

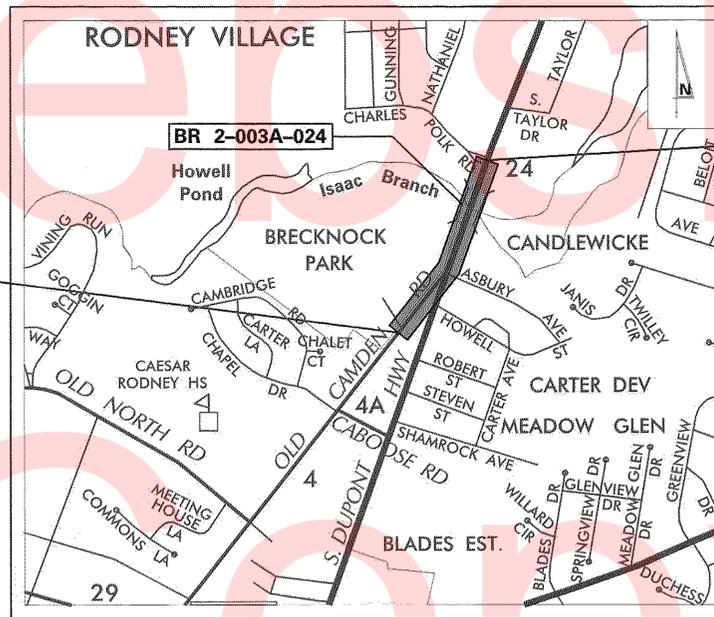
THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION



CONSTRUCTION PLANS FOR:

BRECKNOCK PARK MULTI-USE TRAIL

CONTRACT NUMBER: T201330011
 FEDERAL AID PROJECT NUMBER: CMAQ-2017(28)
 COUNTY: KENT M.R. #: K4 & K24



PROJECT LOCATION
NOT TO SCALE

U.S. CUSTOMARY
UNITS

DESIGN DESIGNATION

FUNCTIONAL CLASS: MAJOR COLLECTOR	D.H.V. PROJECTED: N/A	YEAR: N/A
TYPE OF CONSTRUCTION: PEDESTRIAN IMPROVEMENTS	DESIGN SPEED: 35 M.P.H. / 50 M.P.H.	
A.A.D.T. CURRENT: 48001	YEAR: 2012	TRUCKS: N/A
A.A.D.T. PROJECTED: N/A	YEAR: N/A	DIRECTION OF DISTRIBUTION: N/A

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE
2	PLAN SHEET INDEX
3	LEGEND
4	NOTES
5	TYPICAL SECTIONS
6	HORIZONTAL AND VERTICAL CONTROL
7-9	CONSTRUCTION PLANS
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22-27	CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS
28	ENVIRONMENTAL COMPLIANCE
29-31	SIGNING AND STRIPING PLANS
32	SIGN SCHEDULE
33-36	RIGHT OF WAY PLANS

TOTAL SHEETS: 36

APPROVED DESIGN EXCEPTIONS

DESIGN PARAMETER	REQUIRED	PROVIDED	DATE

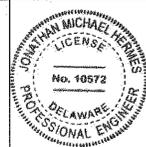
ADDENDA & REVISIONS

DESCRIPTION	NAME & DATE

ASSOCIATED CONTRACTS

CONTRACT NO.	CONTRACT NAME
843	US13 CONSTRUCTION, CANTERBURY TO CAMDEN
T20041701	WEST DOVER CONNECTOR
T201500202	HEP KC, US13 LOCHMEATH WAY TO PUNCEON RUN CONNECTOR

PREPARED BY
THE CONSULTING FIRM OF



SEAL

RECOMMENDED Jonathan Michael Hoag 5-2-17 DATE

RECOMMENDED

SQUAD MANAGER, CONSTRUCTION

5/11/17 DATE

GROUP ENGINEER, CONSTRUCTION

5/11/17 DATE

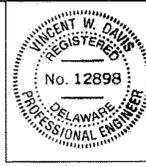
ASSISTANT DIRECTOR, TRANSPORTATION SOLUTIONS (CONSTRUCTION)

5/24/17 DATE

RECOMMENDED

Vincent W. Davis
STORMWATER ENGINEER

DATE 26 MAY 2017



SEAL

RECOMMENDED

Robert B. McClary
TRANSPORTATION ALTERNATIVES,
PROGRAM MANAGER V

DATE 30 May 2017

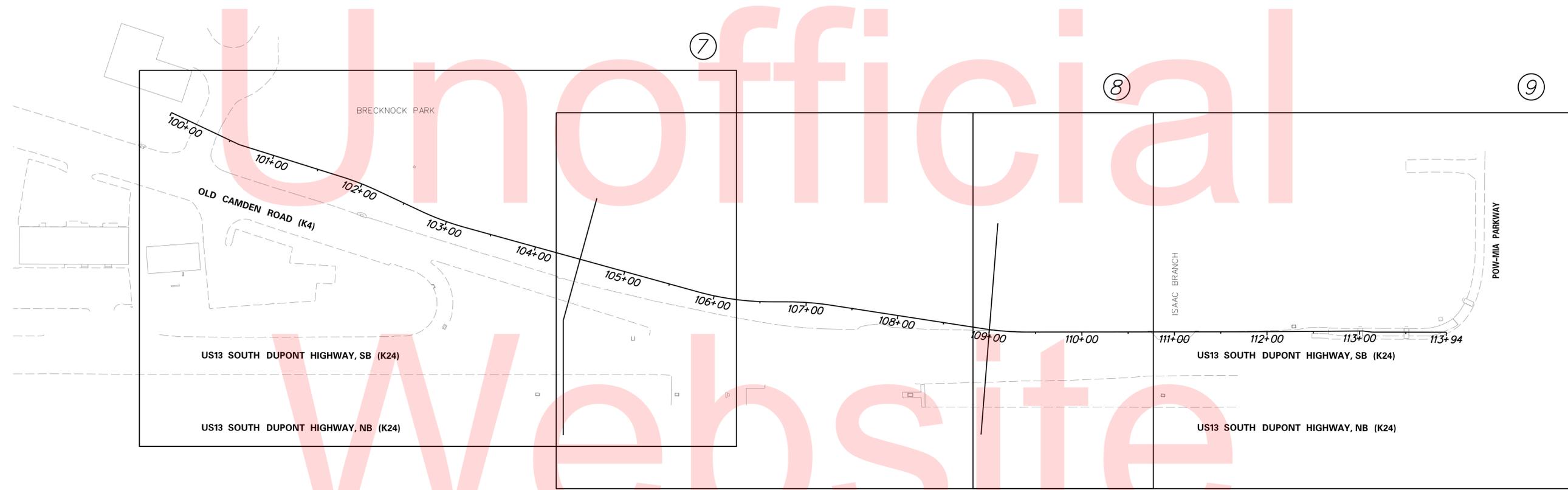
APPROVED
AS TO PROCESS

Robert B. McClary
CHIEF ENGINEER

DATE 5/30/17

SEAL

SEAL



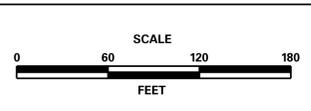
6/7/2017 4:06:29 PM G:\PROJECTS\155002.00 (DelDOT Agmt. 1730 TAP)\155002.14 (Task 14, Brecknock Park US13 Bridge Final Design)\CAD FILES\155002.breck.dgn

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PLAN SHEET INDEX CROSS REFERENCE			
CONSTRUCTION PLANS	7	8	9
GRADES AND GEOMETRICS	12	13	14
CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS	24	25	26
ENVIRONMENTAL COMPLIANCE	28		
SIGNING AND STRIPING PLANS	29	30	31
RIGHT OF WAY PLANS	33-36		



ADDENDUMS / REVISIONS	



**BRECKNOCK PARK
MULTI-USE TRAIL**

CONTRACT	ROAD NO.	K4 & K24
T201330011	DESIGNED BY:	ASH
COUNTY	CHECKED BY:	JMH
KENT		

PLAN SHEET INDEX	
SHEET NO.	2
TOTAL SHTS.	36

GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2016 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2014, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
- ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR, INCLUDE:

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

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

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

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

- THE ADDITIONAL IMPERVIOUS AREA CREATED BY THIS PROJECT IS 0.33 ACRES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.
- THE EROSION AND SEDIMENT CONTROL PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE EROSION AND SEDIMENT CONTROL PLANS ARE VALID FOR A FIVE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE FIVE YEARS, THE CONTRACTOR SHALL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE EROSION AND SEDIMENT CONTROL PLAN APPROVAL. DELDOT WILL REVIEW THE CURRENT EROSION AND SEDIMENT CONTROL PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.

PROJECT NOTES

SECTION 100

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

SECTION 200

- IN AREAS WHERE TREES OR SHRUBS WILL BE OVERHANGING THE PROPOSED SIDEWALK, PRUNING MAY BE NECESSARY TO ACHIEVE A VERTICAL CLEAR SPACE OF 10 FEET ABOVE THE PROPOSED SIDEWALK ELEVATION. THE CONTRACTOR SHALL PRUNE EXISTING TREE AND SHRUB BRANCHES, WHICH OVERHANG THE SIDEWALK, IN ACCORDANCE WITH I.S.A. STANDARDS. THE CONTRACTOR SHALL NOTIFY DELDOT'S ROADSIDE ENVIRONMENTALIST ADMINISTRATOR AND/OR HIS DESIGNEE, AT LEAST TWO (2) DAYS PRIOR TO THE PRUNING OPERATION. ALL COSTS ASSOCIATED WITH THE ABOVE WORK TO BE PAID UNDER ITEM 201000 - CLEARING AND GRUBBING.
- THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG PROPOSED DRAINAGE RUNS, AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 202000.
- ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING: FENCE, BOLLARDS, PIPES, DRAINAGE STRUCTURES, UNDERDRAINS, SIDEWALK/CURB OPENINGS, GUARDRAIL AND EXISTING PEDESTRIAN BRIDGE AND CULVERT CONNECTIONS.
- UNSUITABLE MATERIALS FROM ROADWAY AND UNDERCUT EXCAVATION SHALL NOT BE USED AS FILL AND SHALL BE LEGALLY DISPOSED OF OUTSIDE THE PROJECT AREA. ALL COSTS ASSOCIATED WITH THE REMOVAL AND DISPOSAL OF THIS MATERIAL SHALL BE INCIDENTAL TO THE ITEM BEING REMOVED.
- THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, SHALL BE DIRECTED TO USE ON THE PROJECT BORROW MATERIALS AS MAY BE FOUND IN THE EXCAVATIONS THAT ARE DETERMINED BY THE ENGINEER TO BE SUITABLE FOR USE ELSEWHERE WITHIN THE PROJECT. PAYMENT FOR PLACING THESE BORROW MATERIALS AT LOCATIONS AS DIRECTED BY THE ENGINEER SHALL BE INCIDENTAL TO THE ITEM THAT GENERATED THE MATERIAL. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DRY OR WET THE MATERIALS, IF NEEDED, SO THAT THE MATERIALS WILL MEET THE REQUIREMENTS OF ITS INTENDED USE. THE CONTRACTOR MAY, WITH APPROVAL OF THE ENGINEER, STOCKPILE MATERIALS TO MEET THESE REQUIREMENTS. HOWEVER, MOVING THE MATERIAL FROM THE STOCKPILE AND THEN UTILIZING THE MATERIALS SHALL NOT BE MEASURED FOR PAYMENT. ALL MATERIALS ENCOUNTERED IN THE EXCAVATIONS OF THE PROJECT THAT ARE NOT USED ELSEWHERE ON THE PROJECT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL COSTS ASSOCIATED WITH STOCKPILING MATERIAL, MOVING ANY MATERIAL FROM ANY STOCKPILES, WETTING AND/OR DRYING THE MATERIAL, OR REMOVAL AND FINAL DISPOSAL SHALL BE INCIDENTAL TO THE ITEM THAT GENERATED THAT MATERIAL.
- ROADSIDE AMENITIES WITHIN THE LIMITS OF CONSTRUCTION OR EASEMENT AREAS THAT ARE TO REMAIN IN PLACE AND ARE NOTED BY "DND" SHALL BE PROTECTED BY THE CONTRACTOR WITH SAFETY FENCE OR OTHER MEASURES AS DIRECTED BY THE ENGINEER. ALL COSTS SHALL BE INCIDENTAL TO ITEM NO. 201000. ANY DAMAGE TO THESE AMENITIES WHICH IS DONE BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

SECTION 600

- THE DEPARTMENT AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES AND DRAINAGE STRUCTURES TO BE USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION PRIOR TO CONSTRUCTION. DAMAGES TO EXISTING PIPES AND DRAINAGE STRUCTURES DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED OR REPLACED IN-KIND AT THE CONTRACTOR'S EXPENSE. THE DEPARTMENT WILL VIDEO INSPECT NEW PIPE RUNS TO CONFIRM CONDITION PRIOR TO ACCEPTANCE. PIPE CLEANING PRIOR TO VIDEO INSPECTION AND MAINTENANCE OF TRAFFIC DURING THE VIDEO INSPECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND INCIDENTAL TO THE PIPE ITEM THAT IS BEING VIDEO INSPECTED.
- THE STEEL SUPERSTRUCTURE FOR THE PEDESTRIAN BRIDGE, INCLUDING, BUT NOT LIMITED TO, STRINGERS, FLOOR BEAMS, STRUTS, DIAPHRAGMS, PLATES, BOLTED CONNECTIONS, AND PAINTING, SHALL BE PAID FOR UNDER ITEM 615000 - STEEL STRUCTURES.
- THE STEEL SUPERSTRUCTURE SHALL BE PAINTED IN ACCORDANCE WITH SECTION 616 OF THE STANDARD SPECIFICATIONS.

SECTION 700

- IN AREAS WHERE PROPOSED CURB MEETS EXISTING CURB AND THE TWO CURB TYPES ARE NOT SIMILAR, THE PROPOSED CURB SHALL BE TRANSITIONED IN 10 LINEAR FEET OR AS DIRECTED BY THE ENGINEER IN THE FIELD. PAYMENT FOR TRANSITIONING SHALL BE INCIDENTAL TO THE PROPOSED CURB ITEM.
- WHERE PROPOSED CONCRETE SIDEWALK IS CONSTRUCTED TO MEET EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL BE SAWCUT AT THE TIE-IN POINT OR MEET THE NEAREST EXISTING SIDEWALK JOINT. ALL SAW CUTTING SHALL BE FULL DEPTH, UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM 762001 - SAWCUTTING, CONCRETE, FULL DEPTH.
- ALL DISTURBED AREAS WITHIN THE LIMIT OF CONSTRUCTION, SHALL BE TOPSOILED (6" MINIMUM), AND SEEDED AS DIRECTED BY THE ENGINEER. ALL COSTS ARE PAID UNDER THE RESPECTIVE ITEMS BEING INSTALLED.
- ALL PAVED AREAS (INCLUDING DRIVEWAYS) TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.
- DURING CONSTRUCTION OF THE TRAIL ALL BARE AREAS SHALL BE STABILIZED AT THE END OF EACH WORK DAY. BARE AREAS SHALL BE EITHER PERMANENTLY STABILIZED OR COVERED WITH GABC.

SECTION 900

- THIS PROJECT IS COVERED UNDER A "NPDES" GENERAL PERMIT FOR CONSTRUCTION, UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AN AREA SUITABLE FOR STOCKPILING BORROW, TOPSOIL, AND OTHER FILL MATERIAL REQUIRED FOR THE PROJECT IN ACCORDANCE WITH SECTION 908.01 OF THE STANDARD SPECIFICATIONS. SUBJECT TO THE APPROVAL OF THE ENGINEER, STOCKPILE AREA MAY BE LOCATED OUTSIDE OF THE PROJECT LIMITS, IF NECESSARY, NO ADDITIONAL PAYMENT WILL OCCUR FOR OFFSITE STOCKPILING.

MISCELLANEOUS

- THE CONTRACTOR SHALL INSTALL ALL TRAILS TO CONFORM TO CURRENT ADA STANDARDS. ALL TRAIL CROSS SLOPES SHALL BE A MAXIMUM OF 2% ALONG THE PROPOSED CONSTRUCTION. ALL DRIVEWAY CROSSING AND CURB RAMPS SHALL CONFORM TO CURRENT DEPARTMENT AND ADA STANDARDS. ALL COSTS ARE INCIDENTAL TO THE ITEMS BEING INSTALLED.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL RESIDENTS AND BUSINESSES, INCLUDING BRECKNOCK PARK DURING CONSTRUCTION ACTIVITIES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL COORDINATE THE BRECKNOCK PARK ENTRANCE WORK WITH JEREMY SHEPPARD, (302) 744-2495. ALL COSTS INCIDENTAL TO THE CONTRACT.
- THE LOCATIONS OF ALL ABOVE GROUND ITEMS TO BE INSTALLED, SUCH AS SIGNS, KIOSK, ETC. SHALL BE VERIFIED BY THE ENGINEER PRIOR TO INSTALLATION. ALL COSTS INCIDENTAL TO ITEM 763501 - CONSTRUCTION ENGINEERING.
- ALL WORK IS TO BE PERFORMED ON KENT COUNTY OR STATE OF DELAWARE PROPERTY. AN AGREEMENT HAS BEEN EXECUTED FOR ACCESS AND MAINTENANCE BETWEEN KENT COUNTY AND DELDOT.
- CONTRACTOR SHALL COORDINATE TRIMMING OF TREES, WITHIN BRECKNOCK PARK, WITH KENT COUNTY LEVY COURT PARKS AND RECREATION, MICHAEL S. RIGBY 302-744-2495. ALL COSTS ARE INCIDENTAL TO ITEM 201000.
- THE CONTRACTOR SHALL CONTACT JAMILA JONES, THE CHIEF OF SCHEDULING FOR DART FIRST STATE, 14 DAYS PRIOR TO THE START OF CONSTRUCTION AT 302-576-6006. ALL COSTS ARE INCIDENTAL TO THE CONTRACT.

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ADDENDUMS / REVISIONS	

NOT TO SCALE

**BRECKNOCK PARK
MULTI-USE TRAIL**

CONTRACT	ROAD NO.	K4 & K24
T201330011	DESIGNED BY: ASH	
COUNTY	CHECKED BY: JMH	
KENT		

NOTES

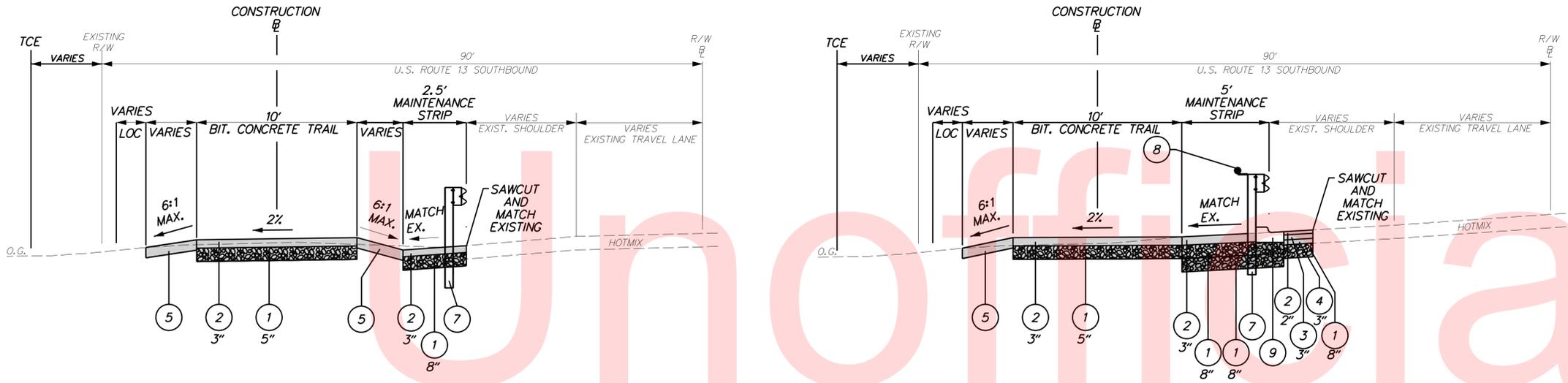
SHEET NO.	4
TOTAL SHTS.	36

LEGEND

- ① ITEM 301001 - GRADED AGGREGATE BASE COURSE, TYPE B
- ② ITEM 401002 - BIT. CONCRETE, SUPERPAVE TYPE C, 160 GYR. PG 64-22, (CARBONATE STONE)
- ③ ITEM 401011 - BIT. CONCRETE, SUPERPAVE TYPE B, 160 GYR. PG 64-22
- ④ ITEM 401020 - BIT. CONCRETE, SUPERPAVE BCBC, 160 GYR. PG 64-22
- ⑤ ITEM 908004 - TOPSOIL, 6"
ITEM 908014 - PERMANENT GRASS SEEDING, DRY GROUND
- ⑥ ITEM 760010 - PAVEMENT MILLING, BIT. CONCRETE PAVEMENT
- ⑦ ITEM 720021 - GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31
- ⑧ ITEM 626000 - STEEL PEDESTRIAN RAILING (DELDOT STANDARD B-13)
- ⑨ ITEM 701021 - I.P.C.C. CURB AND GUTTER, TYPE 3-4

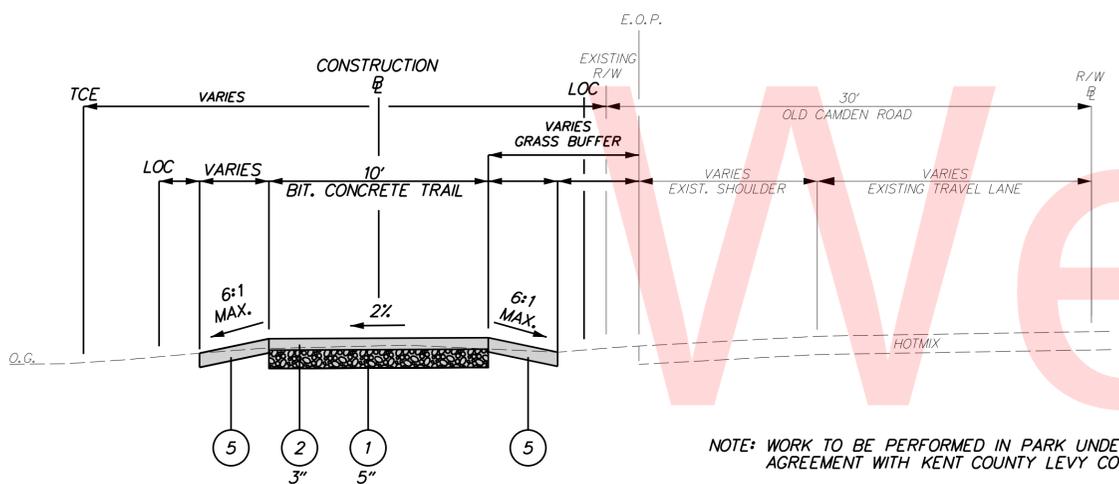
PR - POINT OF ROTATION
 PDGA - PROFILE DITCH GRADE APPLICATION
 PGA - PROFILE GRADE APPLICATION

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



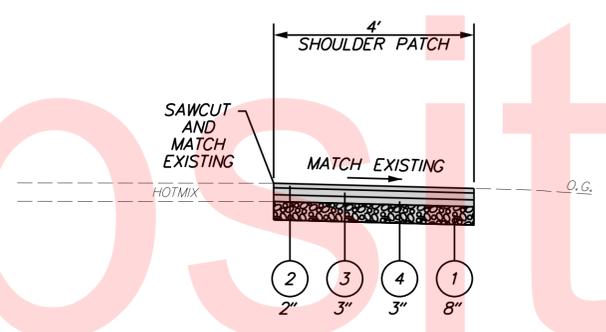
U.S. ROUTE 13 TRAIL WITH GUARDRAIL & GRASS BUFFER
 STATION 108+07 TO STATION 109+22

U.S. ROUTE 13 TRAIL WITH GUARDRAIL
 STATION 109+22 TO STATION 112+67
 (SEE BRIDGE PLANS FOR TYPICAL SECTION OVER BRIDGE)

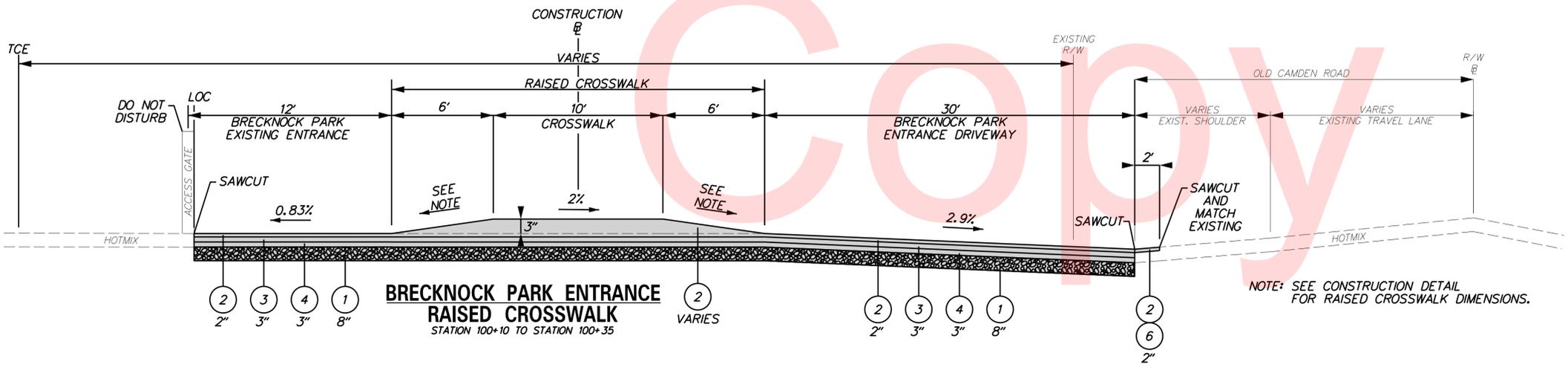


OLD CAMDEN ROAD TRAIL WITH GRASS BUFFER
 STATION 100+35 TO STATION 108+07

NOTE: WORK TO BE PERFORMED IN PARK UNDER AGREEMENT WITH KENT COUNTY LEVY COURT.



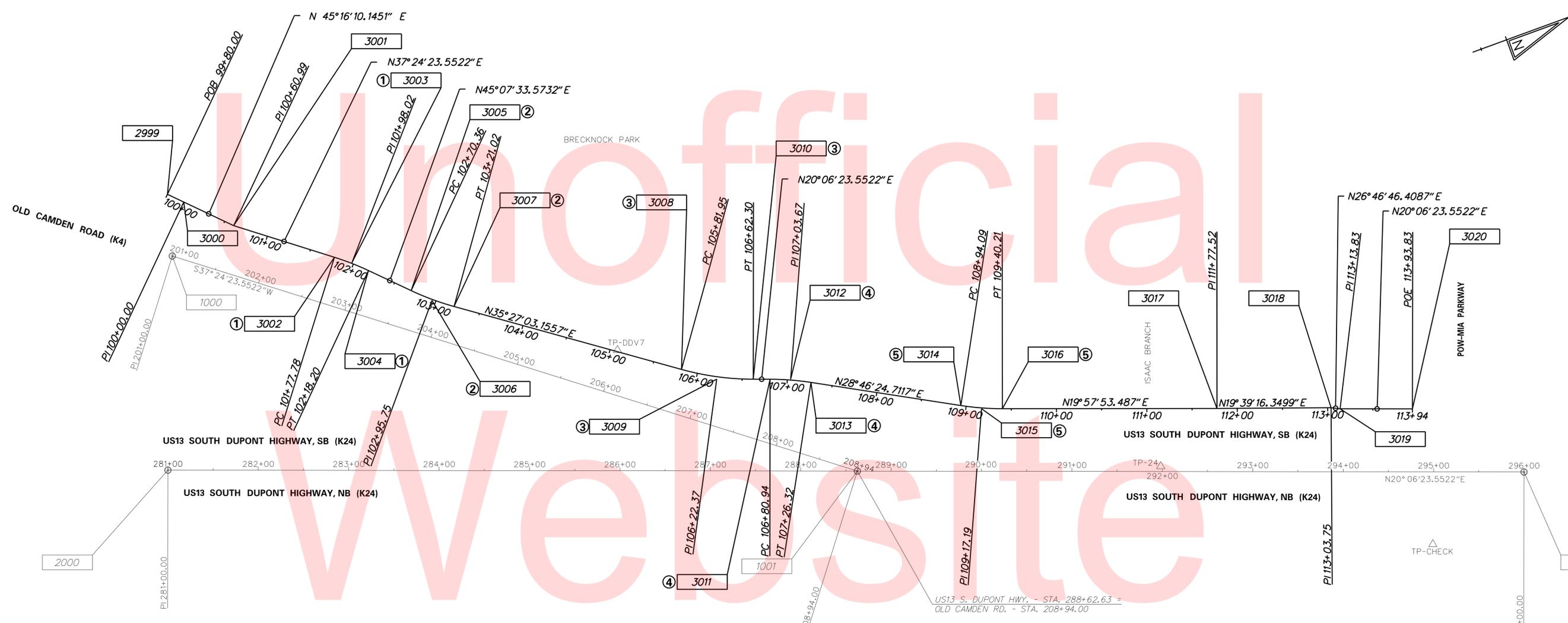
U.S. ROUTE 13 LANE SHIFT WIDENING PHASE 3 FULL-DEPTH PATCH
 STATION 110+47 TO STATION 112+55



BRECKNOCK PARK ENTRANCE RAISED CROSSWALK
 STATION 100+10 TO STATION 100+35

NOTE: SEE CONSTRUCTION DETAIL FOR RAISED CROSSWALK DIMENSIONS.

