SHEET INDEX

DWG. NO.	SHT. NO.	DESCRIPTION
01	TT-1	TITLE SHEET
02	AB-1	NOTES, ABBREVIATIONS, LEGEND AND CONVENTIONAL SIGNS
03	TS-1	TYPICAL SECTIONS
04	TS-2	TYPICAL SECTIONS
05	TS-3	TYPICAL SECTIONS
06	DE-1	ROADWAY DETAILS
07	GS-1	BASELINE GEOMETRY
08	PS-1	ROADWAY PLAN AND PROFILE
09	PS-2	ROADWAY PLAN AND PROFILE
10	PS-3	ROADWAY PLAN AND PROFILE
11	PS-4	ROADWAY PLAN
12	PS-5	ROADWAY PROFILE
13	PS-6	ROADWAY PROFILE
14	PS-7	ROADWAY PLAN AND PROFILE
15	PS-8	ROADWAY PLAN AND PROFILE
16	PS-9	ROADWAY PLAN AND PROFILE
17	PS-10	ROADWAY PLAN AND PROFILE
18	RL-1	ROUNDABOUT LAYOUT
19	RL-2	ROUNDABOUT LAYOUT
20	DE-2	INTERSECTION DETAILS
21	DD-1	DRAINAGE PROFILE
22	DD-2	DRAINAGE PROFILE
23	DD-3	DRAINAGE PROFILE
24	DD-4	DRAINAGE PROFILE
25	DD-5	DRAINAGE PROFILE
26	DD-6	DRAINAGE PROFILE
27	DD-7	DRAINAGE PROFILE
28	DD-8	DRAINAGE PIPE SCHEDULES
29	DD-9	DRAINAGE STRUCTURE SCHEDULES
30	DD-10	DRAINAGE DITCH SCHEDULES
31	SN-1	SIGNING AND PAVEMENT MARKING PLAN
32	SN-2	SIGNING AND PAVEMENT MARKING PLAN
33	SN-3	SIGNING AND PAVEMENT MARKING PLAN
34	SN-4	SIGNING AND PAVEMENT MARKING PLAN
35	SN-5	SIGNING AND PAVEMENT MARKING PLAN
36	SN-6	SIGNING AND PAVEMENT MARKING PLAN
37	SN-7	SIGNING AND PAVEMENT MARKING PLAN
38	SN-8	SIGNING AND PAVEMENT MARKING PLAN
39	TP-1	MAINTENANCE OF TRAFFIC – GENERAL NOTES
40	TP-2	MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
41	TP-3	MAINTENANCE OF TRAFFIC PHASE 1
42	TP-4	MAINTENANCE OF TRAFFIC PHASE 1
43	TP-5	MAINTENANCE OF TRAFFIC PHASE 1
44	TP-6	MAINTENANCE OF TRAFFIC PHASE 1
45	TP-7	MAINTENANCE OF TRAFFIC PHASE 1
46	TP-8	MAINTENANCE OF TRAFFIC PHASE 2
47	TP-9	MAINTENANCE OF TRAFFIC PHASE 2
48	TP-10	MAINTENANCE OF TRAFFIC PHASE 2
49	TP-11	MAINTENANCE OF TRAFFIC PHASE 2
50	TP-12	MAINTENANCE OF TRAFFIC PHASE 2
51	SW-1	STORMWATER MANAGEMENT PLAN
52	SW-2	STORMWATER MANAGEMENT PLAN
53	SW-3	STORMWATER MANAGEMENT PLAN
54	SW-4	STORMWATER MANAGEMENT DETAILS
55	ES-1	EROSION & SEDIMENT CONTROL NOTES
56	ES-2	EROSION & SEDIMENT CONTROL DETAILS
57	ES-3	EROSION AND SEDIMENT CONTROL PLAN PHASE 1
58	ES-4	EROSION AND SEDIMENT CONTROL PLAN PHASE 1
59	ES-5	EROSION AND SEDIMENT CONTROL PLAN PHASE 1
60	ES-6	EROSION AND SEDIMENT CONTROL PLAN PHASE 1
61	ES-7	EROSION AND SEDIMENT CONTROL PLAN PHASE 1
62	ES-8	EROSION AND SEDIMENT CONTROL PLAN PHASE 1
63	ES-9	EROSION AND SEDIMENT CONTROL PLAN PHASE 1
64	LF-1	TREE PROTECTION PLAN
65	LF-2	TREE PROTECTION PLAN
66	LF-3	TREE PROTECTION PLAN
67	LF-4	TREE PROTECTION PLAN
68	LF-5	TREE PROTECTION PLAN
69	LF-6	TREE PROTECTION PLAN
70	LF-7	TREE PROTECTION PLAN
71	LF-8	TREE PROTECTION PLAN
72	LF-9	DETAILS AND NOTES
73	LP-1	LANDSCAPE PLAN
74	LP-2	LANDSCAPE PLAN
75	LP-3	LANDSCAPE PLAN
76	LP-4	LANDSCAPE PLAN
77	LP-5	LANDSCAPE PLAN
78	LP-6	LANDSCAPE PLAN
79	LP-7	LANDSCAPE PLAN
80	LP-8	LANDSCAPE PLAN
81	LP-9	LANDSCAPE PLAN
82	LP-10	DETAILS AND NOTES
83	CS-1	CROSS SECTIONS
84	CS-2	CROSS SECTIONS
85	CS-3	CROSS SECTIONS
86	CS-4	CROSS SECTIONS
87	CS-5	CROSS SECTIONS
88	CS-6	CROSS SECTIONS
89	CS-7	CROSS SECTIONS
90	CS-8	CROSS SECTIONS
91	CS-9	CROSS SECTIONS
92	CS-10	CROSS SECTIONS
93	CS-11	CROSS SECTIONS
94	CS-12	CROSS SECTIONS
95	CS-13	CROSS SECTIONS
96	CS-14	CROSS SECTIONS
97	CS-15	CROSS SECTIONS
98	CS-16	CROSS SECTIONS
99	CS-17	CROSS SECTIONS
100	CS-18	CROSS SECTIONS
101	CS-19	CROSS SECTIONS
102	CS-20	CROSS SECTIONS
103	CS-21	CROSS SECTIONS
104	CS-22	CROSS SECTIONS
105	CS-23	CROSS SECTIONS
106	CS-24	CROSS SECTIONS

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING

RECONSTRUCTION OF CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO WALTER MARTZ /POOLE JONES ROAD

FREDERICK COUNTY PROJECT NO. C6308.6308.01

NOTICE TO BIDDERS

THE SPECIFICATIONS FOR THIS CONTRACT WILL BE THOSE OF THE MDOT SHA, TITLED "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS", DATED MAY 2019, REVISIONS THERETO, AND THE SPECIAL PROVISIONS.

SEDIMENT AND EROSION CONTROL WILL BE STRICTLY ENFORCED DURING CONSTRUCTION BY ENVIRONMENTAL COMPLIANCE SECTION PHONE NO. 310-600-3507.

THE GRADING LIMITS SHOWN ON THE PLANS ARE NOT TO BE EXCEEDED. CHANGES IN GRADING EROSION AND SEDIMENT CONTROL PLAN, OR OTHER SEGMENT OF THE WORK MUST BE REVIEWED AND APPROVED BY THE FREDERICK COUNTY DIVISION OF PUBLIC WORKS.

THE FREDERICK COUNTY DIVISION OF PUBLIC WORKS SHALL ONLY BE RESPONSIBLE FOR THE COMPLETENESS OF DOCUMENTS OBTAINED DIRECTLY FROM FREDERICK COUNTY. FAILURE TO ATTACH ALL ADDENDA MAY CAUSE THE BID TO BE NON-RESPONSIVE.

IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR THAT THE STANDARD PLATES IN HIS/HER POSSESSION ARE THE LATEST REVISED MDOT SHA STANDARD PLATES AS OF THE DATE OF THE AWARD OF THIS PROJECT.

RIGHT OF WAY LINES ON THESE PLANS DO NOT INCLUDE EASEMENTS. THEY ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THESE LINES DO NOT REPRESENT THE OFFICIAL PROPERTY ACQUISITION LINES. FOR OFFICIAL FEE SIMPLE RIGHT OF WAY AND EASEMENT INFORMATION, SEE APPROPRIATE R/W PLATS NUMBERED *

MDE PERMIT NO. * _____ EXPIRATION DATE:

USCAE PERMIT NO. * _____ EXPIRATION DATE: _____

OWNER'S / DEVELOPER'S CERTIFICATION

I CERTIFY THAT THIS PLAN OF SEDIMENT CONTROL WILL BE IMPLEMENTED TO THE FULLEST EXTENT, AND ALL STRUCTURES WILL BE INSTALLED TO THE DESIGN AND SPECIFICATIONS AS SPELLED OUT IN THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE EVALUATION BY THE FREDERICK COUNTY SOIL CONSERVATION DISTRICT PERSONNEL AND COOPERATING AGENCIES.

_____

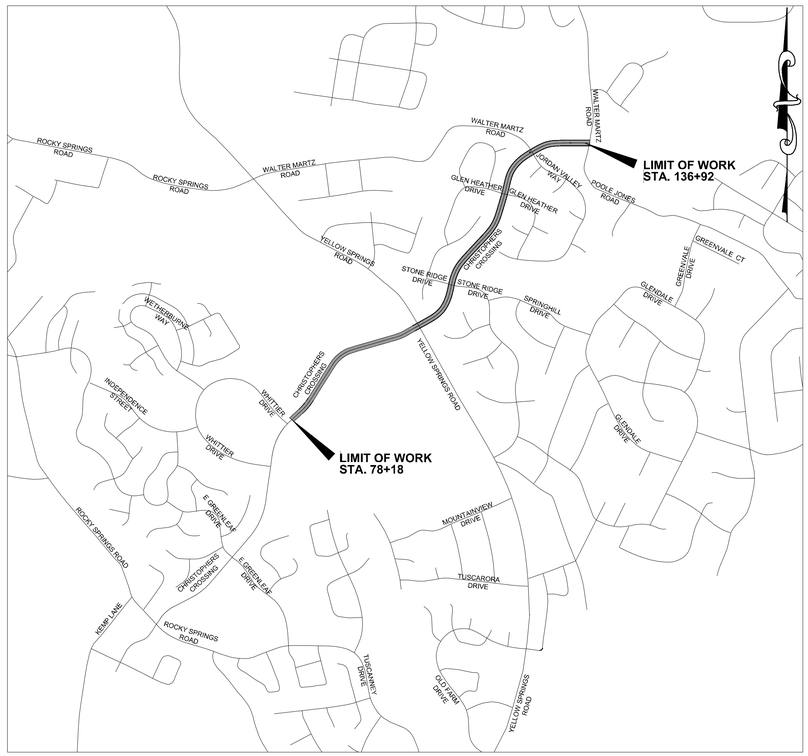
JASON M. STITT, P.E., CHIEF
FREDERICK COUNTY OFFICE OF TRANSPORTATION ENGINEERING
355 MONTEVUE LANE, SUITE 200
FREDERICK, MARYLAND 21702
301-600-2932

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH LOCAL ORDINANCES, COMAR 26.17.01.07 AND 2017 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (LATEST VERSION AND REVISIONS).

_____

SIGNATURE DATE REG. NO.



PROJECT VICINITY MAP
SCALE: 1"=1000'

SURVEY INFORMATION

THE DATA COLLECTED ELECTRONICALLY AND NO PHYSICAL FIELD BOOK EXISTS. CONTROL INFORMATION IS AVAILABLE UPON REQUEST.

FIELD SURVEYS PREPARED BY:
A. MORTON THOMAS & ASSOCIATES
MARCH 2020

HORIZONTAL DATUM: NAD 83/2011

VERTICAL DATUM: NAVD 88

CHRISTOPHERS CROSSING TRAFFIC DATA	
ROAD CLASSIFICATION	MAJOR ARTERIAL
DESIGN SPEED	35 MPH
A.D.T. (EXISTING) 2019	7000
A.D.T. (FUTURE) 2039	12600
PERCENT TRUCKS	2.5%

YELLOW SPRINGS ROAD TRAFFIC DATA	
ROAD CLASSIFICATION	MAJOR ARTERIAL
DESIGN SPEED	40 MPH
A.D.T. (EXISTING) 2019	8660
A.D.T. (FUTURE) 2039	14050
PERCENT TRUCKS	1.5%

FREDERICK
SOIL CONSERVATION DISTRICT

APPROVED BY: _____
DISTRICT MANAGER

DATE: _____

FOR SWM REVIEW ONLY

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE

REVIEWED IN ACCORDANCE WITH LOCAL COUNTY REQUIREMENTS. FREDERICK COUNTY ASSUMES NO LIABILITY FOR DESIGN AND/OR CONSTRUCTION. APPROVAL IS VALID FOR TWO (2) YEARS AFTER THE LAST DATE SHOWN ABOVE. THE PROJECT MUST BE UNDER CONSTRUCTION BEFORE THE APPROVAL EXPIRATION TO BE CONSIDERED ACTIVE. OTHERWISE, RESUBMIT OF PLANS INCLUDING APPLICABLE FEES, MUST BE MADE TO DEVELOPMENT REVIEW FOR APPROVAL. FEES FOR RESUBMITTAL CANNOT BE WAIVED.

REV. #	DATE	REVISION DESCRIPTION *FILL IN THESE BLOCKS FOR REVISIONS ONLY	CONSULTANT DATE & INITIAL	DEV. REVIEW DATE & INITIAL

DISTURBED AREA QUANTITY

THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY _____ SQUARE FEET, AND THE TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO BE APPROXIMATELY _____ CUBIC YARDS** OF EXCAVATION AND APPROXIMATELY _____ CUBIC YARDS** OF FILL.
** THESE QUANTITIES ARE APPROXIMATE AND SHALL NOT BE USED BY THE CONTRACTOR FOR BIDDING PURPOSES.

_____
NAME DATE

EXISTING UTILITIES

THE TYPE AND LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATIONS. CONTACT "MISS UTILITY" AT 1-800-257-7777 A MINIMUM OF 5 DAYS PRIOR TO START OF WORK.

FREDERICK COUNTY OFFICE OF PUBLIC WORKS

_____
DIRECTOR DATE

FREDERICK COUNTY OFFICE OF TRANSPORTATION ENGINEERING

_____
CHIEF DATE

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

TT-1

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TITLE SHEET

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 01 OF 106

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIAL PROVISIONS, THE LATEST EDITION OF THE MDOT SHA STANDARD SPECIFICATIONS, AND SUPPLEMENTAL SPECIFICATIONS.
2. WHERE REFERENCE IS MADE TO STANDARDS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE POSSESSION OF THE MDOT SHA BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES WITH THE LATEST UP TO DATE MDOT SHA STANDARDS AS OF THE DATE OF ADVERTISEMENT OF THIS PROJECT.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE LATEST APPROVED SET OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND ANY REFERENCED MDOT SHA STANDARDS AS OF NOTICE TO PROCEED.
4. HORIZONTAL CONTROL: THE COORDINATES FOR THIS PROJECT HAVE BEEN ESTABLISHED BY RTK GPS OBSERVATIONS ADJUSTED TO THE MARYLAND GRID SYSTEM, NAD 83/2011.
5. VERTICAL CONTROL: THE LOCATIONS AND ELEVATIONS BENCHMARKS ARE SHOWN ON GEOMETRIC LAYOUT PLAN. PROJECT ELEVATIONS SHOWN ARE IN U.S. SURVEY FEET AND AGREE WITH THE MARYLAND GRID SYSTEM, NAVD 88.
6. ALL INVERT ELEVATIONS ARE APPROXIMATE. INVERT ELEVATIONS OF PIPES MAY BE MODIFIED, AS DIRECTED BY THE ENGINEER, TO MEET CONDITIONS ENCOUNTERED DURING INSTALLATION OF DRAINAGE STRUCTURES. ALL PIPES SHALL BE CONSTRUCTED ON UNIFORM GRADE BETWEEN INVERT ELEVATIONS AS NOTED ON THE PLANS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
7. THE LOCATIONS AND LENGTHS OF PIPES TO BE INSTALLED SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING.
8. THE CONTRACTOR SHALL MAKE, CHECK, AND BE RESPONSIBLE FOR ALL MEASUREMENTS AND DIMENSIONS NECESSARY FOR THE PROPER CONSTRUCTION OF ALL WORK.
9. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORMDRAIN STRUCTURES AS NECESSARY IN ORDER TO MEET FIELD CONDITIONS AS APPROVED THE ENGINEER.
10. ALL DITCHES AND CHANNELS SHALL BE CONSTRUCTED AND STABILIZED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS SHOWN ON THE PLANS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ACTUAL CONDITIONS AND PLANNING ALL CONSTRUCTION ACCORDINGLY. ALL DIMENSIONS SHOWN SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE ANY WORK COMMENCES.
12. ANY DAMAGE TO ADJACENT ROADS, YARDS, STRUCTURES, FENCES, SHRUBBERY, ETC., DURING CONSTRUCTION SHALL BE REPLACED IN KIND BY THE CONTRACTOR BEFORE ANY WORK COMMENCES.
13. THE CONTRACTOR SHALL GRADE FOR POSITIVE DRAINAGE AT ALL ROADWAY INTERSECTIONS, ENTRANCES, PARKING LOTS, AND YARDS IN CONFORMANCE WITH THE PROPOSED DRAINAGE PATTERNS SHOWN ON THE PLANS.
14. MAILBOXES SHALL BE REMOVED AND RESET BY THE CONTRACTOR AS NECESSARY TO COMPLETE THE WORK. THIS COST IS INCIDENTAL TO THE CLEARING AND GRUBBING ITEM. CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS AND THE POSTMASTER 48 HRS. PRIOR TO THE REMOVAL OF THE MAILBOXES. THE CONTRACTOR SHALL COORDINATE THE TEMPORARY RELOCATION AND FINAL PLACEMENT OF ALL EXISTING MAILBOXES WITH THE POST OFFICE IN FREDERICK, MD SUCH THAT MAIL DELIVERY IS UNINTERRUPTED.
15. MATERIALS SALVAGED FROM CONSTRUCTION SHALL BECOME THE CONTRACTOR'S PROPERTY UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
16. JOBSITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
17. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE DRAWINGS IS APPROXIMATE. THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE LOCATION OF ALL EXISTING UTILITIES. THE UTILITIES SHOWN ON THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE.
18. IF DURING CONSTRUCTION THE CONTRACTOR FINDS THAT CLEARANCES BETWEEN EXISTING UTILITIES AND PROPOSED WORK IS LESS THAN THAT NOTED OR IS LESS THAN SIX INCHES, HE SHALL CONTACT THE ENGINEER FOR INSTRUCTIONS ON HOW TO PROCEED.
19. THE CONTRACTOR MUST PROTECT IN PLACE ANY ACTIVE ABOVE GROUND AND OR UNDERGROUND UTILITIES FOUND UNLESS OTHER TREATMENT IS CALLED FOR. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION. THE COUNTY OR THE PROPERTY OWNER SHALL NOT BEAR ANY COST OR RESPONSIBILITY FOR DAMAGE TO UTILITIES OR PROPERTY AS THE RESULT OF THE CONTRACTOR'S NEGLIGENCE.
20. THE CONTRACTOR SHALL PROTECT AND NOT INTERRUPT EXISTING UTILITY SERVICES DURING CONSTRUCTION, UNLESS AUTHORIZED BY THE ENGINEER. THE CONTRACTOR SHALL SUPPORT EXISTING UNDERGROUND UTILITIES DURING CONSTRUCTION AND THIS SUPPORT SHALL BE INCIDENTAL TO PERTINENT PAY ITEMS.
21. THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTY AT ALL TIMES. IF ACCESS MUST BE INTERRUPTED FOR SHORT PERIODS OF TIME, THE INTERRUPTION SHALL BE COORDINATED WITH THE ENGINEER AND THE PROPERTY OWNER.
22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC THROUGHOUT THE ENTIRE PERIOD OF CONSTRUCTION BY PROVIDING A REASONABLY SMOOTH AND EVEN SURFACE SATISFACTORY FOR THE USE OF PUBLIC TRAFFIC, AND BY PROVIDING ACCESS TO ALL PUBLIC ROADS AND RESIDENTIAL AND COMMERCIAL ENTRANCES AT ALL TIMES.
23. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THE ELECTRIC POWER AND TELEPHONE SERVICE CONNECTIONS NECESSARY FOR THE FIELD OFFICES AND PROJECT OPERATIONS WITH ALLEGHENY POWER COMPANY AND VERIZON TELEPHONE COMPANY. ALL COSTS, MATERIALS, AND INSTALLATION OF SERVICE CONNECTIONS SHALL BE PAID FOR BY THE CONTRACTOR.
24. THE CONTRACTOR SHALL ADJUST TO PROPOSED GRADE ALL EXISTING MANHOLES, VALVE BOXES, OR OTHER UTILITIES LOCATED WITHIN THE ASPHALT OVERLAY AND FULL DEPTH ASPHALT PAVING AREAS. IF A VALVE BOX WILL NEED MORE THAN ONE RISER, THE VALVE BOX MUST BE ADJUSTED TO THE FINAL GRADE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE ASPHALT PAY ITEMS NECESSARY TO COMPLETE THE WORK.
25. THE CONTRACTOR SHALL ADJUST TO PROPOSED GRADE ALL EXISTING MANHOLES, VALVE BOXES, CLEANOUTS, OR OTHER UTILITIES LOCATED WITHIN THE CONCRETE SIDEWALK AND SHARED USE PATH. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONCRETE SIDEWALK ITEMS NECESSARY TO COMPLETE THE WORK.
26. ALL ASPHALT PAVEMENT UTILITY CUTS SHALL BE PERFORMED AND REPAIRED IN ACCORDANCE WITH FREDERICK COUNTY STANDARDS.
27. IN ANY AREA WHERE ASPHALT THAT IS TO BE REMOVED ADJOINS ASPHALT THAT IS TO REMAIN, THE ASPHALT PAVING SHALL BE SAWCUT IN ORDER TO PROVIDE A CLEAN JOINT BETWEEN THAT WHICH IS TO BE REMOVED AND THAT WHICH IS TO REMAIN.
28. IN AREAS WHERE CONCRETE THAT IS TO BE REMOVED ADJOINS CONCRETE THAT IS TO REMAIN, THE CONCRETE SHALL BE SAWCUT AT THE NEAREST JOINT AND A BITUMINOUS EXPANSION JOINT PROVIDED BETWEEN NEW AND EXISTING WORK. WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS SET FORTH IN THE SPECIFICATIONS AND ON THE APPROVED CONSTRUCTION DRAWINGS.
29. THE CONTRACTOR SHALL OBTAIN A ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL OR ROOT CUTTING OF TREES WITHIN THE PUBLIC RIGHT OF WAY. REPLACEMENT TREES, IF REQUIRED, WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES-MARYLAND FOREST, PARK, AND WILDLIFE SERVICE WHOSE TELEPHONE NUMBER IS (301) 888-1638. THE CONTRACTOR SHALL ALLOW FOR THE TIME INVOLVED IN THE PROCESSING OF THE PERMIT WHEN MAKING APPLICATION.
30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND PROTECTING PROPERTY MARKERS, CONTROL POINTS AND BENCHMARKS FOR THE DURATION OF THE CONTRACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE ANY OF THESE POINTS THAT ARE DISTURBED OR DAMAGED DURING THE CONSTRUCTION PROCESS. WHERE NECESSARY, POINTS SHALL BE REPLACED UNDER THE DIRECT SUPERVISION OF A REGISTERED SURVEYOR TO THE STANDARD WITH WHICH THEY WERE ESTABLISHED.
31. DEFINITION OF TERMS:
    PROPOSED RIGHT OF WAY: DENOTES LAND BELONGING TO COUNTY OR STATE, WHICH CONTAINS THE ROADWAY AND SUPPORTING STRUCTURES.

    PERPETUAL EASEMENT: PORTIONS OF PRIVATE PROPERTY FOR WHICH THE COUNTY HAS ACQUIRED THE RIGHT TO UTILIZE FOR THE INSTALLATION AND MAINTENANCE OF UTILITIES, DRAINAGE STRUCTURES, ETC.

    REVERTIBLE EASEMENT: PORTIONS OF PRIVATE PROPERTY FOR WHICH THE COUNTY HAS ACQUIRED THE RIGHT TO CONSTRUCT AND MAINTAIN SUPPORTING SLOPES AND STRUCTURES FOR THE ROADWAY.

    TEMPORARY CONSTRUCTION EASEMENT: PORTIONS OF PRIVATE PROPERTY ON WHICH THE COUNTY HAS ACQUIRED THE RIGHT TO OCCUPY AND GRADE ON DURING THE PERIOD OF CONSTRUCTION.
32. THE CONTRACTOR SHALL VERIFY THE DEPTHS OF THE UTILITIES TO CHECK IF THERE IS THE MINIMUM 30" OF COVER BEFORE USING VIBRATORY EQUIPMENT OVER WATER UTILITIES.
33. THE CONTRACTOR WILL NEED TO TAKE TEST PITS OF THE EXISTING WATER SERVICES AND WATER MAINS AT LOCATIONS OF FULL DEPTH PAVEMENT TO AVOID CONFLICTS.

EXISTING STORM INVERTS

1. PRECAST OPEN-BACK CURB INLET
   INV IN=400.77
   INV OUT=400.45
2. PRECAST OPEN-BACK CURB INLET
   INV IN=400.60
   INV OUT=400.00
3. PRECAST OPEN-BACK CURB INLET
   INV IN=399.83
   INV OUT=399.44
4. PRECAST OPEN-BACK CURB INLET
   INV IN=400.51
   INV OUT=400.04
5. HEADWALL
   INV=396.76
6. HEADWALL
   INV=397.14
7. HEADWALL
   INV=395.96
8. HEADWALL
   INV=394.92
9. RISER
   TOP=393.83
   INV OUT=387.83
10. OUTFALL
    INV=384.46
11. DOUBLE GRATE INLET
    TOP=388.80
    INV OUT=383.77
12. HEADWALL
    INV=383.25
13. DITCH INLET W/GRATE
    TOP=386.80
    INV IN=386.80(6")
    INV IN=384.46(CONC. THROAT)
    INV OUT=383.51
14. DITCH INLET W/GRATE
    TOP=384.93
    INV IN=380.48(6")
    INV IN=380.78(18")
    INV IN=383.66(NORTH THROAT)
    INV IN=383.68(SOUTH THROAT)
    INV OUT=380.47
15. HEADWALL
    INV=377.72
16. HEADWALL
    INV=376.95
17. HEADWALL
    INV=372.34
18. HEADWALL
    INV=371.49
19. HEADWALL
    INV(a)=373.53
    INV(b)=373.51
20. HEADWALL
    INV(a)=373.07
    INV(b)=373.09
21. CURB INLET
    TOP=376.40
    INV OUT=373.05
22. CURB INLET
    TOP=376.50
    INV IN=372.94
    INV OUT=372.63
23. CURB INLET
    TOP=377.05
    INV IN=372.70
    INV OUT=377.01(WEIR)
24. MANHOLE
    TOP=377.20
    INV IN(a)=
    INV IN(b)=372.46
    INV OUT=372.43
25. MANHOLE
    TOP=377.59
    INV IN=372.63
    INV OUT=371.31
26. CURB INLET
    TOP=377.45
    OUT=372.63
27. HEADWALL
    INV=396.71
    *PIPE DAMAGED OTHER END NOT FOUND
28. CULVERT
    INV IN=415.32
    INV OUT=414.86
29. CULVERT
    INV IN=412.99
    INV OUT=412.62
30. CULVERT
    INV IN=406.66
    INV OUT=406.51
31. OUTFALL
    INV=404.08
32. GRATE INLET
    TOP=407.18
    INV IN=403.18
    INV OUT=403.19
33. HEADWALL
    INV=402.24
34. CULVERT
    INV IN=411.97
35. CULVERT
    INV OUT=411.72
36. CULVERT
    INV IN=411.53
37. CULVERT
    INV OUT=410.70
38. SUMP DRAIN
    INV=411.05
39. SUMP DRAIN
    INV=410.87
40. HEADWALL
    INV=397.37
41. HEADWALL
    INV=396.52
42. HEADWALL
    INV=391.20
43. HEADWALL
    INV=396.34
44. HEADWALL
    INV=392.40
45. HEADWALL
    INV=394.56
46. HEADWALL
    INV IN=394.13
    INV OUT=394.12
47. HEADWALL
    INV=393.25
48. CATCH BASIN
    TOP=*NOT IN PLACE AT TIME OF SURVEY
    INV IN=376.21
    INV OUT=376.03
49. HEADWALL
    INV=375.66
50. RISER
    TOP=384.54
    INV OUT=379.05
51. OUTFALL
    INV=378.12
52. HEADWALL
    INV=378.12
53. HEADWALL
    INV=376.57
54. CULVERT
    INV IN=408.41
    INV OUT=408.37
55. CULVERT
    INV IN=399.85
    INV OUT=397.32
56. CULVERT
    INV IN=412.99
    INV OUT=412.62

* STRUCTURES 48 AND 49 WERE UNDER CONSTRUCTION AT TIME OF SURVEY

ABBREVIATIONS

A	- GRADE CHANGE/ ALGEBRAIC DIFFERENCE
AASHTO	- AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ADT	- AVERAGE DAILY TRAFFIC
_B/L	- BASELINE
BOA	- BEGINNING OF ALIGNMENT
BOT.	- BOTTOM
BP	- ALIGNMENT BEGINNNING
BVC	- BEGIN VERTICAL CURVE
BVCS	- BEGIN VERTICAL CURVE STATION
BVCE	- BEGIN VERTICAL CURVE ELEVATION
BVP	- BEGINNING OF VERTICAL PROFILE
C.B.	- CATCH BASIN
CL	- CLASS
C/O	- CLEAN OUT
CONC.	- CONCRETE
CIBTR./CAB.	- CONTROL CABINET
CORR.	- CORRECTION
CPI	- CURVE POINT OF INTERSECTION
CULV.	- CULVERT
-C-	- CUT
Dc	- DEGREE OF CURVE
DHV	- DESIGN HOURLY VOLUME
D.S.	- DESIGN SPEED
E.B.	- EASTBOUND
ELEV.,EL.	- ELEVATION
EOA	- END OF ALIGNMENT
EP	- ALIGNMENT END
EX.	- EXISTING
e	- EXTERNAL
EVC	- END VERTICAL CURVE
EVCS	- END VERTICAL CURVE STATION
EVCE	- END VERTICAL CURVE ELEVATION
EVP	- END OF VERTICAL PROFILE
-F-	- FILL
G1	- GRADE 1
G2	- GRADE 2
H.S.D.	- HEADLIGHT SIGHT DISTANCE
H/WALL	- HEADWALL
HOR.	- HORIZONTAL
HP	- HIGH POINT
INV.	- INVERT
L	- LENGTH
LVC	- LENGTH OF VERTICAL CURVE
LP	- LIGHT POLE
LOD	- LIMIT OF DISTURBANCE
L.P.	- LOW POINT
MDSHA	- MARYLAND STATE HIGHWAY ADMINISTRATION
M.P.H.	- MILES PER HOUR
N.B.	- NORTHBOUND
N.T.S.	- NOT TO SCALE
PCC	- POINT OF COMPOUND CURVE
BP	- POINT OF BEGINNING
PC	- POINT OF CURVATURE
P/C	- POINT OF CROWN
POE	- POINT OF ENDING
PI	- POINT OF INTERSECTION
P/R	- POINT OF ROTATION
PT	- POINT OF TANGENCY
PVC	- POINT OF VERTICAL CURVATURE
PVI	- POINT OF VERTICAL INTERSECTION
PVT	- POINT OF VERTICAL TANGENCY
P/GE	- PROFILE GRADE ELEVATION
P.G.L.	- PROFILE GRADE LINE
P/GL	- PROFILE GROUND LINE
PROP.	- PROPOSED
PRC	- POINT OF REVERSE CURVE
R	- RADIUS
K	- RATE OF CHANGE OF GRADE
RCCP	- REINFORCED CONCRETE PIPE
D.S.	- SATELLITE DISH
SDWK	- SIDEWALK
SHLD	- SHOULDER
S.B.	- SOUTHBOUND
STA.,sta	- STATION
S.S.D.	- STOPPING SIGHT DISTANCE
SE	- SUPERELEVATION
ST	- SPIRAL TANGENT INTERSECT
T	- TANGENT
TSP	- TRAFFIC SIGNAL POLE
TCE	- TEMPORARY CONSTRUCTION EASEMENT
U/BOX	- UTILITY BOX
VERT.	- VERTICAL
V.C.	- VERTICAL CURVE
VCC	- VERTICAL COMPOUND CURVE
VCCE	- VERTICAL COMPOUND CURVE ELEVATION
VCCS	- VERTICAL COMPOUND CURVE STATION
VRC	- VERTICAL REVERSE CURVE
VRCS	- VERTICAL REVERSE CURVE STATION
VRCE	- VERTICAL REVERSE CURVE ELEVATION
W.B.	- WESTBOUND

SYMBOL LEGEND

	RAILROAD SIGNAL
	RR MILEPOST
	MAIL BOX
D	STORM MANHOLE
	GRATE INLET
D	DRAIN
TSP	TRAF. SIGNAL POLE
	SIGN
T	TELE. JUNC. BOX
	POWER POLE
	LIGHT POLE
	LAMP POST
	GUY WIRE
	GUY POLE
	ELEC. METER
E	ELEC. JUNC. BOX
AC	AC UNIT
S	SAN. SEW. MH
CO	CLEAN OUT
WV	WATER VALVE
	WATER METER
	FIRE HYDRANT
	GAS VALVE
	GAS METER
G	GAS MANHOLE
	BOLLARD
FLY	FLY STATION
	BENCHMARK
	FLARED END SECTION
	FLOW DIRECTION
	CENTERLINE OF DITCH
	CURB OPENING INLET
	CURB OPENING INLET
	CATCH BASIN (SINGLE)
	CATCH BASIN (DOUBLE)
	TEST PIT
	SOIL BORING
COMM	COMM. LINE PAINT MARK
E	ELEC. TRANSFORMER
UGE	ELECTRIC PAINT MARK
G	GAS LINE PAINT MARK
W	WATERLINE PAINT MARK
	FENCE (CHAIN-LINK)
X	FENCE
	WOODLINE

AB-1

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

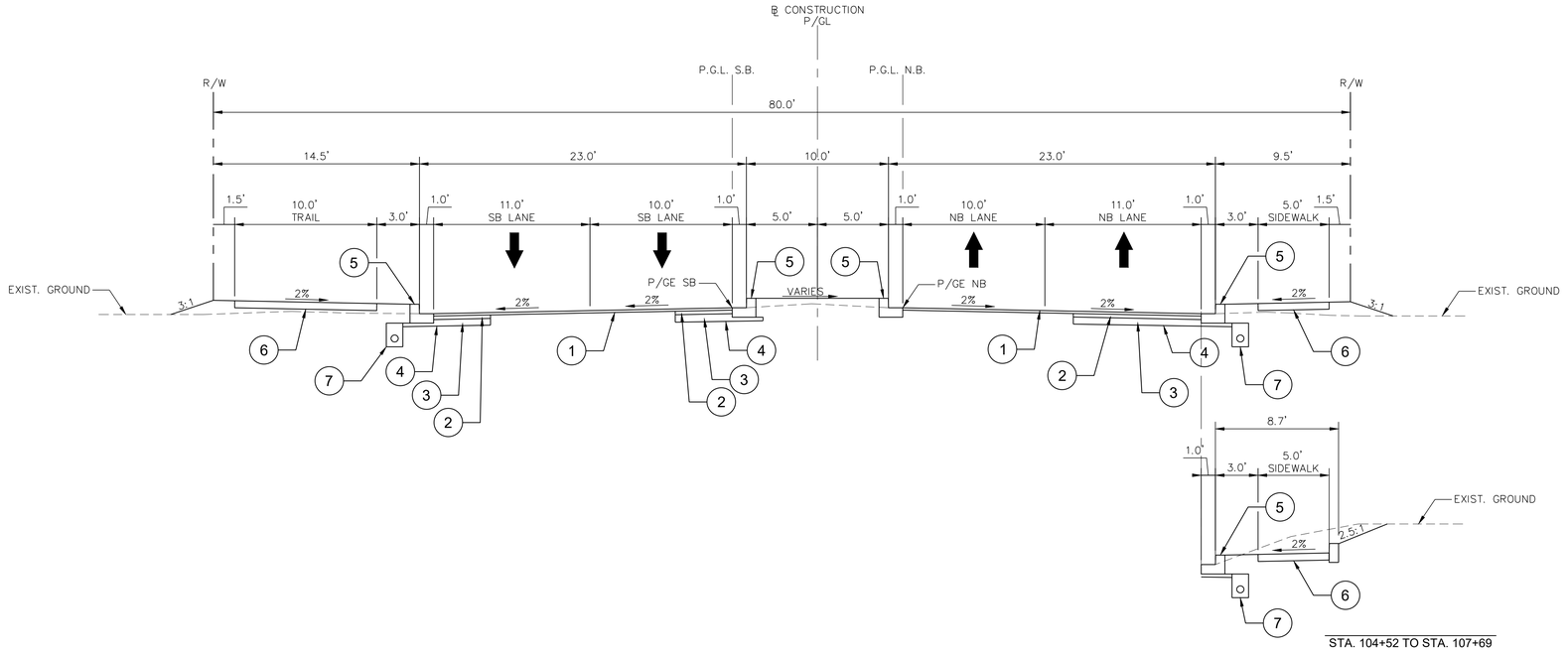
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

NOTES, ABBREVIATIONS, LEGEND AND CONVENTIONAL SIGNS

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 02 OF 106



STA. 104+52 TO STA. 107+69

TYPICAL SECTION - CHRISTOPHERS CROSSING

10' TRAIL & 5' SIDEWALK

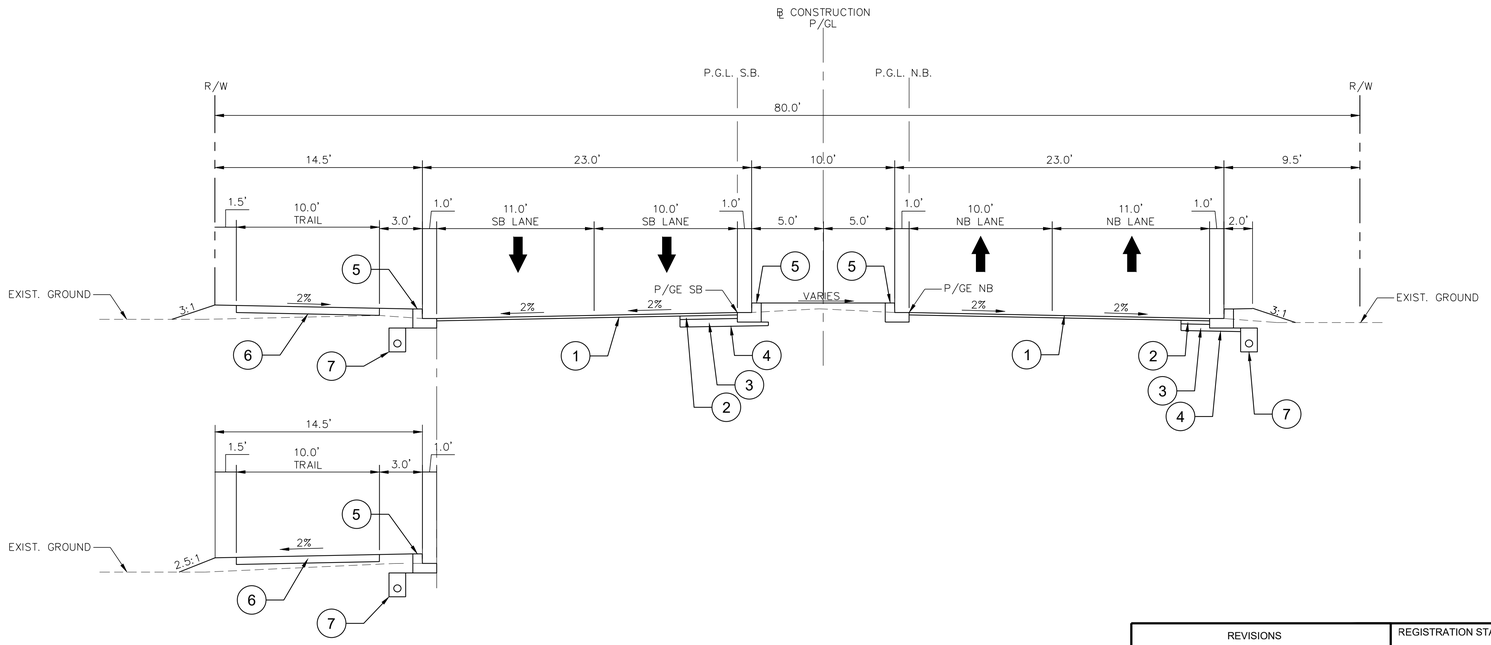
STA. 102+50 TO STA. 136+92

KEYNOTES

1. 2" SURFACE COURSE – 12.5mm HMA SUPERPAVE PG64–22
2. 4" BASE COURSE – 19.0mm HMA SUPERPAVE PG64–22
3. 8" COMPACTED GRADED AGGREGATE BASE (TWO 4" LIFTS)
4. TOP OF SUBGRADE
5. TYPE 'A' COMBINATION CURB AND GUTTER SHA STD MD–620.02
6. 5" CONCRETE SIDEWALK/TRAIL
7. 6" LONGITUDINAL UNDERDRAIN SHA STD. MD–387.11–01
8. TYPE 'A' CURB SHA STD MD–620.02
9. TYPE 'C' COMBINATION CURB AND GUTTER SHA STD MD–620.02–01
10. 9" JOINTED PLAIN CONCRETE PAVEMENT – MIX #7

GENERAL NOTES

1. PLACE 4" FURNISHED TOPSOIL AND TURFGRASS ESTABLISHMENT FOR ALL SLOPES UNLESS OTHERWISE NOTED.
2. SAW CUT TO BE PERFORMED 1' INSIDE EXISTING EDGE OF PAVEMENT FOR FULL–DEPTH WIDENING ON CHRISTOPHERS CROSSING AND 4' INSIDE EDGE OF PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER ON SIDE ROADS.
3. REVERSE GUTTER SLOPE FOR HIGH SIDE COMBINATION CURB AND GUTTER.



STA. 78+75 TO STA. 90+78

TYPICAL SECTION - CHRISTOPHERS CROSSING

10' TRAIL

STA. 78+75 TO STA. 101+25

0 5' 10'

SCALE: 1"=5'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

TS-1

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TYPICAL SECTIONS

DATE: SEPTEMBER 2020 SCALE: 1"=5'

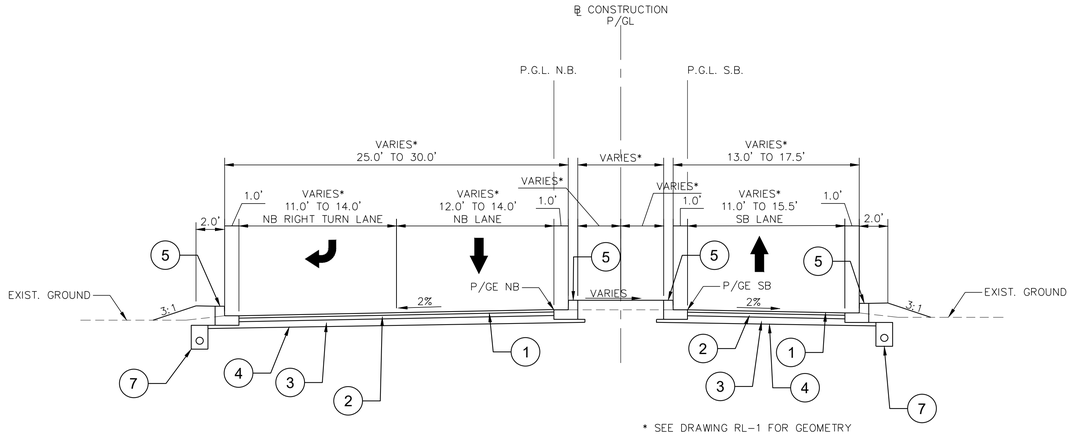
AMT FILE NO. 15-0758.007 SHEET NO. 03 OF 106

○ KEYNOTES

1. 2" SURFACE COURSE – 12.5mm HMA SUPERPAVE PG64-22
2. 4" BASE COURSE – 19.0mm HMA SUPERPAVE PG64-22
3. 8" COMPACTED GRADED AGGREGATE BASE (TWO 4" LIFTS)
4. TOP OF SUBGRADE
5. TYPE 'A' COMBINATION CURB AND GUTTER SHA STD MD-620.02
6. 5" CONCRETE SIDEWALK/TRAIL
7. 6" LONGITUDINAL UNDERDRAIN SHA STD. MD-387.11-01
8. TYPE 'A' CURB SHA STD MD-620.02
9. TYPE 'C' COMBINATION CURB AND GUTTER SHA STD MD-620.02-01
10. 9" JOINTED PLAIN CONCRETE PAVEMENT – MIX #7

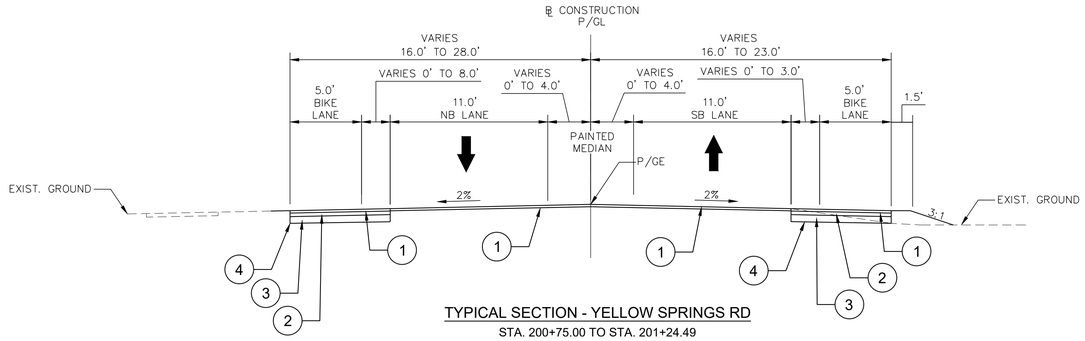
GENERAL NOTES

1. PLACE 4" FURNISHED TOPSOIL AND TURFGRASS ESTABLISHMENT FOR ALL SLOPES UNLESS OTHERWISE NOTED.
2. SAW CUT TO BE PERFORMED 1' INSIDE EXISTING EDGE OF PAVEMENT FOR FULL-DEPTH WIDENING ON CHRISTOPHERS CROSSING AND 4' INSIDE EDGE OF PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER ON SIDE ROADS.
3. REVERSE GUTTER SLOPE FOR HIGH SIDE COMBINATION CURB AND GUTTER.



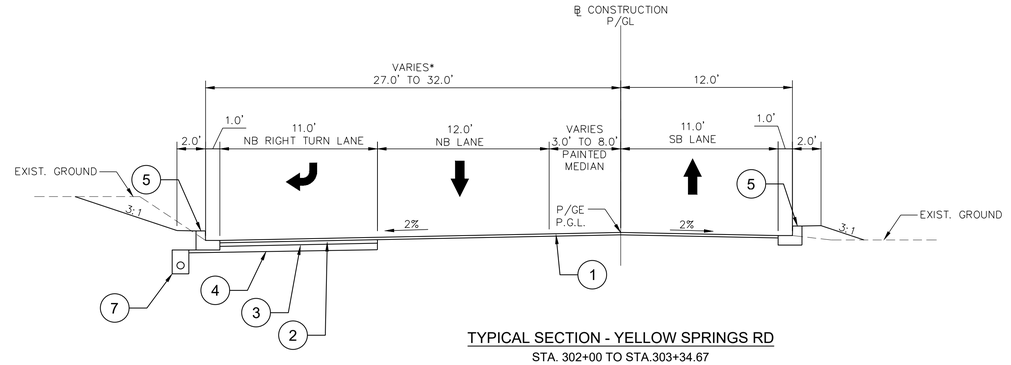
TYPICAL SECTION - YELLOW SPRINGS RD

STA. 300+82.66 TO STA. 302+00



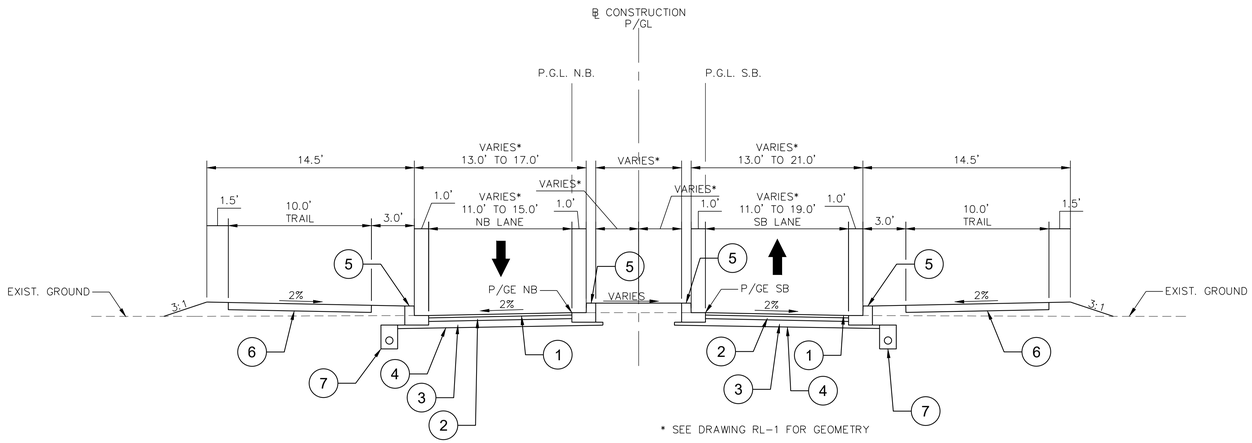
TYPICAL SECTION - YELLOW SPRINGS RD

STA. 200+75.00 TO STA. 201+24.49



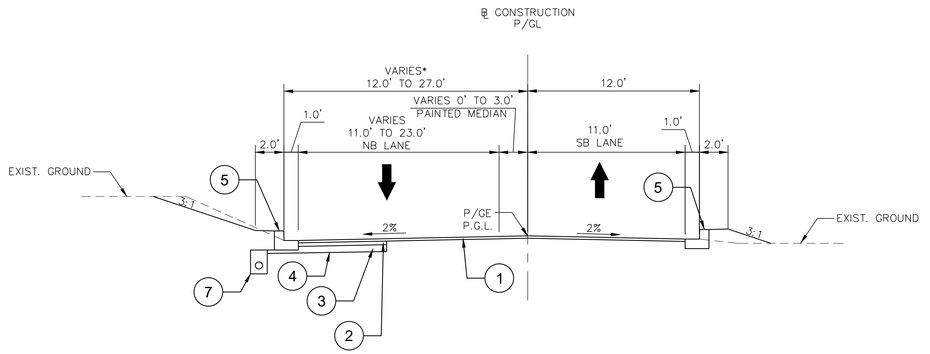
TYPICAL SECTION - YELLOW SPRINGS RD

STA. 302+00 TO STA.303+34.67



TYPICAL SECTION - YELLOW SPRINGS RD

STA. 201+24.49 TO STA. 202+24.17



TYPICAL SECTION - YELLOW SPRINGS RD

STA.303+34.67 TO STA. 304+35

TS-2

SCALE: 1"=5'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TYPICAL SECTIONS

DATE: SEPTEMBER 2020 SCALE: 1"=5'

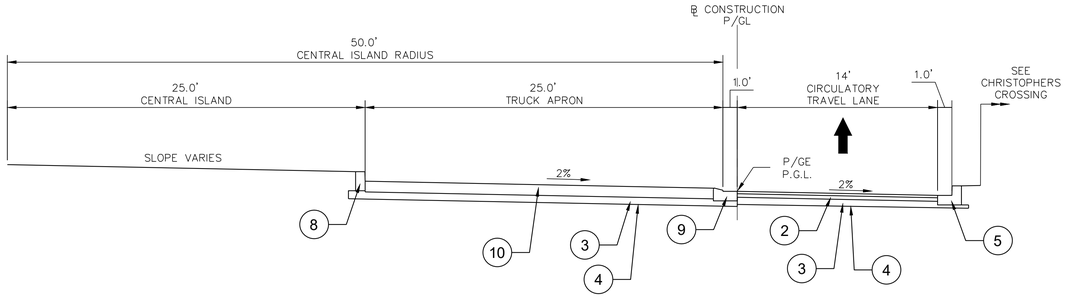
AMT FILE NO. 15-0758.007 SHEET NO. 04 OF 106

○ KEYNOTES

1. 2" SURFACE COURSE – 12.5mm HMA SUPERPAVE PG64–22
2. 4" BASE COURSE – 19.0mm HMA SUPERPAVE PG64–22
3. 8" COMPACTED GRADED AGGREGATE BASE (TWO 4" LIFTS)
4. TOP OF SUBGRADE
5. TYPE 'A' COMBINATION CURB AND GUTTER SHA STD MD–620.02
6. 5" CONCRETE SIDEWALK/TRAIL
7. 6" LONGITUDINAL UNDERDRAIN SHA STD. MD–387.11
8. TYPE 'A' CURB SHA STD MD–620.02
9. TYPE 'C' COMBINATION CURB AND GUTTER SHA STD MD–620.02–01
10. 9" JOINTED PLAIN CONCRETE PAVEMENT – MIX #7

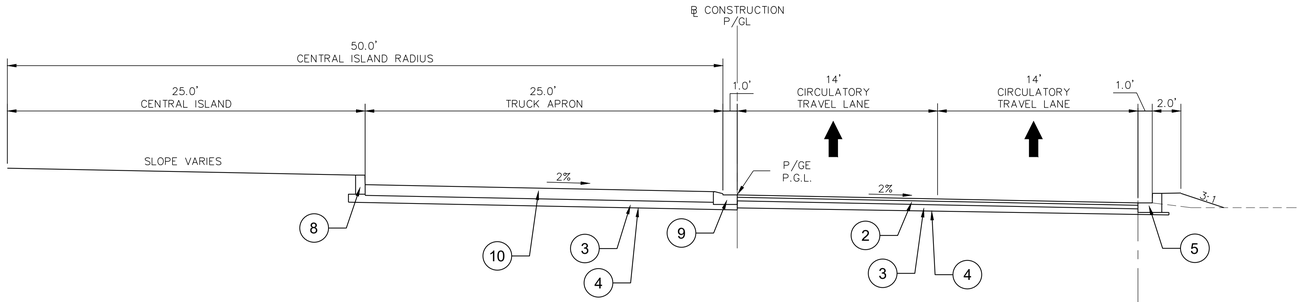
GENERAL NOTES

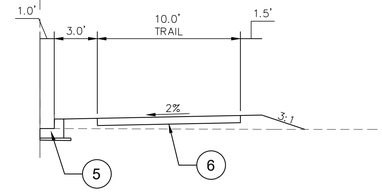
1. PLACE 4" FURNISHED TOPSOIL AND TURFGRASS ESTABLISHMENT FOR ALL SLOPES UNLESS OTHERWISE NOTED.
2. SAW CUT TO BE PERFORMED 1' INSIDE EXISTING EDGE OF PAVEMENT FOR FULL–DEPTH WIDENING ON CHRISTOPHERS CROSSING AND 4' INSIDE EDGE OF PAVEMENT FOR CONSTRUCTION OF CURB AND GUTTER ON SIDE ROADS.
3. REVERSE GUTTER SLOPE FOR HIGH SIDE COMBINATION CURB AND GUTTER.



TYPICAL SECTION - ROUNDABOUT

STA. 400+00 TO STA. 400+15.31
STA. 401+33.57 TO STA. 401+75.97
STA. 403+00.24 TO STA. 403+20.44





STA. 400+15.31 TO STA. 401+33.57

TYPICAL SECTION - ROUNDABOUT

STA. 400+15.31 TO STA. 401+33.57
STA. 401+75.97 TO STA. 403+00.24

0 5' 10'
SCALE: 1"=5'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

TS-3

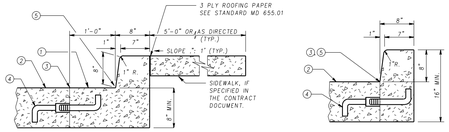
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TYPICAL SECTIONS

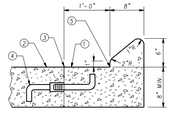
DATE: SEPTEMBER 2020 SCALE: 1"=5'

AMT FILE NO. 15-0758.007 SHEET NO. 05 OF 106

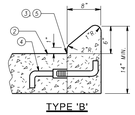


TYPE 'A'
COMBINATION CURB & GUTTER
DESIGN SPEED ≤45 MPH

TYPE 'A'
CURB



TYPE 'B'
COMBINATION CURB & GUTTER
DESIGN SPEED 50 MPH



TYPE 'B'
CURB

① SLOPE GUTTER PAN " PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS, EXCEPT INTERCHANGE RAMPS.
② ROADWAY PAVEMENT SLOPE.
③ ROADWAY PAVEMENT CONSTRUCTION JOINT.
④ PROVIDE LONGITUDINAL TIE DEVICE "J" BAR MODIFIED. REFER TO STANDARD NO MD 572.61.
⑤ FLOW LINE.

NOTES

A. RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD MD 572.61 FOR METHOD OF LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS INDICATED. TIE DEVICES ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.

B. MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.

C. TYPE A OR B COMBINATION CURB AND GUTTER SHALL BE USED FOR ALL APPLICABLE NEW CONSTRUCTION AND IN THOSE AREAS WHERE THE COMBINATION CURB AND GUTTER IS TO BE REPLACED IN KIND.

D. TYPE A OR B CURB SHALL BE USED FOR THE REPLACEMENT OF LIKE KIND OF CURB ONLY. NOT TO BE USED FOR NEW CONSTRUCTION EXCEPT WHERE INDICATED ON APPROPRIATE INLET STANDARDS.

SPECIFICATION	CATEGORY CODE ITEMS
602	

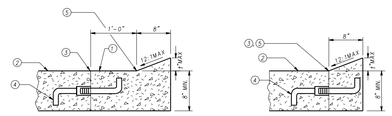
APPROVED
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	APPROVAL
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD TYPES A & B CONCRETE CURB AND COMBINATION CONCRETE CURB & GUTTER

STANDARD NO. MD 620.02

1 OF 2



DEPRESSED CURB FOR COMBINATION CONCRETE CURB & GUTTER FOR SIDEWALK RAMPS

DEPRESSED CONCRETE CURB FOR SIDEWALK RAMPS

① SLOPE GUTTER PAN " PER FOOT TOWARD FLOW LINE ON ALL ROADWAYS INCLUDING SUPERELEVATED SECTIONS, EXCEPT INTERCHANGE RAMPS.
② ROADWAY PAVEMENT SLOPE.
③ ROADWAY PAVEMENT CONSTRUCTION JOINT.
④ PROVIDE LONGITUDINAL TIE DEVICE "J" BAR MODIFIED. REFER TO STANDARD NO MD 572.61.
⑤ FLOW LINE.

NOTES

A. RIGID PAVEMENT ROADWAY ADJACENT TO COMBINATION CURB AND GUTTER AND CLOSED SECTION ROADWAY USING RIGID PAVEMENT WITH COMBINATION CURB AND GUTTER SHALL BE KEYED AND TIED AT THE ROADWAY PAVEMENT CONSTRUCTION JOINT. REFER TO STANDARD MD 572.61 FOR METHOD OF KEYWAY AND LONGITUDINAL TIE DEVICES. SPACING OF THE TIE BARS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. RIGID PAVEMENT AND CURB SHALL BE CONSTRUCTED AS INDICATED. TIE DEVICES AND KEYS ARE NOT REQUIRED WHEN USING FLEXIBLE PAVEMENT FOR ROADWAY.

B. MAXIMUM JOINT SPACING FOR CONCRETE CURB AND COMBINATION CURB & GUTTER IS 10'. SEE SPECIFICATION FOR LOCATIONS AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED.

C. PAYMENT FOR DEPRESSING THE CURB WILL BE INCIDENTAL TO THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR THE ITEM CONCRETE CURB OR COMBINATION CONCRETE CURB AND GUTTER, AS SPECIFIED IN THE CONTRACT DOCUMENTS.

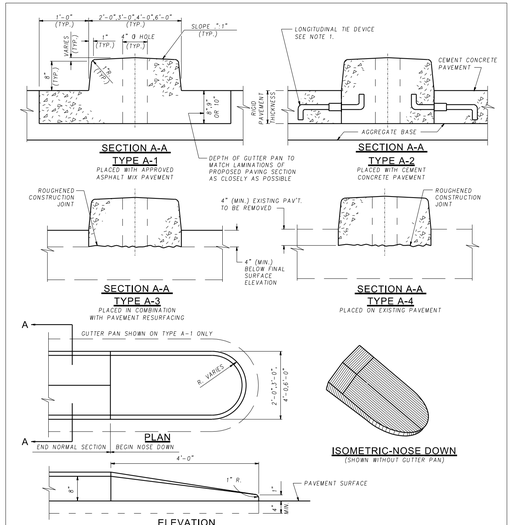
SPECIFICATION	CATEGORY CODE ITEMS
602	

APPROVED
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	APPROVAL
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
DEPRESSED CURB FOR COMBINATION CURB AND GUTTER AND DEPRESSED CURB FOR SIDEWALK RAMPS

STANDARD NO. MD 620.03



SECTION A-A
TYPE A-1
PLACED WITH APPROVED ASPHALT MIX PAVEMENT

SECTION A-A
TYPE A-2
PLACED WITH CEMENT CONCRETE PAVEMENT

SECTION A-A
TYPE A-3
PLACED IN COMBINATION WITH PAVEMENT RESURFACING

SECTION A-A
TYPE A-4
PLACED ON EXISTING PAVEMENT

PLAN

ISOMETRIC-NOSE DOWN
(SHOWN WITHOUT GUTTER PAN)

ELEVATION
NOSE DOWN AT APPROACH END OF MEDIAN

NOTES

1. UNLESS OTHERWISE SPECIFIED, LONGITUDINAL TIE BAR DEVICE, TYPE "A" OR TYPE "B", PLACED AT MIDDLE OF KEYWAY & SPACED ACCORDING TO SPECIFICATIONS FOR CONCRETE PAVEMENT SHALL BE USED AT CONSTRUCTION JOINT BETWEEN MONOLITHIC CONCRETE MEDIAN (OR GUTTER PAN) AND CONCRETE PAVEMENT. SEE STANDARD MD 572.61. SOLID BAR AND SLEEVE MAY BE REPLACE BY TUBE WITH INTERNAL THREAD.
2. JOINT SPACING WILL BE A MAXIMUM OF 10'-0" APART, SEE SPECIFICATIONS FOR LOCATION AND DESCRIPTION OF TREATMENT FOR THE TYPES OF JOINTS USED. CONCRETE PAVEMENT, JOINTS SHALL MATCH PAVEMENT JOINTS.
3. ALLOW 4" Ø HOLES IN MEDIAN FOR SIGNS, SPACED AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

SPECIFICATION	CATEGORY CODE ITEMS
602	

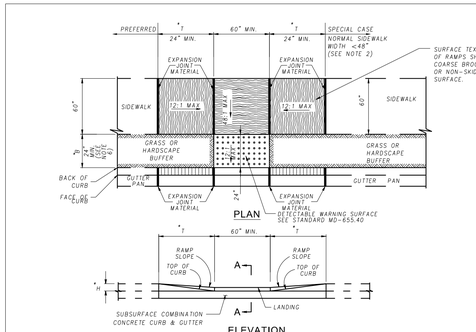
APPROVED
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	APPROVAL
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
STANDARD MONOLITH CONCRETE MEDIAN TYPE 'A'

STANDARD NO. MD 645.01

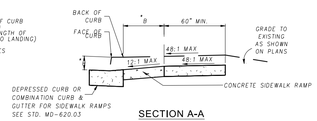
SIDEWALK RAMP DETAILS TO BE INCLUDED IN 90% PLANS



PLAN

ELEVATION

" – H = HEIGHT OF CURB
B = BUFFER WIDTH (BACK OF CURB TO FRONT OF SIDEWALK)
T = RAMP WIDTH (LENGTH OF RAMP FROM SIDEWALK TO LANDING) 9'-0" (12 x 6")
ALL MEASUREMENTS IN INCHES



SECTION A-A

NOTES

1. TO BE USED WHERE AT LEAST 7'-0" EXISTS BETWEEN THE BACK OF CURB AND THE BACK OF SIDEWALK. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. THE CROSS-SLOPE OF THE SIDEWALK RAMP AND LANDING SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
6. FOR BUFFER WIDTHS LESS THAN 24", WIDEN SIDEWALK TO BACK OF CURB AS SHOWN FOR THE SPECIAL CASE, THEN BUILD PARALLEL RAMP USING STANDARD MD-655.12.
7. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH
8. IF THE BUFFER AREA IS GREATER THAN OR EQUAL TO 4' THE LANDING AREA MUST BE 2% X 2%. IF THE BUFFER AREA IS LESS THAN 4' THE LANDING AREA CROSS-SLOPE CANNOT EXCEED THE GRADE OF THE ROAD.

SPECIFICATION	CATEGORY CODE ITEMS
603 & 611	

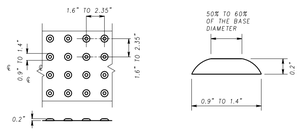
APPROVED
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	APPROVAL
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SIDEWALK RAMPS COMBINATION

STANDARD NO. MD 655.13

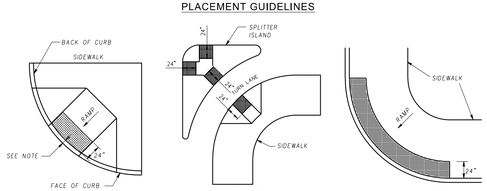
MAT DETAILS
SEE PLACEMENT GUIDELINES BELOW



DOME SPACING

DOME SECTION

PLACEMENT GUIDELINES



SHARED CURB RAMP

REFUGE ISLAND

BLENDED CURB

WHERE ISLANDS OR MEDIANS ARE LESS THAN 6 FEET WIDE, THE DETECTABLE WARNING SHOULD EXTEND ACROSS THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN

NOTES

1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 0.5" AND NO MORE THAN 3.0" FROM THE BACK OF CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
3. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS.
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING & SIGNALIZED INTERSECTIONS.

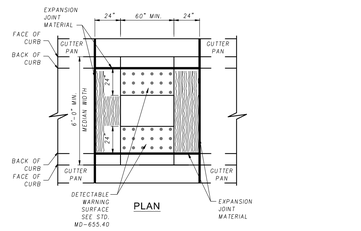
SPECIFICATION	CATEGORY CODE ITEMS
611	

APPROVED
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

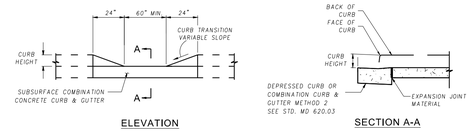
APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	APPROVAL
REVISED 4-17-06	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
DETACHABLE WARNING SURFACES

STANDARD NO. MD 655.40



PLAN



ELEVATION

SECTION A-A

NOTES

1. TO BE USED WHERE A STREET-LEVEL PEDESTRIAN CROSSING IS REQUIRED THROUGH RAISED MEDIANS OR RAISED ISLANDS AND THERE IS INSUFFICIENT WIDTH TO PROVIDE A RAMPED MEDIAN OR ISLAND OPENING (STD. MD-655.22).
2. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD MD-655.01.
3. CUT-THROUGH MEDIAN AND ISLAND OPENINGS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE OPENING ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED OPENING VARIES FROM STANDARD METHODS.
4. WHERE 60" CUT THROUGHS CAN NOT BE PROVIDED A DESIGN WAIVER MUST BE REQUESTED.

