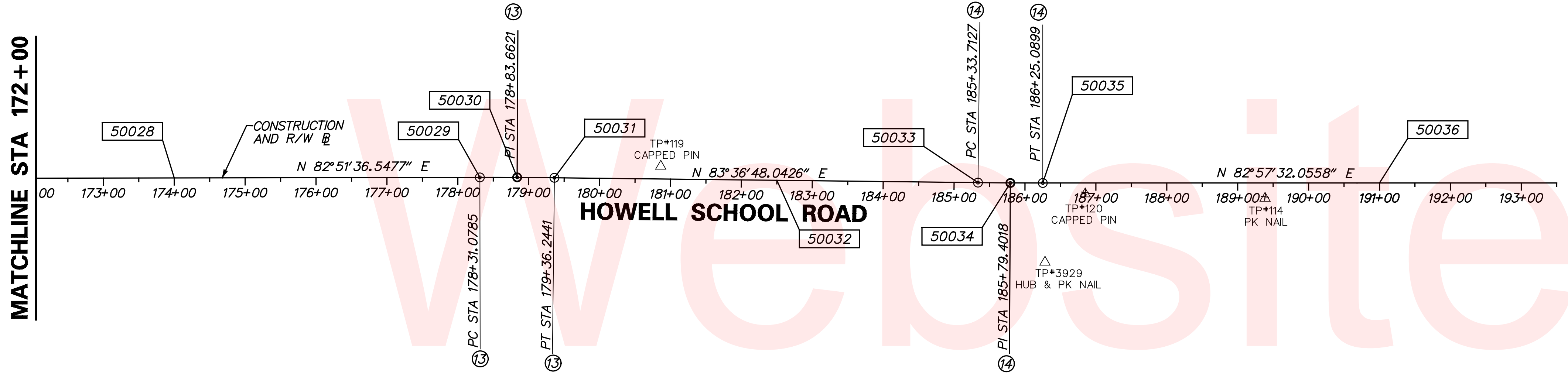
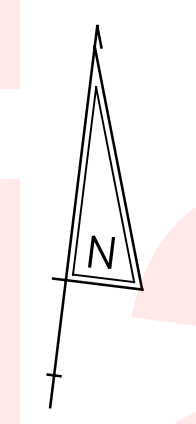




NOTE:  
 HORIZONTAL - PROJECT BASED ON THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83)  
 VERTICAL - PLAN ELEVATIONS ARE BASED ON N.G.S. SURVEY DATUM (NAVD 88)  
 BASED ON THE FOLLOWING STATE OF DELAWARE BENCHMARKS:  
 GPS-HSR1; GPS-HSR2; GPS-HSR3; GPS-DEN1

CIRCULAR CURVE NO. (13)			
Element: Circular			
STATION	NORTHING	EASTING	
PC (50029)	178+31.0785	572787.3253	571751.2242
PI (50030)	178+83.6621	572793.8610	571803.4000
CC		564849.3594	572745.5569
PT (50031)	179+36.2441	572799.7103	571855.6572
Radius:		8000.0000	
Delta:		0° 45' 11.4950" Right	
Degree of Curvature (Arc):		0° 42' 58.3101"	
Length:		105.1656	
Tangent:		52.5836	
Chord:		105.1648	
Middle Ordinate:		0.1728	
External:		0.1728	
Tangent Direction:		N 82° 51' 36.5477" E	
Radial Direction:		S 7° 08' 23.4523" E	
Chord Direction:		N 83° 14' 12.2952" E	
Radial Direction:		S 6° 23' 11.9574" E	
Tangent Direction:		N 83° 36' 48.0426" E	

CIRCULAR CURVE NO. (14)			
Element: Circular			
STATION	NORTHING	EASTING	
PC (50033)	185+33.7127	572866.1712	572449.4178
PI (50034)	185+79.4018	572871.2535	572494.8234
CC		580816.5220	571559.5181
PT (50035)	186+25.0899	572876.8541	572540.1679
Radius:		8000.0000	
Delta:		0° 39' 15.9868" Left	
Degree of Curvature (Arc):		0° 42' 58.3101"	
Length:		91.3772	
Tangent:		45.6891	
Chord:		91.3767	
Middle Ordinate:		0.1305	
External:		0.1305	
Tangent Direction:		N 83° 36' 48.0426" E	
Radial Direction:		S 6° 23' 11.9574" E	
Chord Direction:		N 83° 17' 10.0492" E	
Radial Direction:		S 7° 02' 27.9442" E	
Tangent Direction:		N 82° 57' 32.0558" E	

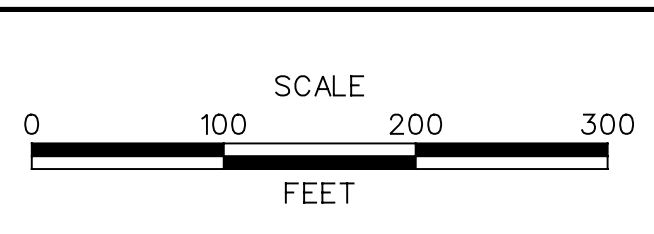


CONSTRUCTION ALIGNMENT CONTROL				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
50028	174+00.0000	0.0000	572733.7459	571323.4884
50032	182+50.0000	0.0000	572834.6117	572167.4659
50036	191+00.0000	0.0000	572935.0692	573011.4965

HORIZONTAL / VERTICAL CONTROL DATA					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
114	189+38.5982	19.5293	572895.9023	572853.7058	68.9357
119	180+86.1850	-17.8186	572836.3339	572002.2495	73.1211
120	186+84.8903	13.4350	572870.8509	572601.1642	68.3583
3929	186+28.1376	111.3574	572768.3549	572556.6852	65.7095



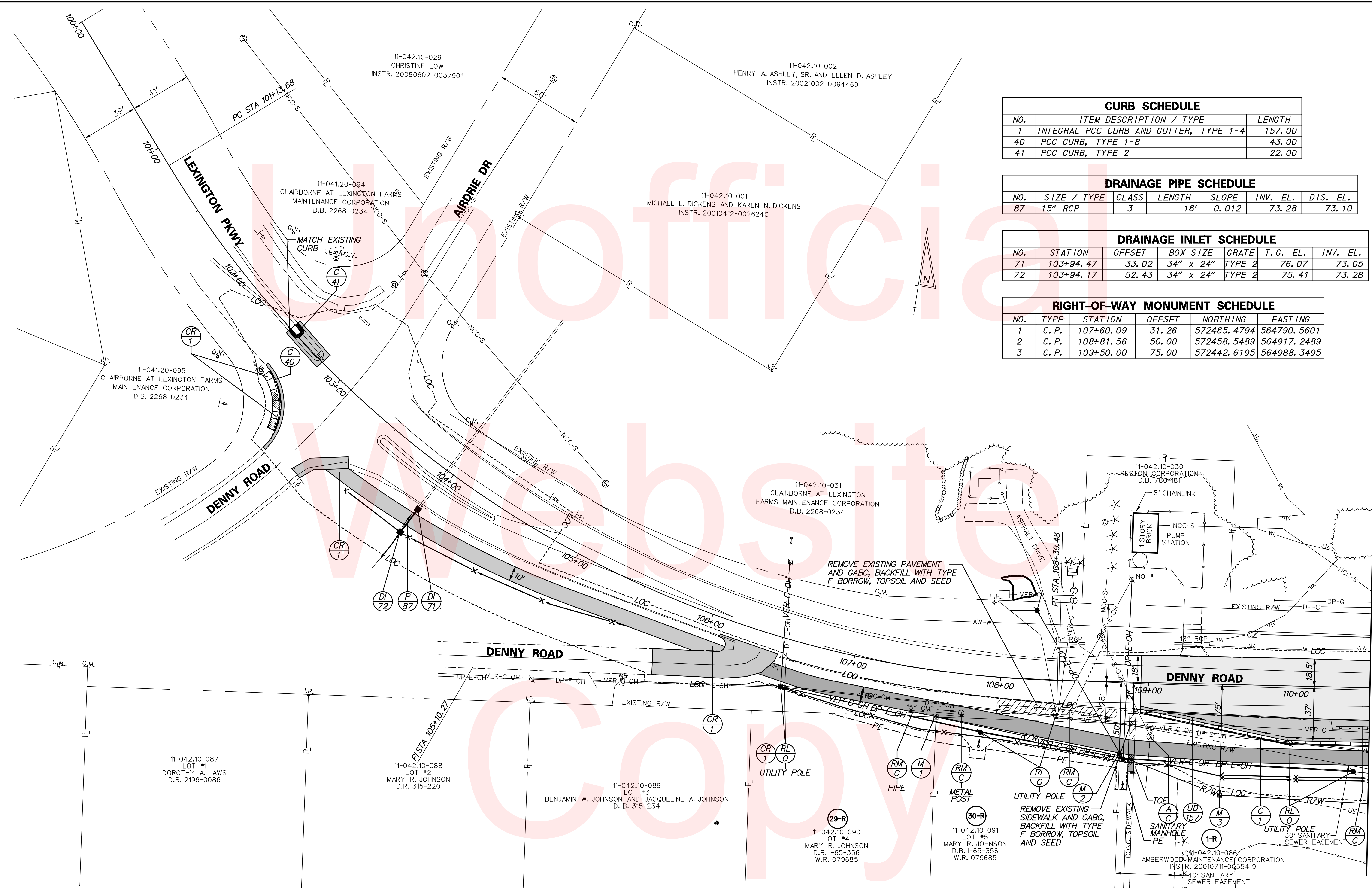
ADDENDUMS / REVISIONS



HSIP NCC, N54, HOWELL SCHOOL ROAD,  
 SR 896 TO SR 71

CONTRACT	BRIDGE NO. BR 1-376 & 1-378
T200504110	DESIGNED BY: RMG
COUNTY	CHECKED BY: PAH
NEW CASTLE	

HORIZONTAL & VERTICAL CONTROL	
SHEET NO.	18
TOTAL SHTS.	138



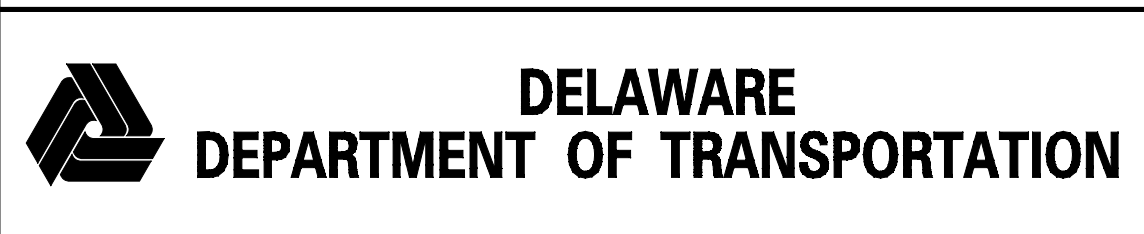
CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	157.00
40	PCC CURB, TYPE 1-8	43.00
41	PCC CURB, TYPE 2	22.00

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
87	15" RCP	3	16'	0.012	73.28	73.10

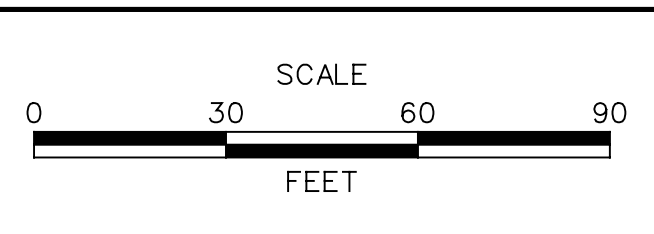
DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
71	103+94.47	33.02	34" x 24"	TYPE 2	76.07	73.05
72	103+94.17	52.43	34" x 24"	TYPE 2	75.41	73.28

RIGHT-OF-WAY MONUMENT SCHEDULE						
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING	
1	C. P.	107+60.09	31.26	572465.4794	564790.5601	
2	C. P.	108+81.56	50.00	572458.5489	564917.2489	
3	C. P.	109+50.00	75.00	572442.6195	564988.3495	

MATCHLINE STA. 110 + 50



ADDENDUMS / REVISIONS



**HSIP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71**

CONTRACT T200504110	BRIDGE NO. BR 1-376 & 1-378
COUNTY NEW CASTLE	DESIGNED BY: RMG
	CHECKED BY: PAH

**CONSTRUCTION PLAN**

SHEET NO. 19
TOTAL SHTS. 138

UTILITY TEST HOLE SCHEDULE table with columns: NO., UTILITY, STATION, OFFSET, GRND EL., COVER, O.D. & MATERIAL. Includes items TH-01 through TH-07.

UTILITY TEST HOLE SCHEDULE table with columns: NO., UTILITY, STATION, OFFSET, GRND EL., COVER, O.D. & MATERIAL. Includes items TH-08 through TH-11.

UPON COMPLETION OF THE PROJECT, DELDOT SHALL DEED 2-L TO THE MEADOW GLEN COMMUNITY PER BOND BILL NO. 145, SECTION 100, PAGE 50

GUARDRAIL SCHEDULE table with columns: NO., ITEM DESCRIPTION / TYPE, BEGIN STA., OFFSET, LENGTH. Includes items 1 through 12.

MANHOLE SCHEDULE table with columns: NO., STATION, OFFSET, TYPE/SIZE, T.G. EL., INV. EL. Includes item 1.

FLARED END SECTION SCHEDULE table with columns: NO., SIZE / TYPE, SLOPE, SAFETY GRATE. Includes items 1 through 7.

- NOTES: 1. PLACE TYPE 6 SOIL RETENTION BLANKET MULCH... 2. PHASE 1 ARTESIAN WATER RELOCATION WORK...

UNDERDRAIN OUTLETS table with columns: NO., LENGTH, DIS. EL. Includes items 1 through 4.