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CIRCULAR CURVE ①		
	STATION	NORTHING EASTING
PC (3002)	101+77.78	408523.7942 622790.9525
PI (3003)	101+98.02	408539.8718 622803.2477
CC ()		408341.5542 623029.2561
PT (3004)	102+18.20	408554.1522 622817.5911
Radius:	300.0000	
Delta:	7°43'10.0210" Right	
Degree of Curvature(Arc):	19°05'54.9354"	
Length:	40.4189	
Tangent:	20.2401	
Chord:	40.3884	
Middle Ordinate:	0.6804	
External:	0.6820	
Tangent Direction:	N 37°24'23.5522" E	
Radial Direction:	S 52°35'36.4478" E	
Chord Direction:	N 41°15'58.5627" E	
Radial Direction:	S 44°52'26.4268" E	
Tangent Direction:	N 45°07'33.5732" E	

CIRCULAR CURVE ②		
	STATION	NORTHING EASTING
PC (3005)	102+70.36	408590.9547 622854.5558
PI (3006)	102+95.75	408608.8685 622872.5485
CC ()		408803.5527 622642.8907
PT (3007)	103+21.02	408629.5513 622887.2746
Radius:	300.0000	
Delta:	9°40'30.4175" Left	
Degree of Curvature(Arc):	19°05'54.9354"	
Length:	50.6588	
Tangent:	25.3898	
Chord:	50.5986	
Middle Ordinate:	1.0687	
External:	1.0725	
Tangent Direction:	N 45°07'33.5732" E	
Radial Direction:	S 44°52'26.4268" E	
Chord Direction:	N 40°17'18.3644" E	
Radial Direction:	S 54°32'56.8443" E	
Tangent Direction:	N 35°27'03.1557" E	

CIRCULAR CURVE ③		
	STATION	NORTHING EASTING
PC (3008)	105+81.95	408842.1129 623038.6185
PI (3009)	106+22.37	408875.0340 623062.0584
CC ()		409016.1143 622794.2346
PT (3010)	106+62.30	408912.9842 623075.9511
Radius:	300.0000	
Delta:	15°20'39.6035" Left	
Degree of Curvature(Arc):	19°05'54.9354"	
Length:	80.3427	
Tangent:	40.4132	
Chord:	80.1029	
Middle Ordinate:	2.6855	
External:	2.7098	
Tangent Direction:	N 35°27'03.1557" E	
Radial Direction:	S 54°32'56.8443" E	
Chord Direction:	N 27°46'43.3540" E	
Radial Direction:	S 69°53'36.4478" E	
Tangent Direction:	N 20°06'23.5522" E	

CIRCULAR CURVE ④		
	STATION	NORTHING EASTING
PC (3011)	106+80.94	408930.4914 623082.3601
PI (3012)	107+03.67	408951.8394 623090.1751
CC ()		408827.3613 623364.0766
PT (3013)	107+26.32	408971.7660 623101.1179
Radius:	300.0000	
Delta:	8°40'01.1595" Right	
Degree of Curvature(Arc):	19°05'54.9354"	
Length:	45.3802	
Tangent:	22.7335	
Chord:	45.3370	
Middle Ordinate:	0.8577	
External:	0.8601	
Tangent Direction:	N 20°06'23.5522" E	
Radial Direction:	S 69°53'36.4478" E	
Chord Direction:	N 24°26'24.1320" E	
Radial Direction:	S 61°13'35.2883" E	
Tangent Direction:	N 28°46'24.7117" E	

CIRCULAR CURVE ⑤		
	STATION	NORTHING EASTING
PC (3014)	108+94.09	409118.8183 623181.8721
PI (3015)	109+17.19	409139.0719 623192.9945
CC ()		409263.2230 622918.9134
PT (3016)	109+40.21	409160.7899 623200.8841
Radius:	300.0000	
Delta:	8°48'31.2247" Left	
Degree of Curvature(Arc):	19°05'54.9354"	
Length:	46.1221	
Tangent:	23.1066	
Chord:	46.0767	
Middle Ordinate:	0.8859	
External:	0.8885	
Tangent Direction:	N 28°46'24.7117" E	
Radial Direction:	S 61°13'35.2883" E	
Chord Direction:	N 24°22'09.0994" E	
Radial Direction:	S 70°02'06.5130" E	
Tangent Direction:	N 19°57'53.4870" E	

CONSTRUCTION ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
2999	99+80.00	0.00	408374.0240	622662.4694
3000	100+00.00	0.00	408388.0995	622676.6778
3001	100+60.99	0.00	408431.0220	622720.0061
3017	111+77.52	0.00	409383.8389	623281.9124
3018	113+03.75	0.00	409502.7134	623324.3692
3019	113+13.83	0.00	409511.7103	623328.9099
3020	113+93.83	0.00	409586.8347	623356.4113

RIGHT OF WAY ALIGNMENT CONTROL				
POINT	STATION	OFFSET	NORTHING	EASTING
1000	201+00.00	0.00	408355.7786	622728.2358
1001	208+94.00	0.00	408986.4887	623210.5642
2000	281+00.00	0.00	408270.3417	622948.3989
2001	296+00.00	0.00	409678.9242	623464.0493

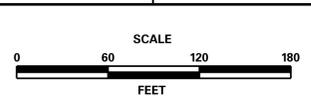
HORIZONTAL / VERTICAL CONTROL DATA					
POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION
TP-DDV7	206+00.98	-47.99	408782.8832	622994.4458	20.23
TP-24	291+92.33	-5.71'	409303.5643	623320.5536	15.48
TP-CHECK	294+93.47	79.85'	409556.9384	623504.4224	19.04

ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM (NAVD 1988) AND HORIZONTAL DATUM NORTH AMERICAN DATUM, NAD 83 (2007). STATION AND OFFSET ARE BASED ON DELDOT CONTRACT NO. 843, US13 CONSTRUCTION, CANTERBURY TO CAMDEN.

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ADDENDUMS / REVISIONS	

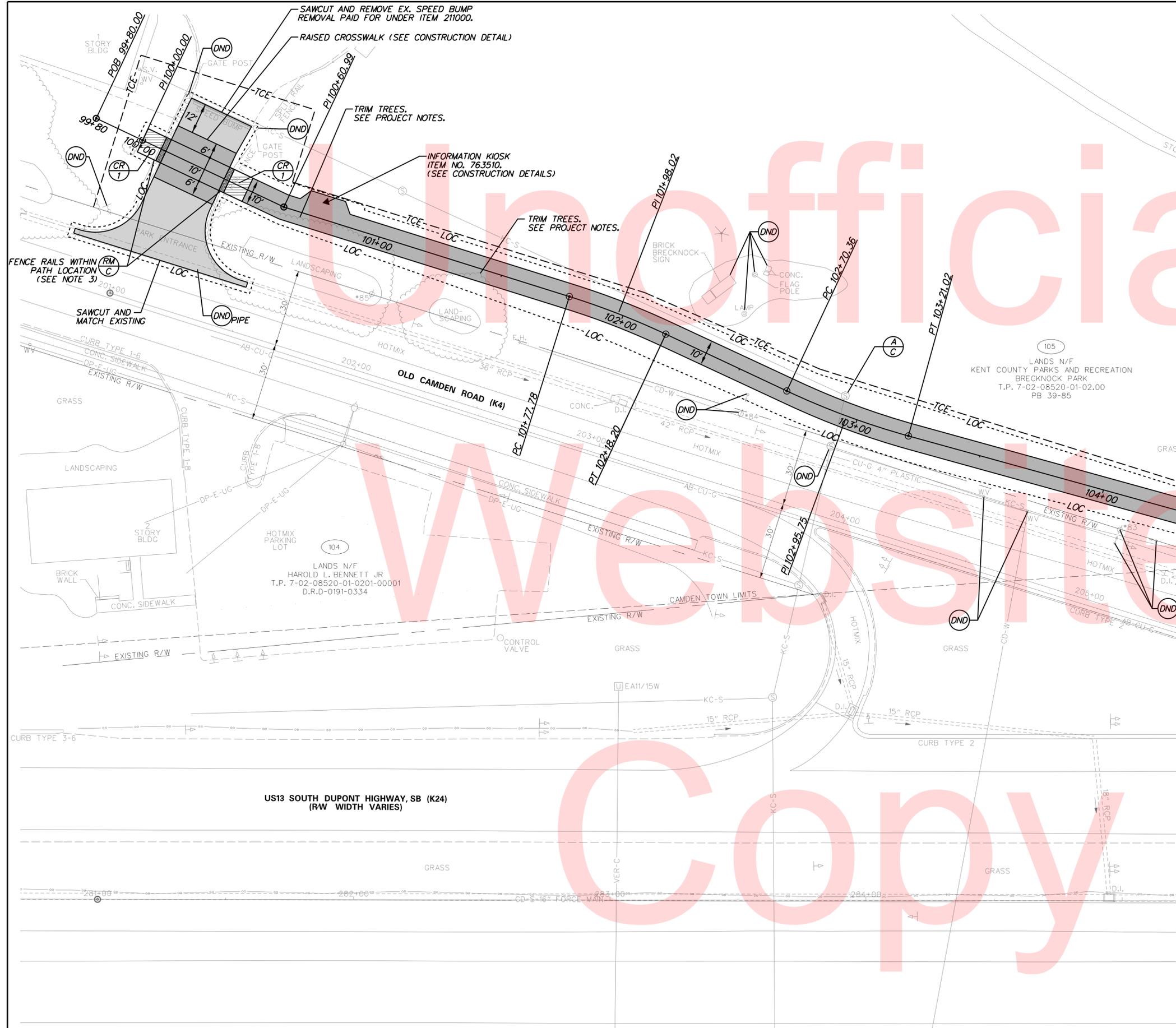


BRECKNOCK PARK MULTI-USE TRAIL

CONTRACT	ROAD NO.	K4 & K24
T201330011	DESIGNED BY:	ASH
COUNTY	CHECKED BY:	JMH
KENT		

HORIZONTAL AND VERTICAL CONTROL	
SHEET NO.	6
TOTAL SHTS.	36

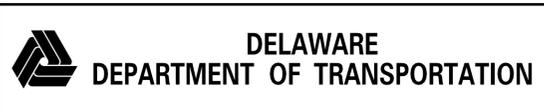
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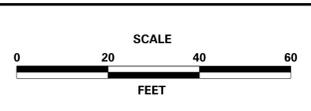
MATCHLINE STA. 104+50

NOTES:

1. ALL EXISTING UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED ON THE PLANS. PROPOSED CURB AND DRAINAGE SHALL BE INSTALLED TO AVOID CONFLICT WITH UTILITY POLES.
2. ALL TREES WITHIN LOC SHALL NOT BE DISTURBED, UNLESS NOTED IN THE PLANS.
3. CONTRACTOR SHALL REMOVE EXISTING FENCE RAILS, ON SPLIT RAIL FENCE, OUTSIDE OF THE PROPOSED PATHWAY LIMITS TO THE NEAREST POST OR AS DIRECTED BY THE ENGINEER IN THE FIELD. ALL COSTS PAID FOR UNDER ITEM 211000.
4. SEE PROJECT NOTE 21 FOR FUTURE TRAIL MAINTENANCE AND ACCESS.



ADDENDUMS / REVISIONS	



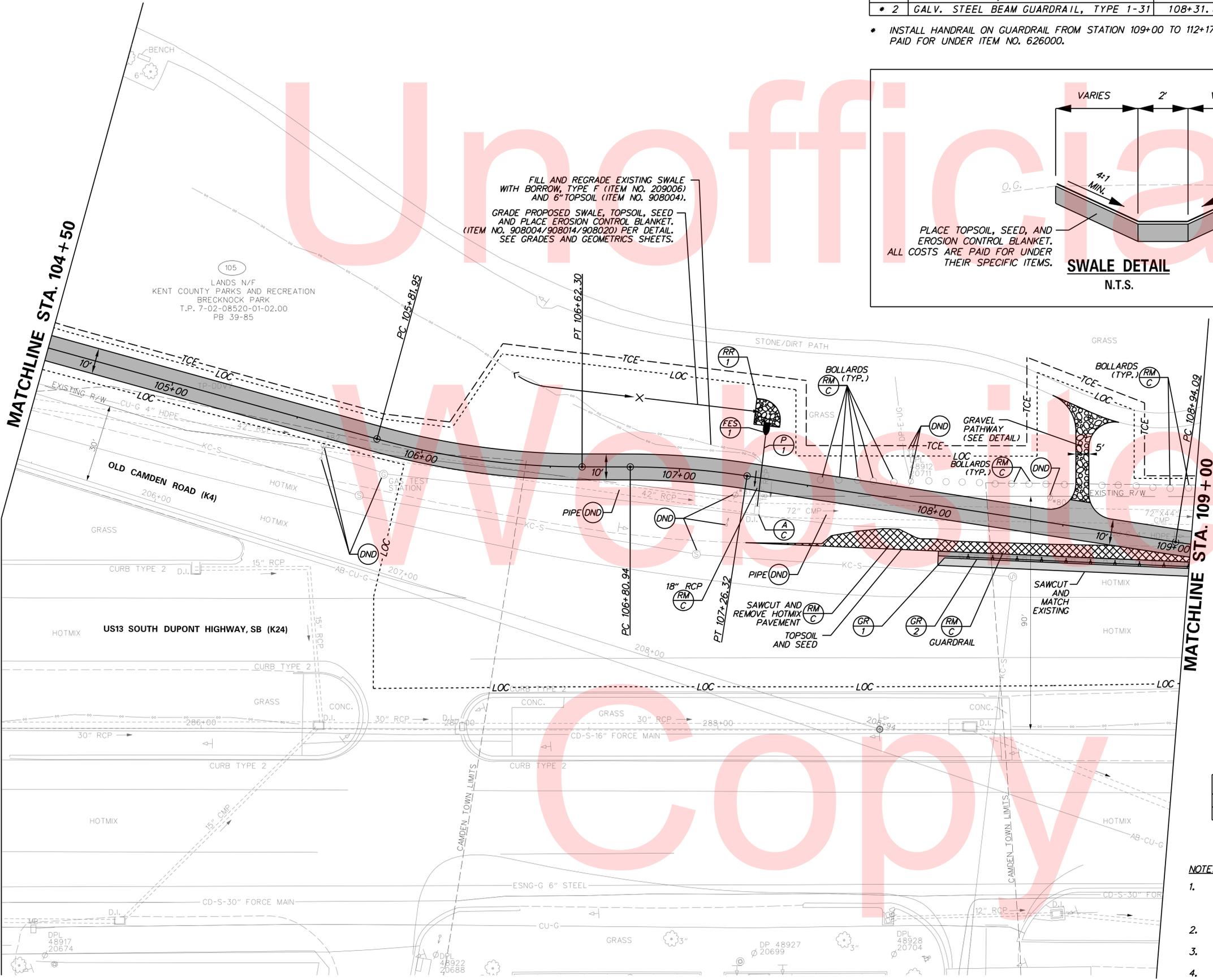
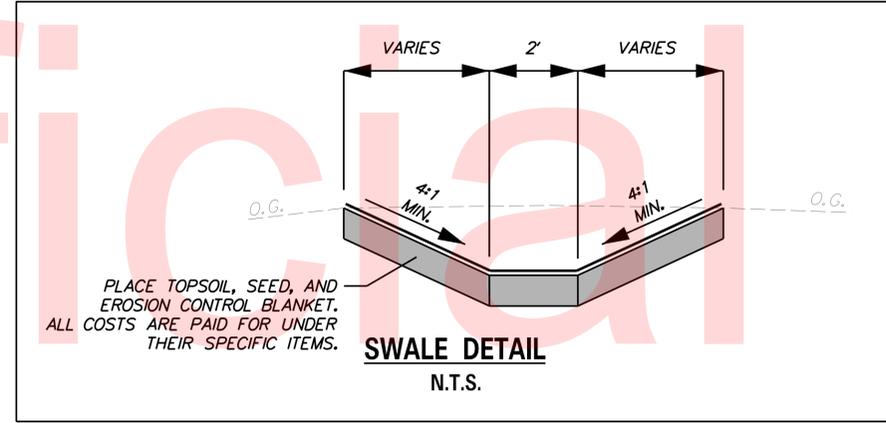
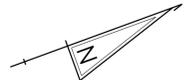
**BRECKNOCK PARK
 MULTI-USE TRAIL**

CONTRACT	ROAD NO.	K4 & K24
T201330011	DESIGNED BY:	ASH
COUNTY	CHECKED BY:	JMH
KENT		

CONSTRUCTION PLANS	SHEET NO.	7
	TOTAL SHTS.	36

GUARDRAIL SCHEDULE				
NO.	ITEM DESCRIPTION / TYPE	BEGIN STA.	OFFSET	LENGTH
1	END ANCHORAGE, TYPE 31	108+06.66	19.63'	1 EA.
* 2	GALV. STEEL BEAM GUARDRAIL, TYPE 1-31	108+31.82	16.87'	410.5'

* INSTALL HANDRAIL ON GUARDRAIL FROM STATION 109+00 TO 112+17.
PAID FOR UNDER ITEM NO. 626000.



FILL AND REGRADE EXISTING SWALE WITH BORROW, TYPE F (ITEM NO. 209006) AND 6" TOPSOIL (ITEM NO. 908004).
GRADE PROPOSED SWALE, TOPSOIL, SEED AND PLACE EROSION CONTROL BLANKET. (ITEM NO. 908004/908014/908020) PER DETAIL. SEE GRADES AND GEOMETRICS SHEETS.

RIPRAP SCHEDULE		
NO.	TYPE	AREA (SY)
1	R-4	10

FLARED END SECTION SCHEDULE			
NO.	SIZE / TYPE	SLOPE	SAFETY GRATE
1	18" RCP	0.025	YES

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
*1	18" RCP	IV	28'	0.025	13.38	12.68

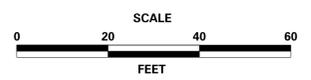
* COST TO CONNECT THE PROPOSED PIPE TO THE EXISTING DRAINAGE INLET IS INCIDENTAL TO THE PROPOSED PIPE INSTALLATION.

NOTES:

- ALL EXISTING UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED ON THE PLANS. PROPOSED CURB AND DRAINAGE SHALL BE INSTALLED TO AVOID CONFLICT WITH UTILITY POLES.
- ALL TREES WITHIN LOC SHALL NOT BE DISTURBED, UNLESS NOTED IN THE PLANS.
- SEE CONSTRUCTION DETAILS FOR GRAVEL PATHWAY.
- SEE PROJECT NOTE 21 FOR FUTURE TRAIL MAINTENANCE AND ACCESS.

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ADDENDUMS / REVISIONS



CONTRACT	T201330011	ROAD NO.	K4 & K24
COUNTY	KENT	DESIGNED BY:	ASH
		CHECKED BY:	JMH

SHEET NO.	8
TOTAL SHTS.	36

GUARDRAIL SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	BEG IN STA.	OFFSET	LENGTH
3	END TREATMENT ATTENUATOR, TYPE 1-31	112+17	8.22'	50'

* INSTALL HANDRAIL ON GUARDRAIL FROM STATION 109+00 TO 112+17. PAID FOR UNDER ITEM NO. 626000.

DRAINAGE INLET SCHEDULE

NO.	STATION	OFFSET	BOX SIZE	GRATE	T.G. EL.	INV. EL.
1	113+00	8.64'	34" x 24"	1	17.40	16.03

DRAINAGE PIPE SCHEDULE

NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
2	(3) - 6" PVC	-	37'	0.30%	16.03	*15.92

* CONTRACTOR SHALL VERIFY AND MATCH PROPOSED INVERT TO EXISTING GRADE

CURB SCHEDULE

NO.	ITEM DESCRIPTION / TYPE	LENGTH
1	PCC CURB AND GUTTER, TYPE 3-4	176 LF
2	PCC CURB AND GUTTER, TYPE 3-4	152 LF
3	PCC CURB AND GUTTER, TYPE 3-8	58 LF

RIPRAP SCHEDULE

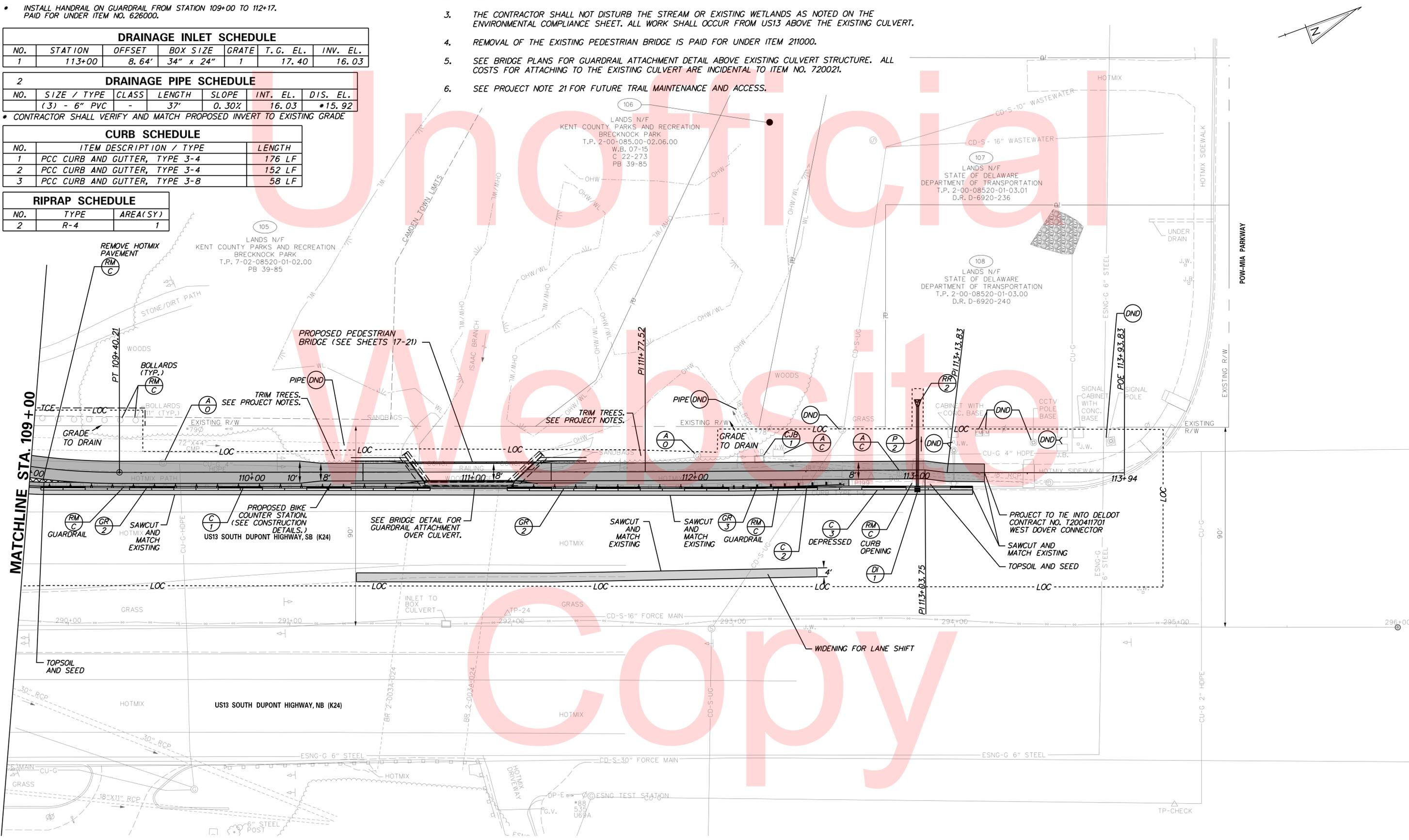
NO.	TYPE	AREA(SY)
2	R-4	1

CONVERT TO JUNCTION BOX SCHEDULE

NO.	STATION	OFFSET	T.C. EL.	INV. EL.
1	112+28.75	-4.00	16.68	MATCH EX.

NOTES:

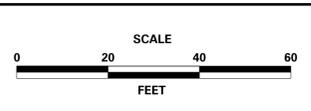
- ALL EXISTING UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED ON THE PLANS. PROPOSED CURB AND DRAINAGE SHALL BE INSTALLED TO AVOID CONFLICT WITH UTILITY POLES.
- ALL TREES WITHIN LOC SHALL NOT BE DISTURBED, UNLESS NOTED IN THE PLANS.
- THE CONTRACTOR SHALL NOT DISTURB THE STREAM OR EXISTING WETLANDS AS NOTED ON THE ENVIRONMENTAL COMPLIANCE SHEET. ALL WORK SHALL OCCUR FROM US13 ABOVE THE EXISTING CULVERT.
- REMOVAL OF THE EXISTING PEDESTRIAN BRIDGE IS PAID FOR UNDER ITEM 211000.
- SEE BRIDGE PLANS FOR GUARDRAIL ATTACHMENT DETAIL ABOVE EXISTING CULVERT STRUCTURE. ALL COSTS FOR ATTACHING TO THE EXISTING CULVERT ARE INCIDENTAL TO ITEM NO. 720021.
- SEE PROJECT NOTE 21 FOR FUTURE TRAIL MAINTENANCE AND ACCESS.