SPECIFICATION	CATEGORY CODE ITEMS
603 & 611	

APPROVED
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL	APPROVAL
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
CUT-THROUGH MEDIAN AND ISLAND OPENINGS

STANDARD NO. MD 655.21

DE-1

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

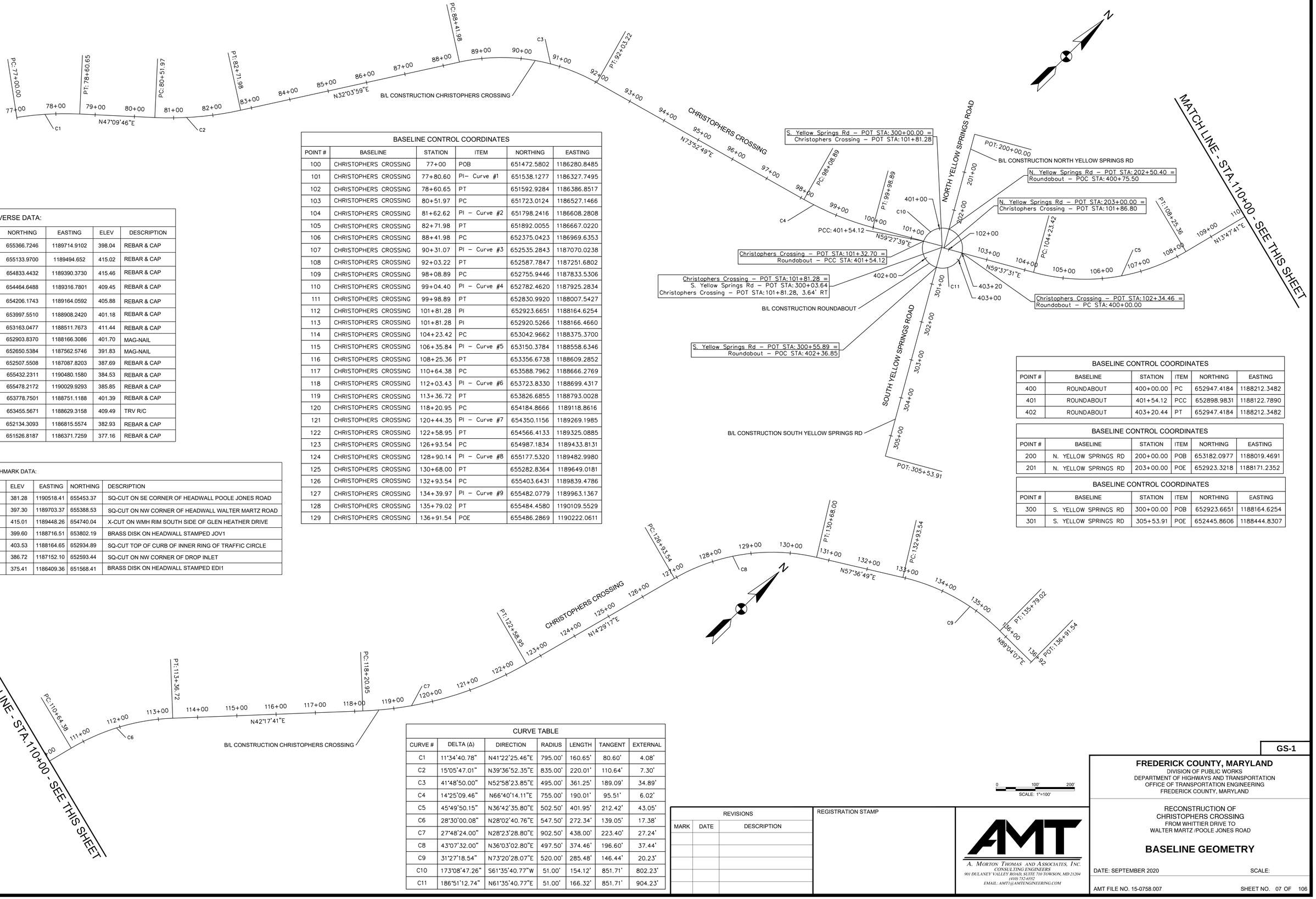
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY DETAILS

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 06 OF 106



TRAVERSE DATA:

NO	NORTHING	EASTING	ELEV	DESCRIPTION
1	655366.7246	1189714.9102	398.04	REBAR & CAP
2	655133.9700	1189494.652	415.02	REBAR & CAP
3	654833.4432	1189390.3730	415.46	REBAR & CAP
4	654464.6488	1189316.7801	409.45	REBAR & CAP
5	654206.1743	1189164.0592	405.88	REBAR & CAP
6	653997.5510	1188908.2420	401.18	REBAR & CAP
7	653163.0477	1188511.7673	411.44	REBAR & CAP
8	652903.8370	1188166.3086	401.70	MAG-NAIL
9	652650.5384	1187562.5746	391.83	MAG-NAIL
10	652507.5508	1187087.8203	387.69	REBAR & CAP
301	655432.2311	1190480.1580	384.53	REBAR & CAP
302	655478.2172	1190029.9293	385.85	REBAR & CAP
303	653778.7501	1188751.1188	401.39	REBAR & CAP
304	653455.5671	1188629.3158	409.49	TRV R/C
305	652134.3093	1186815.5574	382.93	REBAR & CAP
306	651526.8187	1186371.7259	377.16	REBAR & CAP

BENCHMARK DATA:

NO	ELEV	EASTING	NORTHING	DESCRIPTION
1	381.28	1190518.41	655453.37	SQ-CUT ON SE CORNER OF HEADWALL POOLE JONES ROAD
2	397.30	1189703.37	655388.53	SQ-CUT ON NW CORNER OF HEADWALL WALTER MARTZ ROAD
3	415.01	1189448.26	654740.04	X-CUT ON WMH RIM SOUTH SIDE OF GLEN HEATHER DRIVE
4	399.60	1188716.51	653802.19	BRASS DISK ON HEADWALL STAMPED JOV1
5	403.53	1188164.65	652934.89	SQ-CUT TOP OF CURB OF INNER RING OF TRAFFIC CIRCLE
6	386.72	1187152.10	652593.44	SQ-CUT ON NW CORNER OF DROP INLET
7	375.41	1186409.36	651568.41	BRASS DISK ON HEADWALL STAMPED EDI1

BASELINE CONTROL COORDINATES

POINT #	BASELINE	STATION	ITEM	NORTHING	EASTING
100	CHRISTOPHERS CROSSING	77+00	POB	651472.5802	1186280.8485
101	CHRISTOPHERS CROSSING	77+80.60	PI– Curve #1	651538.1277	1186327.7495
102	CHRISTOPHERS CROSSING	78+60.65	PT	651592.9284	1186386.8517
103	CHRISTOPHERS CROSSING	80+51.97	PC	651723.0124	1186527.1466
104	CHRISTOPHERS CROSSING	81+62.62	PI – Curve #2	651798.2416	1186608.2808
105	CHRISTOPHERS CROSSING	82+71.98	PT	651892.0055	1186667.0220
106	CHRISTOPHERS CROSSING	88+41.98	PC	652375.0423	1186969.6353
107	CHRISTOPHERS CROSSING	90+31.07	PI – Curve #3	652535.2843	1187070.0238
108	CHRISTOPHERS CROSSING	92+03.22	PT	652587.7847	1187251.6802
109	CHRISTOPHERS CROSSING	98+08.89	PC	652755.9446	1187833.5306
110	CHRISTOPHERS CROSSING	99+04.40	PI – Curve #4	652782.4620	1187925.2834
111	CHRISTOPHERS CROSSING	99+98.89	PT	652830.9920	1188007.5427
112	CHRISTOPHERS CROSSING	101+81.28	PI	652923.6651	1188164.6254
113	CHRISTOPHERS CROSSING	101+81.28	PI	652920.5266	1188166.4660
114	CHRISTOPHERS CROSSING	104+23.42	PC	653042.9662	1188375.3700
115	CHRISTOPHERS CROSSING	106+35.84	PI – Curve #5	653150.3784	1188558.6346
116	CHRISTOPHERS CROSSING	108+25.36	PT	653356.6738	1188609.2852
117	CHRISTOPHERS CROSSING	110+64.38	PC	653588.7962	1188666.2769
118	CHRISTOPHERS CROSSING	112+03.43	PI – Curve #6	653723.8330	1188699.4317
119	CHRISTOPHERS CROSSING	113+36.72	PT	653826.6855	1188793.0028
120	CHRISTOPHERS CROSSING	118+20.95	PC	654184.8666	1189118.8616
121	CHRISTOPHERS CROSSING	120+44.35	PI – Curve #7	654350.1156	1189269.1985
122	CHRISTOPHERS CROSSING	122+58.95	PT	654566.4133	1189325.0885
123	CHRISTOPHERS CROSSING	126+93.54	PC	654987.1834	1189433.8131
124	CHRISTOPHERS CROSSING	128+90.14	PI – Curve #8	655177.5320	1189482.9980
125	CHRISTOPHERS CROSSING	130+68.00	PT	655282.8364	1189649.0181
126	CHRISTOPHERS CROSSING	132+93.54	PC	655403.6431	1189839.4786
127	CHRISTOPHERS CROSSING	134+39.97	PI – Curve #9	655482.0779	1189963.1367
128	CHRISTOPHERS CROSSING	135+79.02	PT	655484.4580	1190109.5529
129	CHRISTOPHERS CROSSING	136+91.54	POE	655486.2869	1190222.0611

CURVE TABLE

CURVE #	DELTA (Δ)	DIRECTION	RADIUS	LENGTH	TANGENT	EXTERNAL
C1	11°34'40.78"	N41°22'25.46"E	795.00'	160.65'	80.60'	4.08'
C2	15°05'47.01"	N39°36'52.35"E	835.00'	220.01'	110.64'	7.30'
C3	41°48'50.00"	N52°58'23.85"E	495.00'	361.25'	189.09'	34.89'
C4	14°25'09.46"	N66°40'14.11"E	755.00'	190.01'	95.51'	6.02'
C5	45°49'50.15"	N36°42'35.80"E	502.50'	401.95'	212.42'	43.05'
C6	28°30'00.08"	N28°02'40.76"E	547.50'	272.34'	139.05'	17.38'
C7	27°48'24.00"	N28°23'28.80"E	902.50'	438.00'	223.40'	27.24'
C8	43°07'32.00"	N36°03'02.80"E	497.50'	374.46'	196.60'	37.44'
C9	31°27'18.54"	N73°20'28.07"E	520.00'	285.48'	146.44'	20.23'
C10	173°08'47.26"	S61°35'40.77"W	51.00'	154.12'	851.71'	802.23'
C11	186°51'12.74"	N61°35'40.77"E	51.00'	166.32'	851.71'	904.23'

BASELINE CONTROL COORDINATES

POINT #	BASELINE	STATION	ITEM	NORTHING	EASTING
400	ROUNDABOUT	400+00.00	PC	652947.4184	1188212.3482
401	ROUNDABOUT	401+54.12	PCC	652898.9831	1188122.7890
402	ROUNDABOUT	403+20.44	PT	652947.4184	1188212.3482

BASELINE CONTROL COORDINATES

POINT #	BASELINE	STATION	ITEM	NORTHING	EASTING
200	N. YELLOW SPRINGS RD	200+00.00	POB	653182.0977	1188019.4691
201	N. YELLOW SPRINGS RD	203+00.00	POE	652923.3218	1188171.2352

BASELINE CONTROL COORDINATES

POINT #	BASELINE	STATION	ITEM	NORTHING	EASTING
300	S. YELLOW SPRINGS RD	300+00.00	POB	652923.6651	1188164.6254
301	S. YELLOW SPRINGS RD	305+53.91	POE	652445.8606	1188444.8307

0 100' 200'
SCALE: 1"=100'

REVISIONS

MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

GS-1

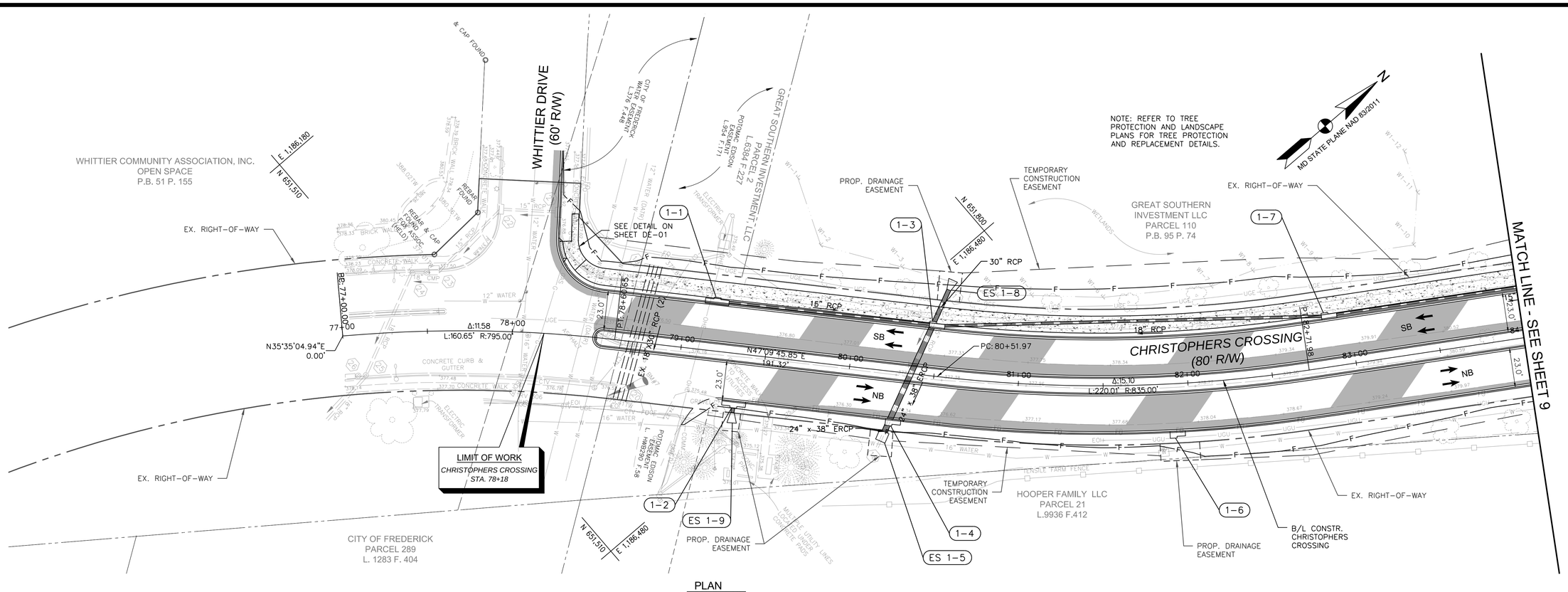
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

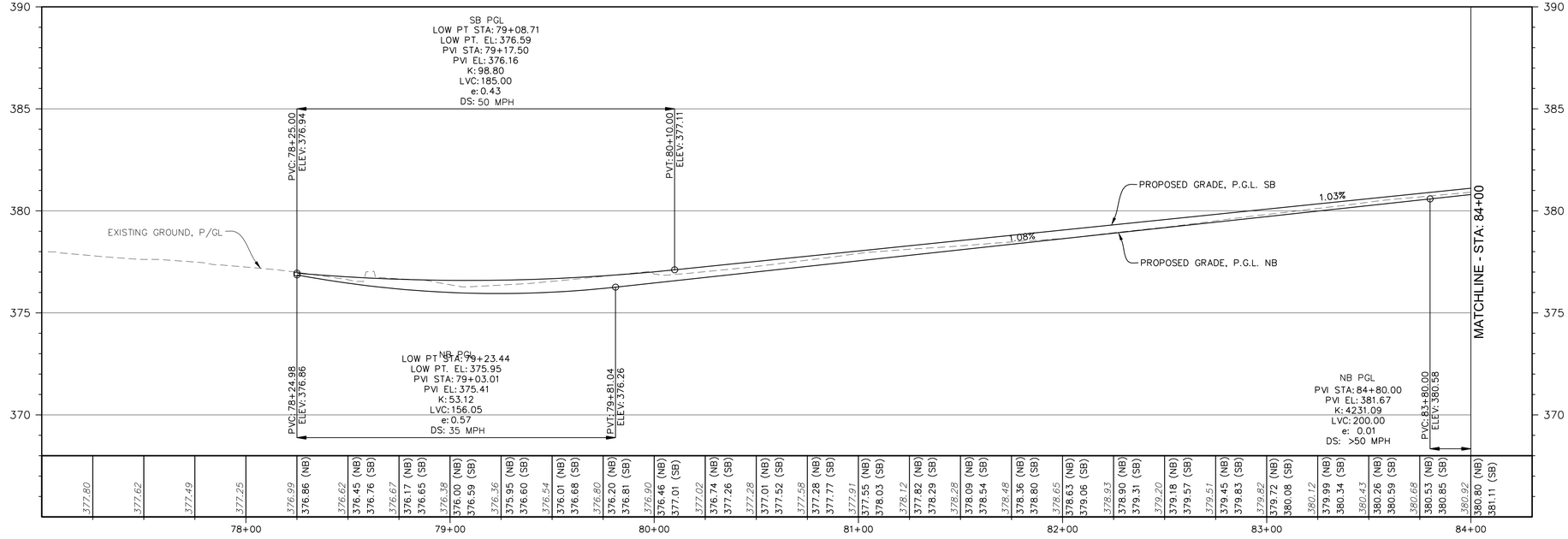
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

BASELINE GEOMETRY

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 07 OF 106





STA. 77+00 TO STA. 84+00 PROFILE

SCALE: HORZ 1"=30'
VERT 1"=3'

SCALE: 1"=30'

LEGEND

- RIGHT-OF-WAY
- FULL DEPTH PAVEMENT
- AT GRADE FINE MILLING AND RESURFACING
- CONCRETE SIDEWALK/TRAIL
- RIP-RAP
- CENTERLINE OF DITCH

PS-1

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY PLAN AND PROFILE

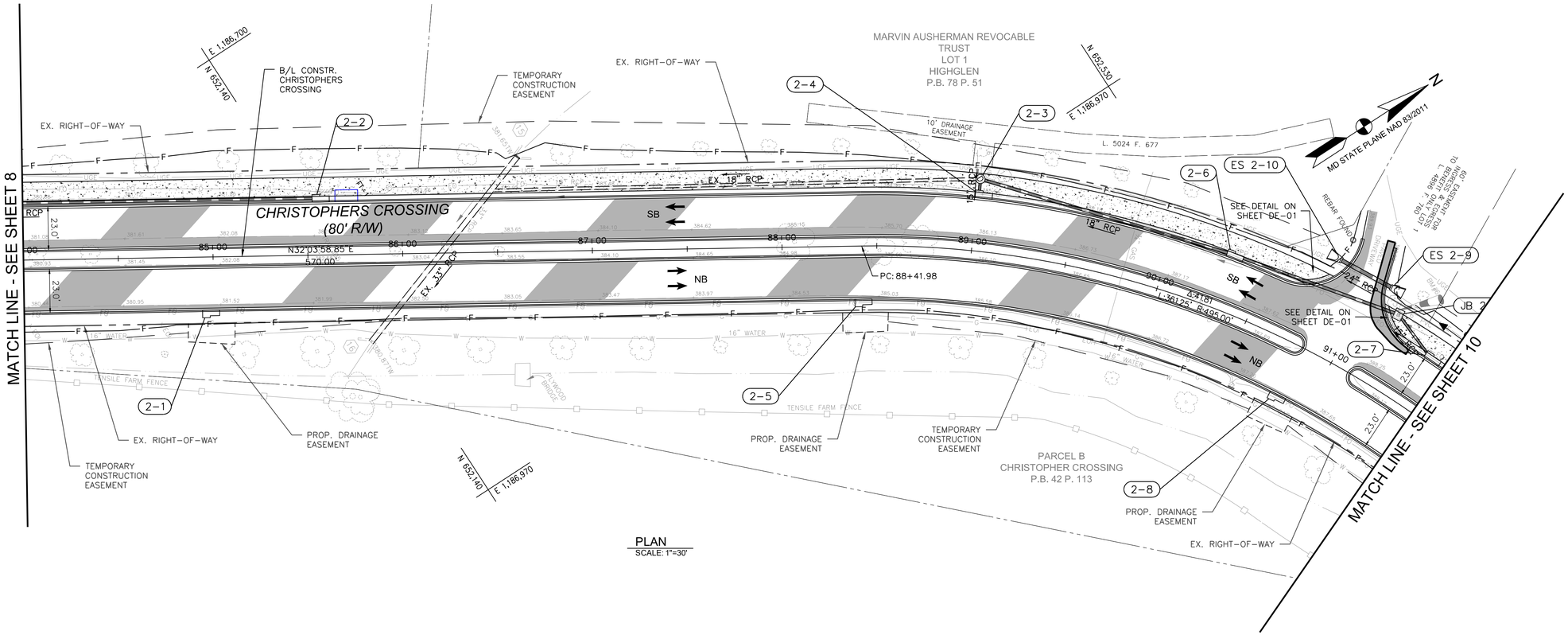
DATE: SEPTEMBER 2020 SCALE: 1"=30'

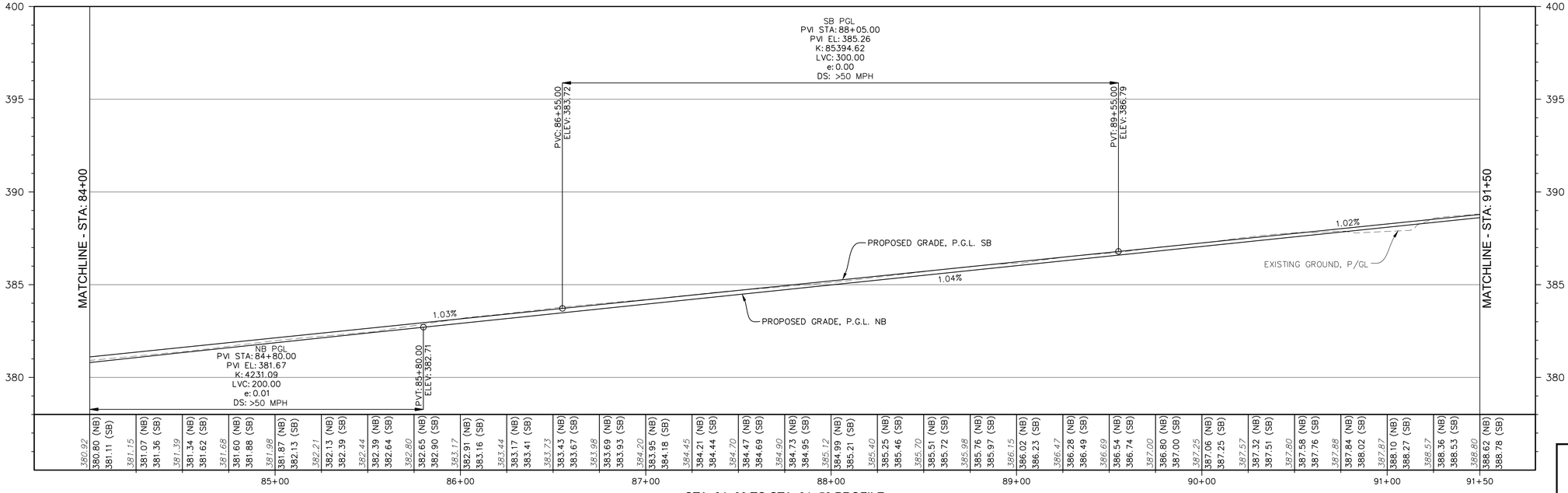
AMT FILE NO. 15-0758.007 SHEET NO. 08 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-4552
EMAIL: AMT1@AMTENGINEERING.COM





STA. 84+00 TO STA. 91+50 PROFILE

SCALE: HORZ 1"=30'
VERT 1"=3'

0 30' 60'
SCALE: 1"=30'

LEGEND

- RIGHT-OF-WAY
- FULL DEPTH PAVEMENT
- AT GRADE FINE MILLING AND RESURFACING
- CONCRETE SIDEWALK/TRAIL
- RIP-RAP
- CENTERLINE OF DITCH

PS-2

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 252-8552
EMAIL: AMT1@AMTENGINEERING.COM

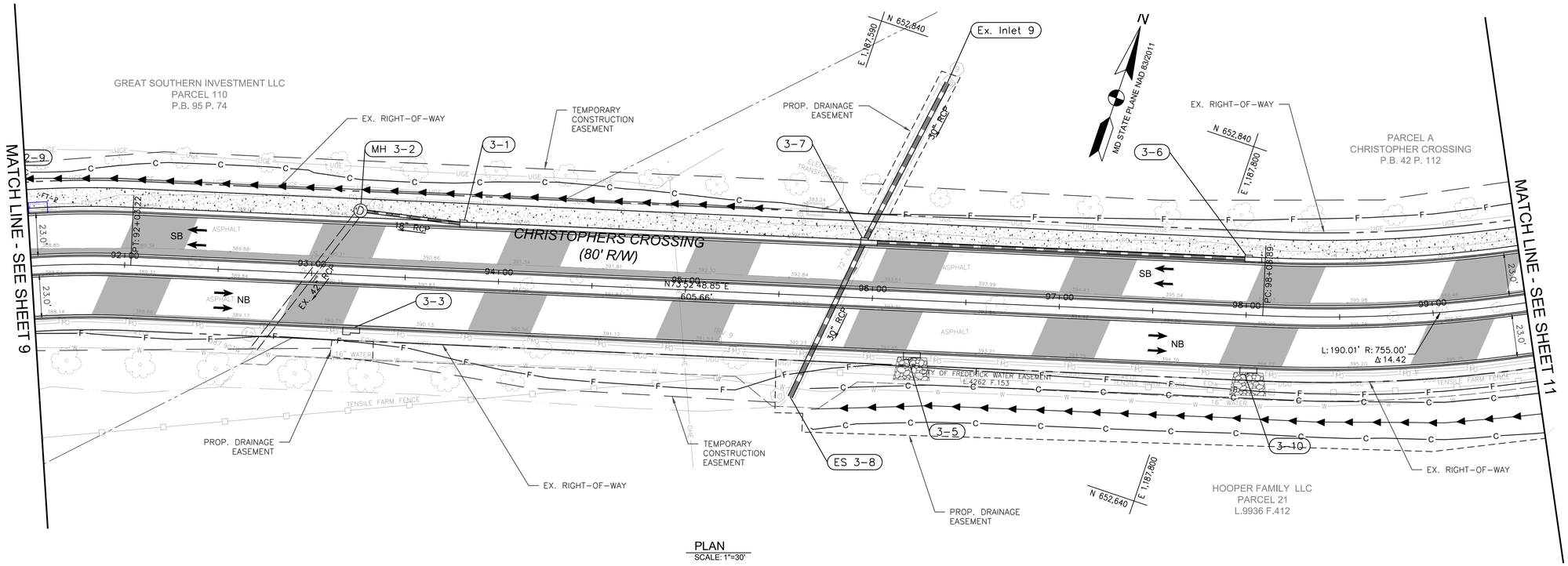
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

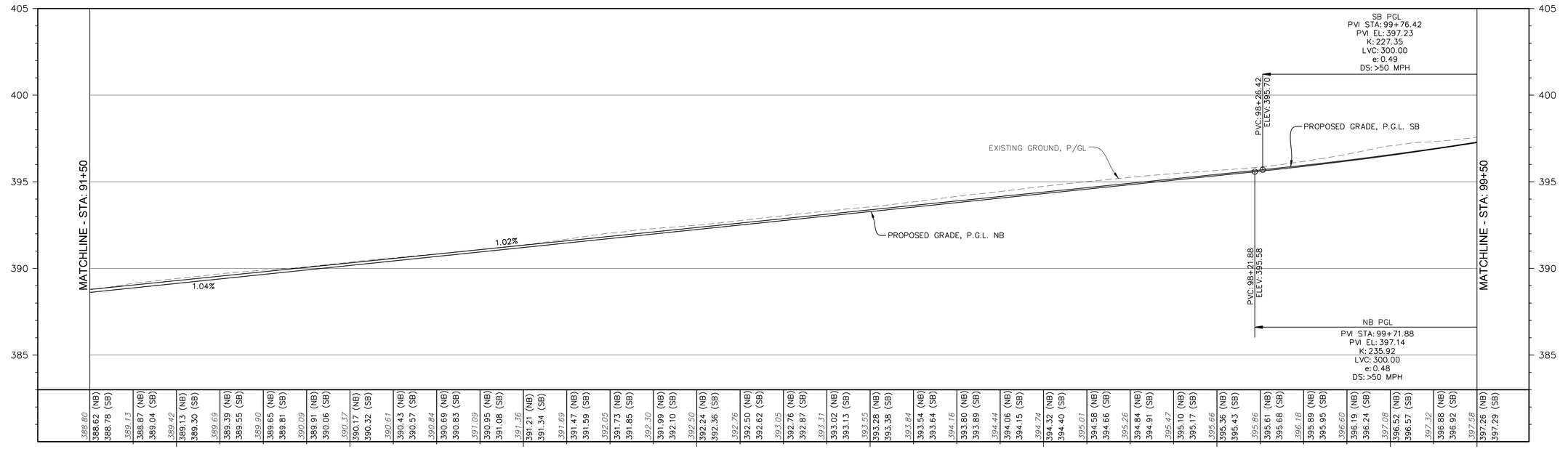
ROADWAY PLAN AND PROFILE

DATE: SEPTEMBER 2020 SCALE: 1"=30'

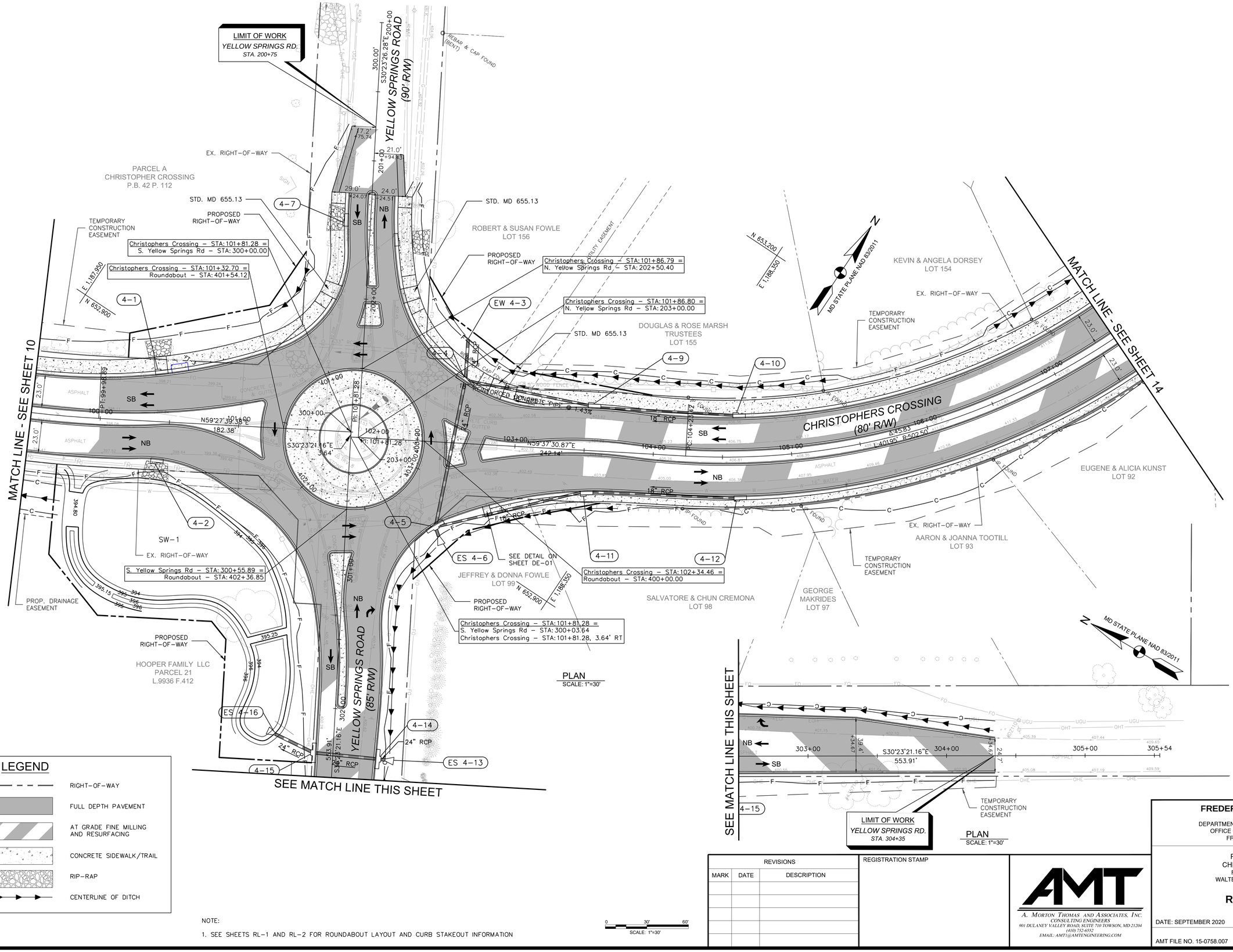
AMT FILE NO. 15-0758.007 SHEET NO. 09 OF 106



PLAN
SCALE: 1"=30'



| | | |



PS-4

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8352
EMAIL: AMT1@AMTENGINEERING.COM

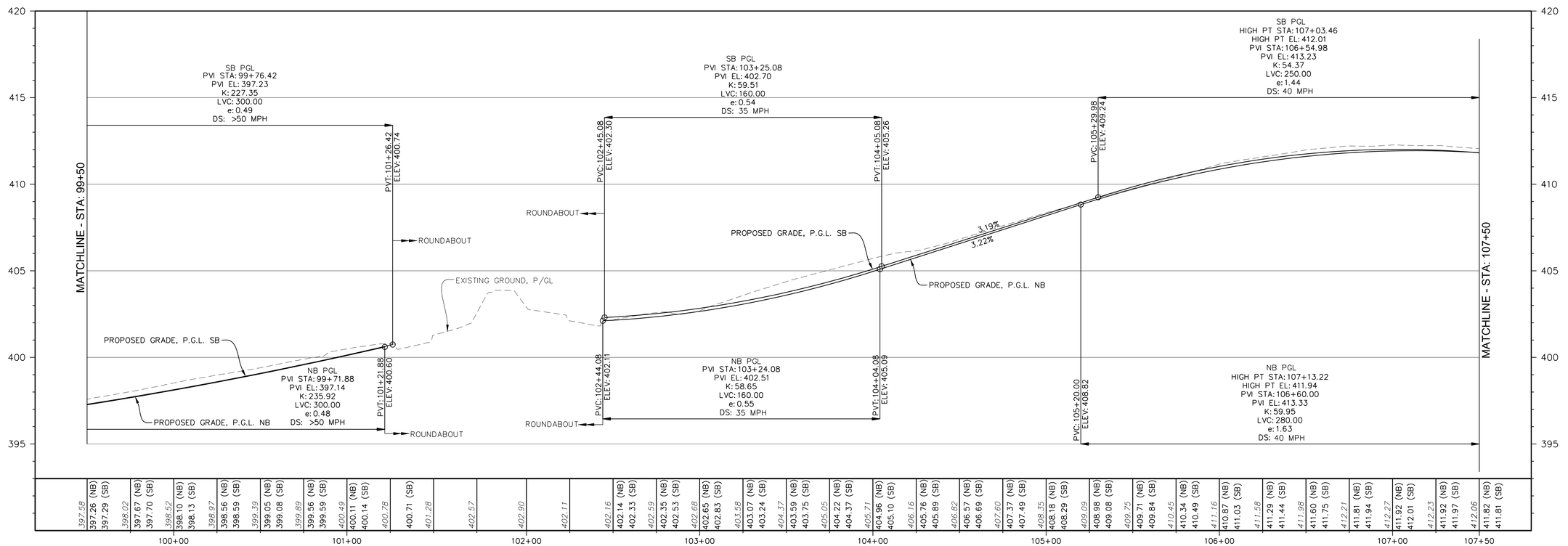
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY PLAN

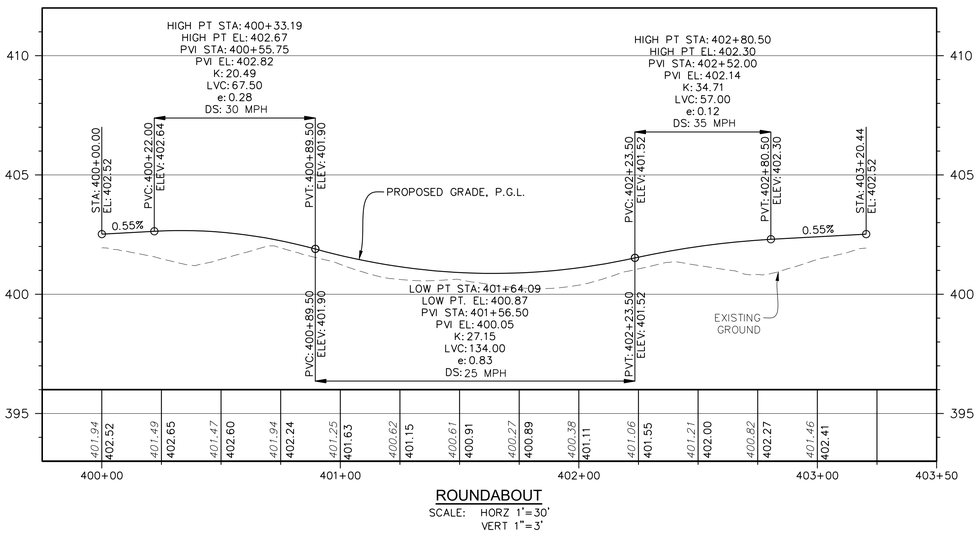
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 11 OF 106



STA. 99+50 TO STA. 107+50 PROFILE

SCALE: HORZ 1"=30'
VERT 1"=3'



ROUNDABOUT

SCALE: HORZ 1"=30'
VERT 1"=3'

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

PS-5

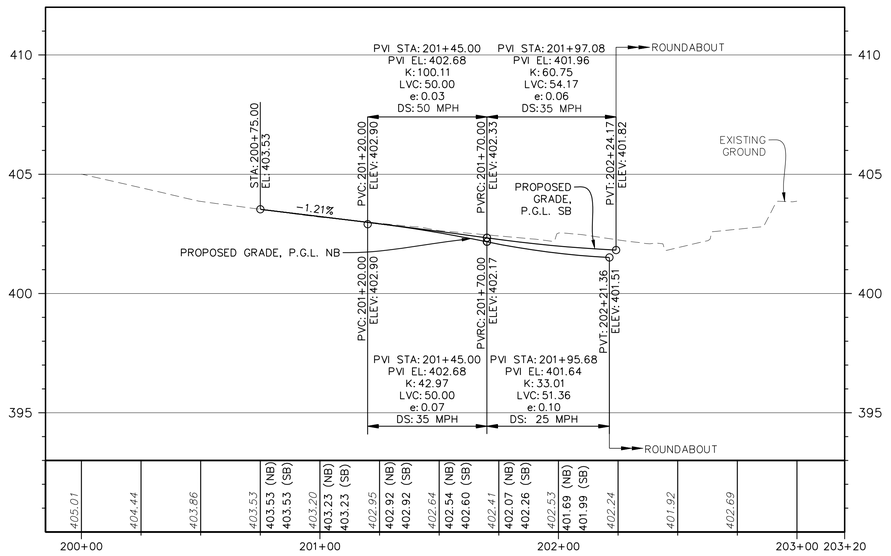
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY PROFILE

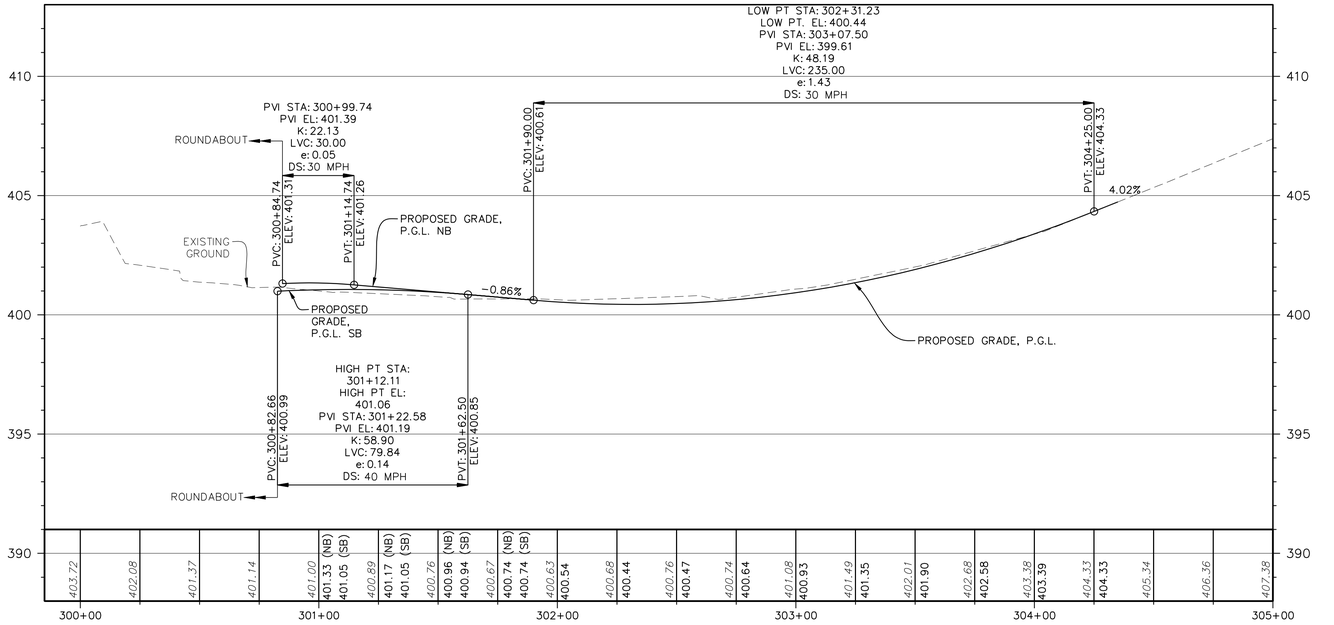
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 12 OF 106



YELLOW SPRINGS ROAD PROFILE NORTH OF CHRISTOPHERS CROSSING

SCALE: HORZ 1"=30'
VERT 1"=3'



YELLOW SPRINGS ROAD PROFILE SOUTH OF CHRISTOPHERS CROSSING

SCALE: HORZ 1"=30'
VERT 1"=3'

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-4552
EMAIL: AMT1@AMTENGINEERING.COM

PS-6

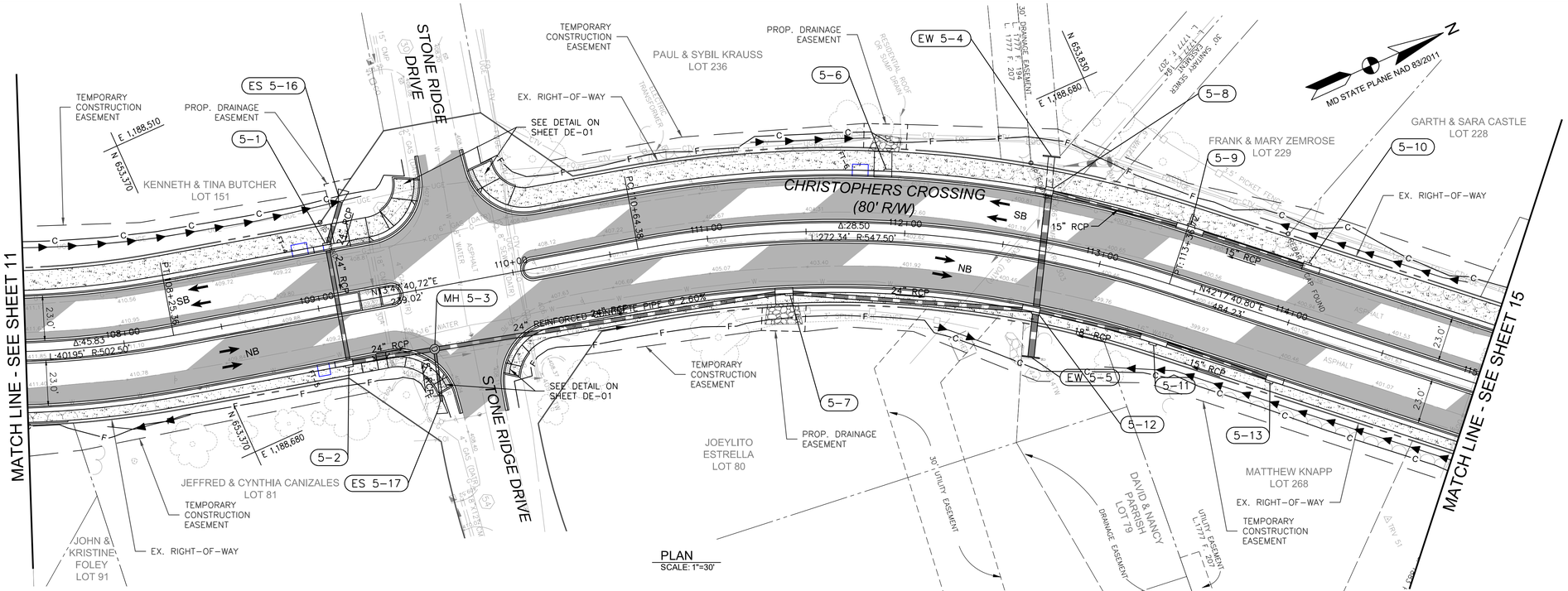
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

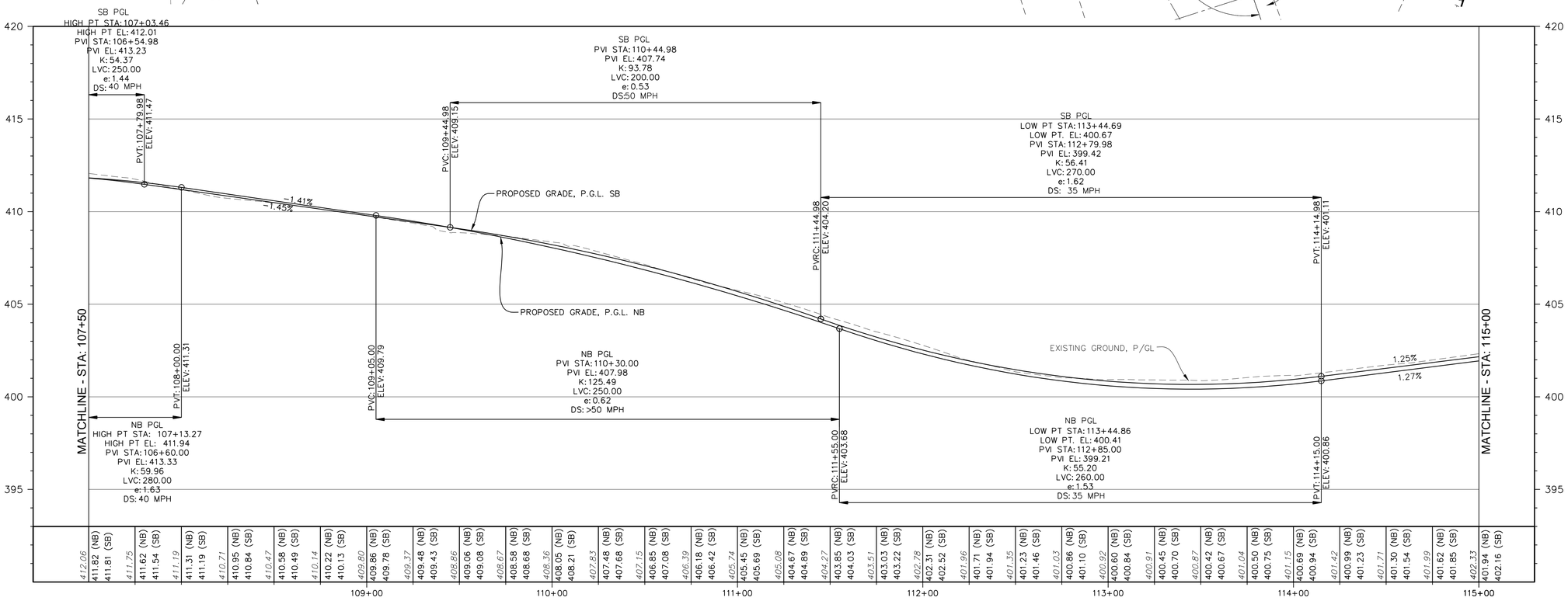
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY PROFILE

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 13 OF 106





STA. 107+50 TO STA. 115+00 PROFILE
SCALE: HORZ 1"=30'
VERT 1"=3'

0 30' 60'
SCALE: 1"=30'

LEGEND

- RIGHT-OF-WAY
- FULL DEPTH PAVEMENT
- AT GRADE FINE MILLING AND RESURFACING
- CONCRETE SIDEWALK/TRAIL
- RIP-RAP
- CENTERLINE OF DITCH

PS-7

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY PLAN AND PROFILE

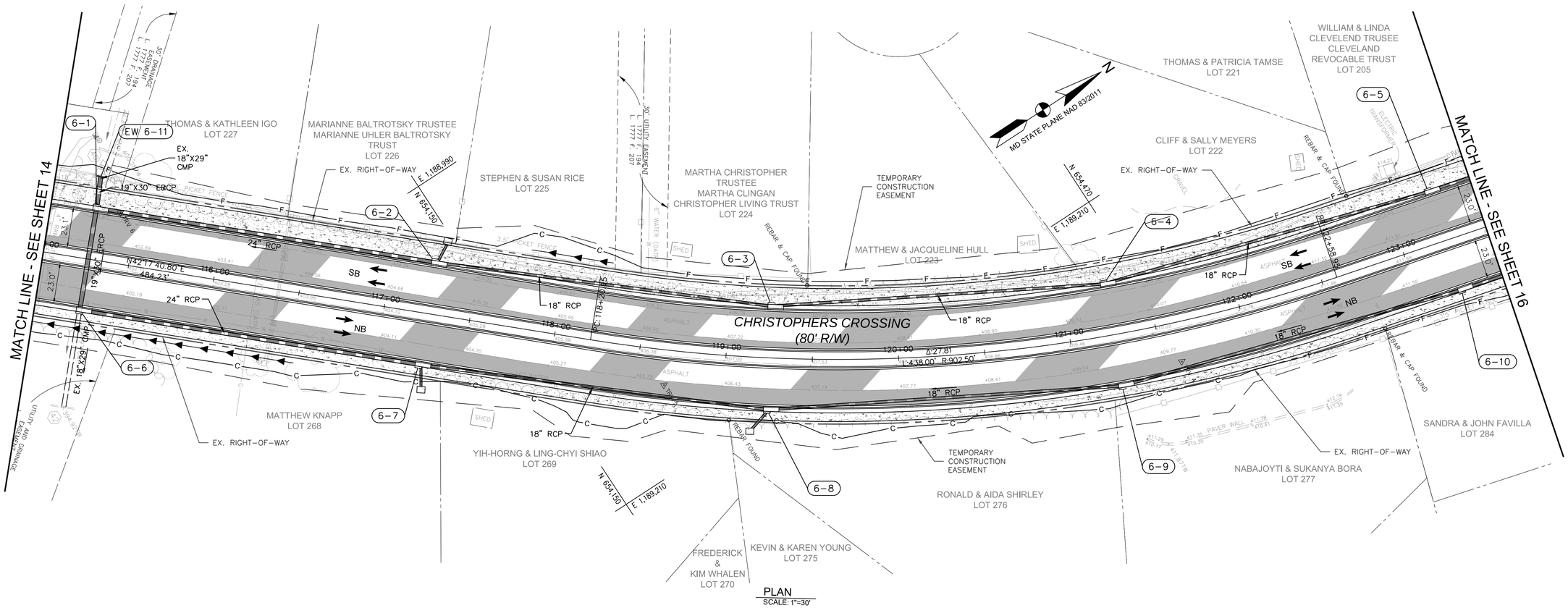
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 14 OF 106

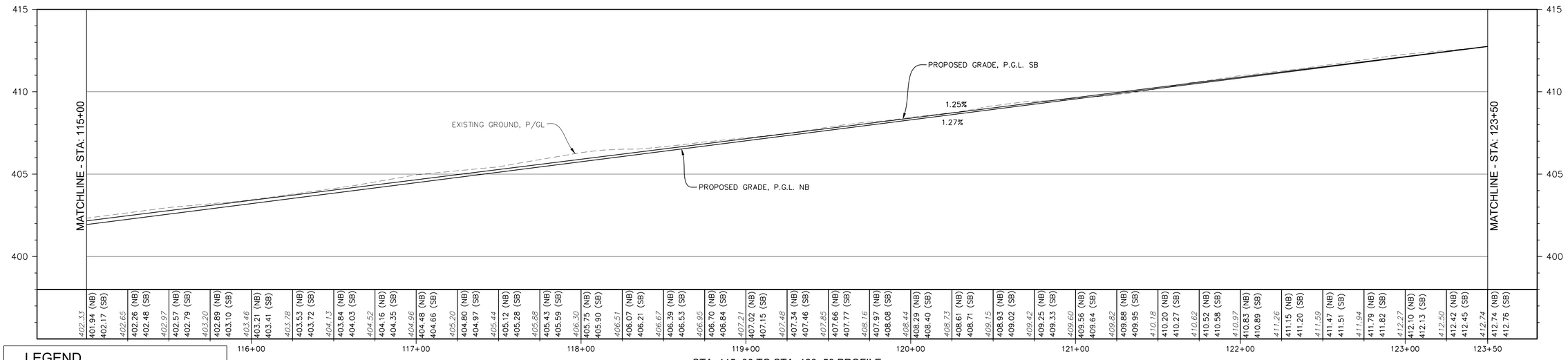
REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM



PLAN
SCALE: 1"=30"



STA. 115+00 TO STA. 123+50 PROFILE
SCALE: HORZ 1"=30'
VERT 1"=3'

LEGEND

- RIGHT-OF-WAY
- FULL DEPTH PAVEMENT
- AT GRADE FINE MILLING AND RESURFACING
- CONCRETE SIDEWALK/TRAIL
- RIP-RAP
- CENTERLINE OF DITCH

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

PS-8

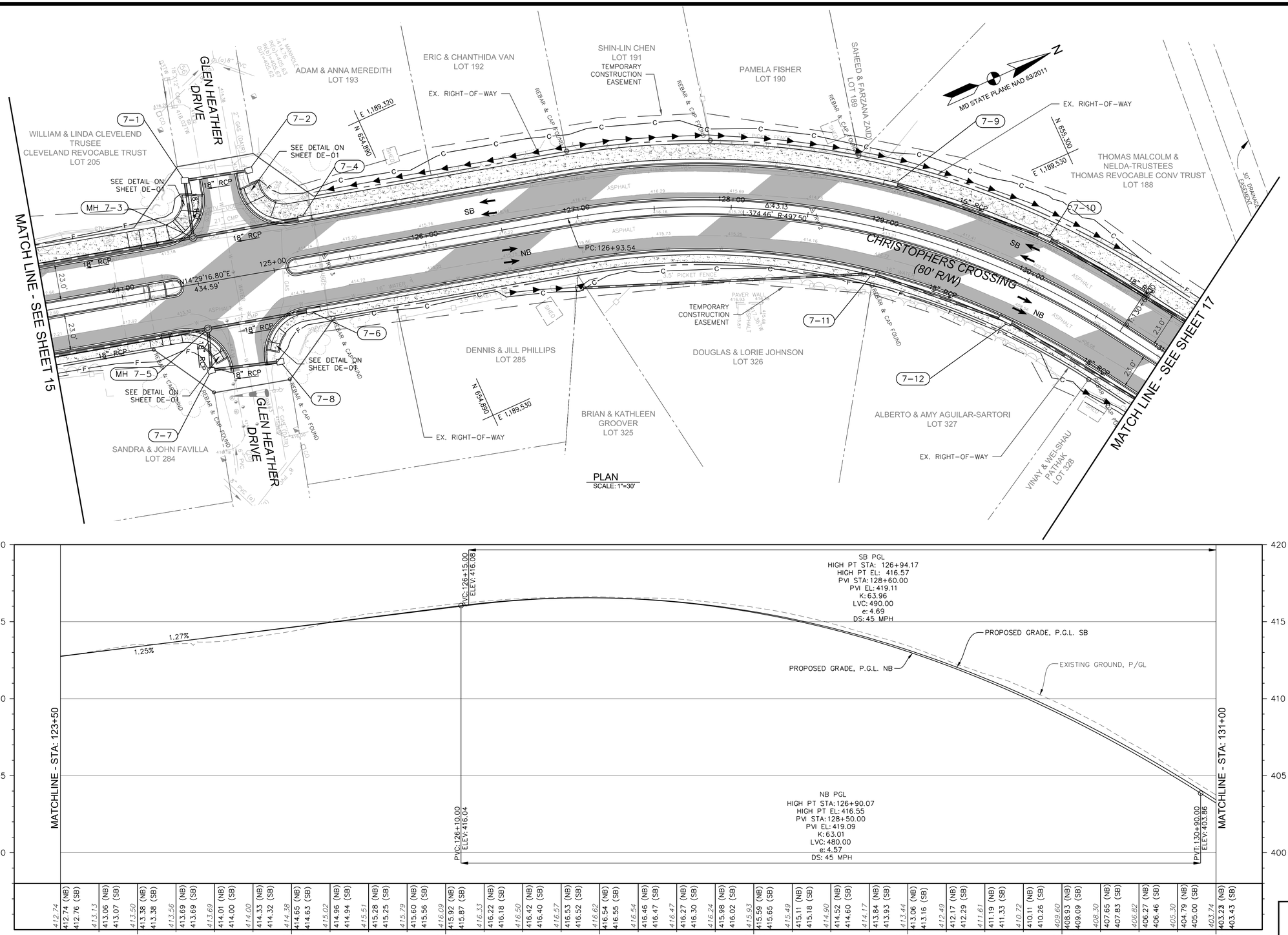
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY PLAN AND PROFILE

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 15 OF 106



STA. 123+50 TO STA. 131+00 PROFILE

SCALE: HORZ 1"=30'
VERT 1"=3'

SCALE: 1"=30'

LEGEND

- RIGHT-OF-WAY
- FULL DEPTH PAVEMENT
- AT GRADE FINE MILLING AND RESURFACING
- CONCRETE SIDEWALK/TRAIL
- RIP-RAP
- CENTERLINE OF DITCH

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

PS-9

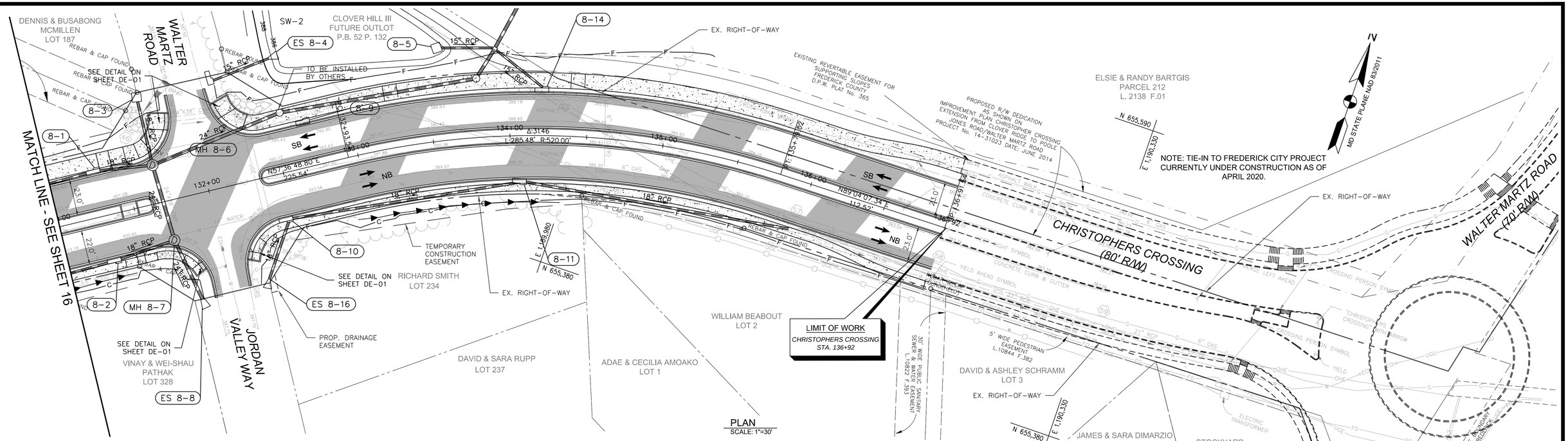
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

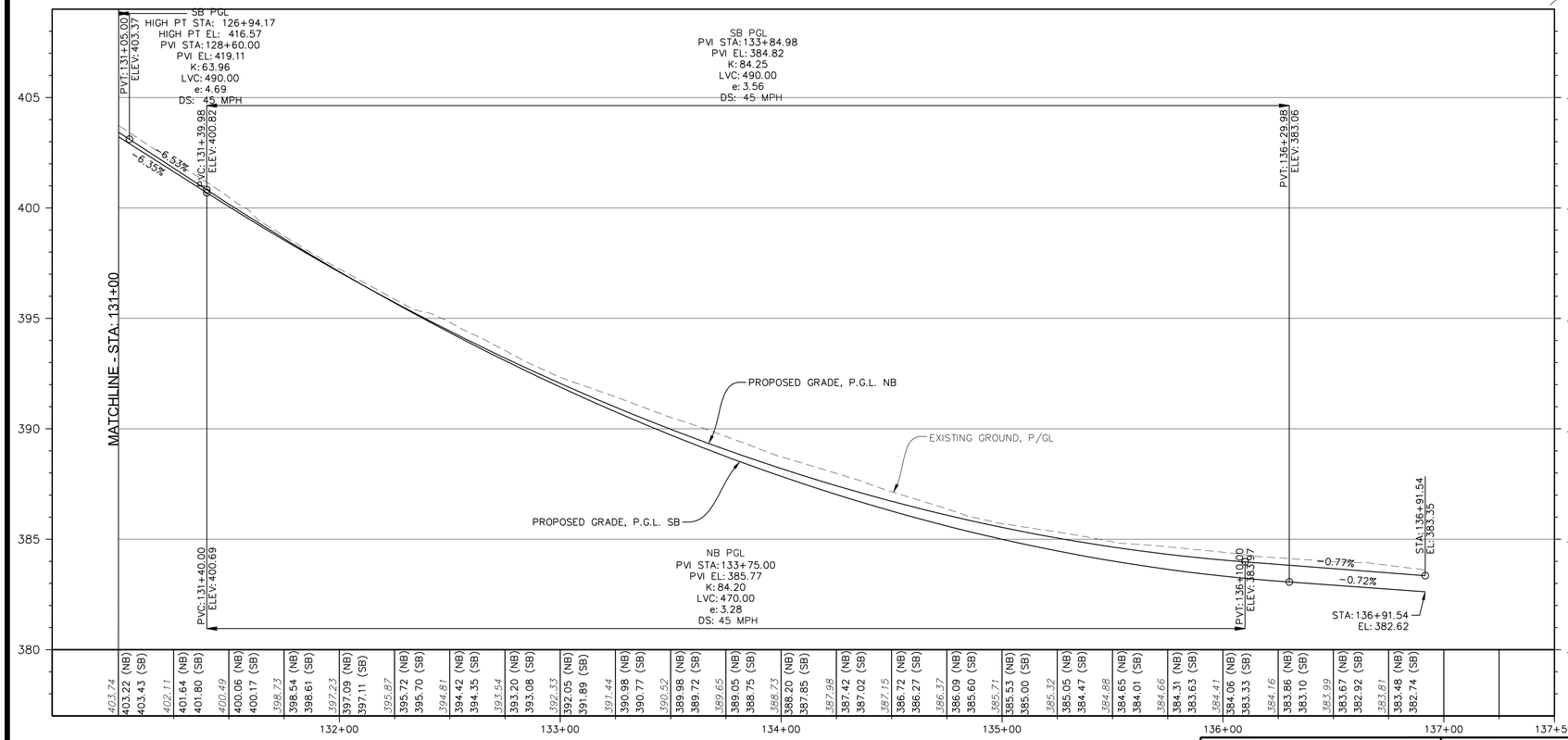
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY PLAN AND PROFILE

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 16 OF 106





STA. 131+00 TO STA. 136+95 PROFILE

SCALE: HORZ 1"=30'
VERT 1"=3'

SCALE: 1"=30'

LEGEND

- RIGHT-OF-WAY
- FULL DEPTH PAVEMENT
- AT GRADE FINE MILLING AND RESURFACING
- CONCRETE SIDEWALK/TRAIL
- RIP-RAP
- CENTERLINE OF DITCH

PS-10

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROADWAY PLAN AND PROFILE

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 17 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8352
EMAIL: AMT1@AMTENGINEERING.COM

STAKEOUT INFORMATION				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
101	CHRISTOPHERS CROSSING STA. 99+96.67, 5.00' RT	398.04	398.08	N 652825.5519 E 1188008.1553
102	CHRISTOPHERS CROSSING STA. 100+42.95, 2.51' RT	398.91	398.95	N 652851.2159 E 1188046.7658
103	CHRISTOPHERS CROSSING STA. 100+80.86, 5.59' RT	399.68	399.72	N 652867.8218 E 1188080.9769
104	CHRISTOPHERS CROSSING STA. 101+17.46, 22.28' RT	400.49	400.53	N 652872.0476 E 1188120.9836
105	RAB STA. 401+71.67, 15.50' RT	400.59	400.55	N 652873.7455 E 1188121.7487
106	RAB STA. 401+43.24, 17.01' RT	400.63	400.59	N 652905.5021 E 1188102.6873
107	CHRISTOPHERS CROSSING STA. 101+15.05, 19.41' LT	400.47	400.51	N 652906.7311 E 1188097.7205
108	CHRISTOPHERS CROSSING STA. 99+97.28, 5.00' LT	398.08	398.12	N 652834.4829 E 1188003.6164

STAKEOUT INFORMATION				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
201	YELLOW SPRINGS ROAD STA. 301+95.99, 7.00' LT	400.57	400.61	N 652758.1405 E 1188269.8111
202	YELLOW SPRINGS ROAD STA. 301+32.40, 3.05' LT	401.10	401.14	N 652810.9970 E 1188234.2319
203	YELLOW SPRINGS ROAD STA. 300+87.67, 5.87' LT	401.32	401.36	N 652851.0075 E 1188214.0433
204	RAB STA. 402+40.70, 30.50' RT	401.26	401.22	N 652851.5894 E 1188212.5049
205	RAB STA. 402+32.70, 32.06' RT	401.11	401.07	N 652844.2110 E 1188201.8127
206	YELLOW SPRINGS ROAD STA. 300+91.24, 10.76' RT	401.03	401.07	N 652839.5222 E 1188201.4984
207	YELLOW SPRINGS ROAD STA. 301+50.67, 0.58' RT	400.93	400.97	N 652793.3967 E 1188240.3447
208	YELLOW SPRINGS ROAD STA. 301+95.99, 1.00' LT	400.58	400.62	N 652755.1053 E 1188264.6355

STAKEOUT INFORMATION				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
301	RAB STA. 403+09.06, 17.02' RT	402.14	402.10	N 652942.7169 E 1188233.3169
302	CHRISTOPHERS CROSSING STA. 102+53.99, 17.76' RT	402.17	402.21	N 652941.9713 E 1188238.1847
303	CHRISTOPHERS CROSSING STA. 102+63.99, 15.02' RT	402.25	402.29	N 652949.3938 E 1188245.4260
304	CHRISTOPHERS CROSSING STA. 102+64.69, 13.73' RT	402.32	402.36	N 652950.8572 E 1188245.3740
305	CHRISTOPHERS CROSSING STA. 102+61.88, 5.43' RT	402.36	402.40	N 652956.5984 E 1188238.7462
306	CHRISTOPHERS CROSSING STA. 102+66.44, 7.42' LT	402.51	402.55	N 652969.9928 E 1188236.1842
307	CHRISTOPHERS CROSSING STA. 102+65.81, 8.71' LT	402.45	402.49	N 652970.7828 E 1188234.9928
308	CHRISTOPHERS CROSSING STA. 102+48.91, 15.99' LT	402.33	402.37	N 652968.5239 E 1188216.7277
309	RAB STA. 400+11.32, 15.00' RT	402.30	402.26	N 652966.8164 E 1188216.0570
310	CHRISTOPHERS CROSSING STA. 102+76.46, 11.07' RT	402.40	402.44	N 652959.1031 E 1188254.1826
311	CHRISTOPHERS CROSSING STA. 102+77.62, 11.73' RT	402.38	402.42	N 652959.1271 E 1188255.5188
312	CHRISTOPHERS CROSSING STA. 103+37.88, 3.03' RT	403.33	403.37	N 652997.1017 E 1188303.1017
313	CHRISTOPHERS CROSSING STA. 103+82.33, 3.33' RT	404.43	404.47	N 653019.3137 E 1188341.6060
314	CHRISTOPHERS CROSSING STA. 104+23.42, 5.00' RT	405.71	405.75	N 653038.6574 E 1188377.9048
315	CHRISTOPHERS CROSSING STA. 104+23.42, 5.00' LT	405.84	405.88	N 653047.2834 E 1188372.8461
316	CHRISTOPHERS CROSSING STA. 103+83.14, 6.63' LT	404.59	404.63	N 653028.3222 E 1188337.2646
317	CHRISTOPHERS CROSSING STA. 103+13.77, 4.47' LT	403.05	403.09	N 652991.3819 E 1188278.5087
318	CHRISTOPHERS CROSSING STA. 102+79.29, 5.22' LT	402.57	402.61	N 652974.5919 E 1188248.3835
319	CHRISTOPHERS CROSSING STA. 102+78.16, 4.57' LT	402.60	402.64	N 652973.4625 E 1188247.7381
320	CHRISTOPHERS CROSSING STA. 102+74.58, 5.52' RT	402.47	402.51	N 652962.9425 E 1188249.7503

STAKEOUT INFORMATION				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
401	RAB STA. 400+70.96, 32.06' RT	401.70	401.66	N 652997.7710 E 1188138.5131
402	YELLOW SPRINGS ROAD STA. 202+15.42, 12.20' LT	401.87	401.91	N 653002.4484 E 1188138.9670
403	YELLOW SPRINGS ROAD STA. 202+03.44, 9.76' LT	401.96	402.00	N 653011.5517 E 1188130.8102
404	YELLOW SPRINGS ROAD STA. 202+02.62, 8.78' LT	401.94	401.98	N 653011.7582 E 1188129.5496
405	YELLOW SPRINGS ROAD STA. 202+02.62, 0.13' LT	401.65	401.69	N 653007.3800 E 1188122.0848
406	YELLOW SPRINGS ROAD STA. 202+03.46, 0.86' RT	401.65	401.69	N 653006.1585 E 1188121.6573
407	YELLOW SPRINGS ROAD STA. 202+18.48, 4.54' RT	401.53	401.57	N 652991.3420 E 1188126.0855
408	RAB STA. 400+78.96, 30.5' RT	401.57	401.53	N 652990.7145 E 1188127.6059
409	YELLOW SPRINGS ROAD STA. 201+90.62, 6.41' LT	402.05	402.09	N 653020.9110 E 1188121.4358
410	YELLOW SPRINGS ROAD STA. 201+89.47, 7.40' LT	402.10	402.14	N 653022.4026 E 1188121.7072
411	YELLOW SPRINGS ROAD STA. 201+46.21, 3.26' LT	402.63	402.67	N 653057.6210 E 1188096.2458
412	YELLOW SPRINGS ROAD STA. 201+25.34, 3.00' LT	402.85	402.89	N 653075.4978 E 1188085.4654
413	YELLOW SPRINGS ROAD STA. 201+25.34, 3.00' RT	402.85	402.89	N 653072.4625 E 1188080.2898
414	YELLOW SPRINGS ROAD STA. 201+73.86, 0.38' RT	402.09	402.13	N 653031.9362 E 1188107.0980
415	YELLOW SPRINGS ROAD STA. 201+89.60, 0.45' LT	401.83	401.87	N 653018.7804 E 1188115.7762
416	YELLOW SPRINGS ROAD STA. 201+90.62, 1.45' LT	401.77	401.81	N 653018.4016 E 1188117.1573

STAKEOUT INFORMATION				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
NW01	YELLOW SPRINGS ROAD STA. 201+24.10, 16.00' RT	402.64	402.60	N 653066.9562 E 1188068.4483
NW02	YELLOW SPRINGS ROAD STA. 201+33.82, 16.00' RT	402.54	402.50	N 653058.5745 E 1188073.3640
NW03	YELLOW SPRINGS ROAD STA. 201+63.02, 14.66' RT	402.10	402.06	N 653034.0609 E 1188073.2885
NW04	RAB STA. 401+17.31, 33.85' RT	400.58	400.54	N 652944.4404 E 1188087.6147
NW05	CHRISTOPHERS CROSSING STA. 99+49.79, 28.00' LT	396.87	396.83	N 652832.4223 E 1187951.8374

STAKEOUT INFORMATION				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
NE01	CHRISTOPHERS CROSSING STA. 104+23.42, 28.00' LT	405.42	405.38	N 653067.1230 E 1188361.2103
NE02	CHRISTOPHERS CROSSING STA. 103+85.00, 29.56' LT	404.17	404.13	N 653049.0416 E 1188327.2794
NE03	CHRISTOPHERS CROSSING STA. 103+25.57, 29.07' LT	402.89	402.85	N 653018.5660 E 1188276.2578
NE04	CHRISTOPHERS CROSSING STA. 102+63.38, 43.45' LT	401.81	401.77	N 652999.5227 E 1188215.3286
NE05	RAB STA. 400+29.96, 36.07' RT	401.96	401.92	N 652999.7464 E 1188205.1325
NE06	YELLOW SPRINGS ROAD STA. 201+86.89, 22.56' LT	401.83	401.79	N 653032.3026 E 1188133.4706
NE07	YELLOW SPRINGS ROAD STA. 201+24.51, 16.00' LT	402.64	402.60	N 653082.7938 E 1188096.2572

STAKEOUT INFORMATION				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
SW01	CHRISTOPHERS CROSSING STA. 99+96.67, 28.00' RT	397.62	397.58	N 652805.7081 E 1188019.7838
SW02	CHRISTOPHERS CROSSING STA. 100+29.47, 26.84' RT	398.20	398.16	N 652823.4103 E 1188047.5195
SW03	CHRISTOPHERS CROSSING STA. 100+88.53, 41.01' RT	399.57	399.53	N 652841.2150 E 1188105.5882
SW04	RAB STA. 401+92.14, 35.09' RT	400.33	400.29	N 652840.8754 E 1188136.3394
SW05	YELLOW SPRINGS ROAD STA. 301+18.86, 20.73' RT	400.79	400.75	N 652810.6506 E 1188206.8749
SW06	YELLOW SPRINGS ROAD STA. 301+90.69, 12.00' RT	400.40	400.36	N 652753.1042 E 1188250.7384

STAKEOUT INFORMATION				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
SE01	YELLOW SPRINGS ROAD STA. 301+81.50, 32.00' LT	400.22	400.18	N 652783.2864 E 1188284.0463
SE02	YELLOW SPRINGS ROAD STA. 301+43.83, 29.86' LT	400.52	400.48	N 652814.6991 E 1188263.1386
SE03	YELLOW SPRINGS ROAD STA. 301+06.40, 32.67' LT	400.82	400.78	N 652848.4091 E 1188246.6330
SE04	RAB STA. 402+87.22, 38.49' RT	401.55	401.51	N 652911.9514 E 1188258.0948
SE05	CHRISTOPHERS CROSSING STA. 103+77.55, 28.00' RT	403.89	403.85	N 652995.6191 E 1188349.9591
SE06	CHRISTOPHERS CROSSING STA. 104+23.42, 28.00' RT	405.29	405.25	N 653018.8096 E 1188389.5267

RL-1

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

ROUNDABOUT LAYOUT

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 18 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

NOTES:
1. DIMENSIONS AND RADII REFERENCE THE FACE OF CURB.
2. ALL ELEVATIONS REFERENCE THE FLOW LINE

B/L CONSTRUCTION N. YELLOW SPRINGS ROAD

B/L CONSTRUCTION ROUNDABOUT

B/L CONSTRUCTION CHRISTOPHERS CROSSING

B/L CONSTRUCTION S. YELLOW SPRINGS RD

N. Yellow Springs Rd – POT STA: 202+50.40 = Roundabout – POC STA: 400+75.50

S. Yellow Springs Rd – POT STA: 300+00.00 = Christophers Crossing – POT STA: 101+81.28

Christophers Crossing – POT STA: 101+32.70 = Roundabout – PCC STA: 401+54.12

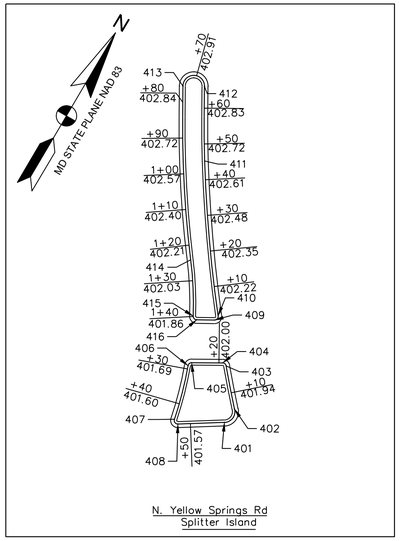
Christophers Crossing – POT STA: 102+34.46 = Roundabout – PC STA: 400+00.00

Christophers Crossing – POT STA: 101+81.28 = S. Yellow Springs Rd – POT STA: 300+03.64 Christophers Crossing – POT STA: 101+81.28, 3.64' RT

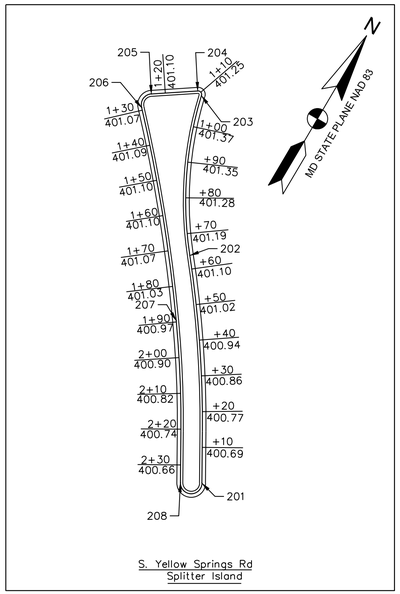
N. Yellow Springs Rd – POT STA: 203+00.00 = Christophers Crossing – POT STA: 101+86.80

S. Yellow Springs Rd – POT STA: 300+55.89 = Roundabout – POC STA: 402+36.85

PC: 104+23.42



N. Yellow Springs Rd
Splitter Island



S. Yellow Springs Rd
Splitter Island

0 10' 20' 40'
SCALE: 1"=20'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

RL-2

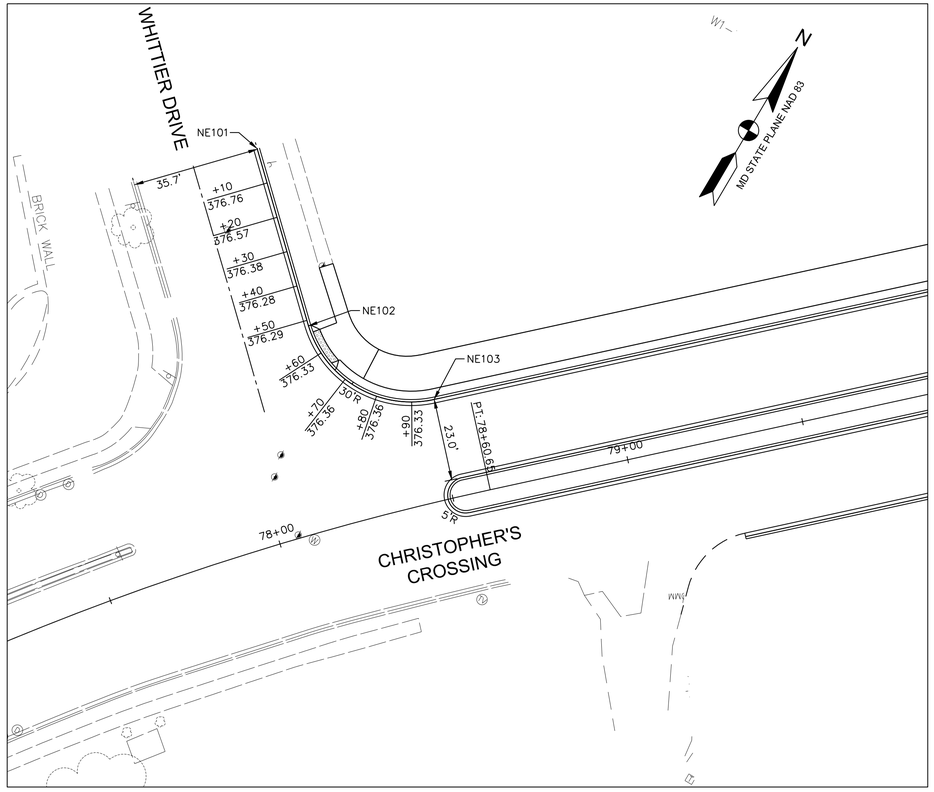
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

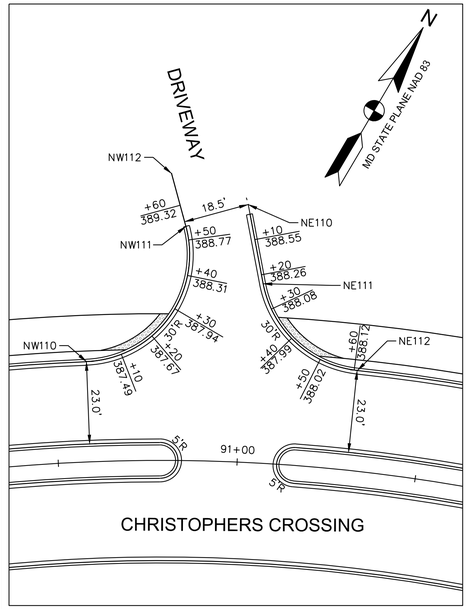
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

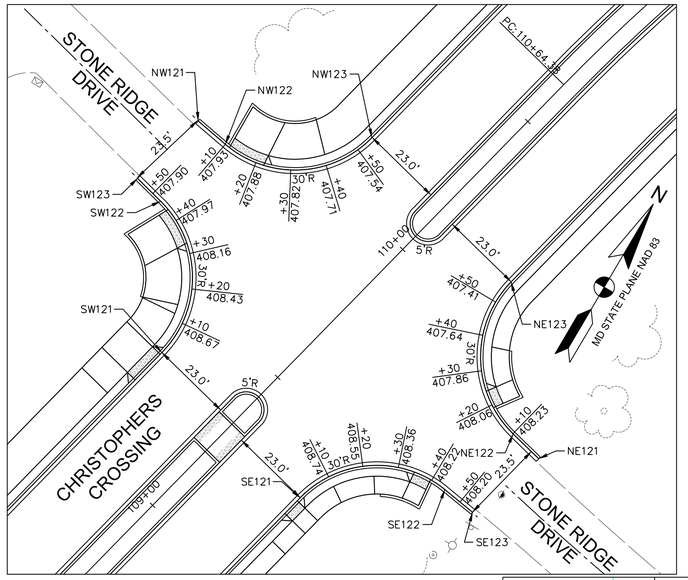
ROUNDABOUT LAYOUT

DATE: SEPTEMBER 2020 SCALE:

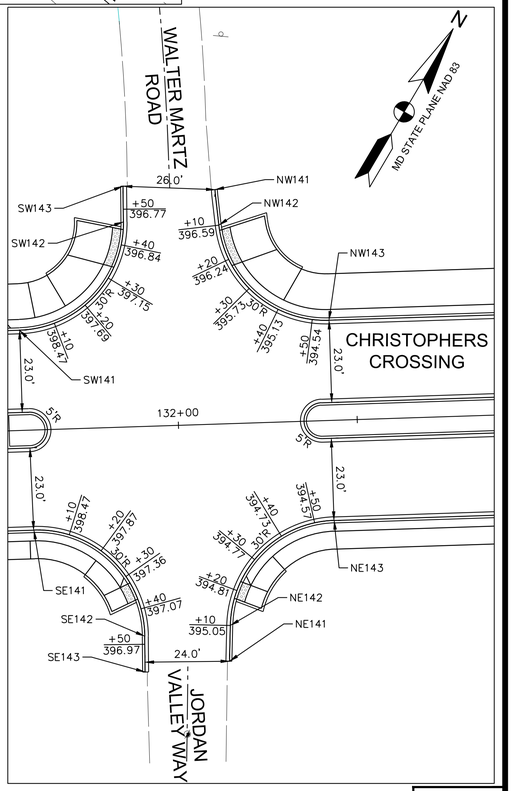
AMT FILE NO. 15-0758.007 SHEET NO. 19 OF 106







NOTES:
1. DIMENSIONS AND RADII REFERENCE THE FACE OF CURB.
2. ALL ELEVATIONS REFERENCE THE FLOW LINE.