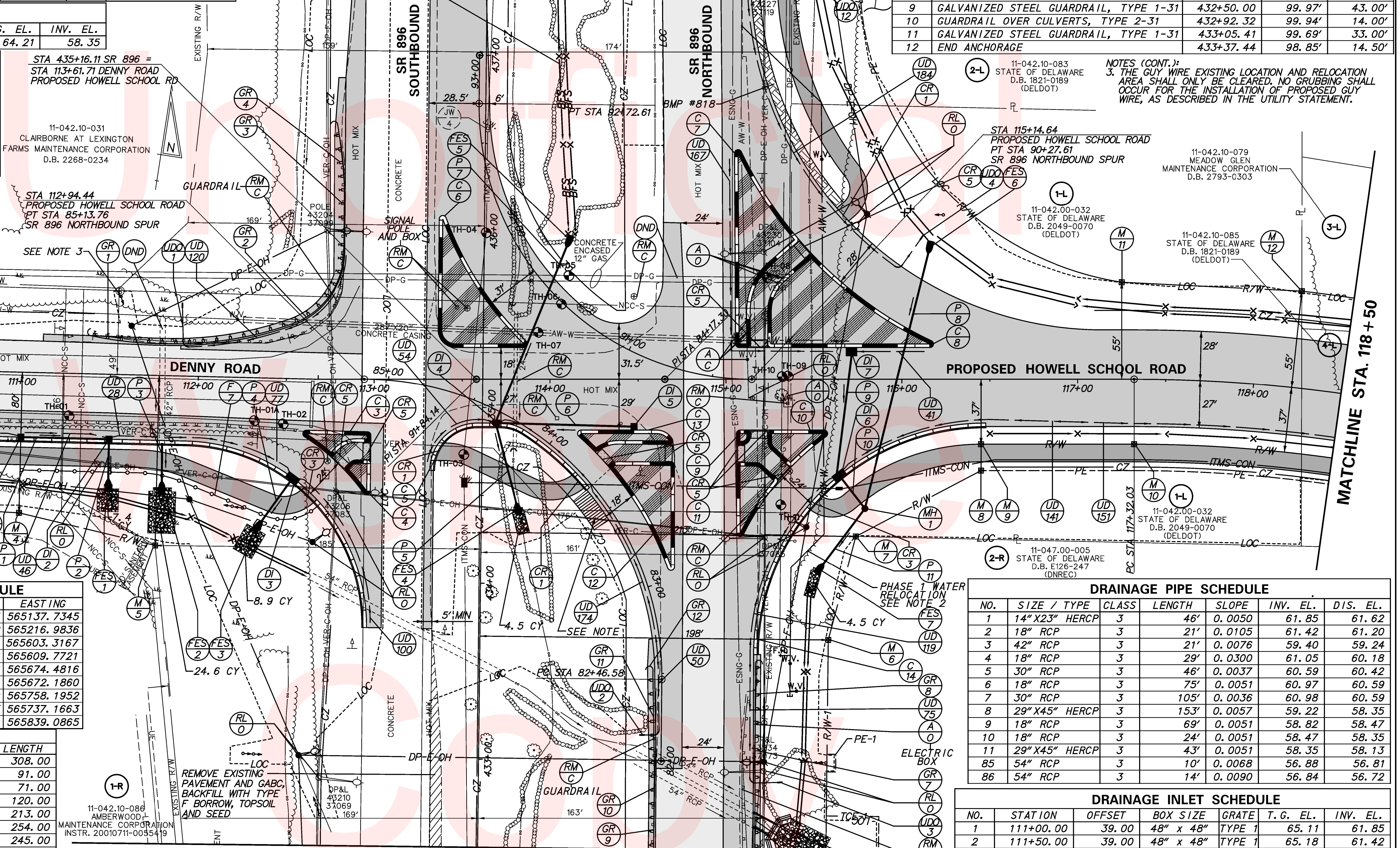
FILTER STRIP SCHEDULE table with columns: BMP #, LOCATION, SIDE. Includes item 818.

BIOFILTRATION SWALES table with columns: BMP #, LOCATION, SIDE. Includes item 819.

ENDWALL SCHEDULE table with columns: NO., SIZE / TYPE, SKEW, SAFETY GRATE. Includes item EW 1.

RIGHT-OF-WAY MONUMENT SCHEDULE table with columns: NO., TYPE, STATION, OFFSET, NORTHING, EASTING. Includes items 4 through 12.

CURB SCHEDULE table with columns: NO., ITEM DESCRIPTION / TYPE, LENGTH. Includes items 2 through 14.



STA 435+16.11 SR 896 = STA 113+61.71 DENNY ROAD PROPOSED HOWELL SCHOOL RD

11-042.10-031 CLAIRBORNE AT LEXINGTON FARMS MAINTENANCE CORPORATION D.B. 2268-0234

11-042.10-079 MEADOW GLEN MAINTENANCE CORPORATION D.B. 2793-0303

11-042.10-079 MEADOW GLEN MAINTENANCE CORPORATION D.B. 2793-0303

11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

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11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

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11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

FENCE SCHEDULE table with columns: NO., ITEM DESCRIPTION / TYPE, LENGTH. Includes item 7: WOOD RAIL FENCE.

NOTES (CONT.): 3. THE GUY WIRE EXISTING LOCATION AND RELOCATION AREA SHALL ONLY BE CLEARED...

11-042.10-083 STATE OF DELAWARE D.B. 1821-0189 (DELDOT)

11-042.10-079 MEADOW GLEN MAINTENANCE CORPORATION D.B. 2793-0303

11-042.10-079 MEADOW GLEN MAINTENANCE CORPORATION D.B. 2793-0303

11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

11-042.10-032 STATE OF DELAWARE D.B. 2049-0070 (DELDOT)

11-047.00-005 STATE OF DELAWARE D.B. E126-247 (DNREC)

DRAINAGE PIPE SCHEDULE table with columns: NO., SIZE / TYPE, CLASS, LENGTH, SLOPE, INV. EL., DIS. EL. Includes items 1 through 11.

DRAINAGE INLET SCHEDULE table with columns: NO., STATION, OFFSET, BOX SIZE, GRATE, T.G. EL., INV. EL. Includes items 1 through 7.

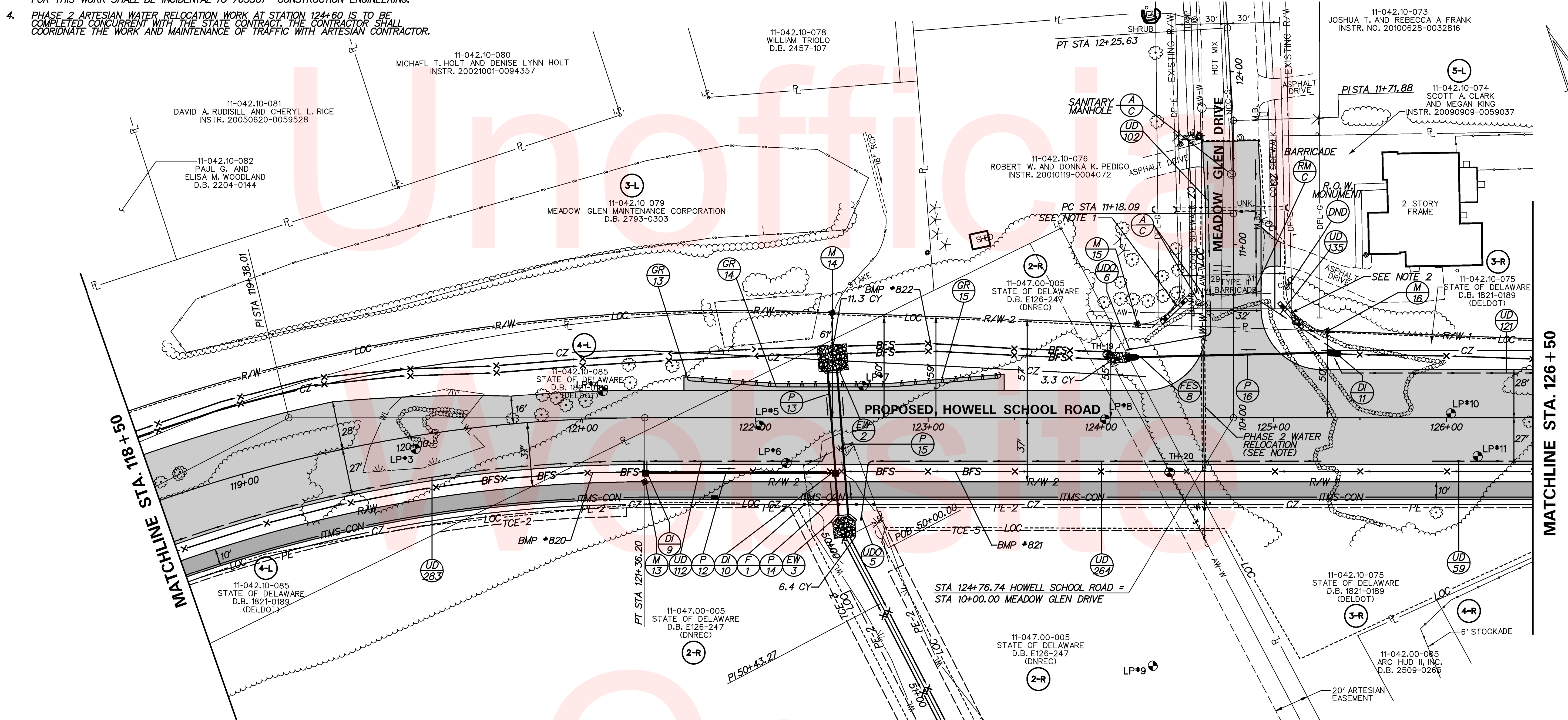
**NOTES:**

- MEADOW GLEN ENTRANCE SIGN ON THE WEST SIDE OF MEADOW GLEN DRIVE SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL SHOWN ON THE PLANS, AND THE SPECIFICATIONS DESCRIBED UNDER ITEM 763537 SUBDIVISION ENTRANCE SIGN. EXACT LOCATION OF PROPOSED SIGN SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.
- MEADOW GLEN ENTRANCE SIGN ON THE EAST SIDE OF MEADOW GLEN DRIVE SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL SHOWN ON THE PLANS, AND THE SPECIFICATIONS DESCRIBED UNDER ITEM 763537 SUBDIVISION ENTRANCE SIGN. EXACT LOCATION OF PROPOSED SIGN SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER.
- CONTRACTOR AND ENGINEER SHALL LOCATE RIGHT OF WAY MONUMENT ON PARCEL 3-R AND MARK DO NOT DISTURB PRIOR TO CONSTRUCTION TO AVOID DISRUPTION. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO 763501 - CONSTRUCTION ENGINEERING.
- PHASE 2 ARTESIAN WATER RELOCATION WORK AT STATION 124+60 IS TO BE COMPLETED CONCURRENT WITH THE STATE CONTRACT. THE CONTRACTOR SHALL COORDINATE THE WORK AND MAINTENANCE OF TRAFFIC WITH ARTESIAN CONTRACTOR.

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
13	C. M.	121+36.20	37.00	572560.4192	566139.7826
14	C. M.	122+44.66	-60.73	572618.8145	566273.5909
15	C. P.	124+21.09	-54.25	572556.8599	566438.9073
16	C. P.	125+31.22	-50.19	572518.1756	566542.0951

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
8	14" x 23" RCP	0.0040	NO

FENCE SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	WOOD RAIL FENCE	48.00'



DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
9	121+36.64	32.00	34" x 24"	TYPE 2	59.60	57.17
10	122+46.46	32.00	72" x 48"	TYPE 2	60.96	56.64
11	125+35.00	-37.50	72" x 48"	TYPE 2	64.72	61.87

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
12	14" x 23" HERCP	3	106'	0.0050	57.17	56.64
13	29" x 45" HERCP	3	57'	0.0063	57.00	56.64
14	29" x 45" HERCP	3	25'	0.0060	56.64	56.49
15	29" x 45" HERCP	3	83'	0.0061	57.00	56.49
16	14" x 23" HERCP	3	113'	0.0040	61.87	61.42

ENDWALL SCHEDULE			
NO.	SIZE / TYPE	SKEW	SAFETY GRATE
EW 2	2-29" X 45" DW	90	NO
EW 3	2-29" X 45" DW	90	NO

UNDERDRAIN OUTLETS			
NO.	LENGTH	DIS. EL.	
5	29.00'	59.45	
6	44.00'	61.95	

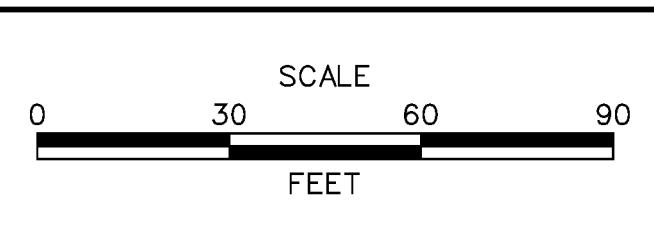
BIOFILTRATION SWALES		
BMP #	LOCATION	SIDE
820	120+35 TO 121+35	RT
821	122+50 TO 123+50	RT
822	122+50 TO 123+80	LT

GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
13*	END TREATMENT ATTENUATOR, TYPE 2-31	121+60.84	-23.00'	50.00'
14*	GALVANIZED STEEL GUARDRAIL, TYPE 1-31	122+12.20	-18.00'	65.62'
15*	END TREATMENT ATTENUATOR, TYPE 2-31	122+90.48	-19.00'	50.00'

\*SHALL BE COATED WITH FUSION-BONDED POLYESTER. SEE PROJECT NOTE 25.



ADDENDUMS / REVISIONS	



HSP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71

CONTRACT	BRIDGE NO. BR 1-376 & 1-378
T200504110	DESIGNED BY: RMG
COUNTY	CHECKED BY: PAH
NEW CASTLE	

CONSTRUCTION PLAN		SHEET NO.
		138
		TOTAL SHTS.
		138

**NOTES:**

1. PHASE 2 ARTESIAN WATER RELOCATION WORK FROM STA. 133+00 TO STA. 135+00 IS TO BE COMPLETED CONCURRENT WITH THE STATE CONTRACT. THE CONTRACTOR SHALL COORDINATE THE WORK AND MAINTENANCE OF TRAFFIC WITH ARTESIAN.