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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

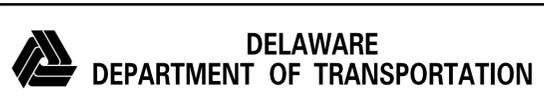
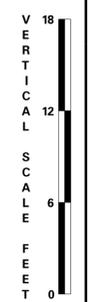
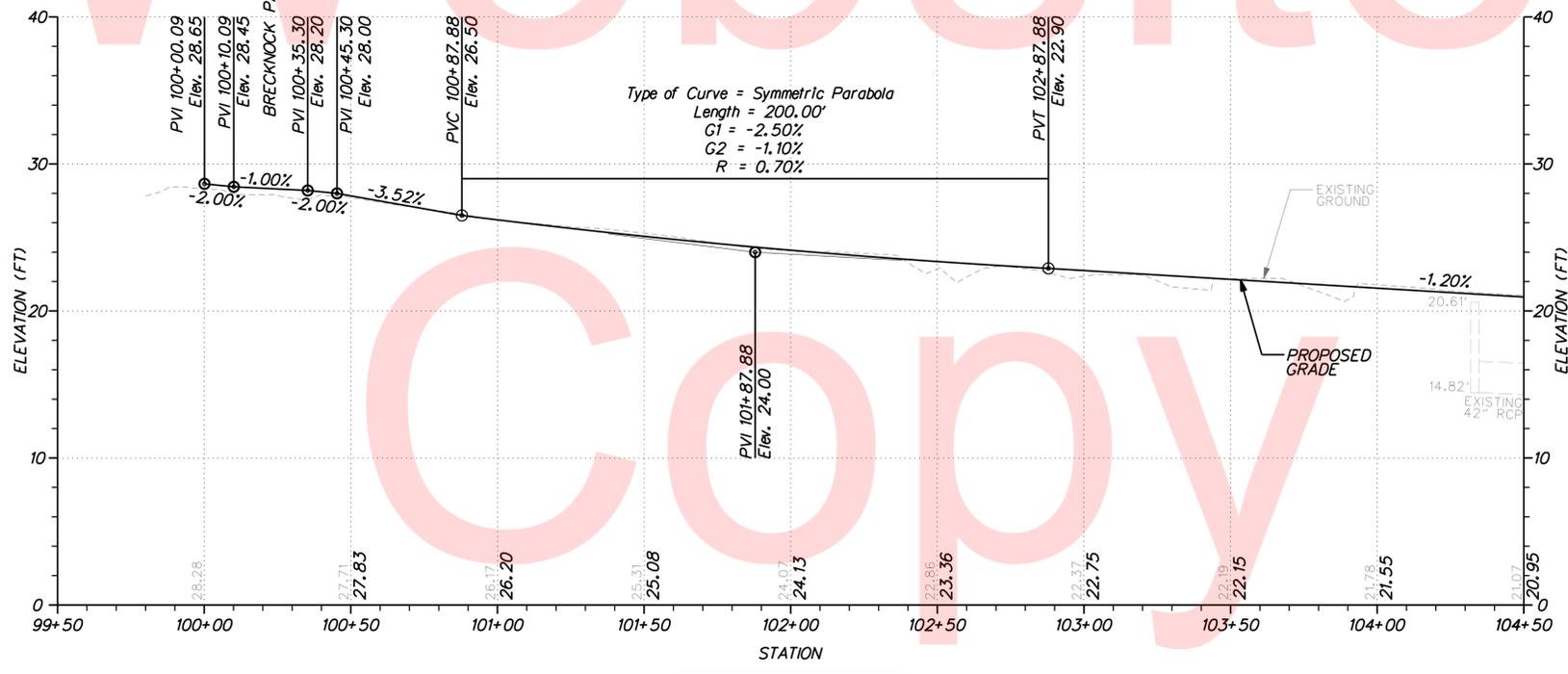
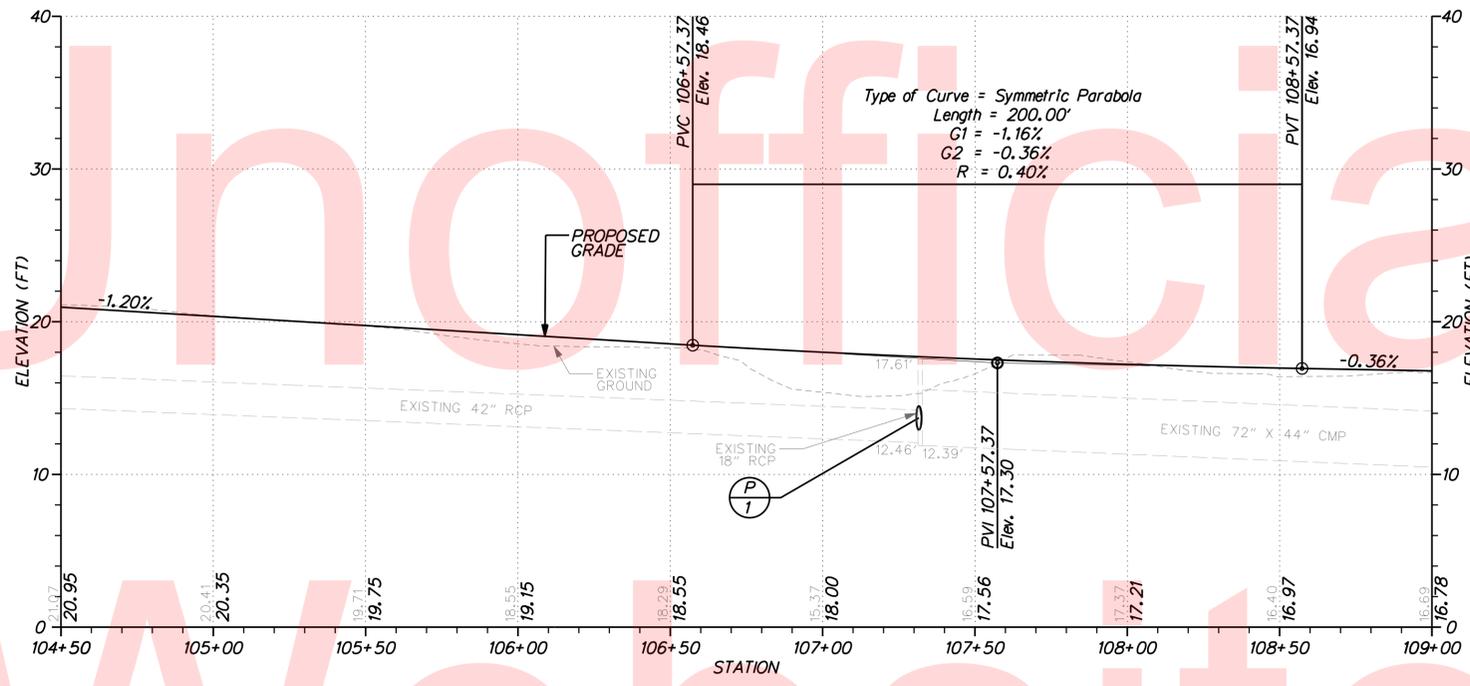


BRECKNOCK PARK MULTI-USE TRAIL

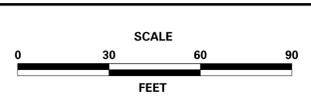
CONTRACT	T201330011	ROAD NO.	K4 & K24
COUNTY	KENT	DESIGNED BY:	ASH
		CHECKED BY:	JMH

CONSTRUCTION PLANS	SHEET NO.	9
	TOTAL SHTS.	36

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ADDENDUMS / REVISIONS	



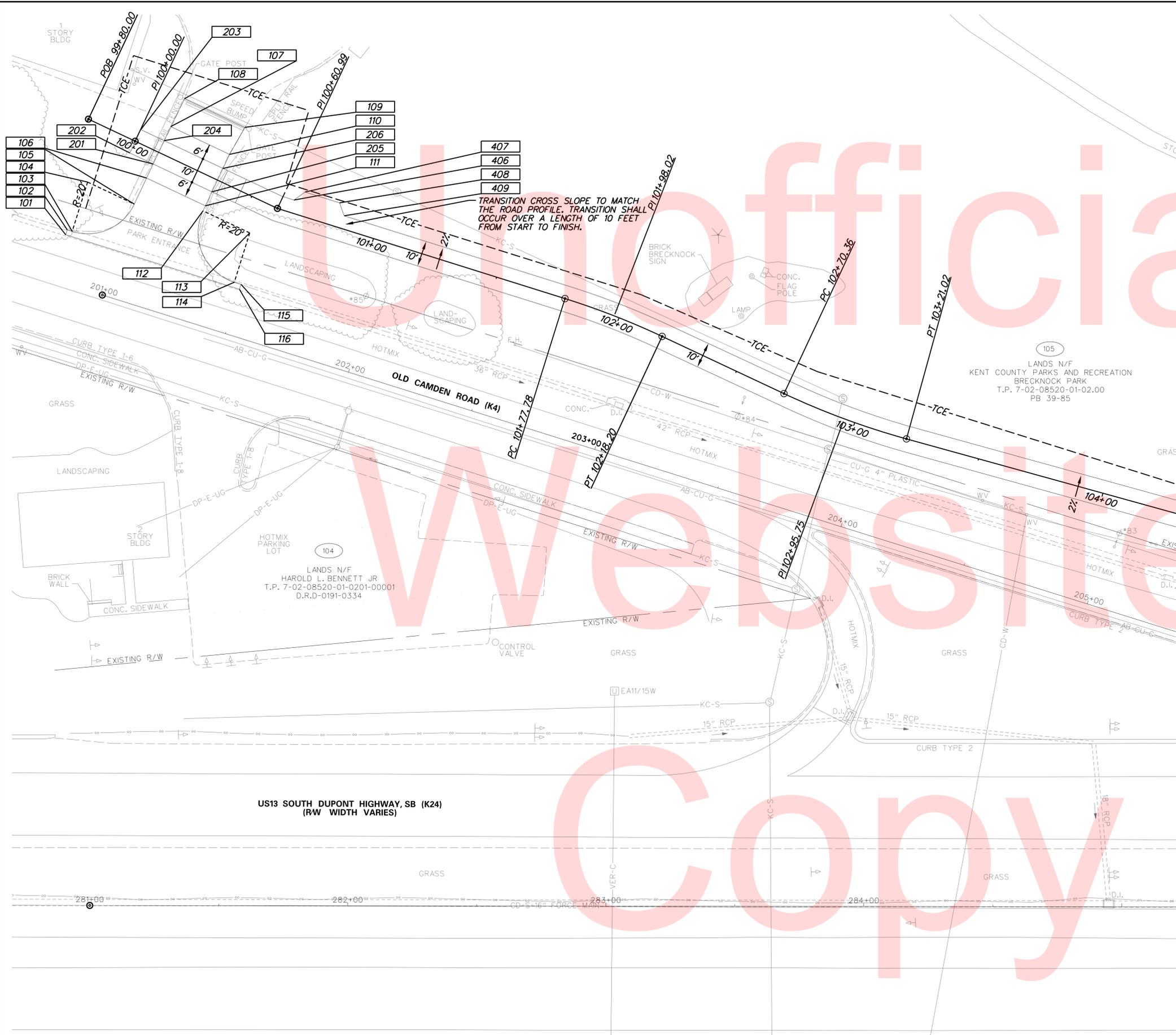
BRECKNOCK PARK MULTI-USE TRAIL

CONTRACT	T201330011	ROAD NO.	K4 & K24
COUNTY	KENT	DESIGNED BY:	ASH
		CHECKED BY:	JMH

PROFILE

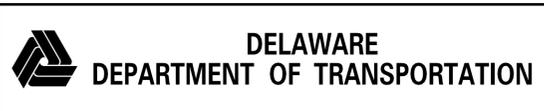
SHEET NO.	10
TOTAL SHTS.	36

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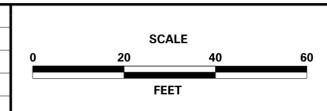


- NOTES:**
1. OFFSETS SHOWN IN THE GEOMETRIC TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION & R/W BASELINE.
 2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB & GUTTER IS GIVEN TO THE EDGE OF PAVEMENT.
 3. RADII ARE GIVEN TO THE EDGE OF PAVEMENT.
 4. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS AT CURB RETURNS ARE GIVEN AT 10 FOOT INTERVALS.
 5. THE CONTRACTOR SHALL STAKE ALL GRADES TO ENSURE POSITIVE DRAINAGE PRIOR TO CONSTRUCTION. ALL GRADES MUST BE APPROVED BY THE ENGINEER IN THE FIELD PRIOR TO CONSTRUCTION. ALL WORK REQUIRED FOR THE CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
 6. PROPOSED CURBS OR PAVEMENT THAT TIE INTO EXISTING PAVEMENT OR CURB SHALL MATCH THE EXISTING PAVEMENT OR CURB ELEVATIONS.
 7. SIDEWALK TO MATCH EXISTING GRADE OR AS DIRECTED IN THE FIELD BY THE ENGINEER. THE PROPOSED SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% PER ADA REGULATIONS. THE SIDEWALK SHALL BE LAID OUT FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. ALL COSTS ARE INCIDENTAL TO THE PROJECT.
 8. SEE THE CONSTRUCTION DETAILS FOR ADDITIONAL GRADES AND GEOMETRICS AT THE CURB RAMPS.

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
101	99+91.13	44.22'	408350.4442	622801.4962
102	99+90.86	42.24'	408351.6592	622699.9075
103	99+92.83	41.96'	408353.2415	622701.1177
104	99+90.09	22.15'	408365.3909	622685.2308
105	100+10.09	22.15'	408379.4663	622699.4392
106	100+10.09	11.00'	408387.3890	622691.5907
107	100+10.09	-11.00'	408403.0184	622676.1077
108	100+10.31	-23.00'	408411.6954	622667.8158
109	100+36.25	-23.00'	408429.9503	622686.2432
110	100+35.31	-11.00'	408420.7671	622694.0242
111	100+35.31	11.00'	408405.1378	622709.5072
112	100+35.31	13.15'	408403.6138	622711.0169
113	100+55.31	13.15'	408417.6893	622725.2254
114	100+58.05	32.96'	408405.5399	622741.1123
115	100+60.73	32.59'	408407.6905	622742.7569
116	100+60.99	34.57'	408406.4756	622744.3456
201	100+10.00	5.00'	408391.6516	622687.3681
202	100+00.00	5.00'	408384.6139	622680.2638
203	100+00.00	-5.00'	408391.7181	622673.2261
204	100+10.00	-5.00'	408398.7558	622680.3304
205	100+35.31	5.00'	408409.4003	622705.2846
206	100+35.31	-5.00'	408416.5046	622698.2468
406	100+66.13	-5.00'	408438.1463	622719.1598
407	100+69.33	-9.25'	408443.2659	622717.7185
408	100+83.34	-9.25'	408454.3985	622726.2320
409	100+86.53	-5.00'	408454.3487	622731.5504



ADDENDUMS / REVISIONS	

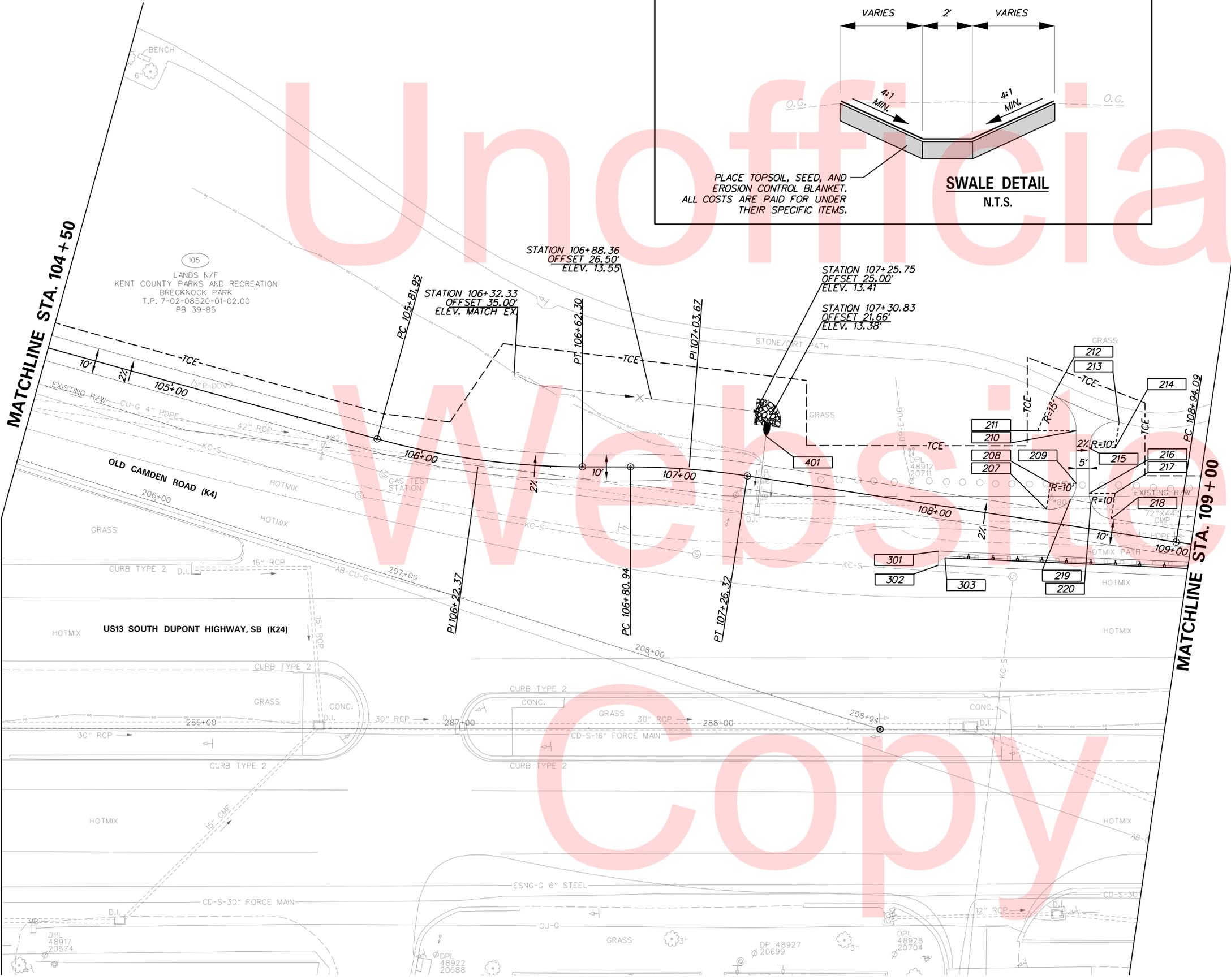
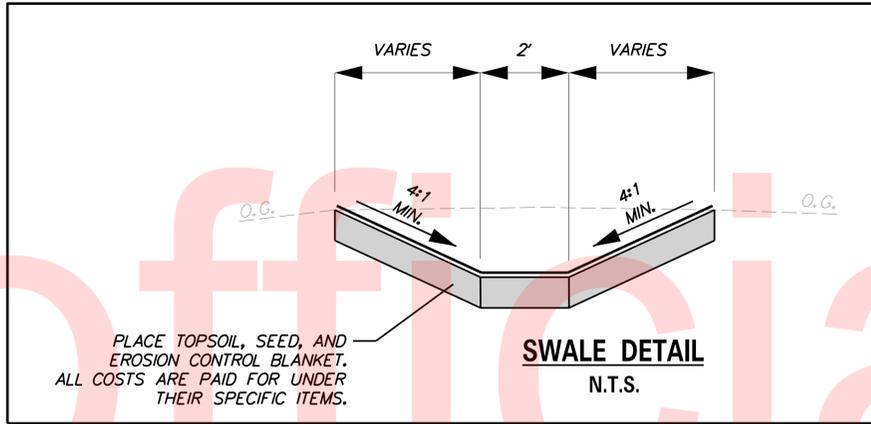
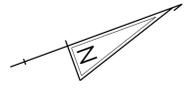


**BRECKNOCK PARK
 MULTI-USE TRAIL**

CONTRACT	T201330011
COUNTY	KENT
ROAD NO.	K4 & K24
DESIGNED BY:	ASH
CHECKED BY:	JMH

**GRADES AND
 GEOMETRICS**

SHEET NO.	12
TOTAL SHTS.	36



NOTES:

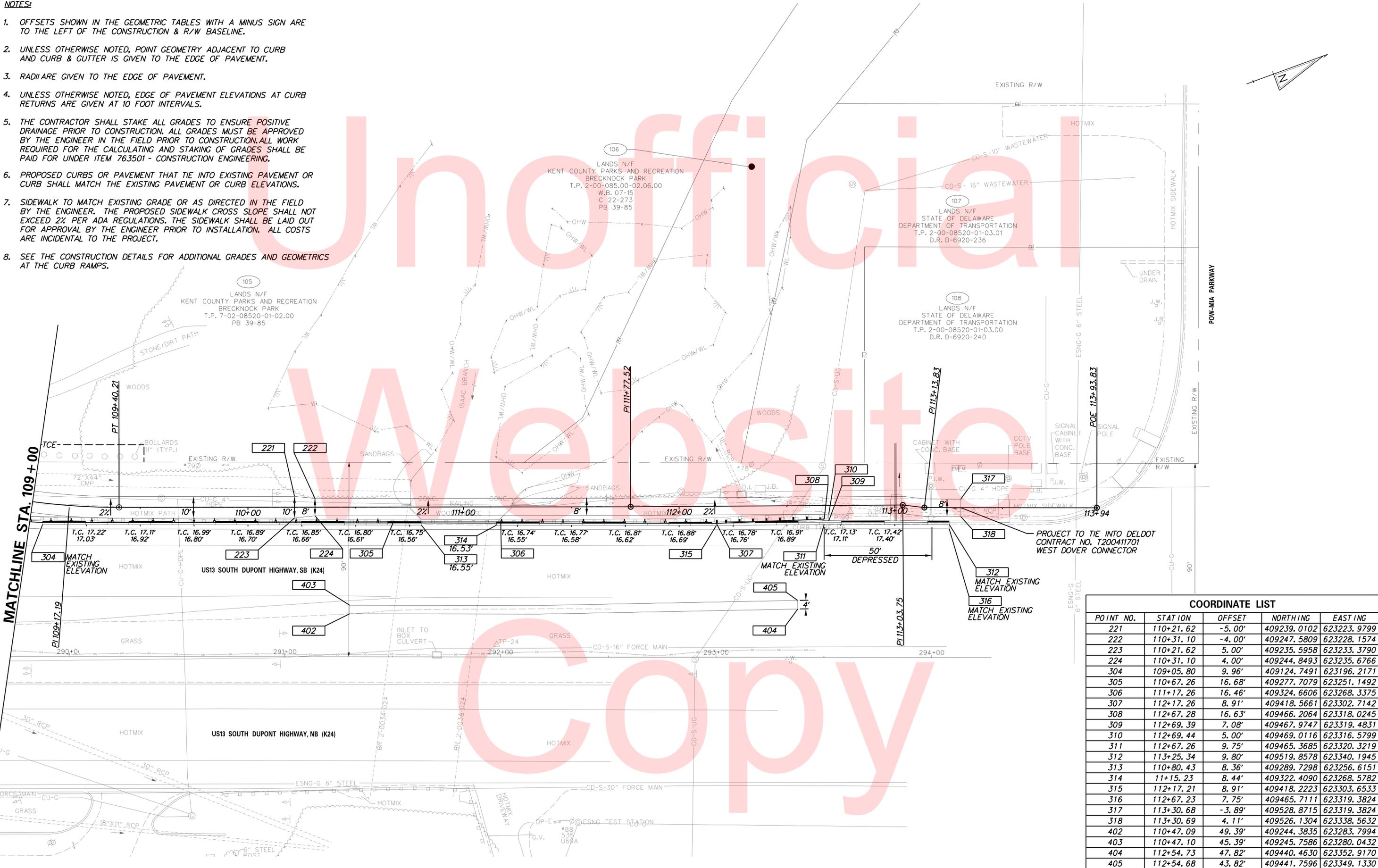
1. OFFSETS SHOWN IN THE GEOMETRIC TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION & R/W BASELINE.
2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND CURB & GUTTER IS GIVEN TO THE EDGE OF PAVEMENT.
3. RADI ARE GIVEN TO THE EDGE OF PAVEMENT.
4. UNLESS OTHERWISE NOTED, EDGE OF PAVEMENT ELEVATIONS AT CURB RETURNS ARE GIVEN AT 10 FOOT INTERVALS.
5. THE CONTRACTOR SHALL STAKE ALL GRADES TO ENSURE POSITIVE DRAINAGE PRIOR TO CONSTRUCTION. ALL GRADES MUST BE APPROVED BY THE ENGINEER IN THE FIELD PRIOR TO CONSTRUCTION. ALL WORK REQUIRED FOR THE CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
6. PROPOSED CURBS OR PAVEMENT THAT TIE INTO EXISTING PAVEMENT OR CURB SHALL MATCH THE EXISTING PAVEMENT OR CURB ELEVATIONS.
7. SIDEWALK TO MATCH EXISTING GRADE OR AS DIRECTED IN THE FIELD BY THE ENGINEER. THE PROPOSED SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% PER ADA REGULATIONS. THE SIDEWALK SHALL BE LAID OUT FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. ALL COSTS ARE INCIDENTAL TO THE PROJECT.
8. SEE THE CONSTRUCTION DETAILS FOR ADDITIONAL GRADES AND GEOMETRICS AT THE CURB RAMPS.

COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
207	108+42.61	-5.00'	409076.1063	623152.7124
208	108+42.61	-15.00'	409080.9198	623143.9471
209	108+52.50	-16.52'	409090.3150	623147.3720
210	108+49.42	-36.53'	409097.2502	623128.3475
211	108+34.59	-34.25'	409083.1574	623123.2101
212	108+38.47	-48.75'	409093.5272	623112.3718
213	108+65.31	-42.32'	409113.9631	623130.9243
214	108+65.24	-32.32'	409109.0926	623139.6581
215	108+55.36	-30.80'	409099.6974	623136.2331
216	108+58.02	-13.48'	409093.6955	623152.6974
217	108+67.91	-15.00'	409103.0907	623156.1223
218	108+67.91	-5.00'	409098.2772	623164.8876
219	108+51.27	-10.00'	409086.1040	623152.4983
220	108+59.25	-10.00'	409093.0930	623156.3364
301	108+03.90	17.41'	409031.3838	623153.7223
302	108+04.50	22.88'	409029.2774	623158.8030
303	108+06.66	19.63'	409032.7357	623156.9892
401	107+31.02	-16.33'	408983.7453	623089.0704

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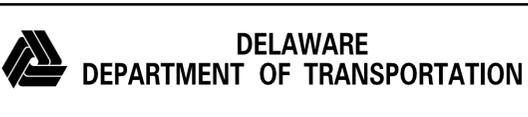
NOTES:

1. OFFSETS SHOWN IN THE GEOMETRIC TABLES WITH A MINUS SIGN ARE TO THE LEFT OF THE CONSTRUCTION & R/W BASELINE.
2. UNLESS OTHERWISE NOTED, POINT GEOMETRY ADJACENT TO CURB AND GUTTER IS GIVEN TO THE EDGE OF PAVEMENT.
3. RADII ARE GIVEN TO THE EDGE OF PAVEMENT.
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5. THE CONTRACTOR SHALL STAKE ALL GRADES TO ENSURE POSITIVE DRAINAGE PRIOR TO CONSTRUCTION. ALL GRADES MUST BE APPROVED BY THE ENGINEER IN THE FIELD PRIOR TO CONSTRUCTION. ALL WORK REQUIRED FOR THE CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM 763501 - CONSTRUCTION ENGINEERING.
6. PROPOSED CURBS OR PAVEMENT THAT TIE INTO EXISTING PAVEMENT OR CURB SHALL MATCH THE EXISTING PAVEMENT OR CURB ELEVATIONS.
7. SIDEWALK TO MATCH EXISTING GRADE OR AS DIRECTED IN THE FIELD BY THE ENGINEER, THE PROPOSED SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% PER ADA REGULATIONS. THE SIDEWALK SHALL BE LAID OUT FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. ALL COSTS ARE INCIDENTAL TO THE PROJECT.
8. SEE THE CONSTRUCTION DETAILS FOR ADDITIONAL GRADES AND GEOMETRICS AT THE CURB RAMPS.