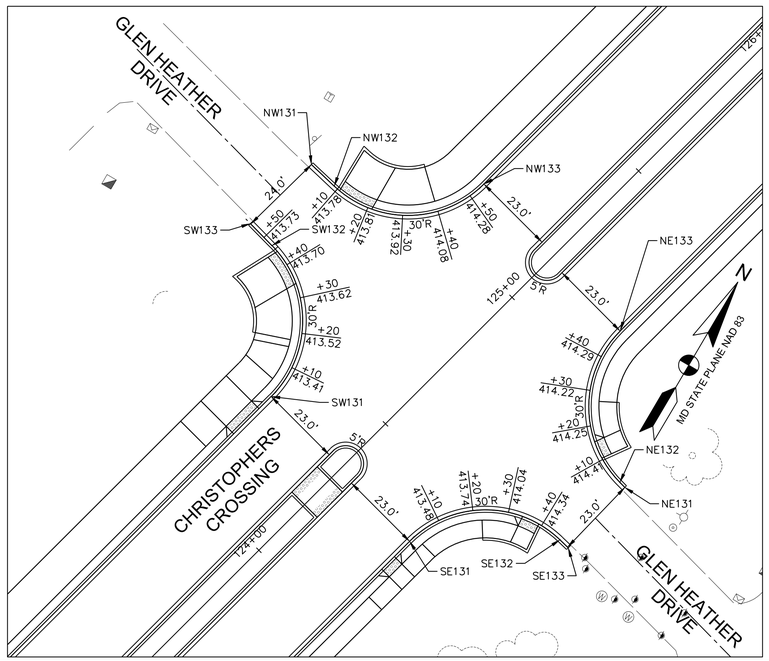
STAKEOUT INFORMATION - WHITTIER DR.				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
NE101	CHRISTOPHERS CROSSING STA. 78+22.97, 108.10' LT	377.00	376.96	N 651641.9982 E 1186282.3141
NE102	CHRISTOPHERS CROSSING STA. 78+23.44, 56.50' LT	376.34	376.30	N 651606.5846 E 1186319.8562
NE103	CHRISTOPHERS CROSSING STA. 78+51.05, 28.06' LT	376.33	376.29	N 651606.7015 E 1186360.5246

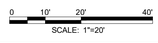
STAKEOUT INFORMATION - DRIVEWAY				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
NW110	CHRISTOPHERS CROSSING STA. 90+59.01, 28.00' LT	387.43	387.39	N 652551.7994 E 1187105.7035
NW111	CHRISTOPHERS CROSSING STA. 90+84.85, 65.47' LT	389.02	388.98	N 652598.4915 E 1187110.3910
NW112	CHRISTOPHERS CROSSING STA. 90+81.24, 80.20' LT	389.93	389.89	N 652609.1745 E 1187099.4354
NE110	CHRISTOPHERS CROSSING STA. 90+99.99, 72.05' LT	388.98	388.94	N 652612.5994 E 1187122.2974
NE111	CHRISTOPHERS CROSSING STA. 91+04.66, 50.12' LT	388.25	388.21	N 652595.6447 E 1187137.1641
NE112	CHRISTOPHERS CROSSING STA. 91+30.76, 28.00' LT	388.16	388.12	N 652588.1264 E 1187172.1653

STAKEOUT INFORMATION - STONE RIDGE DR.				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
SW121	CHRISTOPHERS CROSSING STA. 109+32.35, 28.00' LT	408.91	408.87	N 653467.2512 E 1188607.6030
SW122	CHRISTOPHERS CROSSING STA. 109+62.35, 57.80' LT	407.95	407.91	N 653503.4902 E 1188585.8183
SW123	CHRISTOPHERS CROSSING STA. 109+62.41, 66.90' LT	407.94	407.90	N 653505.7197 E 1188576.9956
NW121	CHRISTOPHERS CROSSING STA. 109+85.72, 65.97' LT	408.03	407.99	N 653528.1342 E 1188583.4565
NW122	CHRISTOPHERS CROSSING STA. 109+86.39, 55.99' LT	407.97	407.93	N 653526.4059 E 1188593.3060
NW123	CHRISTOPHERS CROSSING STA. 110+16.32, 28.00' LT	407.47	407.43	N 653548.8012 E 1188627.6255
SE121	CHRISTOPHERS CROSSING STA. 109+30.32, 28.00' RT	408.97	408.93	N 653451.9254 E 1188661.5034
SE122	CHRISTOPHERS CROSSING STA. 109+60.20, 55.33' RT	408.23	408.19	N 653474.4282 E 1188695.1677
SE123	CHRISTOPHERS CROSSING STA. 109+61.09, 65.29' RT	408.27	408.23	N 653472.9183 E 1188705.0531
NE121	CHRISTOPHERS CROSSING STA. 109+84.71, 68.01' RT	408.40	408.36	N 653495.2033 E 1188713.3281
NE122	CHRISTOPHERS CROSSING STA. 109+84.68, 58.08' RT	408.27	408.23	N 653497.5441 E 1188703.6797
NE123	CHRISTOPHERS CROSSING STA. 110+14.68, 28.00' RT	407.29	407.25	N 653533.8516 E 1188681.6183

STAKEOUT INFORMATION - WALTER MARTZ RD.				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
SW141	CHRISTOPHERS CROSSING STA. 131+56.45, 28.00' LT	399.34	399.30	N 655353.8610 E 1189708.7182
SW142	CHRISTOPHERS CROSSING STA. 131+86.44, 57.31' LT	396.81	396.77	N 655394.6744 E 1189718.3472
SW143	CHRISTOPHERS CROSSING STA. 131+86.68, 67.30' LT	396.87	396.83	N 655403.2401 E 1189713.1874
NW141	CHRISTOPHERS CROSSING STA. 132+12.32, 65.52' LT	396.84	396.80	N 655415.4726 E 1189735.8020
NW142	CHRISTOPHERS CROSSING STA. 132+13.09, 55.55' LT	396.63	396.59	N 655407.4634 E 1189741.7894
NW143	CHRISTOPHERS CROSSING STA. 132+42.99, 28.00' LT	394.31	394.27	N 655400.2130 E 1189781.7956

STAKEOUT INFORMATION - JORDAN VALLEY WAY				
NO.	POINT INFORMATION	EDGE OF ROAD	FLOWLINE	COORDINATES
SE141	CHRISTOPHERS CROSSING STA. 131+58.69, 28.00' RT	399.11	399.07	N 655307.7684 E 1189740.6003
SE142	CHRISTOPHERS CROSSING STA. 131+88.68, 58.63' RT	397.02	396.98	N 655297.9694 E 1189782.3338
SE143	CHRISTOPHERS CROSSING STA. 131+88.47, 68.63' RT	397.08	397.04	N 655289.4147 E 1189787.5119
NE141	CHRISTOPHERS CROSSING STA. 132+12.14, 66.38' RT	395.65	395.61	N 655303.9934 E 1189806.2982
NE142	CHRISTOPHERS CROSSING STA. 132+12.68, 56.39' RT	395.09	395.05	N 655312.7128 E 1189801.4024
NE143	CHRISTOPHERS CROSSING STA. 132+42.64, 28.00' RT	394.38	394.34	N 655352.7342 E 1189811.4921





REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

DE-02

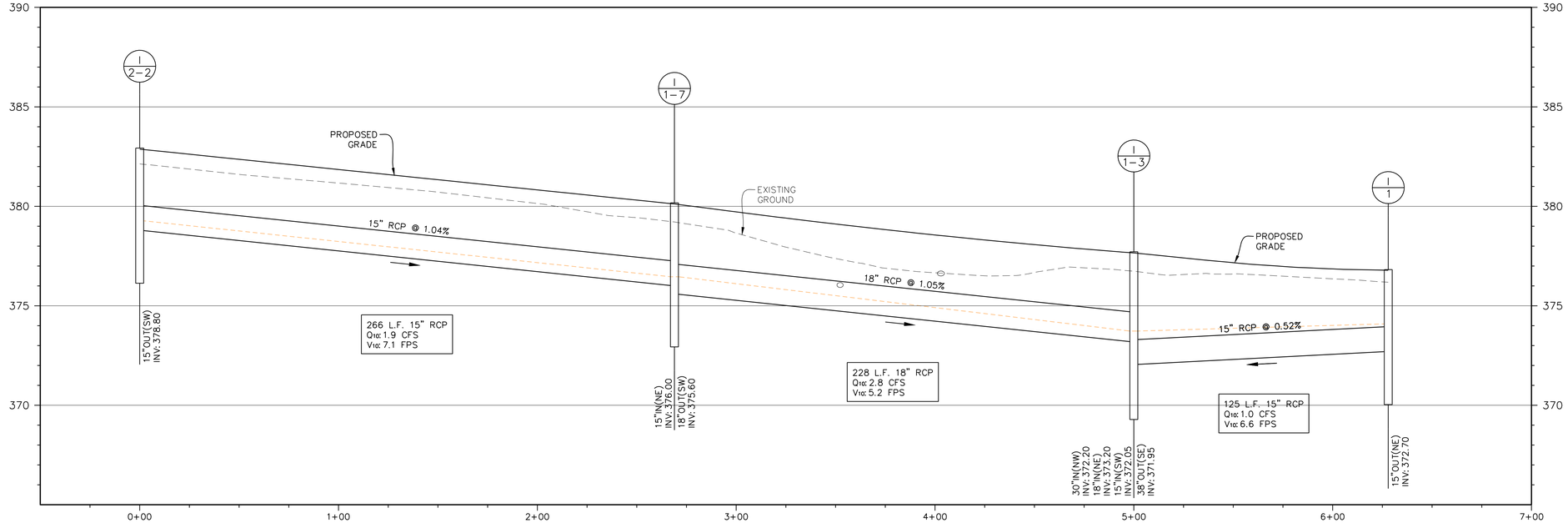
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

INTERSECTION DETAILS

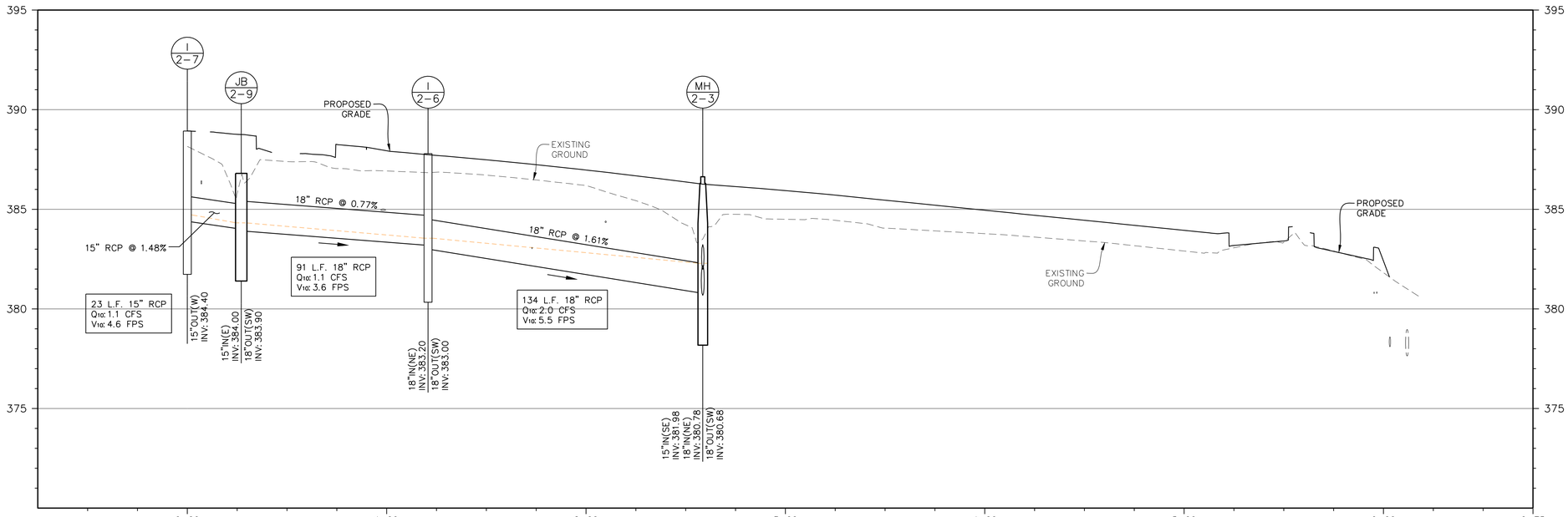
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 20 OF 106



INLET 2-2 TO INLET 1-1

SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 2-7 TO EXISTING OUTFALL

SCALE: HORZ 1"=30'
VERT 1"=3'

C-106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

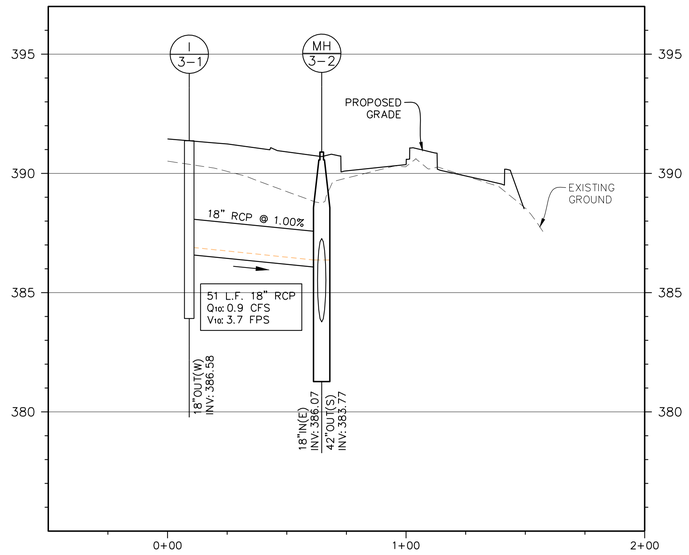
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE PROFILE

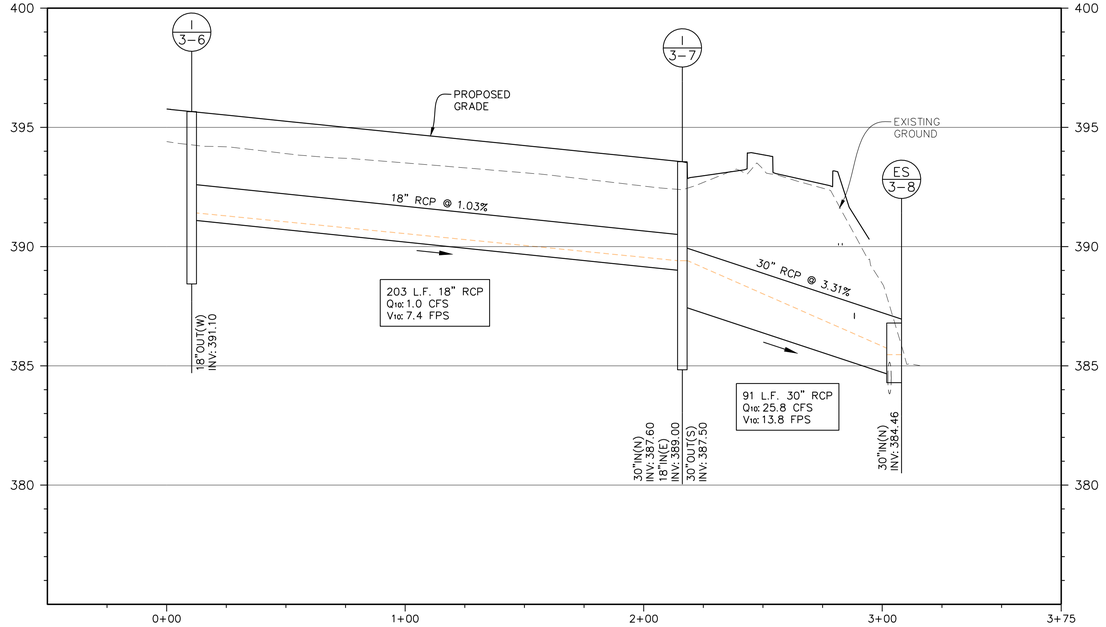
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 21 OF 106



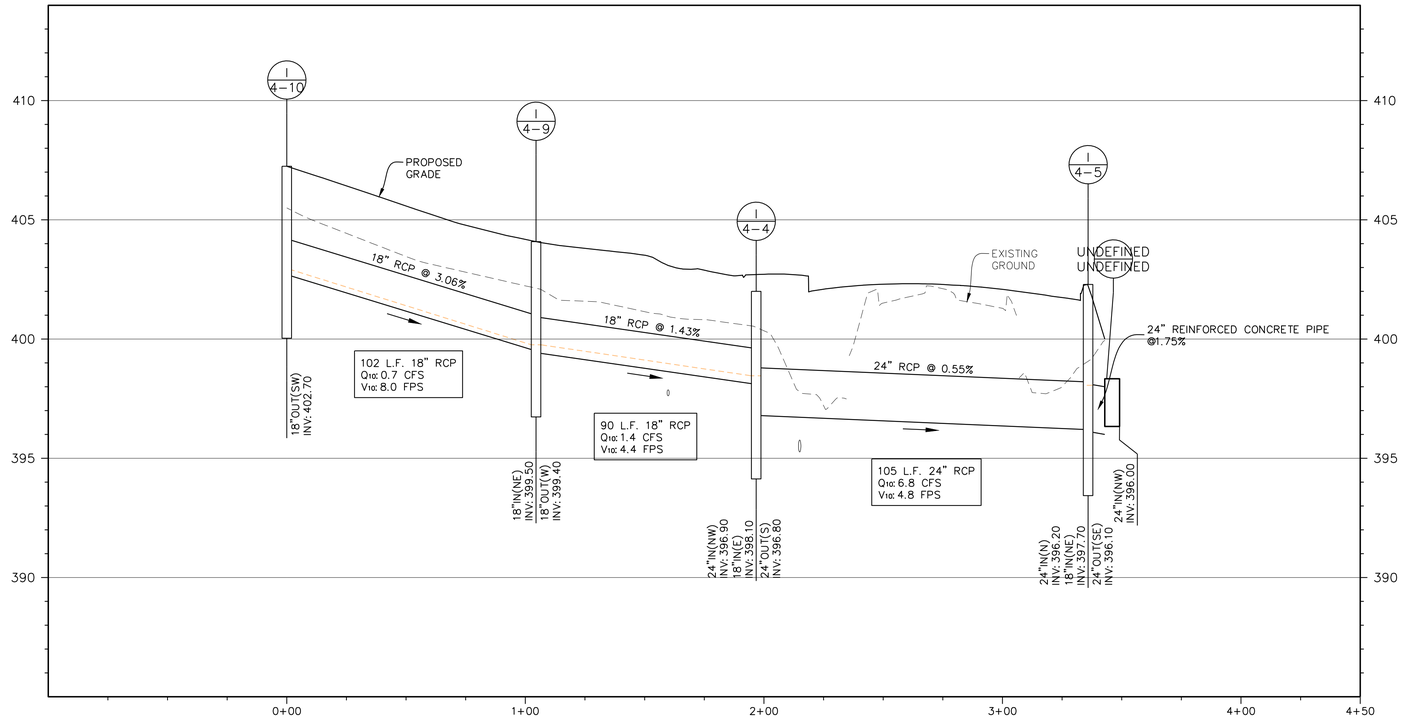
INLET 3-1 TO EXISITNG OUTFALL

SCALE: HORZ 1"=30'
VERT 1"=3'



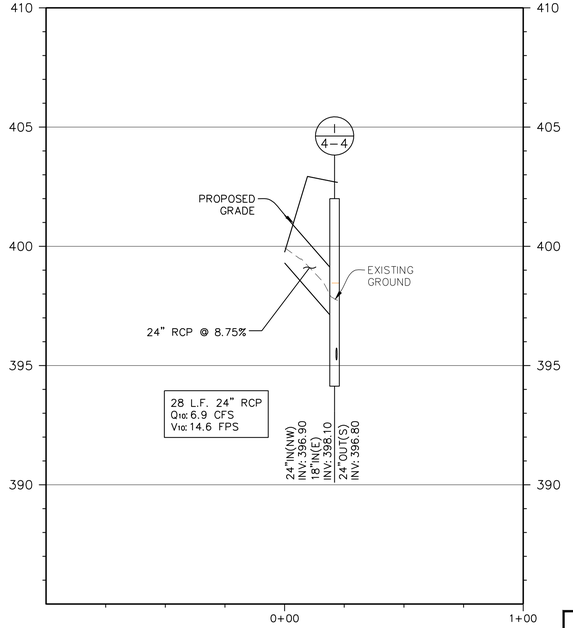
INLET 3-6 TO INLET 4-8

SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 4-10 TO INELT 4-6

SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 4-3 TO INLET 4-4

SCALE: HORZ 1"=30'
VERT 1"=3'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

C-107

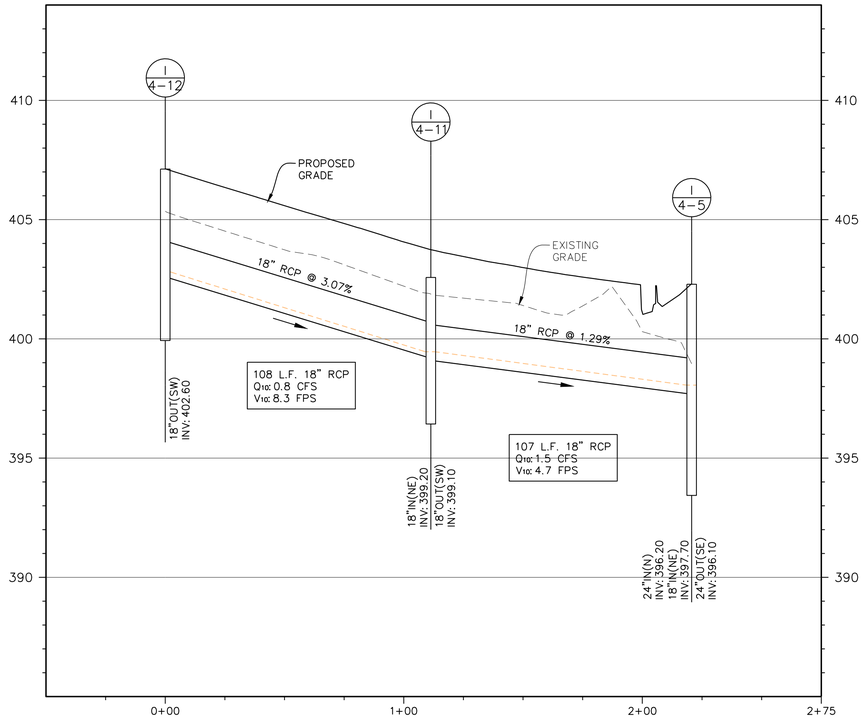
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE PROFILE

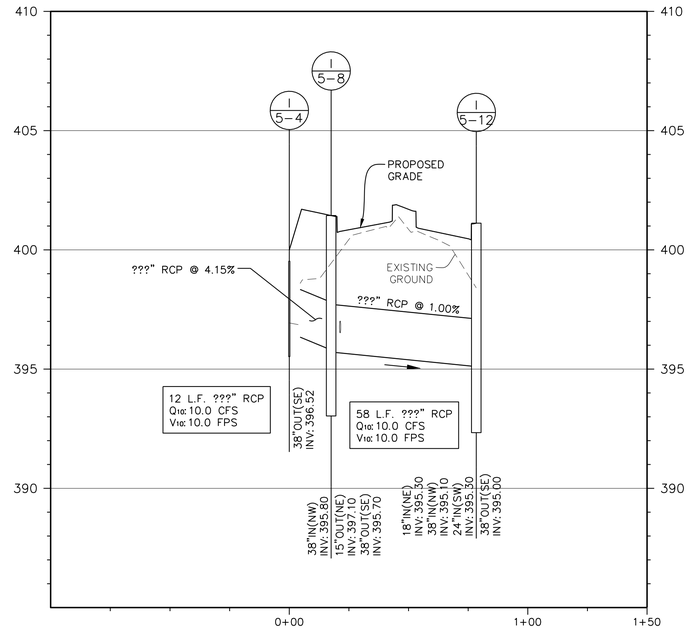
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 22 OF 106



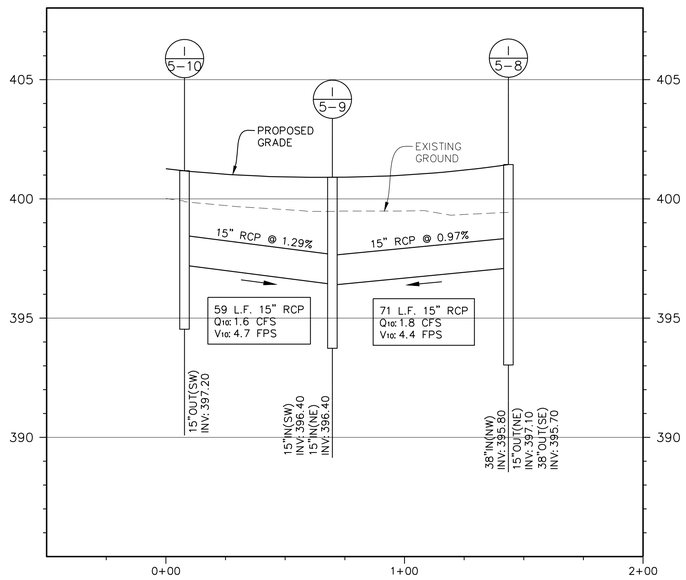
INLET 4-12 TO INLET 4-5

SCALE: HORZ 1"=30'
VERT 1"=3'



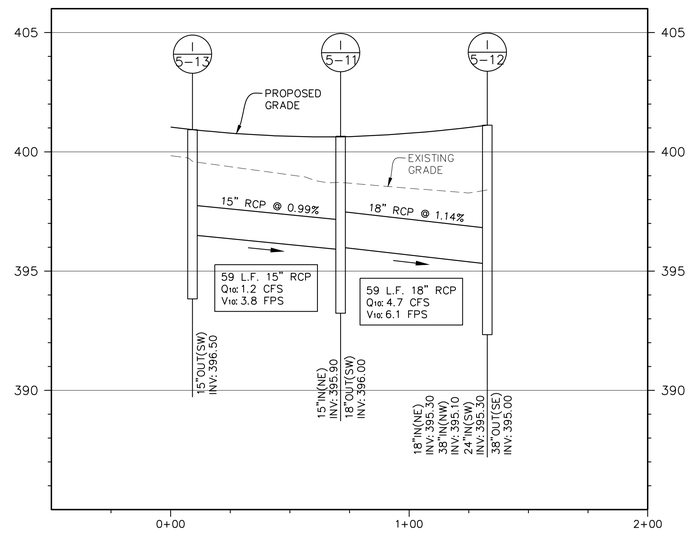
INLET 5-4 TO INLET 5-12

SCALE: HORZ 1"=30'
VERT 1"=3'



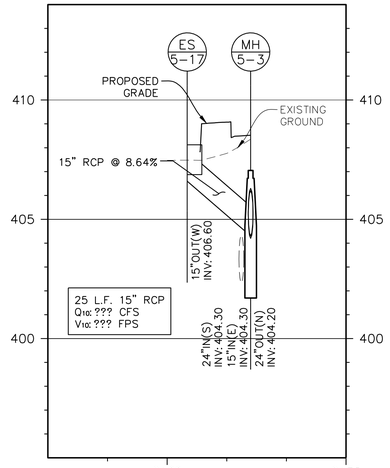
INLET 5-10 TO 5-8

SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 5-13 TO INLET 5-12

SCALE: HORZ 1"=30'
VERT 1"=3'



END SECTION 5-17 TO MANHOLE 5-3

SCALE: HORZ 1"=30'
VERT 1"=3'

C-108

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

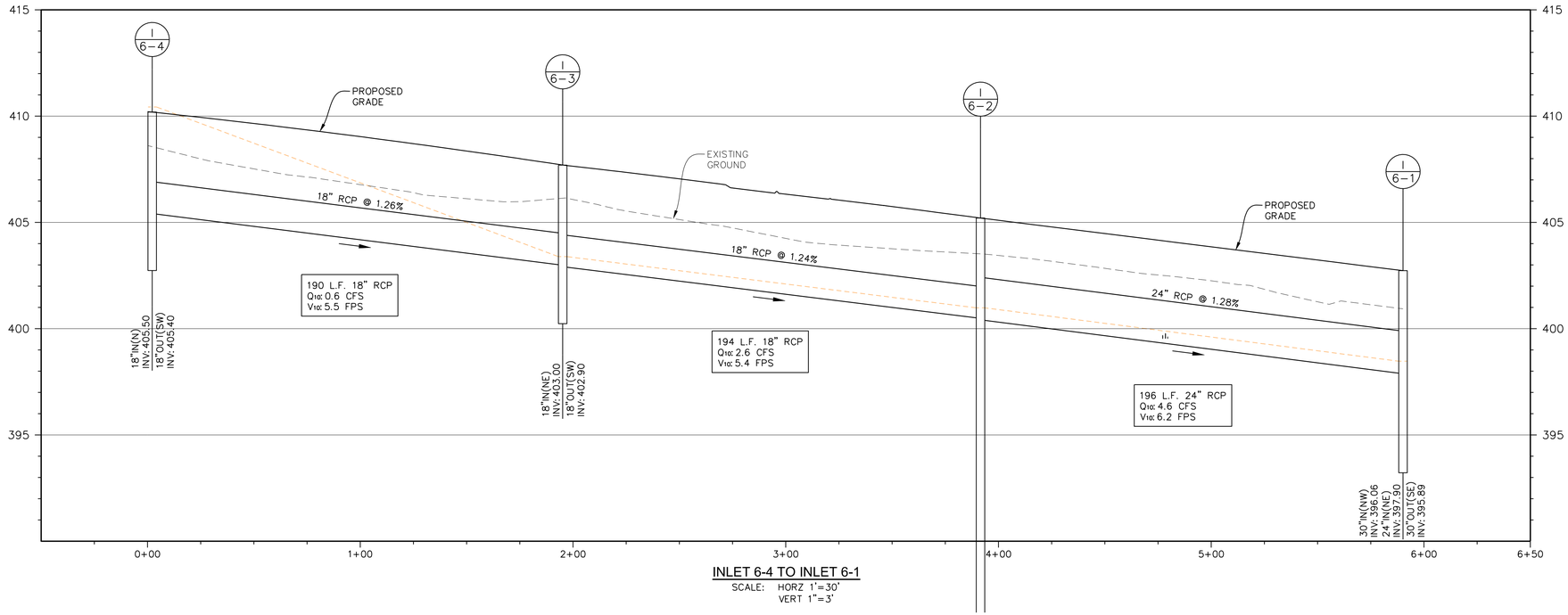
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE PROFILE

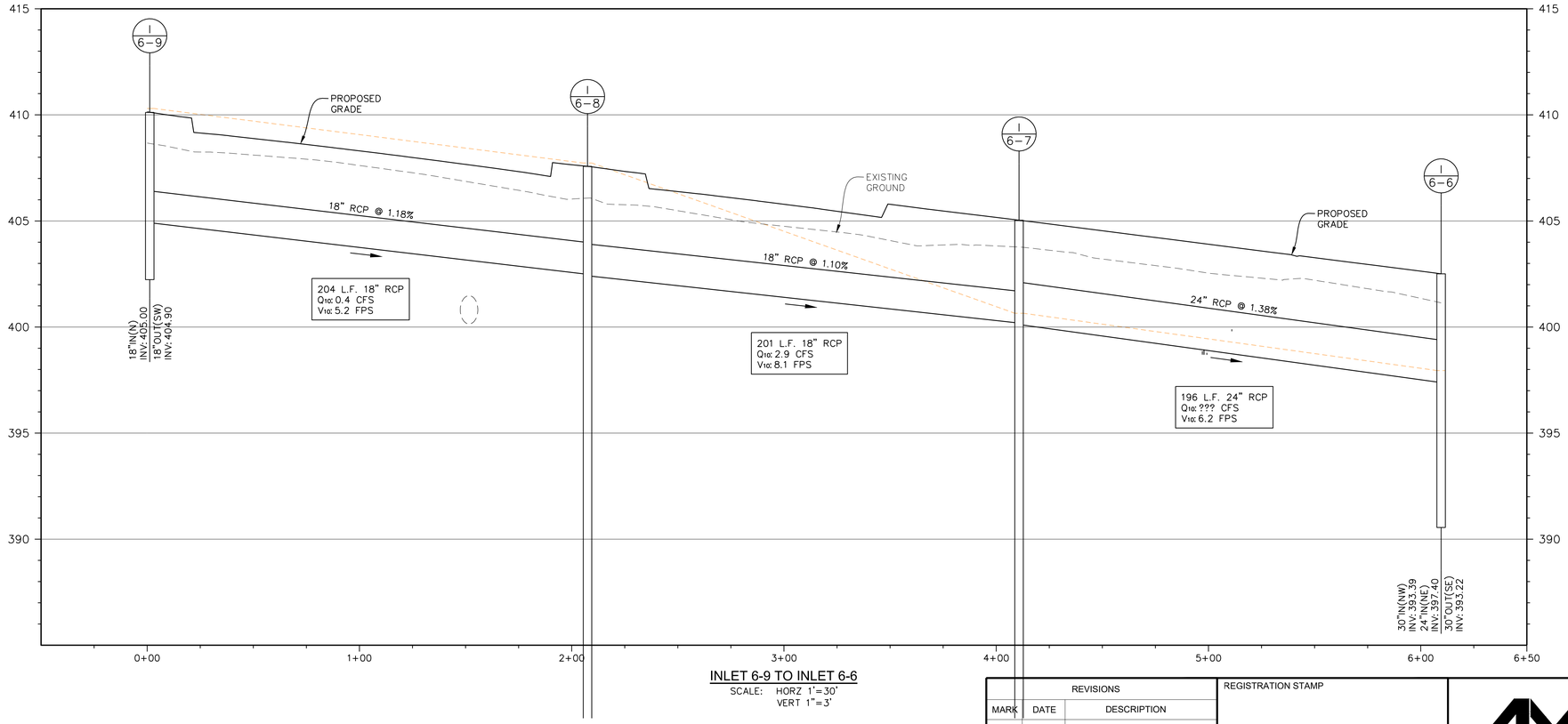
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 23 OF 106



INLET 6-4 TO INLET 6-1

SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 6-9 TO INLET 6-6

SCALE: HORZ 1"=30'
VERT 1"=3'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 757-6552
EMAIL: AMT1@AMTENGINEERING.COM

C-109

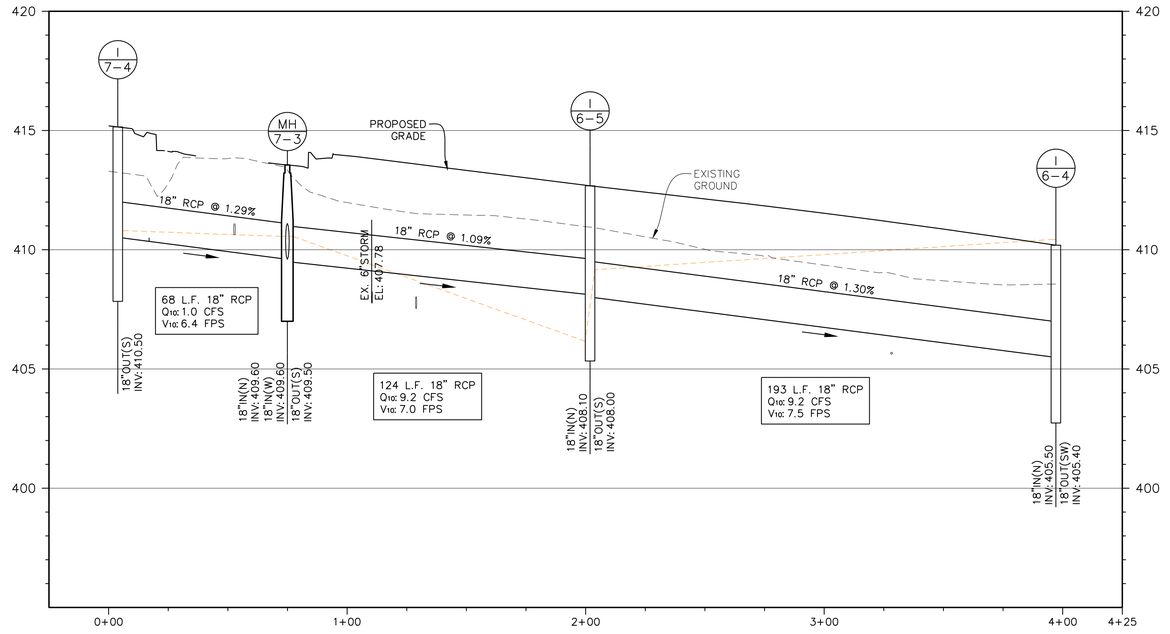
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

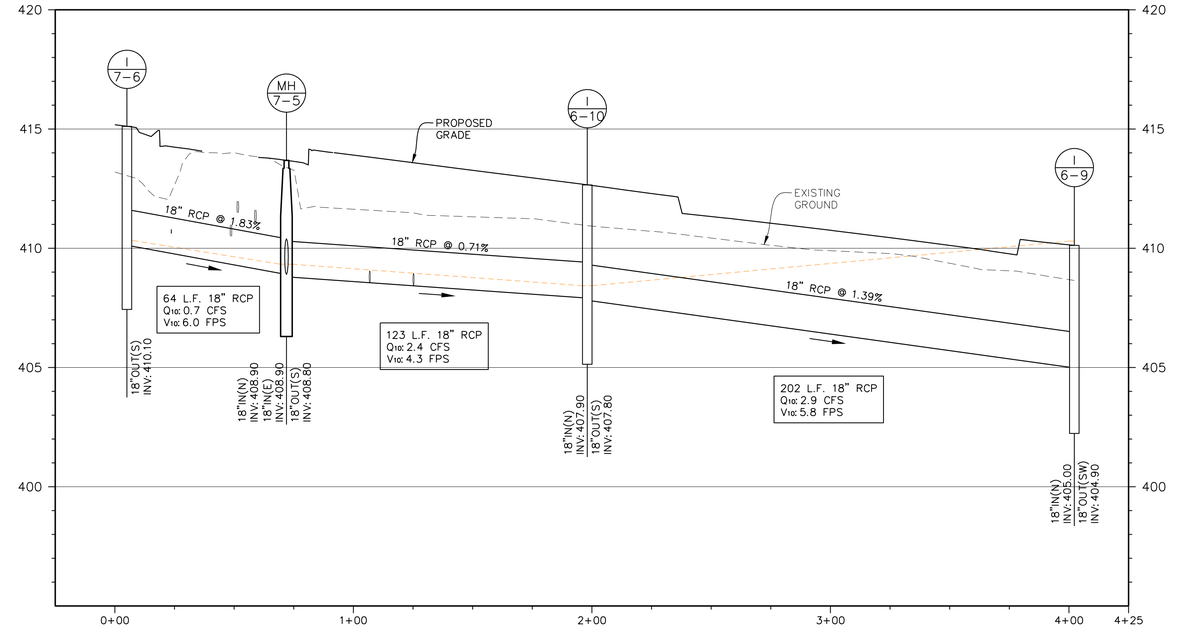
DRAINAGE PROFILE

DATE: SEPTEMBER 2020 SCALE:

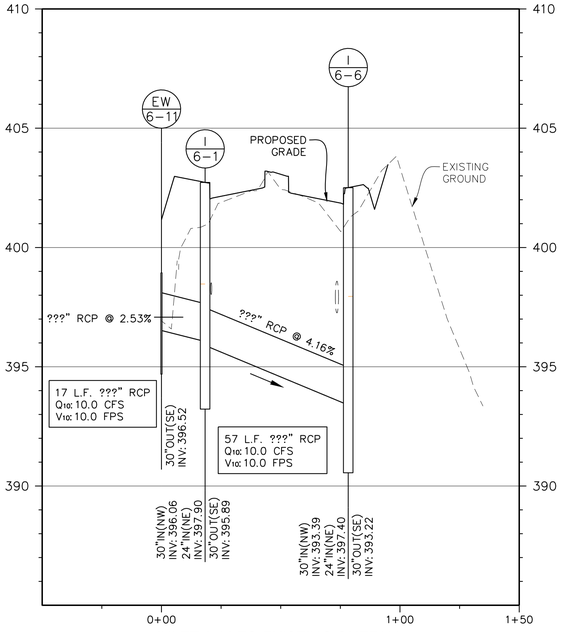
AMT FILE NO. 15-0758.007 SHEET NO. 24 OF 106



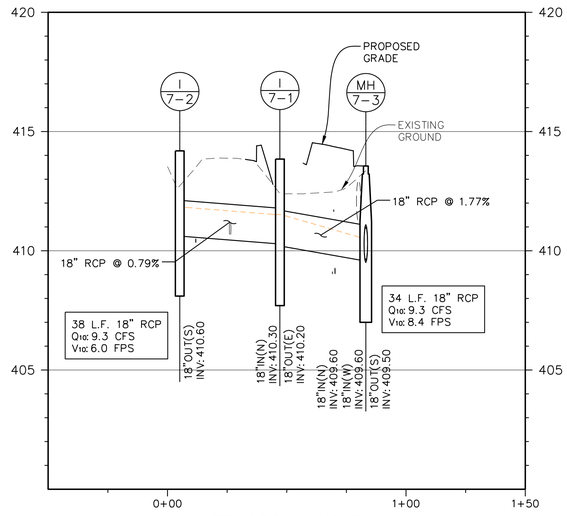
INLET 7-4 TO INLET 6-4
SCALE: HORZ 1"=30'
VERT 1"=3'



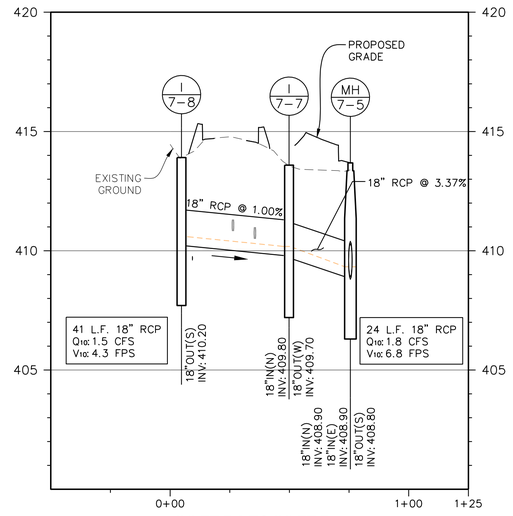
INLET 7-6 TO INLET 6-9
SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 6-11 TO EXISTING OUTFALL
SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 7-2 TO MANHOLE 7-3
SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 7-8 TO INLET 7-5
SCALE: HORZ 1"=30'
VERT 1"=3'

C-110

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

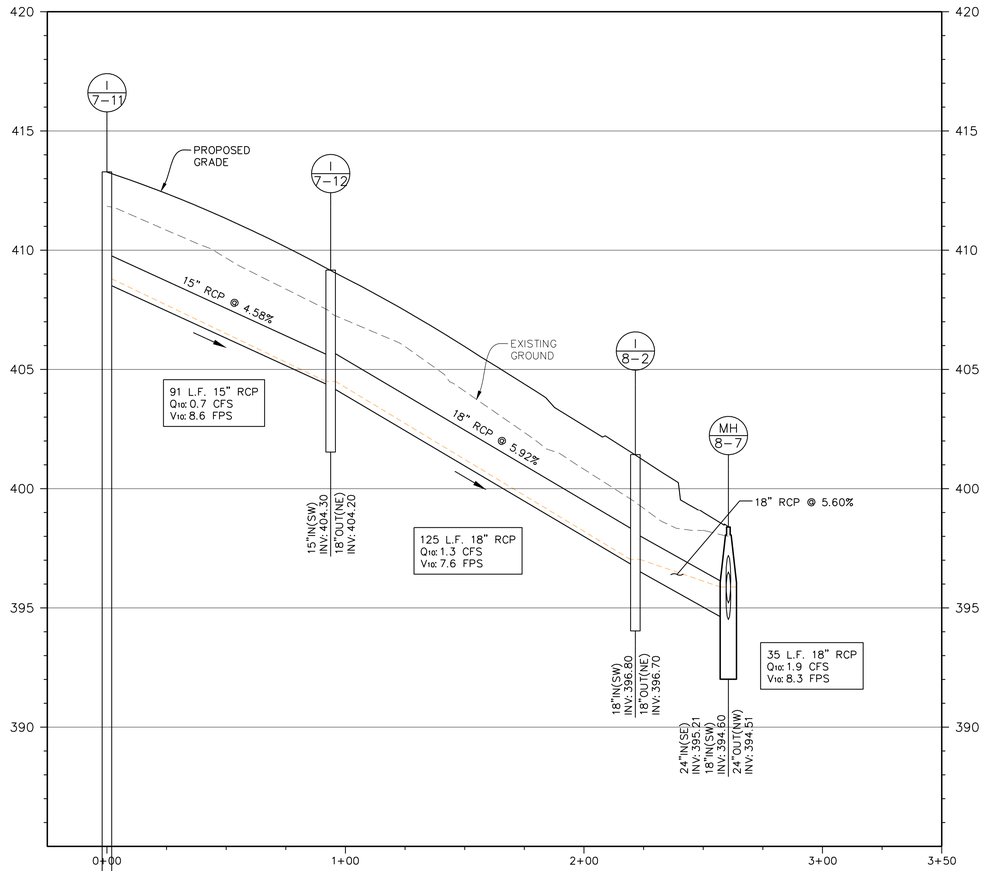
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE PROFILE

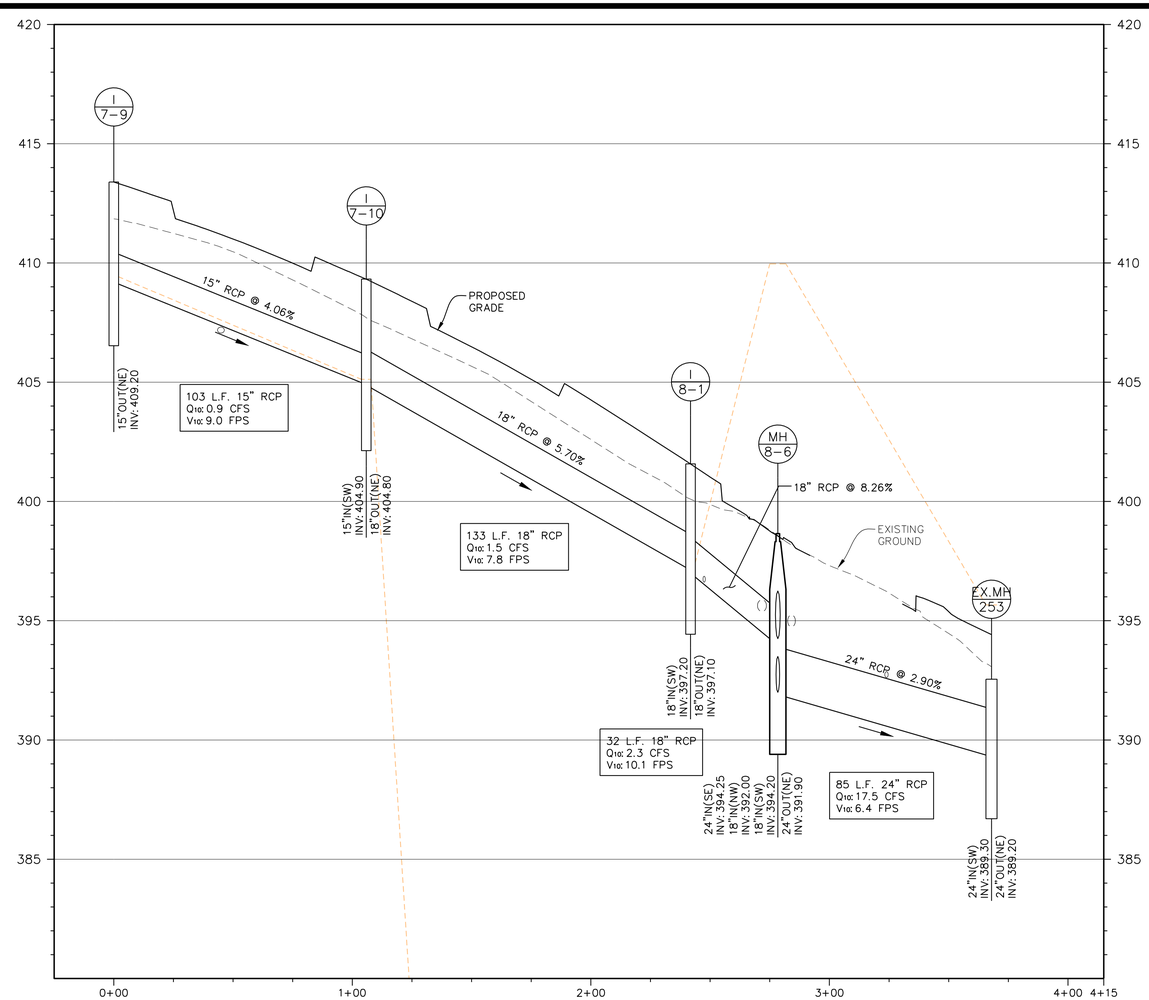
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 25 OF 106



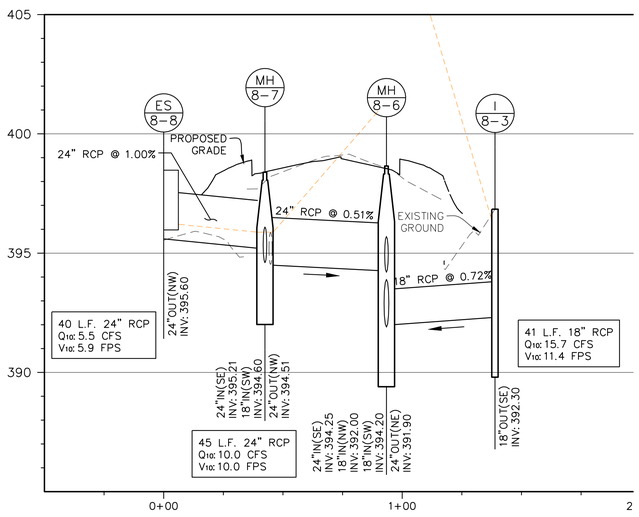
INLET 7-11 TO INLET 8-7

SCALE: HORZ 1"=30'
VERT 1"=3'



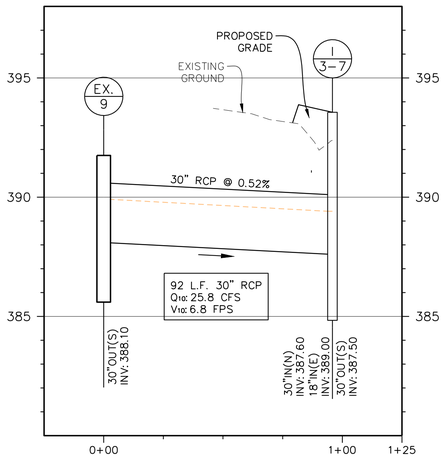
INLET 7-9 TO EXISTING MH-253

SCALE: HORZ 1"=30'
VERT 1"=3'



INLET 8-8 TO INLET 8-3

SCALE: HORZ 1"=30'
VERT 1"=3'



EXISTING I-9 TO EXISTING 3-7

SCALE: HORZ 1"=30'
VERT 1"=3'

C-111

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

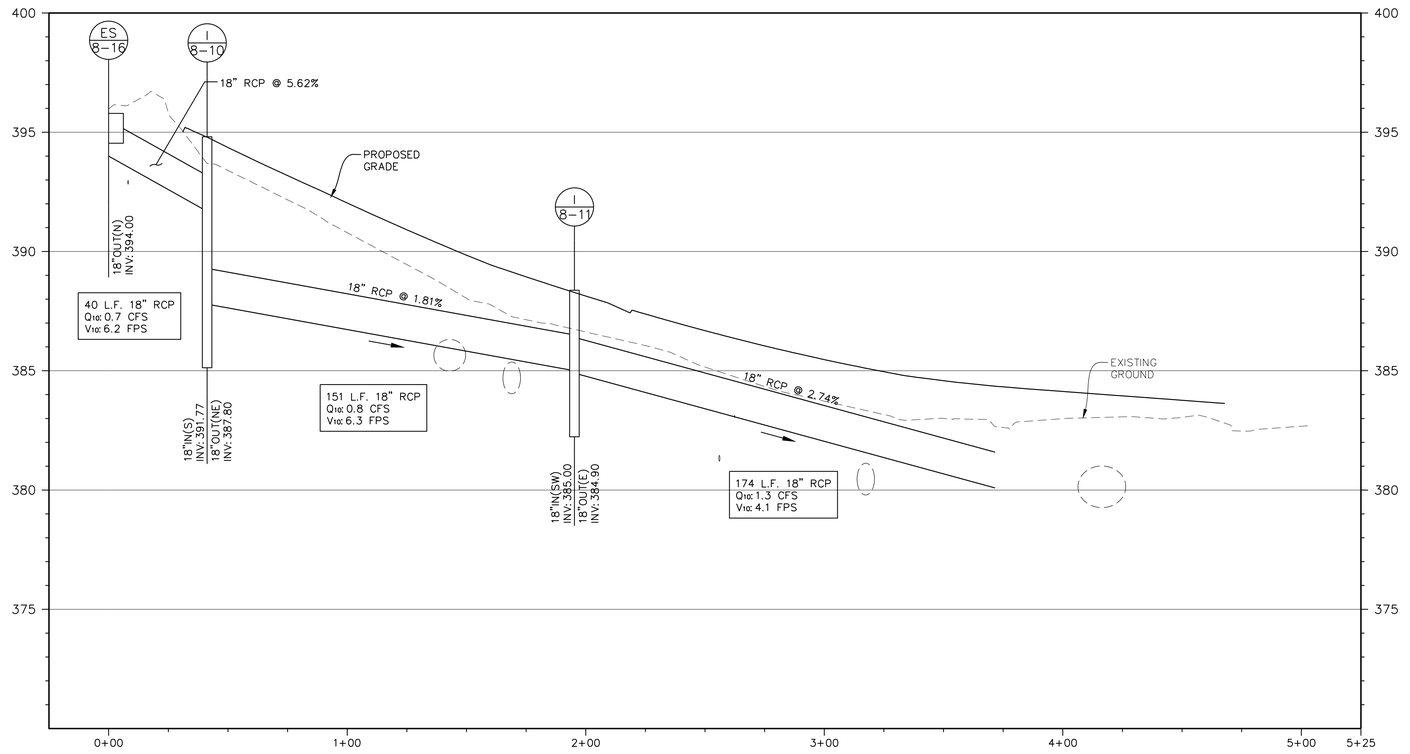
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE PROFILE

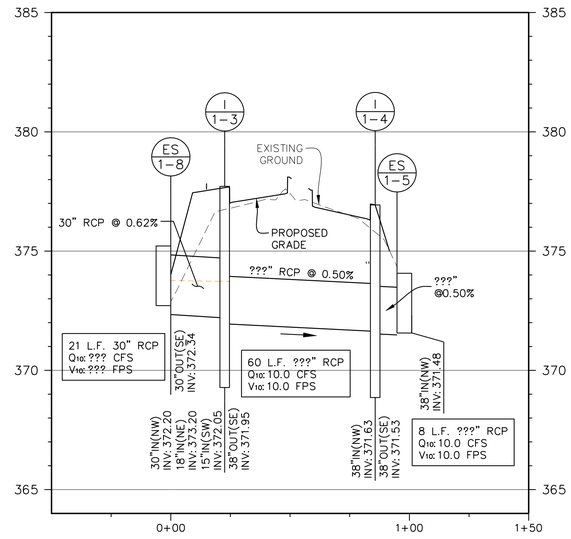
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 26 OF 106



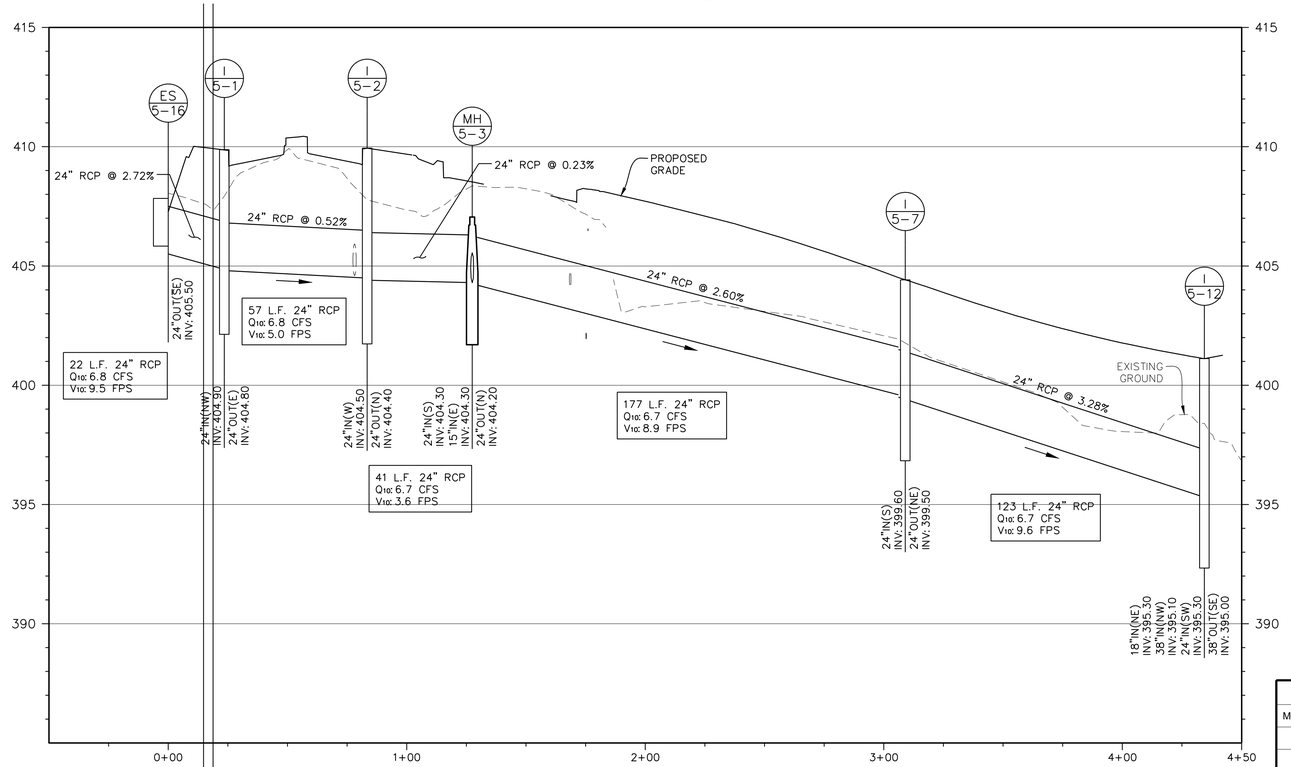
ENS SECTION 8-16 TO INLET 8-13

SCALE: HORZ 1"=30'
VERT 1"=3'



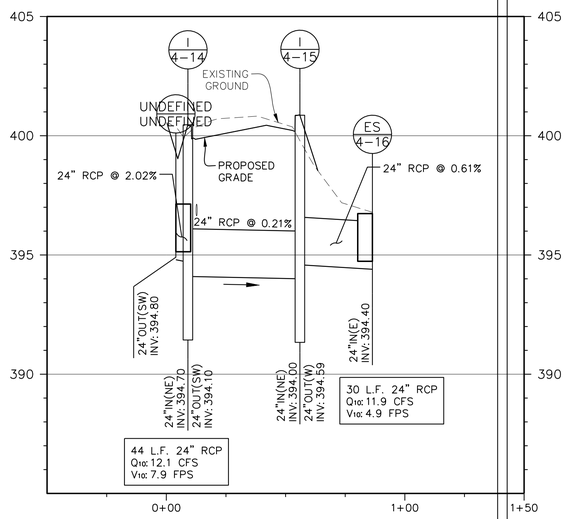
END SECTION 1-8 TO END SECTION 1-5

SCALE: HORZ 1"=30'
VERT 1"=3'



END SECTION 5-16 TO ENDWALL 5-5

SCALE: HORZ 1"=30'
VERT 1"=3'



END SECTION 4-13 TO END SECTION 4-16

SCALE: HORZ 1"=30'
VERT 1"=3'

C-112

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE PROFILE

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 27 OF 106

PIPE TABLE				
FROM	TO	SIZE	MATERIAL	LENGTH (FT)
ES 2-9	ES 2-10	24"	REINFORCED CONCRETE PIPE	31'
ES 5-17	MH 5-3	15"	REINFORCED CONCRETE PIPE	25'
ES 5-16	5-1	24"	REINFORCED CONCRETE PIPE	22'
ES 8-16	8-10	18"	REINFORCED CONCRETE PIPE	40'
MH 8-6	EX. MH 253	24"	REINFORCED CONCRETE PIPE	85'
ES 8-8	MH 8-7	24"	REINFORCED CONCRETE PIPE	40'
MH 8-7	MH 8-6	24"	REINFORCED CONCRETE PIPE	45'
MH 7-5	6-10	18"	REINFORCED CONCRETE PIPE	123'
MH 7-3	6-5	18"	REINFORCED CONCRETE PIPE	124'
EW 6-11	6-1	30"		17'
EW 4-3	4-4	24"	REINFORCED CONCRETE PIPE	28'
EX. INLET 9	3-7	30"	REINFORCED CONCRETE PIPE	92'
ES 1-8	1-3	30"	REINFORCED CONCRETE PIPE	21'
FE 254	ES 8-4	15"	REINFORCED CONCRETE PIPE	40'
JB 2-9	2-6	18"	REINFORCED CONCRETE PIPE	91'
MH 5-3	5-7	24"	REINFORCED CONCRETE PIPE	177'
ES 4-13	4-14	24"	REINFORCED CONCRETE PIPE	4'
1-1	1-3	15"	REINFORCED CONCRETE PIPE	125'
1-3	1-4	38"		60'
1-4	ES 1-5	38"		8'
1-7	1-3	18"	REINFORCED CONCRETE PIPE	228'
1-2	ES 1-9	23"		4'
2-6	2-3	18"	REINFORCED CONCRETE PIPE	134'
2-7	JB 2-9	15"	REINFORCED CONCRETE PIPE	23'
2-4	2-3	15"	REINFORCED CONCRETE PIPE	5'
2-2	1-7	15"	REINFORCED CONCRETE PIPE	266'
3-7	ES 3-8	30"	REINFORCED CONCRETE PIPE	91'
3-1	MH 3-2	18"	REINFORCED CONCRETE PIPE	51'
3-6	3-7	18"	REINFORCED CONCRETE PIPE	203'
4-14	4-15	24"	REINFORCED CONCRETE PIPE	44'
4-10	4-9	18"	REINFORCED CONCRETE PIPE	102'
4-12	4-11	18"	REINFORCED CONCRETE PIPE	108'
4-9	4-4	18"	REINFORCED CONCRETE PIPE	90'
4-4	4-5	24"	REINFORCED CONCRETE PIPE	105'
4-5	ES 4-6	24"	REINFORCED CONCRETE PIPE	6'
4-11	4-5	18"	REINFORCED CONCRETE PIPE	107'
4-15	ES 4-16	24"	REINFORCED CONCRETE PIPE	30'
5-11	5-12	18"	REINFORCED CONCRETE PIPE	59'
5-1	5-2	24"	REINFORCED CONCRETE PIPE	57'
5-13	5-11	15"	REINFORCED CONCRETE PIPE	59'