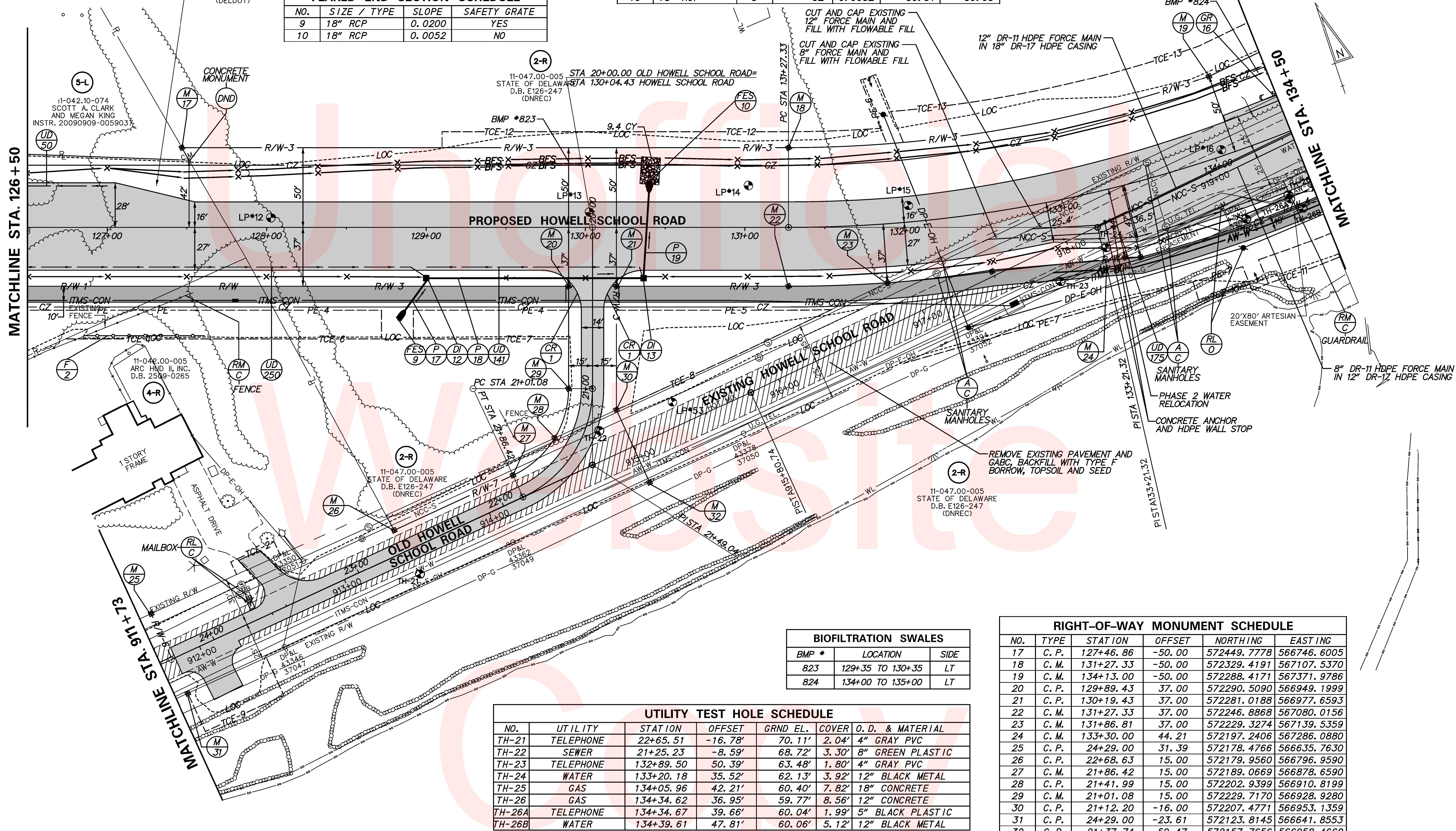
FENCE SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
2	WOOD FENCE, 6' HIGH	75.00'

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
9	18" RCP	0.0200	YES
10	18" RCP	0.0052	NO

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
17	18" RCP	3	22'	0.0200	60.88	60.38
18	18" RCP	3	134'	0.0050	60.18	59.51
19	18" RCP	3	52'	0.0052	59.31	59.03

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
12	129+00.00	32.00	48" x 48"	TYPE 2	63.69	60.18
13	130+36.48	32.00	48" x 30"	TYPE 2	64.16	59.31



BIOFILTRATION SWALES		
BMP #	LOCATION	SIDE
823	129+35 TO 130+35	LT
824	134+00 TO 135+00	LT

UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O. D. & MATERIAL
TH-21	TELEPHONE	22+65.51	-16.78'	70.11'	2.04'	4" GRAY PVC
TH-22	SEWER	21+25.23	-8.59'	68.72'	3.30'	8" GREEN PLASTIC
TH-23	TELEPHONE	132+89.50	50.39'	63.48'	1.80'	4" GRAY PVC
TH-24	WATER	133+20.18	35.52'	62.13'	3.92'	12" BLACK METAL
TH-25	GAS	134+05.96	42.21'	60.40'	7.82'	18" CONCRETE
TH-26	GAS	134+34.62	36.95'	59.77'	8.56'	12" CONCRETE
TH-26A	TELEPHONE	134+34.67	39.66'	60.04'	1.99'	5" BLACK PLASTIC
TH-26B	WATER	134+39.61	47.81'	60.06'	5.12'	12" BLACK METAL

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
17	C. P.	127+46.86	-50.00	572449.7778	566746.6005
18	C. M.	131+27.33	-50.00	572329.4191	567107.5370
19	C. M.	134+13.00	-50.00	572288.4171	567371.9786
20	C. P.	129+89.43	37.00	572290.5090	566949.1999
21	C. P.	130+19.43	37.00	572281.0188	566977.6593
22	C. M.	131+27.33	37.00	572246.8868	567080.0156
23	C. M.	131+86.81	37.00	572229.3274	567139.5359
24	C. M.	133+30.00	44.21	572197.2406	567286.0880
25	C. P.	24+29.00	31.39	572178.4766	566635.7630
26	C. P.	22+68.63	15.00	572179.9560	566796.9590
27	C. M.	21+86.42	15.00	572189.0669	566878.6590
28	C. P.	21+41.99	15.00	572202.9399	566910.8199
29	C. M.	21+01.08	15.00	572229.7170	566928.9280
30	C. P.	21+12.20	-16.00	572207.4771	566953.1359
31	C. P.	24+29.00	-23.61	572123.8145	566641.8553
32	C. P.	21+37.74	-50.47	572157.7656	566958.4660

GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
16*	END TREATMENT ATTENUATOR, TYPE 2-31	134+40.20	-25.93'	50.00'

\*SHALL BE COATED WITH FUSION-BONDED POLYESTER. SEE PROJECT NOTE 25.



DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
33	19" X30" HERCP	3	147'	0.0038	58.87	58.30
34	19" X30" HERCP	3	147'	0.0100	60.34	58.87
35	18" RCP	3	26'	0.0100	60.60	60.34
36	18" RCP	3	6'	0.0200	60.72	60.60
37	19" X30" HERCP	3	263'	0.0100	62.97	60.34
38	18" RCP	3	26'	0.0100	62.86	62.60
39	14" X23" HERCP	3	22'	0.0500	64.79	63.89
40	18" RCP	3	260'	0.0100	65.66	63.06

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
21	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	551.00
22	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	850.00

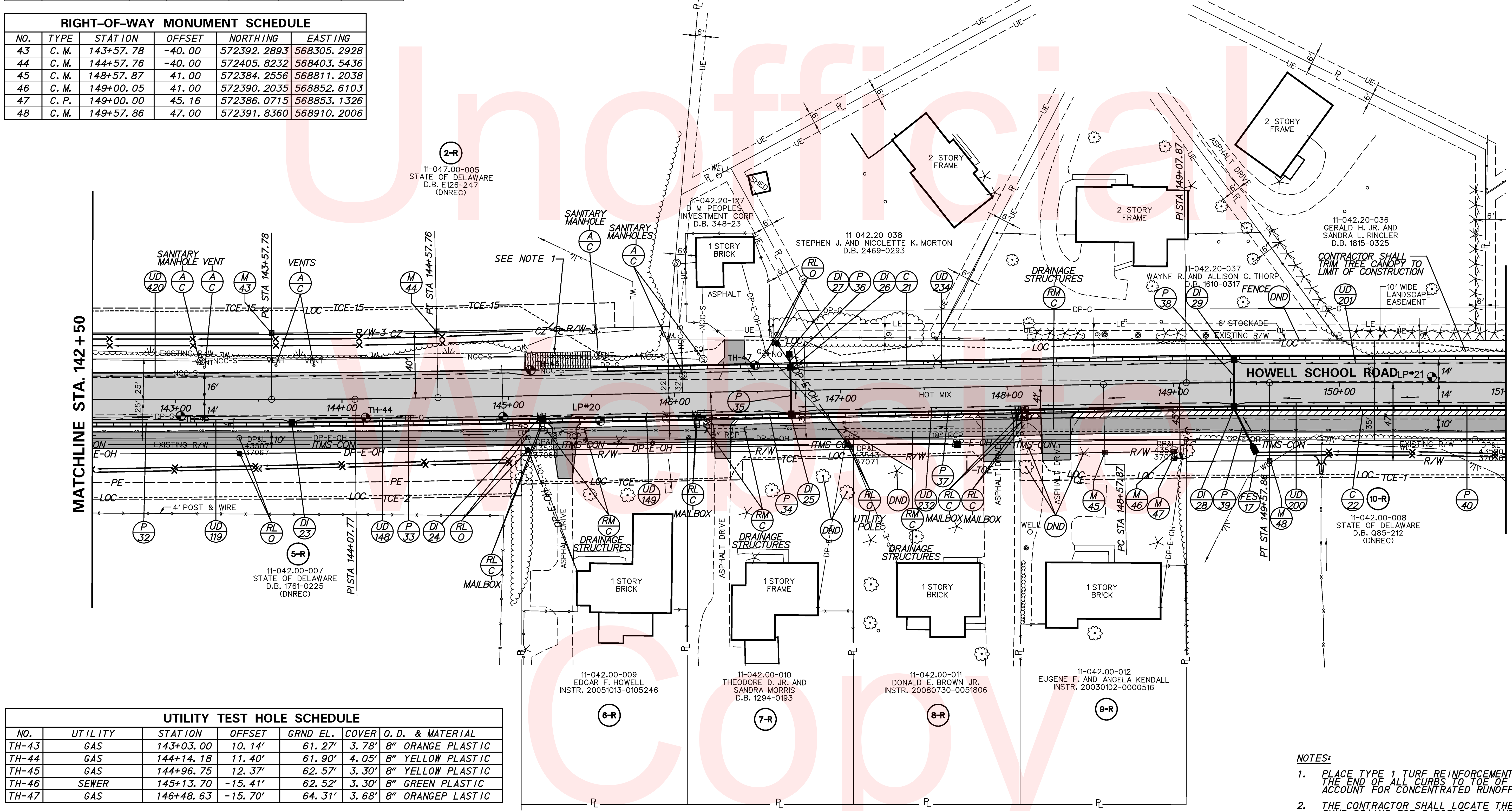
FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
17	14" X23" HERCP	0.0500	YES

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
23	143+69.90	14.00	48" x 48"	TYPE 1	61.63	58.30
24	145+20.00	16.00	48" x 48"	TYPE 1	62.64	58.87
25	146+70.00	16.00	48" x 48"	TYPE 1	64.77	60.34
26	146+70.00	-16.00	34" x 24"	TYPE 1	64.77	60.60
27	146+69.50	-22.00	34" x 24"	TYPE 2	64.50	60.72
28	149+36.55	16.00	48" x 48"	TYPE 1	67.75	62.60
29	149+36.55	-16.00	34" X 24"	TYPE 1	67.75	62.86

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
43	C.M.	143+57.78	-40.00	572392.2893	568305.2928
44	C.M.	144+57.76	-40.00	572405.8232	568403.5436
45	C.M.	148+57.87	41.00	572384.2556	568811.2038
46	C.M.	149+00.05	41.00	572390.2035	568852.6103
47	C.P.	149+00.00	45.16	572386.0715	568853.1326
48	C.M.	149+57.86	47.00	572391.8360	568910.2006

MATCHLINE STA. 142 + 50

MATCHLINE STA. 151 + 00



UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O. D. & MATERIAL
TH-43	GAS	143+03.00	10.14'	61.27'	3.78'	8" ORANGE PLASTIC
TH-44	GAS	144+14.18	11.40'	61.90'	4.05'	8" YELLOW PLASTIC
TH-45	GAS	144+96.75	12.37'	62.57'	3.30'	8" YELLOW PLASTIC
TH-46	SEWER	145+13.70	-15.41'	62.52'	3.30'	8" GREEN PLASTIC
TH-47	GAS	146+48.63	-15.70'	64.31'	3.68'	8" ORANGE PLASTIC

- NOTES:**
- PLACE TYPE 1 TURF REINFORCEMENT MATTING AT THE END OF ALL CURBS TO TOE OF SLOPE TO ACCOUNT FOR CONCENTRATED RUNOFF.
  - THE CONTRACTOR SHALL LOCATE THE EXISTING SUMP DRAINS FOR PARCELS 7-R AND 8-R AND THE ENGINEER SHALL APPROVE THE SUMP PUMP CONNECTIONS IN ACCORDANCE WITH ITEM 763533 PRIOR TO EXCAVATION.



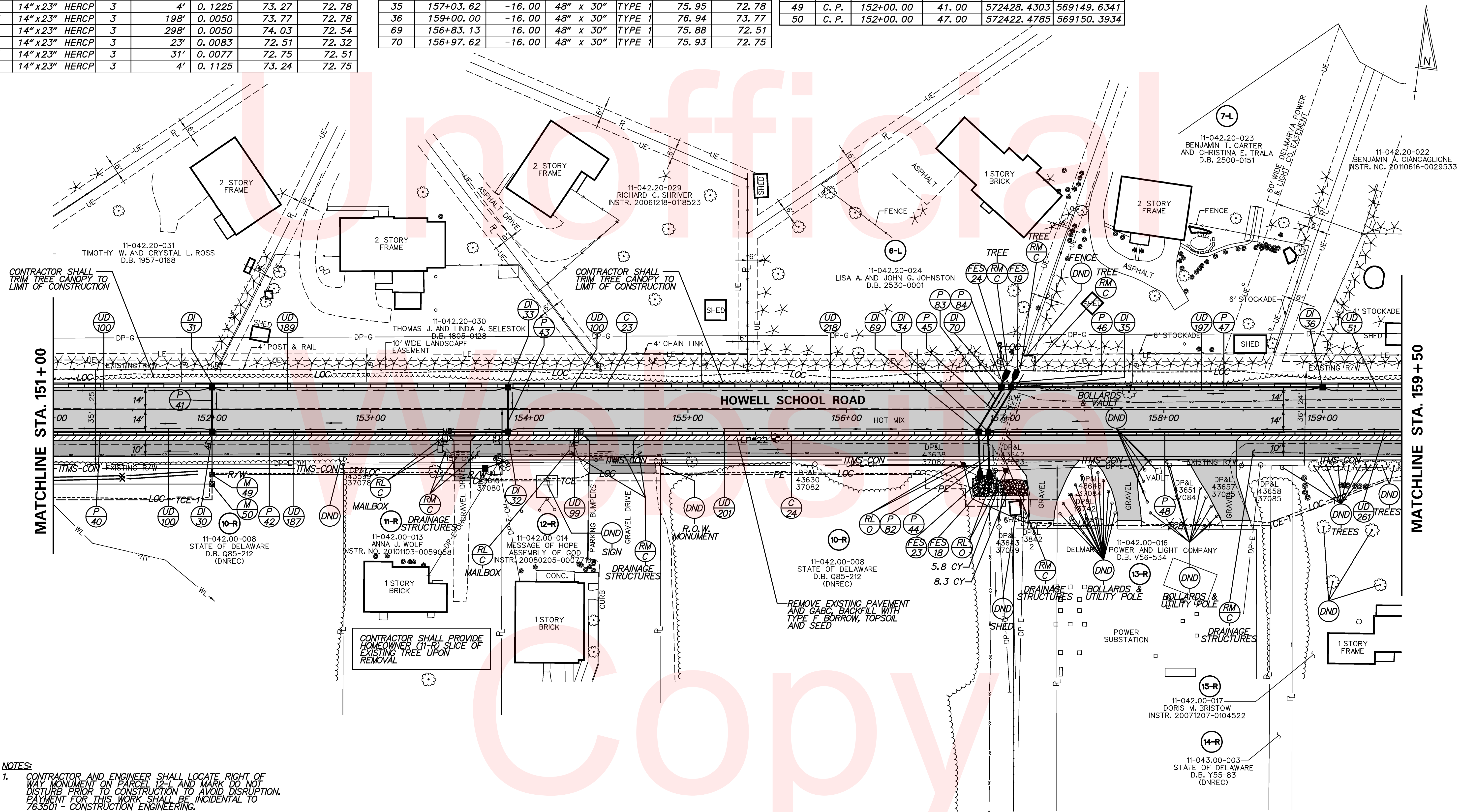
DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
41	18" RCP	3	28'	0.0100	65.94	65.66
42	18" RCP	3	183'	0.0150	68.41	65.66
43	18" RCP	3	28'	0.0100	68.69	68.41
44	14" x 23" HERCP	3	23'	0.0083	72.54	72.35
45	14" x 23" HERCP	3	31'	0.0077	72.78	72.54
46	14" x 23" HERCP	3	4'	0.1225	73.27	72.78
47	14" x 23" HERCP	3	198'	0.0050	73.77	72.78
48	14" x 23" HERCP	3	298'	0.0050	74.03	72.54
82	14" x 23" HERCP	3	23'	0.0083	72.51	72.32
83	14" x 23" HERCP	3	31'	0.0077	72.75	72.51
84	14" x 23" HERCP	3	4'	0.1125	73.24	72.75