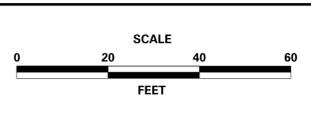


COORDINATE LIST				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
221	110+21.62	-5.00'	409239.0102	623223.9799
222	110+31.10	-4.00'	409247.5809	623228.1574
223	110+21.62	5.00'	409235.5958	623233.3790
224	110+31.10	4.00'	409244.8493	623235.6766
304	109+05.80	9.96'	409124.7491	623196.2171
305	110+67.26	16.68'	409277.7079	623251.1492
306	111+17.26	16.46'	409324.6606	623268.3375
307	112+17.26	8.91'	409418.5661	623302.7142
308	112+67.28	16.63'	409466.2064	623318.0245
309	112+69.39	7.08'	409467.9747	623319.4831
310	112+69.44	5.00'	409469.0116	623316.5799
311	112+67.26	9.75'	409465.3685	623320.3219
312	113+25.34	9.80'	409519.8578	623340.1945
313	110+80.43	8.36'	409289.7298	623256.6151
314	11+15.23	8.44'	409322.4090	623268.5782
315	112+17.21	8.91'	409418.2223	623303.6533
316	112+67.23	7.75'	409465.7111	623319.3824
317	113+30.68	-3.89'	409528.8715	623319.3824
318	113+30.69	4.11'	409526.1304	623338.5632
402	110+47.09	49.39'	409244.3835	623283.7994
403	110+47.10	45.39'	409245.7586	623280.0432
404	112+54.73	47.82'	409440.4630	623352.9170
405	112+54.68	43.82'	409441.7596	623349.1330

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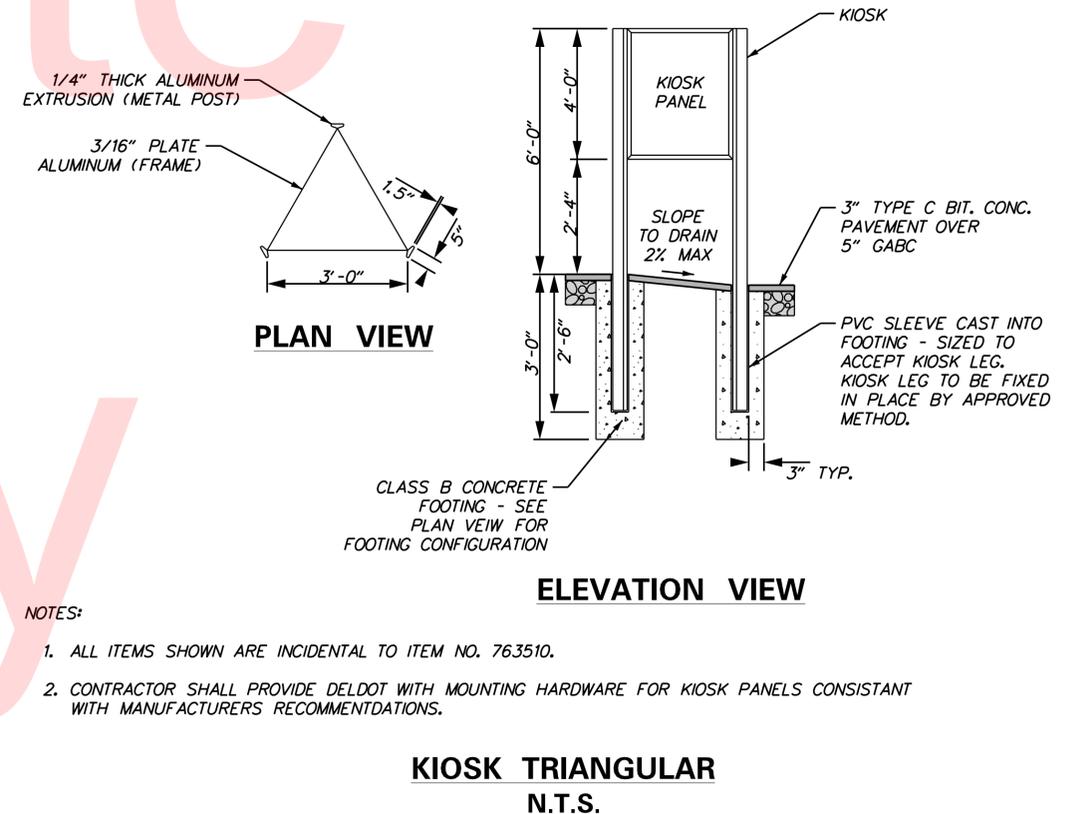
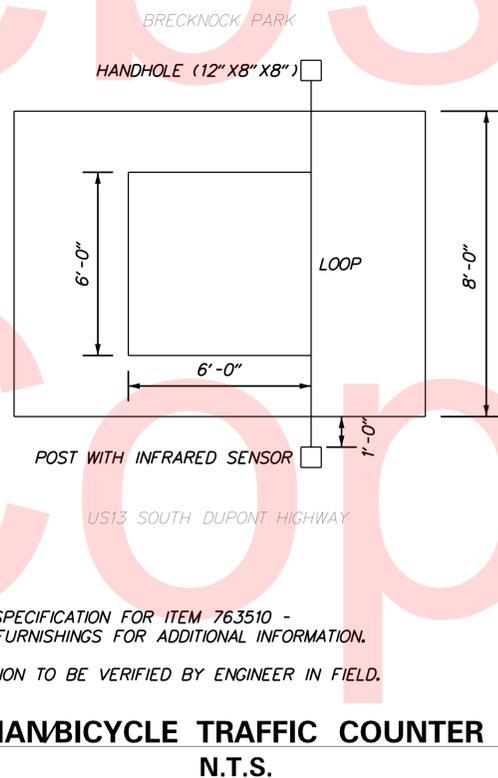
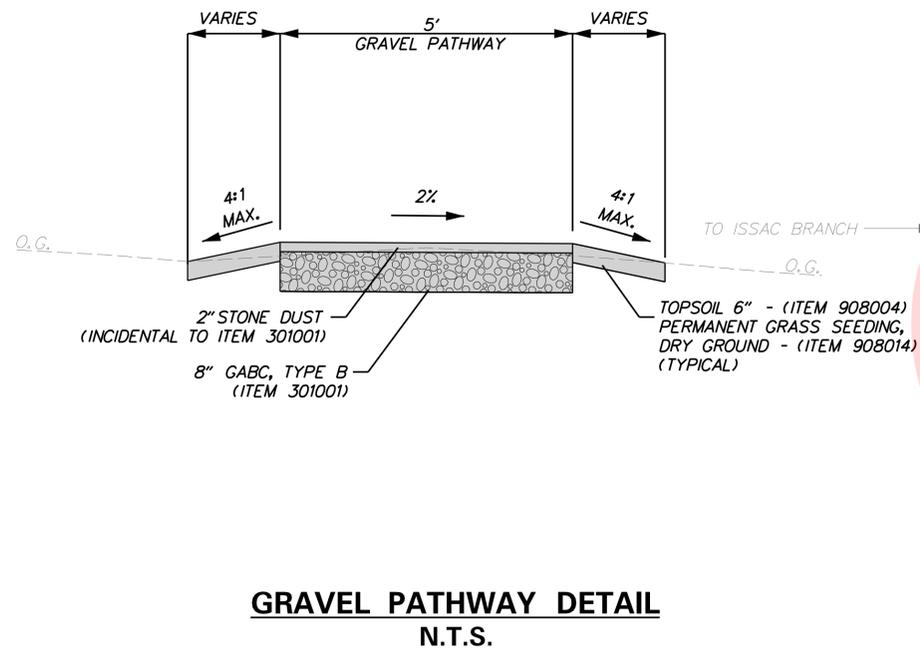
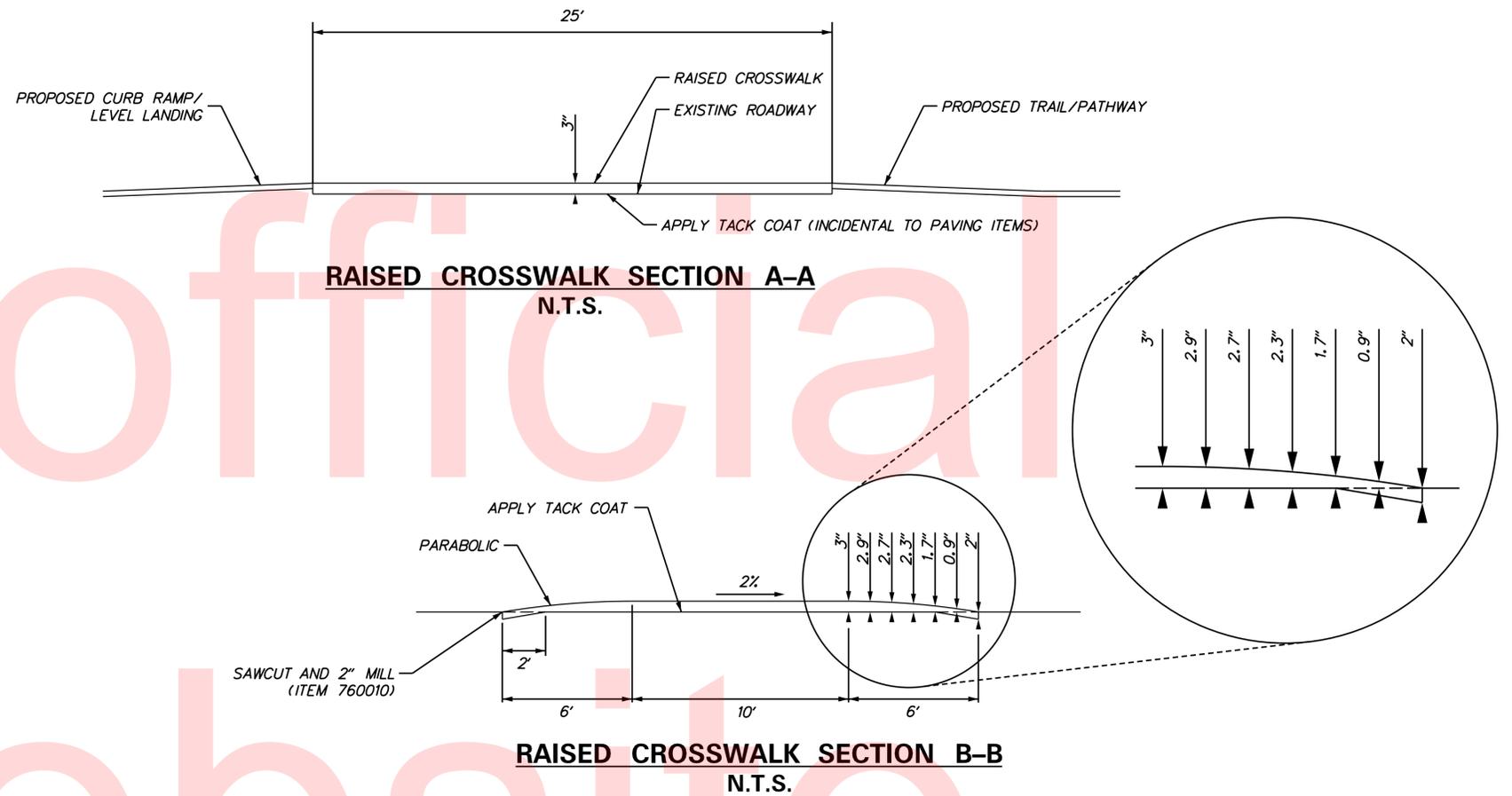
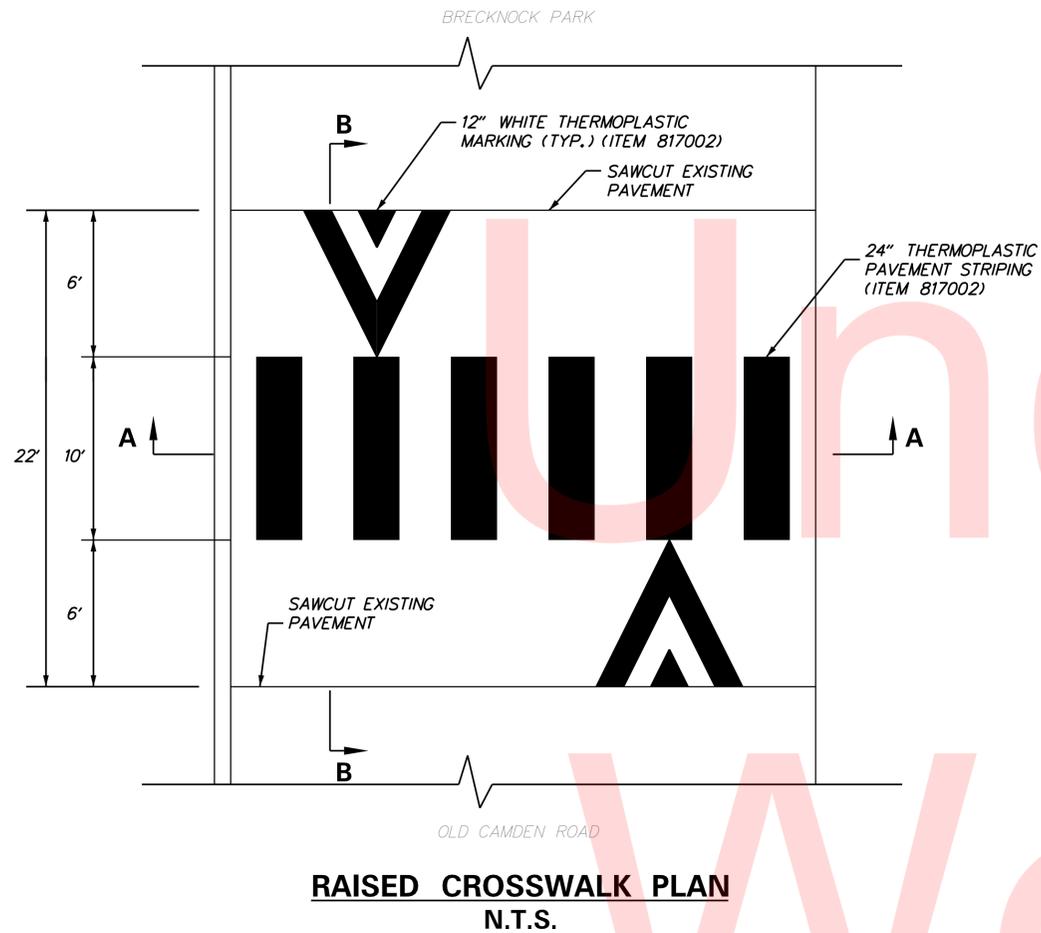
ADDENDUMS / REVISIONS	



BRECKNOCK PARK MULTI-USE TRAIL

CONTRACT	T201330011	ROAD NO.	K4 & K24
COUNTY	KENT	DESIGNED BY:	ASH
		CHECKED BY:	JMH

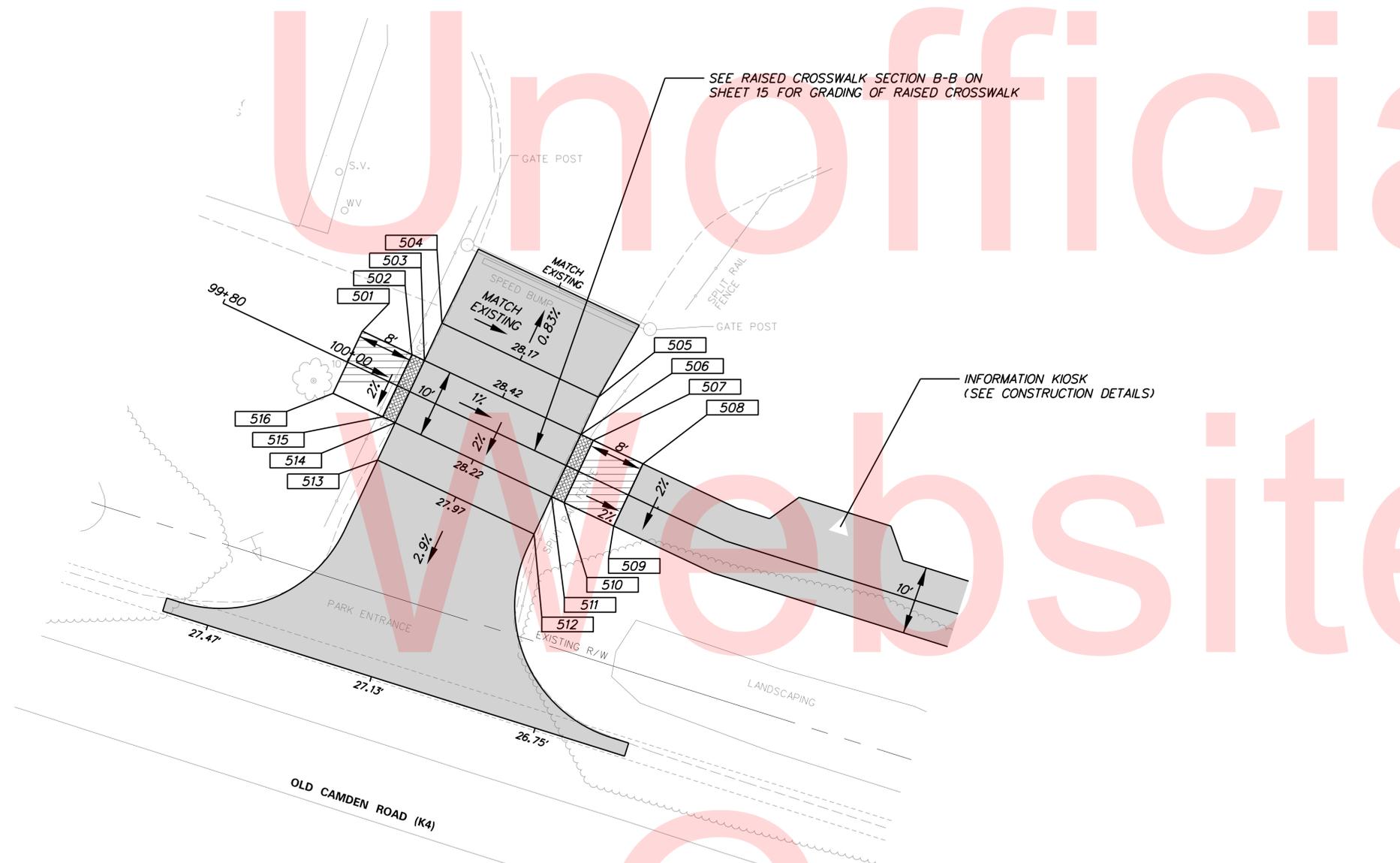
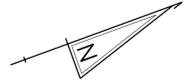
GRADES AND GEOMETRICS		SHEET NO.
		14
		TOTAL SHTS.
		36



- NOTES:
- SEE SPECIFICATION FOR ITEM 763510 - SITE FURNISHINGS FOR ADDITIONAL INFORMATION.
 - LOCATION TO BE VERIFIED BY ENGINEER IN FIELD.

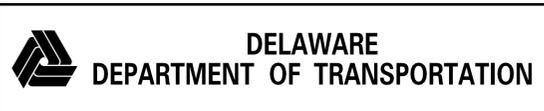
- NOTES:
- ALL ITEMS SHOWN ARE INCIDENTAL TO ITEM NO. 763510.
 - CONTRACTOR SHALL PROVIDE DELDOT WITH MOUNTING HARDWARE FOR KIOSK PANELS CONSISTANT WITH MANUFACTURERS RECOMMENDATIONS.

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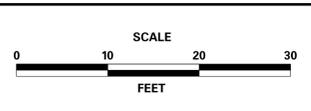


COORDINATE LIST					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEVATION
501	100+00.09	-5.00'	408391.7181	622673.2261	28.75
502	100+08.09	-5.00'	408397.3483	622678.9095	28.59
503	100+10.09	-5.00'	408398.7558	622680.3304	28.55
504	100+10.09	-11.00'	408403.0184	622676.1077	28.30
505	100+35.31	-11.00'	408420.7671	622694.0242	28.05
506	100+35.31	-5.00'	408416.5046	622698.2468	28.30
507	100+37.31	-5.00'	408417.9121	622699.6677	28.26
508	100+45.31	-5.00'	408423.5423	622705.3511	28.10
509	100+45.31	5.00'	408416.4380	622712.3888	27.90
510	100+37.31	5.00'	408410.8079	622706.7054	28.06
511	100+35.31	5.00'	408409.4003	622705.2846	28.10
512	100+35.31	11.00'	408405.1378	622709.5072	27.85
513	100+10.09	11.00'	408387.3890	622691.5907	28.10
514	100+10.09	5.00'	408391.6516	622687.3681	28.35
515	100+08.09	5.00'	408390.2440	622685.9472	28.39
516	100+00.09	5.00'	408384.6139	622680.2638	28.55

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ADDENDUMS / REVISIONS	



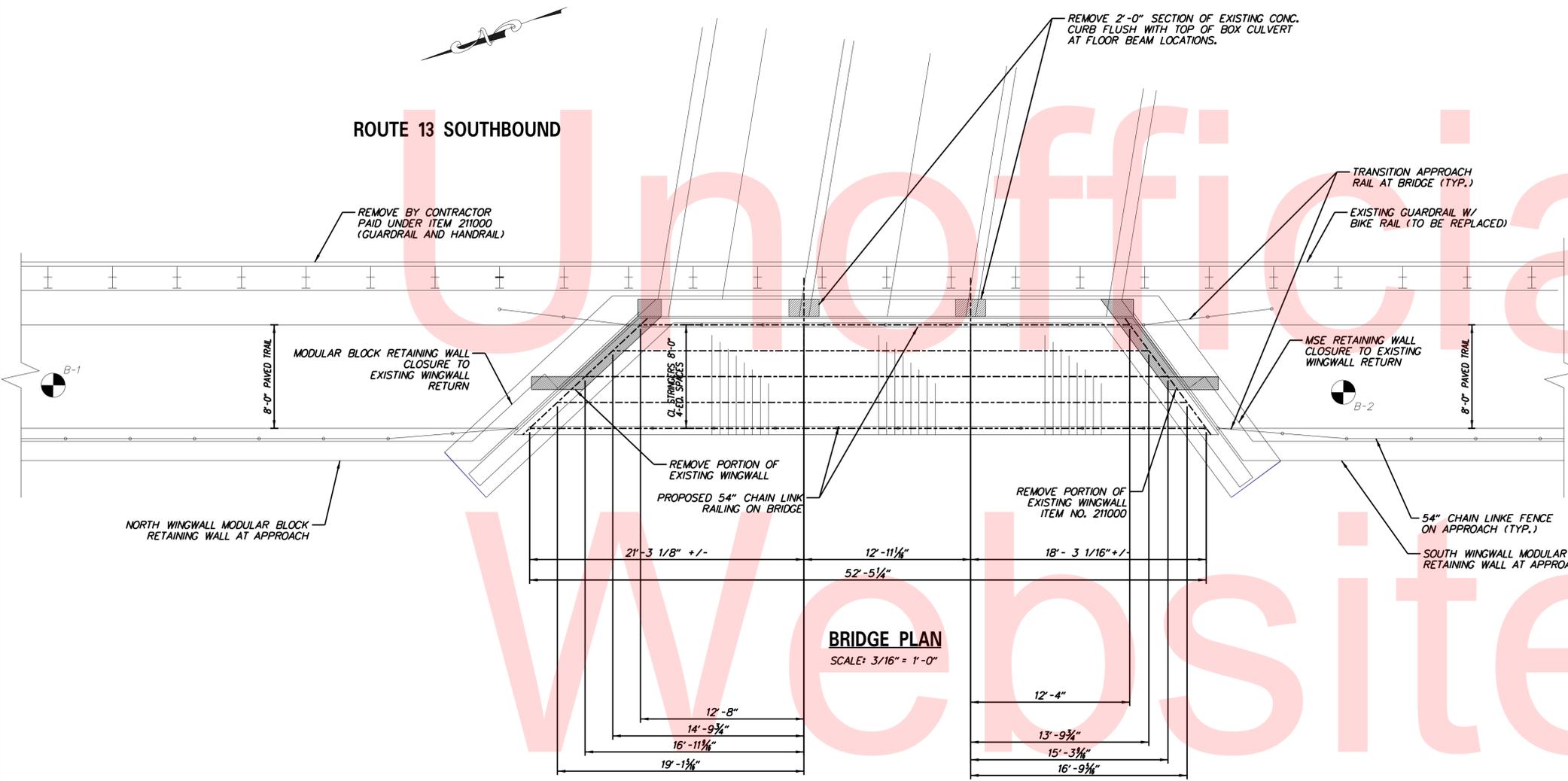
**BRECKNOCK PARK
MULTI-USE TRAIL**

CONTRACT	ROAD NO.	K4 & K24
T201330011	DESIGNED BY:	ASH
COUNTY	CHECKED BY:	JMH
KENT		

CONSTRUCTION DETAILS

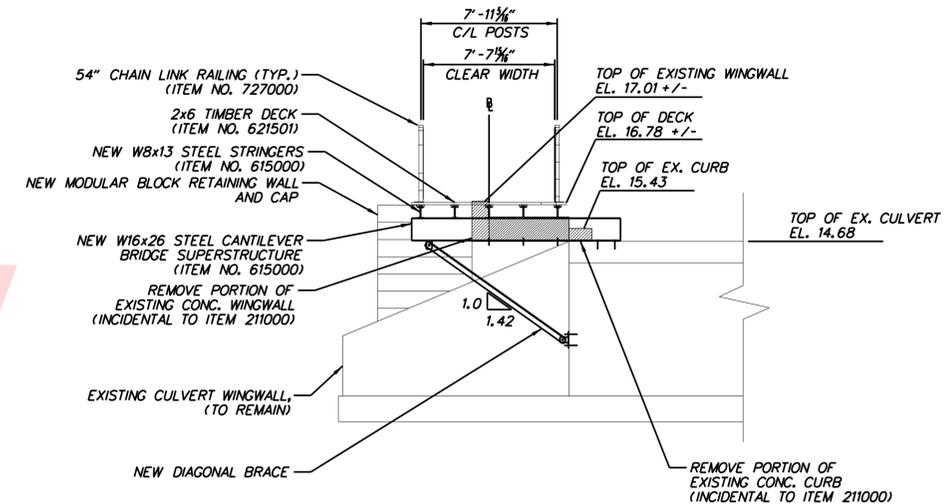
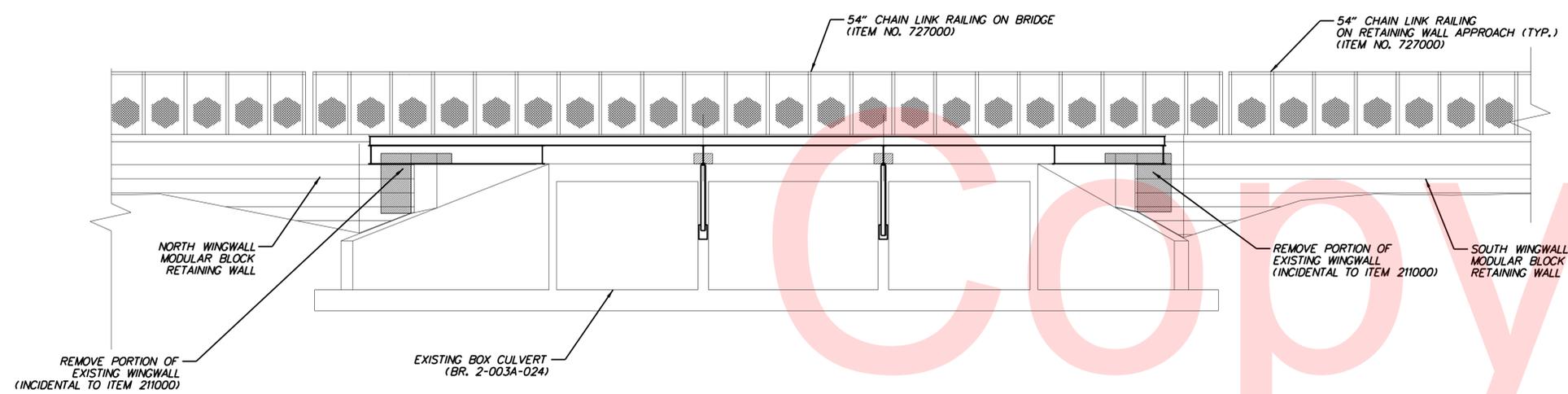
SHEET NO.	16
TOTAL SHTS.	36

ROUTE 13 SOUTHBOUND



BRIDGE NOTES:

- REMOVAL OF STRUCTURES BRIDGE 2-003A-024: EXISTING STEEL AND TIMBER PEDESTRIAN BRIDGE SHALL BE REMOVED IN ITS ENTIRETY. MATERIAL TO BECOME THE PROPERTY OF THE CONTRACTOR. ALL COSTS FOR REMOVAL INCIDENTAL TO ITEM 211000.
PORTIONS OF THE EXISTING CONCRETE CULVERT HEADWALL AND WINGWALLS SHALL BE REMOVED AS SHOWN ON THESE PLANS. CONCRETE SHALL BE SAWCUT TO PRODUCE NEAT VERTICAL AND HORIZONTAL EDGES, AND CAREFULLY REMOVED FLUSH WITH THE TOP OF THE CULVERT OR HEADWALL TO REMAIN. ALL EXPOSED REBAR SHALL BE CUT FLUSH AND TOUCHED UP WITH AN EPOXY PAINT. ALL COSTS INCIDENTAL TO ITEM 211000.
- DESIGN: LIVE LOAD - 90 LBS/SQ.FT. IN ACCORDANCE WITH AASHTO LRFD GUIDE SPECIFICATIONS FOR DESIGN OF PEDESTRIAN BRIDGES.
- MATERIALS: TIMBER DECKING SHALL BE SOUTHERN YELLOW PINE, NO. 2 AND SHALL BE TREATED WITH CHROMATED COPPER ARSENATE (CCA) WITH A MINIMUM RETENTION OF 0.20 LBS/CUBIC FOOT. LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWPFA STANDARD TO THE REQUIREMENTS OF USE CATEGORY 2 (UC2). DECK BOARDS SHALL BE FASTENED WITH TWO (2) SELF TAPPING #10 STAINLESS STEEL SCREWS AT EACH SUPPORT BEAM. SPACING SHALL MEET ADA GUIDELINES.
STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
W-SECTIONS - ASTM A992, Fy= 50 KSI.
ANGLES AND PLATES - ASTM A36, Fy= 36 KSI.
FASTENERS SHALL BE A325 GALVANIZED BOLTS WITH NUTS AND WASHERS. LOCK NUTS SHALL BE INSTALLED AS NOTED ON THE PLANS.
ANCHOR BOLTS SHALL BE 3/4 INCH DIAMETER AISI 304 OR AISI 316 STAINLESS STEEL MEETING THE REQUIREMENTS OF ASTM F 593 (CONDITION CW). ANCHOR BOLTS SHALL BE INSTALLED USING EPOXY ADHESIVE WITH A MINIMUM EMBEDMENT OF 6 5/8 INCHES. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE EPOXY MANUFACTURER'S REQUIREMENTS. EPOXY ADHESIVE SHALL CONFORM TO HILTI HIT-ICE, OR APPROVED EQUAL.
STEEL FLOOR BEAMS SHALL BEAR ON 1/4 INCH THICK ELASTOMERIC BEARING PADS CONFORMING TO SECTION 623.06 OF THE DELAWARE STANDARD SPECIFICATIONS. ELASTOMERIC BEARING PADS SHALL HAVE A MINIMUM DUROMETER HARDNESS OF 50 +/- 5 IN ACCORDANCE WITH ASTM D 2240. ALL COSTS SHALL BE INCIDENTAL TO THE BRIDGE ITEMS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER.
- ALL STRUCTURAL STEEL SHALL BE PAINTED BLACK IN ACCORDANCE WITH SECTION 616 OF THE DELAWARE STANDARD SPECIFICATIONS. ALL COSTS INCIDENTAL TO THE BRIDGE ITEMS.
- THE CONTRACTOR SHALL NOT DISTURB THE EXISTING CORRUGATED METAL PIPE AND ASSOCIATED HEADWALL AT THE SOUTH WEST CORNER OF THE BRIDGE DURING CONSTRUCTION OF THE PROPOSED MODULAR BLOCK RETAINING WALL. ANY DAMAGE TO THIS STRUCTURE SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.