PIPE TABLE				
FROM	TO	SIZE	MATERIAL	LENGTH (FT)
5-10	5-9	15"	REINFORCED CONCRETE PIPE	59'
5-8	5-9	15"	REINFORCED CONCRETE PIPE	71'
5-2	MH 5-3	24"	REINFORCED CONCRETE PIPE	41'
5-7	5-12	24"	REINFORCED CONCRETE PIPE	123'
5-12	EW 5-5	38"		23'
5-8	5-12	38"		58'
6-7	6-6	24"	REINFORCED CONCRETE PIPE	196'
6-8	6-7	18"	REINFORCED CONCRETE PIPE	201'
6-9	6-8	18"	REINFORCED CONCRETE PIPE	204'
6-10	6-9	18"	REINFORCED CONCRETE PIPE	202'
6-2	6-1	24"	REINFORCED CONCRETE PIPE	196'
6-3	6-2	18"	REINFORCED CONCRETE PIPE	194'
6-4	6-3	18"	REINFORCED CONCRETE PIPE	190'
6-5	6-4	18"	REINFORCED CONCRETE PIPE	193'
6-1	6-6	30"		57'
7-10	8-1	18"	REINFORCED CONCRETE PIPE	133'
7-12	8-2	18"	REINFORCED CONCRETE PIPE	125'
7-11	7-12	15"	REINFORCED CONCRETE PIPE	91'
7-9	7-10	15"	REINFORCED CONCRETE PIPE	103'
7-8	7-7	18"	REINFORCED CONCRETE PIPE	41'
7-7	MH 7-5	18"	REINFORCED CONCRETE PIPE	24'
7-6	MH 7-5	18"	REINFORCED CONCRETE PIPE	64'
7-1	MH 7-3	18"	REINFORCED CONCRETE PIPE	34'
7-2	7-1	18"	REINFORCED CONCRETE PIPE	38'
7-4	MH 7-3	18"	REINFORCED CONCRETE PIPE	68'
8-11		18"	REINFORCED CONCRETE PIPE	174'
8-10	8-11	18"	REINFORCED CONCRETE PIPE	151'
8-2	MH 8-7	18"	REINFORCED CONCRETE PIPE	35'
8-1	MH 8-6	18"	REINFORCED CONCRETE PIPE	32'
8-5	FE 251	15"	REINFORCED CONCRETE PIPE	36'
8-14	FE 251	15"	REINFORCED CONCRETE PIPE	40'
8-3	MH 8-6	18"	REINFORCED CONCRETE PIPE	41'

C-114

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE PIPE SCHEDULES

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 28 OF 106

STRUCTURE SCHEDULE

STRUCTURE	STATION	OFFSET	TYPE	TOP	INVERT IN	INVERT OUT
1–1	79+18.12	–29.50' L	10' COS	376.82'		15" (NE) 372.70'
ES 1–9	79+34.47	34.76' R	14" x 23" Concrete End Section	374.18'	23" (NW) 372.60'	
1–2	79+34.60	30.02' R	10' SHALLOW COS	376.23'		23" (SE) 372.64'
ES 1–5	80+23.87	38.73' R	24" x 38"Concrete Elliptical End Section	374.07'	38" (NW) 371.48'	
1–4	80+26.64	29.98' R	5' COG	376.94'	38" (NW) 371.63'	38" (SE) 371.53'
1–3	80+46.06	–30.00' L	5' COG	377.71'	30" (NW) 372.20' 18" (NE) 373.20' 15" (SW) 372.05'	38" (SE) 371.95'
ES 1–8	80+53.07	–51.51' L	30" Concrete End Section	375.22'		30" (SE) 372.34'
1–6	81+90.00	30.00' R	5' Open Back COG	378.58'		
1–7	82+85.80	–30.00' L	10' COG	380.17'	15" (NE) 376.00'	18" (SW) 375.60'
2–1	84+96.00	30.00' R	10' Open Back COG	382.01'		
2–2	85+54.76	–30.00' L	10' COG	382.93'		15" (SW) 378.80'
2–5	88+40.00	30.00' R	5' Open Back COG	385.58'		
2–3	89+00.87	–38.01' L	Std. 48" Dia. Manhole	386.63'	15" (SE) 381.98' 18" (NE) 380.78'	18" (SW) 380.68'
2–4	89+01.00	–30.00' L	5' COG	386.47'		15" (NW) 382.06'
2–6	90+30.00	–30.00' L	5' COG	387.79'	18" (NE) 383.20'	18" (SW) 383.00'
2–8	90+80.00	30.00' R	5' Open Back COG	388.07'		
ES 2–10	90+80.15	–50.39' L	24" Concrete End Section	388.53'	24" (NE) 386.20'	
ES 2–9	91+08.09	–50.19' L	24" Concrete End Section	388.83'		24" (SW) 386.50'
JB 2–9	91+17.42	–39.81' L	Junction Box	386.80'	15" (E) 384.00'	18" (SW) 383.90'
2–7	91+41.00	–30.00' L	5' COG	388.93'		15" (W) 384.40'
3–3	93+20.00	30.00' R	10' Open Back COG	390.56'		
MH 3–2	93+24.66	–34.65' L	Std. 72" Dia. Manhole	390.90'	18" (E) 386.07'	42" (S) 383.77'
3–1	93+80.00	–30.00' L	5' COG	391.37'		18" (W) 386.58'
ES 3–8	95+58.48	54.60' R	30" Concrete End Section	386.79'	30" (N) 384.46'	
3–7	95+94.36	–30.00' L	5' COG	393.56'	30" (N) 387.60' 18" (E) 389.00'	30" (S) 387.50'
3–5	96+20.00	30.00' R	10' Open Back COG	393.67'		
3–10	98+00.00	30.00' R	5' Open Back COG	395.54'		
3–6	98+00.00	–30.00' L	5' COG	395.66'		18" (W) 391.10'
4–2	100+40.00	28.50' R	5' Open Back COG	398.98'		
4–1	100+40.00	–35.75' L	5' Open Back COG	399.10'		
ES 4–16	101+38.60	220.81' R	24 inch Flared End Section 67 x 74	396.73'	24" (E) 394.40'	
4–7	101+69.55	–150.20' L	5' Open Back COG	403.03'		
4–8	101+81.28	–140.27' L	5' Open Back COG	402.88'		
4–15	101+81.28	229.49' R	5' COS	400.86'	24" (NE) 394.00'	24" (W) 394.59'
4–14	102+14.18	231.03' R	5' COS	400.46'	24" (NE) 394.70'	24" (SW) 394.10'
ES 4–13	102+19.21	231.32' R	24 inch Flared End Section 67 x 74	397.13'		24" (SW) 394.80'
4–5	102+46.05	61.42' R	15' COS	402.29'	24" (N) 396.20' 18" (NE) 397.70'	24" (SE) 396.10'
ES 4–6	102+48.66	68.01' R	24 inch Flared End Section 67 x 74	398.33'	24" (NW) 396.00'	
4–4	102+61.58	–45.69' L	15' COS	402.00'	24" (NW) 396.90' 18" (E) 398.10'	24" (S) 396.80'
EW 4–3	102+61.91	–75.42' L	Type C Endwall for 24" RCP	402.25'		24" (SE) 399.50'

STRUCTURE SCHEDULE

STRUCTURE	STATION	OFFSET	TYPE	TOP	INVERT IN	INVERT OUT
4–11	103+51.14	31.26' R	5' COG	402.58'	18" (NE) 399.20'	18" (SW) 399.10'
4–9	103+53.30	–32.65' L	5' COG	404.09'	18" (NE) 399.50'	18" (W) 399.40'
4–12	104+59.93	29.84' R	5' COG	407.12'		18" (SW) 402.60'
4–10	104+60.00	–30.09' L	5' COG	407.25'		18" (SW) 402.70'
5–1	109+10.00	–30.00' L	10' COG	409.88'	24" (NW) 404.90'	24" (E) 404.80'
5–2	109+10.00	30.00' R	5' COG	409.94'	24" (W) 404.50'	24" (N) 404.40'
ES 5–16	109+20.69	–50.97' L	24" Concrete End Section	407.83'		24" (SE) 405.50'
ES 5–17	109+52.62	57.54' R	15" Concrete End Section	408.12'		15" (W) 406.60'
MH 5–3	109+54.03	30.96' R	Std. 48" Dia. Manhole	407.05'	24" (S) 404.30' 15" (E) 404.30'	24" (N) 404.20'
5–7	111+40.00	30.00' R	Shallow 5' COG	404.42'	24" (S) 399.60'	24" (NE) 399.50'
5–6	111+90.00	–30.00' L	10' Open Back COG	403.02'		
EW 5–4	112+66.09	–47.98' L	Type C Endwall	399.52'		38" (SE) 396.52'
5–8	112+67.97	–30.53' L	5' COG	401.44'	38" (NW) 395.80'	15" (NE) 397.10' 38" (SE) 395.70'
5–12	112+72.98	30.12' R	5' COG	401.12'	18" (NE) 395.30' 38" (NW) 395.10' 24" (SW) 395.30'	38" (SE) 395.00'
EW 5–5	112+75.35	53.75' R	Type C Endwall	395.40'	38" (NW) 392.40'	
5–11	113+38.00	30.00' R	10' COS	400.65'	15" (NE) 395.90'	18" (SW) 396.00'
5–9	113+38.00	–30.00' L	10' COS	400.91'	15" (SW) 396.40' 15" (NE) 396.40'	
5–13	114+00.00	30.00' R	5' COG	400.93'		15" (SW) 396.50'
5–10	114+00.00	–30.00' L	5' COG	401.18'		15" (SW) 397.20'
EW 6–11	115+25.98	–48.30' L	Type C Endwall	398.94'		30" (SE) 396.52'
6–6	115+26.16	30.00' R	5' COG	402.51'	30" (NW) 393.39' 24" (NE) 397.40'	30" (SE) 393.22'
6–1	115+26.44	–30.00' L	10' COG	402.73'	30" (NW) 396.06' 24" (NE) 397.90'	30" (SE) 395.89'
6–7	117+25.00	30.00' R	5' COG	405.03'	18" (NE) 400.20' 15" (SE) –3.06'	24" (SW) 400.10'
6–2	117+25.00	–30.00' L	5' COG	405.20'	18" (NE) 400.50' 15" (NW) –3.05'	24" (SW) 400.40'
6–8	119+25.00	30.00' R	5' COG	407.57'	18" (NE) 402.50' 15" (S) –3.19'	18" (SW) 402.40'
6–3	119+25.00	–30.00' L	5' COG	407.70'	18" (NE) 403.00'	18" (SW) 402.90'
6–9	121+25.00	30.00' R	5' COG	410.12'	18" (N) 405.00'	18" (SW) 404.90'
6–4	121+25.00	–30.00' L	5' COG	410.19'	18" (N) 405.50'	18" (SW) 405.40'
6–10	123+25.00	30.00' R	5' COG	412.66'	18" (N) 407.90'	18" (S) 407.80'
6–5	123+25.00	–30.00' L	5' COG	412.68'	18" (N) 408.10'	18" (S) 408.00'
7–7	124+48.51	57.10' R	Type K Inlet Single Opening	413.59'	18" (N) 409.80'	18" (W) 409.70'
MH 7–5	124+51.11	29.98' R	Std. 48" Dia. Manhole	413.68'	18" (N) 408.90' 18" (E) 408.90'	18" (S) 408.80'
MH 7–3	124+51.91	–30.02' L	Std. 48" Dia. Manhole	413.55'	18" (N) 409.60' 18" (W) 409.60'	18" (S) 409.50'
7–1	124+52.98	–67.44' L	Type K Inlet Signle Opening	413.85'	18" (N) 410.30'	18" (E) 410.20'
7–8	124+93.60	59.18' R	Type K Inlet Single Opening	413.91'		18" (S) 410.20'
7–2	124+94.99	–66.72' L	Type K Inlet Single Opening	414.19'		18" (S) 410.60'
7–6	125+18.00	30.00' R	5' COG	415.11'		18" (S) 410.10'
7–4	125+23.00	–30.00' L	5' COG	415.15'		18" (S) 410.50'
7–11	129+00.00	30.00' R	5' COG	413.29'	15" (S) –4.82'	15" (NE) 408.60'
7–9	129+00.00	–30.00' L	5' COG	413.40'		15" (NE) 409.20'

STRUCTURE SCHEDULE

STRUCTURE	STATION	OFFSET	TYPE	TOP	INVERT IN	INVERT OUT
7–12	130+00.00	30.00' R	5' COG	409.16'	15" (SW) 404.30'	18" (NE) 404.20'
7–10	130+00.00	–30.00' L	5' COG	409.32'	15" (SW) 404.90'	18" (NE) 404.80'
8–2	131+32.00	30.00' R	5' COG	401.43'	18" (SW) 396.80'	18" (NE) 396.70'
8–1	131+32.00	–30.00' L	5' COG	401.58'	18" (SW) 397.20'	18" (NE) 397.10'
MH 8–6	131+68.25	–24.89' L	Std. 72" Dia. Manhole	398.65'	24" (SE) 394.25' 18" (NW) 392.00' 18" (SW) 394.20'	24" (NE) 391.90'
8–3	131+68.37	–70.40' L	24 " x 24 " Yard Inlet	396.84'		18" (SE) 392.30'
MH 8–7	131+70.76	25.97' R	Std. 72" Dia. Manhole	398.39'	24" (SE) 395.21' 18" (SW) 394.60'	24" (NW) 394.51'
ES 8–8	131+79.54	67.50' R	24" Concrete End Section	398.48'		24" (NW) 395.60'
ES 8–16	132+25.03	64.92' R	18" Concrete End Section	395.79'		18" (N) 394.00'
8–10	132+47.00	30.00' R	5' COG	394.81'	18" (S) 391.77'	18" (NE) 387.80'
ES 8–4	132+57.85	–74.89' L	15" Concrete End Section	387.52'	15" (SW) 386.00'	
8–9	132+72.39	–29.61' L	5" Open Back COG	393.45'		
8–5	133+58.59	–60.52' L	Outlet Structure	386.34'		15" (E) 382.00'
FE 251	133+92.57	–56.88' L	24"X24" Yard Inlet	386.52'	24" (S) –1.66' 15" (E) –0.62' 15" (W) 381.00'	24" (N) –1.76'
8–11	134+08.13	29.96' R	5' COG	388.38'	18" (SW) 385.00'	18" (E) 384.90'
8–14	134+22.87	–29.97' L	Shallow 5' COG	387.35'		15" (W) –2.94'

C-113

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 757-8552
EMAIL: AMT1@AMTENGINEERING.COM

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE STRUCTURE SCHEDULES

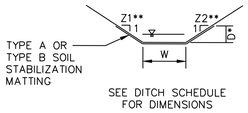
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 29 OF 106

CHRISTOPHERS CROSSING SB DITCH SCHEDULE								
STATION	OFFSET (FT)	LINING	Z1	Z2	W (FT)	D (FT)	INVERT	REMARKS
91+50	47.2 LT	TYPE A SSM	3	3	0	0.5	387.83	
92+00	45.9 LT	TYPE A SSM	3	3	0	0.5	388.78	
92+50	45.9 LT	TYPE A SSM	3	3	0	0.5	389.28	
93+00	45.9 LT	TYPE A SSM	3	3	0	0.5	389.80	
93+50	46.0 LT	TYPE A SSM	3	3	0	0.5	390.28	
94+00	45.9 LT	TYPE A SSM	3	3	0	0.5	390.82	
94+50	45.8 LT	TYPE A SSM	3	3	0	0.5	391.36	
95+00	47.8 LT	TYPE A SSM	3	3	0	0.5	391.87	
103+50	54.4 LT	TYPE A SSM	3	3	0	0.5	401.26	
104+00	52.4 LT	TYPE A SSM	3	3	0	0.5	402.53	
104+50	51.3 LT	TYPE A SSM	3	3	0	0.5	404.37	
105+00	50.4 LT	TYPE A SSM	3	3	0	0.5	406.27	
107+00	52.0 LT	TYPE A SSM	3	3	0	0.5	409.44	
107+50	52.6 LT	TYPE A SSM	3	3	0	0.5	409.06	
108+00	51.3 LT	TYPE A SSM	3	3	0	0.5	408.87	
108+50	50.0 LT	TYPE A SSM	3	3	0	0.5	408.60	
109+00	49.7 LT	TYPE A SSM	3	3	0	0.5	407.98	
111+50	46.2 LT	TYPE A SSM	3	3	0	0.5	403.39	
114+00	45.8 LT	TYPE A SSM	3	3	0	0.5	400.45	
114+50	45.8 LT	TYPE A SSM	3	3	0	0.5	401.03	
118+00	46.1 LT	TYPE A SSM	3	3	0	0.5	405.32	
125+50	45.9 LT	TYPE A SSM	3	3	0	0.5	414.73	
126+00	45.7 LT	TYPE A SSM	3	3	0	0.5	415.40	
126+50	45.9 LT	TYPE A SSM	3	3	0	0.5	415.86	
127+00	45.9 LT	TYPE A SSM	3	3	0	0.5	416.01	
127+50	45.8 LT	TYPE A SSM	3	3	0	0.5	415.80	
128+00	45.8 LT	TYPE A SSM	3	3	0	0.5	415.13	
128+50	45.8 LT	TYPE A SSM	3	3	0	0.5	414.11	
129+00	46.0 LT	TYPE A SSM	3	3	0	0.5	412.53	
129+50	45.4 LT	TYPE A SSM	3	3	0	0.5	410.94	
130+00	46.0 LT	TYPE A SSM	3	3	0	0.5	408.51	
130+50	36.5 LT	TYPE A SSM	3	3	0	0.5	405.71	

CHRISTOPHERS CROSSING NB DITCH SCHEDULE								
STATION	OFFSET (FT)	LINING	Z1	Z2	W (FT)	D (FT)	INVERT	REMARKS
96+00	58.4 RT	TYPE A SSM	3	3	8	2	388.40	
96+50	56.0 RT	TYPE A SSM	3	3	8	2	388.96	
97+00	55.7 RT	TYPE A SSM	3	3	8	2	389.16	
97+50	55.5 RT	TYPE A SSM	3	3	8	2	389.47	
98+00	55.5 RT	TYPE A SSM	3	3	8	2	389.61	
98+50	56.2 RT	TYPE A SSM	3	3	8	2	389.84	
99+00	59.0 RT	TYPE A SSM	3	3	8	2	390.28	
99+50	59.9 RT	TYPE A SSM	3	3	8	2	391.03	
103+50	42.3 RT	TYPE A SSM	3	3	0	0.5	402.86	
108+00	42.8 RT	TYPE A SSM	3	3	0	0.5	410.03	
112+50	51.0 RT	TYPE A SSM	3	3	0	0.5	397.20	
113+50	42.9 RT	TYPE A SSM	3	3	0	0.5	399.10	
114+00	41.4 RT	TYPE A SSM	3	3	0	0.5	399.88	
114+50	41.1 RT	TYPE A SSM	3	3	0	0.5	400.62	
115+00	41.0 RT	TYPE A SSM	3	3	0	0.5	401.29	
115+50	41.0 RT	TYPE A SSM	3	3	0	0.5	401.90	
116+00	41.1 RT	TYPE A SSM	3	3	0	0.5	402.53	
116+50	41.0 RT	TYPE A SSM	3	3	0	0.5	403.18	
126+50	41.8 RT	TYPE A SSM	3	3	0	0.5	415.49	
127+00	41.8 RT	TYPE A SSM	3	3	0	0.5	414.87	
131+00	42.8 RT	TYPE A SSM	3	3	0	0.5	401.96	
133+00	42.1 RT	TYPE A SSM	3	3	0	0.5	391.01	
133+50	41.9 RT	TYPE A SSM	3	3	0	0.5	389.01	
134+00	41.2 RT	TYPE A SSM	3	3	0	0.5	387.46	

YELLOW SPRINGS RD NB DITCH SCHEDULE								
STATION	OFFSET (FT)	LINING	Z1	Z2	W (FT)	D (FT)	INVERT	REMARKS
302+50	36.1 LT	TYPE A SSM	3	2.5	0	0.5	399.22	
303+00	34.3 LT	TYPE A SSM	3	2.8	0	0.5	399.72	
303+50	30.5 LT	TYPE A SSM	3	3	0	0.5	400.95	
304+00	23.1 LT	TYPE A SSM	3	3	0	0.5	402.61	



* D IS DEPTH OF LINING

** Z1 IS FORESLOPE
(CLOSEST TO ROADWAY)
Z2 IS BACKSLOPE
(FARTHEST FROM ROADWAY)

TYPICAL DITCH CROSS SECTION
NOT TO SCALE

DD-10

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DRAINAGE DITCH SCHEDULES

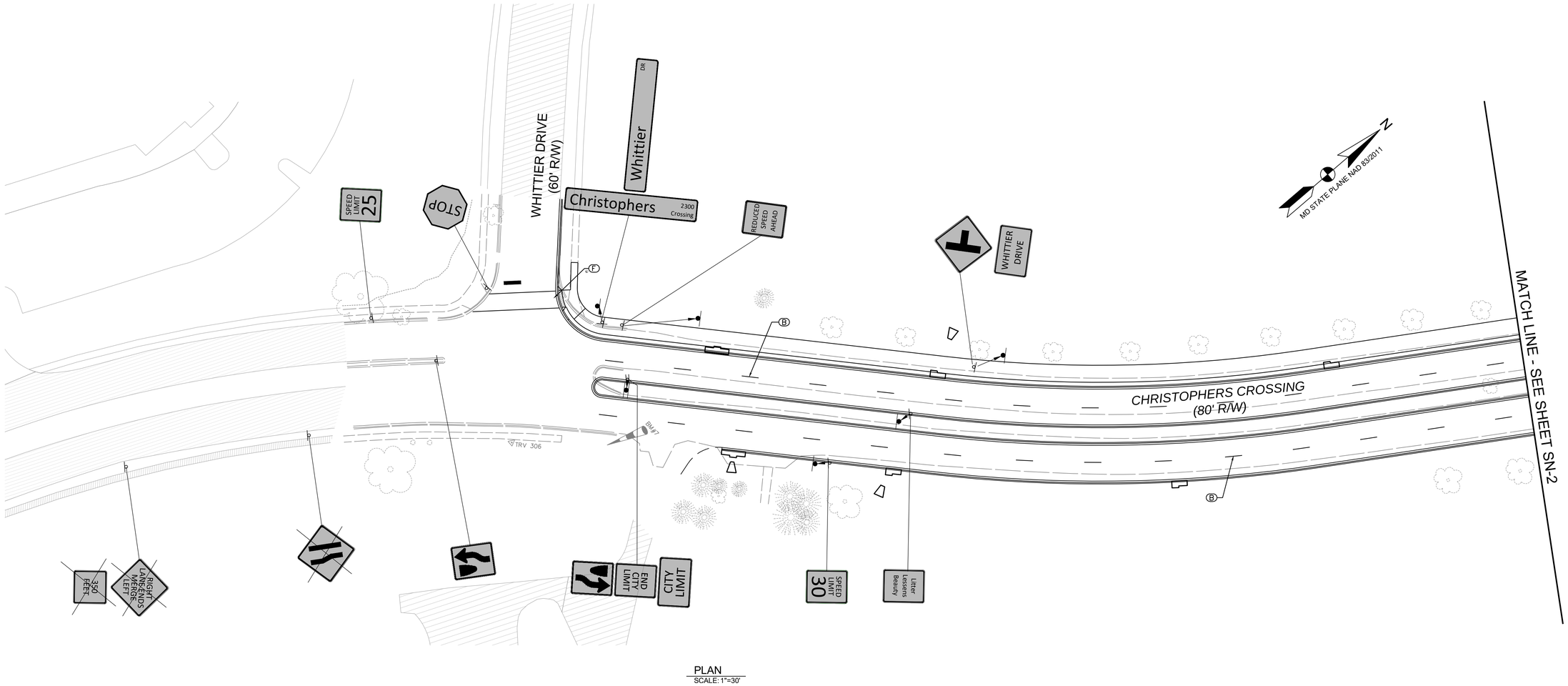
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 30 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-4552
EMAIL: AMT1@AMTENGINEERING.COM



PLAN
SCALE: 1"=30'

LEGEND:

- EXISTING SIGN POST
- PROPOSED SIGN POST
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO REMAIN
- EXISTING SIGN AND SUPPORT TO BE REMOVED
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

(A) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(B) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 10' LINE, 30' GAP
(C) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 3' LINE, 9' GAP
(D) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
(E) 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(F) 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(G) 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(H) 5 INCH DOUBLE YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

SN-1

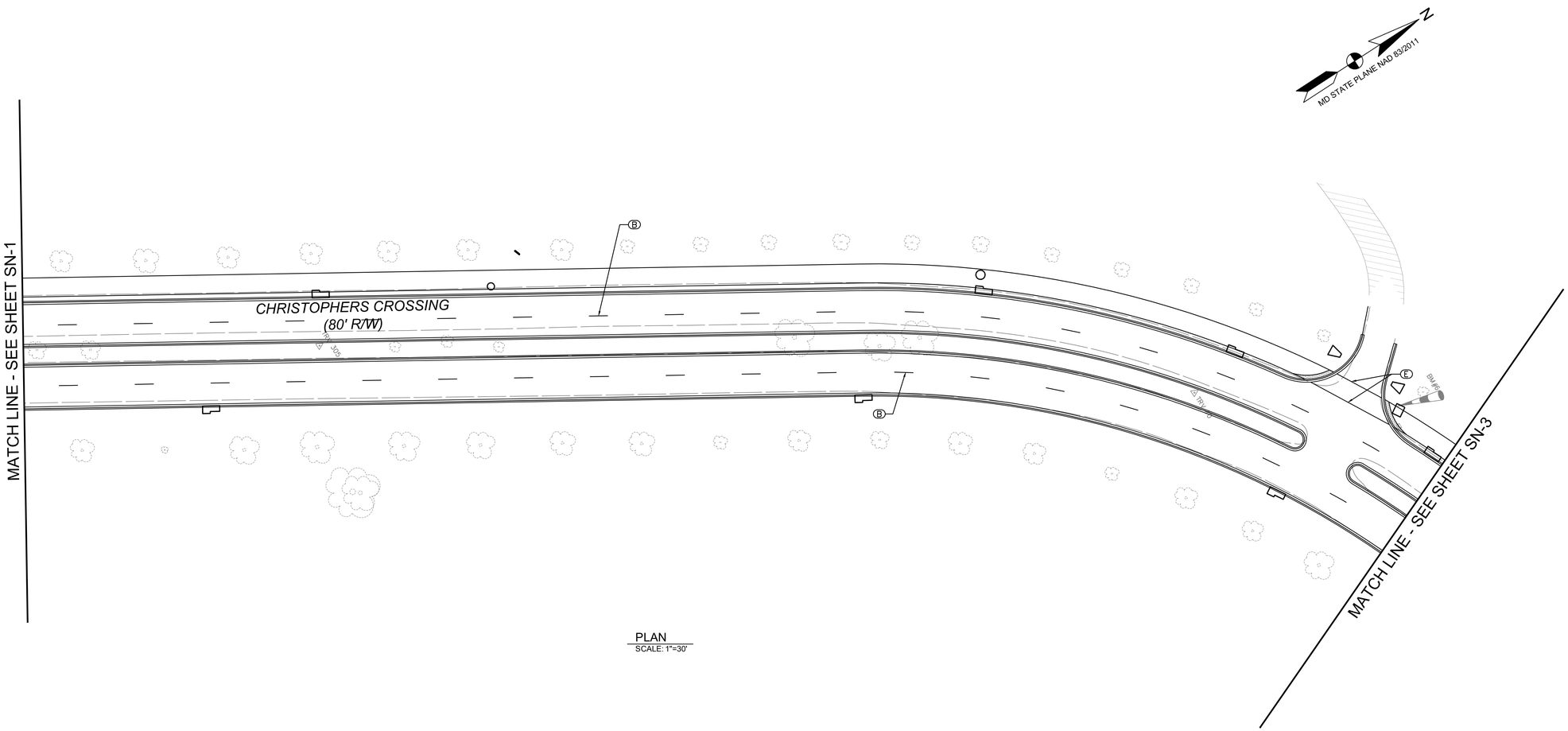
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

SIGNING AND PAVEMENT MARKING PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 31 OF 106



PLAN
SCALE: 1"=30'

LEGEND:

- EXISTING SIGN POST
- PROPOSED SIGN POST
- EXISTING SIGN TO BE RELOCATED
- SPEED LIMIT 40 — EXISTING SIGN TO REMAIN
- SPEED LIMIT 40 — EXISTING SIGN AND SUPPORT TO BE REMOVED
- SPEED LIMIT 40 — PROPOSED SIGN

PAVEMENT MARKING LEGEND:

- (A) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (B) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 10' LINE, 30' GAP
- (C) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 3' LINE, 9' GAP
- (D) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (E) 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (F) 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (G) 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (H) 5 INCH DOUBLE YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT@AMTENGINEERING.COM

SN-2

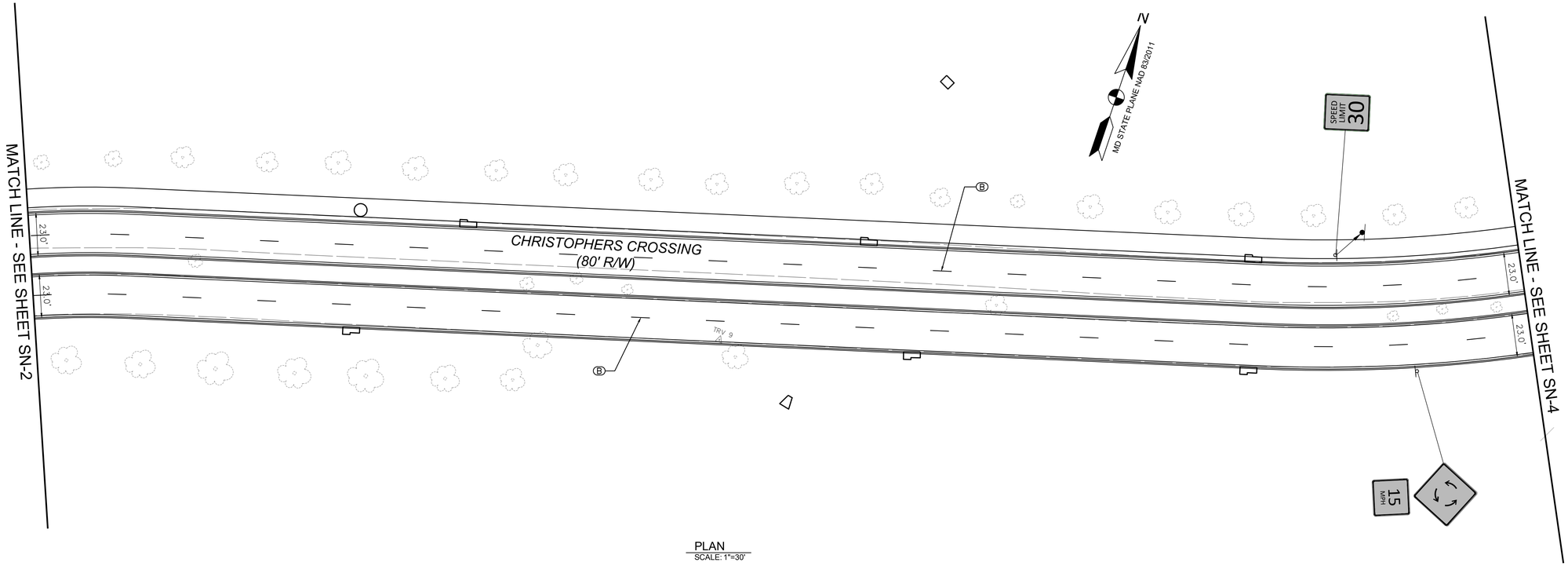
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

SIGNING AND PAVEMENT MARKING PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 32 OF 106



PLAN
SCALE: 1"=30'

LEGEND:

- EXISTING SIGN POST
- PROPOSED SIGN POST
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO REMAIN
- EXISTING SIGN AND SUPPORT TO BE REMOVED
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

- (A) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (B) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 10' LINE, 30' GAP
- (C) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 3' LINE, 9' GAP
- (D) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (E) 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (F) 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (G) 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (H) 5 INCH DOUBLE YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

SN-3

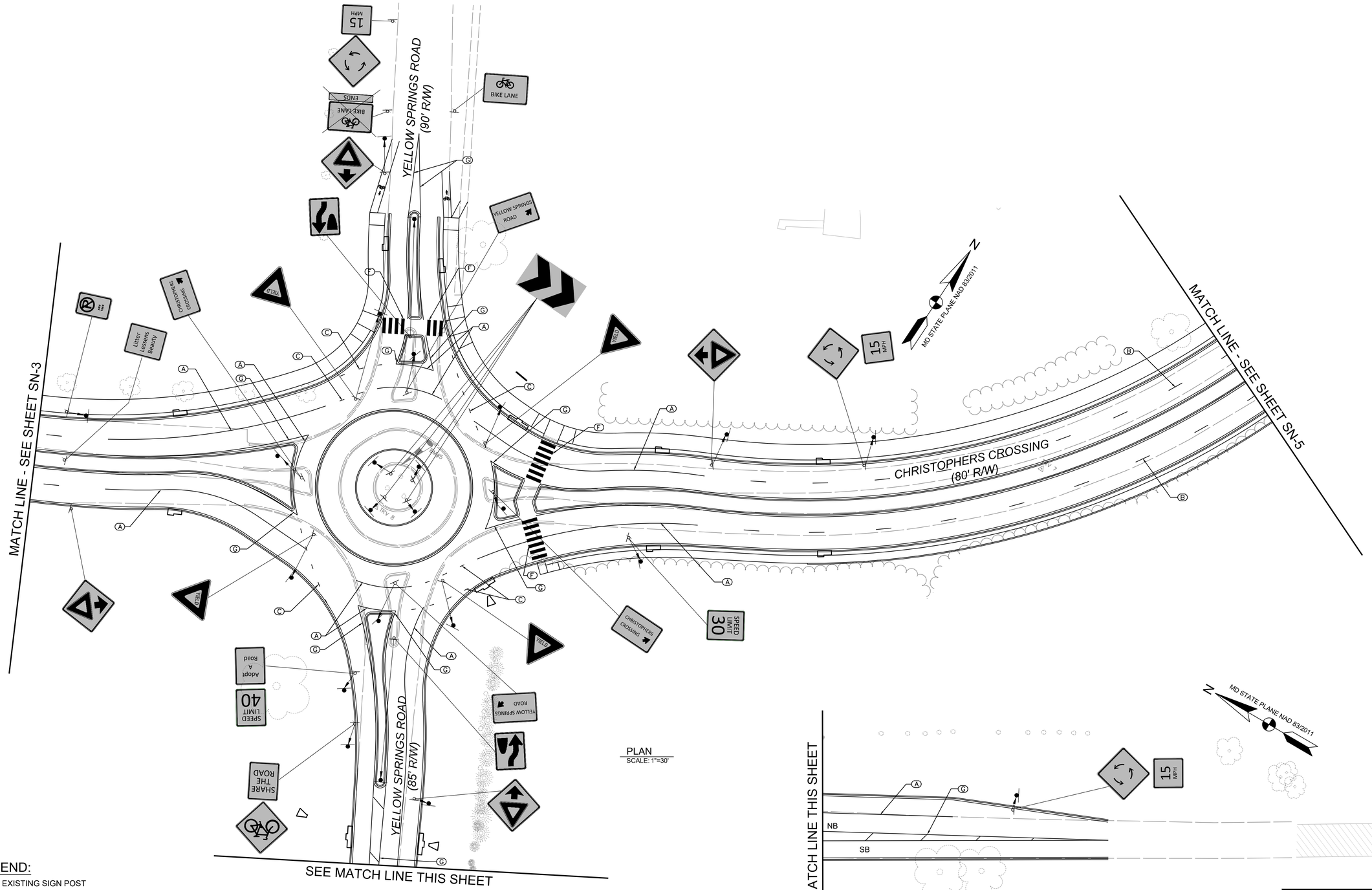
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

SIGNING AND PAVEMENT MARKING PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 33 OF 106



LEGEND:

- EXISTING SIGN POST
- PROPOSED SIGN POST
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO REMAIN
- EXISTING SIGN AND SUPPORT TO BE REMOVED
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

- (A) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (B) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 10' LINE, 30' GAP
- (C) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 3' LINE, 9' GAP
- (D) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (E) 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (F) 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (G) 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (H) 5 INCH DOUBLE YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 252-8552
EMAIL: AMT1@AMTENGINEERING.COM

SN-4

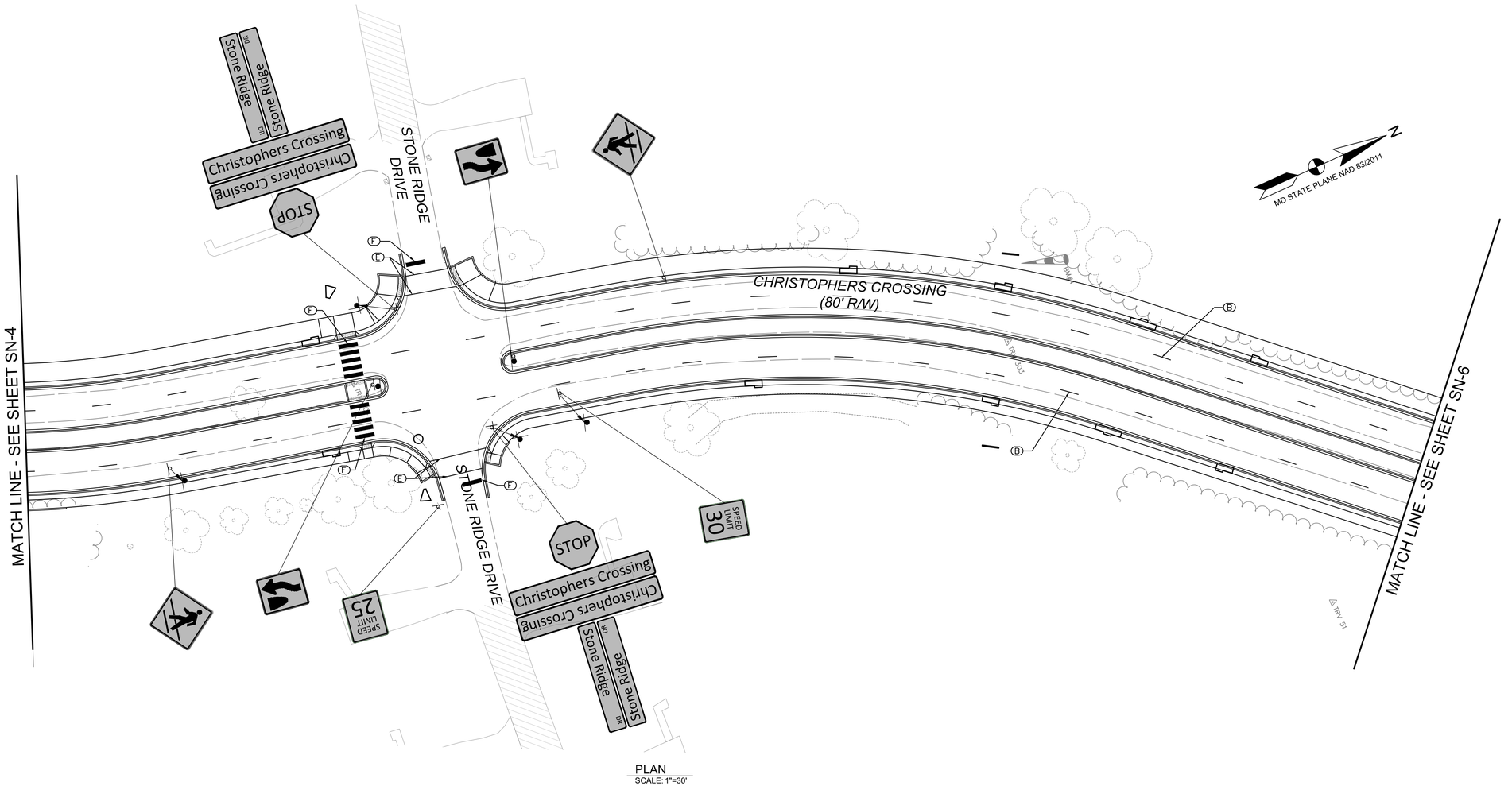
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

SIGNING AND PAVEMENT MARKING PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 34 OF 106



PLAN
SCALE: 1"=30'

LEGEND:

- EXISTING SIGN POST
- PROPOSED SIGN POST
- EXISTING SIGN TO BE RELOCATED
- EXISTING SIGN TO REMAIN
- EXISTING SIGN AND SUPPORT TO BE REMOVED
- PROPOSED SIGN

PAVEMENT MARKING LEGEND:

Ⓐ 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
Ⓑ 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 10' LINE, 30' GAP
Ⓒ 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 3' LINE, 9' GAP
Ⓓ WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
Ⓔ 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
Ⓕ 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS - SOLID
Ⓖ 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
Ⓗ 5 INCH DOUBLE YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

SN-5

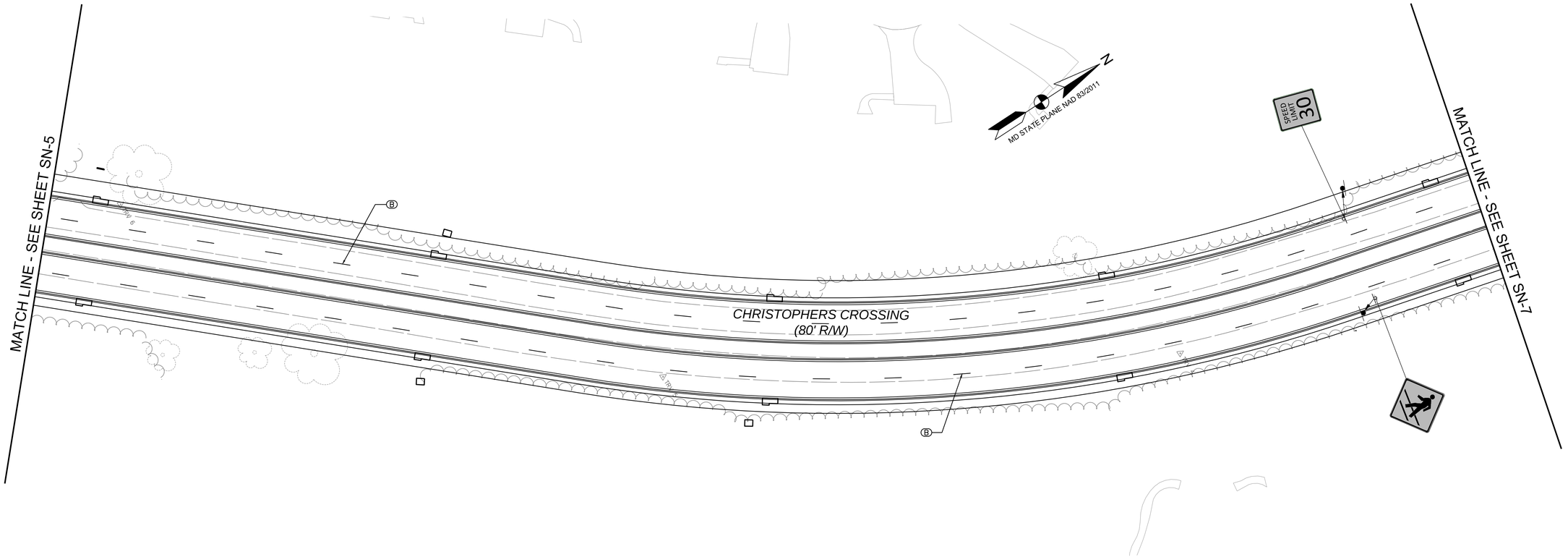
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

SIGNING AND PAVEMENT MARKING PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 35 OF 106



PLAN
SCALE: 1"=30'

LEGEND:

- EXISTING SIGN POST
- PROPOSED SIGN POST
- EXISTING SIGN TO BE RELOCATED
- SPEED LIMIT 40 — EXISTING SIGN TO REMAIN
- SPEED LIMIT 40 — EXISTING SIGN AND SUPPORT TO BE REMOVED
- SPEED LIMIT 40 — PROPOSED SIGN

PAVEMENT MARKING LEGEND:

- (A) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (B) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 10' LINE, 30' GAP
- (C) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 3' LINE, 9' GAP
- (D) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
- (E) 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (F) 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (G) 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
- (H) 5 INCH DOUBLE YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

SN-6

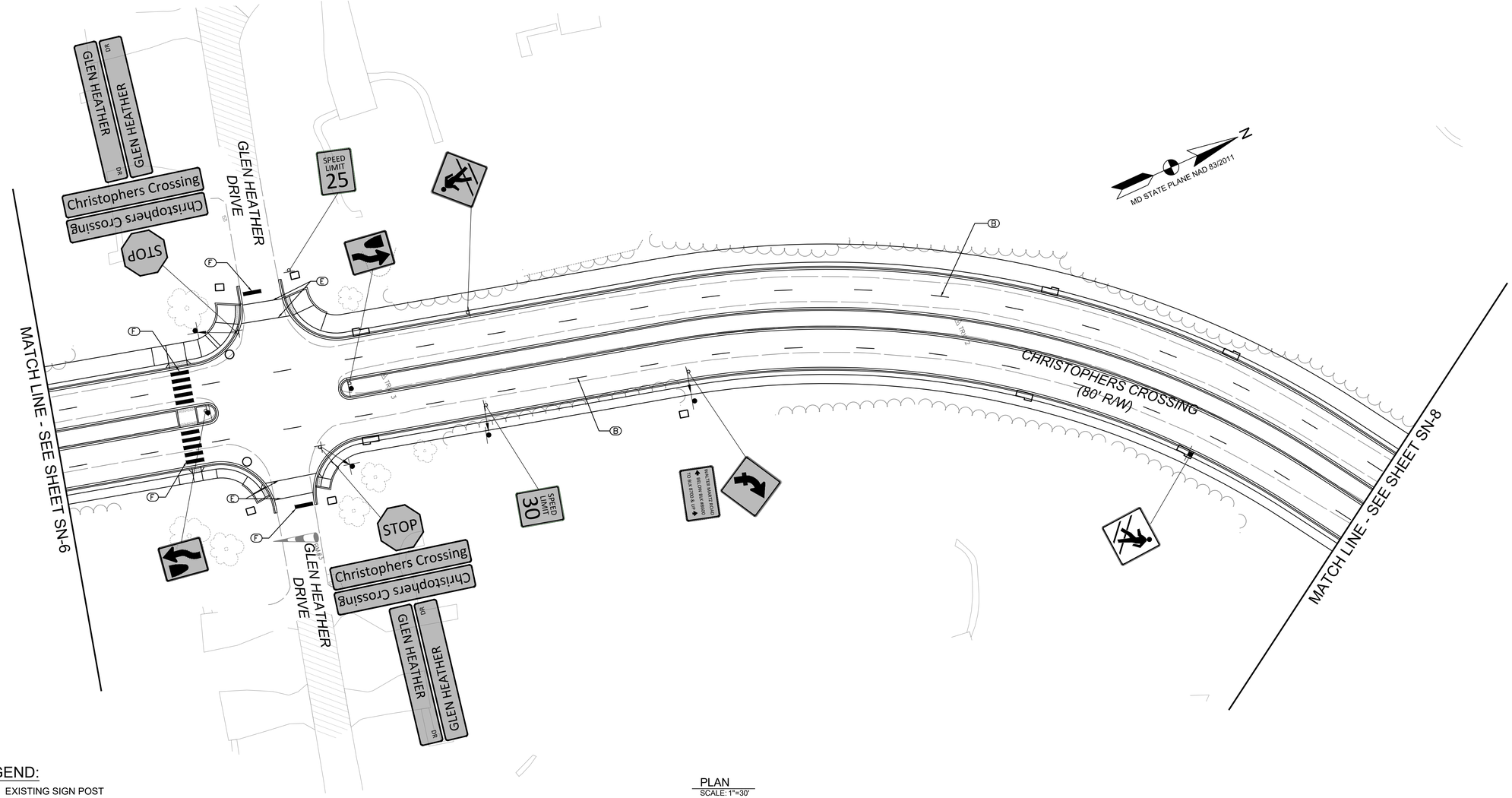
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

SIGNING AND PAVEMENT MARKING PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 36 OF 106



PLAN
SCALE: 1"=30'

LEGEND:

- EXISTING SIGN POST
- PROPOSED SIGN POST
- EXISTING SIGN TO BE RELOCATED
- SPEED LIMIT 40 — EXISTING SIGN TO REMAIN
- SPEED LIMIT 40 — EXISTING SIGN AND SUPPORT TO BE REMOVED
- SPEED LIMIT 40 — PROPOSED SIGN

PAVEMENT MARKING LEGEND:

(A) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(B) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 10' LINE, 30' GAP
(C) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 3' LINE, 9' GAP
(D) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
(E) 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(F) 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(G) 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(H) 5 INCH DOUBLE YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

SN-7

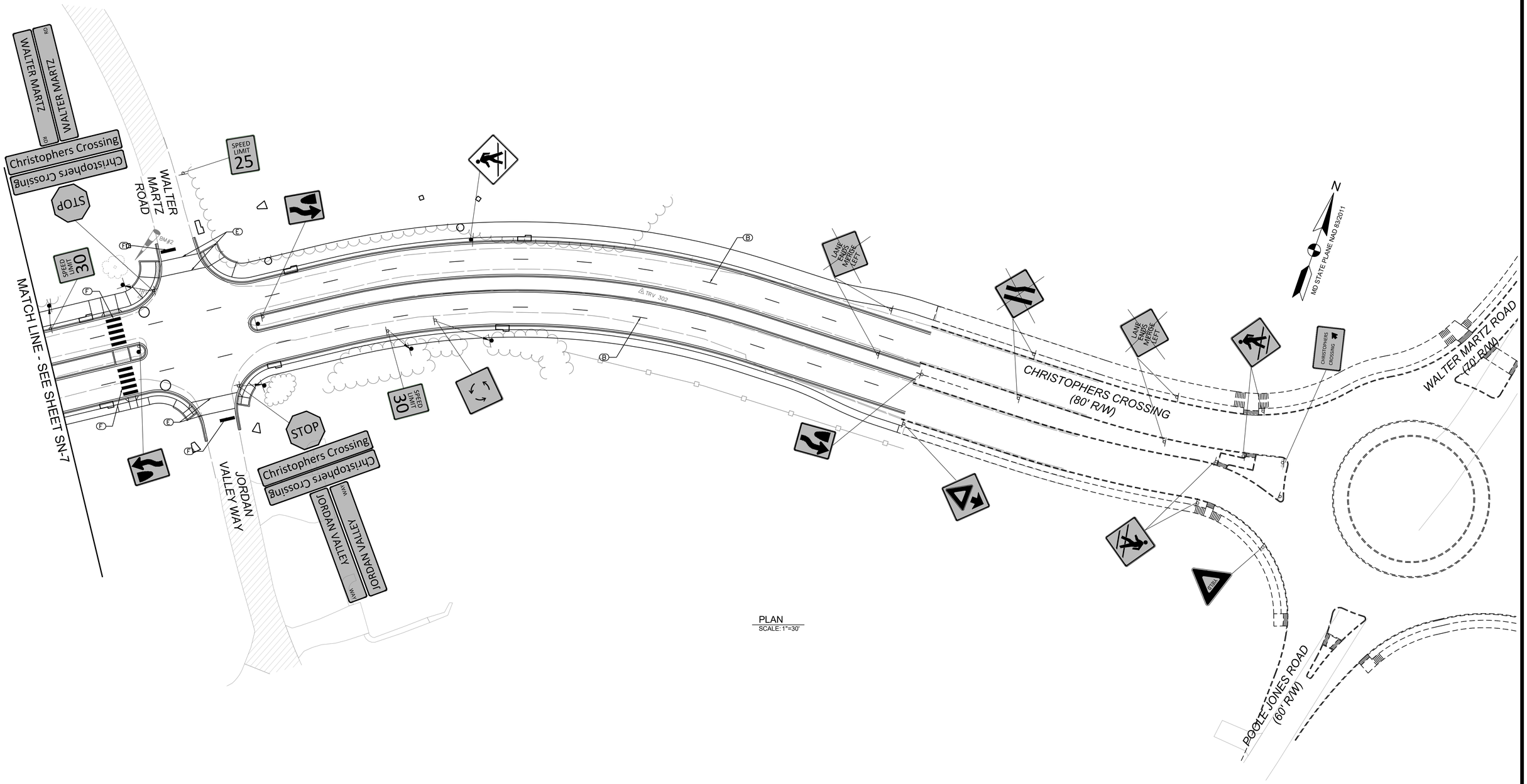
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

SIGNING AND PAVEMENT MARKING PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 37 OF 106



PLAN
SCALE: 1"=30'

LEGEND:

- EXISTING SIGN POST
- PROPOSED SIGN POST
- EXISTING SIGN TO BE RELOCATED
- SPEED LIMIT 40 — EXISTING SIGN TO REMAIN
- SPEED LIMIT 40 — EXISTING SIGN AND SUPPORT TO BE REMOVED
- SPEED LIMIT 40 — PROPOSED SIGN

PAVEMENT MARKING LEGEND:

(A) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(B) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 10' LINE, 30' GAP
(C) 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - 3' LINE, 9' GAP
(D) WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS
(E) 12 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(F) 24 INCH HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(G) 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID
(H) 5 INCH DOUBLE YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS - SOLID

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 252-8552
EMAIL: AMT1@AMTENGINEERING.COM

SN-8

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

SIGNING AND PAVEMENT MARKING PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 38 OF 106

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST VERSION OF MDOT SHA WORK ZONE TRAFFIC CONTROL TYPICAL'S, THE MD MUTCD 2011, AND SUBSEQUENT REVISIONS ADOPTED BY THE STATE OF MARYLAND, THESE PLANS AND THE OTHER CONTRACT DOCUMENTS.

2. ALL STANDARD REGULATORY AND WARNING SIGNS USED FOR MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD-2011) AS WELL AS THE MARYLAND STATE HIGHWAY ADMINISTRATION'S STANDARD SIGN BOOK-STANDARD SIGNS-2009 REVISION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING THE LATEST EDITIONS AND SUPPLEMENTS OF THE MUTCD.

3. THE CONTRACTOR SHALL SCHEDULE CONSTRUCTION OPERATIONS WITHIN THE BASIC CONCEPT OF THIS SUGGESTED SEQUENCE OF CONSTRUCTION AND TRAFFIC CONTROL PLANS. ALL THE ACTIVITIES SHALL IN NO WAY CHANGE TRAFFIC OPERATIONAL REQUIREMENTS EXCEPT AS APPROVED BY THE ENGINEER.

4. NO WORK IS TO BEGIN UNTIL ALL ADVANCE WARNING SIGNS, CHANNELIZATION DEVICES AND PAVEMENT MARKINGS ARE IN PLACE AND OPERATIONAL.

5. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES THROUGHOUT ALL PHASES OF CONSTRUCTION.

6. PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER. TEMPORARY MARKINGS SHALL BE INSTALLED AS SHOWN ON THE PLANS.

7. TEMPORARY PAINT SHALL BE USED ON PAVED SURFACES ONLY AND IS TO BE MAINTAINED TO ENSURE CONTINUOUS REFLECTIVITY AND VISIBILITY. BLACK PAINT SHALL NOT BE PERMITTED.

8. CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS OF POTENTIAL INTERRUPTIONS IN PRIVATE DRIVEWAY ACCESS. ALL EXISTING DRIVEWAY ACCESS AND PUBLIC ROADS SHALL BE OPEN TO TRAFFIC AT ALL TIME.

9. ALL EXCAVATIONS WITHIN THE TRAVELED WAY SHALL BE PLATED AND / OR BACKFILLED AT THE END OF EACH WORK DAY. IF EXCAVATION IS PLATED W8-8(4) "STEEL PLATES" SIGNS SHALL BE PLACED IN ADVANCE OF THE CONSTRUCTION AREA.

10. IN ORDER TO ASSURE A UNIFORM APPEARANCE OF FINISHED SURFACE AND QUALITY OF PAVEMENT, THE FINAL PAVEMENT SURFACE SHALL NOT BE PLACED UNTIL ALL WORK UNDER THIS CONTRACT IS READY FOR FINAL PAVING AS DESCRIBED IN PHASE 3 OF THE TRAFFIC CONTROL PLANS. NO PAINTED TEMPORARY PAVEMENT MARKINGS SHALL BE USED ON THE FINAL PAVEMENT SURFACE. USE TEMPORARY PAVEMENT MARKING TAPE ON FINAL PAVEMENT SURFACE PRIOR TO THE FINAL PERMANENT PAVEMENT MARKINGS.

11. CONTRACTOR SHALL PROVIDE SUFFICIENT STOPPING SIGHT DISTANCE AT THE INTERSECTIONS DURING CONSTRUCTION PER MD. STD. 104.01-29.

12. MAINTAIN 11 FOOT MINIMUM LANE WIDTH AT ALL TIMES DURING CONSTRUCTION. STORAGE OF CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE LOCATED 30' OFF THE TRAVEL LANES AT ALL TIMES.

13. EXISTING SIGNS THAT ARE LOCATED IN THE WORK AREA NEED TO EITHER REMAIN IN PLACE OR BE RELOCATED AS DIRECTED BY THE ENGINEER.

14. ROADWAY EXCAVATION ADJACENT TO TRAVEL LANES SHALL NOT BE MORE THAN THE CONTRACTOR CAN BACKFILL WITHIN 2 INCHES OF THE ADJACENT ROADWAY GRADE, WITHIN THE SAME WORKING DAY. FOR INFORMATION ON STAGED ROADWAY CONSTRUCTION, REFER TO MD STD. DETAIL NO. 104.01-28.

15. ALL EXCAVATIONS WHICH RESULT IN PAVEMENT EDGE DROP-OFF SHALL BE IN ACCORDANCE WITH STD. NOS MD 104.06-15 TO MD 104.06-19. TEMPORARY GAB AND HMA FOR MOT SHALL BE USED AS BACKFILL MATERIAL TO SATISFY PAVEMENT EDGE DROP-OFF CRITERIA.

16. MAXIMUM SPACING BETWEEN PLASTIC DRUMS (CHANNELIZATION DEVICES) SHALL BE AS INDICATED IN THE DRAWINGS.

17. ADVANCED WARNING SIGNS SHALL BE INSTALLED AT A MINIMUM SPACING OF 200 FEET TO AN EXISTING SIGN, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

18. PERMANENT MARKINGS DAMAGED SHALL BE REPAIRED AT THE DISCRETION OF THE ENGINEER.

19. PORTABLE VARIABLE MESSAGE SIGNS AND/OR ARROW PANELS SHALL BE USED AS DIRECTED BY THE CONSTRUCTION PROJECT ENGINEER.

20. WHERE TWO ENTRANCES EXIST FOR ONE PROPERTY, CONSTRUCTION SHALL BE SEQUENCED SO THAT ONLY ONE ENTRANCE WILL BE DISTURBED AT ANY GIVEN TIME. WHEN ONLY ONE ENTRANCE EXISTS FOR A PROPERTY, WHEN NECESSARY, THE CONTRACTOR SHALL PROVIDE FLAGGERS TO CONTROL ENTRANCE CONSTRUCTION.

21. SIGNS USED FOR TEMPORARY TRAFFIC CONTROL THAT ARE NOT APPLICABLE FOR A PARTICULAR CONSTRUCTION PHASE SHALL BE REMOVED OR COMPLETELY COVERED WITH A NON-TRANSPARENT MATERIAL.

22. TRAFFIC CONTROL DEVICES AND OTHER CONSTRUCTION MATERIALS SHALL NOT INTRUDE INTO THE USEABLE WIDTH OF THE SIDEWALK, TEMPORARY PATHWAY, OR OTHER PEDESTRIAN FACILITY.

23. WHERE A SIDEWALK IS CLOSED DURING CONSTRUCTION, THE CONTRACTOR SHALL INSTALL A BARRIER ACROSS THE FULL WIDTH OF THE SIDEWALK APPROACHING THE CLOSURE. THIS BARRIER SHALL BE DETECTABLE BY A VISUALLY IMPAIRED INDIVIDUAL TRAVELING WITH THE AID OF A CANE.

SEQUENCE OF CONSTRUCTION:

PHASE 1

CHRISTOPHERS CROSSING WIDENING WITH TRAIL AND SIDEWALK CONSTRUCTION

1. INSTALL TEMPORARY TRAFFIC CONTROL DEVICES ALONG CHRISTOPHERS CROSSING AND SIDE ROADS PER STANDARDS NO. MD 104.02-02 AND AS INDICATED ON PLANS. REMOVE THE EXISTING SIGNS APPROACHING THE SOUTHERN END OF THE PROJECT AS NOTED ON SHEET SN-1.
2. INSTALL EROSION AND SEDIMENT CONTROLS IN ACCORDANCE WITH EROSION AND SEDIMENT CONTROL PLANS.
3. ACCESS TO SIDE ROADS AND ENTRANCES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
4. CONSTRUCT OUTSIDE CURB, TRAIL AND SIDEWALK AS INDICATED ON PLANS, MAINTAINING A SINGLE LANE IN EACH DIRECTION
5. CONSTRUCT PIPE CROSSINGS ACROSS CHRISTOPHERS CROSSING UNDER FLAGGING OPERATION PER STANDARDS NO. MD 104.02-10, DURING OFF-PEAK HOURS.

PHASE 2

CHRISTOPHER CROSSING MEDIAN AND ROUNDABOUT

1. INSTALL TEMPORARY TRAFFIC CONTROLS ALONG CHRISTOPHERS CROSSING PER STANDARDS NO. MD 104.04-02 AND AS INDICATED ON PLANS.
2. INSTALL SEDIMENT CONTROLS IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLANS.
3. ADJUST TRAFFIC DEVICES AT ROUNDABOUT TO REMOVE EXISTING SPLITTER ISLANDS BEFORE MEDIAN CONSTRUCTION.
4. CONSTRUCT MEDIAN AND ROUNDABOUT MAINTAINING A SINGLE LANE IN EACH DIRECTION.
5. ACCESS TO SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

PHASE 3

FINAL HMA SURFACE COURSE

1. DURING OFF-PEAK HOURS PERFORM NECESSARY GRINDING AND RESURFACING, WEDGING AND LEVELING AND PLACE FINAL SURFACE COURSE AS INDICATED ON THE PLANS UNDER FLAGGING OPERATION PER STANDARDS NO. MD 104.02-10.
2. REMOVE EROSION AND SEDIMENT CONTROL DEVICES IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLANS AND APPLY PAVEMENT MARKINGS PER THE SIGNING AND PAVEMENT MARKING SHEETS.