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T. G. EL.	INV. EL.
30	152+00.00	16.00	48" x 30"	TYPE 1	70.90	65.66
31	152+00.00	-16.00	34" x 24"	TYPE 1	70.90	65.94
32	153+86.57	16.00	48" x 30"	TYPE 1	74.27	68.41
33	153+86.57	-16.00	34" x 24"	TYPE 1	74.27	68.69
34	156+89.11	16.00	48" x 30"	TYPE 1	75.90	72.54
35	157+03.62	-16.00	48" x 30"	TYPE 1	75.95	72.78
36	159+00.00	-16.00	48" x 30"	TYPE 1	76.94	73.77
69	156+83.13	16.00	48" x 30"	TYPE 1	75.88	72.51
70	156+97.62	-16.00	48" x 30"	TYPE 1	75.93	72.75

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
23	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	850.00
24	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	850.00

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
49	C. P.	152+00.00	41.00	572428.4303	569149.6341
50	C. P.	152+00.00	47.00	572422.4785	569150.3934

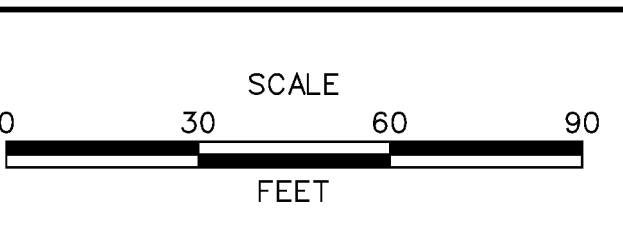
FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
18	14" x 23" HERCP	0.0083	NO
19	14" x 23" HERCP	0.1225	YES
23	14" x 23" HERCP	0.0083	NO
24	14" x 23" HERCP	0.1225	YES



NOTES:  
 1. CONTRACTOR AND ENGINEER SHALL LOCATE RIGHT OF WAY MONUMENT ON PARCEL 12-L AND MARK DO NOT DISTURB PRIOR TO CONSTRUCTION TO AVOID DISRUPTION. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO 763501 - CONSTRUCTION ENGINEERING.



ADDENDUMS / REVISIONS



HSP1 NCC, N54, HOWELL SCHOOL ROAD, SR 896 TO SR 71

CONTRACT	BRIDGE NO.	BR 1-376 & 1-378
T200504110	DESIGNED BY:	RMG
COUNTY	CHECKED BY:	PAH
NEW CASTLE		

CONSTRUCTION PLAN

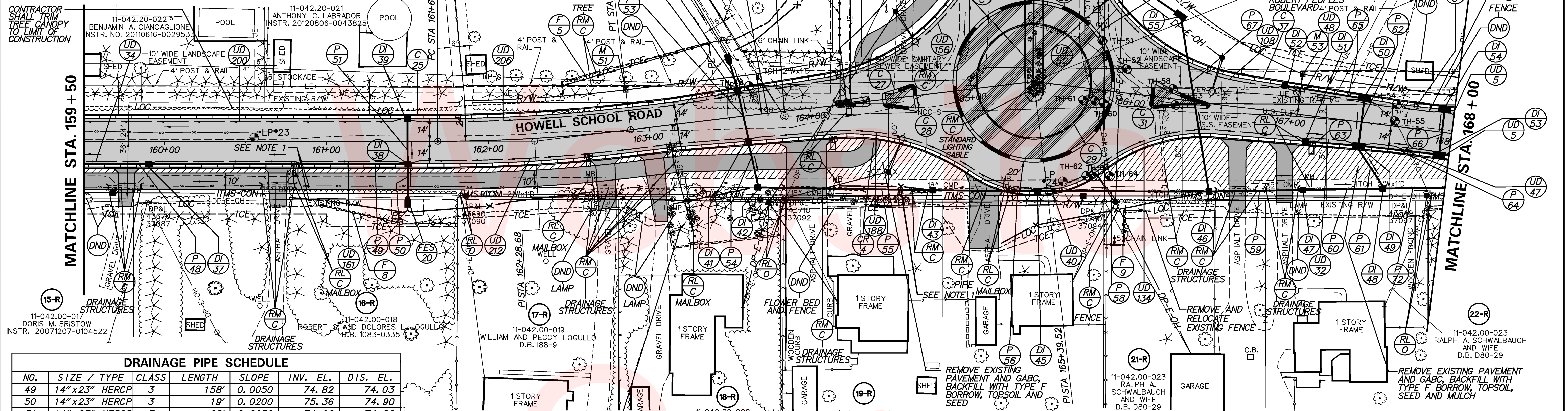
SHEET NO.	25
TOTAL SHTS.	138

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T. G. EL.	INV. EL.
37	159+90.00	16.00	48" x 30"	TYPE 1	77.39	74.03
38	161+50.09	16.00	48" x 30"	TYPE 1	78.18	74.82
39	161+50.09	-16.00	48" x 30"	TYPE 1	78.18	74.96
40	163+57.05	-17.62	48" x 30"	TYPE 1	79.27	74.27
41	163+59.81	17.72	66" x 30"	TYPE 1	79.29	73.97
42	163+62.26	45.00	66" x 66"	TYPE 2	77.50	73.51
43	164+69.40	59.00	66" x 48"	TYPE 2	78.25	73.08
45	165+50.45	69.14	48" x 48"	TYPE 1	80.92	72.82
46	166+55.30	54.00	48" x 48"	TYPE 2	77.25	72.40
47	167+13.09	46.00	48" x 48"	TYPE 2	78.00	72.17
48	167+61.68	39.00	48" x 48"	TYPE 2	79.50	71.97
49	167+43.87	16.74	72" x 48"	TYPE 1	80.03	76.84
50	167+43.87	-16.74	72" x 48"	TYPE 1	80.03	76.97
51	167+10.78	17.62	48" x 30"	TYPE 1	80.05	76.98
52	166+93.87	-18.73	48" x 48"	TYPE 1	80.11	77.19
53	167+93.87	16.00	72" x 48"	TYPE 1	80.16	77.05
54	167+93.87	-16.00	72" x 48"	TYPE 1	80.16	77.18
55	40+40.90	90.68	72" x 48"	TYPE 2	78.50	74.38
56	40+82.09	35.02	48" x 48"	TYPE 1	80.63	75.25
57	40+84.32	-34.33	34" x 24"	TYPE 1	80.43	76.11
58	41+24.52	28.00	48" x 30"	TYPE 1	81.05	75.87
59	42+45.47	27.76	48" x 30"	TYPE 1	82.58	78.06

DRAINAGE PIPE SCHEDULE (CONT.)						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
67	18" RCP	3	106'	0.0100	74.38	73.32
68	18" RCP	3	67'	0.0100	75.25	74.58
69	18" RCP	3	66'	0.0100	76.11	75.45
70	18" RCP	3	42'	0.0100	75.87	75.45
71	18" RCP	3	119'	0.0100	78.06	76.87
72	30" RCP	3	265'	0.0040	71.97	70.91

CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
25	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	633.00
26**	PCC CURB, TYPE 2	49.00
27**	PCC CURB, TYPE 2	67.00
28	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	861.00
29	PCC CURB, TYPE 1-8	225.00
30	PCC CURB, TYPE 2 MODIFIED	315.00
31**	PCC CURB, TYPE 2	93.00
32**	PCC CURB, TYPE 2	73.00
33	PCC CURB, TYPE 2	285.00
34	PCC CURB, TYPE 1-4	143.00
35	PCC CURB, TYPE 1-2 MODIFIED	25.00
36	PCC CURB, TYPE 1-4	143.00
37	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	306.00

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
51	C.M.	162+88.36	-25.00	572638.1154	570216.7757
52	C.M.	165+19.02	-161.86	572827.1029	570407.0832
53	C.M.	167+04.00	-25.00	572700.5955	570630.8543



DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
49	14" x 23" HERCP	3	158'	0.0050	74.82	74.03
50	14" x 23" HERCP	3	19'	0.0200	75.36	74.90
51	14" x 23" HERCP	3	28'	0.0050	74.96	74.82
52	30" RCP	3	17'	0.0471	75.07	74.27
53	30" RCP	3	32'	0.0094	74.27	73.97
54	24" x 38" HERCP	3	27'	0.0096	73.97	73.71
55	24" x 38" HERCP	3	108'	0.0040	73.51	73.08
56	30" RCP	3	63'	0.0041	73.08	72.82
58	30" RCP	3	105'	0.0040	72.82	72.40
59	30" RCP	3	58'	0.0040	72.40	72.17
60	30" RCP	3	48'	0.0042	72.17	71.97
61	14" x 23" HERCP	3	28'	0.0050	76.84	75.49
62	14" x 23" HERCP	3	28'	0.0050	76.97	76.84
63	14" x 23" HERCP	3	29'	0.0050	76.98	76.84
64	14" x 23" HERCP	3	44'	0.0050	77.05	76.84
65	14" x 23" HERCP	3	46'	0.0050	77.19	76.97
66	14" x 23" HERCP	3	25'	0.0050	77.18	77.05

FENCE SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
5	CHAIN-LINK FENCE, 4' HIGH	94.00'
6	CHAIN-LINK FENCE, 6' HIGH	146.00'
8	CHAIN-LINK FENCE, 4' HIGH	88.00'
9	CHAIN-LINK FENCE, 5' HIGH	49.00'

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
20	14" x 23" HERCP	0.0200	YES
21	30" RCP	0.0471	YES

UTILITY TEST HOLE SCHEDULE					
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER O. D. & MATERIAL
TH-62	ELECTRIC	165+79.00	54.02'	79.22'	5.10" 1.5" BLACK CABLES
TH-63	FIBER OPTIC	165+83.16	53.76'	79.20'	3.87" 5" BLACK CONDUIT
TH-64	TELEPHONE	165+93.48	52.45'	79.18'	3.88" 3" BLACK CABLE
TH-65	ELECTRIC	165+60.63	-65.68'	79.76'	3.66" 1.5" BLACK CABLE

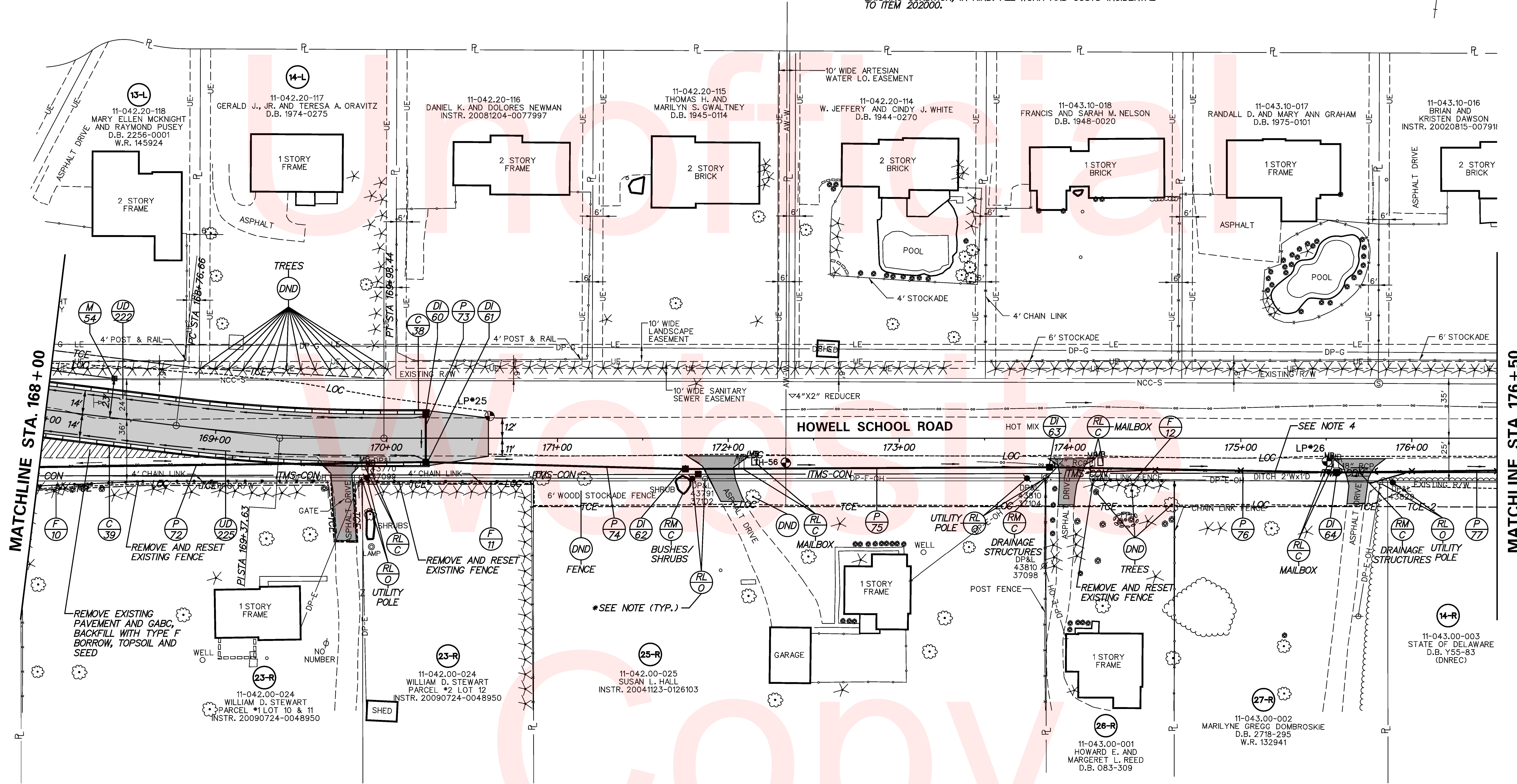
UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER O. D. & MATERIAL	
TH-48	GAS	163+64.46	-18.37'	78.18'	4.46" 8" ORANGE PLASTIC	
TH-49	FIBER OPTIC	165+68.64	-68.95'	79.74'	2.46" 1.5" ORANGE PLASTIC	
TH-49A	TELEPHONE	165+62.62	-66.38'	79.32'	5.45" 3" BLACK CABLE	
TH-50	GAS	165+71.54	-67.74'	79.03'	4.80" 8" ORANGE PLASTIC	
TH-51	GAS	165+78.58	-30.37'	78.57'	4.48" 8" ORANGE PLASTIC	
TH-52	GAS	165+95.78	-14.72'	78.20'	4.75" 8" ORANGE PLASTIC	
TH-53	SEWER	166+28.20	3.66'	78.44'	5.08" 8" GREEN PLASTIC	
TH-54	SEWER	167+64.02	-13.61'	79.74'	4.20" 8" GREEN PLASTIC	
TH-55	FIBER OPTIC	167+64.57	-3.29'	79.77'	3.29" 3" ORANGE PLASTIC	
TH-58	FIBER OPTIC	166+25.67	-6.21'	78.26'	2.76" 3" ORANGE PLASTIC	
TH-59	TELEPHONE	165+78.62	7.02'	78.80'	3.83" 3" BLACK CABLE	
TH-60	FIBER OPTIC	165+84.00	7.88'	74.35'	3.22" 5" BLACK FIBER	
TH-61	ELECTRIC	165+71.13	7.79'	79.12'	1.78" 1.5" BLACK CABLES	

UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O. D. & MATERIAL
TH-56	WATER	172+33.79	14.31'	83.26'	3.74'	3/4" COPPER

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
54	C. P.	168+37.44	-23.00	572698.9738	570764.2999

**NOTES:**

1. THE CONTRACTOR SHALL LOCATE THE EXISTING SUMP DRAINS FOR PARCEL 23-R AND THE ENGINEER SHALL APPROVE THE SUMP PUMP CONNECTION IN ACCORDANCE WITH ITEM 7635.33 PRIOR TO EXCAVATION.
2. DUE TO TRENCH EXCAVATION UTILITY POLES NEED TO BE HELD DURING CONSTRUCTION. PLEASE CONTACT ANGEL COLLAZO AT DELMARVA POWER AT (302) 454-4370.
3. PLACE TYPE 6 SOIL RETENTION BLANKET MULCH, AT THE END OF ALL CURBS TO TOE OF SLOPE TO ACCOUNT FOR CONCENTRATED RUNOFF.
4. SHORING SHALL BE UTILIZED FOR THE INSTALLATION OF PROPOSED PIPES P-72, P-74, P-75, AND P-76 ADJACENT TO PARCELS 23-R, 25-R, 26-R, AND 27-R. COST OF SHORING SHALL BE INCIDENTAL TO PIPE ITEM.
5. SEE TYPICAL SECTION FOR RESTORING PIPE TRENCH EXCAVATION FROM STA. 170+50 TO STA. 187+85.
6. CONTRACTOR SHALL EXCAVATE AND SET ASIDE LANDSCAPED STONE/ROCK ADJACENT TO PARCEL 25-R WITHIN LOC AND TEMPORARILY STORE UNTIL CONSTRUCTION AND GRADING IN AREA HAS BEEN COMPLETED, THEN REESTABLISH LANDSCAPED STONE/ROCK AT FINISHED GRADE TO MATCH EXISTING CONDITION, IN-KIND. ALL WORK AND COSTS INCIDENTAL TO ITEM 202000.



FENCE SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
10	CHAIN LINK FENCE, 4' HIGH	196.00'
11	CHAIN LINK FENCE, 4' HIGH	125.00'
12	CHAIN LINK FENCE, 4' HIGH	53.00'

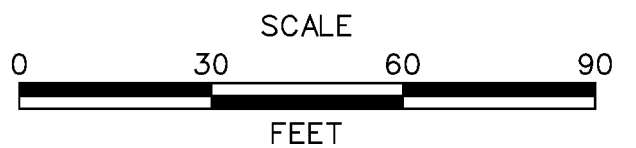
CURB SCHEDULE		
NO.	ITEM DESCRIPTION / TYPE	LENGTH
38	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	224.00
39	INTEGRAL PCC CURB AND GUTTER, TYPE 1-4	227.00

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
60	170+23.00	-16.00	34" x 24"	TYPE 1	82.85	76.50
61	170+23.00	16.00	48" x 48"	TYPE 1	82.85	70.91
62	171+75.00	18.00	48" x 48"	TYPE 2	82.75	70.31
63	173+88.00	17.00	48" x 48"	TYPE 2	79.25	69.46
64	175+56.00	20.00	48" x 48"	TYPE 2	77.50	68.79

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
73	18" RCP	3	27'	0.0100	76.50	76.23
74	30" RCP	3	150'	0.0040	70.91	70.31
75	30" RCP	3	213'	0.0040	70.31	69.46
76	30" RCP	3	168'	0.0040	69.46	68.79
77	30" RCP	3	266'	0.0050	68.79	67.46



ADDENDUMS / REVISIONS	



HSIP NCC, N54, HOWELL SCHOOL ROAD, SR 896 TO SR 71

CONTRACT	BRIDGE NO.	BR 1-376 & 1-378
T200504110	DESIGNED BY:	RMG
COUNTY	CHECKED BY:	PAH
NEW CASTLE		

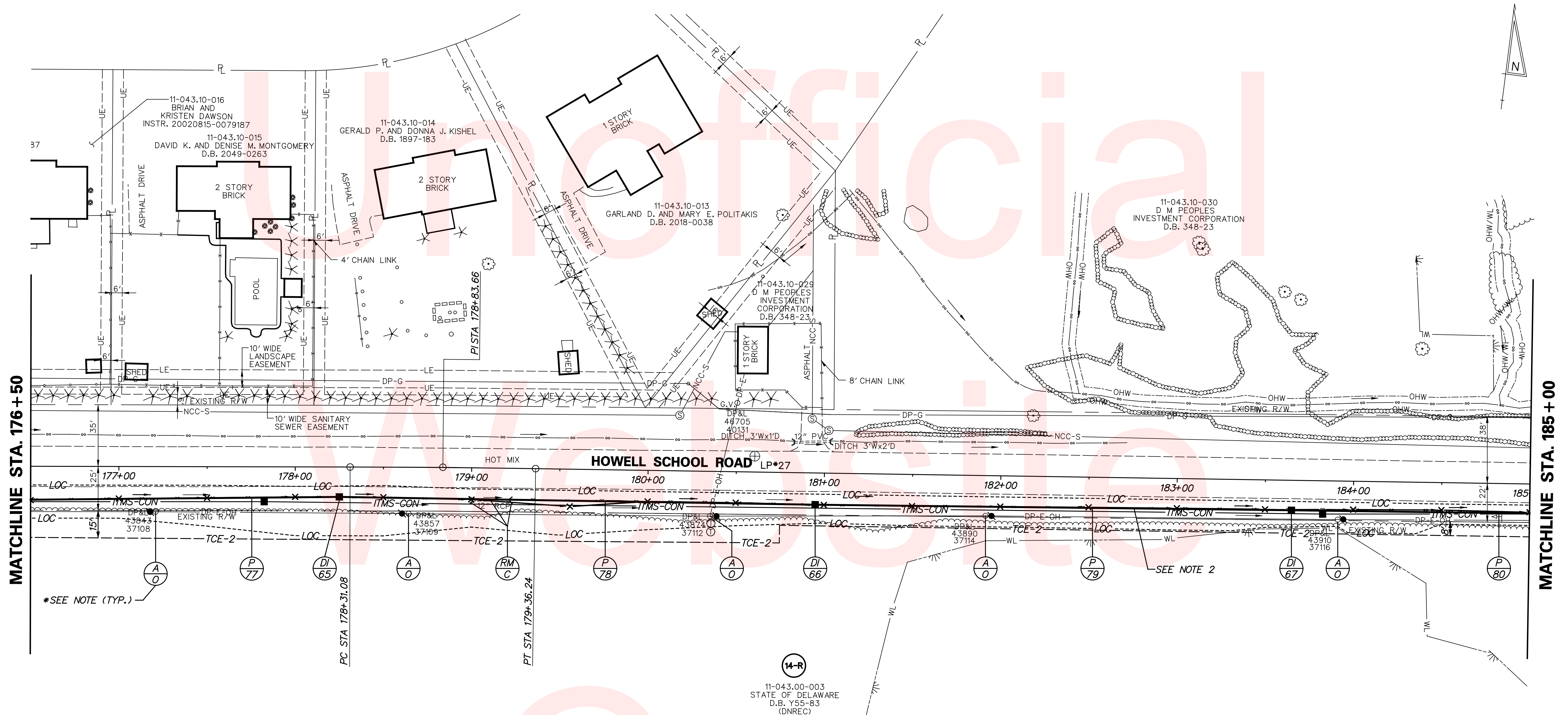
CONSTRUCTION PLAN

SHEET NO.	27
TOTAL SHTS.	138

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
78	30" RCP	3	268'	0.0055	67.46	65.99
79	30" RCP	3	268'	0.0060	65.99	64.38
80	30" RCP	3	258'	0.0060	64.38	62.83

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
65	178+25.00	17.00	48" x 48"	TYPE 2	76.00	67.46
66	180+95.00	18.00	48" x 48"	TYPE 2	71.75	65.99
67	183+65.00	17.00	48" x 48"	TYPE 2	68.90	64.38

- NOTES:
1. DUE TO TRENCH EXCAVATION UTILITY POLES NEED TO BE HELD DURING CONSTRUCTION. PLEASE CONTACT ANGEL COLLAZO AT DELMARVA POWER AT (302) 454-4370.
  2. SEE TYPICAL SECTION FOR RESTORING PIPE TRENCH EXCAVATION FROM STA. 170+50 TO STA. 187+85.