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ADDENDUMS / REVISIONS

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

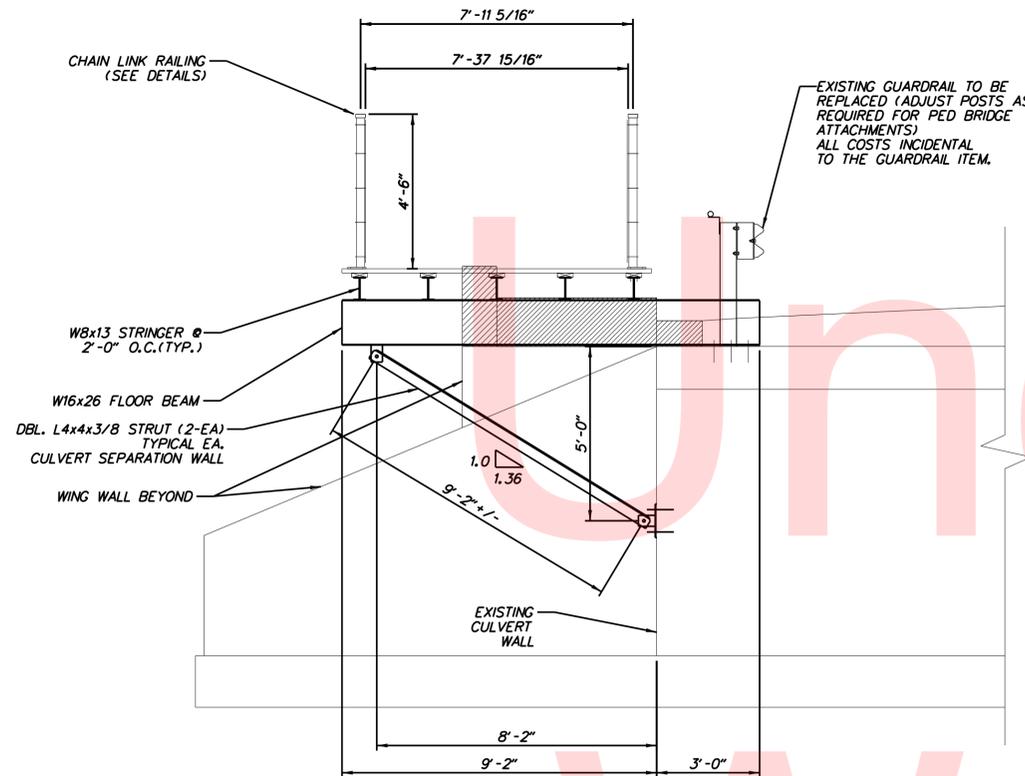
BRECKNOCK PARK MULTI-USE TRAIL

CONTRACT	BRIDGE NO.	2-003A-024
T201330011	DESIGNED BY:	WJH
COUNTY	CHECKED BY:	JMH
KENT		

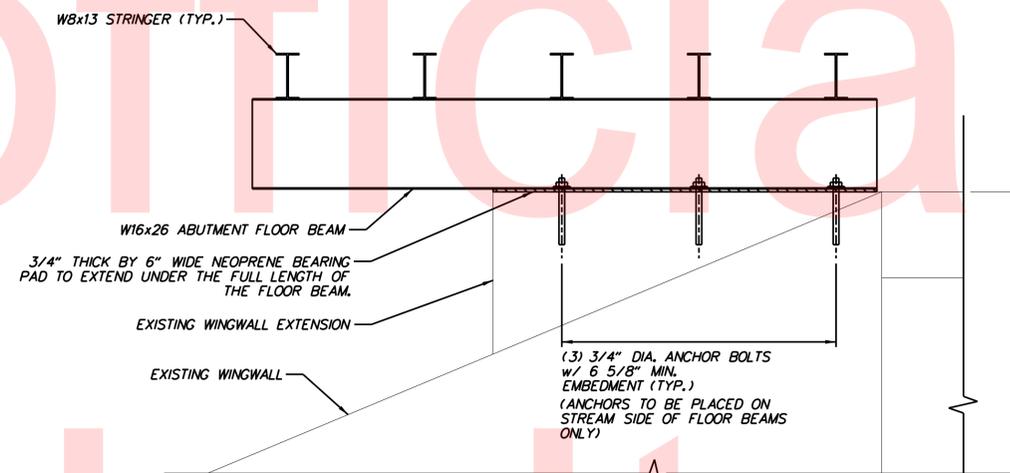
PEDESTRIAN BRIDGE REPLACEMENT PLAN, ELEVATION, & SECTION

SHEET NO.	17
TOTAL SHTS.	36

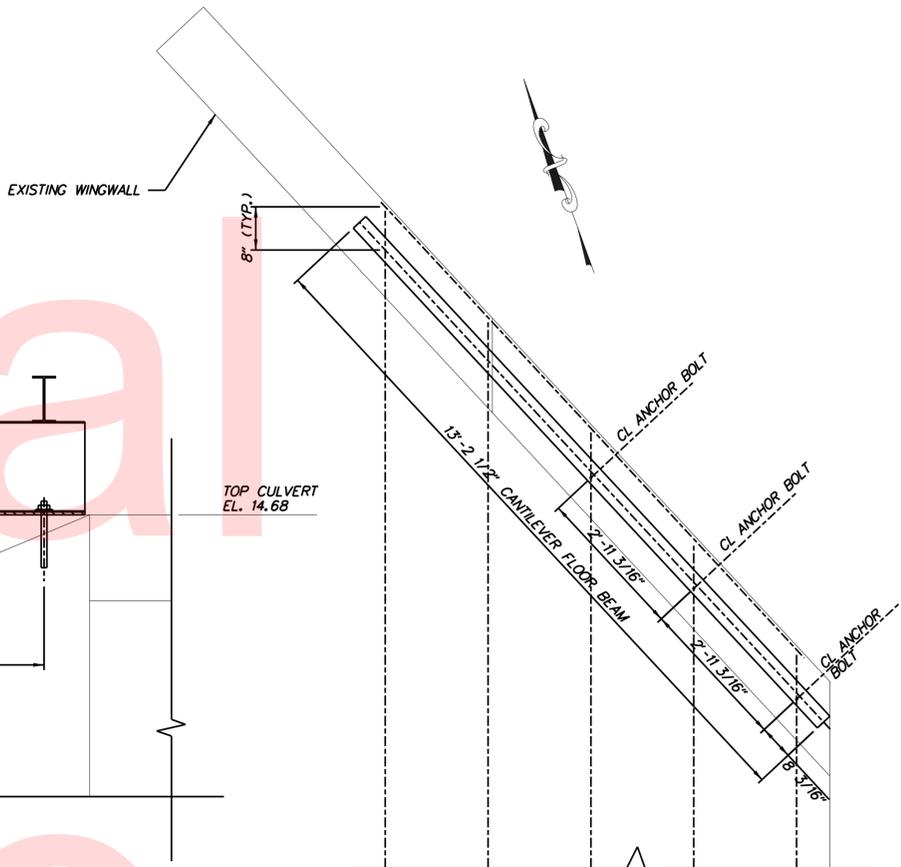
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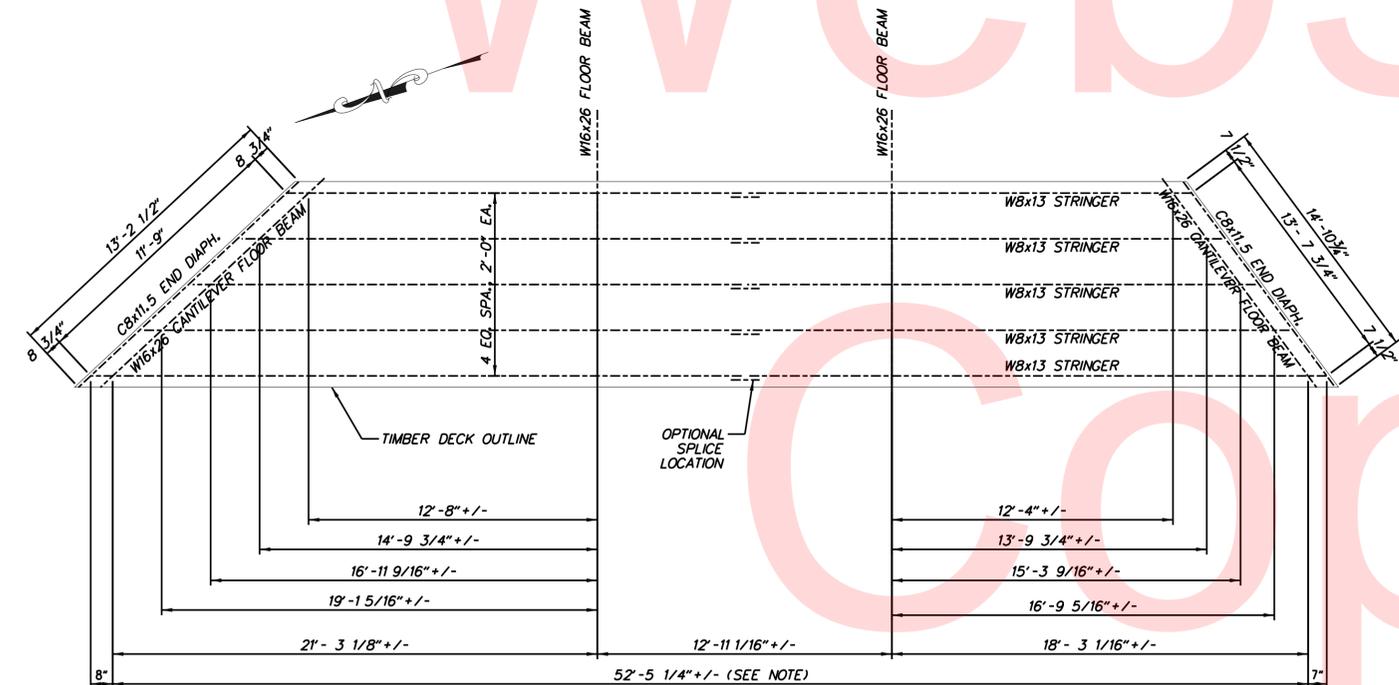
TYPICAL DECK SECTION
SCALE: 3/8" = 1'-0"



TYPICAL CANTILEVER FLOOR BEAM ANCHORAGE AT ABUTMENT
SCALE: 3/4" = 1'-0"

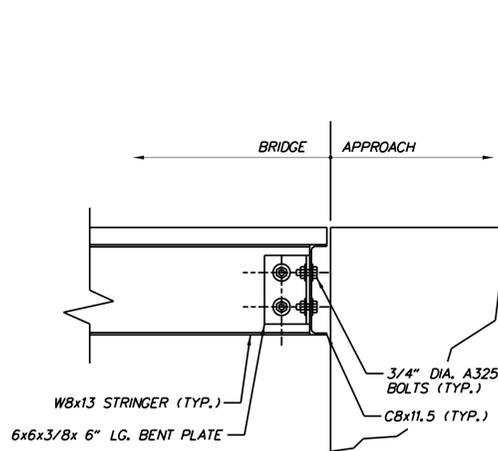


CANTILEVER FLOOR BEAM AT ABUTMENT ANCHORAGE PLAN
SCALE: 1/2" = 1'-0"



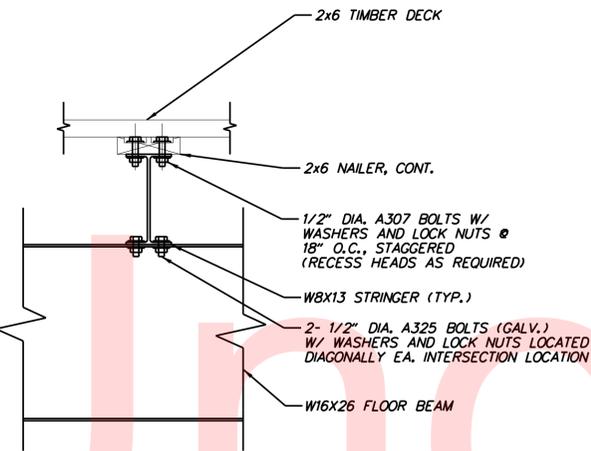
DECK FRAMING PLAN
SCALE: 1/4" = 1'-0"

NOTE:
W8x13 STRINGERS SHOWN AS SINGLE CONTINUOUS BEAMS. CONTRACTOR SHALL PROVIDE SHEAR SPLICE DETAILS AND COMPUTATIONS IF STRINGERS ARE TO BE BROKEN INTO PARTS.



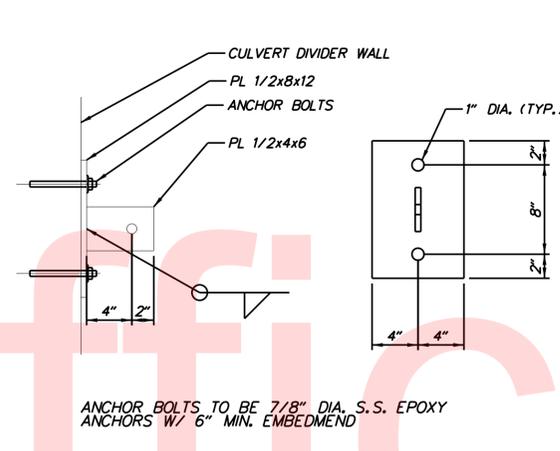
STRINGER END DIAPHRAGM DETAIL

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



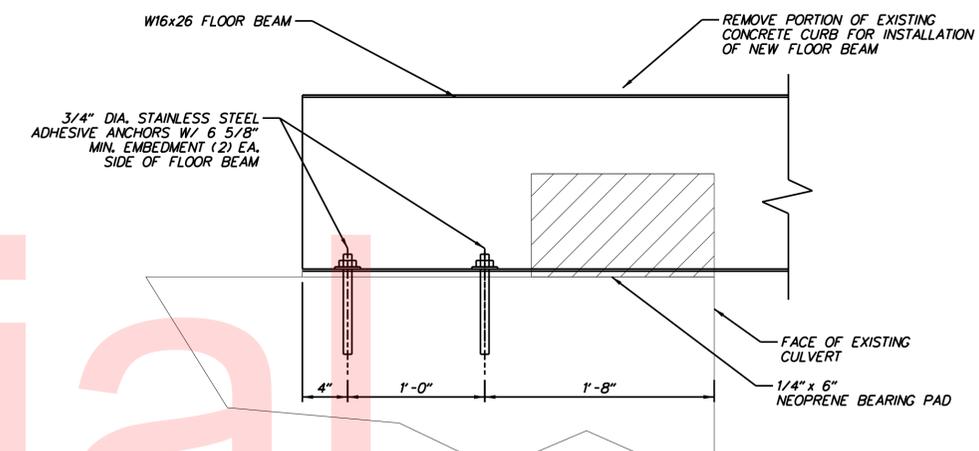
DECK & STRINGER CONNECTION DETAIL

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



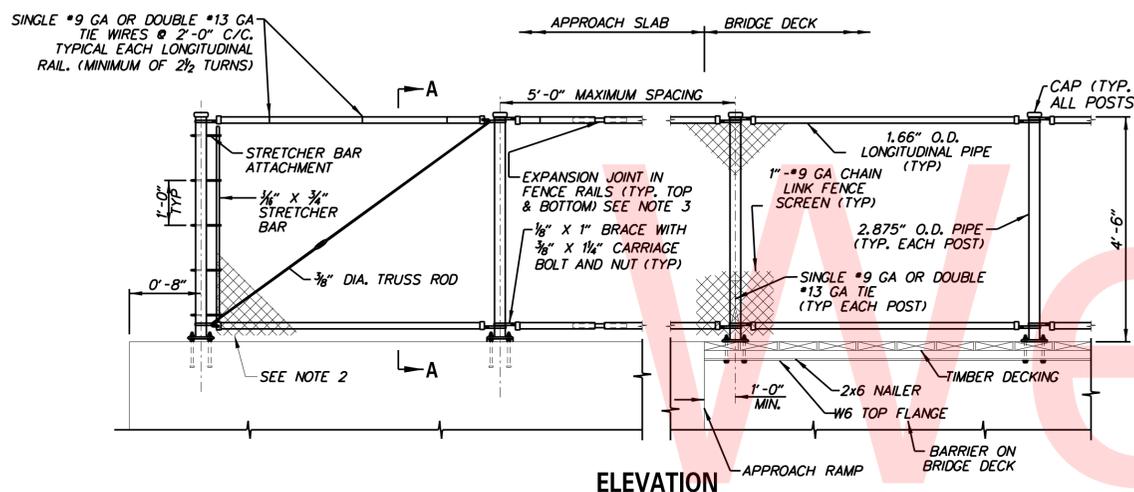
CULVERT GUSSET PLATE DETAIL

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

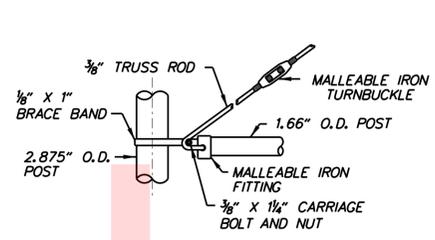


FLOOR BEAM TO CULVERT ATTACHMENT DETAIL

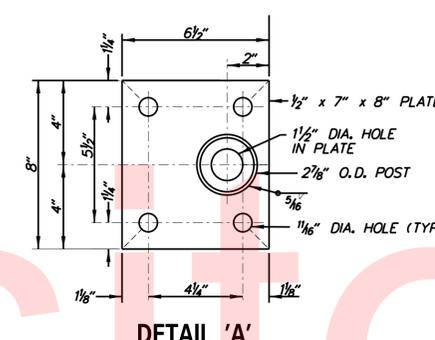
SCALE: 1 1/2" = 1'-0"



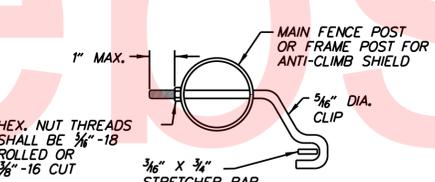
ELEVATION



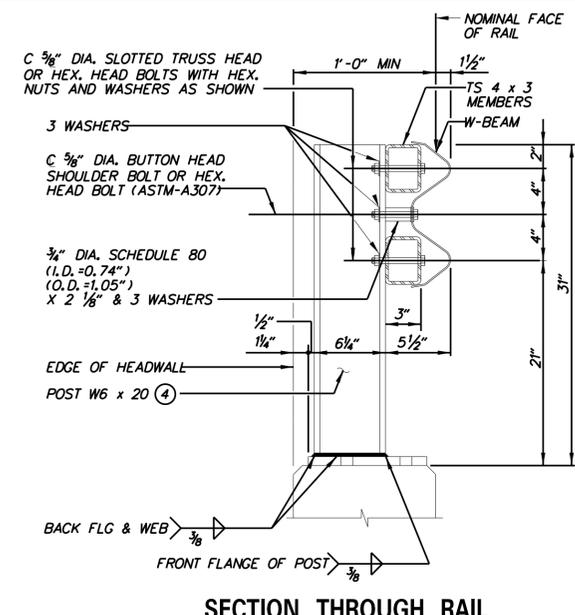
TRUSS ROD ATTACHMENT



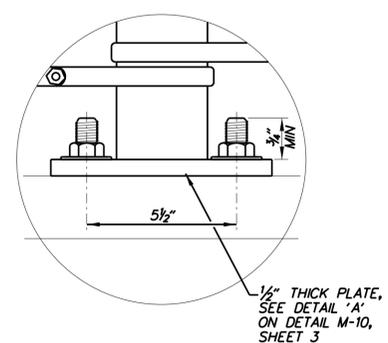
DETAIL 'A'



STRETCHER BAR ATTACHMENT

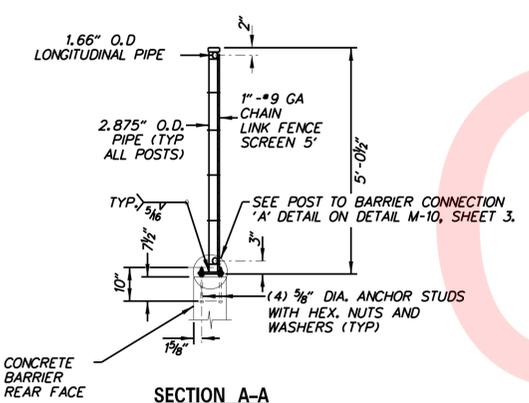


SECTION THROUGH RAIL



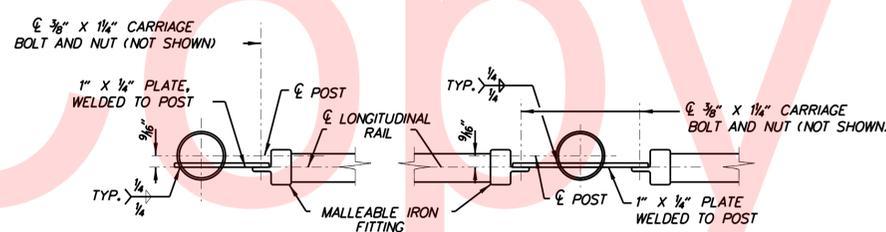
POST TO DECK CONNECTION

TYPICAL FOR POSTS WITHOUT ANTI-CLIMB SHIELD



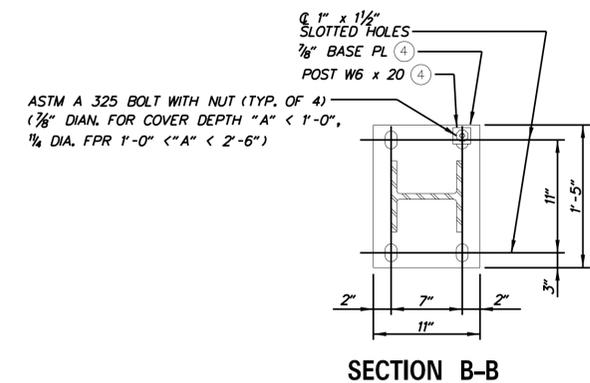
SECTION A-A

APPROACH SAFETY FENCE, TYPE 1



TOP LONGITUDINAL RAIL-POST ATTACHMENT

POST TO DECK CONNECTION 'A'

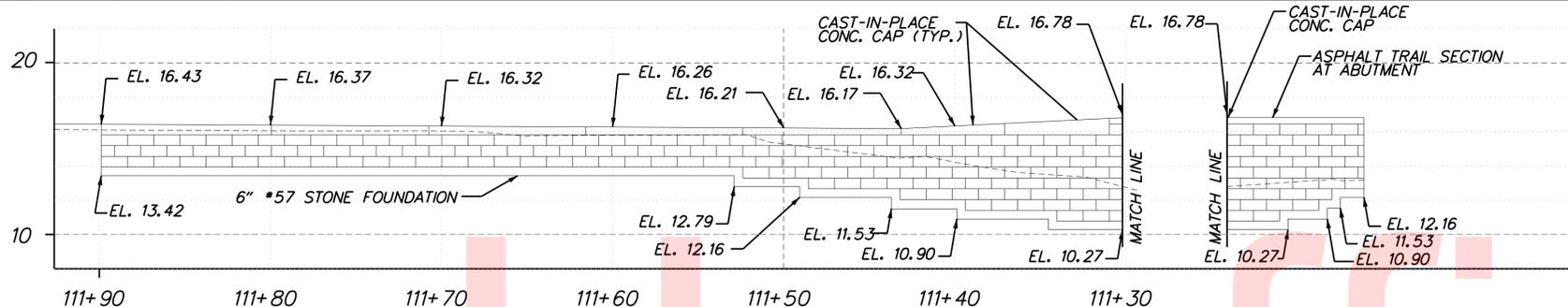


SECTION B-B

NOTES:

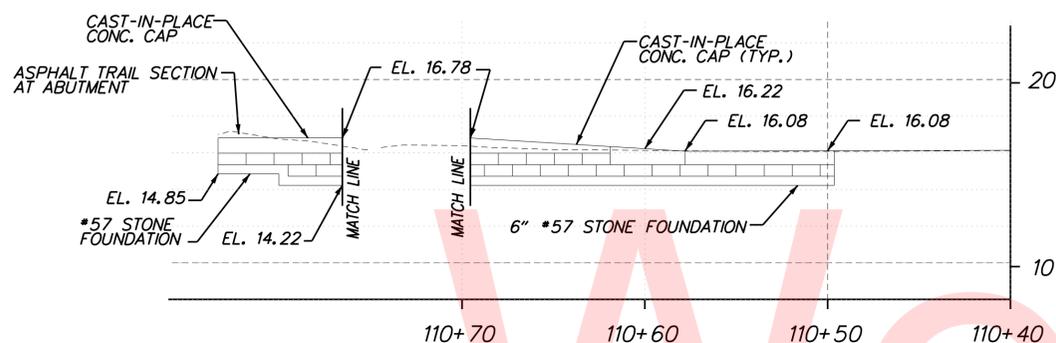
1. POST SPACING - POST SPACING TO BE DETERMINED BY THE CONTRACTOR AND INCLUDED IN THE WORKING DRAWINGS. EACH POST MUST BE A MINIMUM OF 1'-0" FROM ANY PARAPET JOINT.
2. WORKING DRAWINGS - CONTRACTOR SHALL SUBMIT WORKING DRAWINGS FOR THE FENCE FOR REVIEW BY THE ENGINEER.
3. MINIMUM 1" TO MAXIMUM 2" OF CLEARANCE BETWEEN TOP OF DECK AND BOTTOM OF CHAIN LINK FENCE SCREEN.