TP-1

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-4552
EMAIL: AMT1@AMTENGINEERING.COM

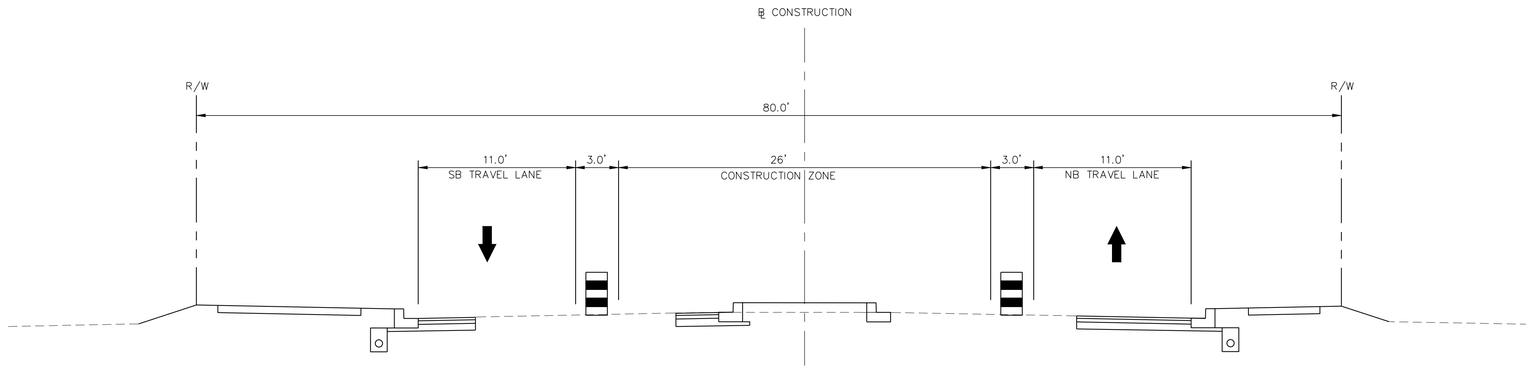
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

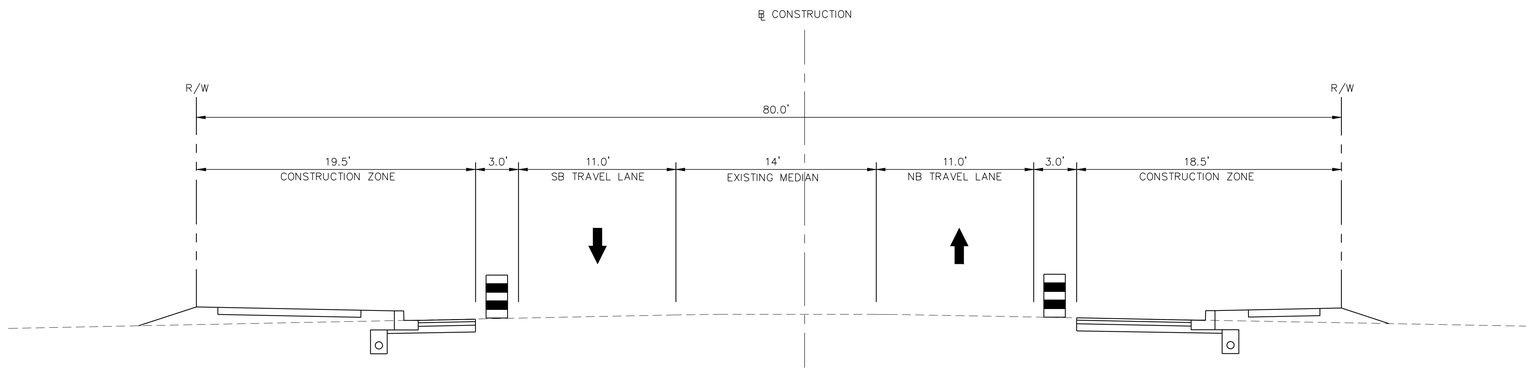
MAINTENANCE OF TRAFFIC - GENERAL NOTES

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 39 OF 106



TYPICAL SECTION - PHASE 2



TYPICAL SECTION - PHASE 1

TP-2

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS

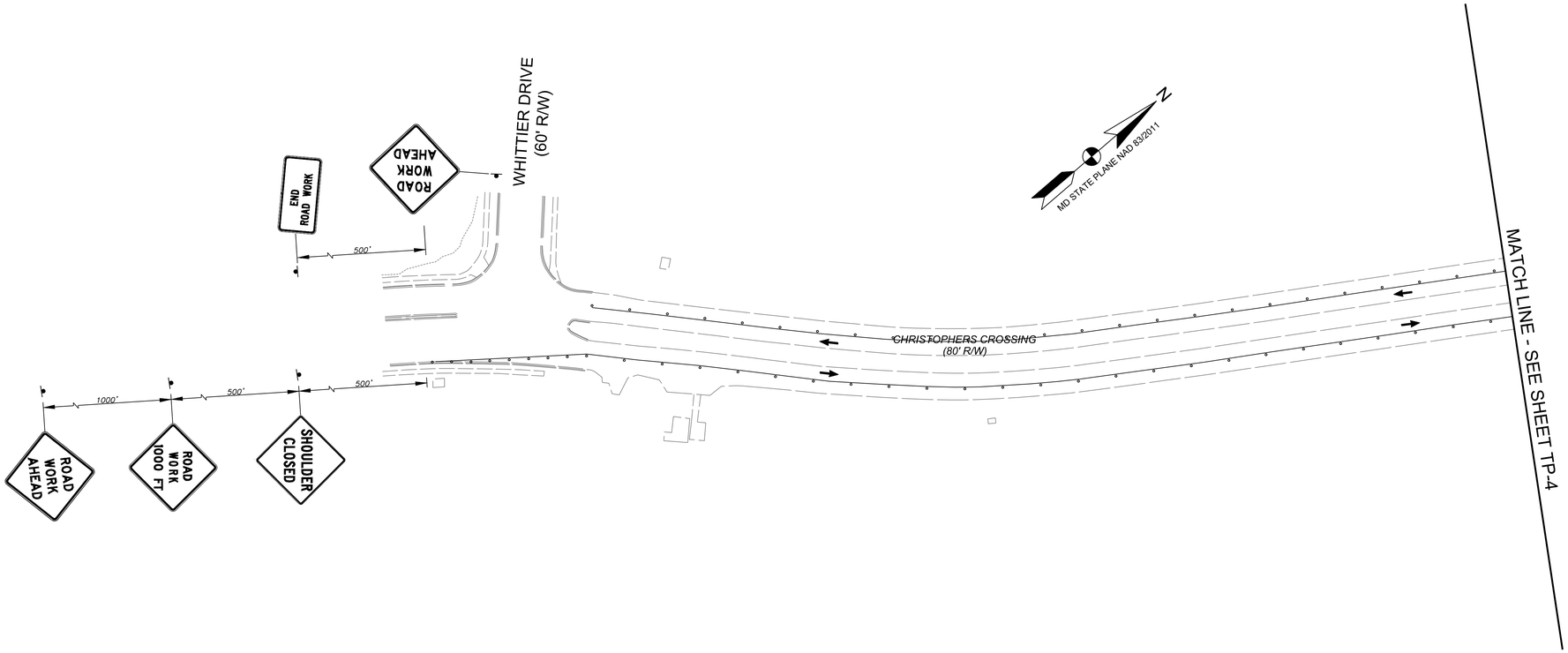
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 40 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-4552
EMAIL: AMT1@AMTENGINEERING.COM



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

TP-3

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 1

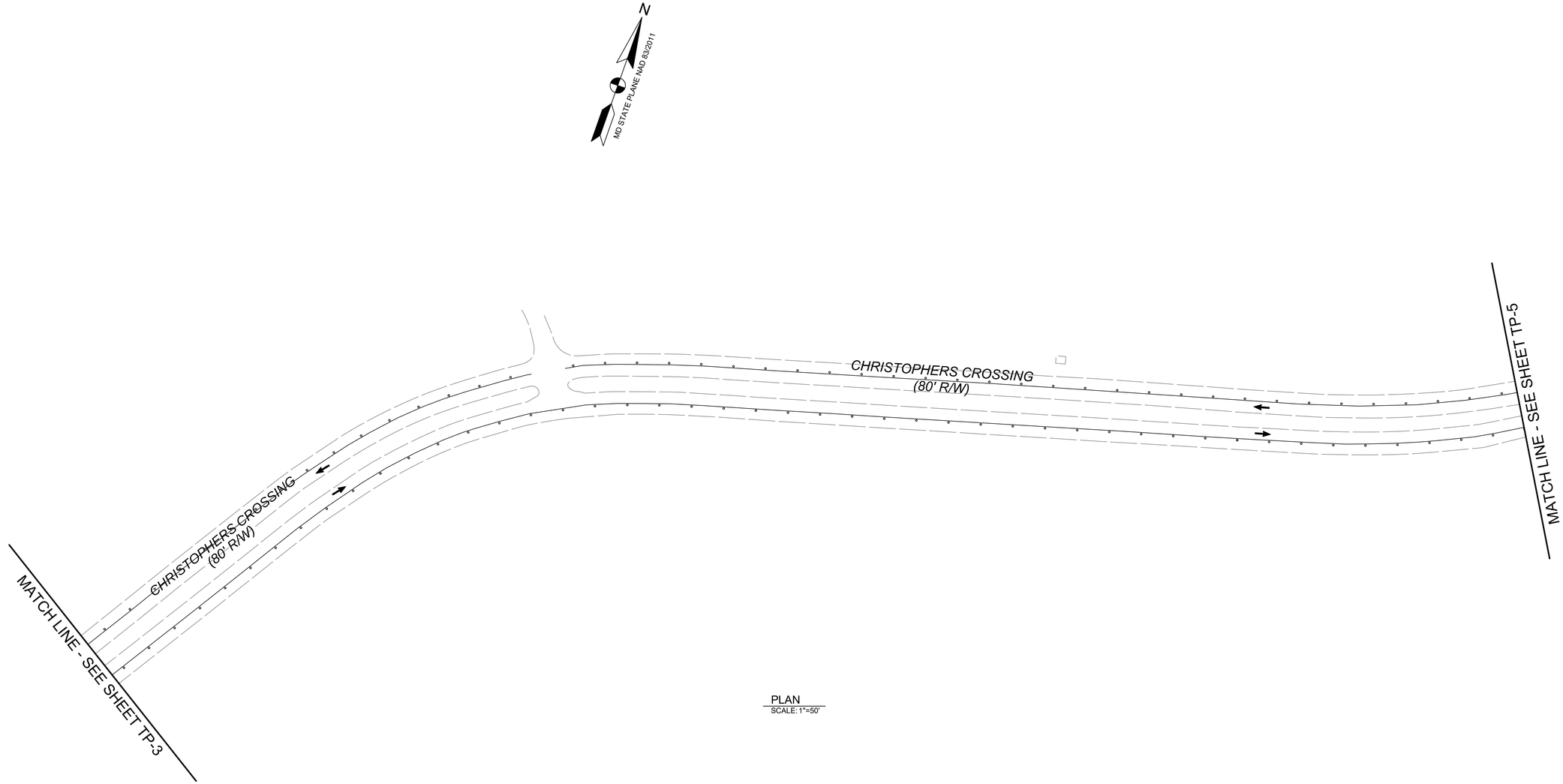
DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 41 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

TP-4

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

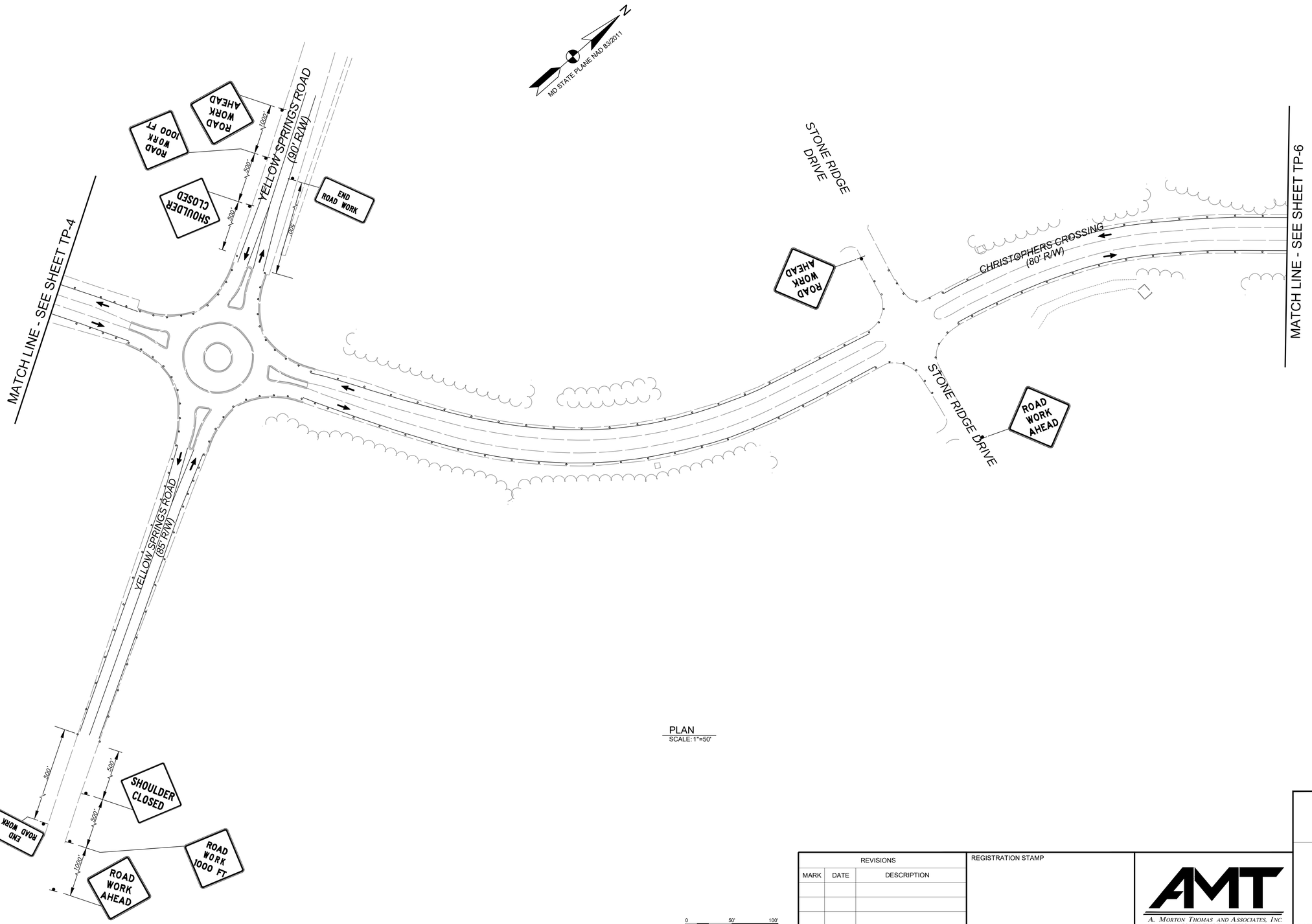
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 1

DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 42 OF 106



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

TP-5

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 1

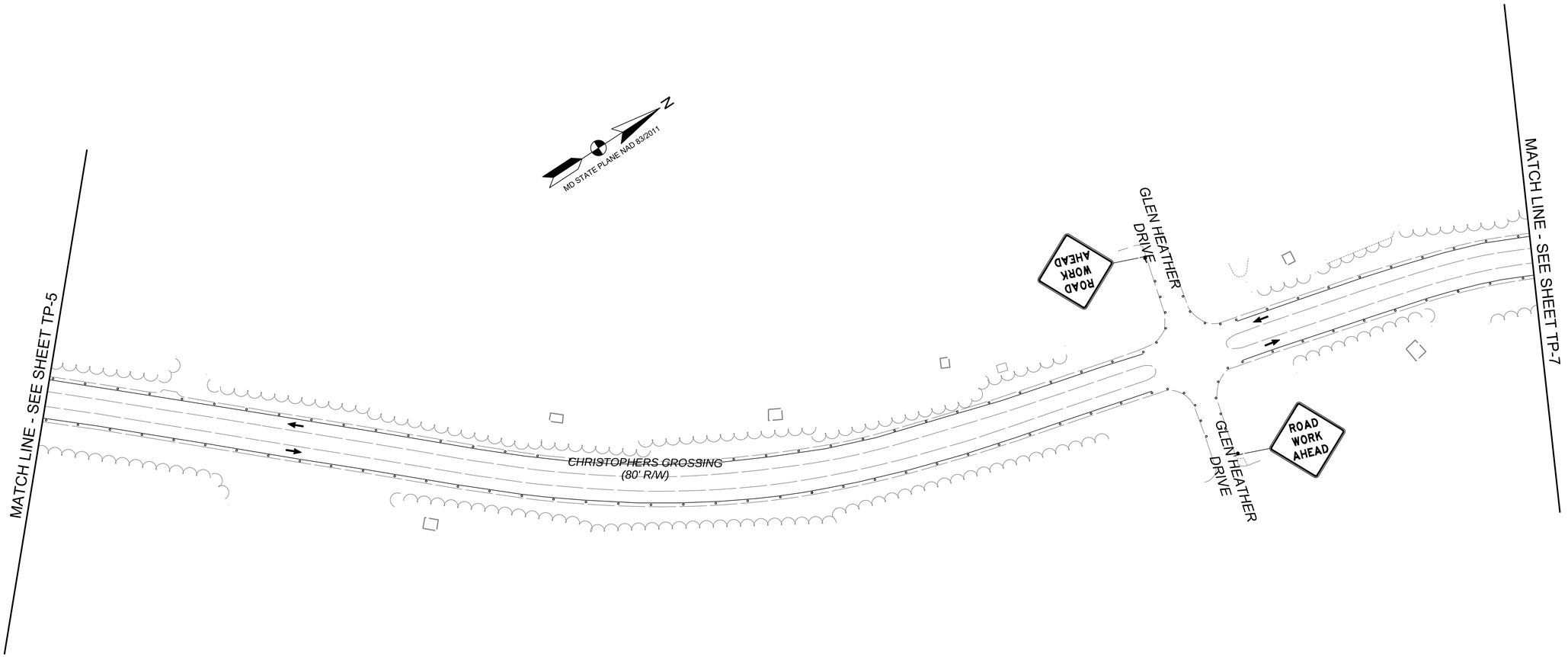
DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 43 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8352
EMAIL: AMT1@AMTENGINEERING.COM



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

TP-6

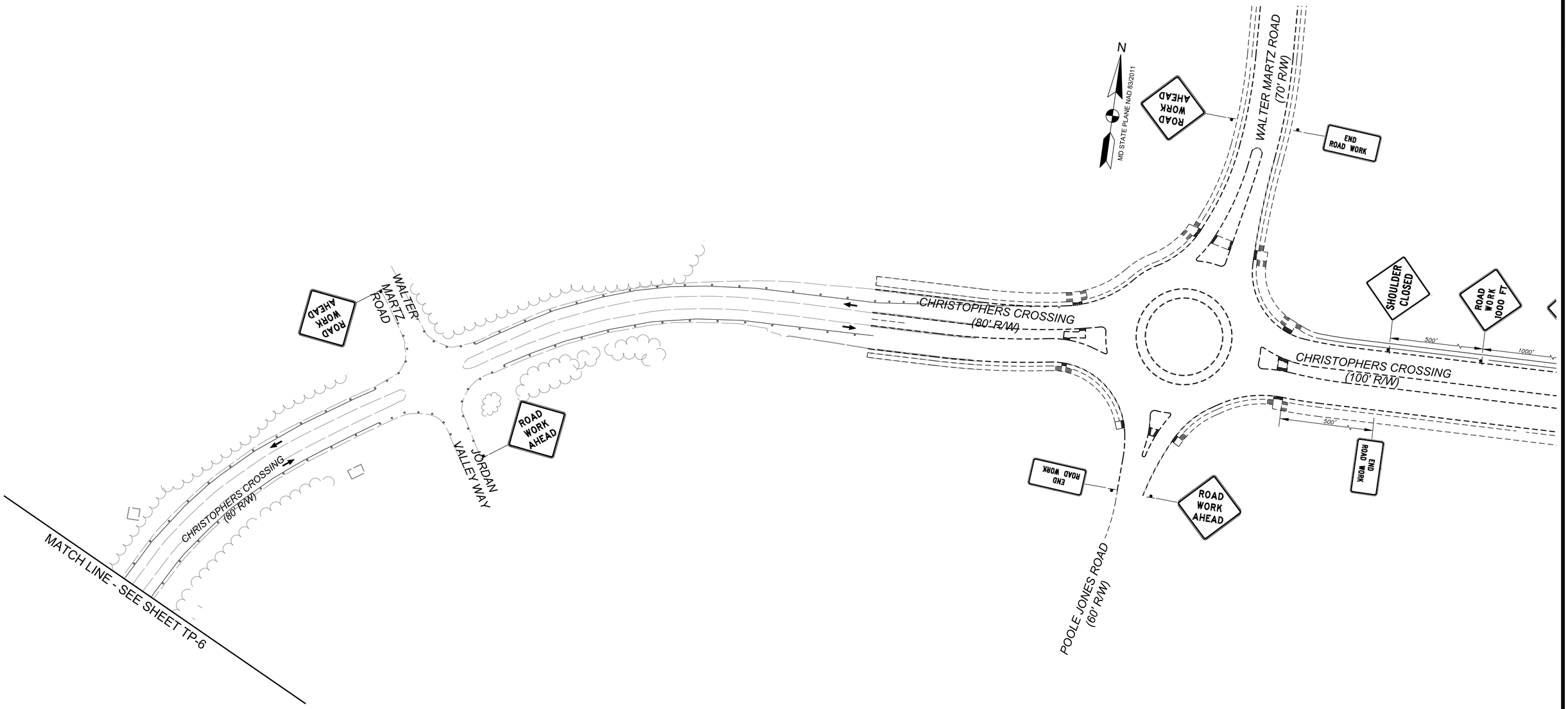
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 1

DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 44 OF 106



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

TP-7

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

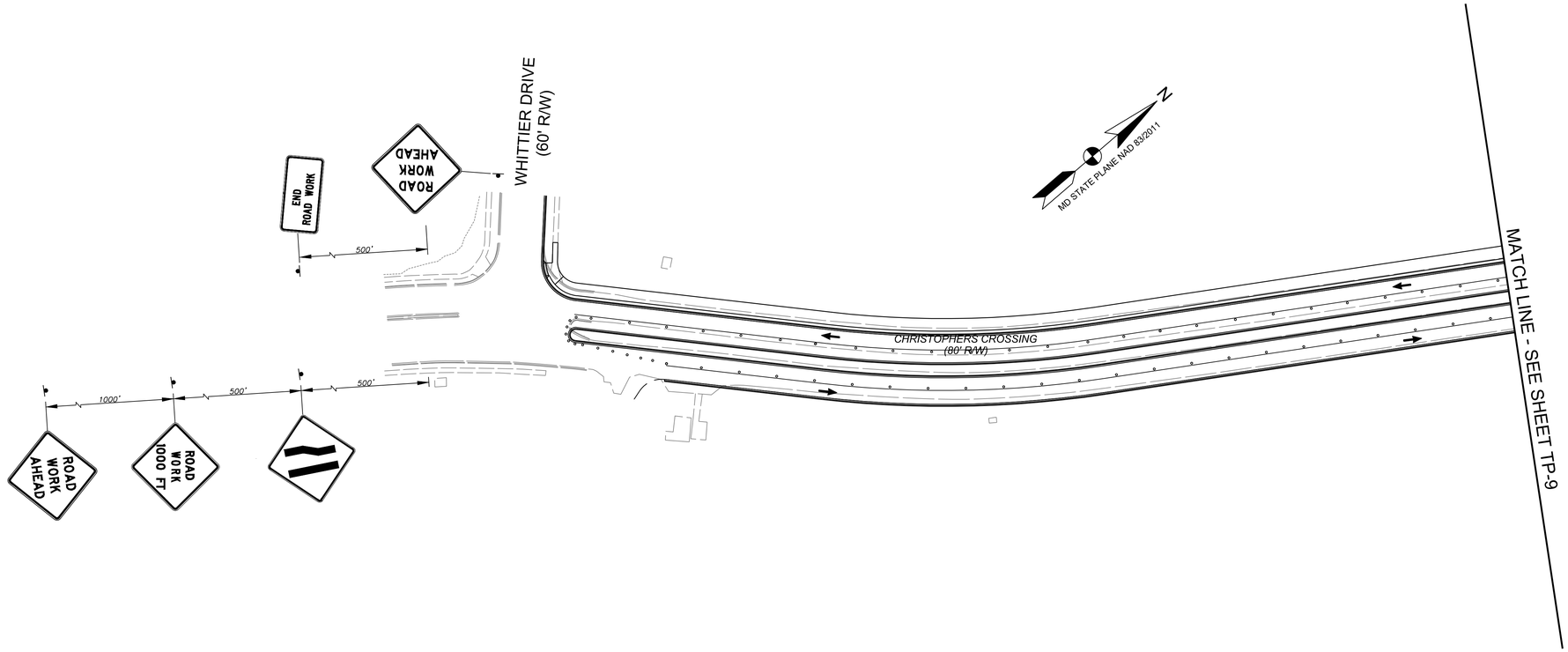
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 1

DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 45 OF 106



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

TP-8

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 2

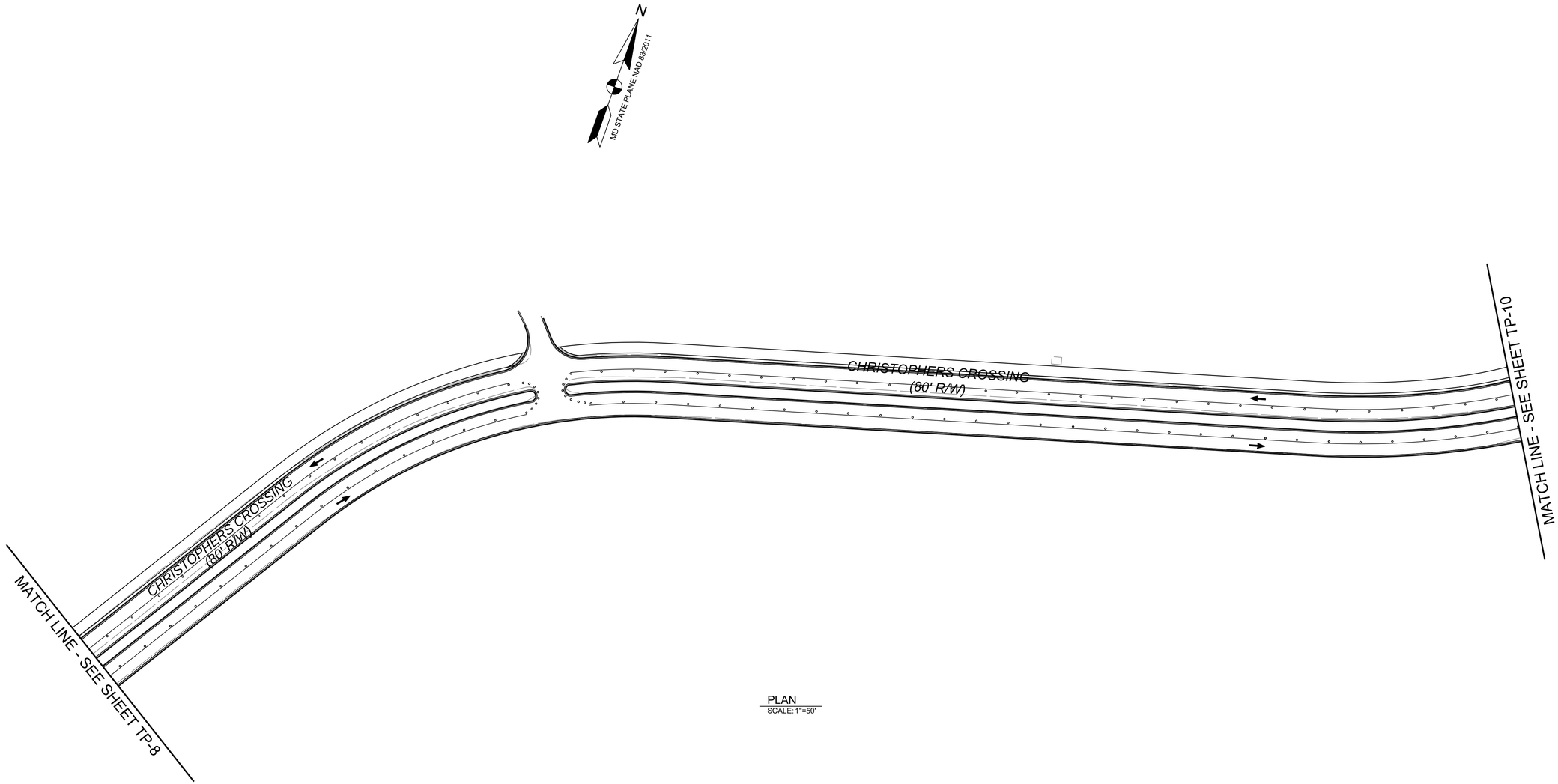
DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 46 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMTI@AMTENGINEERING.COM

TP-9

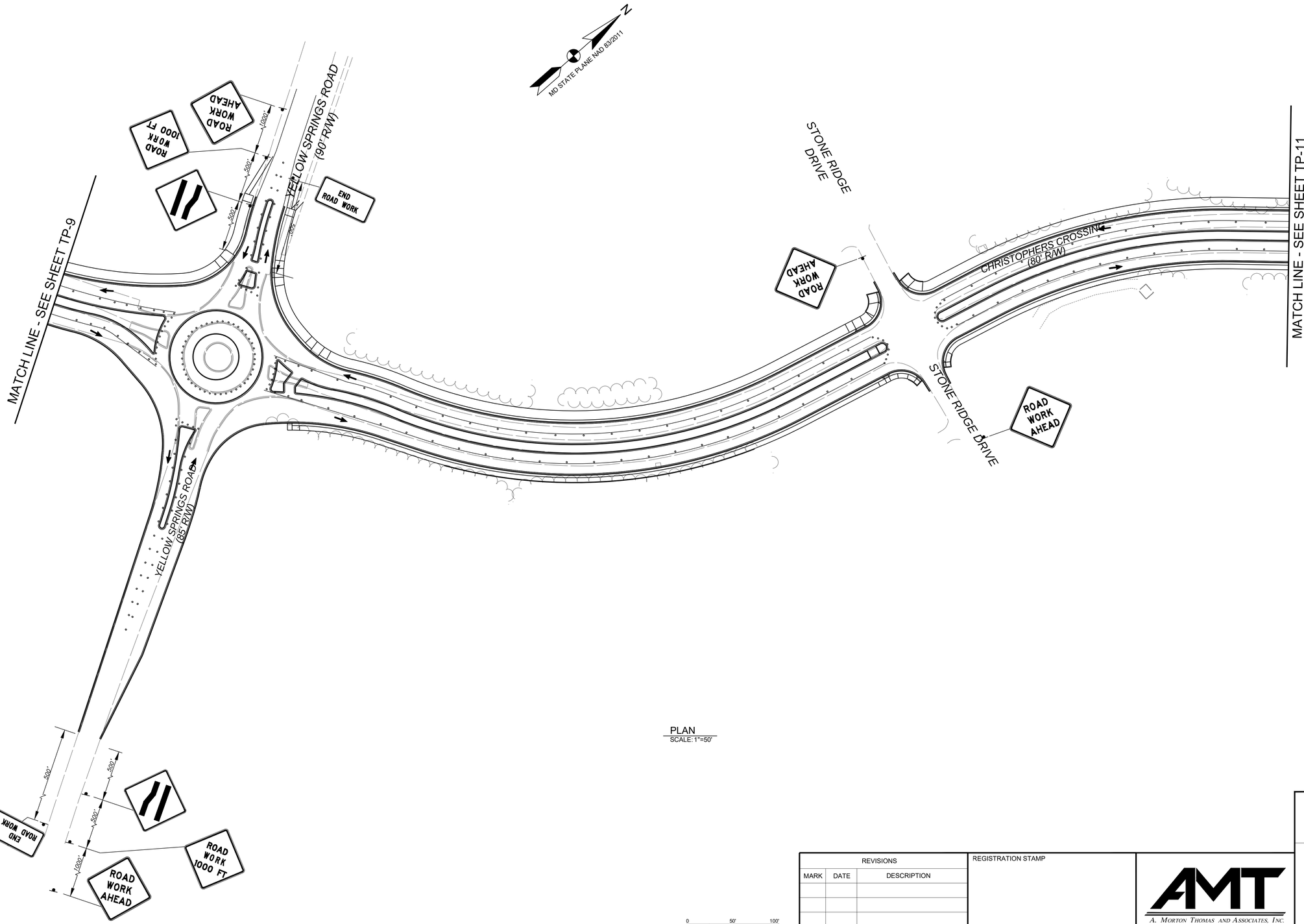
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 2

DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 47 OF 106



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

TP-10

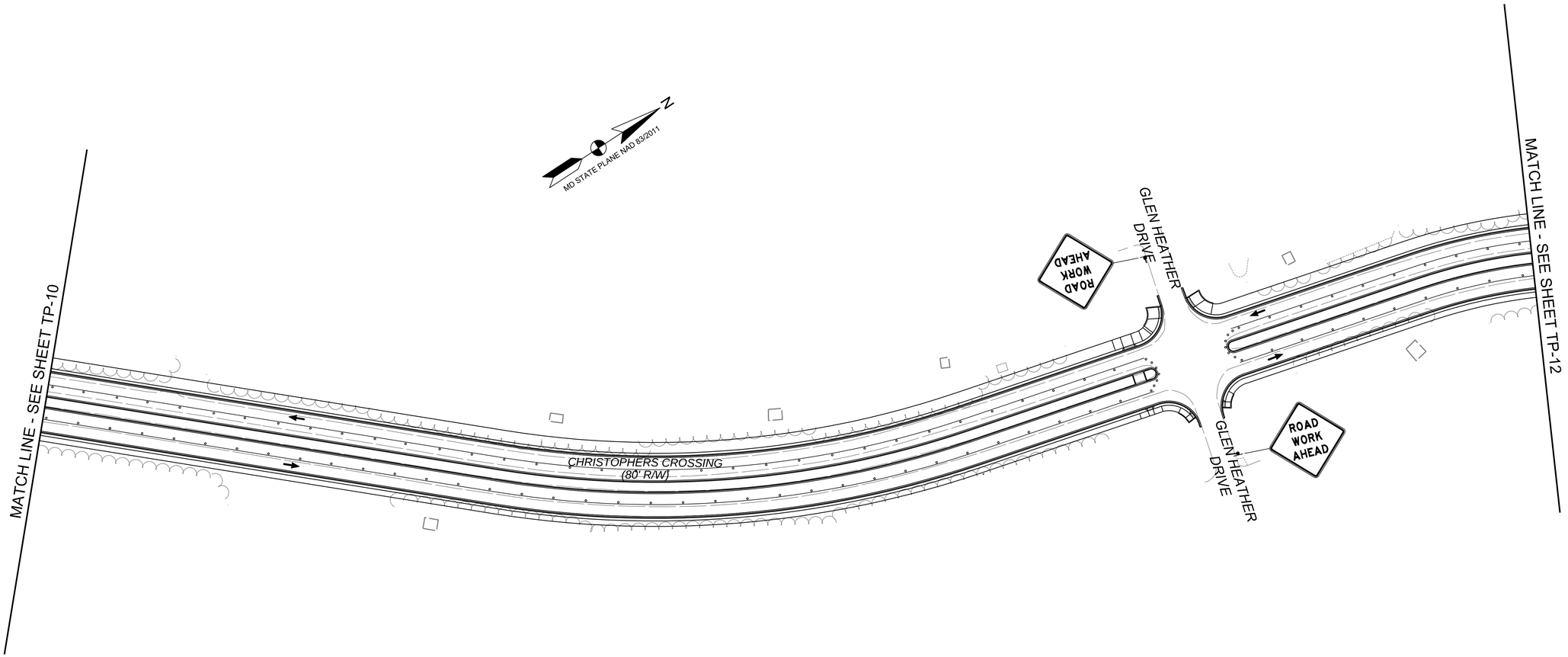
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 2

DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 48 OF 106



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

TP-11

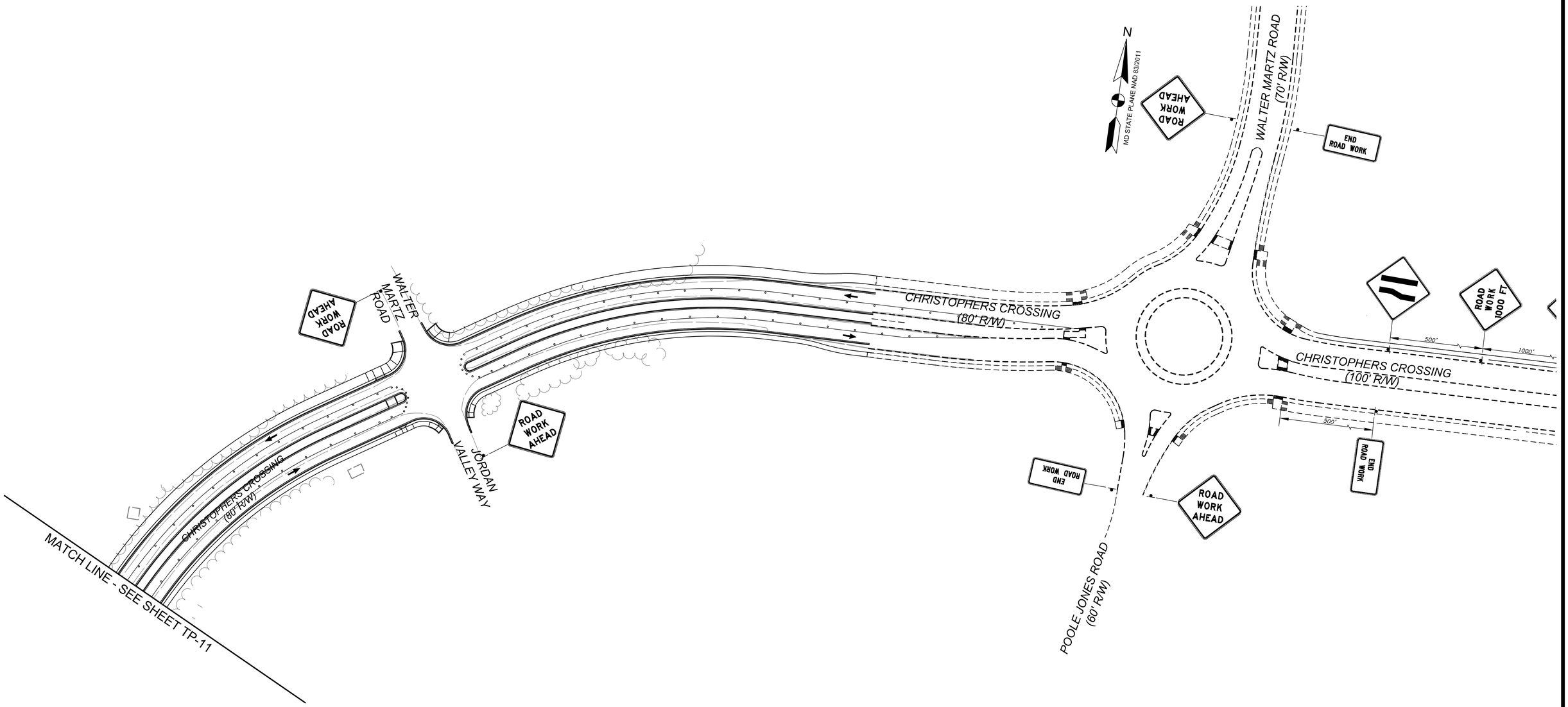
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

MAINTENANCE OF TRAFFIC PHASE 2

DATE: SEPTEMBER 2020 SCALE: 1"=50'

AMT FILE NO. 15-0758.007 SHEET NO. 49 OF 106



PLAN
SCALE: 1"=50'

0 50' 100'
SCALE: 1"=50'

TP-12

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

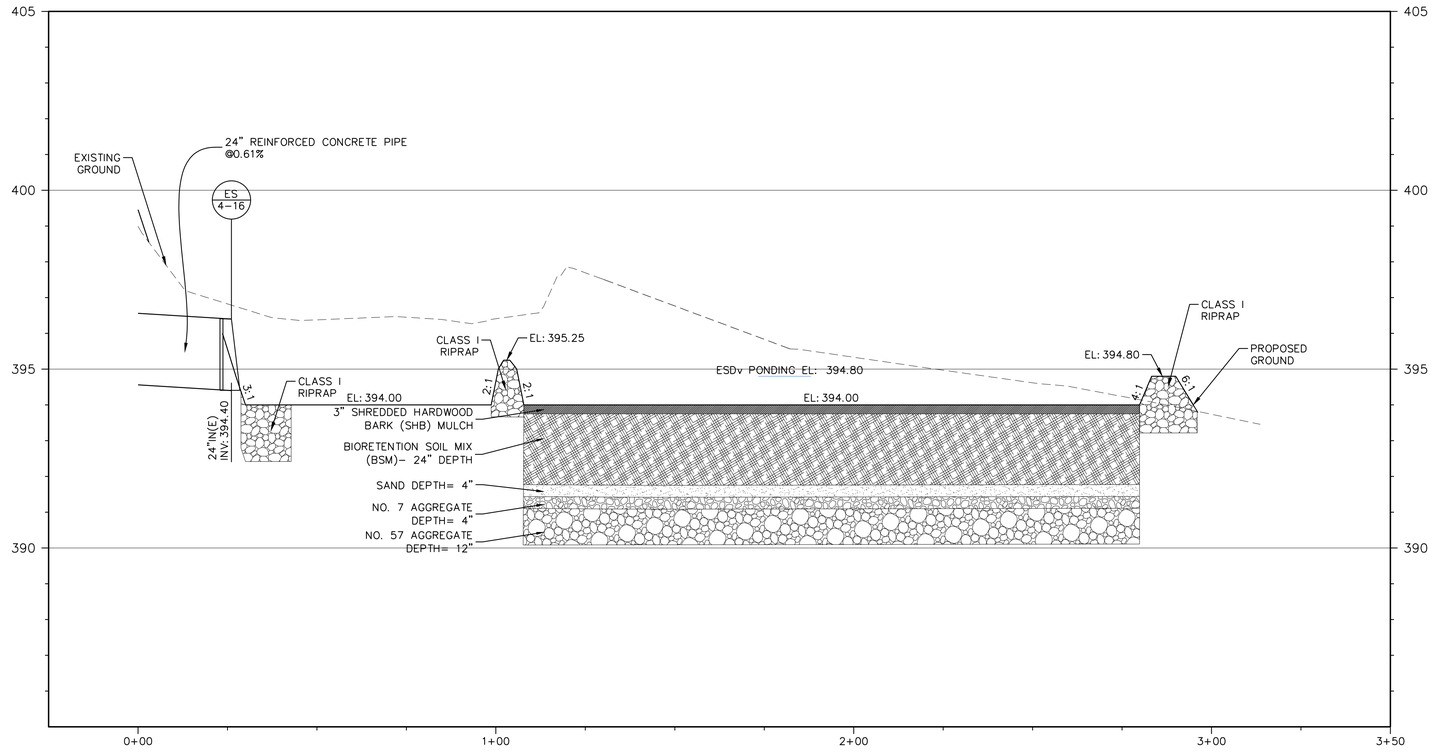
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

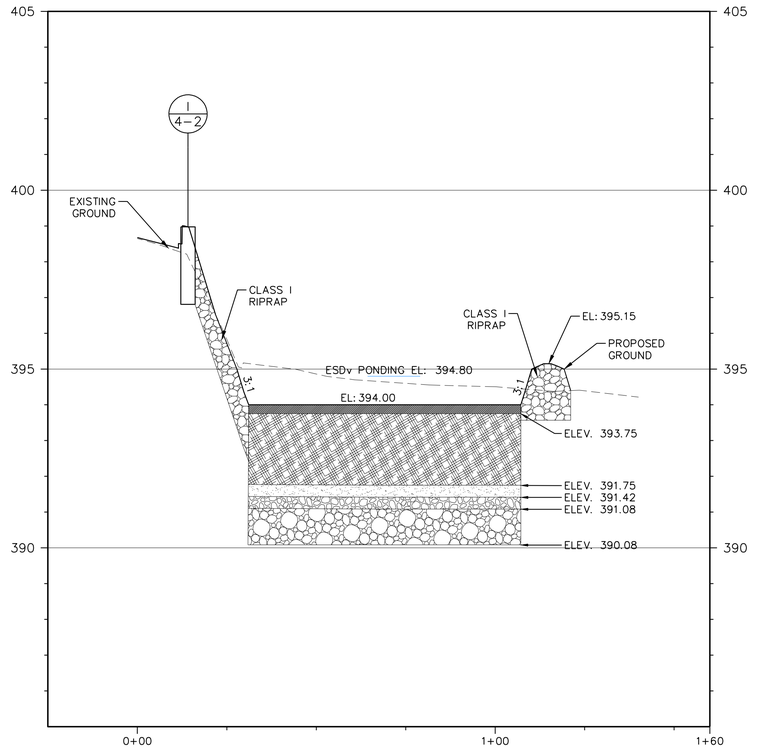
MAINTENANCE OF TRAFFIC PHASE 2

DATE: SEPTEMBER 2020 SCALE: 1"=50'

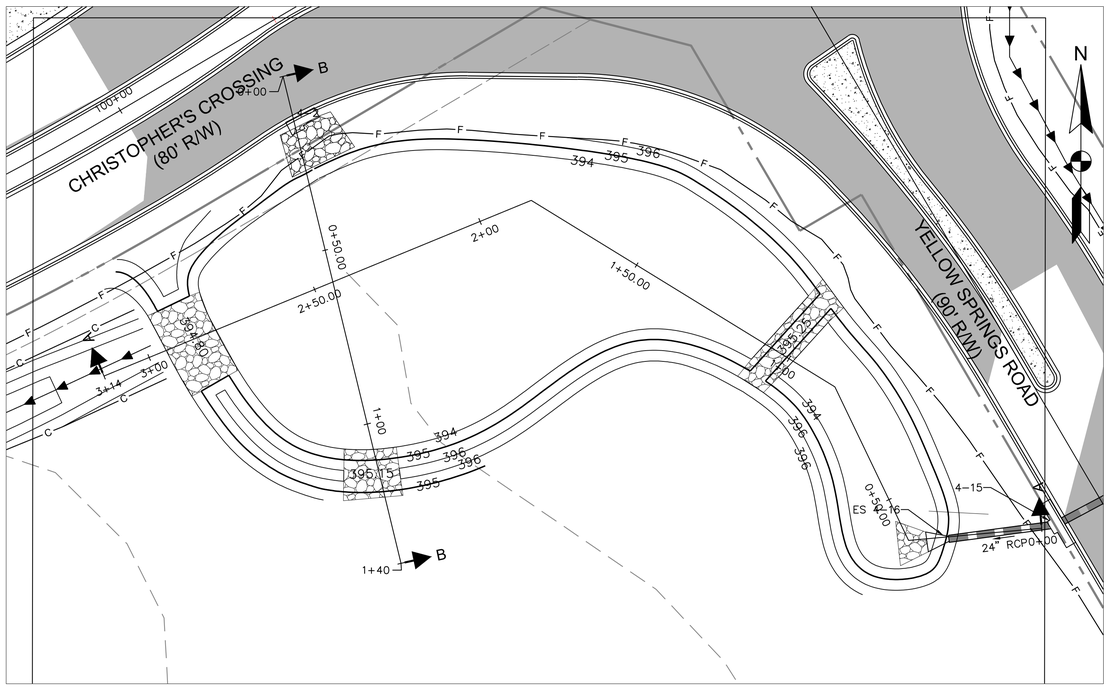
AMT FILE NO. 15-0758.007 SHEET NO. 50 OF 106



SW-1 A-A
SCALE: HORZ 1"=20'
VERT 1"=2'



SW-1 B-B
SCALE: HORZ 1"=20'
VERT 1"=2'



PROPOSED BIORETENTION FACILITY - PLAN VIEW
SCALE: 1"=20'

0 10' 20' 40'
SCALE: 1"=20'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

SW-1

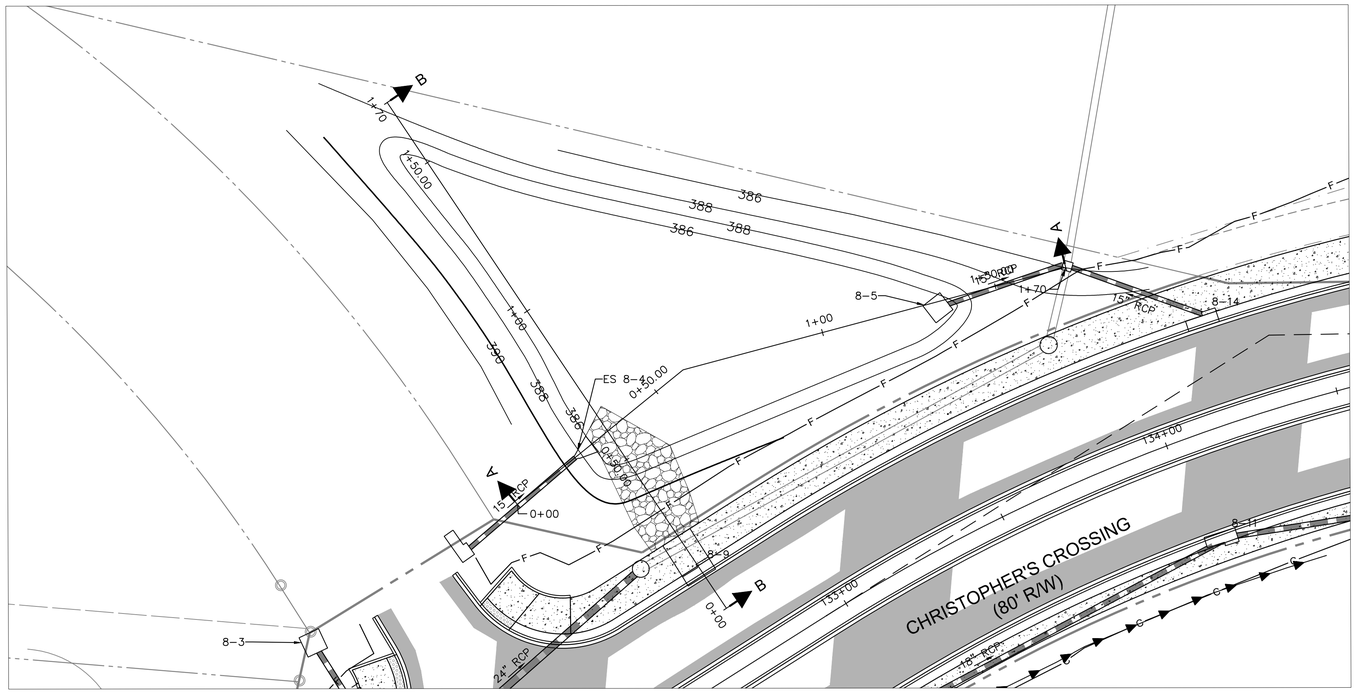
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

STORMWATER MANAGEMENT PLAN

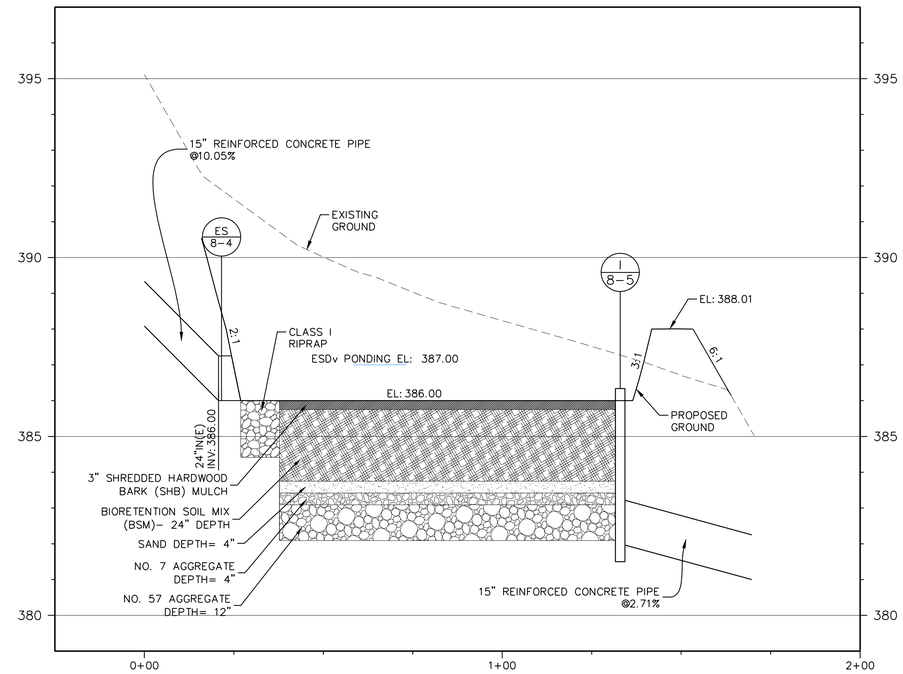
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 51 OF 106

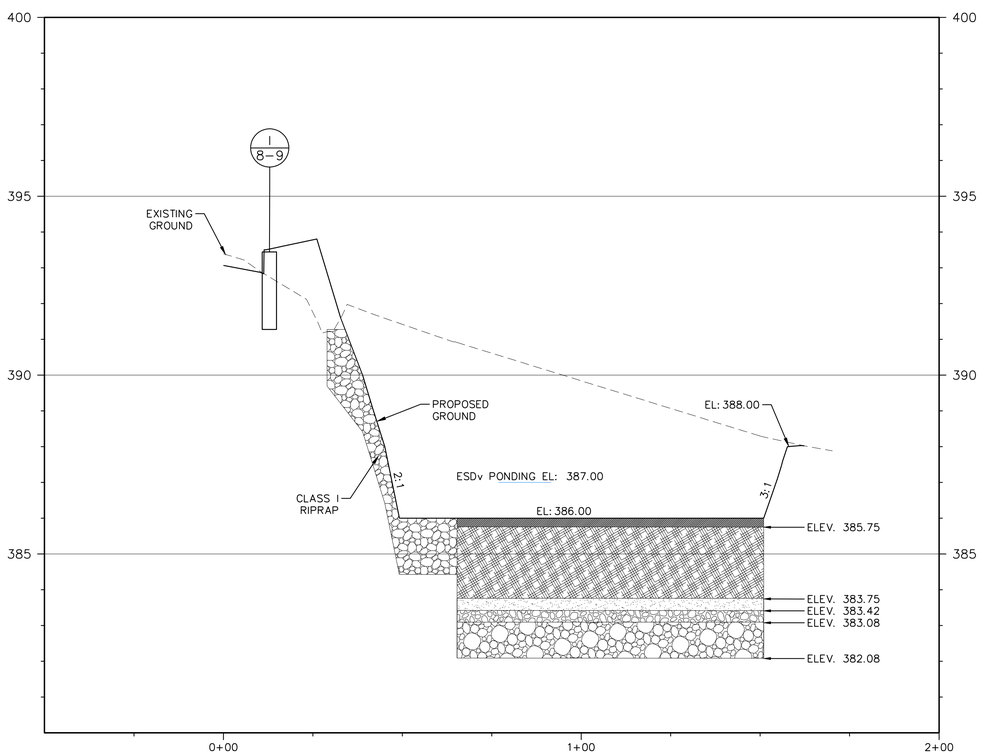


PROPOSED BIORETENTION FACILITY - PLAN VIEW
SCALE: 1"=20'

0 10' 20' 40'
SCALE: 1"=20'



SW-2 A-A
SCALE: HORZ 1"=20'
VERT 1"=2'



SW-2 B-B
SCALE: HORZ 1"=20'
VERT 1"=2'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

SW-2

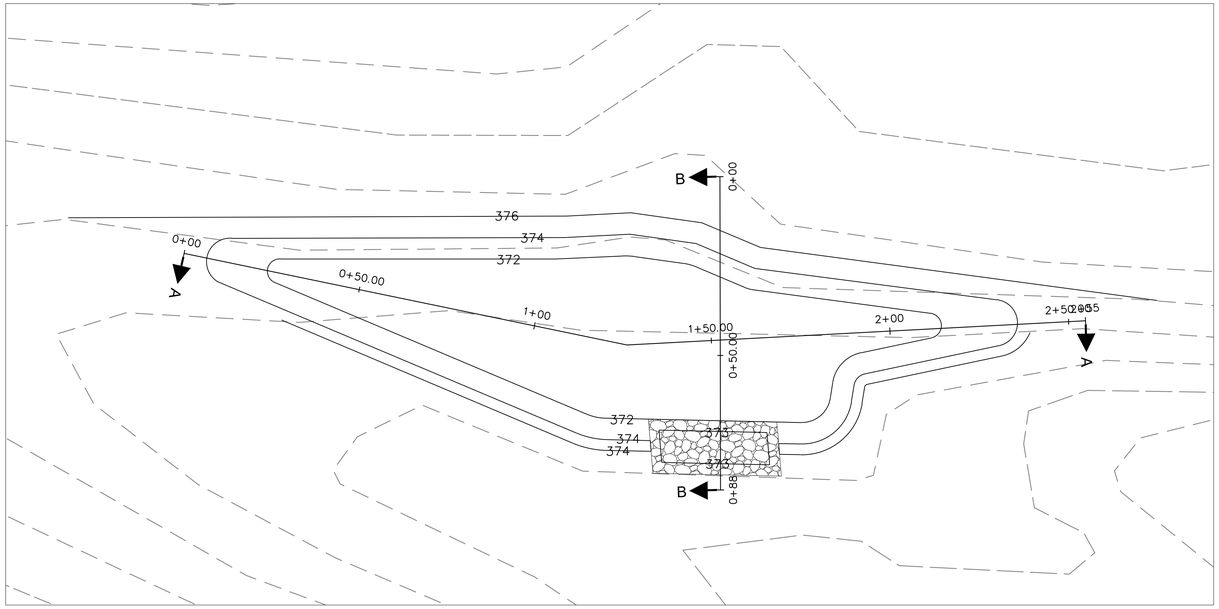
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

STORMWATER MANAGEMENT PLAN

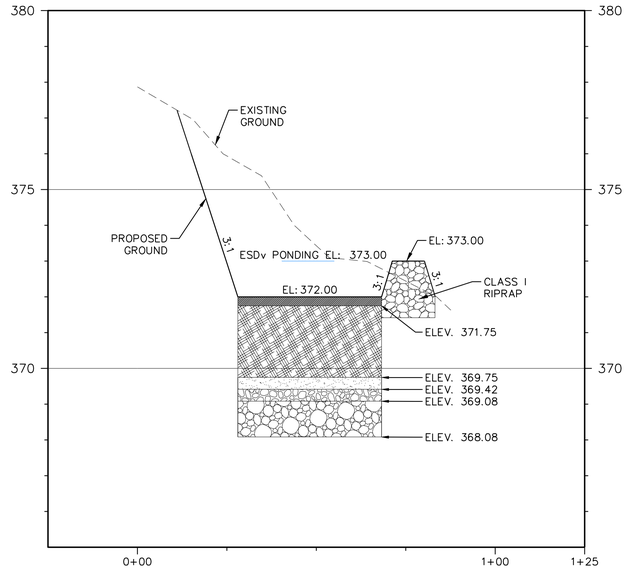
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 52 OF 106

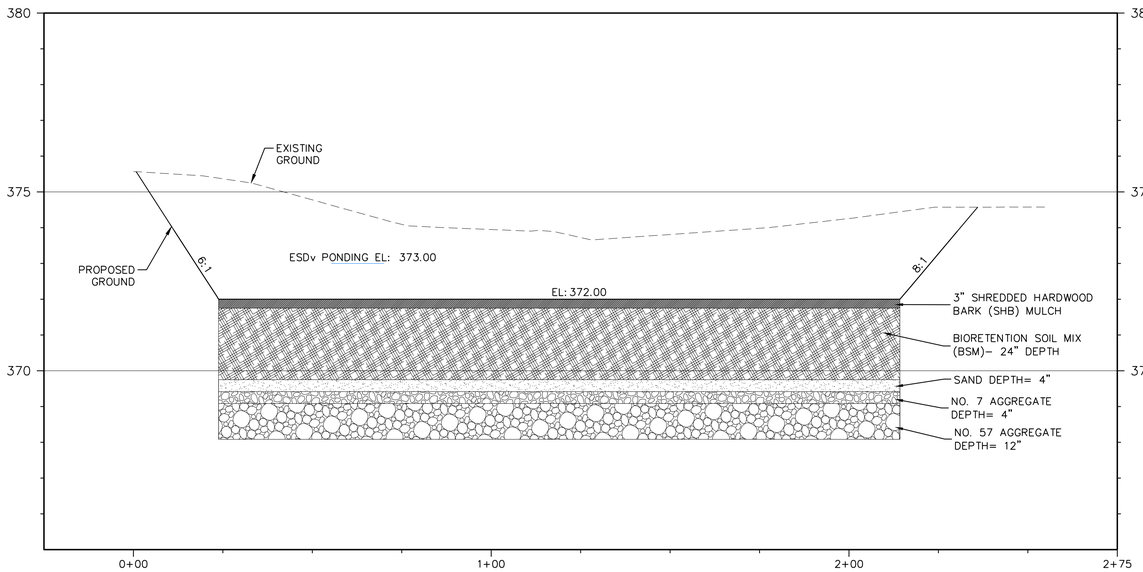


PROPOSED BIORETENTION FACILITY - PLAN VIEW
SCALE: 1"=20'

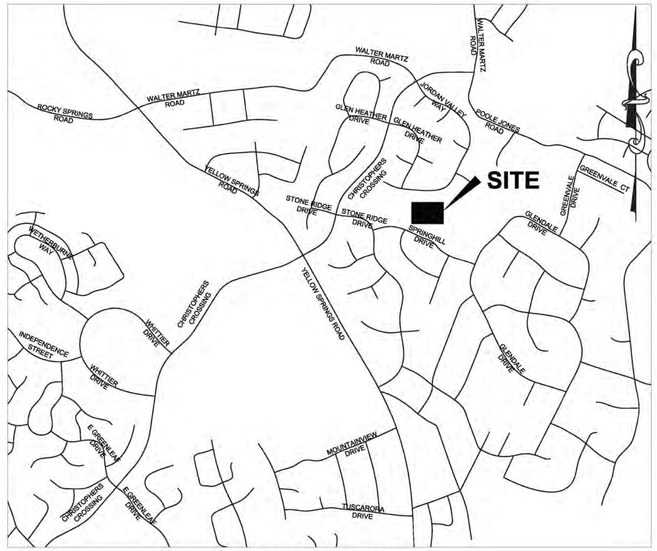
0 10' 20' 40'
SCALE: 1"=20'



SW-3 B-B
SCALE: HORZ 1"=20'
VERT 1"=2'



SW-3 A-A
SCALE: HORZ 1"=20'
VERT 1"=2'



PROJECT KEY MAP
SCALE: 1"=1000'

SW-3

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

STORMWATER MANAGEMENT PLAN

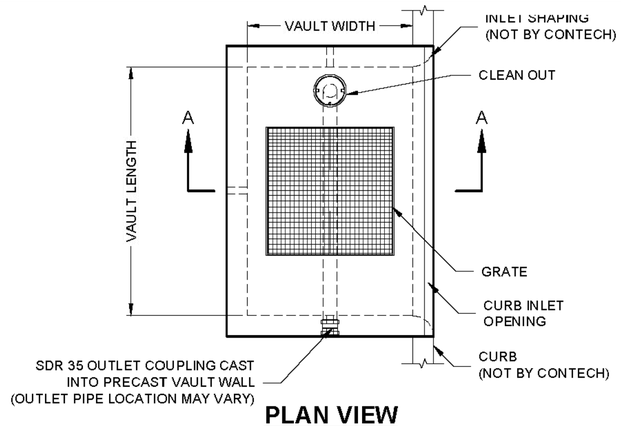
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 53 OF 106

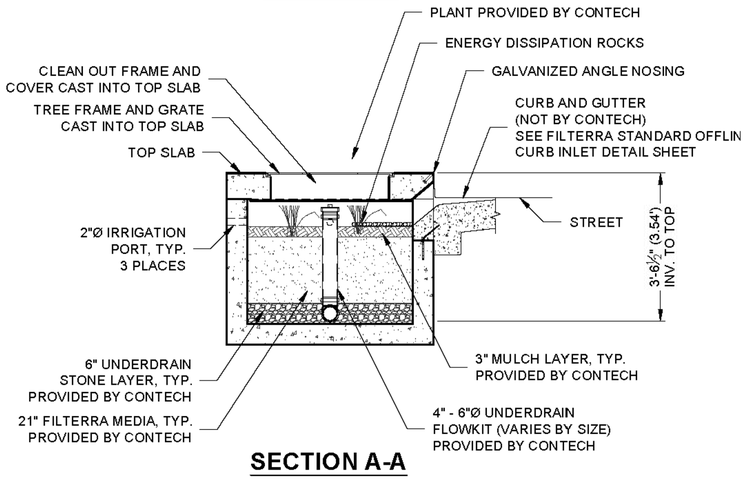
REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM



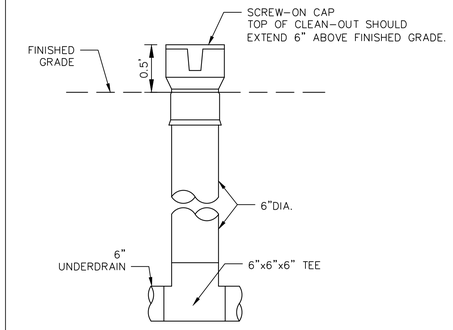
PLAN VIEW



SECTION A-A

PROPOSED FILTERRA PLANTER BOX DETAIL
SCALE: N.T.S.

FILTERRA PLANTER BOX SCHEDULE				
STATION	OFFSET (FT)	BOX SIZE	BYPASS INLET	REMARKS
85+70	27.9 LT	6' x 12'	2-2	
91+55	27.8 LT	6' x 10'	2-7	
100+56	36.3 LT	6' x 10'	4-1	
108+96	28.0 LT	6' x 8'	5-1	
108+97	28.0 RT	6' x 6'	5-2	
111+77	27.9 LT	6' x 8'	5-6	



EACH OBSERVATION WELL SHALL HAVE THE FOLLOWING:

1. FOR AN UNDERGROUND FLUSH MOUNTED OBSERVATION WELL PROVIDE A TUBE MADE OF PVC OR EQUAL, WITH AND INSIDE DIAMETER OF AT LEAST 8 INCHES.
2. THE TUBE SHALL HAVE A FACTORY ATTACHED CAST IRON OR HIGH IMPACT PLASTIC COLLAR WITH RIBS TO PREVENT ROTATION WHEN REMOVING SCREW TOP LID. THE SCREW TOP LID SHALL BE CAST IRON OR HIGH IMPACT PLASTIC THAT WILL WITHSTAND ULTRA-VIOLET RAYS. THE LID SHALL BE VENTED. THE LID SHALL BE MARKED WITH BOTH OBSERVATION WELL/CLEANOUT' AND THE DEPTH TO THE INVERT. MARKINGS SHALL BE VISABLE UPON COMPLETION OF THE PROJECT AND MUST BE RESISTANT TO WEATHERING.

OBSERVATION WELL/CLEANOUT AND CAP DETAIL
NTS

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

SW-4

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

STORMWATER MANAGEMENT DETAILS

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 54 OF 106

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING & MULCHING

A. SEEDING

1. SPECIFICATIONS

a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.

b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.

c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.

d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

2. APPLICATION

a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.

II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.

b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).

i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (POTASSIUM), 200 POUNDS PER ACRE.

II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.

III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

B. MULCHING

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.

b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

III. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.

IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.

v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.

2. APPLICATION

a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.

c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

3. ANCHORING

A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:

i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.

II. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

III. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRATACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.

IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT STABILIZATION

a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

i. SOIL PH BETWEEN 6.0 AND 7.0.

II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.

IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

b. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

c. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.

d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. TOPSOILING

1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.

3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.

c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:

a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.

b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

6. TOPSOIL APPLICATION

a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.

b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING

AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.

2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.

3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

FREDERICK COUNTY STANDARD SEDIMENT & EROSION CONTROL NOTES

1. ALL EROSION/SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AS APPROVED BY THE COUNTY.

2. ALL DISTURBED AREAS NOT UNDER ACTIVE GRADING TO BE SEEDED WITHIN 7 DAYS OF INITIAL GRADING. FOR TEMPORARY SEEDING SPECIFICATIONS SEE SECTION B1, "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" PUBLISHED JOINTLY BY WATER MANAGEMENT ADMINISTRATION, SOIL CONSERVATION SERVICE AND STATE SOIL CONSERVATION COMMITTEE.

3. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AT THE INITIATION OF GRADING.

4. ALL STORM DRAIN AND SANITARY SEWER LINES NOT IN PAVED AREAS AND NOT SUBJECT TO ACTIVE GRADING ARE TO BE MULCHED & SEEDED WITHIN 7 DAYS OF INITIAL BACKFILL.

5. ELECTRIC POWER, TELEPHONE AND GAS LINES NOT IN ACTIVE GRADING AREAS ARE TO BE COMPACTED, SEEDED AND MULCHED WITHIN 7 DAYS AFTER INITIAL BACKFILL.

6. ALL EARTH BERMS AND SEDIMENT DAMS ARE TO BE MULCHED AND SEEDED (SEE SECTION B OF ABOVE REFERENCE) WITHIN 7 DAYS AFTER GRADING. ALL SOIL STOCKPILES ARE TO BE MULCHED AND SEEDED WITHIN 7 DAYS.

7. DURING CONSTRUCTION, ALL SEDIMENT CONTROL STRUCTURES WILL BE INSPECTED AFTER EACH RAINFALL AND REPAIRED IF NECESSARY. SEDIMENT TO BE REMOVED TO A SUITABLE DISPOSAL AREA AND STABILIZED WITH PERMANENT VEGETATIVE COVER. (SEE SECTION B OF "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" PUBLISHED JOINTLY BY WATER MANAGEMENT ADMINISTRATION, SOIL CONSERVATION SERVICE, AND STATE SOIL CONSERVATION COMMITTEE.).

8. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SEDIMENT EROSION CONTROL MEASURES UNTIL DISTURBED AREAS ARE STABILIZED.

9. AFTER FINE GRADING, ALL DISTURBED AREAS ARE TO BE PERMANENTLY MULCHED AND SEEDED (SEE SECTION B).

10. NO SLOPE SHALL BE GREATER THAN 2:1.

11. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS WHICH ARE SHOWN ON THE PLAN AND AREA CURRENTLY BEING USED FOR MATERIAL STORAGE OR FOR THOSE AREAS ON WHICH ACTUAL CONSTRUCTION ACTIVITIES ARE CURRENTLY BEING PERFORMED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE THAT STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".

12. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN CONTINUOUS COMPLIANCE WITH THE LATEST VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

13. ALL UTILITIES, SUCH AS; STORM DRAIN, PUBLIC WATER, SANITARY SEWER, ELECTRIC POWER, TELEPHONE, CABLE AND GAS LINES, THAT ARE NOT IN PAVED AREAS AND ARE NOT UNDERGOING ACTIVE GRADING SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 3 DAYS OF INITIAL DISTURBANCE.

14. THE OWNER DEVELOPER OR THEIR DESIGNATE IS RESPONSIBLE FOR CONDUCTING ROUTINE MAINTENANCE. THE SITE AND CONTROLS SHOULD BE INSPECTED WEEKLY AND THE NEXT DAY AFTER EACH RAIN EVENT**. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN A SUITABLE AREA AND SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED.

**ANY PROJECT THAT HAS A STATE ISSUED N.O.I. PERMIT DOCUMENT EACH INSPECTION AND MAINTAIN AN INSPECTION LOG (PLEASE SEE NOI FOR DETAILS).

NOTES FOR UTILITY WORK

1. DISTURBANCE OUTSIDE THE LIMIT OF DISTURBANCE CANNOT EXCEED 5,000 SQUARE FEET.

2. PLACE ALL EXCAVATED MATERIAL ON THE HIGH SIDE OF THE TRENCH.

3. ONLY COMPLETE AS MUCH WORK AS CAN BE DONE IN ONE DAY SO BACKFILLING, FINAL GRADING, SEEDING, AND MULCHING CAN OCCUR.

4. ANY SEDIMENT CONTROL MEASURES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED THE SAME DAY.

NOTES FOR SECONDARY UTILITY WORK

A. DISTURBANCE FROM SECONDARY UTILITIES SUCH AS PHONE, CABLE, ELECTRIC CABLE, T.V. CABLE, ETC. SHALL BE THE SUBCONTRACTORS RESPONSIBILITY. THE WORK AREA SHALL BE RETURNED TO EXISTING GRADE. SEED AND MULCH THE DISTURBED AREA FROM THE INSTALLATION OR RELOCATION OF ANY LINES OR CONDUIT.

B. THE SUBCONTRACTORS SHALL BE RESPONSIBLE FOR THE REINSTALLATION OR REPAIR OF ANY SILT FENCE OR SEDIMENT CONTROLS MEASURES THAT WERE DAMAGED OR MOVED DURING THE INSTALLATION OR RELOCATION OF ANY LINES OR CONDUIT.

TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3): 6b SEED MIXTURE (FROM TABLE B.1)					FERTILIZER RATE (10-20-20)	LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS		
TEMPORARY	ANNUAL RYEGRASS	40	3/1-5/31 8/15-10/15	0.5"	4.36 LB/AC.	2 TONS/AC
TEMPORARY	WHEAT	120	3/1-5/31 8/15-10/15	1.0"	4.36 LB/AC	2 TONS/AC

PERMANENT SEEDING SUMMARY

NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	N	P_2O_5	K_2O	LIME RATE
3	SHEEP FESCUE REDTOP KOREAN LESPEDEZA	20 1 10	3/1-5/315-10/15	¼"-1/4"	45 LB/AC	90 LB/AC	90 LB/AC	2 TONS/AC

ES-1

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

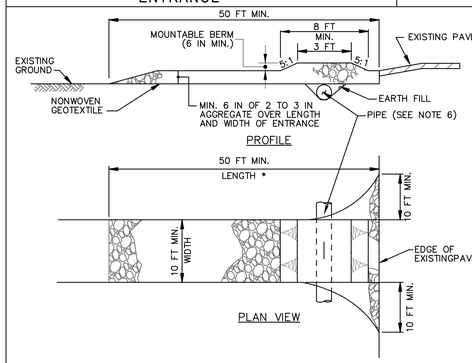
EROSION & SEDIMENT CONTROL NOTES

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 55 OF 106

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

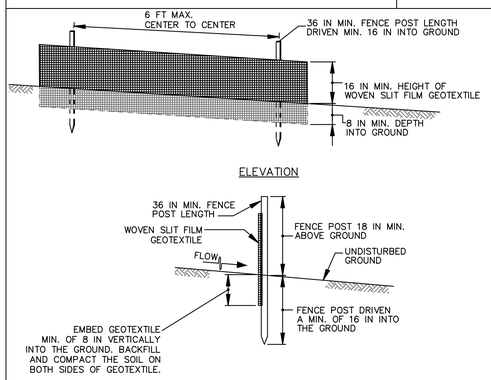
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

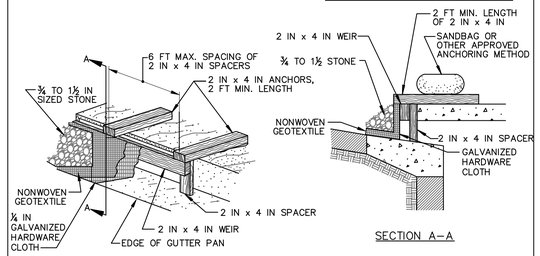
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

MAXIMUM DRAINAGE AREA = ¼ ACRE



CONSTRUCTION SPECIFICATIONS

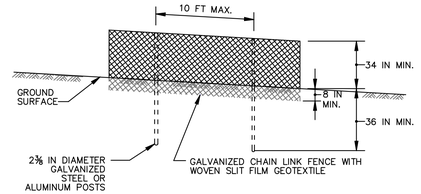
1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON–SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

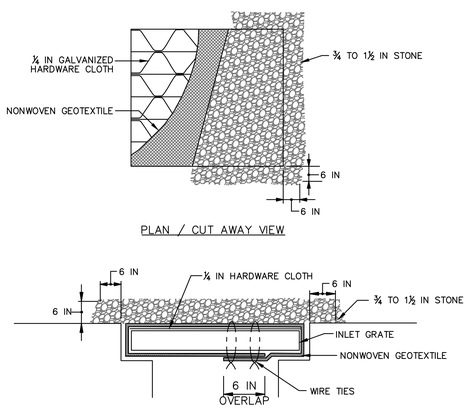
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



CONSTRUCTION SPECIFICATIONS

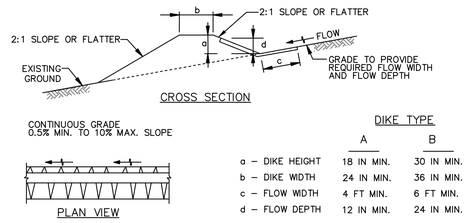
1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-1 EARTH DIKE

STANDARD SYMBOL: A–1 PLACE DESIGNATION (e.g. A–1) ON FLOW CHANNEL SIDE OF DIKE.



DIKE TYPE	A	B
a – DIKE HEIGHT	18 IN MIN.	30 IN MIN.
b – DIKE WIDTH	24 IN MIN.	36 IN MIN.
c – FLOW WIDTH	4 FT MIN.	6 FT MIN.
d – FLOW DEPTH	12 IN MIN.	24 IN MIN.