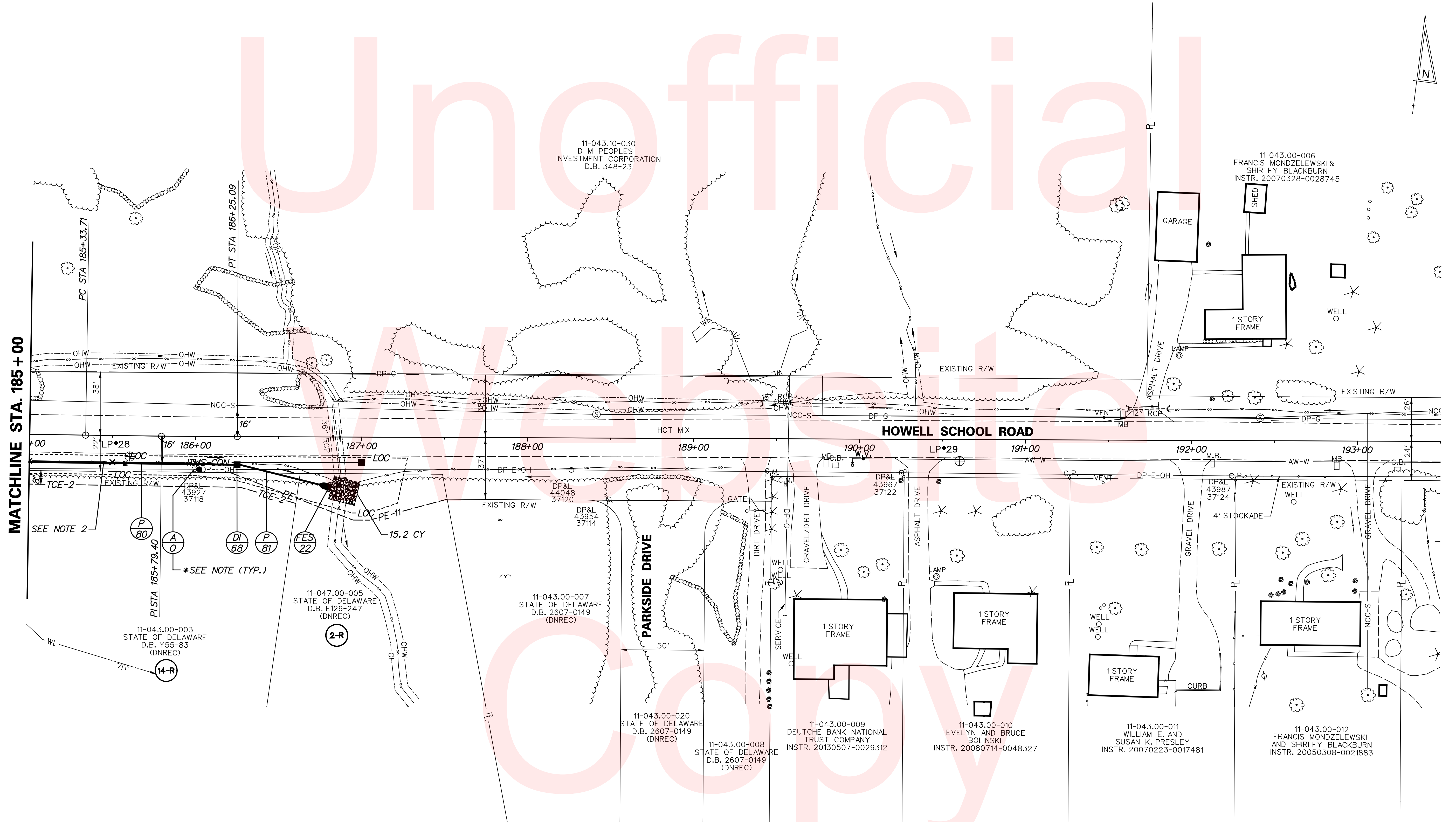


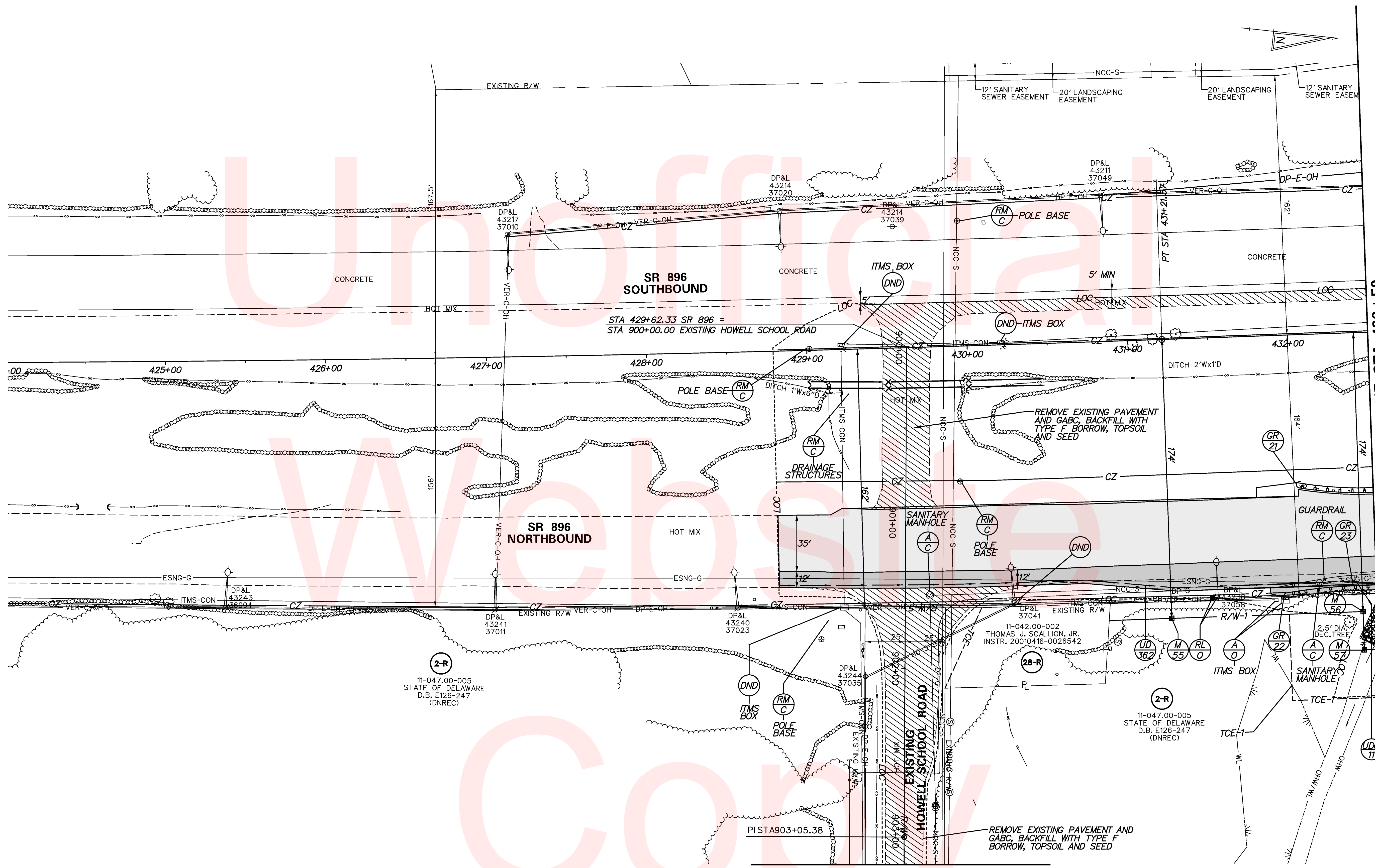
DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INV. EL.	DIS. EL.
81	30" RCP	3	51'	0.0059	62.83	62.53

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET	BOX SIZE	GRATE	T. G. EL.	INV. EL.
68	186+25.00	17.00	48" x 48"	TYPE 2	67.08	62.83

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
22	30" RCP	0.0059	NO

- NOTES:
1. DUE TO TRENCH EXCAVATION UTILITY POLES NEED TO BE HELD DURING CONSTRUCTION. PLEASE CONTACT ANGEL COLLAZO AT DELMARVA POWER AT (302) 454-4370.
  2. SEE TYPICAL SECTION FOR RESTORING PIPE TRENCH EXCAVATION FROM STA. 170+50 TO STA. 187+85.





MATCHLINE STA. 432+50

MATCHLINE STA. 903+22

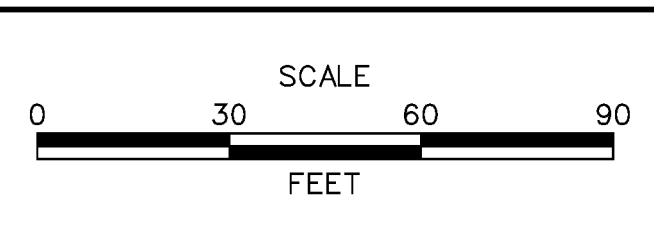
GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
21	END TREATMENT ATTENUATOR, TYPE 2	432+02.19	93.45'	50.00'
22	END TREATMENT ATTENUATOR, TYPE 2	431+60.66	157.77'	50.00'
23	GALVANIZED STEEL GUARDRAIL, TYPE 1-31	432+11.93	152.87'	38.00'

UNDERDRAIN OUTLETS			
NO.	LENGTH	DIS.	EL.
11	13.00'		60.02

RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
55	C. M.	431+21.57	174.00	572206.6626	565614.8437
56	C. M.	432+41.00	174.00	572324.8819	565597.8814
57	C. P.	432+41.00	198.00	572328.2905	565621.6381



ADDENDUMS / REVISIONS	

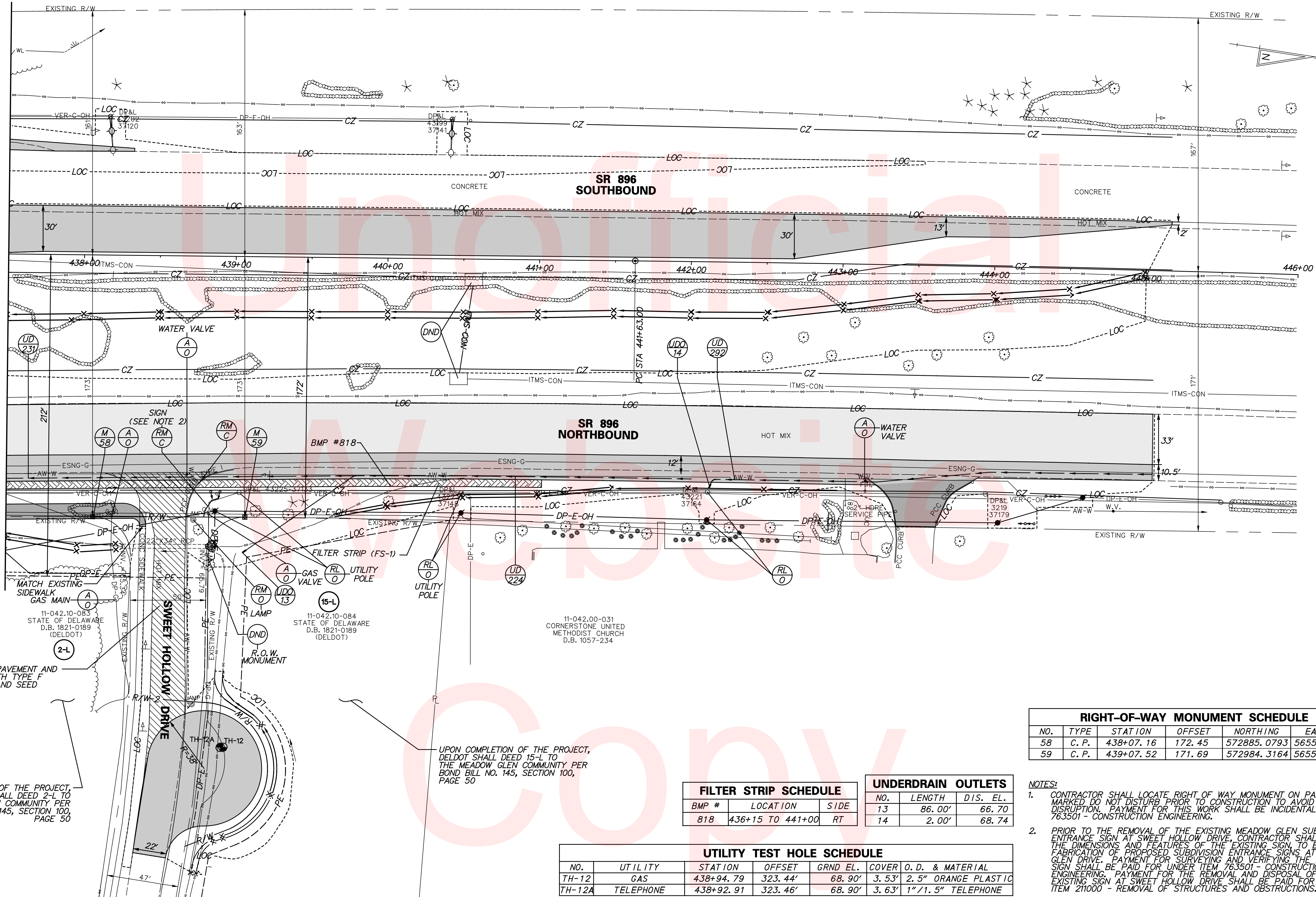


HSIP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71

CONTRACT	BRIDGE NO. BR 1-376 & 1-378
T200504110	DESIGNED BY: RMG
COUNTY	CHECKED BY: PAH
NEW CASTLE	

<b>CONSTRUCTION PLAN</b>	SHEET NO.
	TOTAL SHTS.
	138

MATCHLINE STA. 437 + 50



REMOVE EXISTING PAVEMENT AND GABC, BACKFILL WITH TYPE F BORROW, TOPSOIL AND SEED

UPON COMPLETION OF THE PROJECT, DELDOT SHALL DEED 2-L TO THE MEADOW GLEN COMMUNITY PER BOND BILL NO. 145, SECTION 100, PAGE 50

UPON COMPLETION OF THE PROJECT, DELDOT SHALL DEED 15-L TO THE MEADOW GLEN COMMUNITY PER BOND BILL NO. 145, SECTION 100, PAGE 50

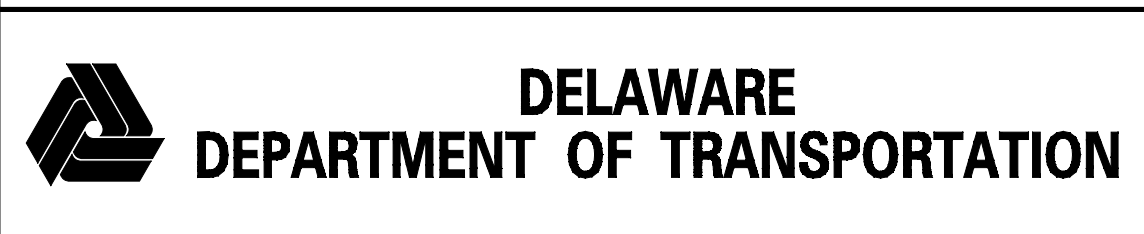
RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
58	C. P.	438+07.16	172.45	572885.0793	565515.9394
59	C. P.	439+07.52	171.69	572984.3164	565500.9301

FILTER STRIP SCHEDULE		
BMP #	LOCATION	SIDE
818	436+15 TO 441+00	RT

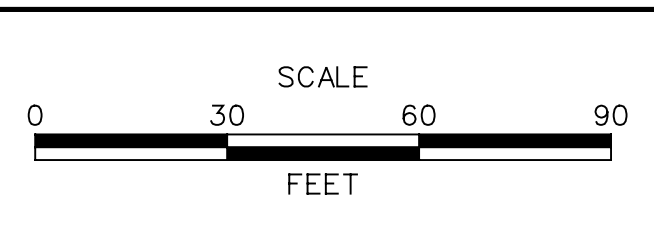
UNDERDRAIN OUTLETS		
NO.	LENGTH	DIS. EL.
13	86.00'	66.70
14	2.00'	68.74

UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O. D. & MATERIAL
TH-12	GAS	438+94.79	323.44'	68.90'	3.53'	2.5" ORANGE PLASTIC
TH-12A	TELEPHONE	438+92.91	323.46'	68.90'	3.63'	1" / 1.5" TELEPHONE

- NOTES:**
- CONTRACTOR SHALL LOCATE RIGHT OF WAY MONUMENT ON PARCEL 3-L MARKED DO NOT DISTURB PRIOR TO CONSTRUCTION TO AVOID ANY DISRUPTION. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO 763501 - CONSTRUCTION ENGINEERING.
  - PRIOR TO THE REMOVAL OF THE EXISTING MEADOW GLEN SUBDIVISION ENTRANCE SIGN AT SWEET HOLLOW DRIVE, CONTRACTOR SHALL SURVEY THE DIMENSIONS AND FEATURES OF THE EXISTING SIGN. FABRICATION OF PROPOSED SUBDIVISION ENTRANCE SIGNS AT MEADOW GLEN DRIVE. PAYMENT FOR SURVEYING AND VERIFYING THE EXISTING SIGN SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING. PAYMENT FOR THE REMOVAL AND DISPOSAL OF THE EXISTING SIGN AT SWEET HOLLOW DRIVE SHALL BE PAID FOR UNDER ITEM 21000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.