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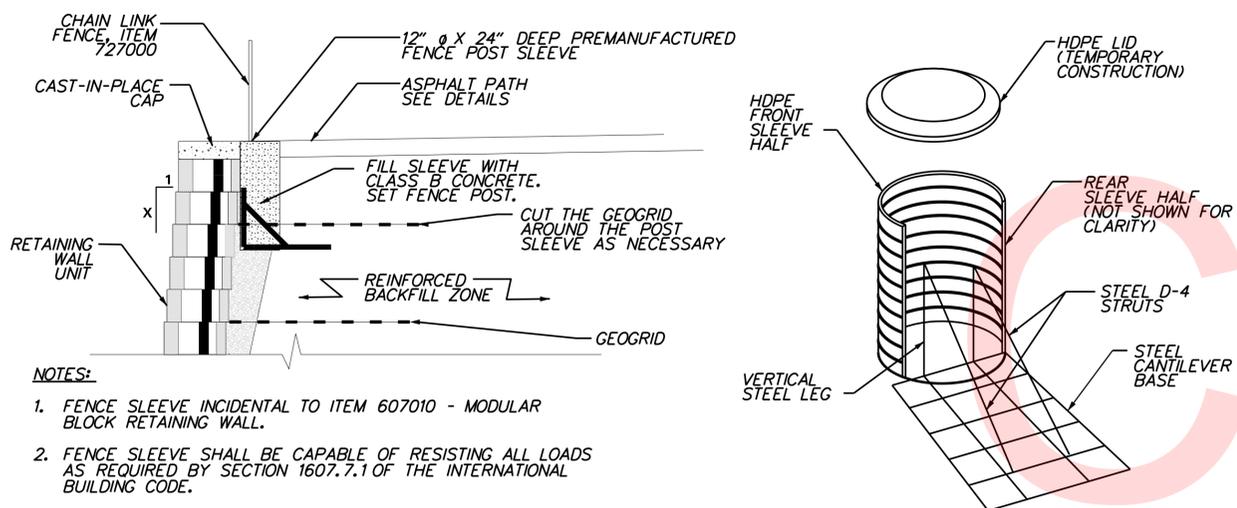
WEST ELEVATION - NORTH WINGWALL AND ABUTMENT MODULAR BLOCK RETAINING WALL

SCALE: 1"=10'



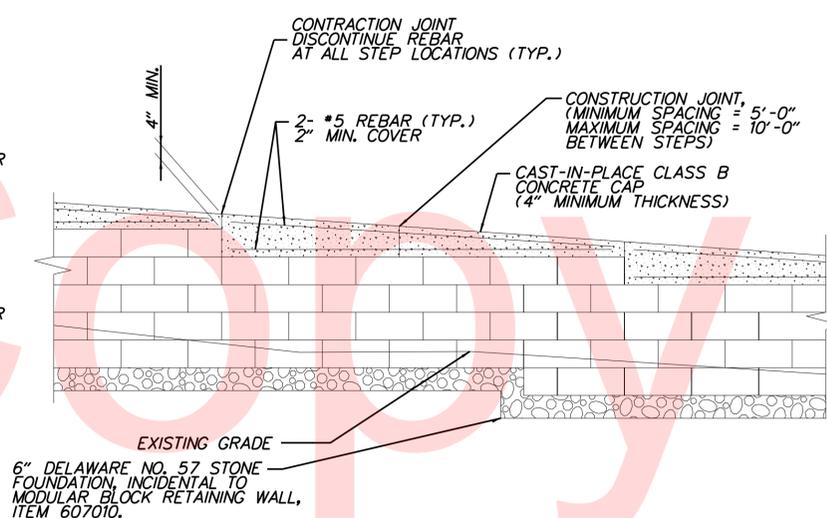
WEST ELEVATION - SOUTH WINGWALL AND ABUTMENT MODULAR BLOCK RETAINING WALL

SCALE: 1"=10'



SLEEVE AND FENCE POST INSTALLATION DETAIL

N.T.S.



607010 - MODULAR BLOCK RETAINING WALL ELEVATION

N.T.S.

GENERAL NOTES:

- THE DETAILS PROVIDED PER THIS PLAN SHEET ARE FOR REFERENCE ONLY AND ARE NOT ENGINEERED DETAILS. THE DETAILS ARE SIMPLY MEANT TO ASSIST THE BIDDER IN DETERMINING A REASONABLE COST FOR CONSTRUCTION OF THE PROPOSED MODULAR RETAINING WALL.
- THE CONTRACTOR SHALL CONTACT/EMPLOY A MODULAR RETAINING WALL MANUFACTURER FOR THE PROPOSED RETAINING WALL TO BE DESIGNED BY THE PRODUCT MANUFACTURER'S ENGINEER. CONTRACTOR SHALL SUBMIT, FOR APPROVAL, CONSTRUCTION DRAWINGS AND DESIGN CALCULATIONS FOR THE RETAINING WALL SYSTEM PREPARED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF DELAWARE.
ACCEPTABLE MODULAR BLOCK RETAINING WALLS ARE:
A. "KEYSTONE RETAINING WALL SYSTEMS", AS MANUFACTURED BY ANCHOR CONCRET PRODUCTS, INC., P.O. BOX 601, BRIDGEPORT, NJ 08014 (TELEPHONE 609-241-1544).
B. "ALLAN BLOCK RETAINING WALL SYSTEMS" STYLE AB THREE AS MANUFACTURED BY FIZZANO BROS., INC., CHESTER PIKE, CRUM LYNNE, PA 19022 (TELEPHONE 610-833-1100).
C. APPROVED EQUAL.
- ANY GEOGRID REINFORCEMENT, UNDERDRAINS/DRAINAGE SYSTEM THAT MAY BE DEEMED NECESSARY BY THE MODULAR RETAINING WALL SYSTEM DESIGN ENGINEER SHALL BE INCIDENTAL TO THE PROJECT AND AT NO ADDITIONAL COST TO THE OWNER.
- SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING INFORMATION: TYPE OF WALL, LOCATION, LENGTH, TOP ELEVATION(S), PROPOSED BOTTOM OF FOOTING OR LEVELING PAD ELEVATION(S), MODULAR BLOCKS, WALL DRAINAGE UNIT, AND CROSS SECTIONS INCLUDING DRAINAGE ZONE, BACKFILL MATERIAL TYPE AND LIMITS, AND QUANTITIES. DETAILS FOR ALL DRAIN OUTLETS, INCLUDING SOLID FLEXIBLE PIPING EXTENDING THRU THE MODULAR BLOCK WALL SHALL BE PROVIDED IN THE SHOP DRAWINGS. CONTRACTOR SHALL VERIFY ALL FIELD DIMENSIONS AND ELEVATIONS PRIOR TO SUBMITTAL OF SHOP DRAWINGS.
- PERFORM REQUIRED DESIGN OF THE RETAINING WALL IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS WITH CURRENT INTERIMS.
- WALLS SHALL BE CONSTRUCTED FROM LOW END TO HIGH END.
- WALLS SHALL EXTEND A MINIMUM OF ONE BLOCK UNIT BENEATH THE COMPACTED FILL ALONG THE FRONT FACE, OR AS SPECIFIED BY THE MANUFACTURER.
- ALL EXPOSED MODULAR BLOCK SURFACES SHALL HAVE A SPLIT-FACED TEXTURE.
- LEVELING PAD, SIZE, AND MATERIAL, SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- WALLS SHALL HAVE A NEAR VERTICAL FACE WITH MINIMUM SETBACKS AS RECOMMENDED BY THE MANUFACTURER.
- THE CONTRACTOR SHALL INSTALL THE MODULAR BLOCK WALL PER THE MANUFACTURER'S RECOMMENDATIONS.
- ALL COSTS FOR PROVIDING ALL MATERIALS AS NOTED AND DETAILED INCLUDING SHOP DRAWINGS SHALL BE INCIDENTAL TO ITEM 607010 - MODULAR BLOCK RETAINING WALL.
- CAST-IN-PLACE CONCRETE CAP SHALL BE CLASS B CONCRETE AND SHALL CONFORM TO SECTION 812. PAYMENT FOR THE CAST-IN-PLACE CONCRETE CAP AND REQUIRED REBAR SHALL BE INCLUDED IN ITEM 607010 - MODULAR BLOCK RETAINING WALL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY SHEETING AND SHORING REQUIRED FOR THE INSTALLATION OF THE MODULAR BLOCK RETAINING WALL. PRICE FOR ANY SHEETING AND SHORING SHALL BE INCIDENTAL TO THE MODULAR BLOCK RETAINING WALL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND ENSURE THAT THE CONSTRUCTION OF THE MODULAR BLOCK RETAINING WALL DOES NOT UNDERMINE THE EXISTING ROADWAY, INCLUDING SHOULDERS AND GUARDRAIL. ANY UNDERMINING SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE, INCLUDING ANY REPAIR TO PAVEMENT.
- VOIDS IN TOP COURSE OF RETAINING WALL TO BE BACKFILLED WITH DELAWARE NO. 57 STONE TO ONE HALF THE HEIGHT OF THE COURSE.
- UPPER HALF OF VOIDS IN TOP COURSE OF RETAINING WALL BLOCKS TO BE LEFT EMPTY FOR CONSTRUCTION OF AND KEYING CAST-IN-PLACE CONCRETE CAP.
- RETAINING WALL SECTIONS SHOWN FOR ESTIMATING PURPOSES ONLY. CONTRACTOR SHALL REFER TO MANUFACTURER'S SHOP DRAWINGS FOR ACTUAL DESIGN DETAILS INCLUDING MATERIALS AND DIMENSIONS.
- CONTRACTOR SHALL INSTALL SILT FENCE, ITEM 905001, ALONG LIMIT OF CONSTRUCTION, AS SHOWN ON THE E&S PLANS, PRIOR TO BEGINNING ANY WORK. NO ACCESS SHALL BE ALLOWED WITHIN WETLANDS.
- SEE ENVIRONMENTAL COMPLIANCE SHEET AND CONSTRUCTION PHASING PLANS FOR SILT FENCE LOCATION AND INSTALLATION DETAILS.
- ALL WORK SHALL BE PERFORMED FROM THE EXISTING ROADWAY SHOULDER AND/OR THE RETAINING WALL TIE-BACK EXCAVATION LIMITS IN A TOP-DOWN MANNER. NO WORK OR MACHINERY SHALL BE ALLOWED ON THE WEST SIDE OF THE PROPOSED RETAINING WALL SO AS NOT TO ENCR OACH ON THE ADJOINING WETLANDS. ALL COSTS ARE INCIDENTAL TO ITEM 607010.
- IT IS RECOMMENDED THAT THE CONTRACTOR PLACE THE TOPSOIL SHOWN IN FRONT OF THE WALL PRIOR TO BUILDING THE WALL TO ITS FULL HEIGHT. THE MATERIAL CAN THEN BE PLACED FROM BEHIND THE WALL SO AS NOT TO ENCR OACH ON THE ADJOINING WETLANDS.
- STEEL FENCE RAILING NOT SHOWN FOR CLARITY. SEE STEEL FENCE DETAILS.
- COLOR OF RETAINING WALL BLOCKS SHALL BE INTEGRAL AND SHALL BE MANUFACTURER'S STANDARD DARK BROWN. CONTRACTOR TO SUBMIT MANUFACTURER'S COLOR CHART FOR REVIEW AND APPROVAL. ALL COSTS ARE INCIDENTAL TO ITEM 607010.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS	

AS SHOWN

BRECKNOCK PARK MULTI-USE TRAIL

CONTRACT	BRIDGE NO.	2-003A-024
T201330011	DESIGNED BY:	WJH
COUNTY	CHECKED BY:	JMH
KENT		

PEDESTRIAN BRIDGE REPLACEMENT MODULAR BLOCK RETAINING WALL DETAILS		SHEET NO.
		20
		TOTAL SHTS.
		36

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BORING: B-1		DATE DRILLED: 1/14/16		STATION: [OFFSET:] [ELEVATION:] [NORTHING:] [EASTING:]		
COMMENTS:						
DEPTH (FT.)	NO.	SAMPLE DEPTH	Blows/6"	SAMPLE DESCRIPTION	CLASS./G.I.	REMARKS
3.0	1	0.0'	3	Orange-brown, wet, loose, fine to medium sand w/ some silt		Approximately 1 in. of asphalt and 3 in. of organic bearing soil were encountered at the ground surface.
		2.0'	2			
		2.0'	4			
6.0	2	3.5'	4	Orange-brown, wet, medium stiff, silty clay, with little fine to medium sand		At completion water was at 7' Boring caved in at 8'
			2			
			2			
9.0	3	6.0'	WOH/18"	Brown, wet to saturated, very loose, fine to medium sand, with trace silt, trace gravel		Groundwater was encountered at 6.5' during drilling operations.
		7.5'				
12.0	4	9.0'	5	Light brown, saturated, medium dense, fine to coarse sand, with trace silt, trace gravel.		
			8			
		10.5'	6			
15.0	5	14.0'	3	Orange-brown, saturated, medium dense, fine to coarse sand, with some silt.		
			5			
		15.5'	6			
21.0	6	19.0'	3	Orange-brown, saturated, medium dense, fine to medium sand, with some silt.		
			4			
		20.5'	9			
24.0	7	24.0'	10	Orange-brown, saturated, loose, fine to coarse sand, with trace silt.		
			6			
		25.5'	4			
30.0	8	29.0'	4	Dark grey, saturated, medium stiff, organic silty clay.		
			5			
		30.5'	5			
36.0	9	34.0'	3			
			3			
		35.5'	4			
39.0	10	39.0'	3	Dark gray, saturated, loose, fine to medium sand, with some silt, trace clay		
			4			
		40.5'	5			
45.0	11	44.0'	3	Gray, saturated, very dense, fine to medium sand, with trace silt.		
			4			
		45.5'	6			
51.0	12	49.0'	5	Gray, saturated, medium dense, fine to medium sand, with little silt, trace clay		
			25			
		50.5'	32			
54.0	13	54.0'	10	Gray, saturated, very dense, fine to medium sand, with little silt		
			28			
		55.5'	35			
60.0	14	59.0'	50/6			Boring terminated at 60.5'.

BORING: B-2		DATE DRILLED: 1/14/16		STATION: [OFFSET:] [ELEVATION:] [NORTHING:] [EASTING:]		
COMMENTS:						
DEPTH (FT.)	NO.	SAMPLE DEPTH	Blows/6"	SAMPLE DESCRIPTION	CLASS./G.I.	REMARKS
3.0	1	0.0'	3	Brown, wet, loose, fine to medium sand, with some silt		Approximately 2 in. of asphalt and 6 in. of organic bearing soil were encountered at the ground surface.
		2.0'	3			
			4			
6.0	2	3.0'	11	Light orange-brown, wet, loose, fine to medium sand, with some silt, trace clay		At completion water was at 6' Boring caved in at 8'
			4			
		4.5'	4			
9.0	3	6.0'	WOH/18"	Orange-brown, wet to saturated, fine to medium sand, with some silt, trace clay		Groundwater was encountered at 6.5' during drilling operations.
		7.5'				
12.0	4	9.0'	8	Brown, saturated, medium dense, fine to coarse sand, with trace silt, trace gravel		
			14			
		10.5'	14			
15.0	5	14.0'	3	Orange-brown, saturated, loose, fine to coarse sand, with trace silt		
			3			
		15.5'	3			
21.0	6	19.0'	2	Orange-brown, saturated, very loose, fine to medium sand, with some silt		
			2			
		20.5'	3			
24.0	7	24.0'	1	Dark grey, saturated, soft, organic silty clay		
			2			
		25.5'	2			
30.0	8	29.0'	1			
			2			
		30.5'	3			
36.0	9	34.0'	3			
			3			
		35.5'	4			
39.0	10	39.0'	1	Brown, saturated, very soft, silt, with little clay, trace fine to medium sand		
			1			
		40.5'	1			
45.0	11	44.0'	4	Gray, saturated, dense, fine to medium sand, with trace silt		
			14			
		45.5'	20			
51.0	12	49.0'	3	Gray, saturated, medium dense, fine to medium sand, with little silt, trace clay		
			3			
		50.5'	9			
54.0	13	54.0'	6	Gray, saturated, very dense, fine to medium sand, with little silt		
			30			
		55.5'	45			
60.0	14	59.0'	50/6			Boring terminated at 60.5'.

NOTES:

1. THE INFORMATION SHOWN ON THIS SHEET IS BASED ON LIMITED INVESTIGATIONS, AND IS NO WAY WARRANTED TO BE INDICATIVE OF ACTUAL CONDITIONS WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION. SEE SECTION 102.05 OF THE DELDOT STANDARD SPECIFICATIONS FOR MORE DETAIL.
2. LOCATIONS OF BORINGS ARE REFERENCED TO THE CONSTRUCTION PLAN AND LABELED AS 'B-1' AND 'B-2'.



ADDENDUMS / REVISIONS

NOT TO SCALE

**BRECKNOCK PARK
MULTI-USE TRAIL**

CONTRACT	BRIDGE NO.	2-003A-024
T201330011	DESIGNED BY:	ASH
COUNTY	CHECKED BY:	JMH
KENT		

SOIL BORING LOGS

SHEET NO.	21
TOTAL SHTS.	36

TRAFFIC CONTROL NOTES

1. THE CONTRACTOR SHALL MAINTAIN ACCESS TO AND ALONG PEDESTRIAN AND TRANSIT FACILITIES AT ALL TIMES DURING CONSTRUCTION. WHERE PEDESTRIAN ROUTES ARE CLOSED OR BLOCKED, ALTERNATE PEDESTRIAN ACCESS SHALL BE PROVIDED TO THE SATISFACTION OF THE ENGINEER AND SHALL BE ADA COMPLIANT. ACCEPTABLE MATERIALS FOR TEMPORARY PEDESTRIAN PATHS SHALL INCLUDE CONCRETE, HOT-MIX COMPACTED MILLINGS, PLYWOOD WALKWAY STRUCTURE, OR 1.5" STONE DUST OVER 4" OF GABC. TEMPORARY PEDESTRIAN PATHS SHALL BE INCIDENTAL TO ITEM 801000 UNLESS OTHERWISE SPECIFIED IN THE PLANS.
2. TYPICAL APPLICATIONS PER THE DELAWARE MUTCD SHALL BE INCORPORATED TO ACHIEVE REQUIRED TEMPORARY TRAFFIC CONTROL AND SAFETY REQUIREMENTS. THIS PROJECT IS SUBJECT TO THE FOLLOWING TYPICAL APPLICATIONS UNLESS DIRECTED OTHERWISE BY THE ENGINEER:
 - A. TA-3A AND TA-36 FOR US13 S. DUPONT HWY CLOSURES.
3. THE ENGINEER RESERVES THE RIGHT TO MODIFY THE TRAFFIC CONTROL AS FIELD CONDITIONS DICTATE.

TRM NOTES

1. THE USE OF MILLINGS AND GABC IN THE TRAVEL WAY, TEMPORARY TRAVEL WAY, HIGH VOLUME ENTRANCES AND ACCESS RAMP FOR THE PURPOSE OF PROVIDING A TEMPORARY ROADWAY SURFACE, POT HOLE REPAIR, TAPERED EDGE FOR UTILITIES, BUTTJOINTS AND LONGITUDINAL DROP-OFFS (MILLING AND PAVING OPERATIONS) IS PROHIBITED UNLESS IT IS OTHERWISE DESIGNATED TO BE USED IN THE CONTRACT PLANS. USE COLD PATCH, BITUMINOUS CONCRETE, BITUMINOUS CONCRETE WEDGE OR TAPER MILL AS NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE ENGINEER. PAYMENT FOR COLD PATCH, BITUMINOUS CONCRETE OR BITUMINOUS CONCRETE WEDGE SHALL BE PAID AS NOTED IN THE CONTRACT DOCUMENTS. TAPER MILL BITUMINOUS CONCRETE SHALL BE PAID UNDER THE BITUMINOUS CONCRETE MILLING ITEM 760011.
2. MILLINGS OR GABC SHALL BE USED AT THE FOLLOWING LOCATIONS WHERE ACCESS TO A BUSINESS, RESIDENCE OR EDGE DROP-OFF NEEDS TO BE MAINTAINED UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE ENGINEER TO USE BITUMINOUS CONCRETE OR COLD PATCH. ALL MILLINGS AND GABC WILL BE ROLLED AND COMPACTED TO HELP PREVENT THE MATERIAL FROM UNRAVELLING:
 - A. DRIVEWAYS.
 - B. ENTRANCES.
 - C. LOW VOLUME ACCESS RAMPS (IDENTIFIED IN THE CONTRACT DOCUMENTS).
 - D. EDGE DROP-OFFS ADJACENT TO LIVE ROADWAY (LANE, SHOULDER OR TURN LANE) AND THE PROPOSED ROAD CONSTRUCTION.
 - E. EDGE OF ROADWAY DROP-OFF.

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

LANE RESTRICTIONS

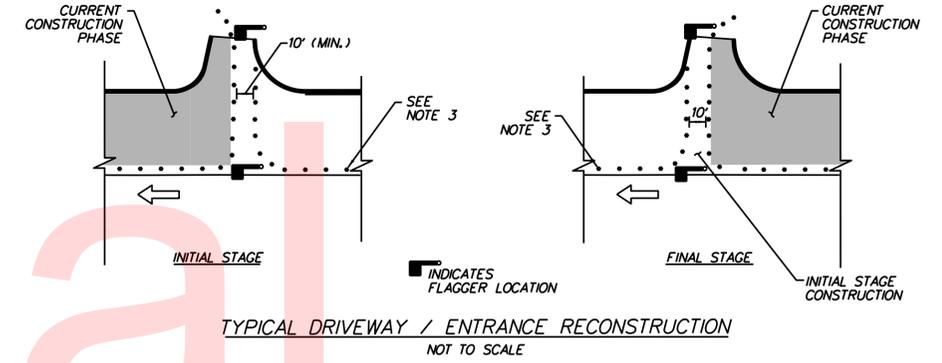
1. CONTRACTOR SHALL COORDINATE WITH AREA SPECIAL EVENTS. IN ADDITION TO THE EVENT AND HOLIDAY LANE CLOSURE RESTRICTIONS IN SECTION 800, LANE CLOSURES ARE NOT PERMITTED DURING THE FOLLOWING EVENTS:
 - A. PRIMARY ELECTIONS - NO LANE CLOSURES ARE PERMITTED DURING THE DAY OF PRIMARY ELECTIONS. THE ENGINEER WILL PROVIDE THE DATE.
 - B. GENERAL ELECTIONS - NO LANE CLOSURES ARE PERMITTED DURING THE DAY OF GENERAL ELECTIONS. THE ENGINEER WILL PROVIDE THE DATE.
 - C. FIREFLY MUSIC FESTIVAL - NO LANE CLOSURES ON US13 FROM 12:00AM WEDNESDAY PRIOR TO THE EVENT THROUGH 9:00PM MONDAY FOLLOWING THE EVENT.

ALLOWABLE LANE CLOSURE HOURS		US13																							
		12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																									
MONDAY																									
TUESDAY																									
WEDNESDAY																									
THURSDAY																									
FRIDAY																									
SATURDAY																									

ONE LANE CLOSURE
ALL LANES OPEN

ALLOWABLE LANE CLOSURE HOURS		OLD CAMDEN ROAD																							
		12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
SUNDAY																									
MONDAY																									
TUESDAY																									
WEDNESDAY																									
THURSDAY																									
FRIDAY																									
SATURDAY																									

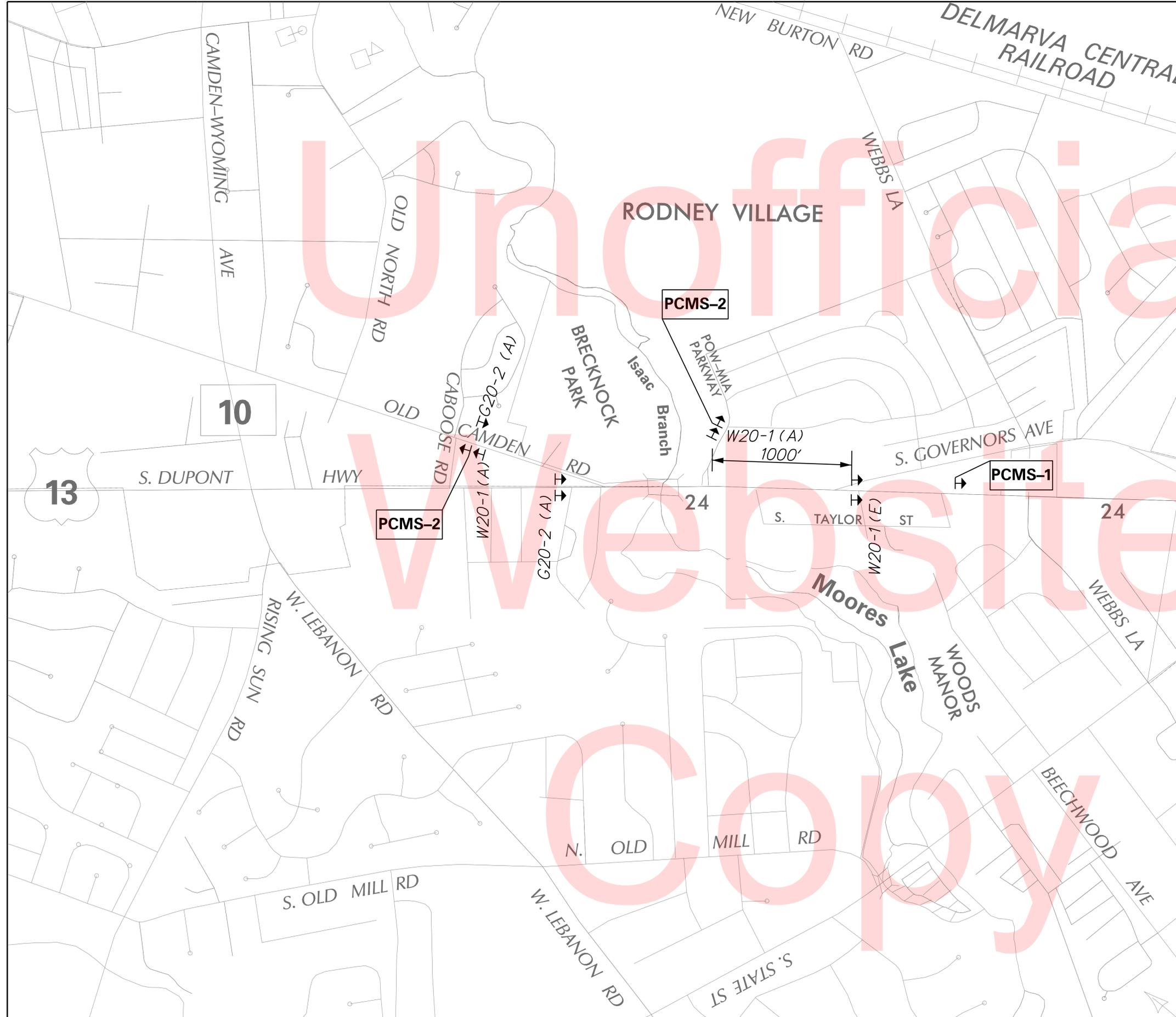
ONE LANE CLOSURE
ALL LANES OPEN



- NOTES:**
1. THIS DETAIL PROVIDES THE PROPER TRAFFIC CONTROL DEVICES AT DRIVEWAYS AND ENTRANCES THAT ARE TO BE BUILT IN HALF-SECTION UNDER FLAGGER CONTROL. APPLICATION OF THIS DETAIL SHALL BE AS INDICATED ON THE PLANS, DURING DAYLIGHT HOURS ONLY, OR AS DIRECTED BY THE ENGINEER. TRAFFIC CONTROL DEVICES AT ENTRANCES SHALL BE RESET TO MAIN PHASE AT END OF EACH WORKING DAY.
 2. CHANNELIZATION THROUGH ENTRANCE AREA SHALL BE ACCOMPLISHED WITH DRUMS PLACED AT 10' BETWEEN THE EDGES OF THE DRUMS IMMEDIATELY ADJACENT TO THE TRAVELED WAY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DRUM LAYOUT SHALL ACCOMMODATE LARGEST DESIGN VEHICLE EXPECTED TO USE ENTRANCE.
 3. TRAFFIC CONTROL DEVICES ALONG MAINLINE ROADWAY SHALL BE AS SHOWN ON CONSTRUCTION PHASING PLANS.
 4. DEPENDING ON TRAFFIC VOLUME UTILIZING ENTRANCE AND OTHER SITE-SPECIFIC CONDITIONS, THE NUMBER OF FLAGGERS USED DURING ENTRANCE CONSTRUCTION MAY BE REDUCED FROM 2 TO 1, SUBJECT TO APPROVAL OF ENGINEER.
 5. COORDINATE WITH KENT COUNTY TO SCHEDULE THE ENTRANCE CLOSURE AT NON-PEAK TIMES.