FLOW CHANNEL STABILIZATION

A–1	SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)
A–2/B–2	SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.
A–3/B–3	4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

CONSTRUCTION SPECIFICATIONS

1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. COMPACT FILL.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.
8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

ES-2

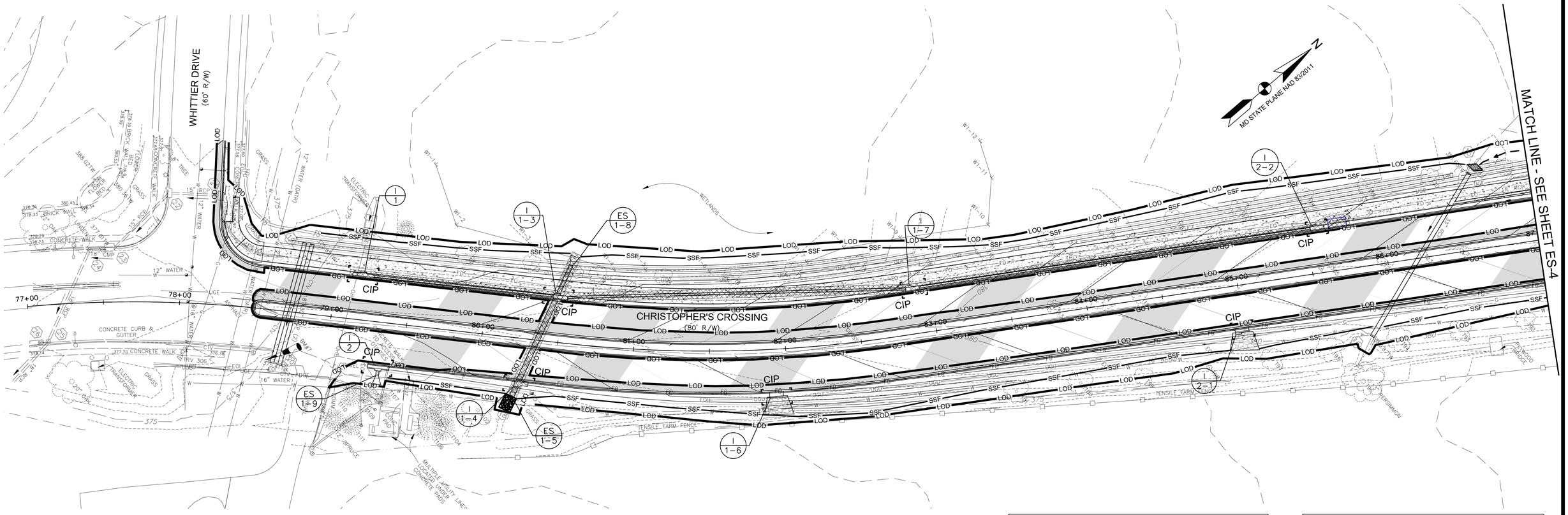
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

EROSION & SEDIMENT CONTROL DETAILS

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 56 OF 106



EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN CONTINUOUS COMPLIANCE WITH THE LATEST VERSION OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
2. ALL UTILITIES, SUCH AS; STORM DRAIN, PUBLIC WATER, SANITARY SEWER, ELECTRIC POWER, TELEPHONE, CABLE AND GAS LINES, THAT ARE NOT IN PAVED AREAS AND ARE NOT UNDERGOING ACTIVE GRADING SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 3 DAYS OF INITIAL DISTURBANCE.
3. THE OWNER/DEVELOPER OR THEIR DESIGNATE IS RESPONSIBLE FOR CONDUCTING ROUTINE INSPECTIONS AND REQUIRED MAINTENANCE. THE SITE AND CONTROLS SHOULD BE INSPECTED WEEKLY AND THE NEXT DAY AFTER EACH RAIN EVENT. ** ANY ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN A SUITABLE AREA AND SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED.

** ANY PROJECT THAT HAS A STATE ISSUED N.O.I. PERMIT MUST DOCUMENT EACH INSPECTION AND MAINTAIN AN INSPECTION LOG.

SEQUENCE OF CONSTRUCTION

1. THE CONTRACTOR SHALL NOTIFY THE FREDERICK SOIL CONSERVATION DISTRICT AT 301-695-2503 EXT. 3, AND THE FREDERICK ENVIRONMENTAL COMPLIANCE DIVISION AT 301-600-3507 AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING. THE CONTRACTOR SHALL PROVIDE THE NAME OF THE PERSON ON THE SITE WHO IS RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES, AND A COPY OF THEIR GREEN CARD TO THE SEDIMENT CONTROL INSPECTOR AT THE PRE-CONSTRUCTION MEETING.
2. THE CONTRACTOR SHALL CALL "MISS UTILITY" (1-800-257-7777) A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/ OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES.
3. THE LIMITS OF DISTURBANCE MUST BE FIELD MARKED PRIOR TO INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITIES.
4. CLEAR AND GRADE FOR INSTALLATION OF PERIMETER SEDIMENT CONTROL DEVICES, ONLY DISTURBING THE AREA NEEDED FOR INSTALLATION OF THE SEDIMENT CONTROL DEVICES.
5. DISTURBED AREAS WITHIN THE PROJECT LIMITS SHALL HAVE EITHER PERMANENT OR TEMPORARY STABILIZATION AT THE END OF EACH WORK DAY.
6. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE CONTRACTOR SHALL COMMENCE WIDENING OF CHRISTOPHERS CROSSING PER THE MOT SOC.
7. INSTALL INLET PROTECTION AND ADDITIONAL SEDIMENT CONTROL MEASURES AS THE PROPOSED STORM DRAIN SYSTEM IS INSTALLED AND MEDIAN WORK IS COMPLETED.
8. ONCE THE UPSTREAM AREAS THAT DRAIN INTO THE SWM FACILITY ARE STABILIZED, THE CONTRACTOR MAY CONSTRUCT THE BIORETENTION FACILITIES. THE CONTRACTOR SHALL TAKE EXTREME CAUTION NOT TO ALLOW DISTURBED AREAS TO DRAIN INTO THE FACILITY.
9. WITH THE SEDIMENT AND EROSION CONTROL INSPECTOR'S APPROVAL, REMOVE THE EROSION AND SEDIMENT CONTROL MEASURES.
10. ANY AREAS DISTURBED DURING THE REMOVAL OF THE ESC MEASURES SHALL BE IMMEDIATELY STABILIZED.

EARTH DIKE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
B-2	86+70 LT	87+00 LT	CHRISTOPHERS CROSSING	30

SUPER SILT FENCE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
SSF	78+85 LT	86+60 LT	CHRISTOPHERS CROSSING	750
SSF	79+50 RT	79+50 RT	CHRISTOPHERS CROSSING	750

INLET PROTECTION				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
CIP	79+15	LT	CHRISTOPHERS CROSSING	1
CIP	8+26	RT	CHRISTOPHERS CROSSING	1
CIP	80+46	LT	CHRISTOPHERS CROSSING	1
CIP	82+90	LT	CHRISTOPHERS CROSSING	1
CIP	85+50	LT	CHRISTOPHERS CROSSING	1
CIP	79+30	RT	CHRISTOPHERS CROSSING	1
CIP	81+80	RT	CHRISTOPHERS CROSSING	1
CIP	85+00	RT	CHRISTOPHERS CROSSING	1

TGOS / TSOS				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
TGOS	86+60	LT	CHRISTOPHERS CROSSING	1

TREE PROTECTION NOTES

1. THE CONTRACTOR SHALL NOT REMOVE OR INTENTIONALLY DAMAGE ANY TREES NOT MARKED FOR REMOVAL.
2. THE CONTRACTOR SHALL AVOID AND MINIMIZE PASSAGE OF HEAVY CONSTRUCTION EQUIPMENT WITHIN THE TREE DRIP LINE.
3. THE CONTRACTOR SHALL FINE GRADE AROUND TREES WITH SMALL EQUIPMENT OR HAND GRADE ONLY.
4. THE CONTRACTOR SHALL INSTALL TREE PROTECTION FENCING AND PLANKING AS REQUIRED BY THE COUNTY INSPECTOR.
5. ALL TREES WITHIN THE LIMIT OF DISTURBANCE NOT DESIGNATED FOR REMOVAL SHALL BE PROTECTED AS PER THE TREE PROTECTION AND PLANNING DETAILS. TREE PLANKING SHALL BE UTILIZED FOR TREES THAT ARE DIRECTLY ADJACENT TO OR HAVE THE POTENTIAL TO BE DAMAGED BY MACHINERY THAT IS IN CLOSE OPERATION. TREE PROTECTION FENCING SHALL BE USED FOR TREES WHERE THERE IS NECESSARY ROOM TO AVOID DURING CONSTRUCTION.

MISS UTILITY
48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net

Know what's **below.** **Call** before you dig.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

LEGEND

LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
SSF	SUPER SILT FENCE
CWD	CLEAR WATER DIVERSION
SAF	SAFETY FENCE (BOF)
	EARTH DIKE
P	PUMP AROUND AND FLEX PIPE
SCE	STABILIZED CONSTRUCTION ENTRANCE
	FILTER BAG
	SANDBAGS
	SAME DAY STABILIZATION AREA
CIP	CURB INLET PROTECTION
AGIP	AT-GRADE INLET PROTECTION
TGOS	TEMPORARY GABION OUTLET STRUCTURE
TSOS	TEMPORARY STONE OUTLET STRUCTURE
	SUMP PIT

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

ES-3

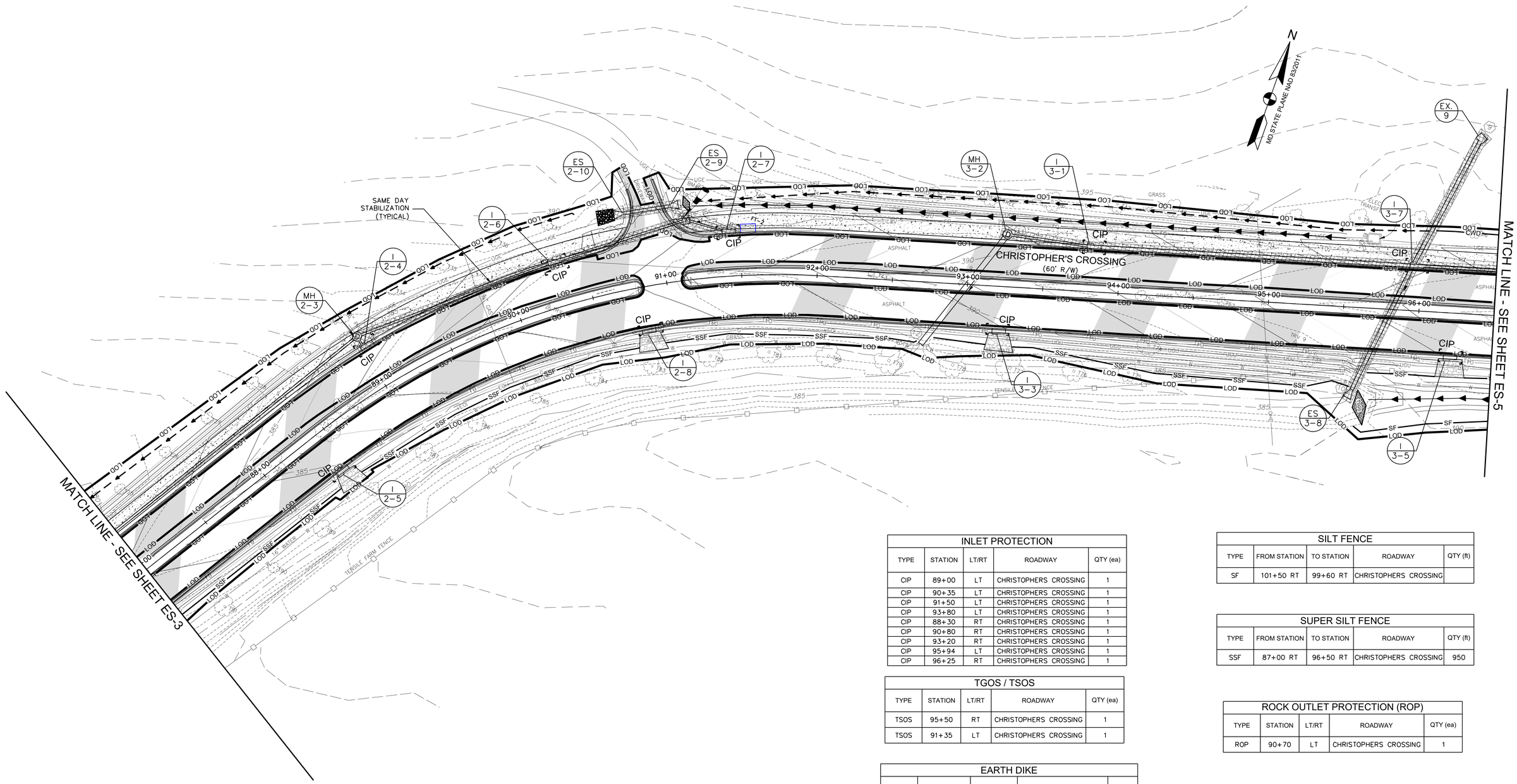
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

EROSION AND SEDIMENT CONTROL PLAN

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 57 OF 106


N
MID STATE PLANE NAD 83/2011
MATCH LINE - SEE SHEET ES-5
MATCH LINE - SEE SHEET ES-3
CHRISTOPHER'S CROSSING
(60' R/W)
SAME DAY STABILIZATION (TYPICAL)
CIP
ES 2-10
ES 2-9
I 2-7
MH 3-2
I 3-1
I 3-7
EX. 9
I 2-6
I 2-4
MH 2-3
I 2-8
I 3-3
ES 3-8
I 3-5
I 2-5
91+00
92+00
93+00
94+00
95+00
96+00
80+00
89+00
88+30
TENSILE FARM FENCE
TF-2
TF-3
TF-4
TF-5
TF-6
TF-7
TF-8
TF-9
TF-10
TF-11
TF-12
TF-13
TF-14
TF-15
TF-16
TF-17
TF-18
TF-19
TF-20
TF-21
TF-22
TF-23
TF-24
TF-25
TF-26
TF-27
TF-28
TF-29
TF-30
TF-31
TF-32
TF-33
TF-34
TF-35
TF-36
TF-37
TF-38
TF-39
TF-40
TF-41

TGOS / TSOS				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
TGOS	99+65	RT	CHRISTOPHERS CROSSING	1
TSOS	102+50	LT	CHRISTOPHERS CROSSING	1
TSOS	302+35	LT	YELLOW SPRINGS	1

STABILIZED CONSTRUCTION ENTRANCE				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
SCE	302+55	RT	YELLOW SPRINGS	1

ROCK OUTLET PROTECTION (ROP)				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
ROP	302+30	RT	YELLOW SPRINGS	1

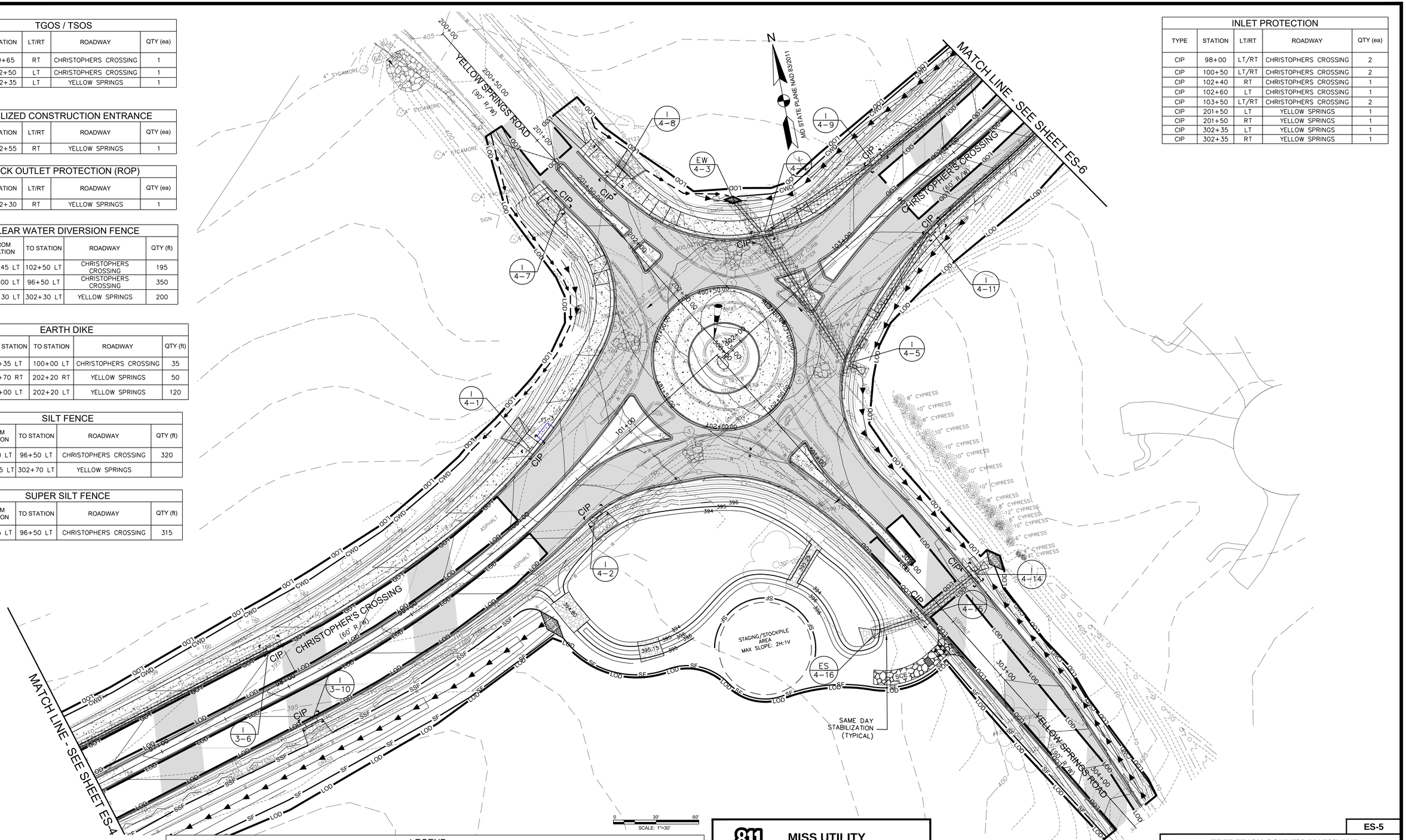
CLEAR WATER DIVERSION FENCE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
CWD	104+45 LT	102+50 LT	CHRISTOPHERS CROSSING	195
CWD	100+00 LT	96+50 LT	CHRISTOPHERS CROSSING	350
CWD	304+30 LT	302+30 LT	YELLOW SPRINGS	200

EARTH DIKE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
B-2	101+35 LT	100+00 LT	CHRISTOPHERS CROSSING	35
A-2	201+70 RT	202+20 RT	YELLOW SPRINGS	50
A-2	201+00 LT	202+20 LT	YELLOW SPRINGS	120

SILT FENCE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
SF	99+70 LT	96+50 LT	CHRISTOPHERS CROSSING	320
SF	304+35 LT	302+70 LT	YELLOW SPRINGS	

SUPER SILT FENCE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
SSF	99+65 LT	96+50 LT	CHRISTOPHERS CROSSING	315

INLET PROTECTION				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
CIP	98+00	LT/RT	CHRISTOPHERS CROSSING	2
CIP	100+50	LT/RT	CHRISTOPHERS CROSSING	2
CIP	102+40	RT	CHRISTOPHERS CROSSING	1
CIP	102+60	LT	CHRISTOPHERS CROSSING	1
CIP	103+50	LT/RT	CHRISTOPHERS CROSSING	2
CIP	201+50	LT	YELLOW SPRINGS	1
CIP	201+50	RT	YELLOW SPRINGS	1
CIP	302+35	LT	YELLOW SPRINGS	1
CIP	302+35	RT	YELLOW SPRINGS	1



STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

LEGEND

LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
SSF	SUPER SILT FENCE
CWD	CLEAR WATER DIVERSION
SAF	SAFETY FENCE (BOF)
	EARTH DIKE
P	PUMP AROUND AND FLEX PIPE
SCE	STABILIZED CONSTRUCTION ENTRANCE
	FILTER BAG
	SANDBAGS
	SAME DAY STABILIZATION AREA
CIP	CURB INLET PROTECTION
AGIP	AT-GRADE INLET PROTECTION
TGOS	TEMPORARY GABION OUTLET STRUCTURE
TSOS	TEMPORARY STONE OUTLET STRUCTURE
	SUMP PIT

811 Know what's below. Call before you dig.

MISS UTILITY
48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 252-8552
EMAIL: AMT1@AMTENGINEERING.COM

ES-5

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

EROSION AND SEDIMENT CONTROL PLAN

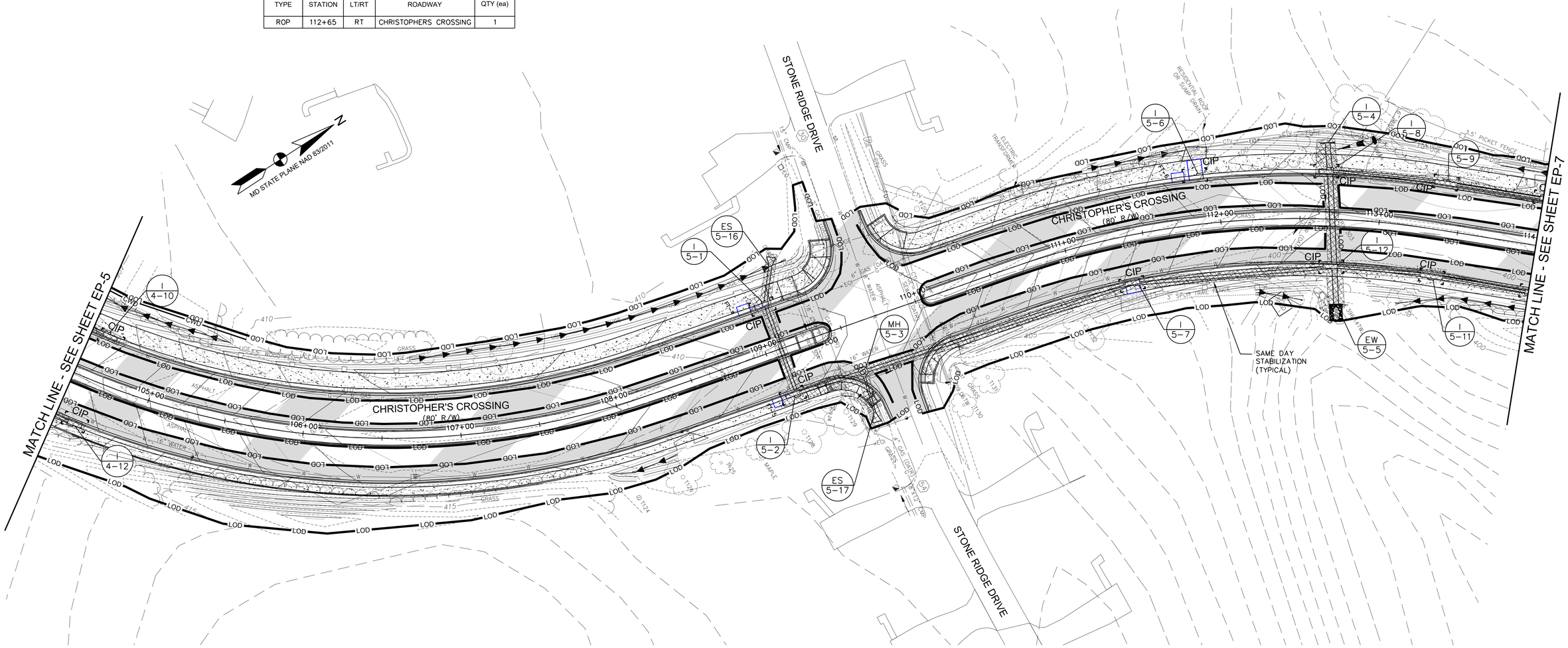
DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 59 OF 106

INLET PROTECTION				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
CIP	104+50	LT/RT	CHRISTOPHERS CROSSING	2
CIP	109+10	LT/RT	CHRISTOPHERS CROSSING	2
CIP	111+40	LT/RT	CHRISTOPHERS CROSSING	2
CIP	112+70	LT/RT	CHRISTOPHERS CROSSING	2
CIP	114+00	LT/RT	CHRISTOPHERS CROSSING	2

CLEAR WATER DIVERSION FENCE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
CWD	105+50 LT	104+45 LT	CHRISTOPHERS CROSSING	105

ROCK OUTLET PROTECTION (ROP)				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
ROP	112+65	RT	CHRISTOPHERS CROSSING	1



811 Know what's **below.** **Call** before you dig.

MISS UTILITY
48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

LEGEND

LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
SSF	SUPER SILT FENCE
CWD	CLEAR WATER DIVERSION
SAF	SAFETY FENCE (BOF)
	EARTH DIKE
P	PUMP AROUND AND FLEX PIPE
SCE	STABILIZED CONSTRUCTION ENTRANCE
	FILTER BAG
	SANDBAGS
	SAME DAY STABILIZATION AREA
CIP	CURB INLET PROTECTION
AGIP	AT-GRADE INLET PROTECTION
TGOS	TEMPORARY GABION OUTLET STRUCTURE
TSOS	TEMPORARY STONE OUTLET STRUCTURE
	SUMP PIT

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

ES-6

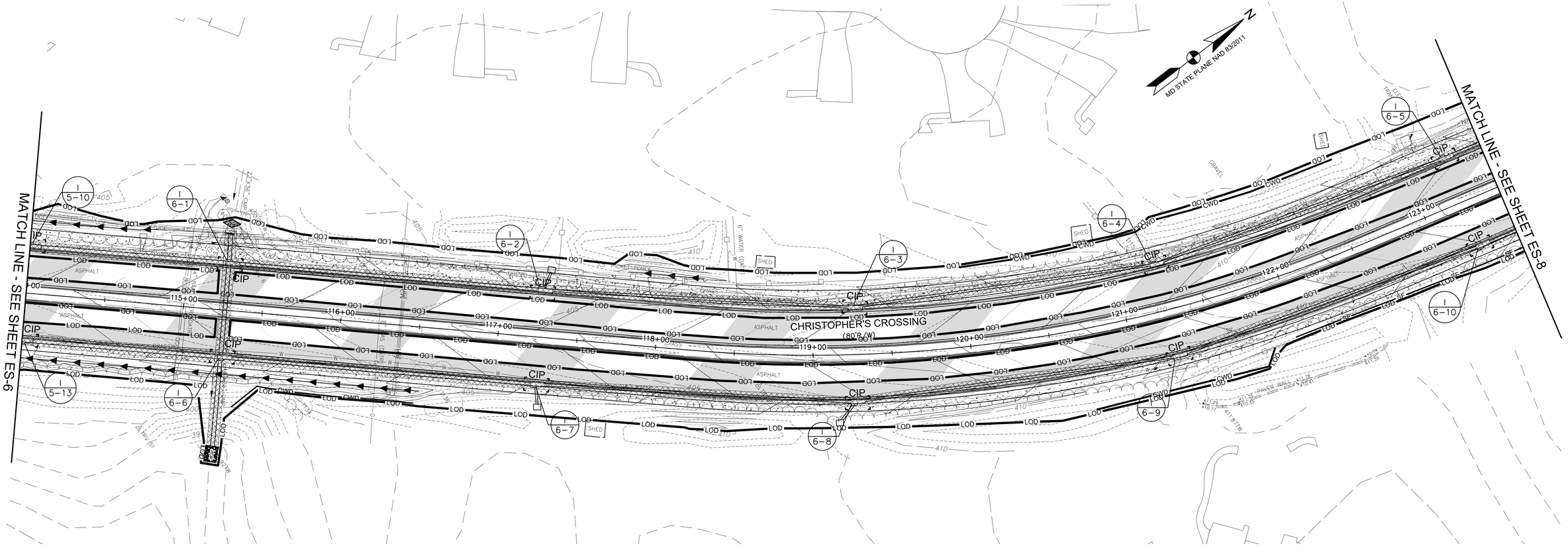
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

EROSION AND SEDIMENT CONTROL PLAN

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 60 OF 106



CURB INLET PROTECTION				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
CIP	115+25	LT/RT	CHRISTOPHERS CROSSING	2
CIP	117+25	LT/RT	CHRISTOPHERS CROSSING	2
CIP	119+25	LT/RT	CHRISTOPHERS CROSSING	2
CIP	121+25	LT/RT	CHRISTOPHERS CROSSING	2
CIP	121+25	LT/RT	CHRISTOPHERS CROSSING	2
CIP	123+25	LT/RT	CHRISTOPHERS CROSSING	2

CLEAR WATER DIVERSION FENCE (CWD)				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
CWD	120+65 LT	122+70 LT	CHRISTOPHERS CROSSING	205
CWD	120+50 RT	121+75 RT	" "	125
CWD	115+35 RT	116+70 RT	" "	135

SILT FENCE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
SF	123+50 RT	121+70 RT	CHRISTOPHERS CROSSING	180

TGOS / TSOS				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
TSOS	115+25	LT	CHRISTOPHERS CROSSING	1

ROCK OUTLET PROTECTION (ROP)				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
ROP	115+25	RT	CHRISTOPHERS CROSSING	1

MISS UTILITY
48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

LEGEND

LOD	LIMITS OF DISTURBANCE
SF	SILT FENCE
SSF	SUPER SILT FENCE
CWD	CLEAR WATER DIVERSION
SAF	SAFETY FENCE (BOF)
	EARTH DIKE
P	PUMP AROUND AND FLEX PIPE
SCE	STABILIZED CONSTRUCTION ENTRANCE
	FILTER BAG
	SANDBAGS
	SAME DAY STABILIZATION AREA
CIP	CURB INLET PROTECTION
AGIP	AT-GRADE INLET PROTECTION
TGOS	TEMPORARY GABION OUTLET STRUCTURE
TSOS	TEMPORARY STONE OUTLET STRUCTURE
	SUMP PIT

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 252-8552
EMAIL: AMT1@AMTENGINEERING.COM

ES-7

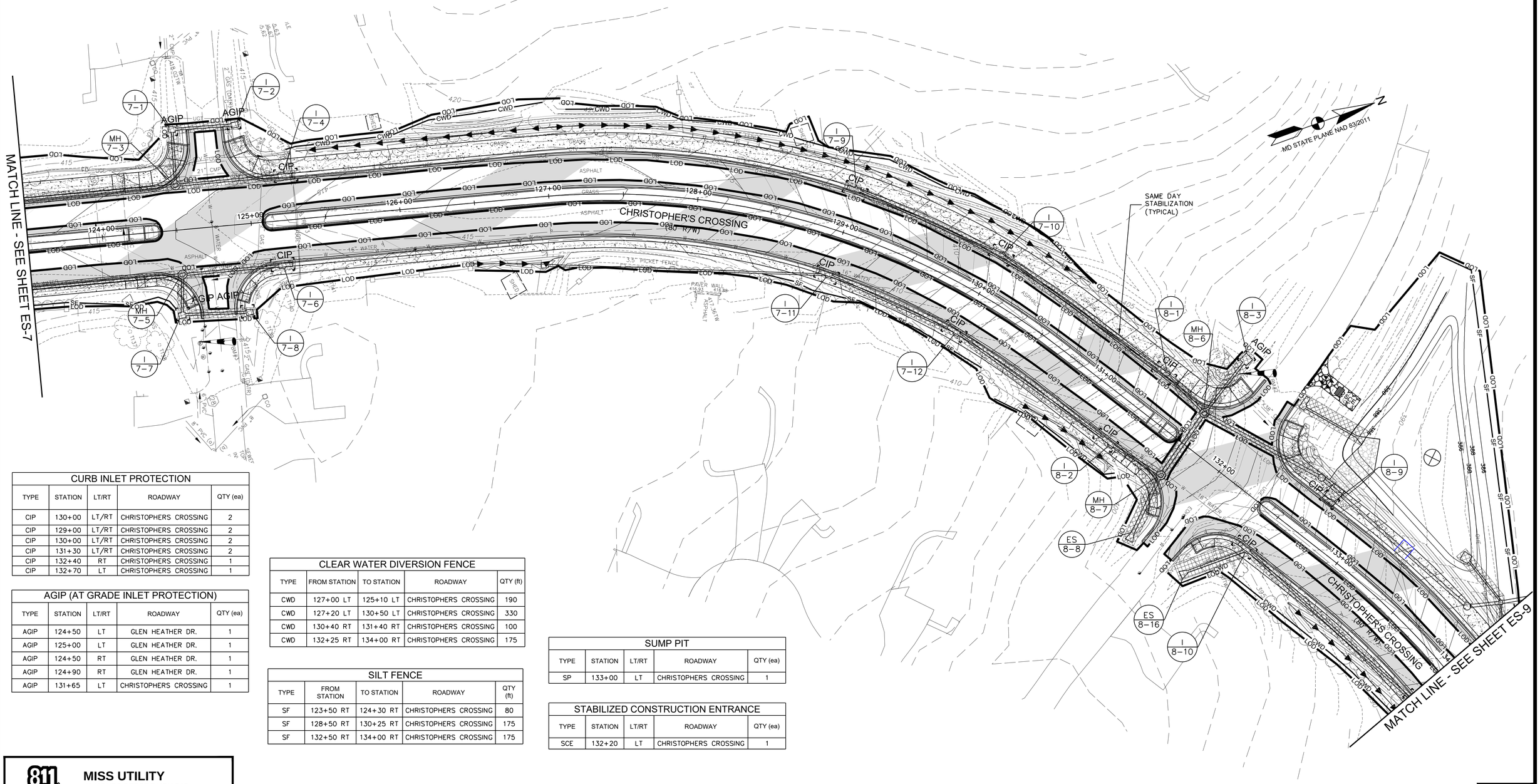
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

EROSION AND SEDIMENT CONTROL PLAN

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 61 OF 106



CURB INLET PROTECTION

TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
CIP	130+00	LT/RT	CHRISTOPHERS CROSSING	2
CIP	129+00	LT/RT	CHRISTOPHERS CROSSING	2
CIP	130+00	LT/RT	CHRISTOPHERS CROSSING	2
CIP	131+30	LT/RT	CHRISTOPHERS CROSSING	2
CIP	132+40	RT	CHRISTOPHERS CROSSING	1
CIP	132+70	LT	CHRISTOPHERS CROSSING	1

AGIP (AT GRADE INLET PROTECTION)

TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
AGIP	124+50	LT	GLEN HEATHER DR.	1
AGIP	125+00	LT	GLEN HEATHER DR.	1
AGIP	124+50	RT	GLEN HEATHER DR.	1
AGIP	124+90	RT	GLEN HEATHER DR.	1
AGIP	131+65	LT	CHRISTOPHERS CROSSING	1

CLEAR WATER DIVERSION FENCE

TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
CWD	127+00 LT	125+10 LT	CHRISTOPHERS CROSSING	190
CWD	127+20 LT	130+50 LT	CHRISTOPHERS CROSSING	330
CWD	130+40 RT	131+40 RT	CHRISTOPHERS CROSSING	100
CWD	132+25 RT	134+00 RT	CHRISTOPHERS CROSSING	175

SILT FENCE

TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
SF	123+50 RT	124+30 RT	CHRISTOPHERS CROSSING	80
SF	128+50 RT	130+25 RT	CHRISTOPHERS CROSSING	175
SF	132+50 RT	134+00 RT	CHRISTOPHERS CROSSING	175

SUMP PIT

TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
SP	133+00	LT	CHRISTOPHERS CROSSING	1

STABILIZED CONSTRUCTION ENTRANCE

TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
SCE	132+20	LT	CHRISTOPHERS CROSSING	1

MISS UTILITY
48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net

Know what's **below.** **Call** before you dig.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- CWD — CLEAR WATER DIVERSION
- SAF — SAFETY FENCE (BOF)
- EARTH DIKE
- PUMP AROUND AND FLEX PIPE
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- FILTER BAG
- SANDBAGS
- SAME DAY STABILIZATION AREA
- CIP — CURB INLET PROTECTION
- AGIP — AT-GRADE INLET PROTECTION
- TGOS — TEMPORARY GABION OUTLET STRUCTURE
- TSOS — TEMPORARY STONE OUTLET STRUCTURE
- SUMP PIT

SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6582
EMAIL: AMT1@AMTENGINEERING.COM

ES-8

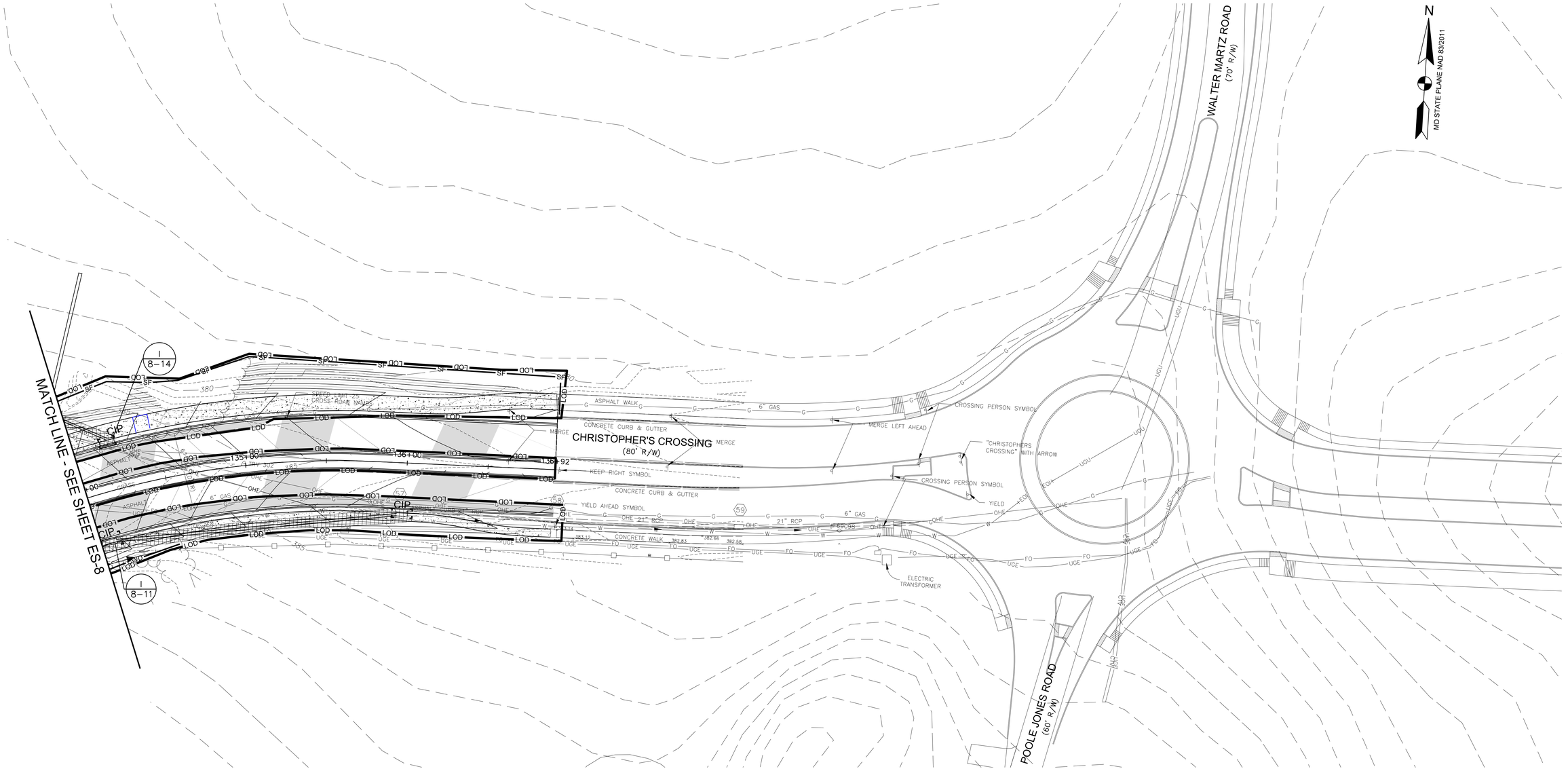
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

EROSION AND SEDIMENT CONTROL PLAN

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 62 OF 106



ROCK OUTLET PROTECTION (ROP)				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
ROP	134+00	LT	CHRISTOPHERS CROSSING	1

SILT FENCE				
TYPE	FROM STATION	TO STATION	ROADWAY	QTY (ft)
SF	136+92 LT	134+00 LT	CHRISTOPHERS CROSSING	300

CURB INLET PROTECTION				
TYPE	STATION	LT/RT	ROADWAY	QTY (ea)
CIP	134+05	RT	CHRISTOPHERS CROSSING	1
CIP	130+20	LT	CHRISTOPHERS CROSSING	1
CIP	136+00	RT	CHRISTOPHERS CROSSING	1

811 Know what's **below.** **Call** before you dig.

MISS UTILITY
48 HOURS BEFORE YOU DIG
CALL "MISS UTILITY" AT 811
OR LOG ON TO www.missutility.net

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a. THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b. SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING

LEGEND

LOD	LIMITS OF DISTURBANCE	EARTH DIKE	CIP — CURB INLET PROTECTION
SF	SILT FENCE	PUMP AROUND AND FLEX PIPE	AGIP — AT-GRADE INLET PROTECTION
SSF	SUPER SILT FENCE	SCE — STABILIZED CONSTRUCTION ENTRANCE	TGOS — TEMPORARY GABION OUTLET STRUCTURE
CWD	CLEAR WATER DIVERSION	FILTER BAG	TSOS — TEMPORARY STONE OUTLET STRUCTURE
SAF	SAFETY FENCE (BOF)	SANDBAGS	SUMP PIT
		SAME DAY STABILIZATION AREA	

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

ES-9

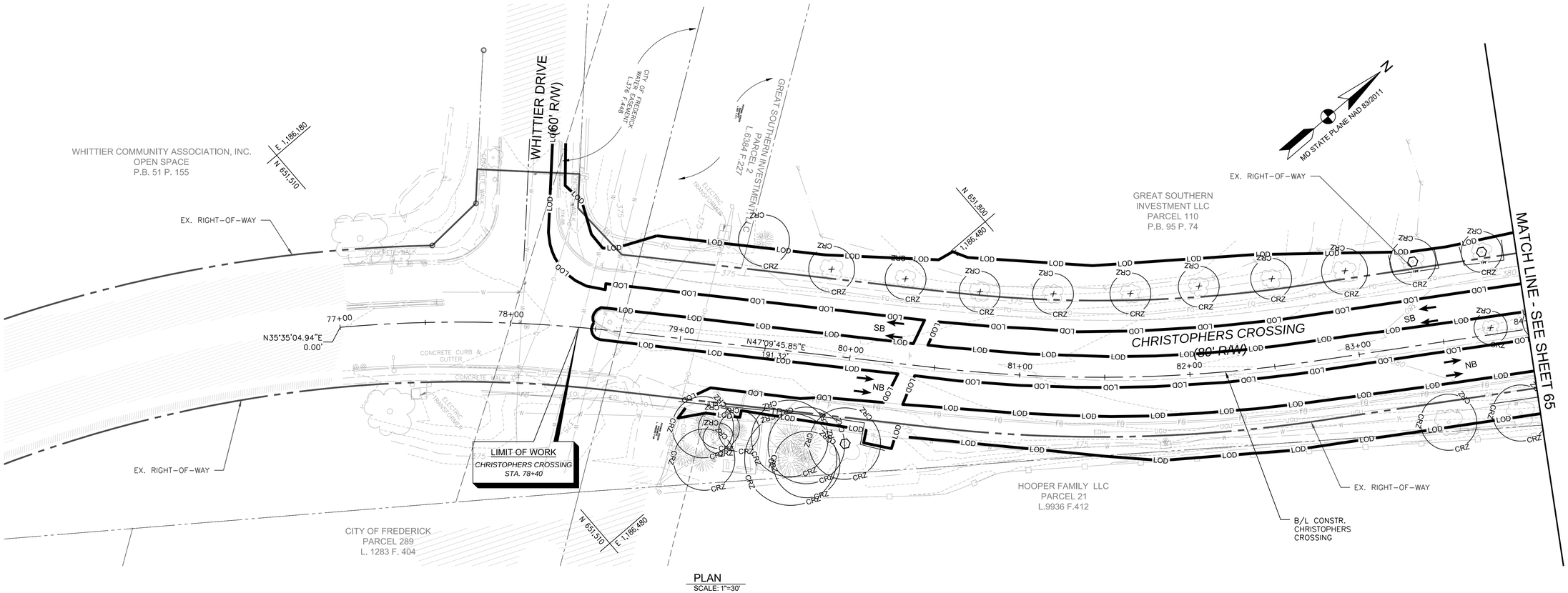
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

EROSION AND SEDIMENT CONTROL PLAN

DATE: SEPTEMBER 2020 SCALE:

AMT FILE NO. 15-0758.007 SHEET NO. 63 OF 106



PLAN
SCALE: 1"=30'

0 30' 60'
SCALE: 1"=30'

LEGEND

CRZ	CRITICAL ROOT ZONE
TPF	TREE PROTECTION FENCE
TP	TREE PROTECTION FENCE 6' CHAINLINK FENCE
RP	ROOT PRUNING
	TRUNK PROTECTION
X	EXISTING TREE TO BE REMOVED
	ROOT AERATION MATTING
	FOREST CLEARING

LF-1

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TREE PROTECTION PLAN

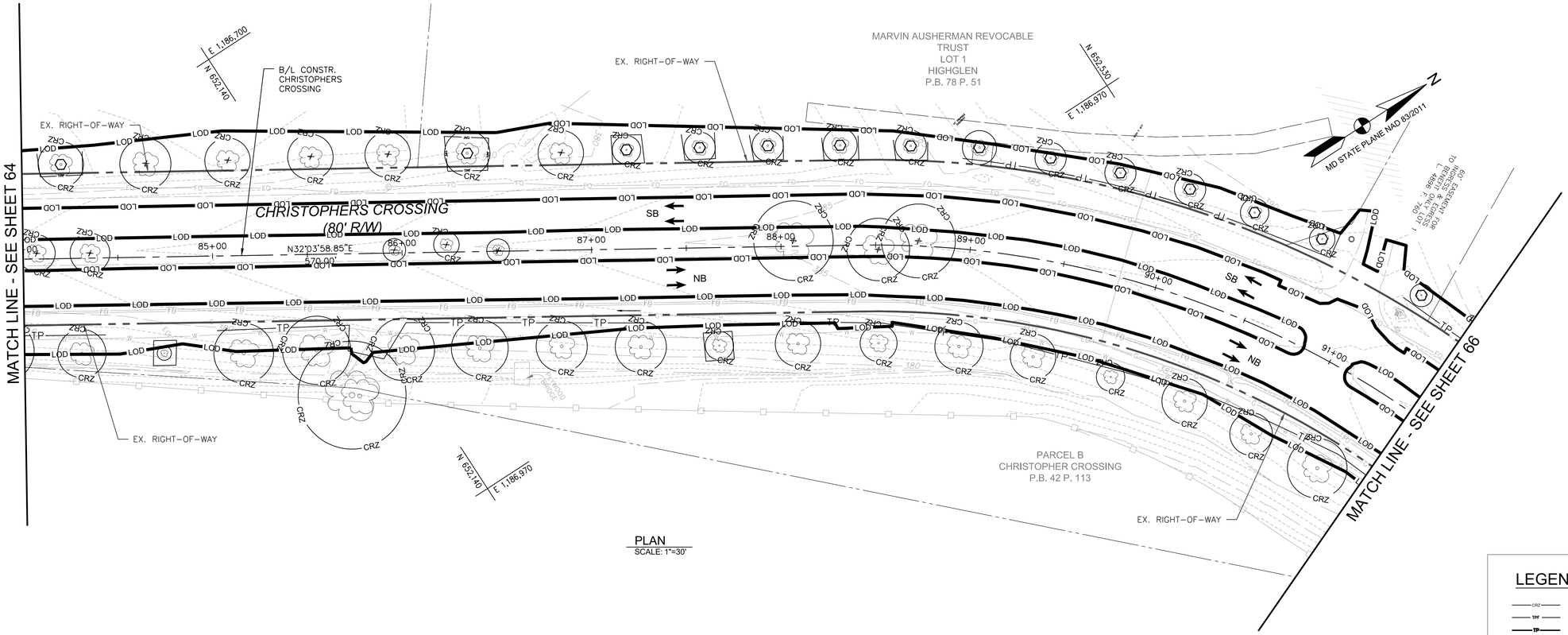
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 64 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM



PLAN
SCALE: 1"=30'

LEGEND

- CRZ — CRITICAL ROOT ZONE
- TPF — TREE PROTECTION FENCE
- TP — TREE PROTECTION FENCE 6' CHAINLINK FENCE
- SF — ROOT PRUNING
- TRUNK PROTECTION
- X — EXISTING TREE TO BE REMOVED
- ROOT AERATION MATTING
- FOREST CLEARING

0 30' 60'
SCALE: 1"=30'

LF-2

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TREE PROTECTION PLAN

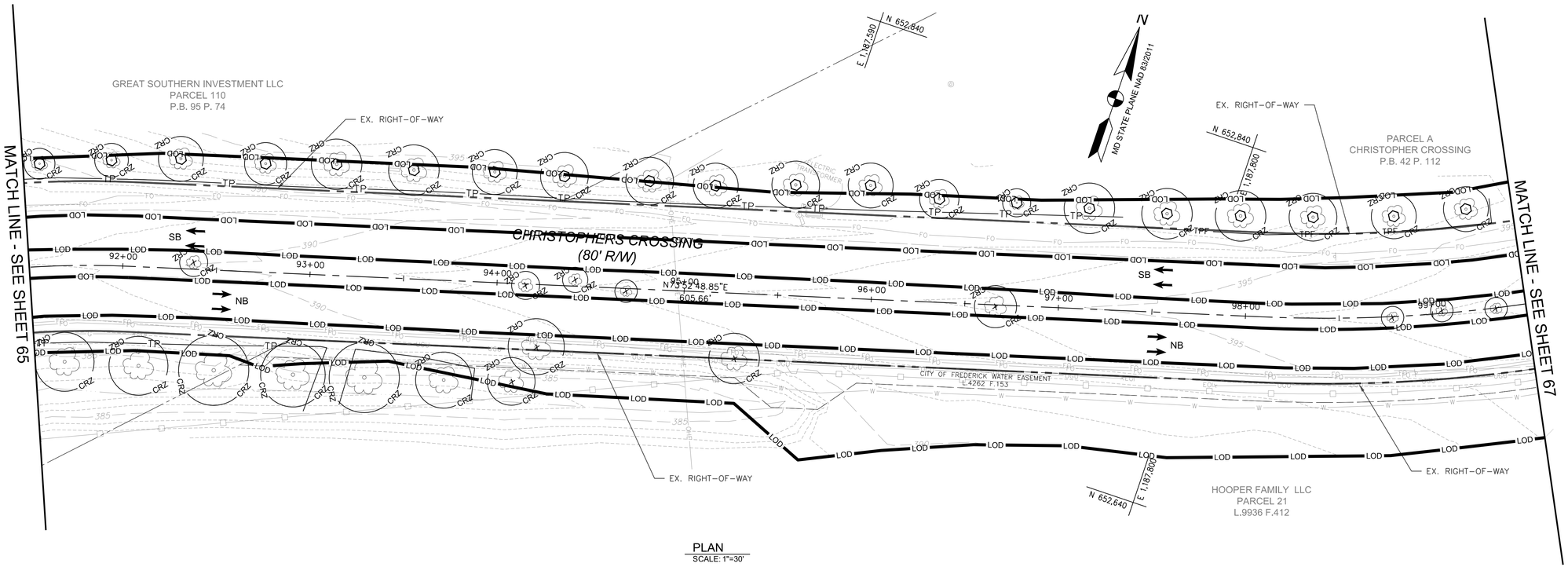
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 65 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM



PLAN
SCALE: 1"=30'

LEGEND

- CRZ — CRITICAL ROOT ZONE
- TPF — TREE PROTECTION FENCE
- TP — TREE PROTECTION FENCE 6' CHAINLINK FENCE
- RP — ROOT PRUNING
- TRUNK PROTECTION
- X — EXISTING TREE TO BE REMOVED
- ROOT AERATION MATTING
- FOREST CLEARING

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

LF-3

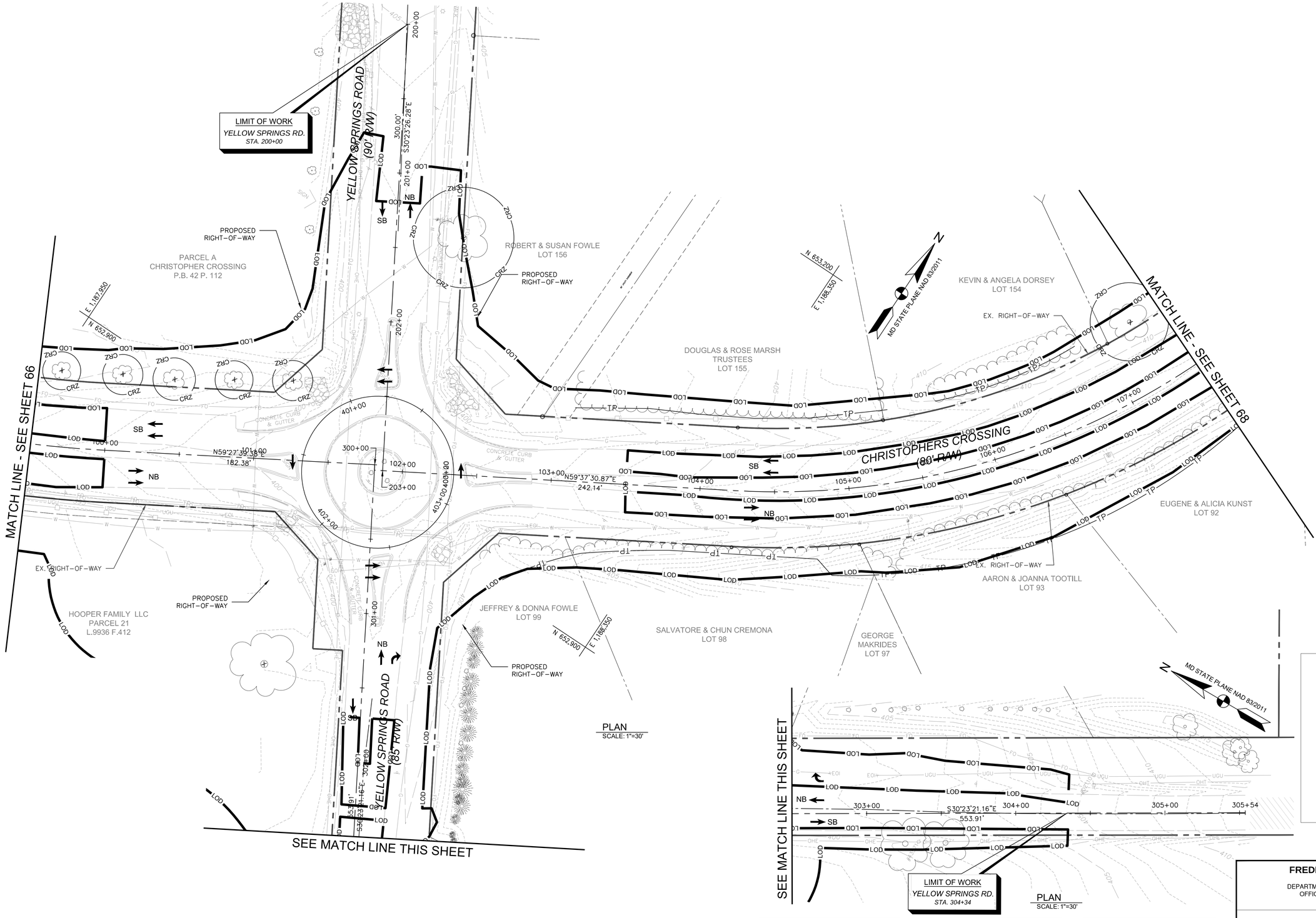
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TREE PROTECTION PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 66 OF 106



LEGEND

- CRZ — CRITICAL ROOT ZONE
- TPF — TREE PROTECTION FENCE
- TP — TREE PROTECTION FENCE
- 6' — 6' CHAINLINK FENCE
- ROOT PRUNING
- TRUNK PROTECTION
- X — EXISTING TREE TO BE REMOVED
- ROOT AERATION MATTING
- FOREST CLEARING

LF-4

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-4552
EMAIL: AMT1@AMTENGINEERING.COM

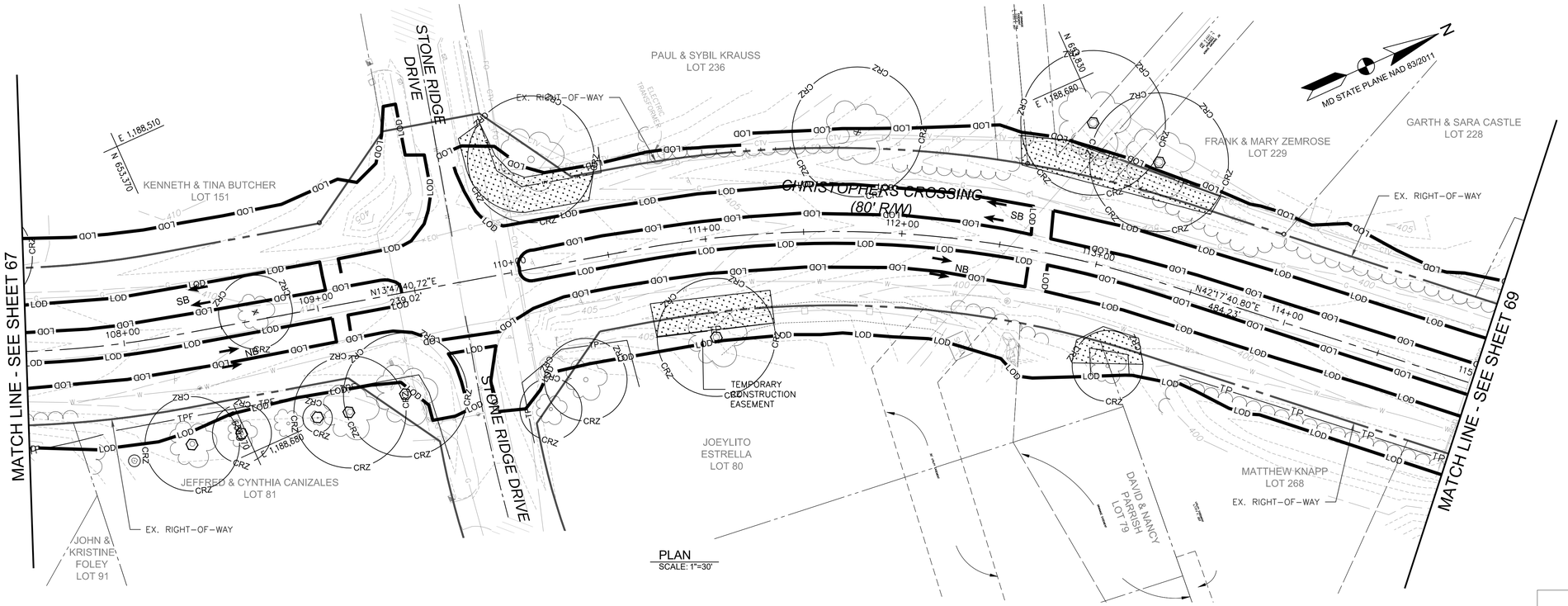
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TREE PROTECTION PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 67 OF 106



PLAN
SCALE: 1"=30'

LEGEND

- CRZ — CRITICAL ROOT ZONE
- TPF — TREE PROTECTION FENCE
- TP — TREE PROTECTION FENCE 6' CHAINLINK FENCE
- RP — ROOT PRUNING
- TRUNK PROTECTION
- X — EXISTING TREE TO BE REMOVED
- ROOT AERATION MATTING
- FOREST CLEARING

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

LF-5

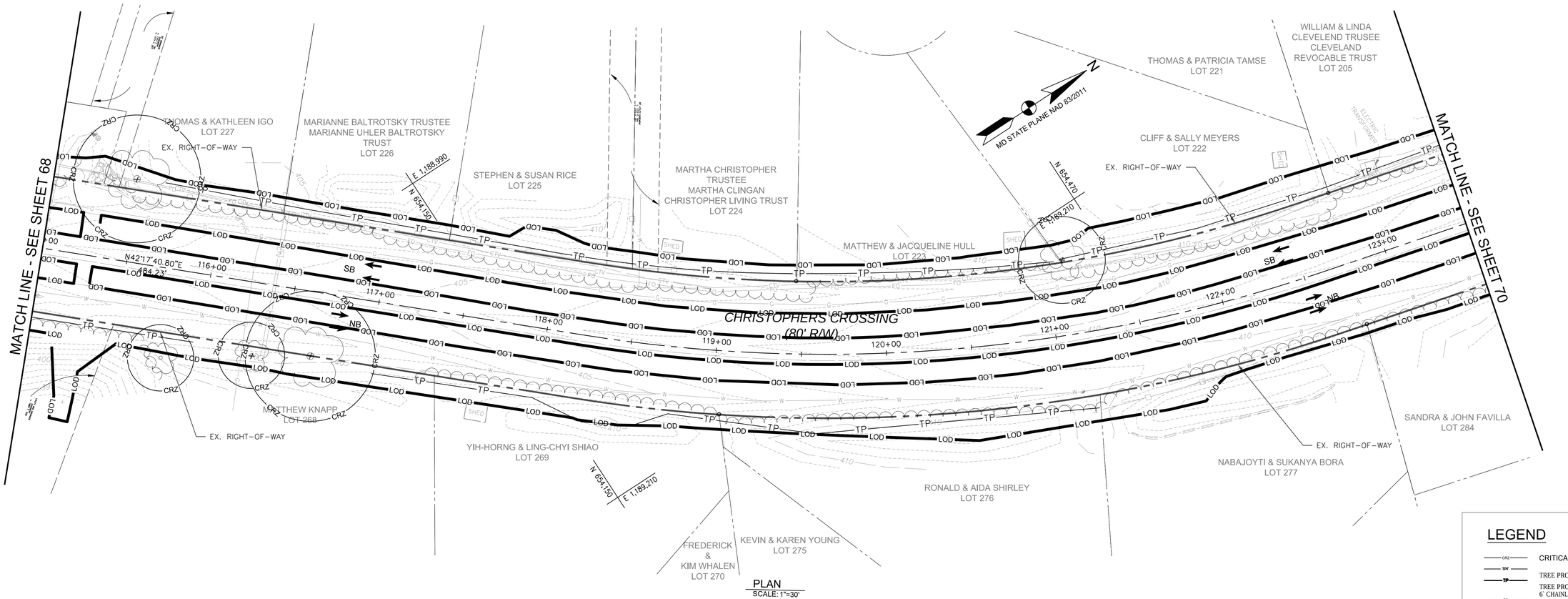
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TREE PROTECTION PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 68 OF 106



PLAN
SCALE: 1"=30'

0 30' 60'
SCALE: 1"=30'

LEGEND

- CRZ — CRITICAL ROOT ZONE
- TPF — TREE PROTECTION FENCE
- TP — TREE PROTECTION FENCE
- 6' CHAINLINK FENCE
- RP — ROOT PRUNING
- TRUNK PROTECTION
- X — EXISTING TREE TO BE REMOVED
- ROOT AERATION MATTING
- FOREST CLEARING

LF-6

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TREE PROTECTION PLAN

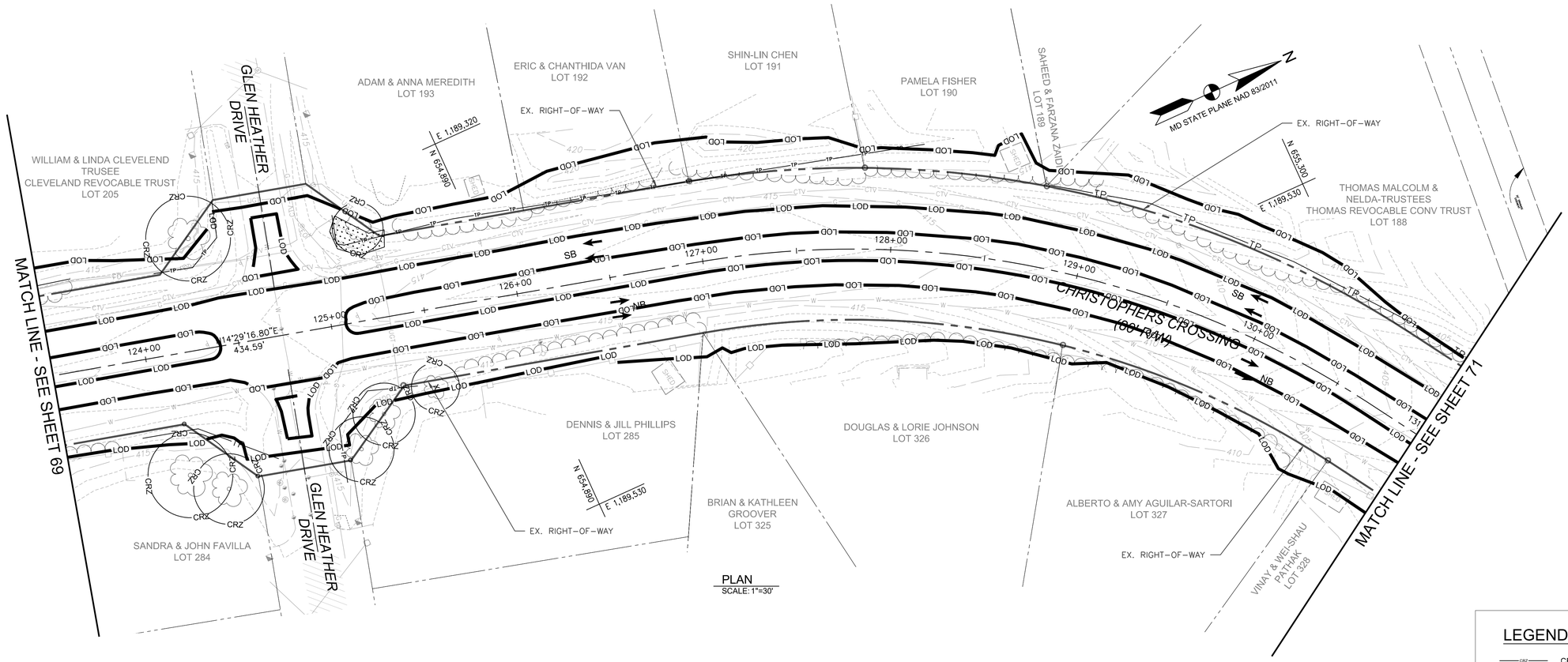
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 69 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM



LEGEND

- CRZ — CRITICAL ROOT ZONE
- TPF — TREE PROTECTION FENCE
- TP — TREE PROTECTION FENCE 6' CHAINLINK FENCE
- RP — ROOT PRUNING
- TRUNK PROTECTION
- X — EXISTING TREE TO BE REMOVED
- ROOT AERATION MATTING
- FOREST CLEARING

LF-7

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TREE PROTECTION PLAN

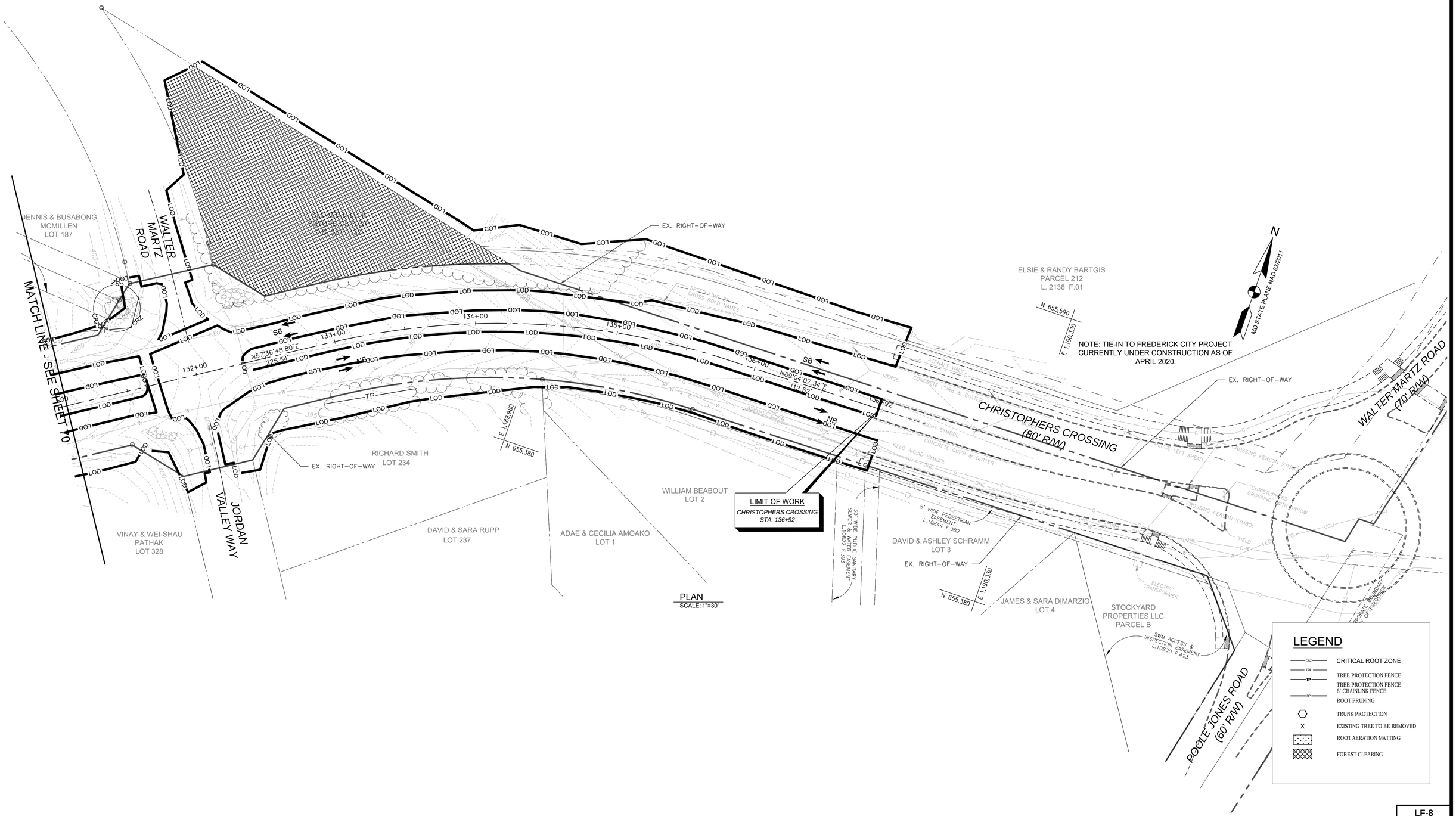
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 70 OF 106

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM



LEGEND

- CRZ — CRITICAL ROOT ZONE
- TPF — TREE PROTECTION FENCE
- TP — TREE PROTECTION FENCE 6' CHAINLINK FENCE
- RP — ROOT PRUNING
- TRUNK PROTECTION
- X — EXISTING TREE TO BE REMOVED
- ROOT AERATION MATTING
- FOREST CLEARING

LF-8

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

TREE PROTECTION PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 71 OF 106

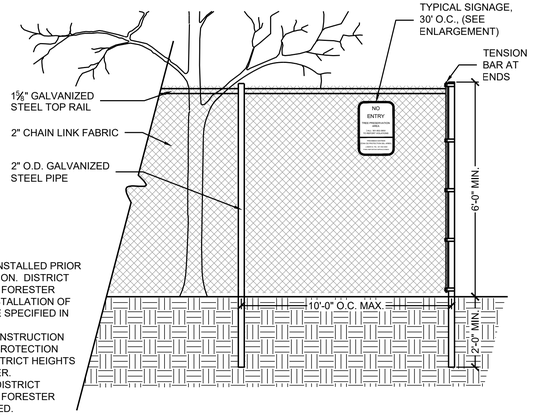
REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM



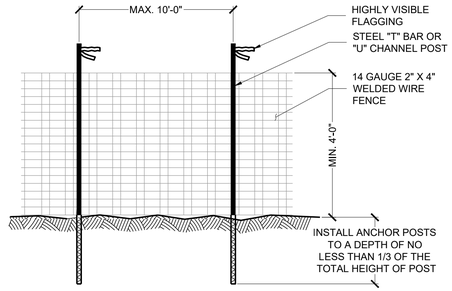
SIGN ENLARGEMENT
2" = 1'-0"



NOTES:
1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK CLEARING, OR DEMOLITION. DISTRICT HEIGHTS CONSTRUCTION MANAGER/URBAN FORESTER SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION OF ANY OTHER TREE PRESERVATION MEASURE SPECIFIED IN PLANS AND SHALL APPROVE LAYOUT.
2. NO PERSONNEL, VEHICLES, EQUIPMENT, CONSTRUCTION MATERIALS, OR DEBRIS ALLOWED IN TREE PROTECTION AREAS WITHOUT WRITTEN CONSENT OF DISTRICT HEIGHTS CONSTRUCTION MANAGER/URBAN FORESTER.
3. REMOVE TPF ONLY WITH APPROVAL FROM DISTRICT HEIGHTS CONSTRUCTION MANAGER/URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
4. SIGN MATERIAL TO BE WEATHER RESISTANT.