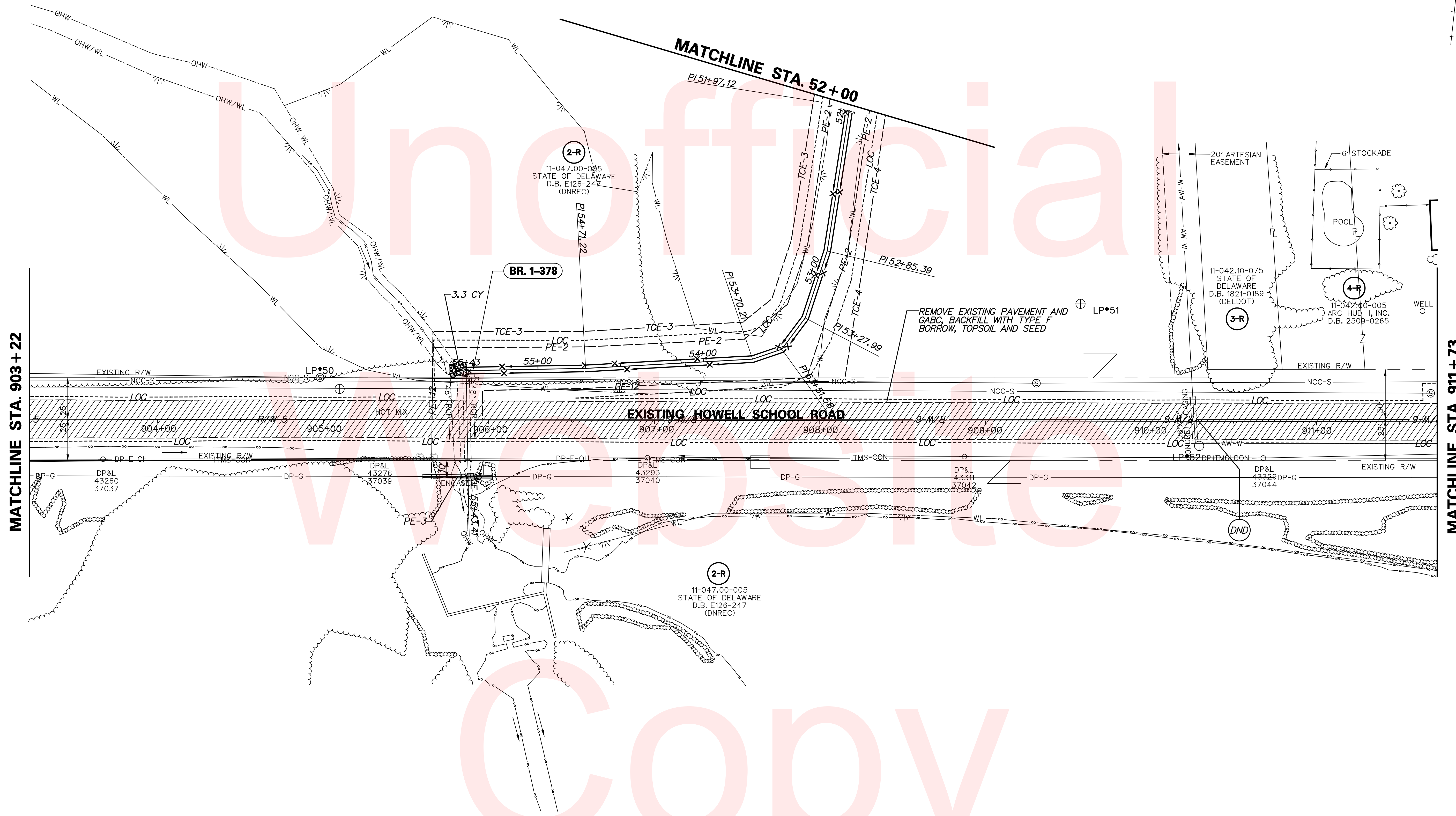
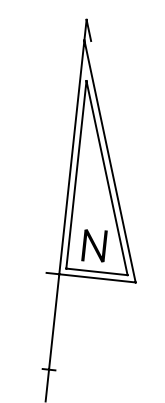
ADDENDUMS / REVISIONS	



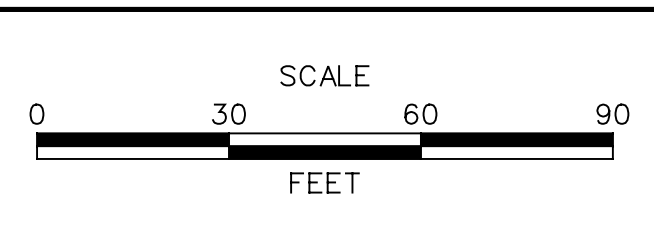
HSIP NCC, N54, HOWELL SCHOOL ROAD, SR 896 TO SR 71

CONTRACT	BRIDGE NO. BR 1-376 & 1-378
T200504110	DESIGNED BY: RMG
COUNTY	CHECKED BY: PAH
NEW CASTLE	

<b>CONSTRUCTION PLAN</b>	SHEET NO.	31
	TOTAL SHTS.	138



ADDENDUMS / REVISIONS	



**HSIP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71**

CONTRACT T200504110	BRIDGE NO. BR 1-376 & 1-378
COUNTY NEW CASTLE	DESIGNED BY: RMG
	CHECKED BY: PAH

**CONSTRUCTION PLAN**

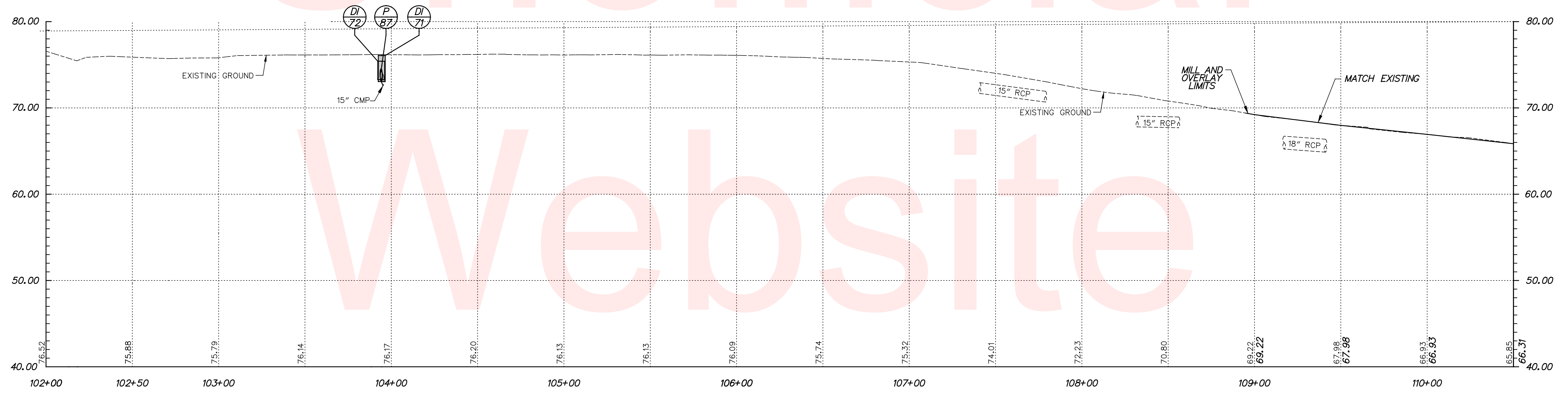
SHEET NO. 32
TOTAL SHTS. 138



# Unofficial

# Website

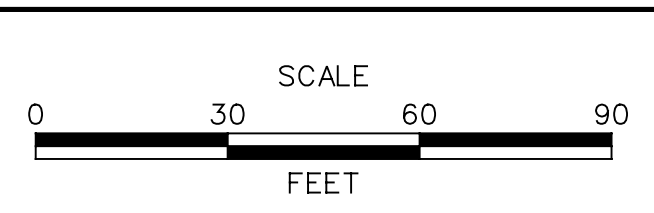
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**DENNY ROAD**



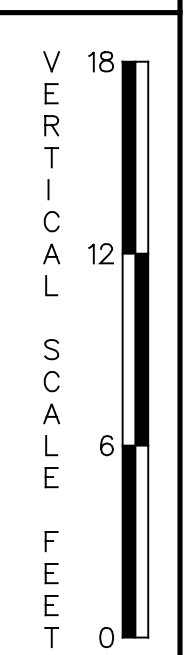
ADDENDUMS / REVISIONS	



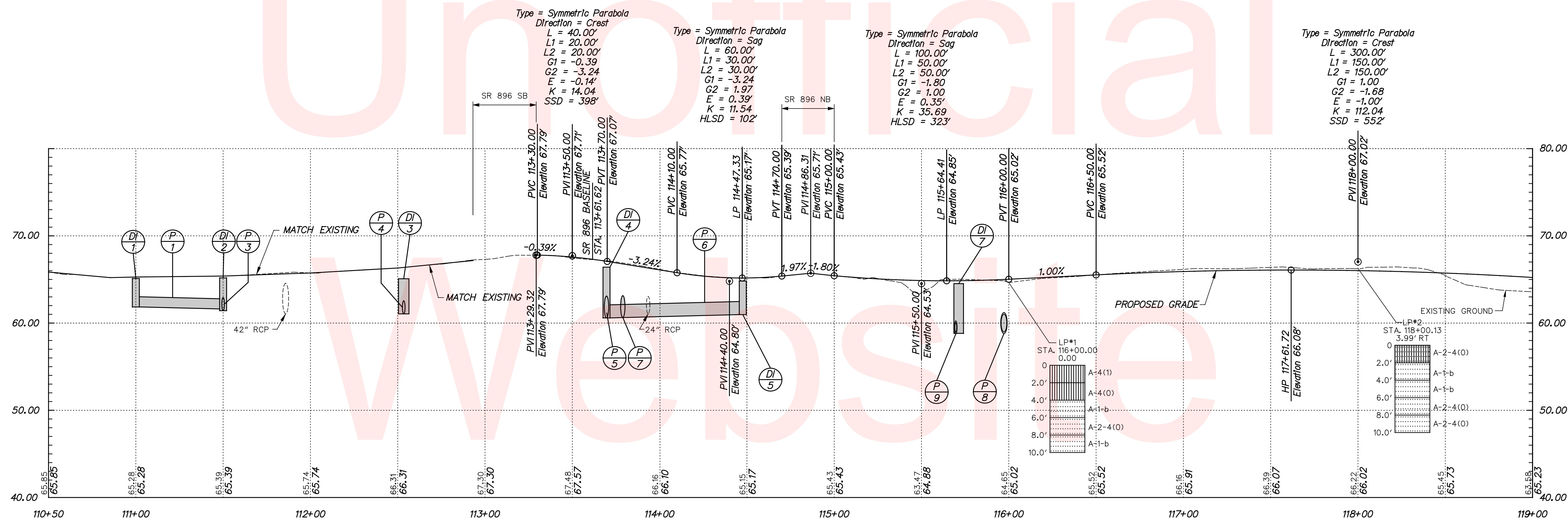
**HSIP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71**

CONTRACT T200504110	BRIDGE NO. BR 1-376 & 1-378
COUNTY NEW CASTLE	DESIGNED BY: RMG
	CHECKED BY: PAH

<b>PROFILES</b>	SHEET NO. 33
	TOTAL SHTS. 138



Unofficial

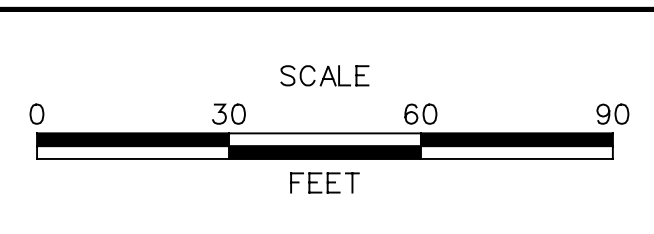


**DENNY ROAD / PROPOSED HOWELL SCHOOL ROAD**

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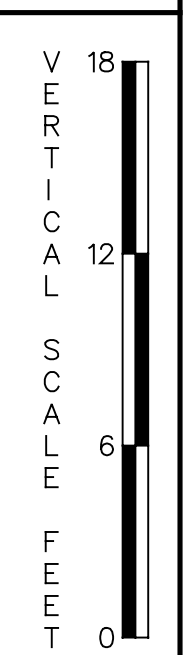
ADDENDUMS / REVISIONS	



**HSIP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71**

CONTRACT T200504110	BRIDGE NO. BR 1-376 & 1-378
COUNTY NEW CASTLE	DESIGNED BY: RMG
	CHECKED BY: PAH

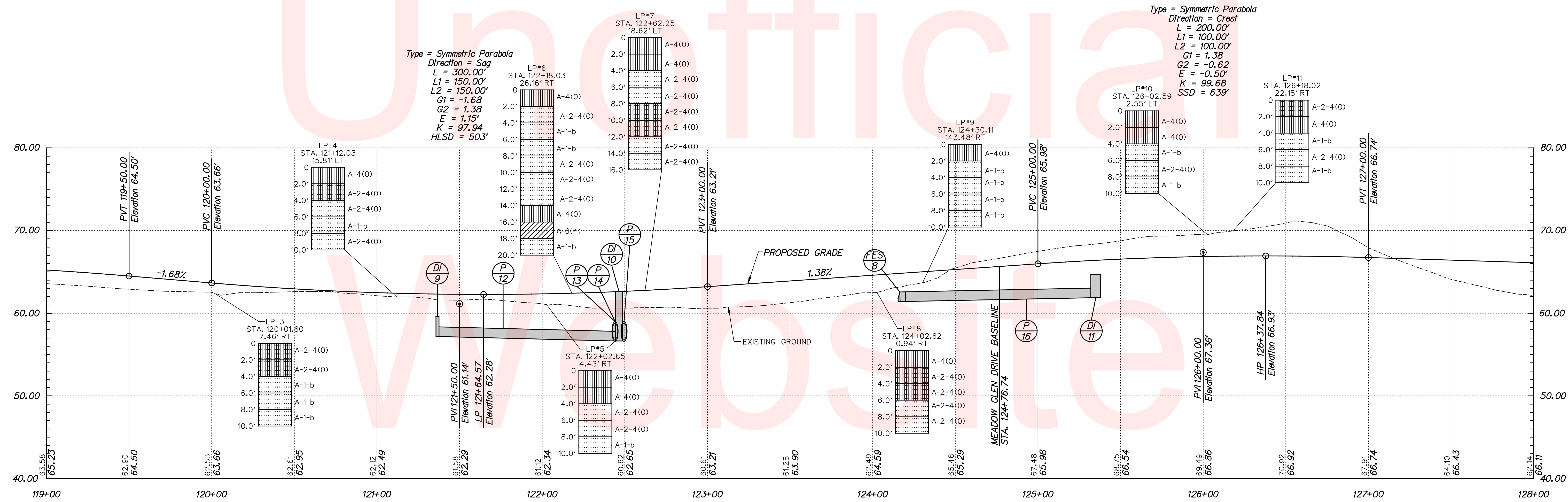
<b>PROFILES</b>	SHEET NO. 34
	TOTAL SHTS. 138



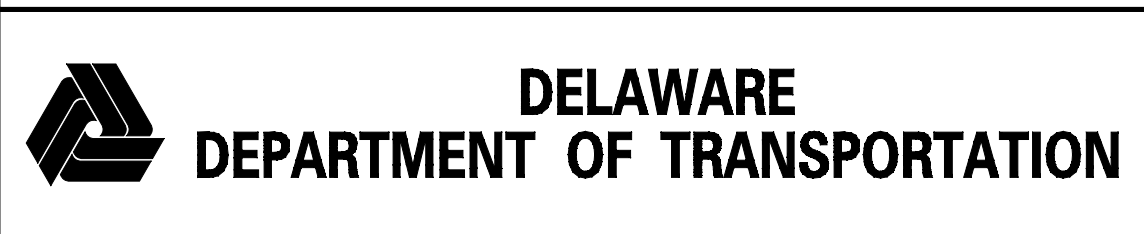
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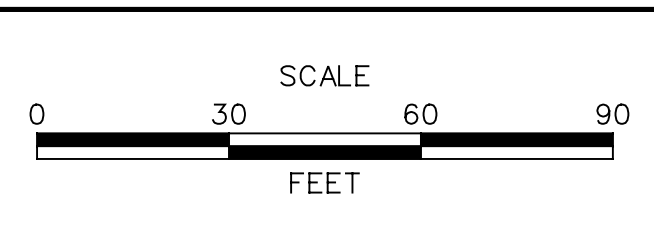
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**PROPOSED HOWELL SCHOOL ROAD**