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* NOTE: THE CONTRACTOR SHALL LAYOUT SIGNS FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. THE COVERING OF ANY CONFLICTING SIGNS SHALL BE INCIDENTAL TO ITEM NO. 810001. ALL SIGNS PAID UNDER ITEM NO. 810001.

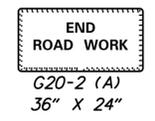
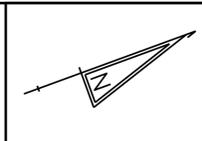
ALL PERMANENT ADVANCE WARNING SIGNS SHALL BE GROUND MOUNTED ON TWO APPROVED BREAK-AWAY POSTS AND SHALL BE MOUNTED IN COMPLIANCE WITH THE DE MUTCD. PERMANENT ADVANCE WARNING SIGNS SHALL BE MOUNTED AT A HEIGHT OF 7 FEET, MEASURED FROM THE ROADWAY TO THE BOTTOM OF THE SIGN. THE USE OF SKID MOUNTED SIGN SUPPORTS IS NOT ALLOWED UNLESS THE CONTRACTOR CAN DEMONSTRATE THAT A UTILITY CONFLICT EXISTS, WHICH SHALL BE VERIFIED BY THE ENGINEER; OR CONCRETE MEDIANS PREVENT THE INSTALLATION OF THE PERMANENT SIGNS IN THE APPROPRIATE LOCATION.

CONSTRUCTION ZONE WARNING SIGNS

* DISTANCE LEGEND

LETTER	DISTANCE
A	500 FT
B	1000 FT
C	1500 FT
D	1/2 MILE AHEAD
E	
F	BOTH SHOULDERS CLOSED

* NOTE: ALL PERMANENT WARNING SIGNS PAID UNDER ITEM NO. 810001.



PCMS PORTABLE CHANGEABLE MESSAGE SIGN LOCATION

NEW TRAFFIC PATTERN	STARTING XX/XX/XX	PCMS-1 10 DAYS PRIOR TO START OF CONSTRUCTION
LANE SHIFT AHEAD	PROCEED WITH CAUTION	PCMS-1 REMOVE 5 DAYS AFTER START OF CONSTRUCTION
ROAD WORK	TO START XX/XX/XX	PCMS-2 10 DAYS PRIOR TO START OF CONSTRUCTION
ROAD WORK AHEAD	PROCEED WITH CAUTION	PCMS-2 REMOVE 5 DAYS AFTER START OF CONSTRUCTION

PHASING NOTES:

PHASE 1 - BRECKNOCK PARK TRAIL - BRECKNOCK PARK ENTRANCE TO PEDESTRIAN BRIDGE

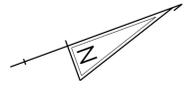
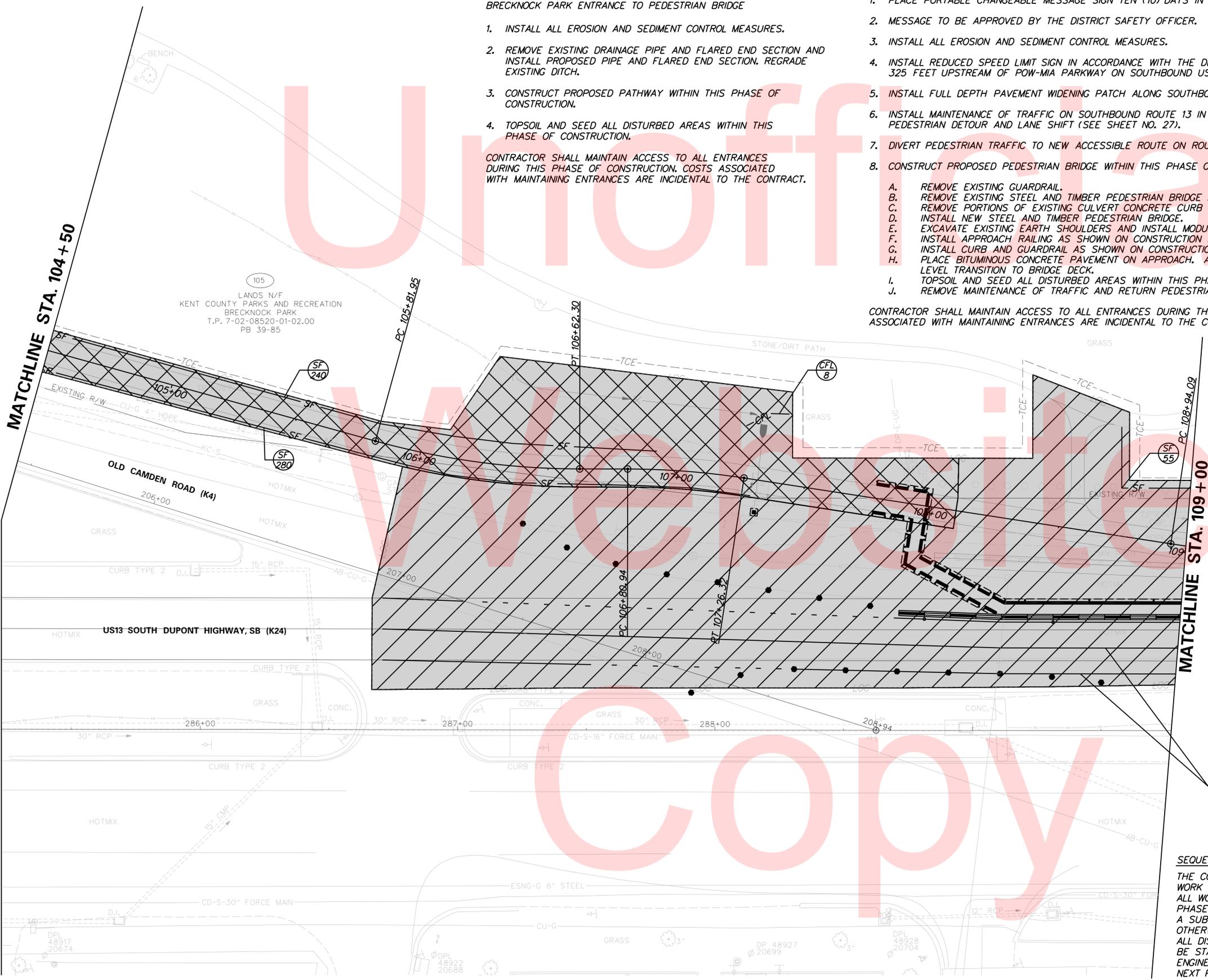
1. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES.
2. REMOVE EXISTING DRAINAGE PIPE AND FLARED END SECTION AND INSTALL PROPOSED PIPE AND FLARED END SECTION. REGRADE EXISTING DITCH.
3. CONSTRUCT PROPOSED PATHWAY WITHIN THIS PHASE OF CONSTRUCTION.
4. TOPSOIL AND SEED ALL DISTURBED AREAS WITHIN THIS PHASE OF CONSTRUCTION.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ENTRANCES DURING THIS PHASE OF CONSTRUCTION. COSTS ASSOCIATED WITH MAINTAINING ENTRANCES ARE INCIDENTAL TO THE CONTRACT.

PHASE 3 - BRECKNOCK PARK TRAIL - TRAIL CONNECTION TO BRECKNOCK PARK AND PEDESTRIAN BRIDGE

1. PLACE PORTABLE CHANGEABLE MESSAGE SIGN TEN (10) DAYS IN ADVANCE OF CONSTRUCTION.
2. MESSAGE TO BE APPROVED BY THE DISTRICT SAFETY OFFICER.
3. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES.
4. INSTALL REDUCED SPEED LIMIT SIGN IN ACCORDANCE WITH THE DE MUTCD. SIGN SHALL BE PLACED APPROX. 325 FEET UPSTREAM OF POW-MIA PARKWAY ON SOUTHBOUND US13.
5. INSTALL FULL DEPTH PAVEMENT WIDENING PATCH ALONG SOUTHBOUND US13. WORK IS TO BE PERFORMED AT NIGHT.
6. INSTALL MAINTENANCE OF TRAFFIC ON SOUTHBOUND ROUTE 13 IN ACCORDANCE WITH THE PLANS, INCLUDING PEDESTRIAN DETOUR AND LANE SHIFT (SEE SHEET NO. 27).
7. DIVERT PEDESTRIAN TRAFFIC TO NEW ACCESSIBLE ROUTE ON ROUTE 13 SHOULDER.
8. CONSTRUCT PROPOSED PEDESTRIAN BRIDGE WITHIN THIS PHASE OF CONSTRUCTION.
 - A. REMOVE EXISTING GUARDRAIL.
 - B. REMOVE EXISTING STEEL AND TIMBER PEDESTRIAN BRIDGE AT BRIDGE 2-003A-024.
 - C. REMOVE PORTIONS OF EXISTING CULVERT CONCRETE CURB AND WINGWALLS AS SHOWN ON CONSTRUCTION PLANS.
 - D. INSTALL NEW STEEL AND TIMBER PEDESTRIAN BRIDGE.
 - E. EXCAVATE EXISTING EARTH SHOULDERS AND INSTALL MODULAR BLOCK RETAINING WALL FOR PEDESTRIAN BRIDGE APPROACHES.
 - F. INSTALL APPROACH RAILING AS SHOWN ON CONSTRUCTION PLANS.
 - G. INSTALL CURB AND GUARDRAIL AS SHOWN ON CONSTRUCTION PLAN.
 - H. PLACE BITUMINOUS CONCRETE PAVEMENT ON APPROACH. ADJUST PAVEMENT HEIGHT AS REQUIRED TO PROVIDE LEVEL TRANSITION TO BRIDGE DECK.
 - I. TOPSOIL AND SEED ALL DISTURBED AREAS WITHIN THIS PHASE OF CONSTRUCTION.
 - J. REMOVE MAINTENANCE OF TRAFFIC AND RETURN PEDESTRIAN TRAFFIC TO NEW BRIDGE.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ENTRANCES DURING THIS PHASE OF CONSTRUCTION. COSTS ASSOCIATED WITH MAINTAINING ENTRANCES ARE INCIDENTAL TO THE CONTRACT.



TEMPORARY PAVEMENT STRIPING (SEE PEDESTRIAN DETOUR AND LANE SHIFT ON SHEET 27)

SEQUENCE OF CONSTRUCTION
 THE CONTRACTOR SHALL COMPLETE ALL WORK IN THE FOLLOWING SEQUENCE. ALL WORK SHALL BE COMPLETED IN A PHASE/STAGE BEFORE STARTING WORK IN A SUBSEQUENT PHASE/STAGE UNLESS OTHERWISE APPROVED BY THE ENGINEER. ALL DISTURBED AREAS IN A STAGE SHALL BE STABILIZED AS DIRECTED BY THE ENGINEER BEFORE BEGINNING WORK IN THE NEXT PHASE/STAGE.

CONSTRUCTION SEQUENCE LEGEND	
	PHASE 1
	PHASE 2
	PHASE 3

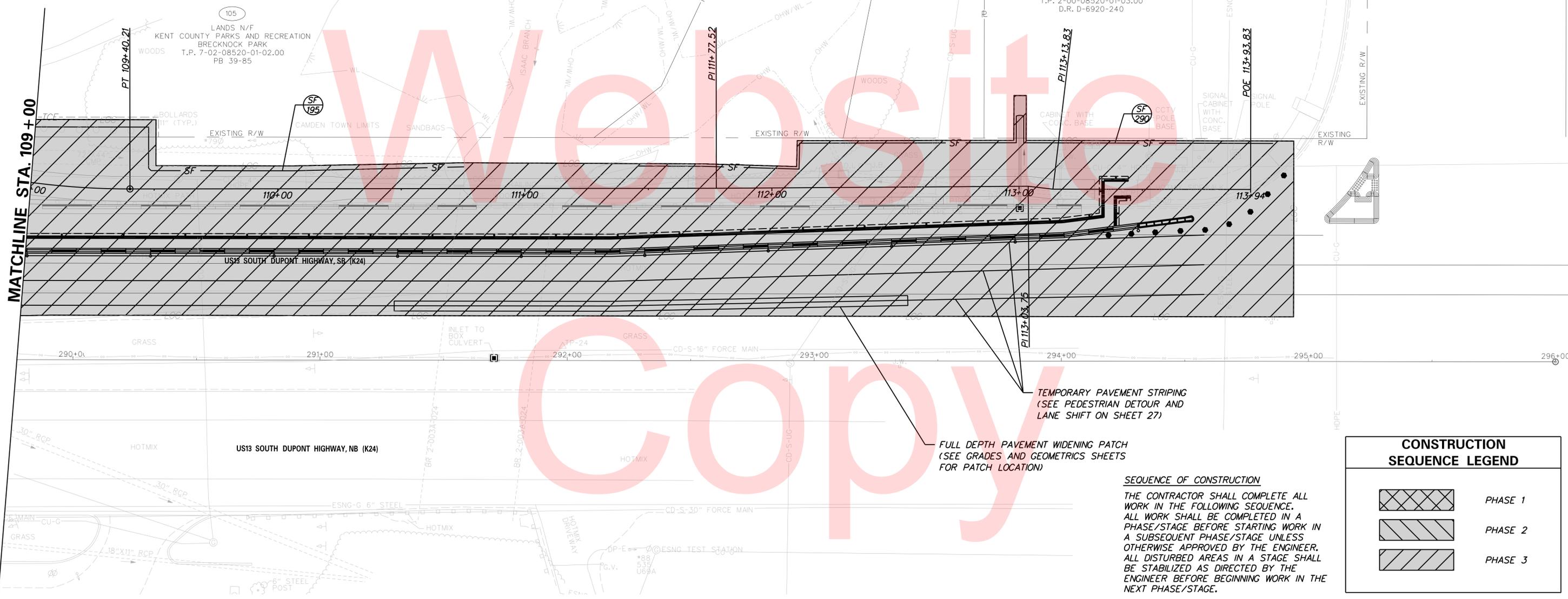
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PHASING NOTES:

PHASE 3 - BRECKNOCK PARK TRAIL - TRAIL CONNECTION TO BRECKNOCK PARK AND PEDESTRIAN BRIDGE

1. PLACE PORTABLE CHANGEABLE MESSAGE SIGN TEN (10) DAYS IN ADVANCE OF CONSTRUCTION.
 2. MESSAGE TO BE APPROVED BY THE DISTRICT SAFETY OFFICER.
 3. INSTALL ALL EROSION AND SEDIMENT CONTROL MEASURES.
 4. INSTALL REDUCED SPEED LIMIT SIGN IN ACCORDANCE WITH THE DE MUTCD. SIGN SHALL BE PLACED APPROX. 325 FEET UPSTREAM OF POW-MIA PARKWAY ON SOUTHBOUND US13.
 5. INSTALL FULL DEPTH PAVEMENT WIDENING PATCH ALONG SOUTHBOUND US13. WORK IS TO BE PERFORMED AT NIGHT.
 6. INSTALL MAINTENANCE OF TRAFFIC ON SOUTHBOUND ROUTE 13 IN ACCORDANCE WITH THE PLANS, INCLUDING PEDESTRIAN DETOUR AND LANE SHIFT (SEE SHEET NO. 27).
 7. DIVERT PEDESTRIAN TRAFFIC TO NEW ACCESSIBLE ROUTE ON ROUTE 13 SHOULDER.
 8. CONSTRUCT PROPOSED PEDESTRIAN BRIDGE WITHIN THIS PHASE OF CONSTRUCTION.
- A. REMOVE EXISTING GUARDRAIL.
 - B. REMOVE EXISTING STEEL AND TIMBER PEDESTRIAN BRIDGE AT BRIDGE 2-003A-024.
 - C. REMOVE PORTIONS OF EXISTING CULVERT CONCRETE CURB AND WINGWALLS AS SHOWN ON CONSTRUCTION PLANS.
 - D. INSTALL NEW STEEL AND TIMBER PEDESTRIAN BRIDGE.
 - E. EXCAVATE EXISTING EARTH SHOULDERS AND INSTALL MODULAR BLOCK RETAINING WALL FOR PEDESTRIAN BRIDGE APPROACHES.
 - F. INSTALL APPROACH RAILING AS SHOWN ON CONSTRUCTION PLANS.
 - G. INSTALL CURB AND GUARDRAIL AS SHOWN ON CONSTRUCTION PLAN.
 - H. PLACE BITUMINOUS CONCRETE PAVEMENT ON APPROACH. ADJUST PAVEMENT HEIGHT AS REQUIRED TO PROVIDE LEVEL TRANSITION TO BRIDGE DECK.
 - I. TOPSOIL AND SEED ALL DISTURBED AREAS WITHIN THIS PHASE OF CONSTRUCTION.
 - J. REMOVE MAINTENANCE OF TRAFFIC AND RETURN PEDESTRIAN TRAFFIC TO NEW BRIDGE.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ENTRANCES DURING THIS PHASE OF CONSTRUCTION. COSTS ASSOCIATED WITH MAINTAINING ENTRANCES ARE INCIDENTAL TO THE CONTRACT.



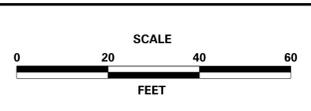
CONSTRUCTION SEQUENCE LEGEND

	PHASE 1
	PHASE 2
	PHASE 3

SEQUENCE OF CONSTRUCTION
 THE CONTRACTOR SHALL COMPLETE ALL WORK IN THE FOLLOWING SEQUENCE. ALL WORK SHALL BE COMPLETED IN A PHASE/STAGE BEFORE STARTING WORK IN A SUBSEQUENT PHASE/STAGE UNLESS OTHERWISE APPROVED BY THE ENGINEER. ALL DISTURBED AREAS IN A STAGE SHALL BE STABILIZED AS DIRECTED BY THE ENGINEER BEFORE BEGINNING WORK IN THE NEXT PHASE/STAGE.

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ADDENDUMS / REVISIONS	

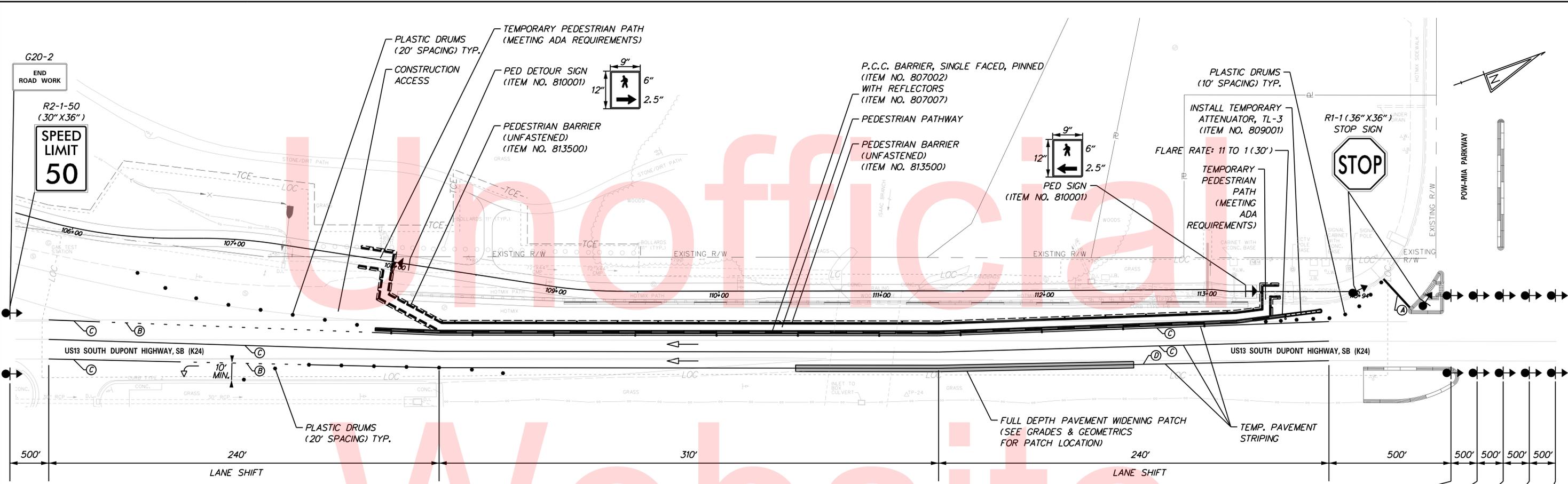


BRECKNOCK PARK MULTI-USE TRAIL

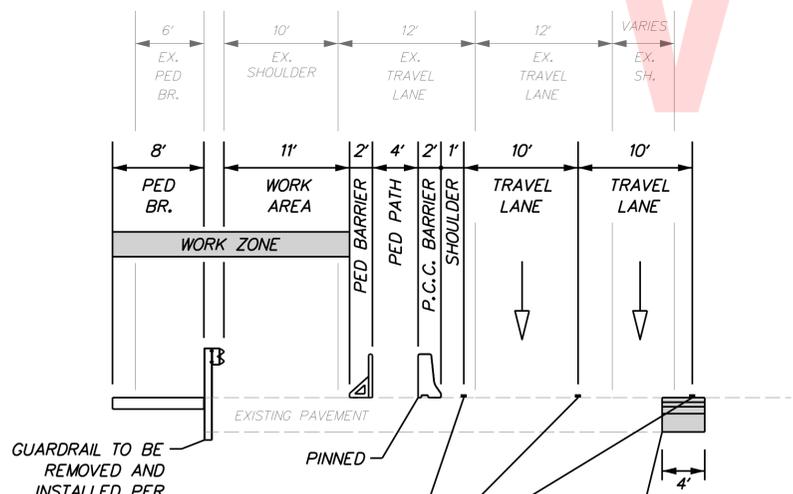
CONTRACT	T201330011	ROAD NO.	K4 & K24
COUNTY	KENT	DESIGNED BY:	ASH
		CHECKED BY:	JMH

CONSTRUCTION PHASING, M.O.T., AND EROSION CONTROL PLANS	SHEET NO.	26
	TOTAL SHTS.	36

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**PEDESTRIAN DETOUR ROUTE /VEHICLE LANE SHIFT
PHASE 3**



GUARDRAIL TO BE REMOVED AND INSTALLED PER THE CONTRACT DOCUMENTS.

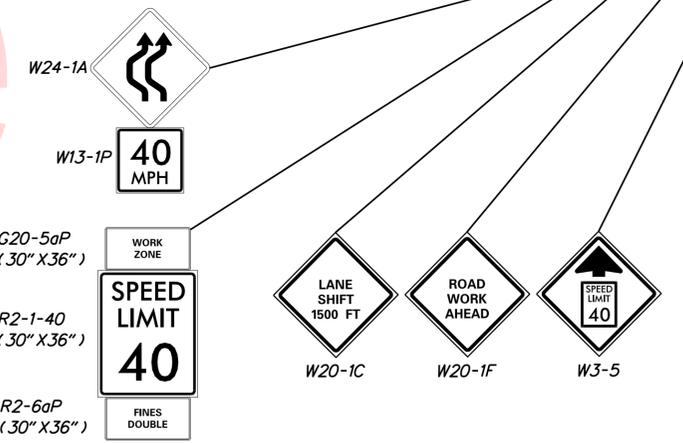
TEMPORARY PAVEMENT STRIPING (WHITE) (ITEM NO. 817009)
UTILIZE BLACKOUT TAPE TO COVER EXISTING STRIPING PRIOR TO INSTALLATION OF TEMPORARY STRIPING (ITEM NO. 817008)

FULL DEPTH PATCH SEE TYP. SECTION

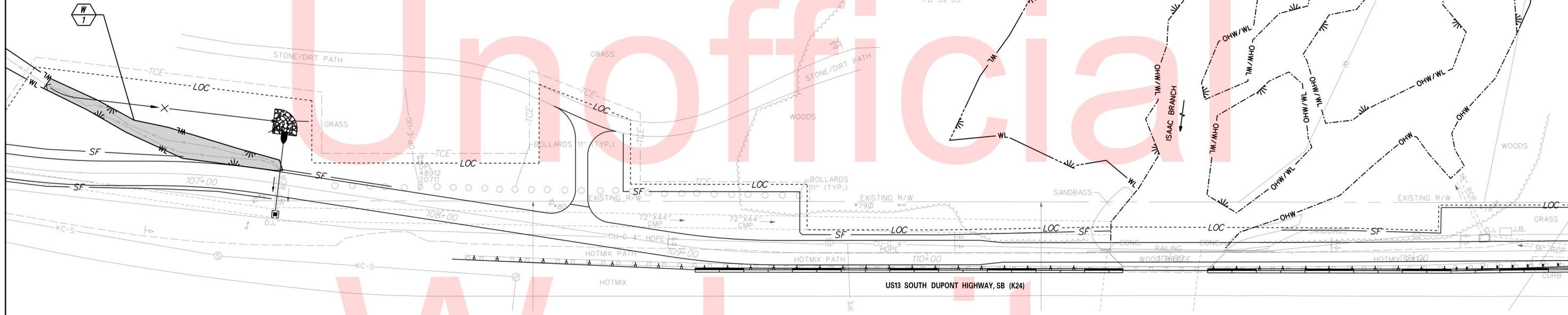
**US13 SOUTHBOUND
NOT TO SCALE**

PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	TEMPORARY MARKINGS, TAPE, WORDS/SYMBOLS (ITEM 817010)	40 SF
(B)	TEMPORARY MARKINGS, TAPE, 4" WHITE 2' LINE & 6' GAP (ITEM 817009)	63 LF
(C)	TEMPORARY MARKINGS, TAPE, 4" WHITE SOLID (ITEM 817009)	1,457 LF
(D)	TEMPORARY MARKINGS, TAPE, 4" YELLOW SOLID (ITEM 817009)	630 LF
(E)	BLACKOUT TAPE, 6" (ITEM 817008)	2,400 LF

- NOTES:**
1. THE CONTRACTOR SHALL UTILIZE TA-33 FOR FULL-DEPTH PATCH ALONG THE INSIDE SHOULDER OF US13, AS SHOWN ON THE PLAN. THIS WORK IS TO BE PERFORMED PRIOR TO THE START OF THE PHASE 3 TEMPORARY DETOUR AND CONSTRUCTION (NIGHTWORK). LIGHT PLANTS ARE INCIDENTAL TO ITEM 801000 AS REQUIRED FOR ALL NIGHTWORK.
 2. THE CONTRACTOR SHALL UTILIZE TA-36 AND INSTALL ALL NECESSARY SIGNAGE AND TRAFFIC SAFETY DEVICES PRIOR TO THE START OF ANY WORK WITHIN THIS PHASE 3. A TRAFFIC OFFICER SHALL BE ON SITE DURING THE INSTALLATION OF THE SAFETY BARRIER AND TEMPORARY ATTENUATOR.
 3. THE CONTRACTOR SHALL MAINTAIN THE PROPOSED PEDESTRIAN PATHWAY THROUGHOUT THE DAY AND ENSURE ITS COMPLIANCE AT THE END OF EACH WORK DAY.
 4. THE CONTRACTOR SHALL UTILIZE A FLAGGER WHEN ACCESS TO THE CONSTRUCTION ENTRANCE IS NEEDED. THE FLAGGER WILL GUIDE PEDESTRIANS SAFELY THROUGH THE TEMPORARY PATHWAY AT THE POINT WHERE THE BARRICADES HAVE BEEN REMOVED. THE PEDESTRIAN BARRICADES ARE TO BE PLACED IMMEDIATELY AFTER VEHICLE IS THROUGH THE ENTRANCE.
 5. TRAFFIC OFFICERS SHALL BE UTILIZED DURING PHASE 3 AT THE SET UP AND BREAK DOWN OF THE VEHICLE LANE SHIFT PLAN.
 6. THE CONTRACTOR SHALL USE BLACKOUT TAPE, 6" (ITEM 817008) TO MASK THE EXISTING LANE STRIPING ALONG US13.