1 6` CHAIN LINK TREE PROTECTION FENCE

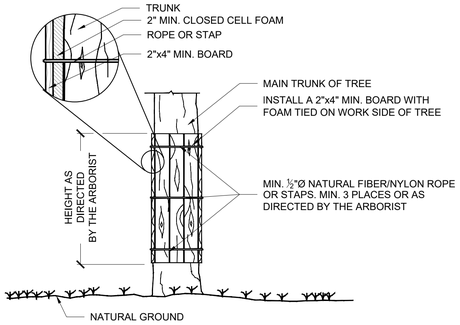
1/2" = 1'-0" 0203-01



NOTES:
1. FOREST PROTECTION DEVICE ONLY
2. SET TREE RETENTION AREA AS PART OF THE PRE-CONSTRUCTION REVIEW PROCESS
3. STAKE & FLAG THE BOUNDARIES OF RETENTION AREA PRIOR TO INSTALLATION OF DEVICE
4. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR THE SIGNS.
5. PROTECTIVE SIGNAGE IS REQUIRED
6. MAINTAIN THE DEVICE THROUGHOUT CONSTRUCTION.
7. ALTERNATIVE TREE PROTECTION DEVICES (IN LIEU OF WIRE MESH): SUPER SILT FENCE (SSF) OR 3 STRANDS OF SMOOTH 12 GAUGE WIRE. ATTACH HIGHLY VISIBLE FLAGGING TO WIRES @ 12" O.C.

2 WIRE MESH TREE PROTECTION FENCING

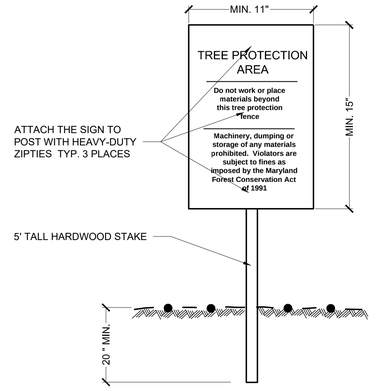
NOT TO SCALE 0203-02



NOTES:
1. COMPLETE ALL INSTALLATION UNDER THE DIRECTION OF A CERTIFIED ARBORIST
2. TIE BOARDS WITH WITH 1/2" DIAMETER ROPE OR STAPS SUFFICIENT TO PROTECT ALL AREAS OF THE TREE EXPOSED TO CONSTRUCTION.
3. PROTECT THE TRUNK FROM DAMAGE DUE TO THE STRAPS WITH ADDITIONAL FOAM AND BOARDS AS NEEDED

3 TRUNK PROTECTION

NOT TO SCALE 0203-03



NOTES:
1. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
2. SIGNS SHOULD BE PROPERLY MAINTAINED.
3. AVOID INJURY TO ROOTS WHEN PLACING POSTS FOR THE SIGNS.

4 TREE PROTECTION SIGNAGE

NOT TO SCALE 0203-04

NOTES:
1. TREE RETENTION AREAS WILL BE SET AS PART OF THE PRE-CONSTRUCTION REVIEW PROCESS.
2. BOUNDARIES OF RETENTION AREAS SHOULD BE STAKED AND FLAGGED PRIOR TO TRENCHING
3. EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
4. ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.
5. TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR OTHER HIGH ORGANIC SOIL.

NOT TO SCALE

5 ROOT PRUNING WITH FENCE

1" = 1'-0" 3293-02

NOTES:
1. MATTING MATERIAL SHALL BE DOUBLE SIDED GEOCOMPOSITE, GEONET CORE WITH NON-WOV
2. RAM SHALL BE INSTALLED BY A CERTIFIED ARBORIST WITH EXPERIENCE INSTALLING THESE SYSTEMS.
3. ANY REQUIRED SITE PREPARATION/GRADING TO BE DONE USING SSAT TO MINIMIZE FOOT DAMAGE.
4. ALL ADJACENT WORK SHALL BE SUPERVISED BY A CERTIFIED ARBORIST.
5. AGGREGATE FILL SHALL BE TAPERED TO MATCH EXISTING GRADE WHOLLY ON RAM MATERIAL.
6. GEOGRID AND RAM PLACEMENTS SHALL BE OVERLAPPED BY 24".
7. TOPSOIL MAY BE PLACED LOOSELY ON SIDE SLOPES AS REQUIRED TO MATCH GRADE. TOPSOIL SHALL NOT BE COMPACTED. RAM MUST EXTEND TO DAYLIGHT AND MAY BE TRIMMED AT FINAL TOE OF SLOPE.
8. SILT FENCE SHALL NOT BE TRENCHED AND MUST BE COORDINATED WITH ARBORIST FOR INSTALLATION.
9. EQUIPMENT/TRAFFIC SHALL NOT TRAVEL DIRECTLY ON RAM/GEOGRID. TRAFFIC MAY TRAVEL ON FINAL FILL ONLY.

6 ROOT AERATION MATTING

NOT TO SCALE 3293-03

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 757-6552
EMAIL: AMT1@AMTENGINEERING.COM

LF-9

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

DETAILS AND NOTES

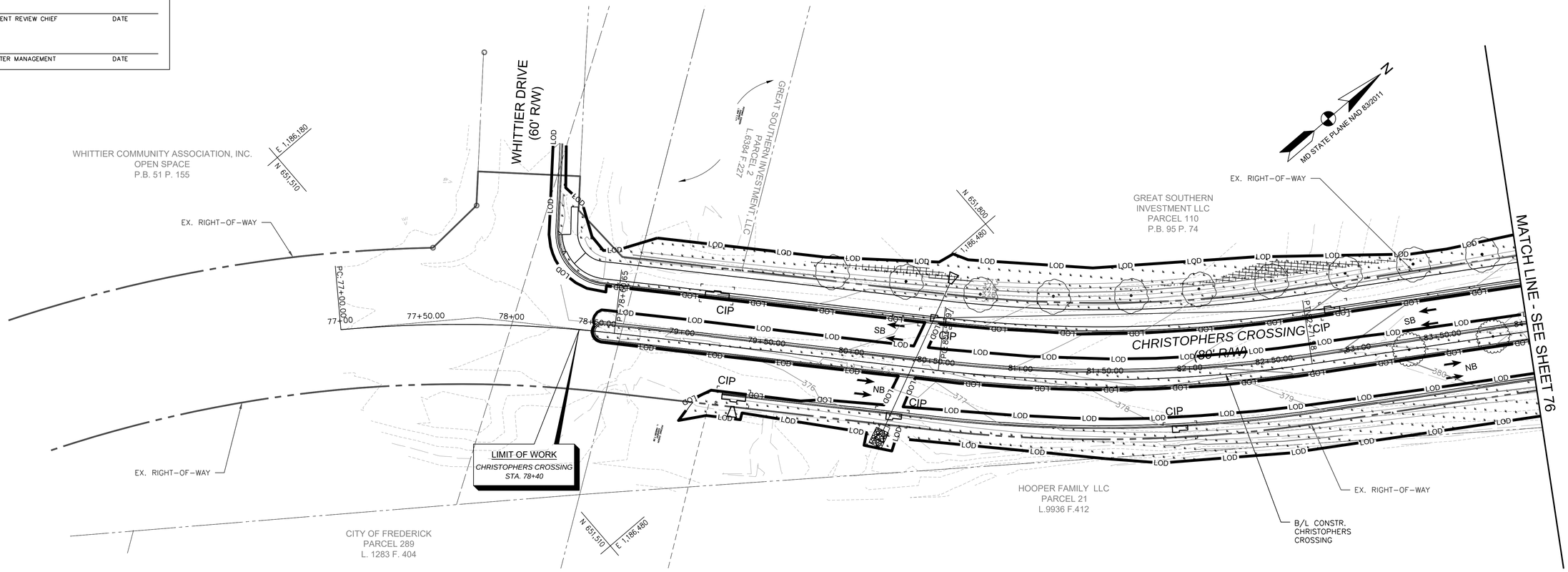
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 72 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLAN
SCALE: 1"=30'

PLANT SCHEDULE LP-1

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	LR	2	LIQUIDAMBAR STYRACIFLUA `HAPDELL` TM / HAPPIDAZE SWEET GUM	B & B	2"CAL	
	PO	10	PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE	B & B	2"CAL	

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	MEA	994 SF	MEADOW MIX / NATIVE MEADOW MIX ERNMX-111	SEED	
	SOD	39,841 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD	

LEGEND

TREES

- AS ACER SACCHARUM / SUGAR MAPLE
- CO CELTIS OCCIDENTALIS / COMMON HACKBERRY
- GD GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
- LR LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
- NS NYSSA SYLVATICA / SOUR GUM
- PO PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
- QA QUERCUS ALBA / WHITE OAK
- QB QUERCUS BICOLOR / SWAMP WHITE OAK
- QR QUERCUS RUBRA / RED OAK

GROUND COVERS

- TURFGRASS SOD

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

LP-1

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

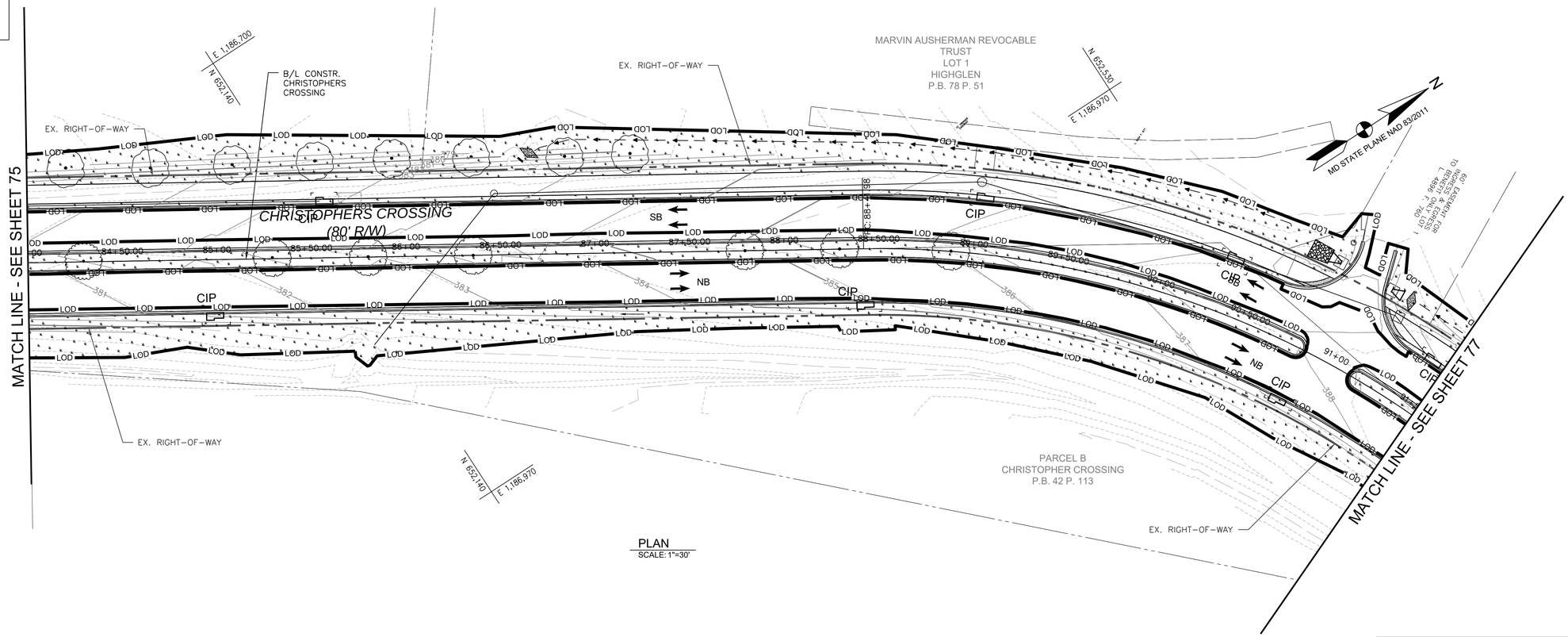
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 75 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLAN
SCALE: 1"=30'

PLANT SCHEDULE LP-2

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	LR	1	LIQUIDAMBAR STYRACIFLUA `HAPDELL` TM / HAPPIDAZE SWEET GUM	B & B	2"CAL	
	NS	6	NYSSA SYLVATICA / SOUR GUM	B & B	2"CAL	
	PO	8	PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE	B & B	2"CAL	

LEGEND

TREES

- AS ACER SACCHARUM / SUGAR MAPLE
- CO CELTIS OCCIDENTALIS / COMMON HACKBERRY
- GD GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
- LR LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
- NS NYSSA SYLVATICA / SOUR GUM
- PO PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
- QA QUERCUS ALBA / WHITE OAK
- QB QUERCUS BICOLOR / SWAMP WHITE OAK
- QR QUERCUS RUBRA / RED OAK

GROUND COVERS

- TURFGRASS SOD

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

LP-2

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

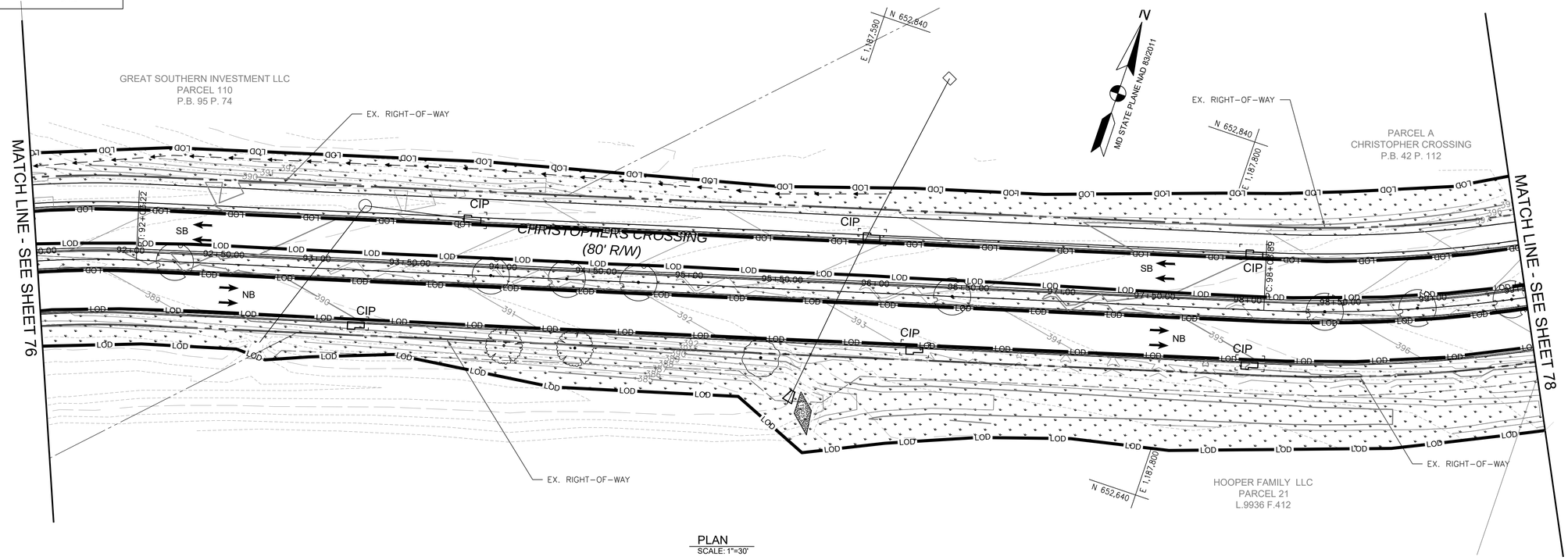
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 76 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLAN
SCALE: 1"=30'

PLANT SCHEDULE LP-3

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	AS	8	ACER SACCHARUM / SUGAR MAPLE	B & B	2"CAL	
	PO	1	PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE	B & B	2"CAL	
	QB	2	QUERCUS BICOLOR / SWAMP WHITE OAK	B & B	2"CAL	

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	SOD	2,462 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD	

LEGEND

TREES

- AS ACER SACCHARUM / SUGAR MAPLE
- CO CELTIS OCCIDENTALIS / COMMON HACKBERRY
- GD GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
- LR LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
- NS NYSSA SYLVATICA / SOUR GUM
- PO PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
- QA QUERCUS ALBA / WHITE OAK
- QB QUERCUS BICOLOR / SWAMP WHITE OAK
- QR QUERCUS RUBRA / RED OAK

GROUND COVERS

- TURFGRASS SOD

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

LP-3

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

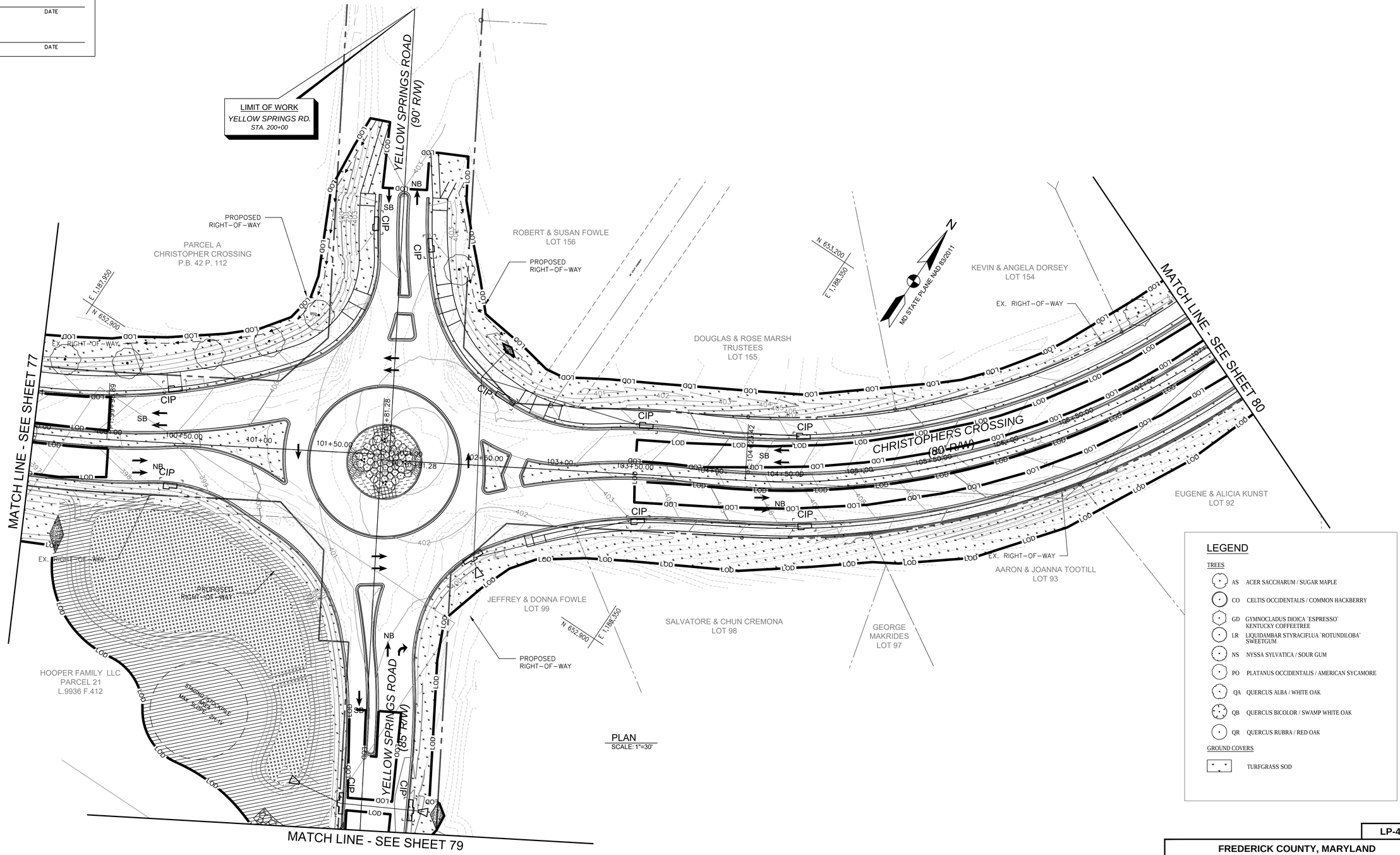
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 77 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLAN
SCALE: 1"=30"

0 30' 60'
SCALE: 1"=30'

LEGEND

TREES

AS	ACER SACCHARUM / SUGAR MAPLE
CO	CELTIS OCCIDENTALIS / COMMON HACKBERRY
GD	GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
LR	LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
NS	NYSSA SYLVATICA / SOUR GUM
PO	PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
QA	QUERCUS ALBA / WHITE OAK
QB	QUERCUS BICOLOR / SWAMP WHITE OAK
QR	QUERCUS RUBRA / RED OAK

GROUND COVERS

TURFGRASS SOD

LP-4

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

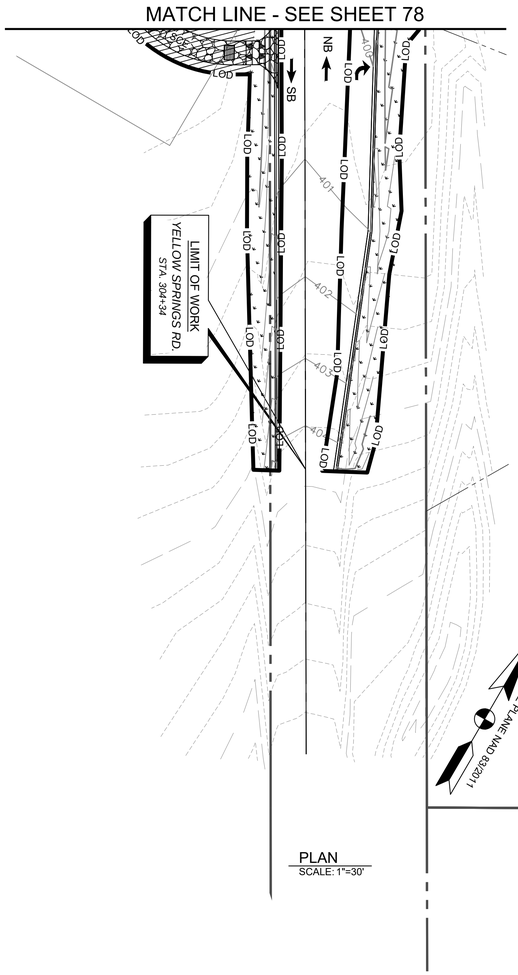
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 78 OF 106

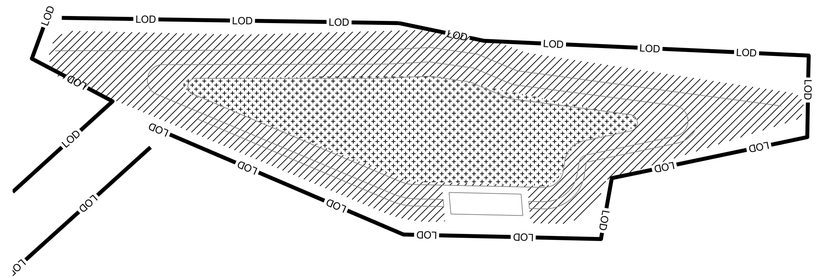
FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLAN
SCALE: 1"=30'



PLAN
SCALE: 1"=30'

PLANT SCHEDULE LP-4

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	AG2	4	AMELANCHIER X GRANDIFLORA `AUTUMN BRILLIANCE` / `AUTUMN BRILLIANCE` SERVICEBERRY	B & B		8`-10` H
	GD	1	GYMNOCLADUS DIOICA `ESPRESSO` / KENTUCKY COFFEETREE	B & B	2"CAL	
	PO	6	PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE	B & B	2"CAL	

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	AA	21	ARONIA ARBUTIFOLIA `BRILLIANTISSIMA` / `BRILLIANTISSIMA` RED CHOKEBERRY	5 GAL
	CH	12	CLETHRA ALNIFOLIA `HUMMINGBIRD` / `HUMMINGBIRD` SUMMERSWEET	5 GAL
	IH	8	ITEA VIRGINICA `HENRY`S GARNET` / `HENRY`S GARNET` SWEETSPIRE	5 GAL
	VD	13	VIBURNUM DENTATUM `BLUE MUFFIN` / `BLUE MUFFIN` SOUTHERN ARROWWOOD	5 GAL

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	BA	66	BAPTISIA AUSTRALIS / BLUE WILD INDIGO	1 GAL	24" o.c.
	BNM	4,994	BIORETENTION NATIVE MIX / SEE PLANT LIST FOR MIX COMPONENTS PLANT SPECIES IN DRIFTS OF 11 TO 23	1 GAL	18" o.c.
	MC	71	MUHLENBERGIA CAPILLARIS / PINK MUHLY	1 GAL	24" o.c.
	NM	17,058 SF	NATIVE GRASS MIX (ERNMX-111 BY ERNST SEED OR APPROVED EQUAL)	SEED	
	SN	123	SORGHASTRUM NUTANS / INDIAN GRASS	1 GAL	24" o.c.
	SOD	75,031 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD	

LEGEND

TREES

- AS ACER SACCHARUM / SUGAR MAPLE
- CO CELTIS OCCIDENTALIS / COMMON HACKBERRY
- GD GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
- LR LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
- NS NYSSA SYLVATICA / SOUR GUM
- PO PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
- QA QUERCUS ALBA / WHITE OAK
- QB QUERCUS BICOLOR / SWAMP WHITE OAK
- QR QUERCUS RUBRA / RED OAK

GROUND COVERS

- TURFGRASS SOD

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

LP-5

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

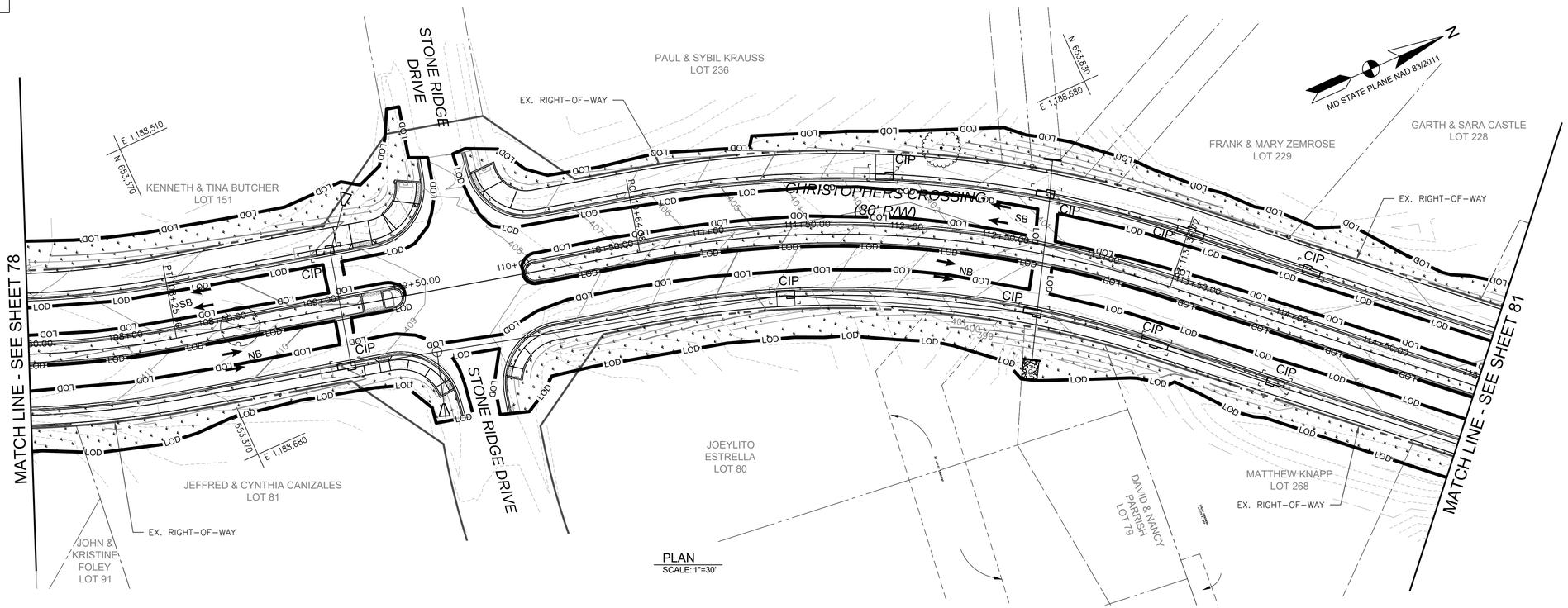
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 79 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLANT SCHEDULE LP-5

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
	AS	1	ACER SACCHARUM / SUGAR MAPLE	B & B	2"CAL
	LR	1	LIQUIDAMBAR STYRACIFLUA `HAPDELL` TM / HAPPIDAZE SWEET GUM	B & B	2"CAL

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	BNM	2,460	BIORETENTION NATIVE MIX / SEE PLANT LIST FOR MIX COMPONENTS PLANT SPECIES IN DRIFTS OF 11 TO 23	1 GAL	18" o.c.
	NM	9,806 SF	NATIVE GRASS MIX (ERNMX-111 BY ERNST SEED OR APPROVED EQUAL)	SEED	
	SOD	38,042 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD	

LEGEND

TREES

- AS ACER SACCHARUM / SUGAR MAPLE
- CO CELTIS OCCIDENTALIS / COMMON HACKBERRY
- GD GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
- LR LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
- NS NYSSA SYLVATICA / SOUR GUM
- PO PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
- QA QUERCUS ALBA / WHITE OAK
- QB QUERCUS BICOLOR / SWAMP WHITE OAK
- QR QUERCUS RUBRA / RED OAK

GROUND COVERS

- TURFGRASS SOD

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

LP-6

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

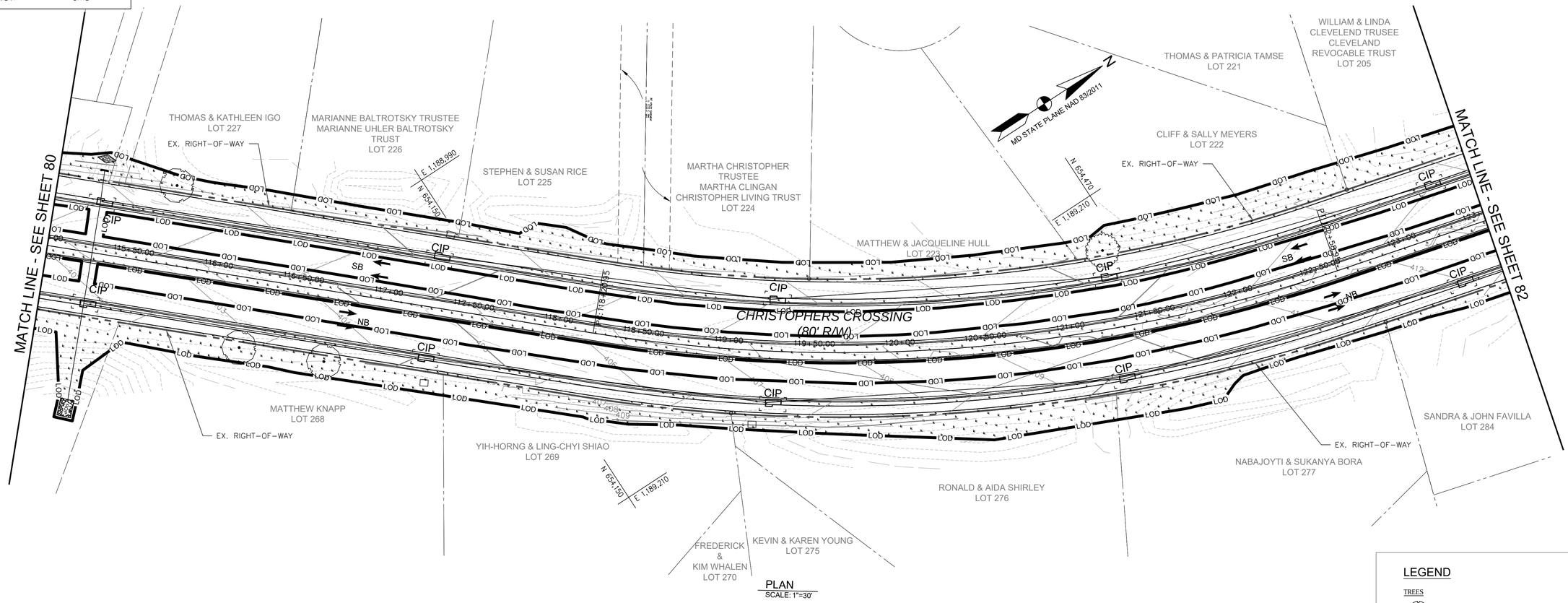
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 80 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLAN
SCALE: 1"=30'

0 30' 60'
SCALE: 1"=30'

PLANT SCHEDULE LP-6

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
	LR	1	LIQUIDAMBAR STYRACIFLUA `HAPDELL` TM / HAPPIDAZE SWEET GUM	B & B	2"CAL
	QA	3	QUERCUS ALBA / WHITE OAK	B & B	2"CAL

LEGEND

TREES

- AS ACER SACCHARUM / SUGAR MAPLE
- CO CELTIS OCCIDENTALIS / COMMON HACKBERRY
- GD GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
- LR LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
- NS NYSSA SYLVATICA / SOUR GUM
- PO PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
- QA QUERCUS ALBA / WHITE OAK
- QB QUERCUS BICOLOR / SWAMP WHITE OAK
- QR QUERCUS RUBRA / RED OAK

GROUND COVERS

- TURFGRASS SOD

LP-7

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

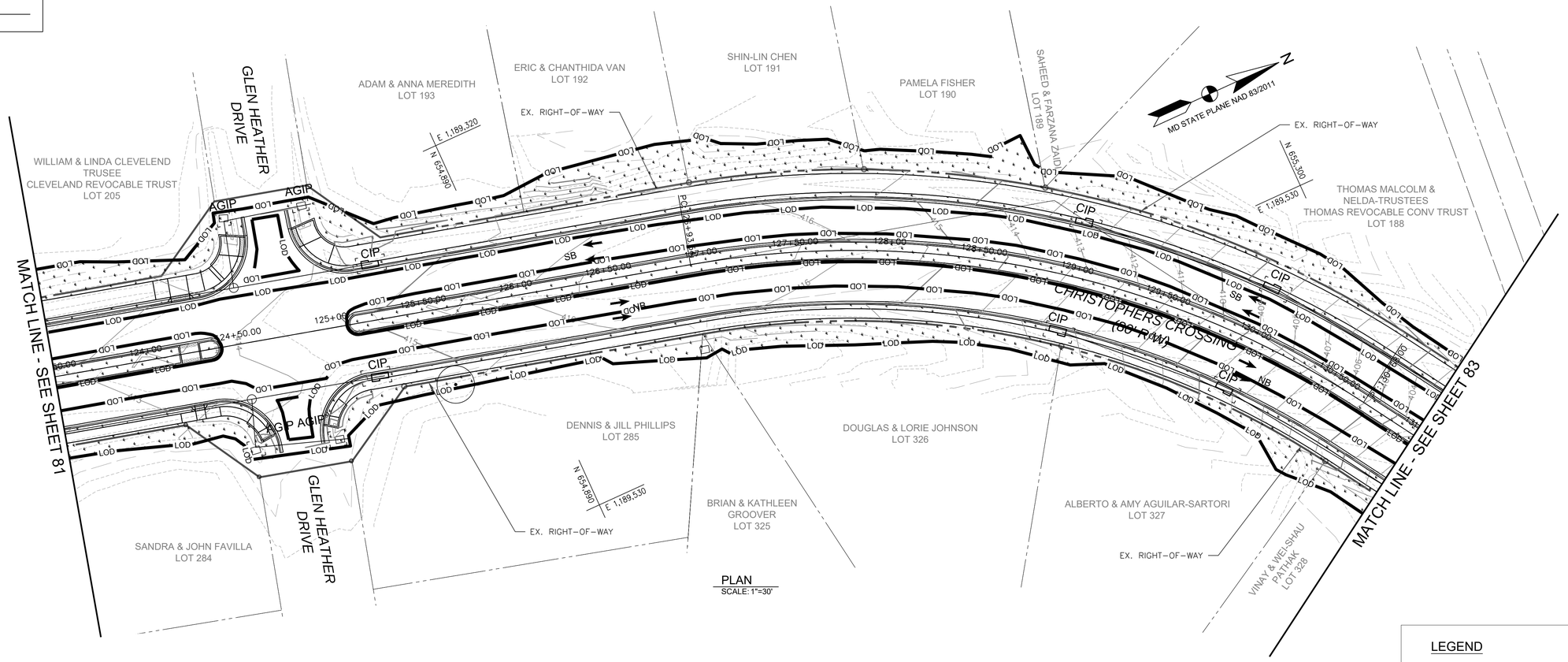
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 81 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLAN
SCALE: 1"=30'

0 30' 60'
SCALE: 1"=30'

PLANT SCHEDULE LP-7

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
	QR	1	QUERCUS RUBRA / RED OAK	B & B	2"CAL

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	SOD	27,172 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD	

LEGEND

TREES

- AS ACER SACCHARUM / SUGAR MAPLE
- CO CELTIS OCCIDENTALIS / COMMON HACKBERRY
- GD GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
- LR LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
- NS NYSSA SYLVATICA / SOUR GUM
- PO PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
- QA QUERCUS ALBA / WHITE OAK
- QB QUERCUS BICOLOR / SWAMP WHITE OAK
- QR QUERCUS RUBRA / RED OAK

GROUND COVERS

- TURFGRASS SOD

LP-8

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

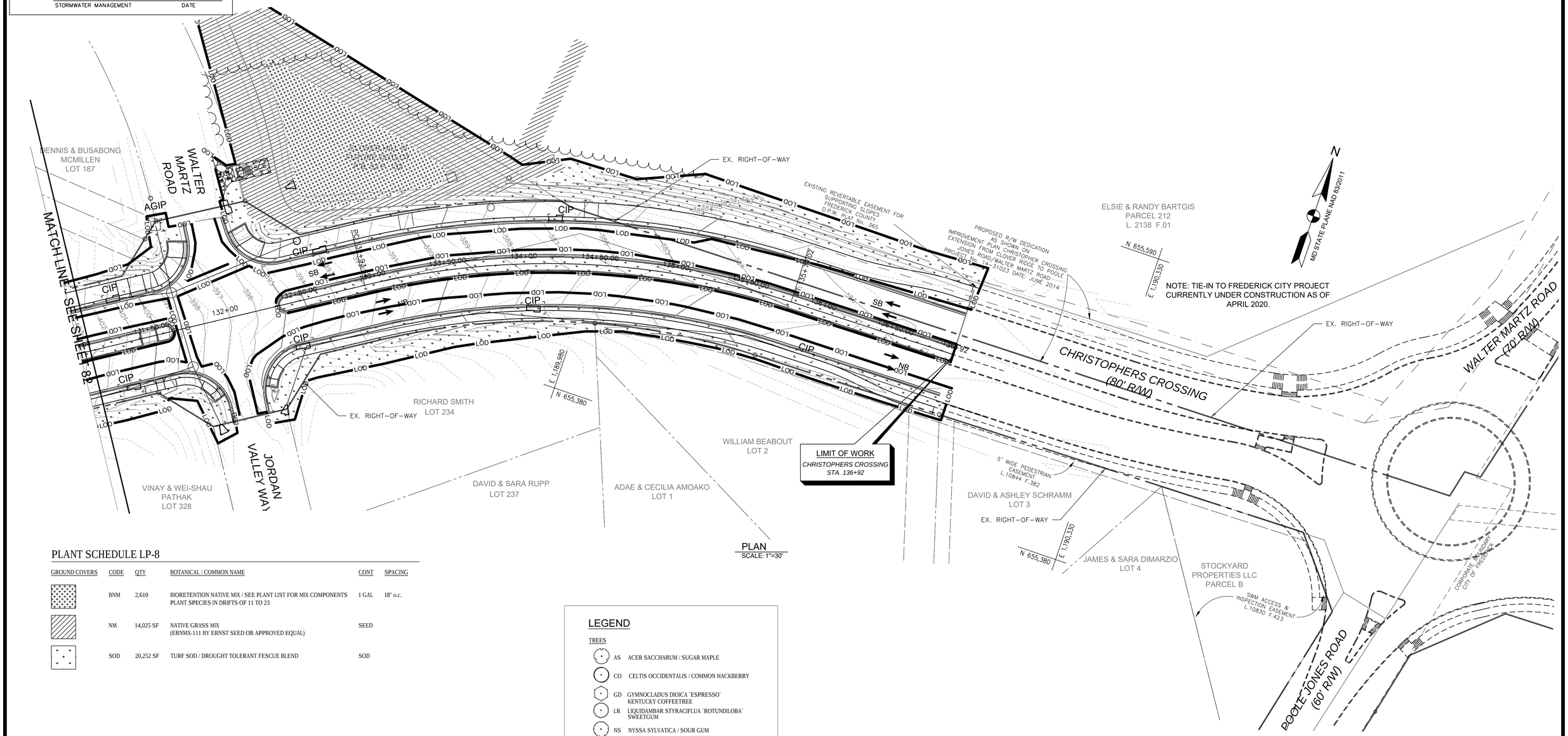
DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 82 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE



PLAN
SCALE: 1"=30'

PLANT SCHEDULE LP-8

GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	SPACING
	BNM	2,610	BIORETENTION NATIVE MIX / SEE PLANT LIST FOR MIX COMPONENTS PLANT SPECIES IN DRIFTS OF 11 TO 23	1 GAL	18" o.c.
	NM	14,025 SF	NATIVE GRASS MIX (ERNMX-111 BY ERNST SEED OR APPROVED EQUAL)	SEED	
	SOD	20,252 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD	

LEGEND

TREES

- AS ACER SACCHARUM / SUGAR MAPLE
- CO CELTIS OCCIDENTALIS / COMMON HACKBERRY
- GD GYMNOCLADUS DIOICA `ESPRESSO` KENTUCKY COFFEETREE
- LR LIQUIDAMBAR STYRACIFLUA `ROTUNDILOBA` SWEETGUM
- NS NYSSA SYLVATICA / SOUR GUM
- PO PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE
- QA QUERCUS ALBA / WHITE OAK
- QB QUERCUS BICOLOR / SWAMP WHITE OAK
- QR QUERCUS RUBRA / RED OAK

GROUND COVERS

- TURFGRASS SOD

0 30' 60'
SCALE: 1"=30'

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

LP-9

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

LANDSCAPE PLAN

DATE: SEPTEMBER 2020 SCALE: 1"=30'

AMT FILE NO. 15-0758.007 SHEET NO. 83 OF 106

FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: _____
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: _____
STORMWATER MANAGEMENT DATE

PLANT SCHEDULE

TREES	CODE	QTY	LP-1	LP-2	LP-3	LP-4	LP-5	LP-6	LP-7	LP-8	BOTANICAL / COMMON NAME	CONT	CAL
	AS	9			8		1				ACER SACCHARUM / SUGAR MAPLE	B & B	2"CAL
	AG2	4				4					AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / 'AUTUMN BRILLIANCE' SERVICEBERRY	B & B	
	GD	1				1					GYMNOCLADUS DIOICA 'ESPRESSO' / KENTUCKY COFFEETREE	B & B	2"CAL
	LR	5	2	1			1	1			LIQUIDAMBAR STYRACIFLUA 'HAPDELL' TM / HAPPIDAZE SWEET GUM	B & B	2"CAL
	NS	6		6							NYSSA SYLVATICA / SOUR GUM	B & B	2"CAL
	PO	25	10	8	1	6					PLATANUS OCCIDENTALIS / AMERICAN SYCAMORE	B & B	2"CAL
	QA	3						3			QUERCUS ALBA / WHITE OAK	B & B	2"CAL
	QB	2			2						QUERCUS BICOLOR / SWAMP WHITE OAK	B & B	2"CAL
	QR	1							1		QUERCUS RUBRA / RED OAK	B & B	2"CAL

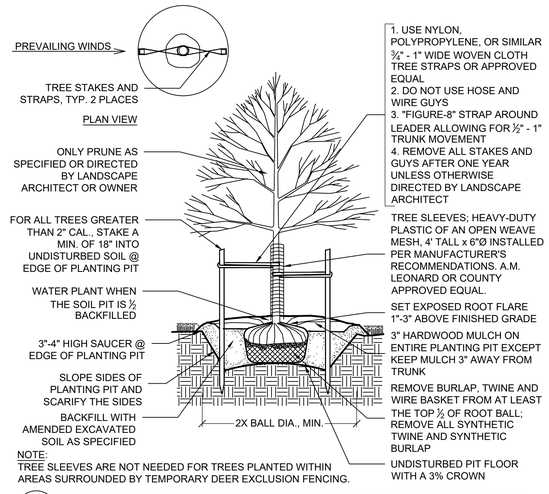
SHRUBS	CODE	QTY	LP-1	LP-2	LP-3	LP-4	LP-5	LP-6	LP-7	LP-8	BOTANICAL / COMMON NAME	CONT
	AA	21				21					ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA' / 'BRILLIANTISSIMA' RED CHOKEBERRY	5 GAL
	CH	12				12					CLETHRA ALNIFOLIA 'HUMMINGBIRD' / 'HUMMINGBIRD' SUMMERSWEET	5 GAL
	IH	8				8					ITEA VIRGINICA 'HENRY'S GARNET' / 'HENRY'S GARNET' SWEETSPIRE	5 GAL
	VD	13				13					VIBURNUM DENTATUM 'BLUE MUFFIN' / 'BLUE MUFFIN' SOUTHERN ARROWWOOD	5 GAL

GROUND COVERS	CODE	QTY	LP-1	LP-2	LP-3	LP-4	LP-5	LP-6	LP-7	LP-8	BOTANICAL / COMMON NAME	CONT
	BA	66				66					BAPTISIA AUSTRALIS / BLUE WILD INDIGO	1 GAL
	BNM	10,064	PLANT SPECIES IN DRIFTS OF 11 TO 23			4,994	2,460			2,610	BIORETENTION NATIVE MIX / SEE PLANT LIST FOR MIX COMPONENTS	1 GAL
	MEA	994 SF	994 SF ERNMX-111								MEADOW MIX / NATIVE MEADOW MIX	SEED
	MC	71				71					MUHLENBERGIA CAPILLARIS / PINK MUHLY	1 GAL
	NM	40,889 SF	(ERNMX-111 BY ERNST SEED OR APPROVED EQUAL)			17,058 SF	9,806 SF			14,025 SF	NATIVE GRASS MIX	SEED
	SN	123				123					SORGHASTRUM NUTANS / INDIAN GRASS	1 GAL
	SOD	202,800 SF	39,841 SF		2,462 SF	75,031 SF	38,042 SF		27,172 SF	20,252 SF	TURF SOD / DROUGHT TOLERANT FESCUE BLEND	SOD

0 30' 60'
SCALE: 1"=30'

GENERAL PLANTING NOTES:

1. THIS PLAN IS FOR PLANTING PURPOSES ONLY, AND ANY OTHER INFORMATION SHOWN IS FOR REFERENCE ONLY. SEE SITE PLAN FOR INFORMATION ABOUT ALL LAYOUT, GRADING AND OTHER SITE IMPROVEMENTS.
2. CALL MISS UTILITY AT 811 OR 1-800-257-7777 TO MARK UTILITIES AT LEAST 48 HOURS BEFORE DIGGING.
3. All materials and planting procedures except as otherwise noted shall conform to the latest edition of "LANDSCAPE SPECIFICATION GUIDELINES" by the Landscape Contractors Association MD-DC-VA.
4. Plants shall conform to the current edition of the American Standard for Nursery Stock. (ANSI z60.1)
5. Plant names shall be those given in the latest edition of Hortus III, L.H. Bailey Hortorium.
6. Topsoil shall meet specifications as per the 2011 MD Standards and Specifications for Soil Erosion and Sediment Control.
7. Soil testing shall be as described in PDD standard specification Section 723.
8. The Contractor shall apply grass according to the 2011 MD Standard and Specifications for Soil Erosion and Sediment Control. Do not use Kentucky 31 tall fescue.
9. The Contractor shall stake out all planting beds and tree locations for approval by the Landscape Architect or Owner and representative before digging. It is the Contractor's responsibility to locate and coordinate plantings with all existing utilities. If discrepancies occur because of utility locations or other existing conditions the Contractor shall notify the Landscape Architect and Owner's representative immediately to coordinate any necessary adjustments.
10. All plant material shall be labeled by the nursery and delivered with labels in place for inspection. Substitutions in plant species or size will not be permitted except with the approval of the Landscape Architect and Owner. Do not prune until plant material has been planted but as soon thereafter as is advisable under standard horticultural practices. For tree pruning and care methods please refer to ANSI A-300, latest edition.
11. It is of utmost importance that all plant material be set slightly higher in relation to grade than it was grown in the nursery and with good earth to root contact. Any materials or work may be rejected by the Landscape Architect if it does not meet this or any other requirement of the specifications. Rejected materials shall be removed from the site by the Contractor at Contractor's expense.
12. The Contractor shall mulch and water all plants well on the day they are planted. Individual planting shall be mulched.
13. In case of discrepancies between quantities on the plant list and the plan, the plan shall govern.
14. Seed or sod bare areas as directed by Owner for all disturbed areas to be stabilized that are not landscaped or covered.



NOTE:
TREE SLEEVES ARE NOT NEEDED FOR TREES PLANTED WITHIN AREAS SURROUNDED BY TEMPORARY DEER EXCLUSION FENCING.

1 DECIDUOUS TREE PLANTING WITH DEER PROTECTION
NOT TO SCALE
329343-31

7.1 *SHA LANDSCAPE NOTES.* *Landscape construction within rights of way of the Maryland State Highway Administration (SHA) and within SHA property, easement areas and lands to be conveyed to SHA shall conform to these Notes. For guidance regarding design modifications during construction, refer to SHA Landscape Design Guide, SHA Landscape Estimating Manual, and SHA Environmental Guide for Access and District* Permit Applicants at http://www.roads.maryland.gov/index.aspx?PageId=25.

7.2 *SHA Standard Specifications.* *Landscape construction shall conform to Sections 701 through 716, and landscape materials shall conform to Section 920 of the most recent revision of SHA Standard Specifications for Construction and Materials, including all revisions and supplements, and as specified in these notes. These requirements shall supersede all other specifications for work on SHA property. All SHA specifications for landscaping and landscape materials published in 2008 have been replaced. Current Specifications are at http://www.roads.maryland.gov/Index.aspx?PageId=44.*

7.3 *Erosion and Sediment Control Manager (ESCM).* *Soil disturbance such as grading, excavation, soil placement or other activities that involve soil disturbance shall be supervised by an ESCM Manager with a valid ñSHA Yellow Cardòin conformance with SHA Standard Specifications and any applicable Erosion and Sediment Control Permit.*

7.4 *SHA Standard Details for Trees, Shrubs and Planting Beds.* *The installation of trees, shrubs, planting beds and other landscape construction related to Section 710 of the SHA Standard Specifications shall conform to the ñSHA Book of Standards for Highway & Incidental Structures - Category 7òat http://apps.roads.maryland.gov/BusinessWithSHA/bizStdsSpecs/desManualStdPub/publicationsonline/ohd/bookstd/toccat7.asp.*

7.5 *Temporary Stabilization* *shall be installed in conformance with Section 704 to ensure that areas of soil disturbance are protected from wind, rainfall and flowing water until permanent stabilization is installed.*

1. *Temporary Mulch, either as temporary straw mulch or temporary matting mulch, shall be installed at the end of each working day to provide ñsame day stabilizationòunless other approved stabilization is installed.*
2. *Temporary straw mulch shall be installed on areas and slopes flatter than 4:1; temporary matting mulch shall be applied on slopes 4:1 and steeper, and to areas within channels.*

3. *Temporary Seed shall be installed in lieu of Temporary Mulch when soil redisturbance is expected more than 30 days after soil disturbance. The required application rate shall be 100 lbs per acre of 37-0-0 (SCU) fertilizer.*

7.6 *Roadway Pavement Removal.* *Areas of roadway pavement removal shall be excavated to remove pavements, aggregate base, and compacted soil to a minimum depth of 10 inches below the pavement surface, or as necessary to remove all materials unsuitable for landscaping. The excavated areas shall be restored with subsoil and topsoil as part of Soil Restoration.*

7.7 *Excavation and Debris Removal.* *Debris related to the demolition of sidewalks, driveways, curbs, trees, stumps, roots, fencing, pipes, and other materials that may interfere with landscape installation or future maintenance shall be excavated as necessary for their complete removal and disposal.*

7.8 *Soil Restoration.* *Areas of pavement removal, excavation or drilling in landscaped areas shall remove excavated debris and restore the subgrade with approved subsoil and topsoil placed in conformance with Section 701 of the SHA Standard Specifications.*

1. *A layer of approved topsoil of at least a 4-inch depth shall be placed on all disturbed areas flatter than 2:1 and in all channels prior to seeding, sodding or other landscaping, unless otherwise specified.*
2. *A layer of approved topsoil of at least a 2-inch depth shall be placed on all disturbed areas 2:1 and steeper prior to seeding, sodding or other landscaping, unless otherwise specified.*
3. *Bioretention Soil Mix (BSM) and other materials installed in conjunction with SPI 316 - Stormwater Filtration Facilities and SHA stormwater details shall be installed in conformance with SHA Landscape Notes and landscape plans. Plant materials and mulch shall be installed in BSM in conformance with stormwater details, Section 710 or other SHA Specifications.*

7.15 *Trees and Other Plant Material Installation.* *Trees, shrubs, perennials, annuals, bulbs, landscape beds, bark mulch and similar materials shall be installed in conformance with Section 710 and 711 of the SHA Standard Specifications. Tree and shrubs shall be pruned at the time of installation to ensure sidewalk clearance for pedestrians is maintained to a height of 8 feet. No tree or shrub shall be installed within 3 feet of curbs, sidewalks, or pavement edges.*

LP-10

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

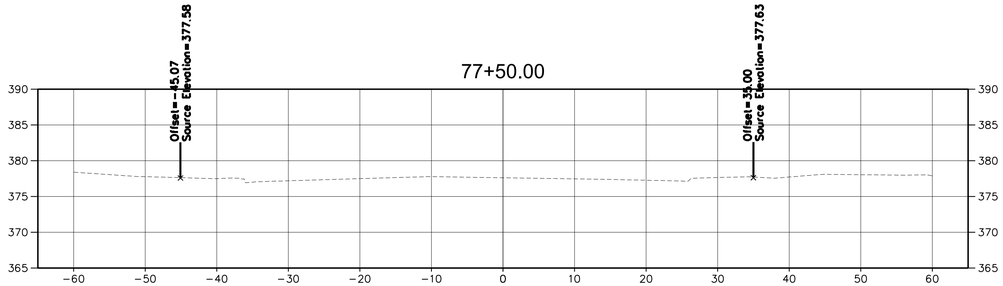
FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

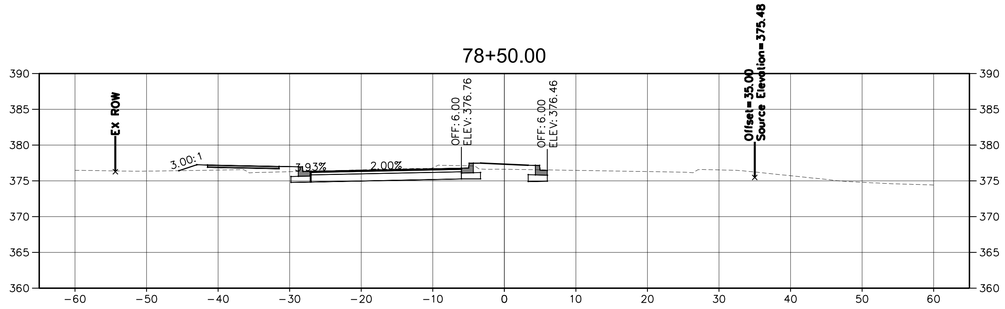
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

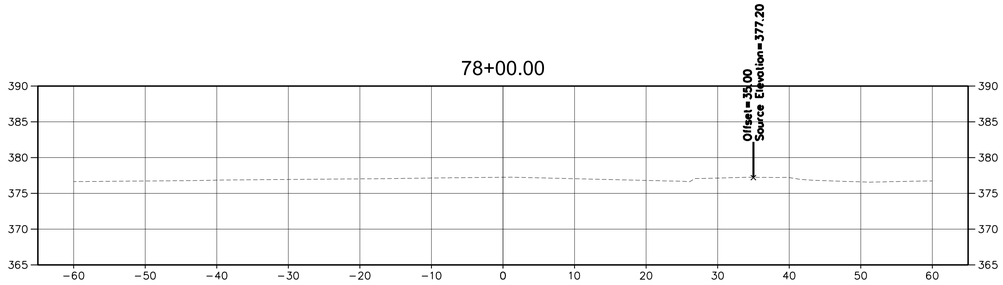
DETAILS AND NOTES

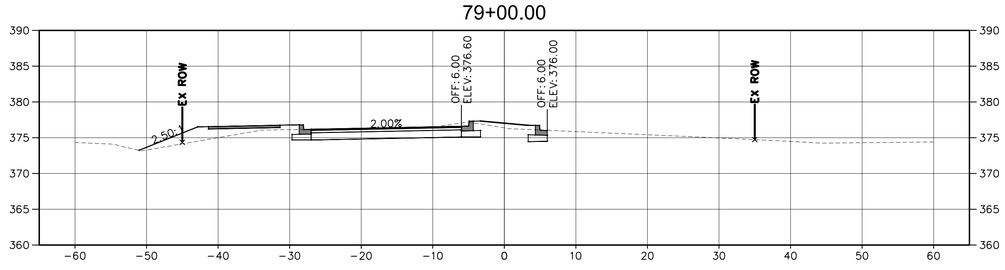
DATE: SEPTEMBER 2020 SCALE: 1"=30'

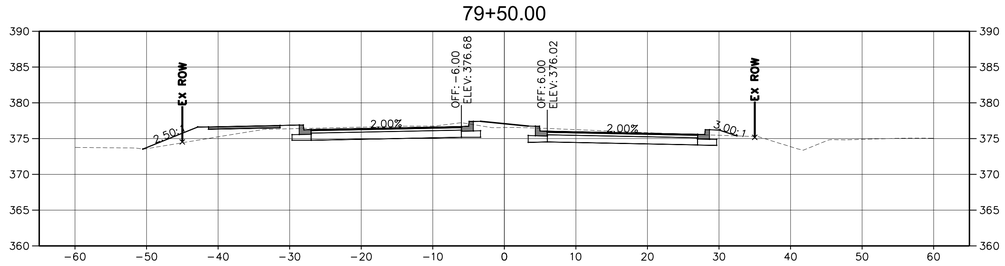
AMT FILE NO. 15-0758.007 SHEET NO. 84 OF 106











NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-1

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

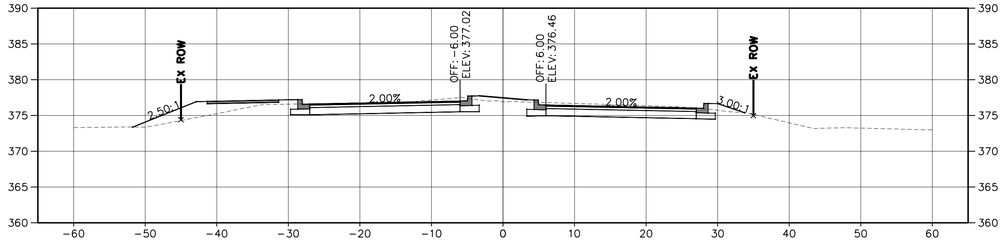
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

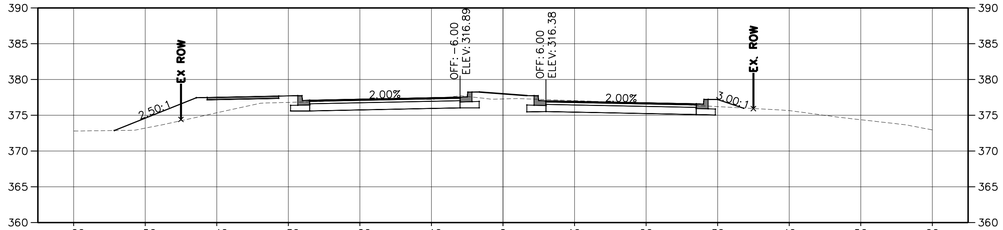
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 83 OF 106

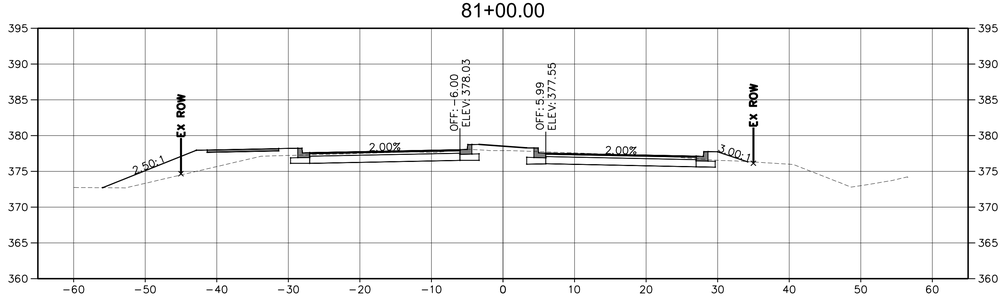
80+00.00



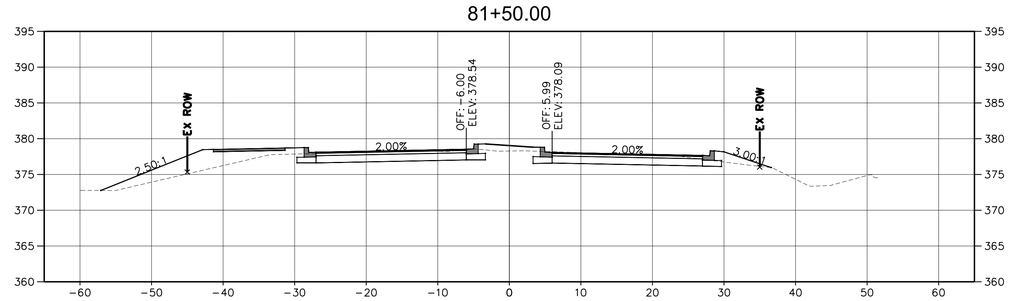
80+50.00



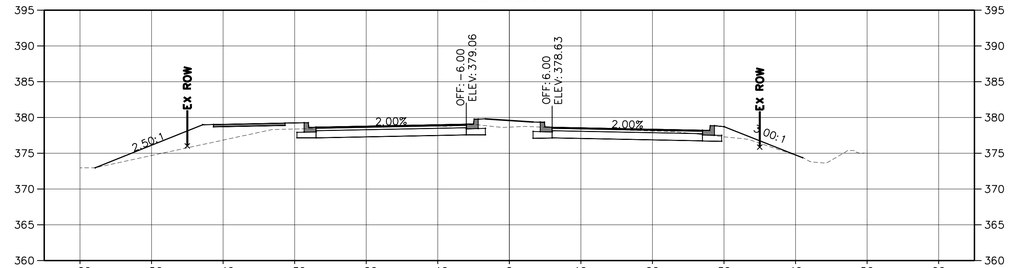
81+00.00



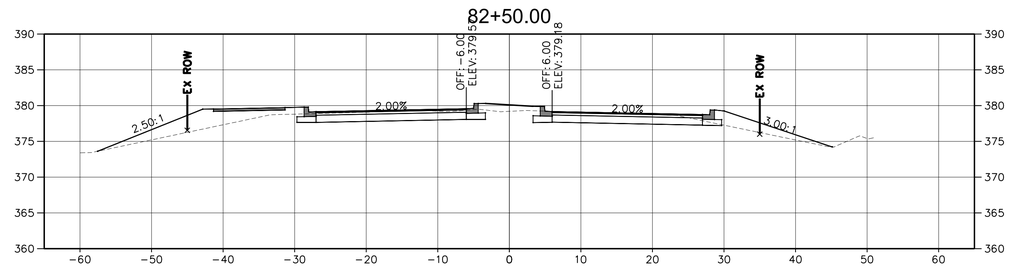
81+50.00



82+00.00



82+50.00



NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

CS-2

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

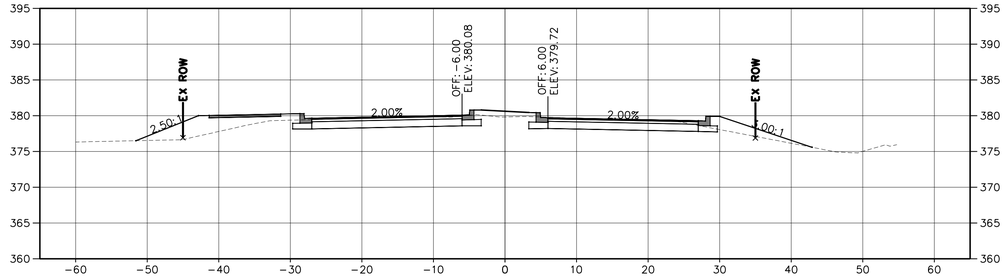
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

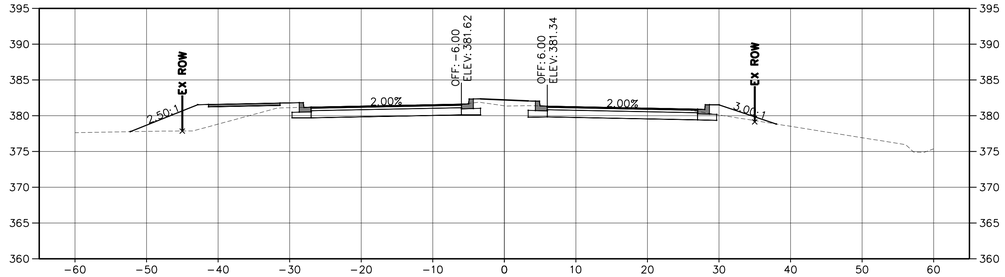
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 84 OF 106

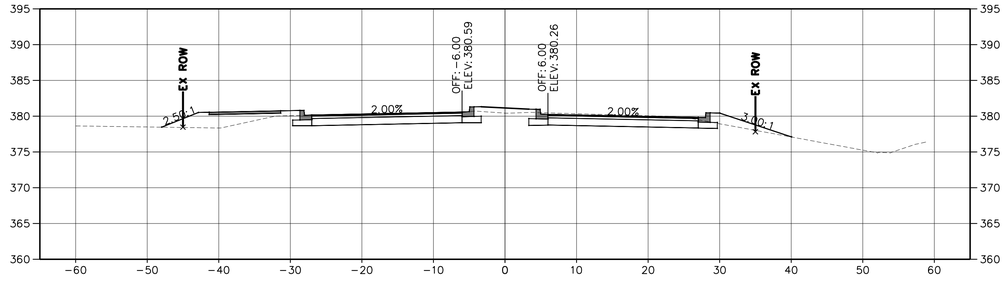
83+00.00



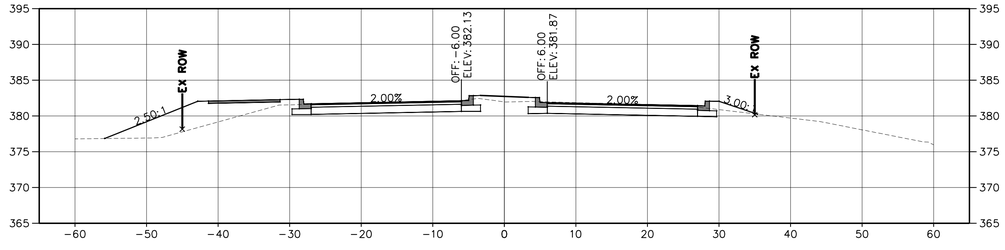
84+50.00



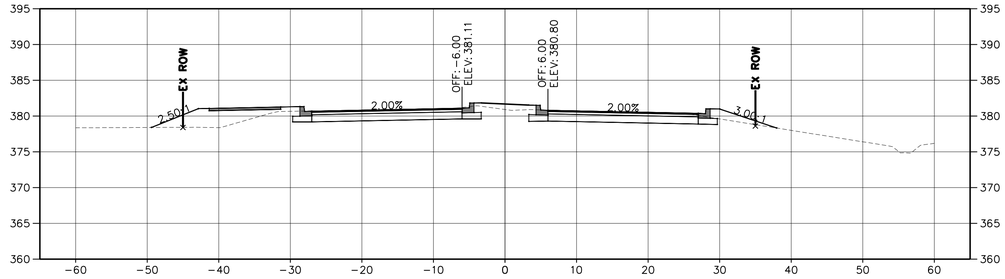
83+50.00



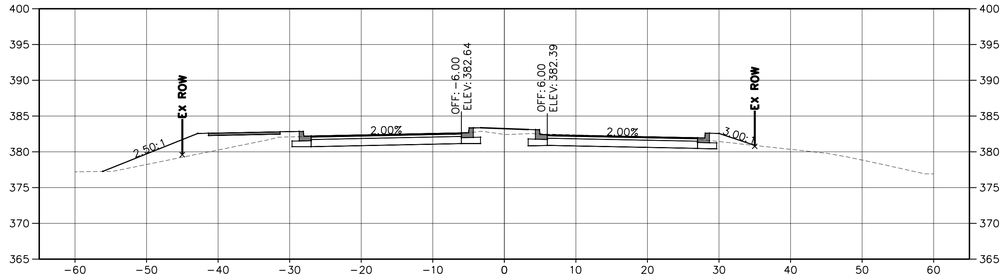
85+00.00



84+00.00



85+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

CS-3

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

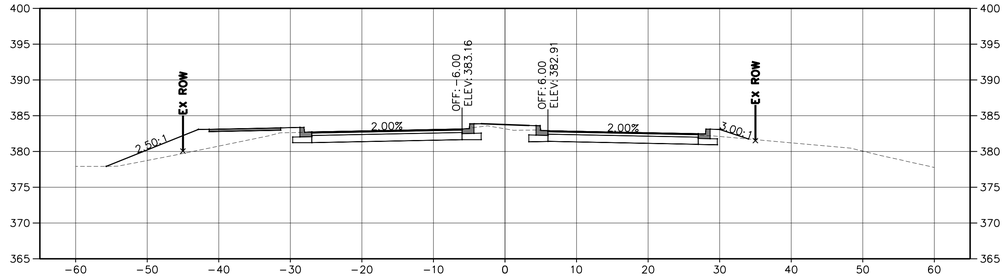
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

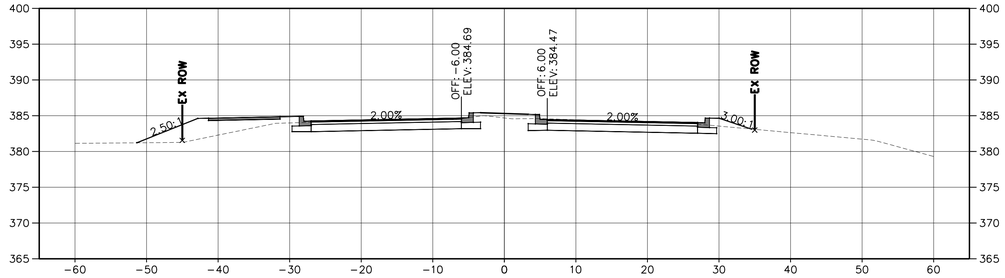
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 85 OF 106