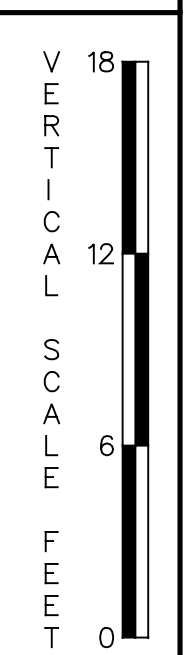
ADDENDUMS / REVISIONS	

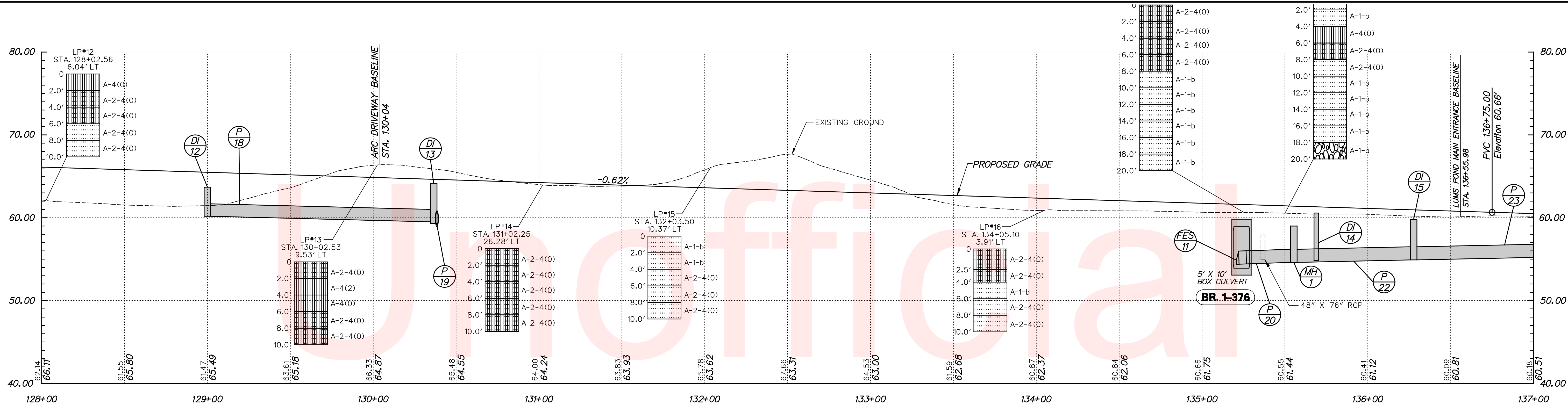


**HSIP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71**

CONTRACT T200504110	BRIDGE NO. BR 1-376 & 1-378
COUNTY NEW CASTLE	DESIGNED BY: RMG
	CHECKED BY: PAH

<b>PROFILES</b>	SHEET NO. 35
	TOTAL SHTS. 138

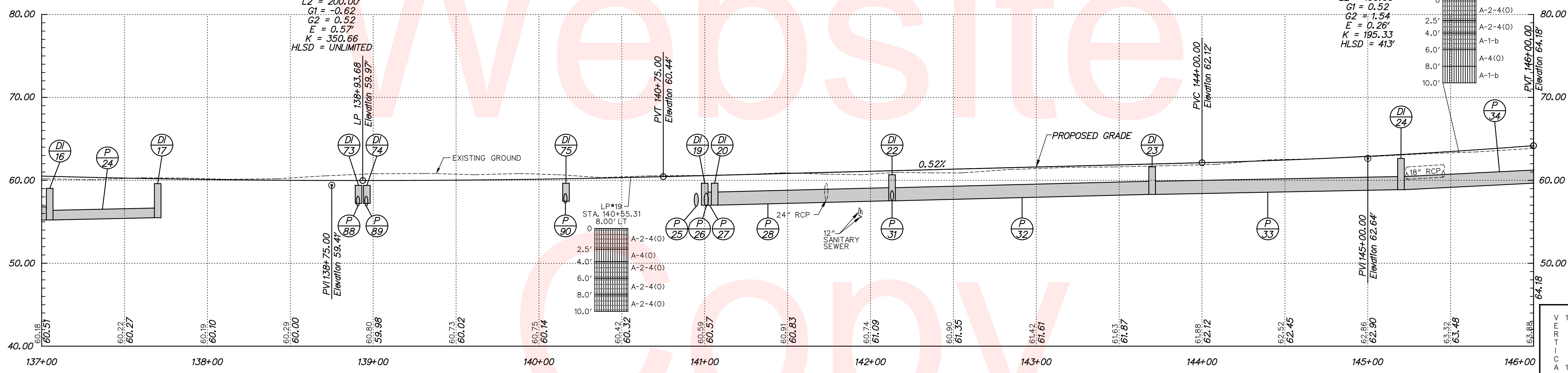




**PROPOSED HOWELL SCHOOL ROAD**

Type = Symmetric Parabola  
 Direction = Sag  
 L = 400.00'  
 L1 = 200.00'  
 L2 = 200.00'  
 G1 = -0.62  
 G2 = 0.52  
 E = 0.57'  
 K = 350.66  
 HLSD = UNLIMITED

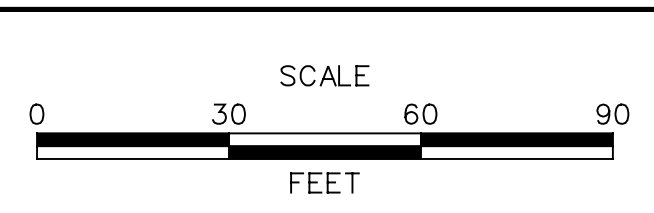
Type = Symmetric Parabola  
 Direction = Sag  
 L = 200.00'  
 L1 = 100.00'  
 L2 = 100.00'  
 G1 = 0.52  
 G2 = 1.54  
 E = 0.26'  
 K = 195.33  
 HLSD = 413'



**PROPOSED HOWELL SCHOOL ROAD**



ADDENDUMS / REVISIONS	

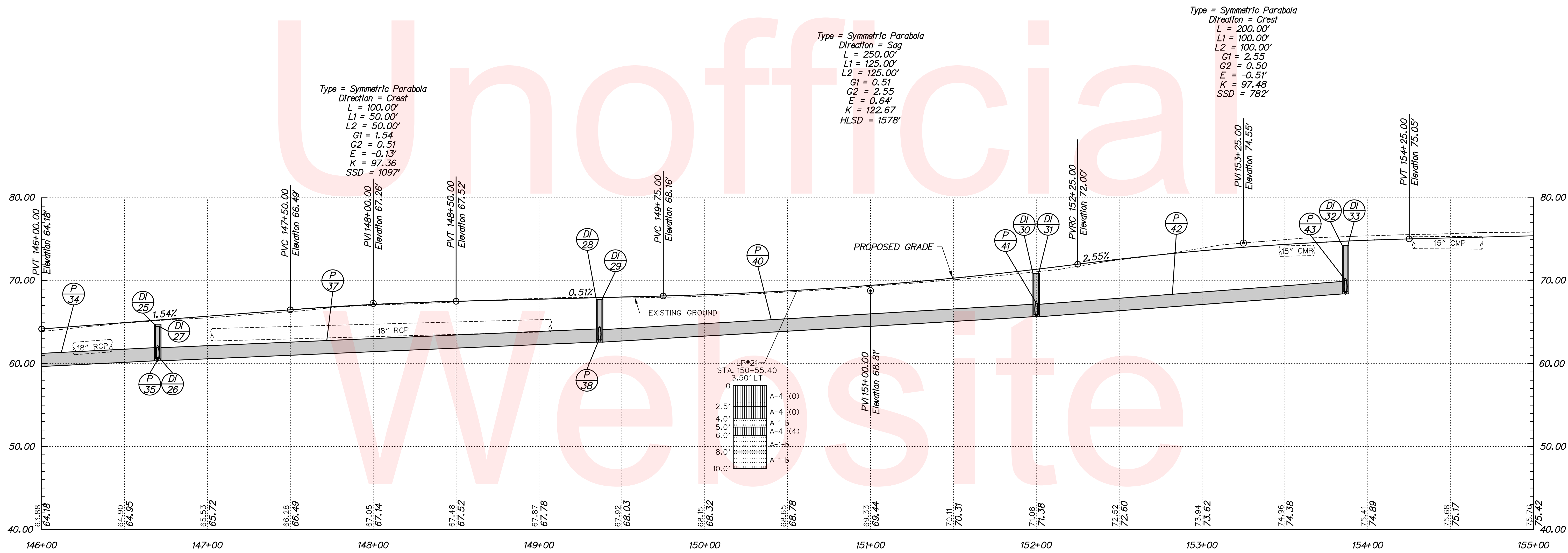


CONTRACT T200504110  
 COUNTY NEW CASTLE  
 HSIP NCC, N54, HOWELL SCHOOL ROAD, SR 896 TO SR 71

BRIDGE NO. BR 1-376 & 1-378
DESIGNED BY: RMG
CHECKED BY: PAH

**PROFILES**

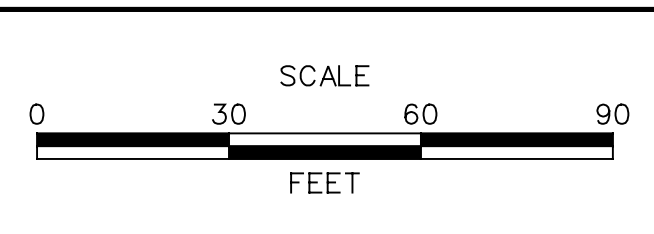
VERTICAL SCALE FEET	18
SHEET NO.	36
TOTAL SHTS.	138



**PROPOSED HOWELL SCHOOL ROAD**



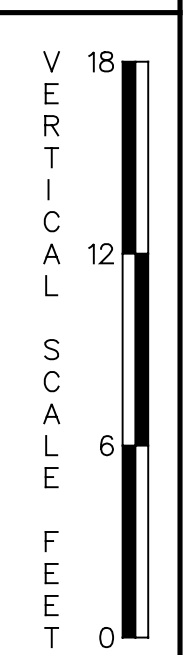
ADDENDUMS / REVISIONS	



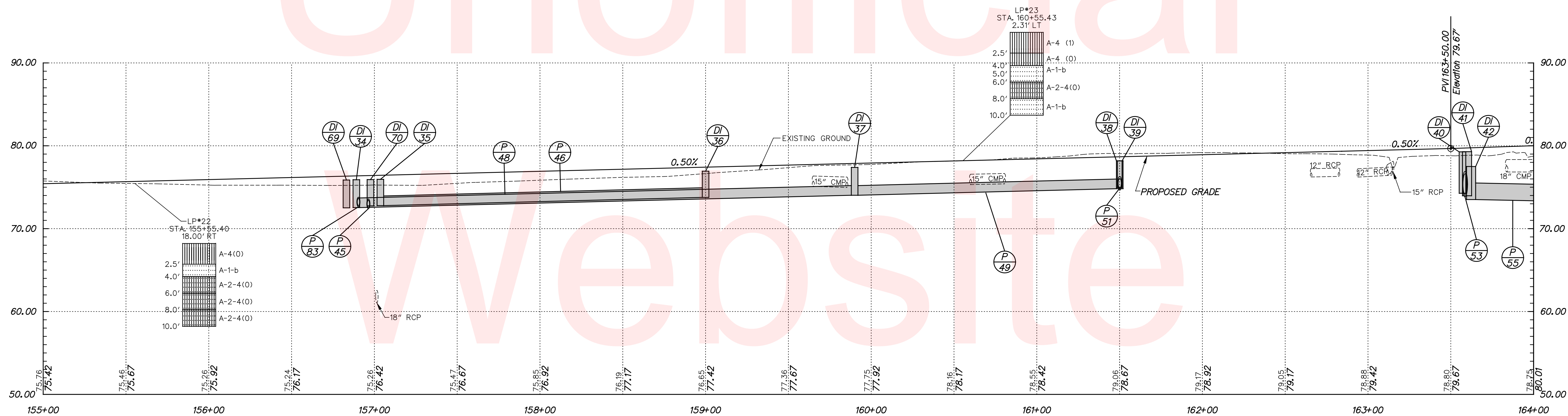
**HSIP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71**

CONTRACT	BRIDGE NO. BR 1-376 & 1-378
T200504110	DESIGNED BY: RMG
COUNTY	CHECKED BY: PAH
NEW CASTLE	

<b>PROFILES</b>	SHEET NO.
	37
	TOTAL SHTS.
138	

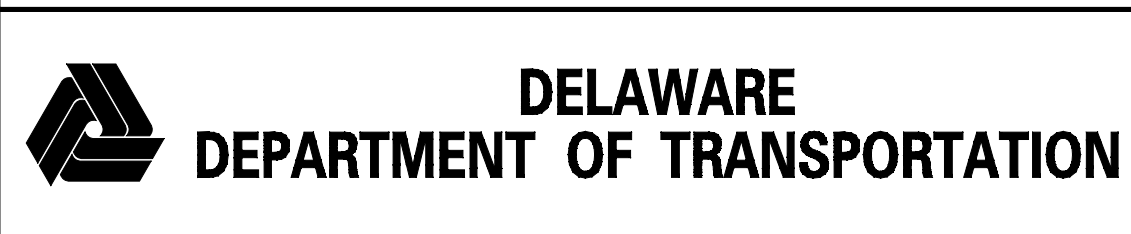
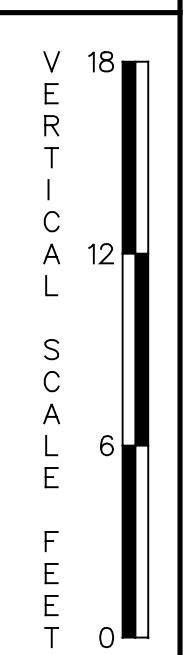


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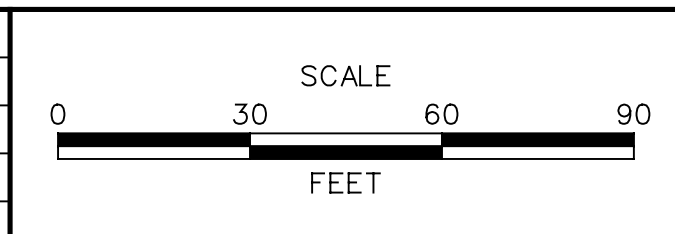


**PROPOSED HOWELL SCHOOL ROAD**

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ADDENDUMS / REVISIONS	



**HSIP NCC, N54, HOWELL SCHOOL ROAD,  
SR 896 TO SR 71**

CONTRACT T200504110	BRIDGE NO. BR 1-376 & 1-378
COUNTY NEW CASTLE	DESIGNED BY: RMG
	CHECKED BY: PAH

<b>PROFILES</b>	SHEET NO. 38
	TOTAL SHTS. 138