PERMANENT WETLAND IMPACT AREA SCHEDULE						
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	CLASS
W-1	FILL	701.14	0.02	41.39	USACE	PEM
TOTAL IMPACTS		701.14	0.02	41.39		



1. GENERAL NOTES:

- A. THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
- B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY OF THE NATURAL AND/OR CULTURAL RESOURCE ISSUES) IS NECESSARY, THE ENVIRONMENTAL STUDIES SECTION SHALL BE CONTACTED AT (302) 760-2264 TO ALLOW THE DEPARTMENT TO COORDINATE WITH THE APPROPRIATE RESOURCE AGENCIES FOR APPROVAL.
- C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.
- D. THE IDENTIFIED PERMANENT AND TEMPORARY IMPACTS TO JURISDICTIONAL RESOURCES SHOWN ON THE ENVIRONMENTAL COMPLIANCE SHEET ARE THE ONLY AUTHORIZED IMPACTS.

2. CULTURAL RESOURCES ISSUES:

- A. DELDOT SUBMITTED "FINDING OF NO ADVERSE EFFECTS" OF HISTORIC PROPERTIES TO SHPO AS PART OF ENVIRONMENTAL COMPLIANCE.
- B. STAGING, STOCKPILING AND DISPOSAL:
 - 1. ANY STAGING AND STOCKPILE AREA(S) OUTSIDE THE PROJECT'S LOC THAT INDIVIDUALLY OR CUMULATIVELY ARE LARGER THAN 10,000 SQUARE FEET MUST BE APPROVED BY DELDOT'S ARCHAEOLOGIST, WITHIN 30 DAYS, DELDOT WILL EITHER:
 - A. APPROVE THE USE OF THE PROPOSED STAGING AND STOCKPILE AREA(S).
 - B. REJECT THE REQUEST
 - C. PERFORM AN ARCHAEOLOGICAL SURVEY TO DETERMINE WHETHER TO APPROVE OR REJECT THE REQUEST, WHICH MAY TAKE UP TO 3 MONTHS. IF AN ARCHAEOLOGICAL SURVEY IS NECESSARY, DELDOT OR A CONSULTANT ON ITS BEHALF WILL UNDERTAKE THE SURVEY.
 - 2. STOCKPILING, STAGING, AND DISPOSAL MUST BE IN UPLAND, NON-ARCHAEOLOGICALLY SENSITIVE SITES REVIEWED AND APPROVED BY THE STATE HISTORIC PRESERVATION OFFICE (SHPO). THE DEPARTMENT WILL NOT CONSIDER ANY DELAYS OR MONETARY CLAIMS OF ANY NATURE RESULTING FROM THE CONTRACTOR'S FAILURE OR DIFFICULTY IN FINDING NECESSARY DISPOSAL SITES TO MEET THE TIME FRAMES AND CAPACITIES REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANS, PERMITS, EROSION AND SEDIMENTATION CONTROL MEASURES, ETC. REQUIRED BY THE APPROPRIATE REGULATORY AGENCY FOR UTILIZING OFF-SITE DISPOSAL AREAS. SEE ENVIRONMENTAL STATEMENT FOR MORE DETAILS.
 - 3. ALL EXCESS EXCAVATED MATERIAL NOT USED IN HIGHWAY SHALL BE DISPOSED OF IN UPLAND, NON-WETLAND DISPOSAL SITE(S) OR SENSITIVE SITE(S). THE EXCAVATED MATERIAL SHALL BE PROPERLY CONTAINED AND STABILIZED TO PREVENT ITS ENTRY INTO ANY ADJACENT WETLANDS OR WATERWAYS. NO DISPOSAL/WASTING OPERATION SHALL COMMENCE UNTIL THE PERMITTEE OBTAINS WRITTEN APPROVAL OF ANY DISPOSAL SITE(S) FROM THE CORPS OF ENGINEERS AND THE STATE HISTORIC PRESERVATION OFFICE. THE DEPARTMENT WILL NOT CONSIDER ANY DELAYS OR MONETARY CLAIMS OF ANY NATURE RESULTING FROM THE CONTRACTOR'S FAILURE OR DIFFICULTY IN FINDING NECESSARY DISPOSAL SITES TO MEET THE TIME FRAMES AND CAPACITIES REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANS, PERMITS, EROSION AND SEDIMENTATION CONTROL MEASURES, ETC. REQUIRED BY THE APPROPRIATE REGULATORY AGENCY FOR UTILIZING OFF-SITE SPOIL AREAS.

3. NATURAL RESOURCE ISSUES:

- A. PERMIT REQUIREMENT/APPROVALS:
 - U.S. ARMY CORPS OF ENGINEERS (COE): NWP 14** / CENAP-OP-R-2017-206-85 (05/17)
 - DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED (PROJECT NOT IN CRW)
 - * THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THIS APPROVAL.
 - ** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE IT IS DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.
- B. CONSTRUCTION RESTRICTIONS:
 - FISHERIES - NONE
 - MIGRATORY BIRDS - NONE
 - ENDANGERED SPECIES - NONE

4. PROTECTION OF RESOURCES:

- A. PROTECTION OF RESOURCES (WETLANDS/WATERS/NATURAL AREA): IN ORDER TO PROTECT RESOURCES LOCATED ALONG THE PROJECT, SILT FENCE OR PROTECTIVE FENCING SHALL BE PLACED AT THE LIMITS OF CONSTRUCTION AT ALL LOCATIONS WHERE WETLANDS AND WATERS COME WITHIN TWENTY (20) FEET OF THE LIMITS OF CONSTRUCTION. THE CONTRACTOR'S ACCESS INTO THESE AREAS IS STRICTLY PROHIBITED.
- B. SILT FENCE INSTALLATION ADJACENT TO WOODED UPLANDS/WETLANDS: SANDBAGS SHALL BE USED TO SECURE SILT FENCE IN LIEU OF TRENCHING UNLESS PROPER EROSION & SEDIMENT CONTROL CANNOT BE MAINTAINED. SANDBAGS USED TO SECURE SILT FENCE SHALL BE INCIDENTAL TO ITEM NUMBER 905001 - SILT FENCE. THE ENVIRONMENTAL STUDIES SECTION (CAROL SULLIVAN, 302-760-2129) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.

LEGEND	
	ORDINARY HIGH WATER/WETLAND BOUNDARY
	ORDINARY HIGH WATER
	WETLAND BOUNDARY
	PERMANENT IMPACT AREA
	IMPACT AREA TYPE ID. (SEE BELOW)
	IMPACT AREA ID. AND/OR NUMBER

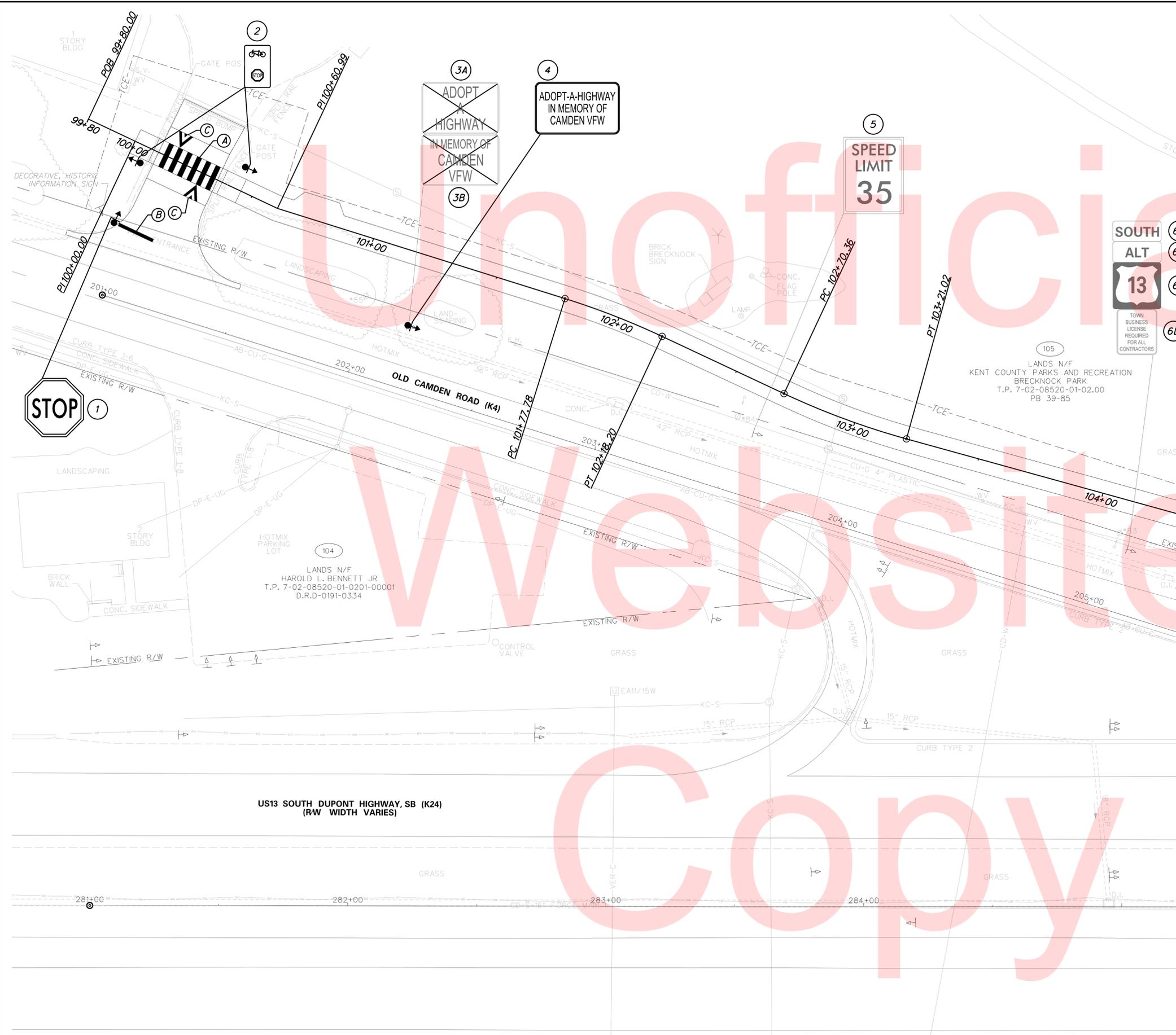
W = WETLAND IMPACT

SHEET PREPARED BY:
CENTURY ENGINEERING, INC.
4134 N. DUPONT HWY
DOVER, DELAWARE 19901
JULY 16, 2016
LAST UPDATED: JUNE 2, 2017

WETLAND DELINEATION BY CENTURY ENGINEERING, INC. IN APRIL 2017, IN ACCORDANCE WITH THE CORPS WETLAND DELINEATION MANUAL AND THE CORPS ATLANTIC AND GULF COASTAL PLAIN REGIONAL SUPPLEMENT VERSION 2.0 (2010).

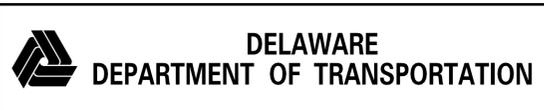
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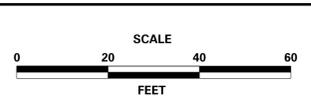


PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	24" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	120 SF
(B)	16" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	20 SF
(C)	12" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	26 SF
(D)	5" SOLID YELLOW EPOXY RESIN PAVEMENT STRIPING (ITEM 817013)	0 LF
(E)	5" SOLID WHITE EPOXY RESIN PAVEMENT STRIPING (ITEM 817013)	0 LF
(F)	5" DASHED WHITE EPOXY RESIN PAVEMENT STRIPING, 10' X 30' (ITEM 817013)	0 LF
(G)	5" DASHED WHITE EPOXY RESIN PAVEMENT STRIPING, 2' X 6' (ITEM 817013)	0 LF

NOTE: CROSSWALK DIMENSIONS SHALL BE 10' x 2' UNLESS OTHERWISE NOTED.



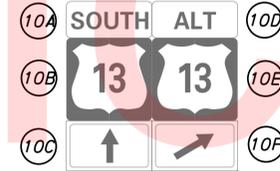
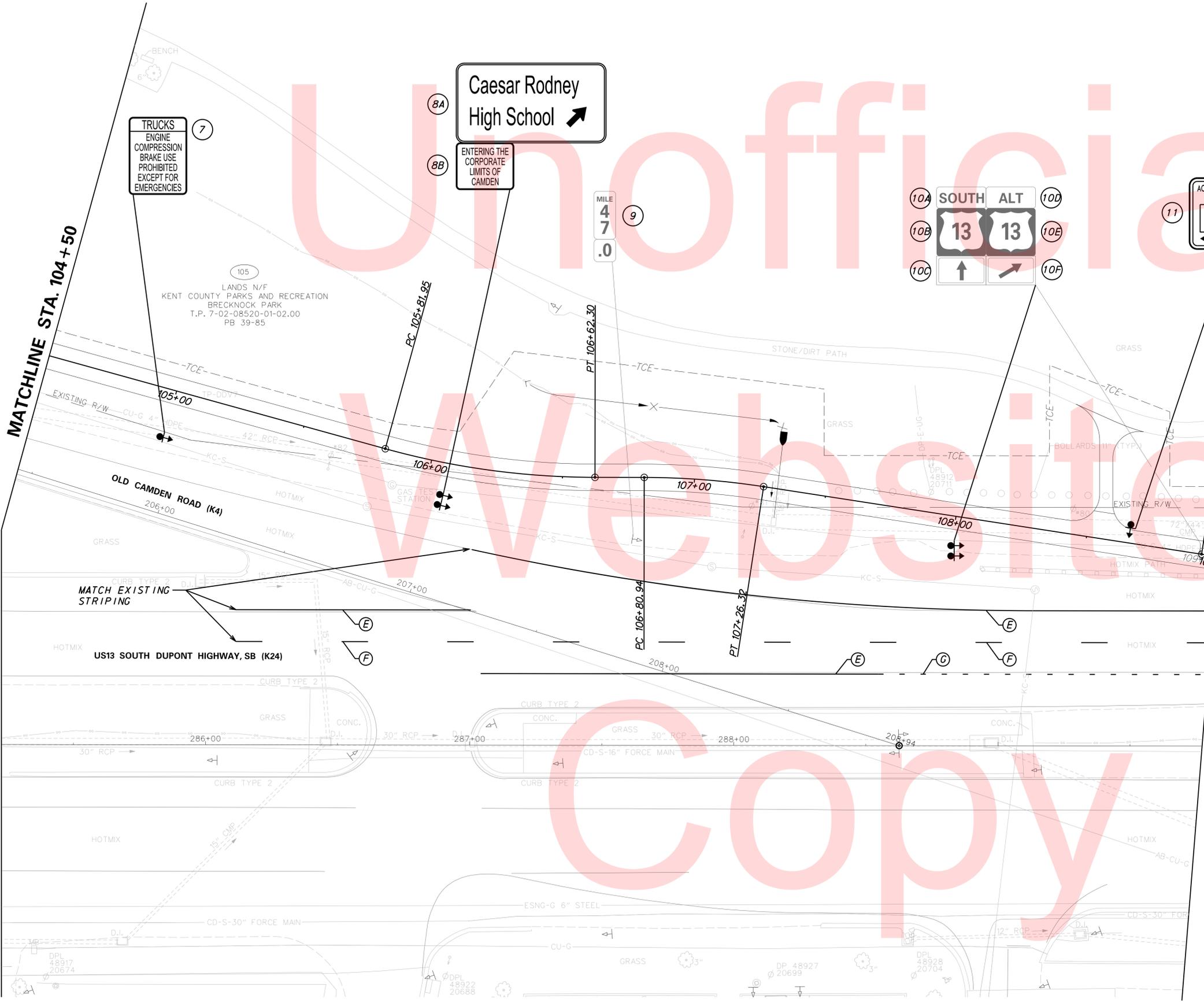
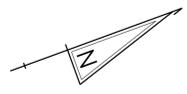
ADDENDUMS / REVISIONS	



BRECKNOCK PARK MULTI-USE TRAIL

CONTRACT T201330011	ROAD NO. K4 & K24
COUNTY KENT	DESIGNED BY: ASH CHECKED BY: JMH

SIGNING AND STRIPING PLANS	SHEET NO. 29
	TOTAL SHTS. 36



MATCHLINE STA. 109 + 00

MATCHLINE STA. 104 + 50

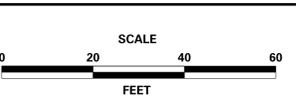
PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	24" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	0 SF
(B)	16" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	0 SF
(C)	12" SOLID WHITE ALKYD THERMOPLASTIC PAVEMENT STRIPING (ITEM 817002)	0 SF
(D)	5" SOLID YELLOW EPOXY RESIN PAVEMENT STRIPING (ITEM 817013)	0 LF
(E)	5" SOLID WHITE EPOXY RESIN PAVEMENT STRIPING (ITEM 817013)	523 LF
(F)	5" DASHED WHITE EPOXY RESIN PAVEMENT STRIPING, 10' X 30' (ITEM 817013)	93 LF
(G)	5" DASHED WHITE EPOXY RESIN PAVEMENT STRIPING, 2' X 6' (ITEM 817013)	31 LF

NOTE: CROSSWALK DIMENSIONS SHALL BE 10' x 2' UNLESS OTHERWISE NOTED.

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DELAWARE DEPARTMENT OF TRANSPORTATION

ADDENDUMS / REVISIONS

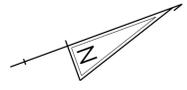


BRECKNOCK PARK MULTI-USE TRAIL

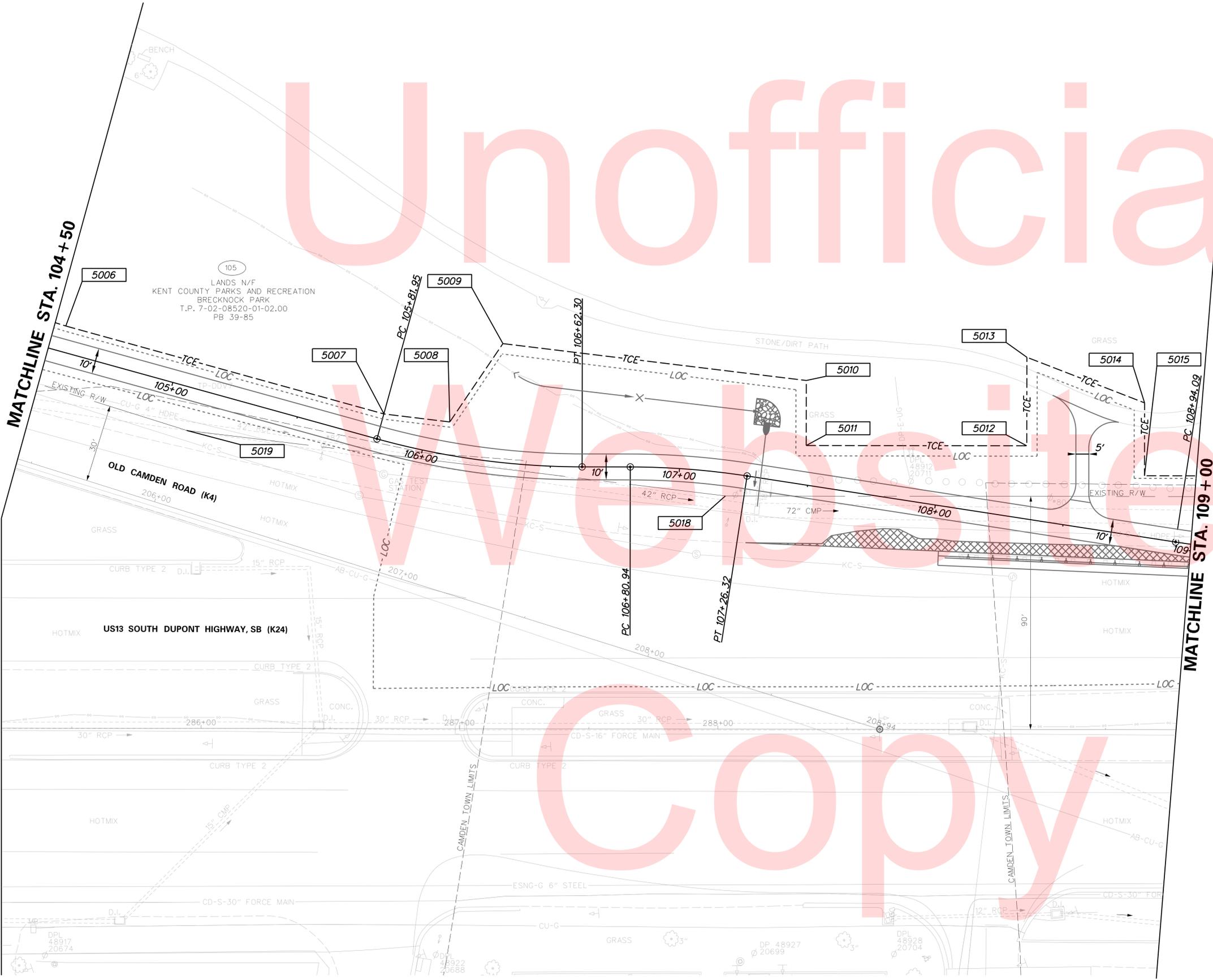
CONTRACT	ROAD NO.	K4 & K24
T201330011	DESIGNED BY:	ASH
COUNTY	CHECKED BY:	JMH
KENT		

SIGNING AND STRIPING PLANS

SHEET NO.	30
TOTAL SHTS.	36

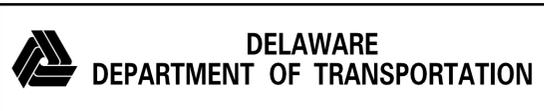


Unofficial

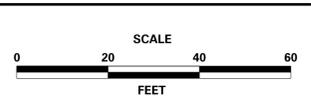


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SHEET 2 OF 4



ADDENDUMS / REVISIONS	



BRECKNOCK PARK
MULTI-USE TRAIL

CONTRACT	ROAD NO.	K4 & K24
T201330011	DESIGNED BY:	ASH
COUNTY	CHECKED BY:	JMH
KENT		

RIGHT OF WAY
PLANS

SHEET NO.	34
TOTAL SHTS.	36

COUNTY ASSESSMENT PARCEL NUMBER	PLAN SHEET NUMBER	OWNERSHIP OF RECORD	TITLE SOURCE	PROPERTY AREA BEFORE ACQUISITION (ACRE) D=DEED C=CALCULATED A=ASSESSMENT	ACQUISITION CODE FEE, R/W, P/E, TCE	AREA TO BE ACQUIRED			PROPERTY AREA REMAINING (SQ. FEET / ACRES)	DEED RECORD OF ACQUISITION	REMARKS	
						ACQUISITION (SQ. FEET / ACRES)	AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET / ACRES)	EASEMENT				
								PERMANENT (SQ. FEET / ACRES)				TEMPORARY (SQ. FEET / ACRES)
7-02-08520-01-0200	33-35	(105) KENT COUNTY PARKS & RECREATION, BRECKNOCK PARK	P. B. 39-85	D - 86.07	TCE			29383.3368 / 0.67	3749078.52 / 86.07			

ASSESSMENT NUMBER	OWNERSHIP OF RECORD	TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)
7-02-08520-01-0200	(105) KENT COUNTY PARKS & RECREATION, BRECKNOCK PARK	TCE	P. B. 39-85	86.067

ALIGNMENT NUMBER & DESCRIPTION: 600 - US 13											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
5000	600	280+98.05	-269.56	408361.1764	622694.5969	N 52°35'36.45" W	61.99				
5001	600	281+16.49	-328.75	408398.8362	622645.3515	N 37°24'23.55" E	71.26				
5002	600	281+84.52	-307.56	408455.4396	622688.6383	S 52°35'36.45" E	29.50				
5003	600	281+75.75	-279.40	408437.5212	622712.0691	N 37°24'23.55" E	144.15				
5004	600	283+13.38	-236.53	408552.0284	622799.6372	N 43°34'03.63" E	74.51				
5005	600	283+81.73	-206.86	408606.0173	622850.9920	N 37°24'23.55" E	173.60				
5006	600	285+47.48	-155.24	408743.9164	622956.4488	N 35°26'40.44" E	127.75				
5007	600	286+70.68	-121.45	408847.9943	623030.5350	N 26°56'37.55" E	25.60				
5008	600	286+96.10	-118.40	408870.8144	623042.1342	N 35°46'05.46" W	36.58				
5009	600	287+16.62	-148.68	408900.4925	623020.7547	N 26°56'37.55" E	118.26				
5010	600	288+34.04	-134.60	409005.9167	623074.3408	S 69°53'36.45" E	25.10				
5011	600	288+34.04	-109.50	408997.2881	623097.9110	N 20°06'23.55" E	85.34				
5012	600	289+19.38	-109.50	409077.4271	623127.2481	N 69°52'42.70" W	34.17				
5013	600	289+19.39	-143.67	409089.1820	623095.1635	N 41°09'05.05" E	48.82				
5014	600	289+64.95	-126.14	409125.9401	623127.2877	S 69°53'36.45" E	28.14				
5015	600	289+64.95	-98.00	409116.2665	623153.7127	N 20°06'23.55" E	69.56				
5016	600	290+34.51	-98.00	409181.5872	623177.6251	S 69°53'36.34" E	8.00				
5017	600	290+34.51	-90.00	409178.8370	623185.1376	S 20°06'23.55" W	231.72				
5018	600	288+02.79	-90.00	408961.2392	623105.4799	S 26°56'37.55" W	210.00				
5019	600	285+94.28	-115.00	408774.0353	623010.3261	S 37°24'23.55" W	519.75				
5000	600	280+98.05	-269.56	408361.1764	622694.5969						

FIGURE 50100 AREA = 29383.3368 SQ. FT. (0.6745 ACRES)

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LEGEND	
FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING RW
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
*	" - " OFFSET IS LEFT OF BASELINE
**	" - " CURVE TURNS TO THE LEFT

SHEET 4 OF 4		ACQUISITION CODES	
FEE - ACQUISITION	R/W - AREA OCCUPIED BY EXISTING R/W	P/E - PERMANENT EASEMENT	TCE - TEMPORARY EASEMENT



ADDENDUMS / REVISIONS

NOT TO SCALE

**BRECKNOCK PARK
MULTI-USE TRAIL**

CONTRACT T201330011	ROAD NO. K4 & K24
COUNTY KENT	DESIGNED BY: ASH CHECKED BY: JMH

RIGHT OF WAY PLANS	
SHEET NO. 36	TOTAL SHTS. 36