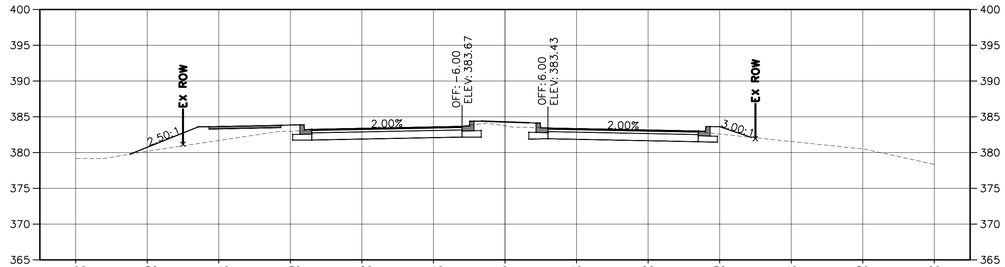
86+00.00



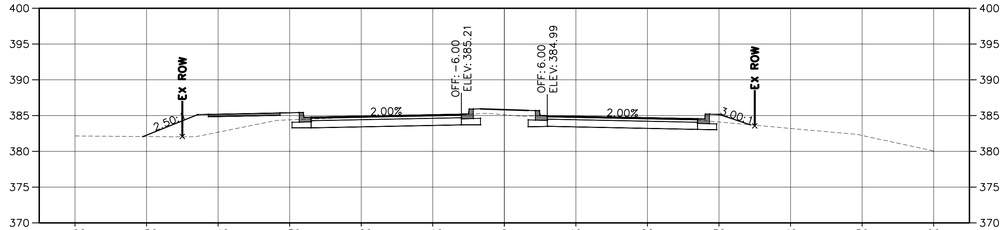
87+50.00



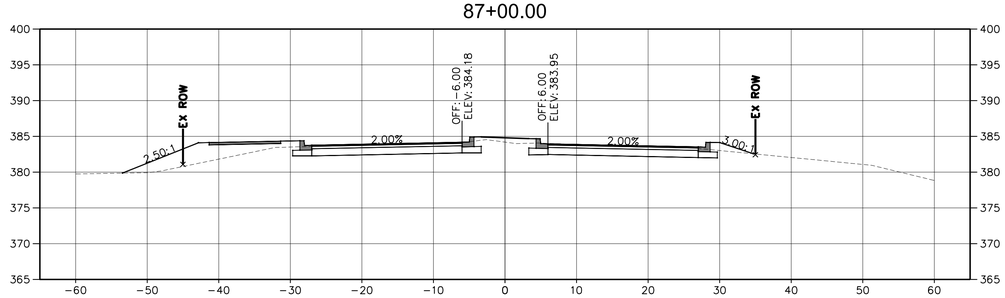
86+50.00



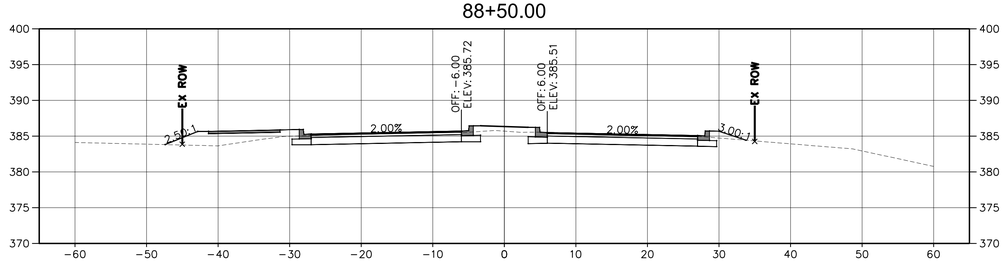
88+00.00



87+00.00



88+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8352
EMAIL: AMT1@AMTENGINEERING.COM

CS-4

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

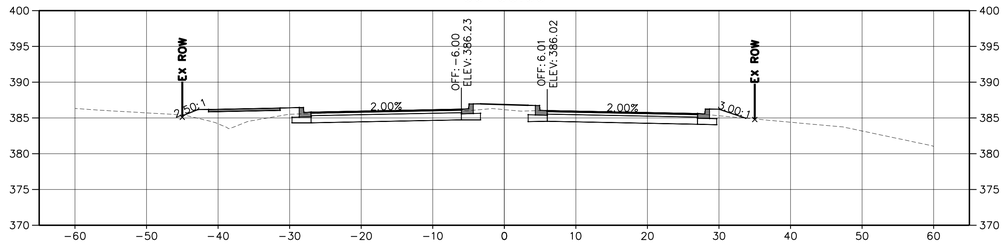
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

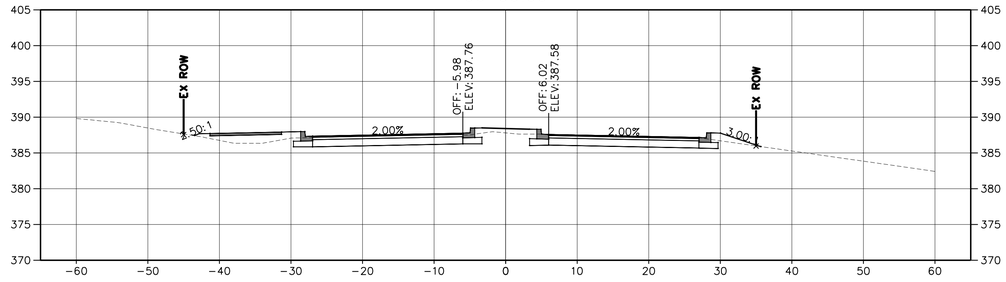
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 86 OF 106

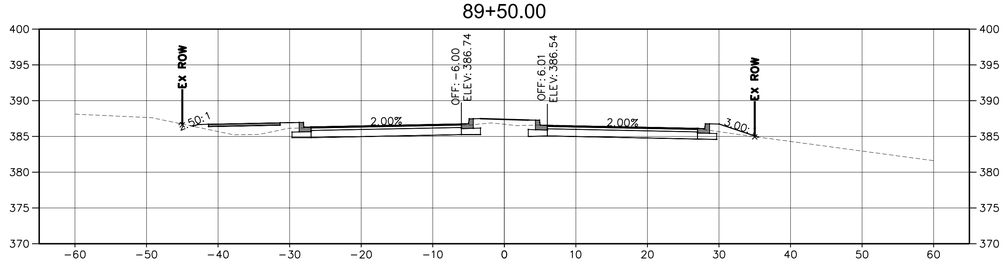
89+00.00



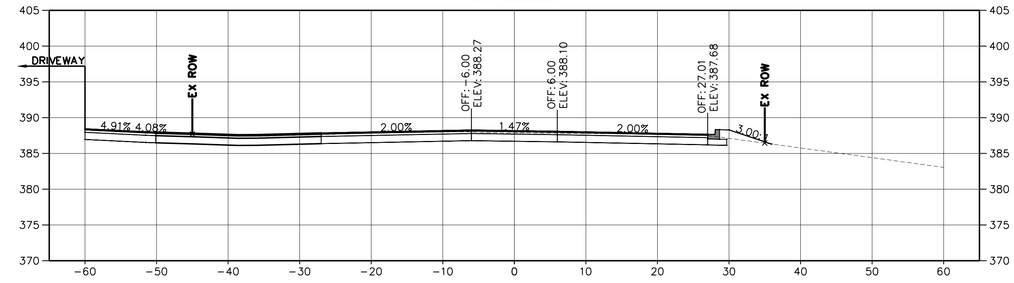
90+50.00



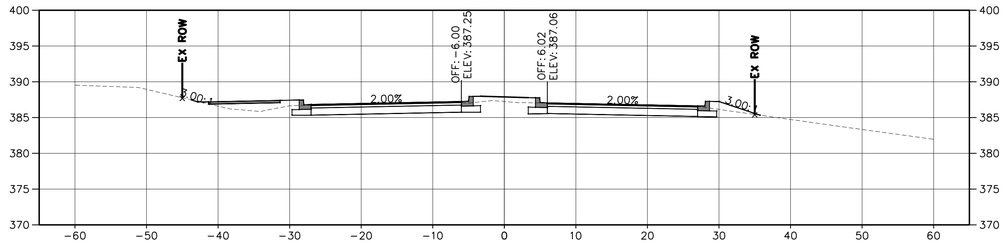
89+50.00



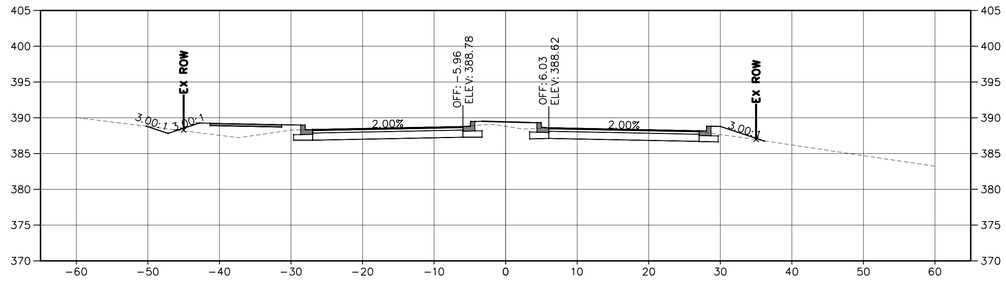
91+00.00



90+00.00



91+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-4552
EMAIL: AMT1@AMTENGINEERING.COM

CS-5

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

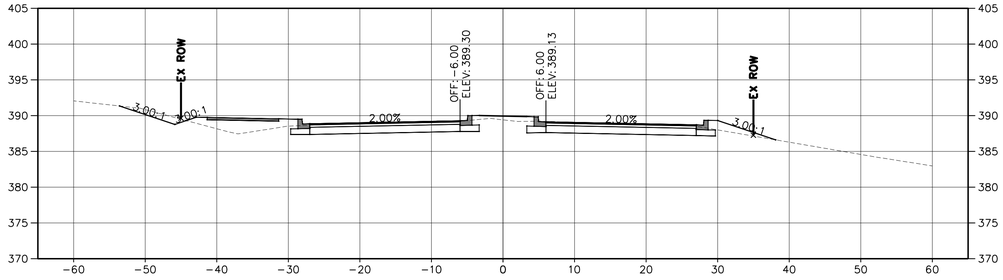
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

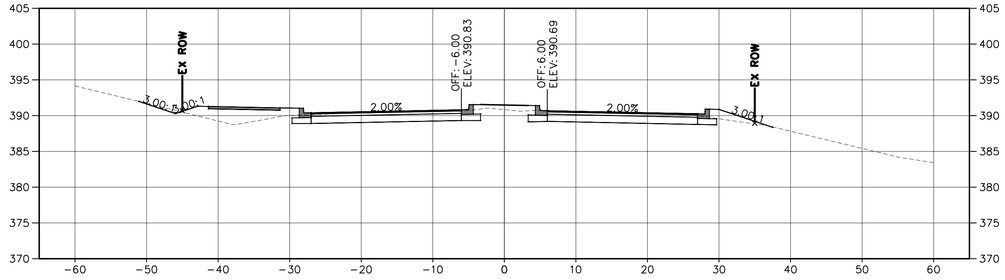
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 87 OF 106

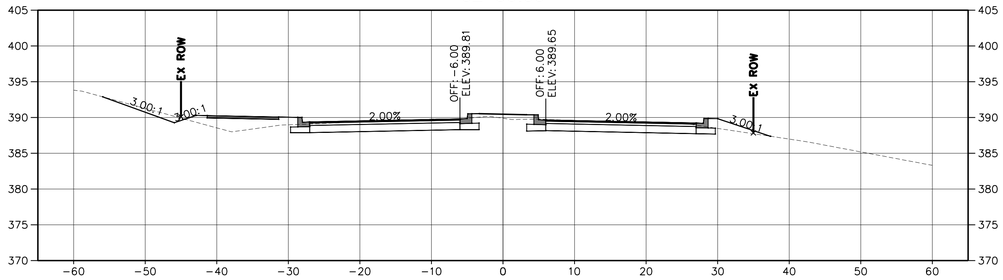
92+00.00



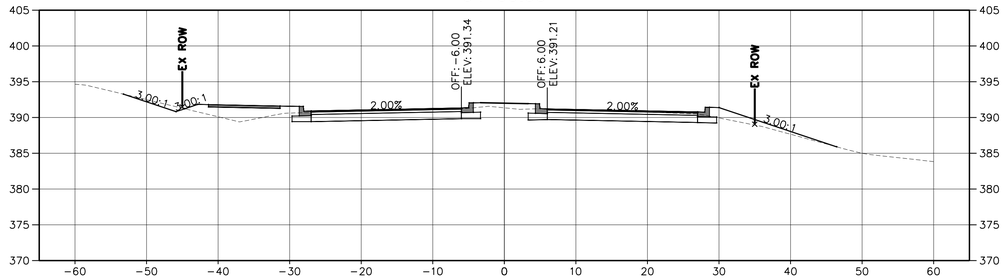
93+50.00



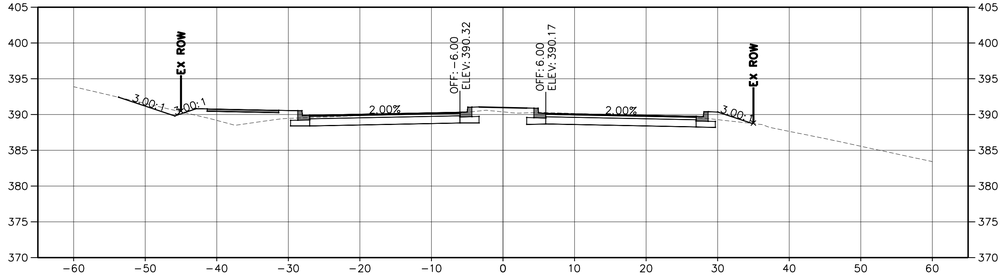
92+50.00



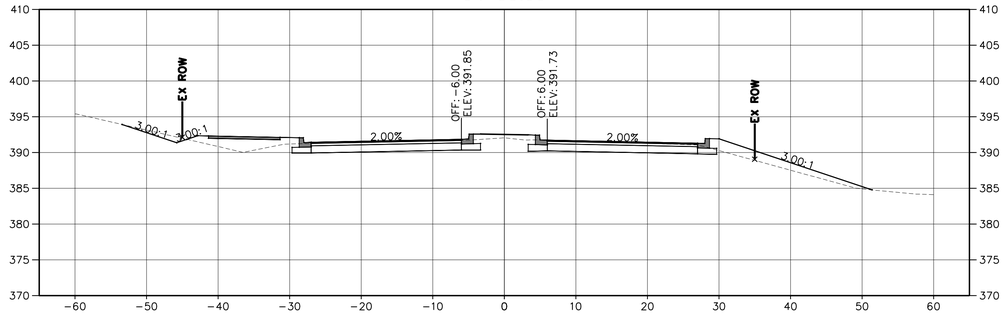
94+00.00



93+00.00



94+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-6

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

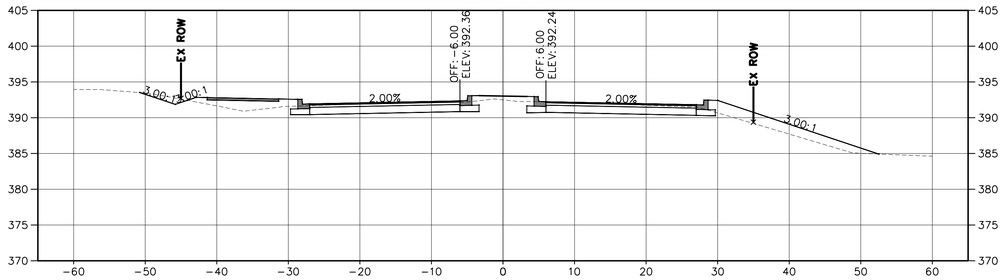
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

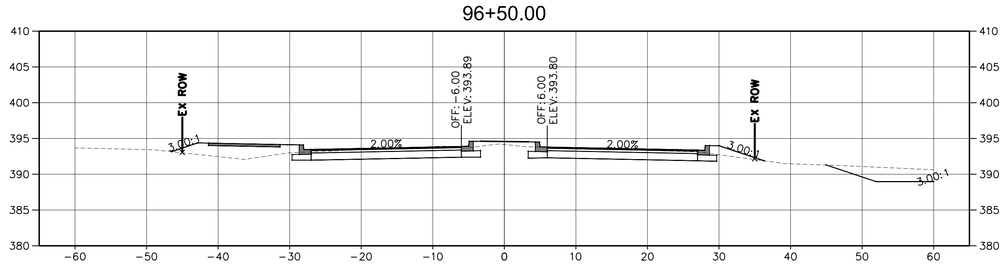
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 88 OF 106

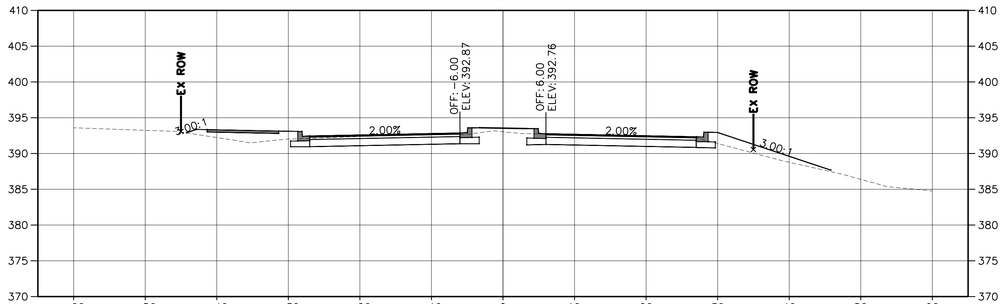
95+00.00



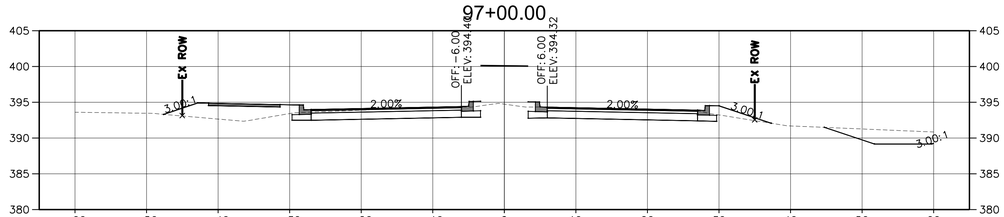
96+50.00



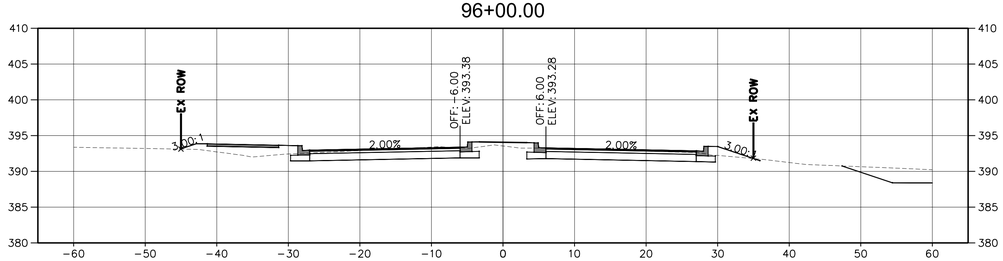
95+50.00



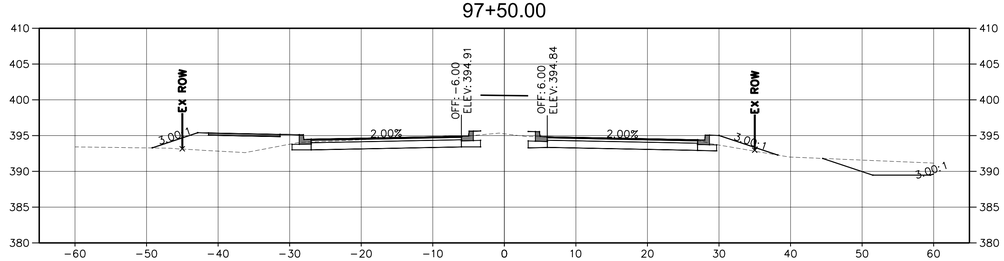
97+00.00



96+00.00



97+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6552
EMAIL: AMT1@AMTENGINEERING.COM

CS-7

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

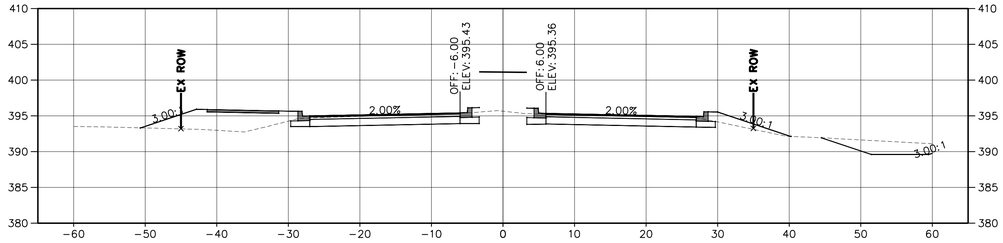
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

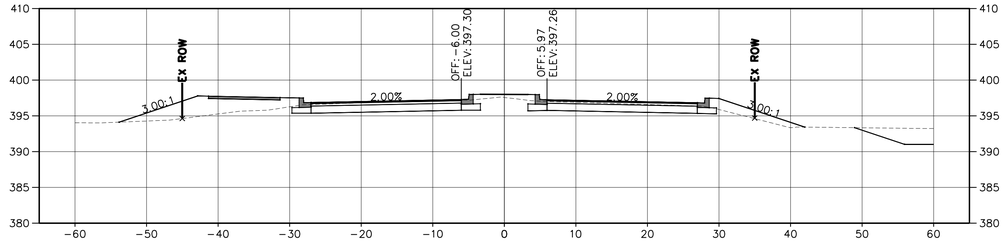
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 89 OF 106

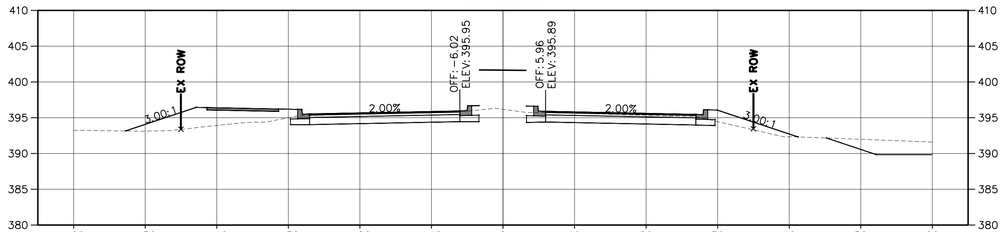
98+00.00



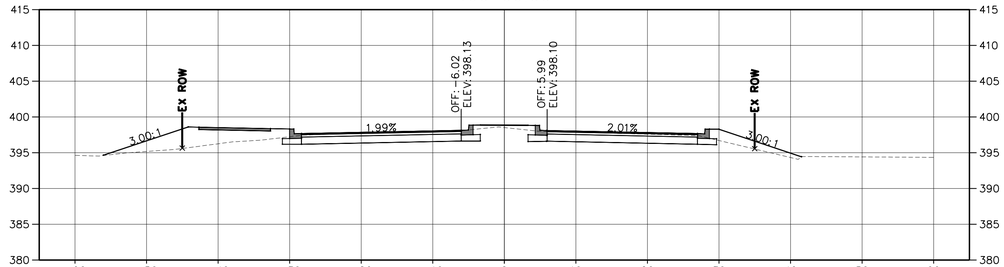
99+50.00



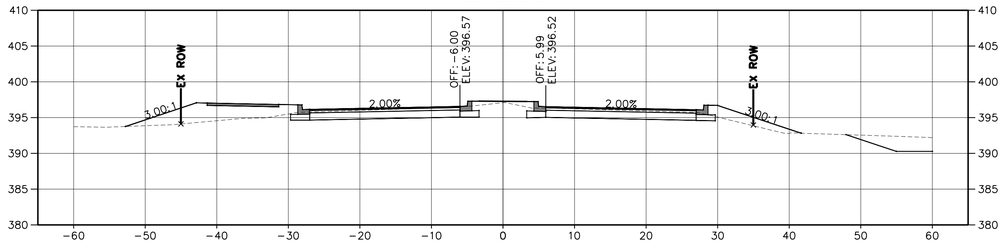
98+50.00



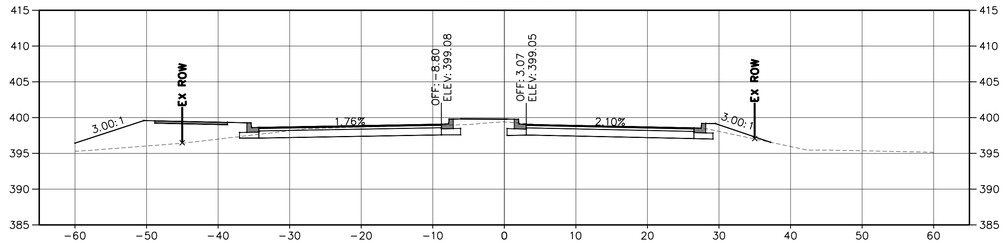
100+00.00



99+00.00



100+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-8

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

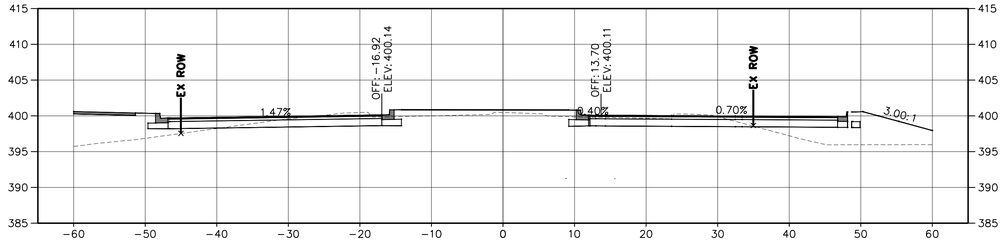
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 90 OF 106

101+00.00



101+50.00

SEE ROUNDABOUT CROSS SECTIONS

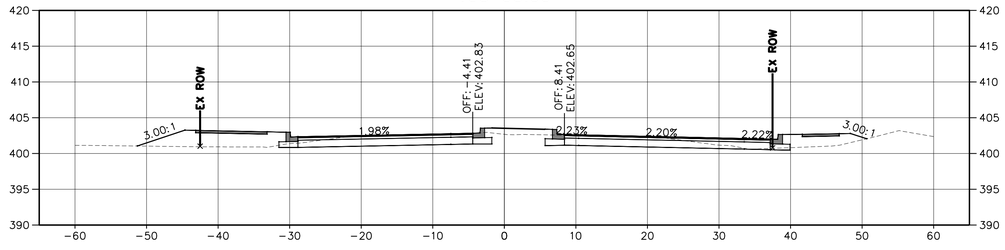
102+00.00

SEE ROUNDABOUT CROSS SECTIONS

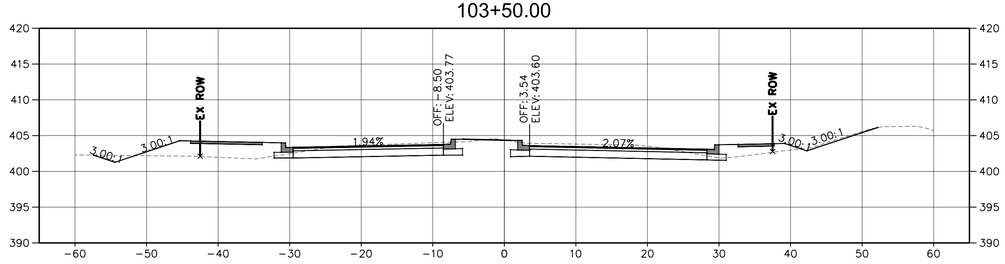
102+50.00

SEE ROUNDABOUT CROSS SECTIONS

103+00.00



103+50.00



NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-9

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

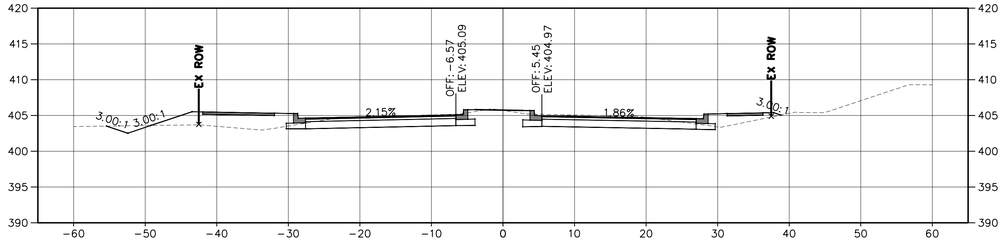
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

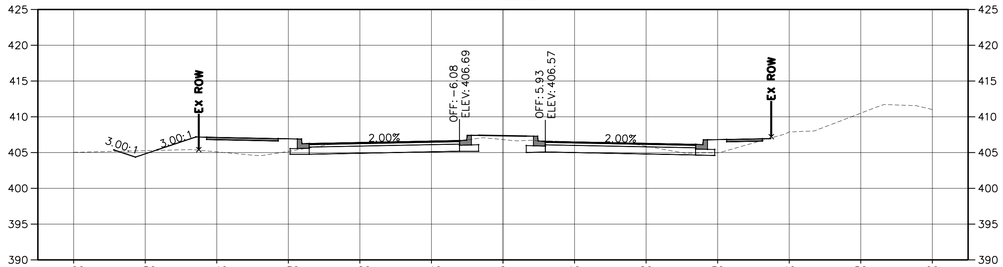
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 91 OF 106

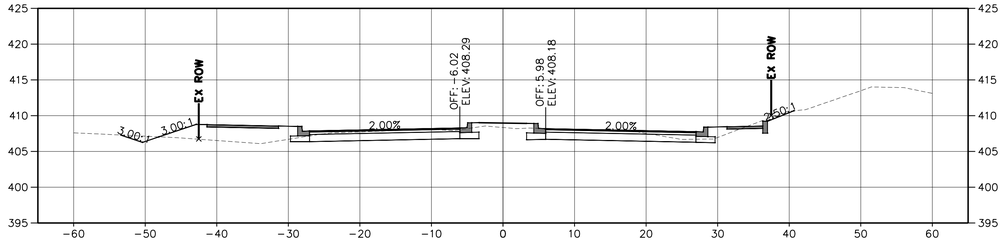
104+00.00



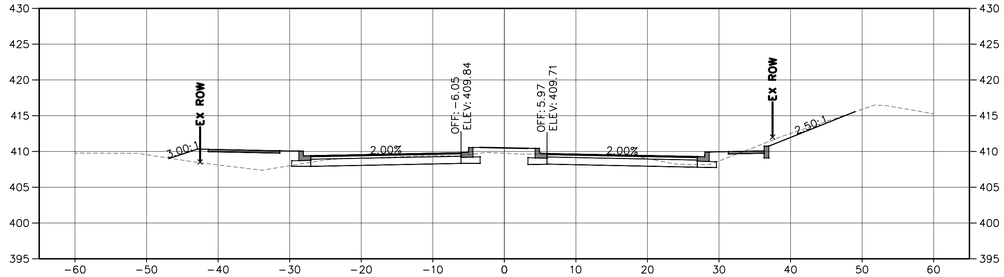
104+50.00



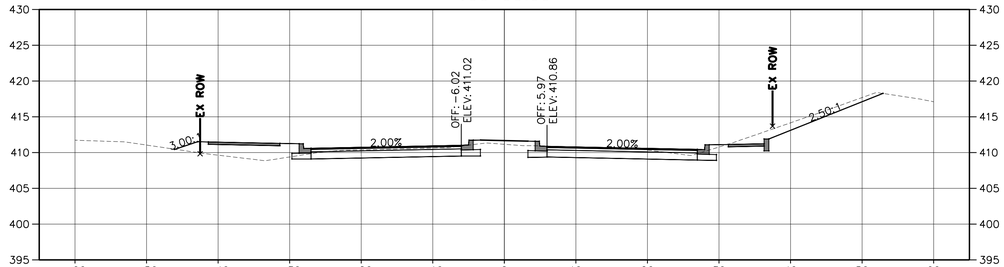
105+00.00



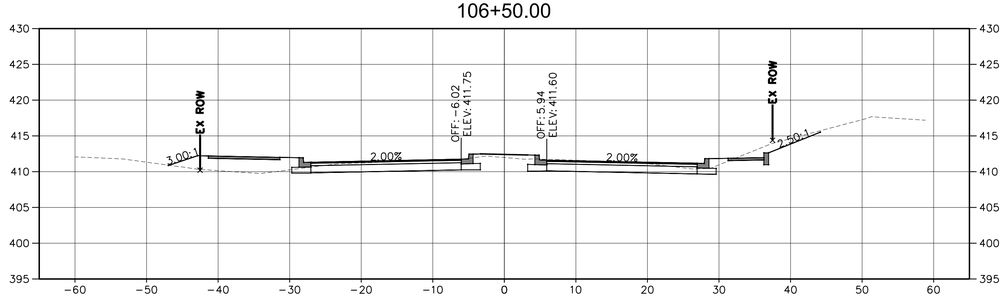
105+50.00



106+00.00



106+50.00



NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8352
EMAIL: AMT1@AMTENGINEERING.COM

CS-10

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

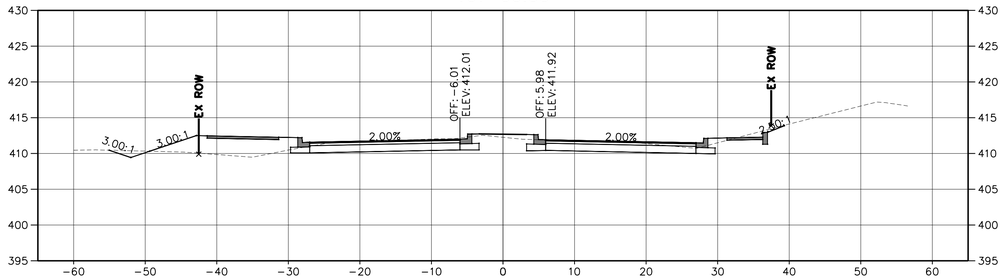
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

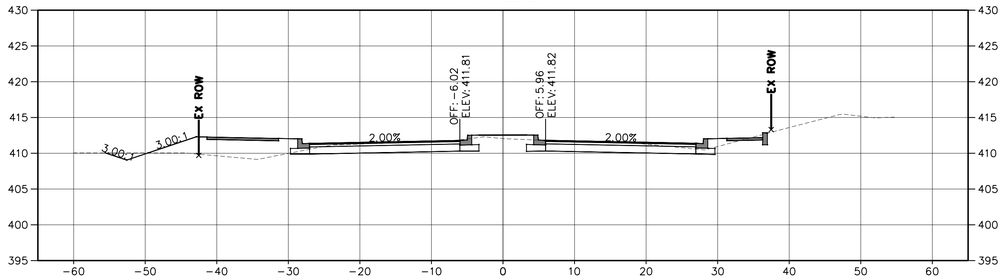
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 92 OF 106

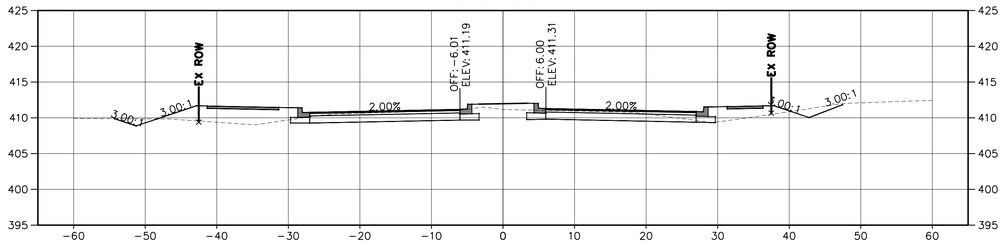
107+00.00



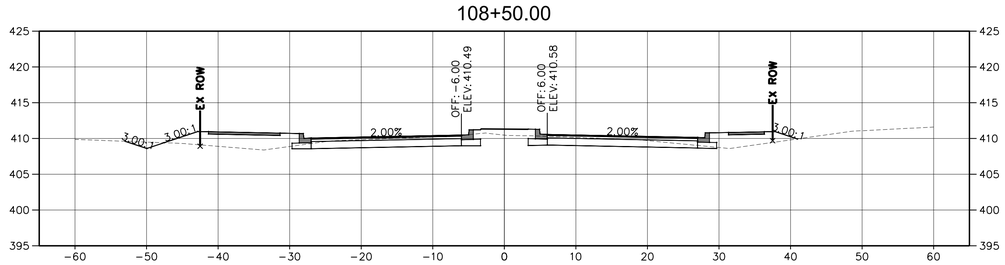
107+50.00



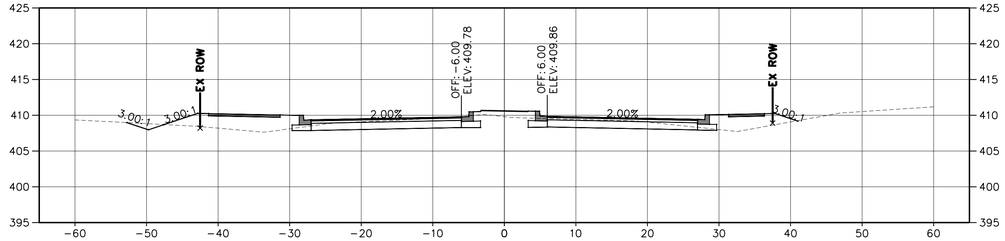
108+00.00



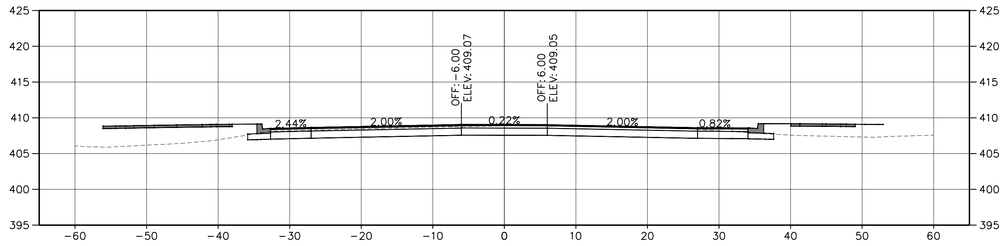
108+50.00



109+00.00



109+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-11

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

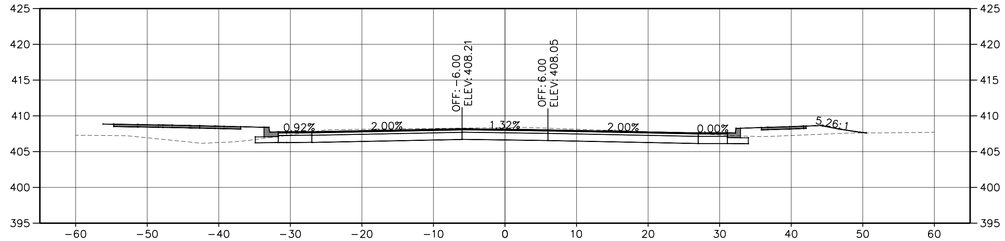
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

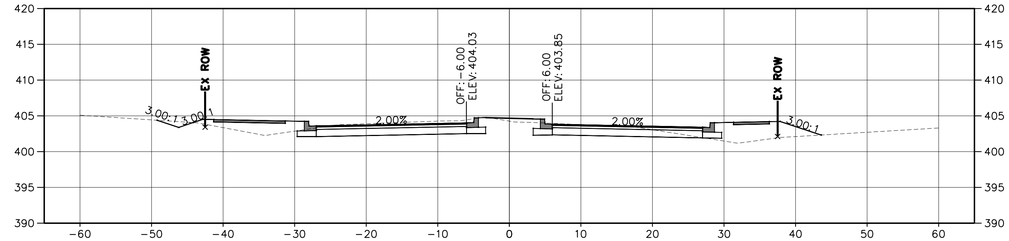
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 93 OF 106

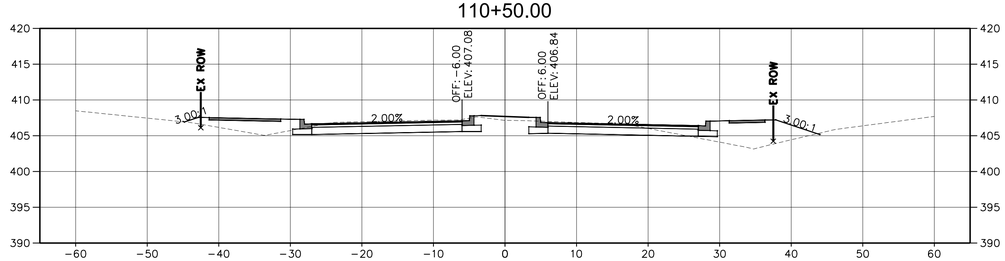
110+00.00



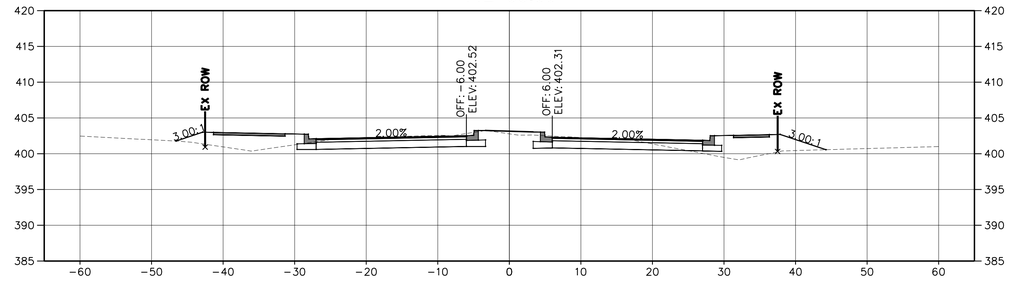
111+50.00



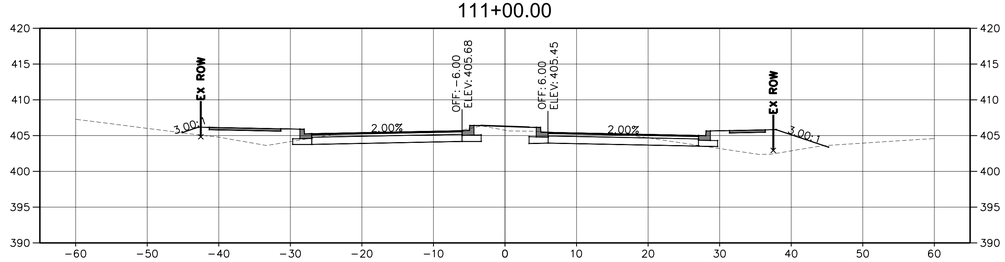
110+50.00



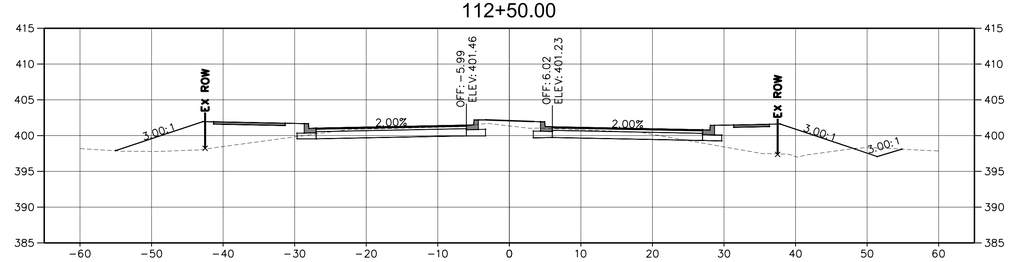
112+00.00



111+00.00



112+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-12

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

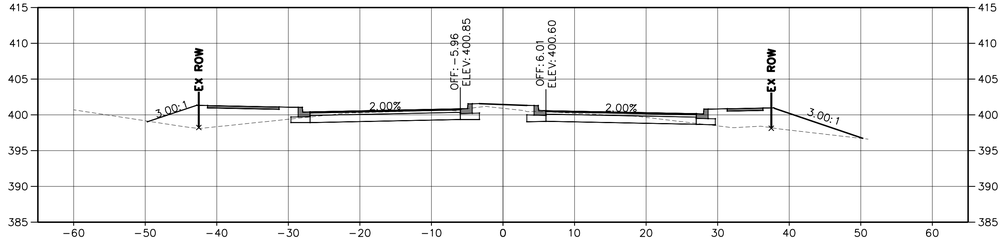
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

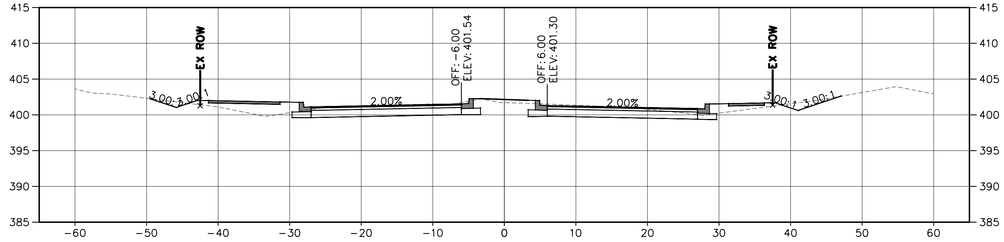
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 94 OF 106

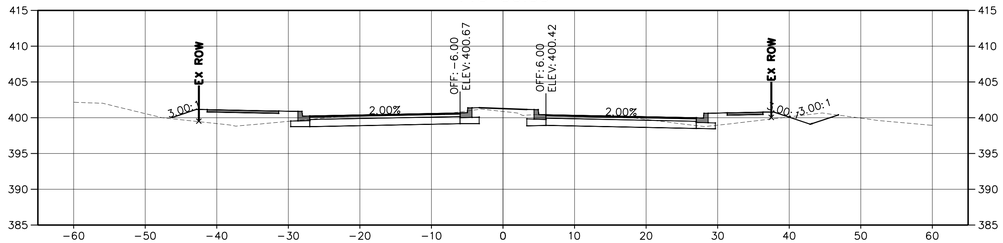
113+00.00



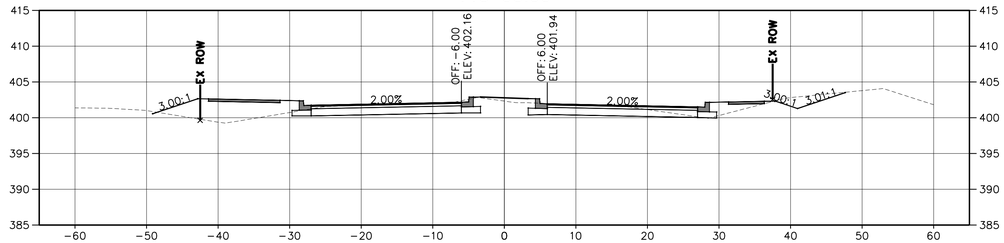
114+50.00



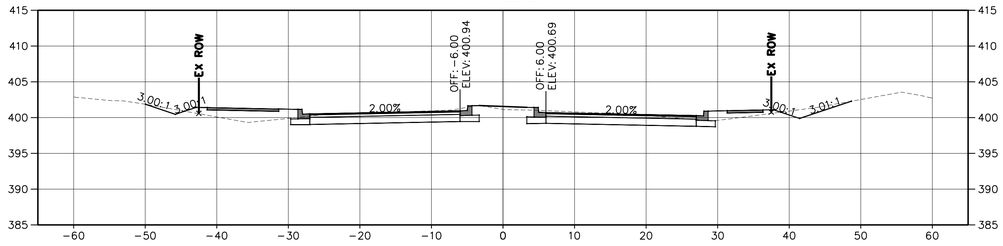
113+50.00



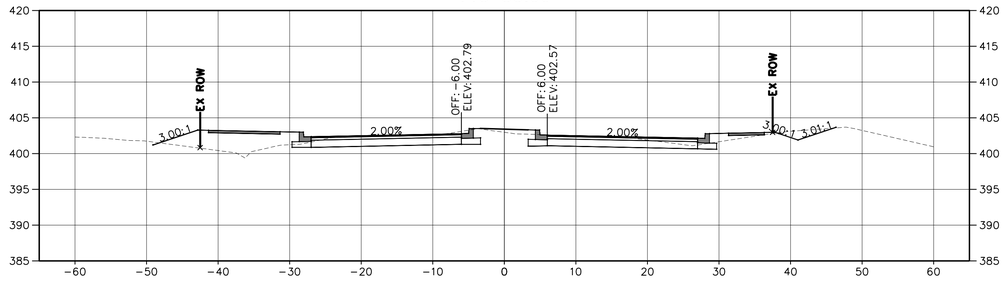
115+00.00



114+00.00



115+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-13

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

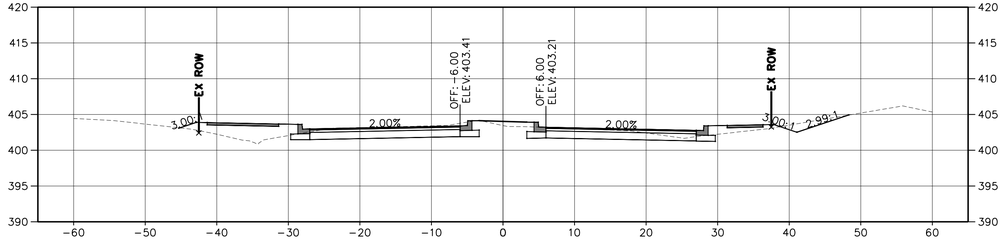
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

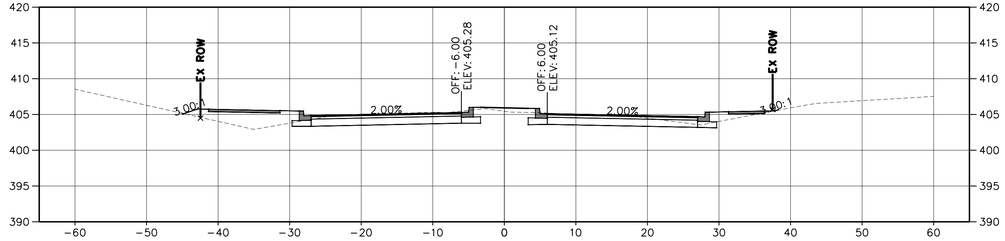
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 95 OF 106

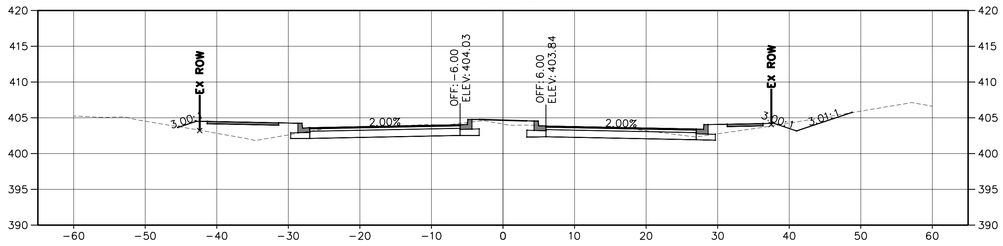
116+00.00



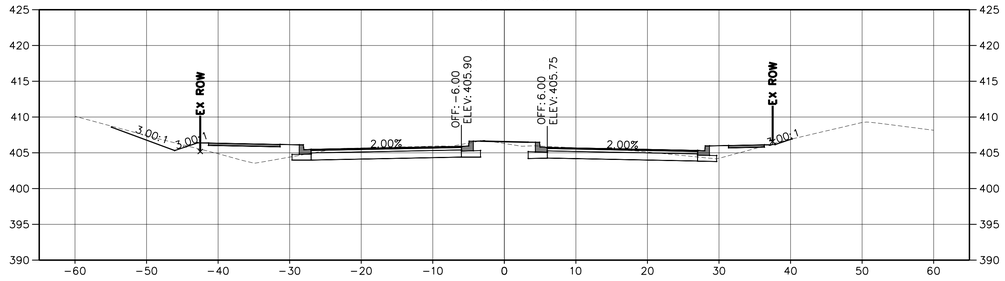
117+50.00



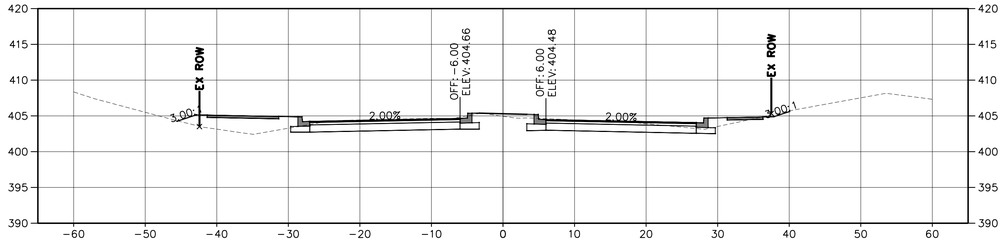
116+50.00



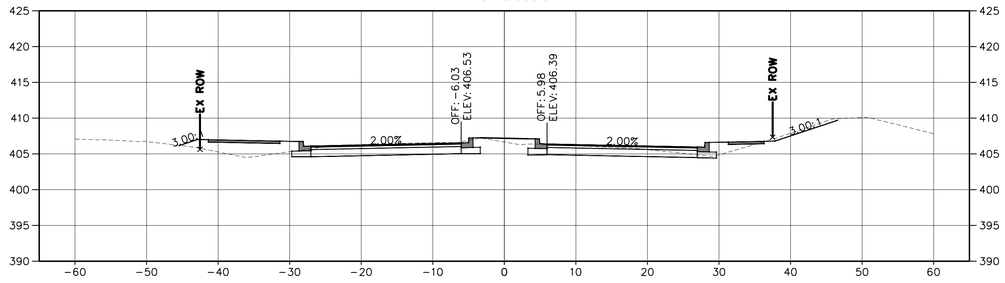
118+00.00



117+00.00



118+50.00



NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

CS-14

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

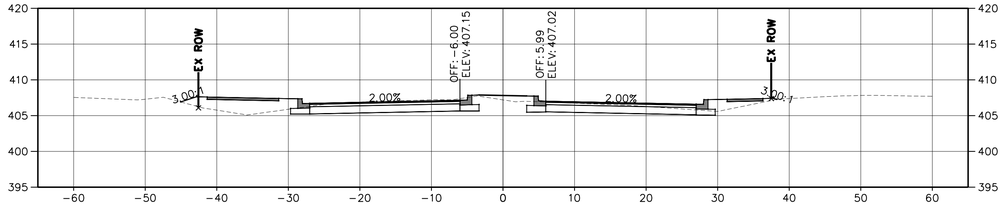
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

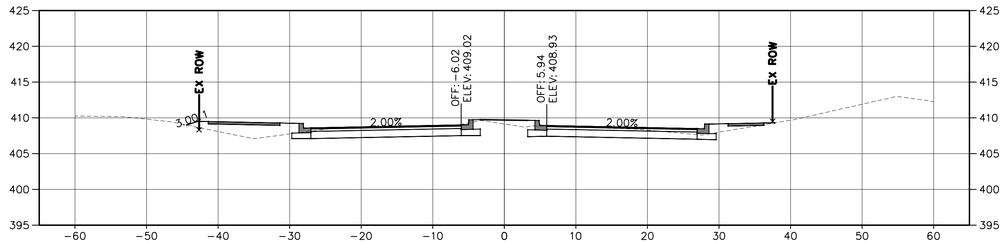
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 96 OF 106

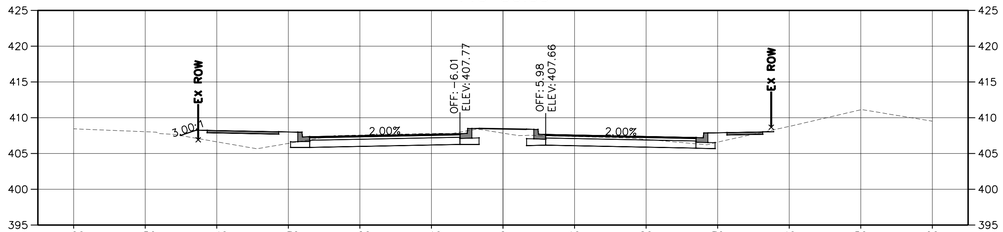
119+00.00



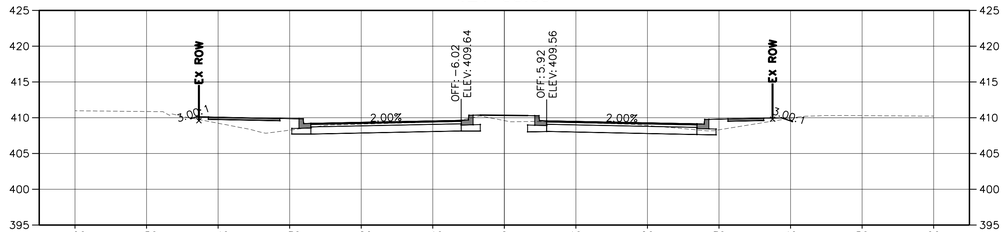
120+50.00



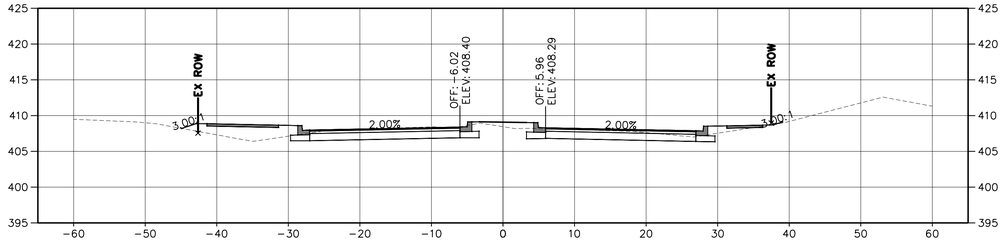
119+50.00



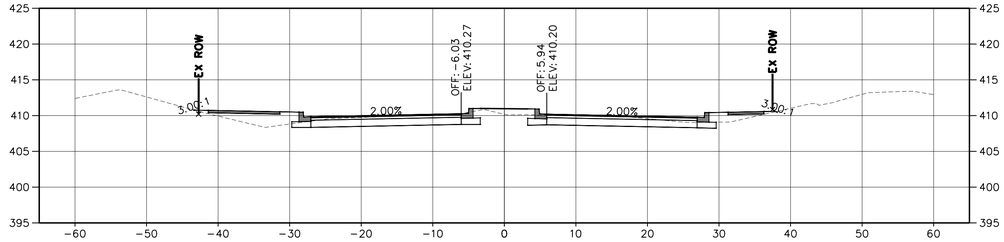
121+00.00



120+00.00



121+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-15

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

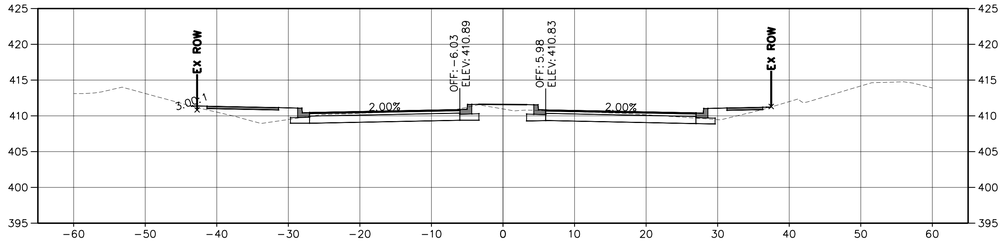
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

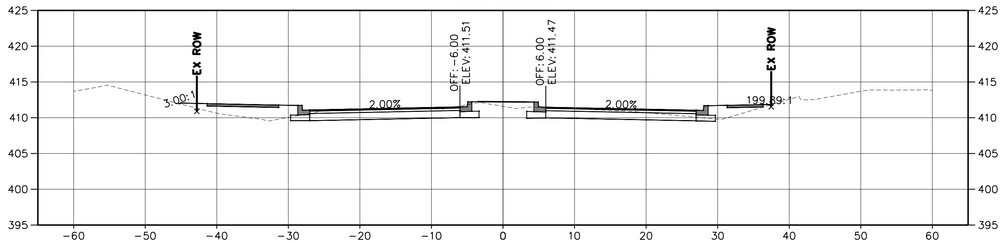
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 97 OF 106

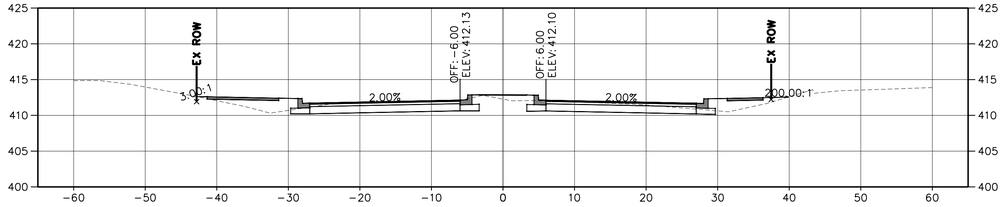
122+00.00



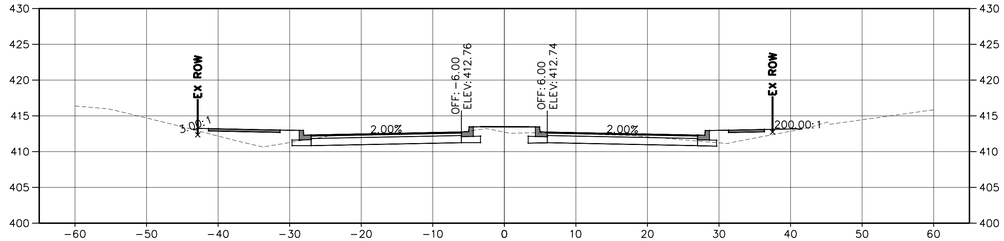
122+50.00



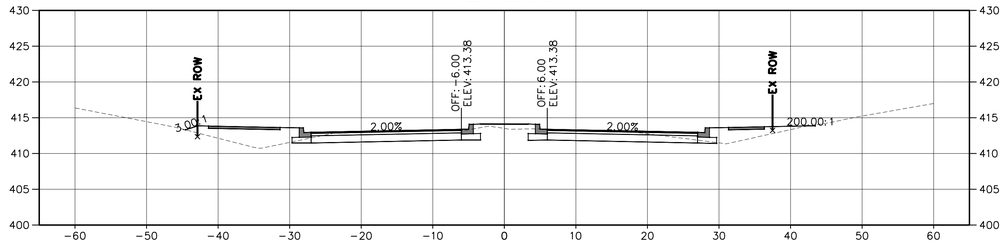
123+00.00



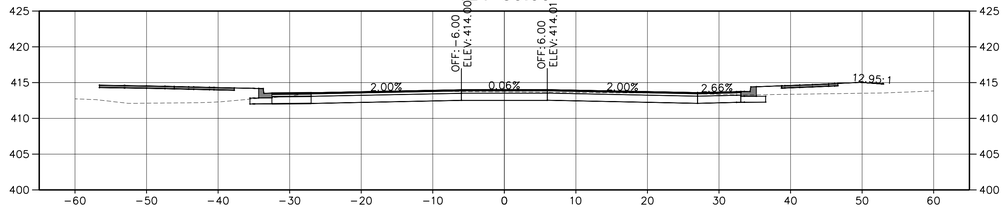
123+50.00



124+00.00



124+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-16

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

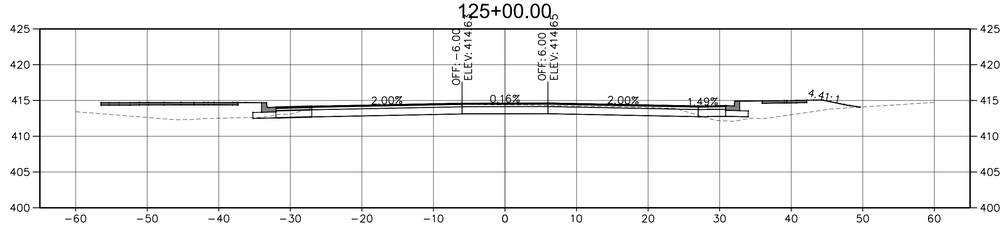
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

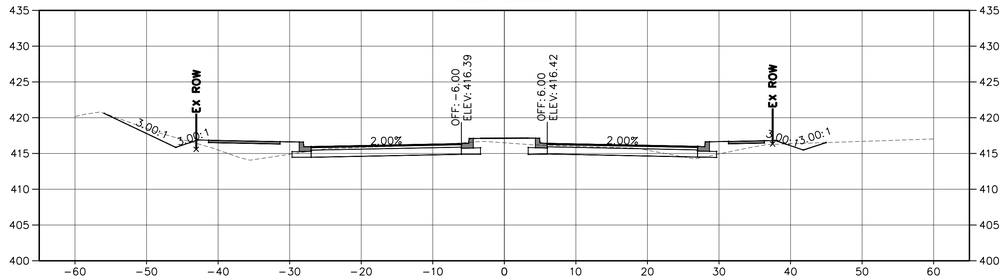
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 98 OF 106

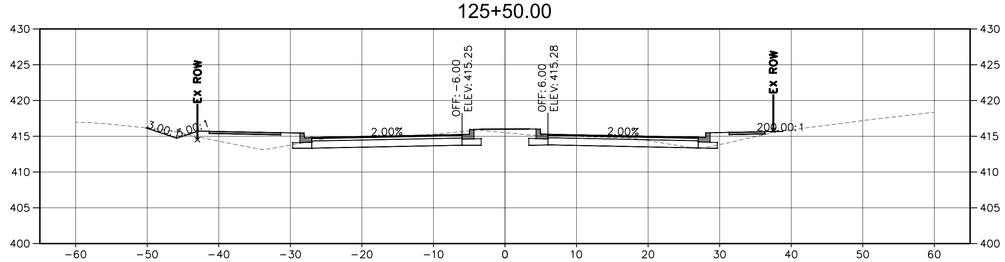
125+00.00



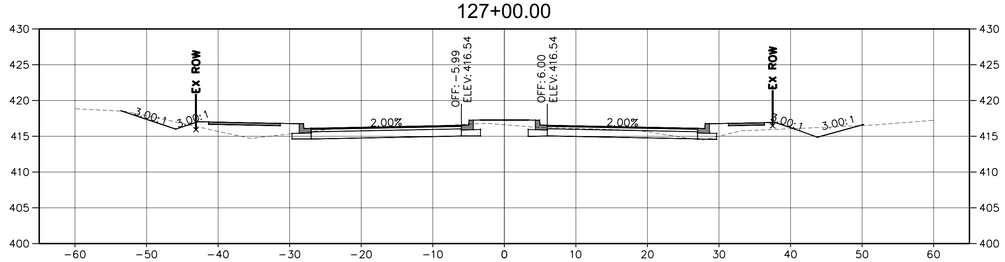
126+50.00



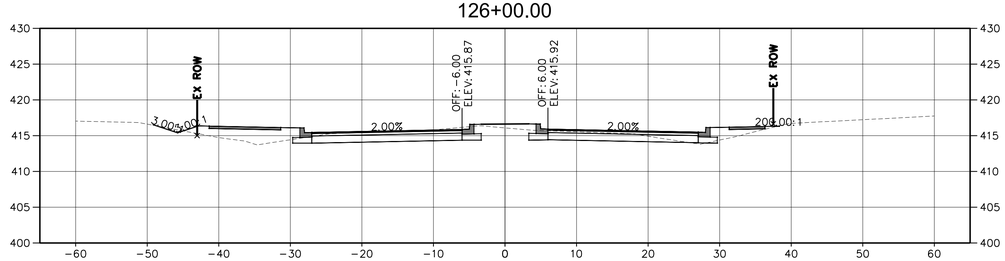
125+50.00



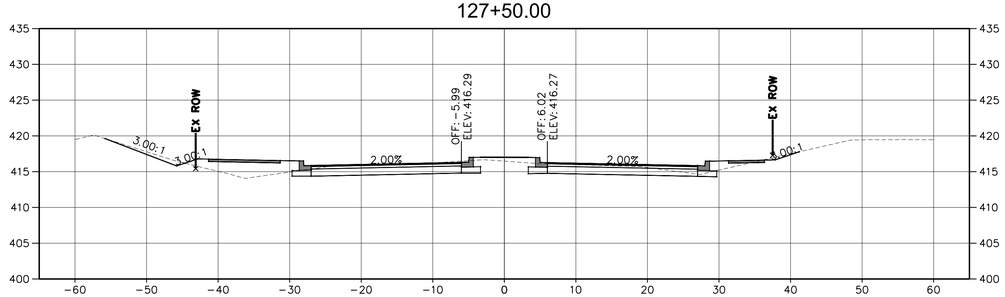
127+00.00



126+00.00



127+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-17

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

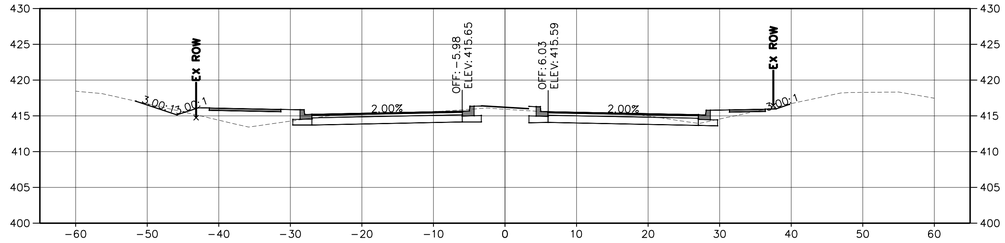
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

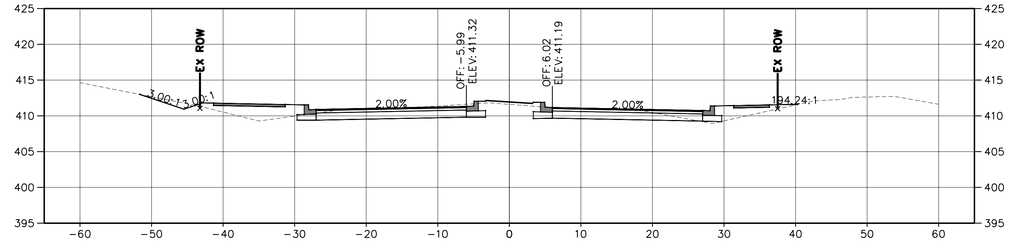
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 99 OF 106

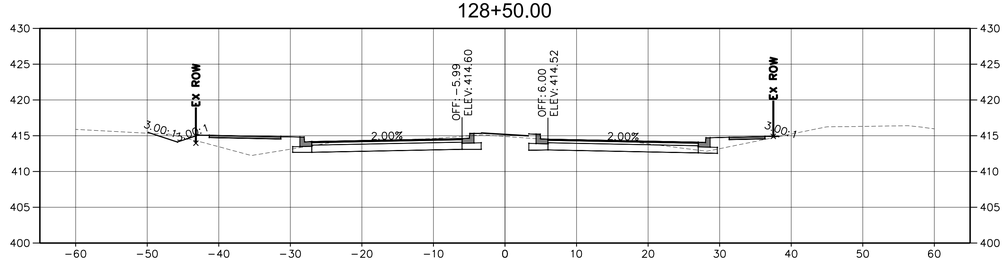
128+00.00



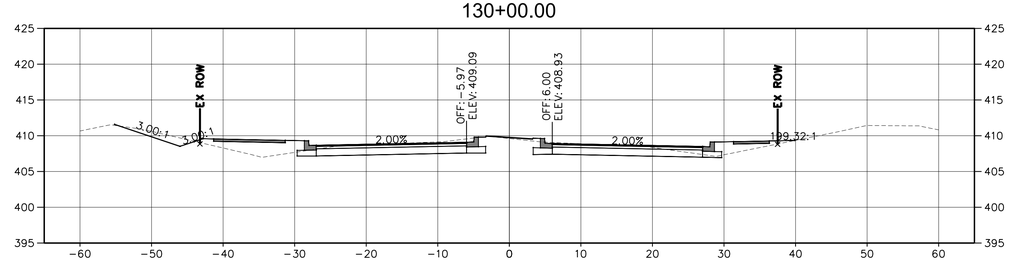
129+50.00



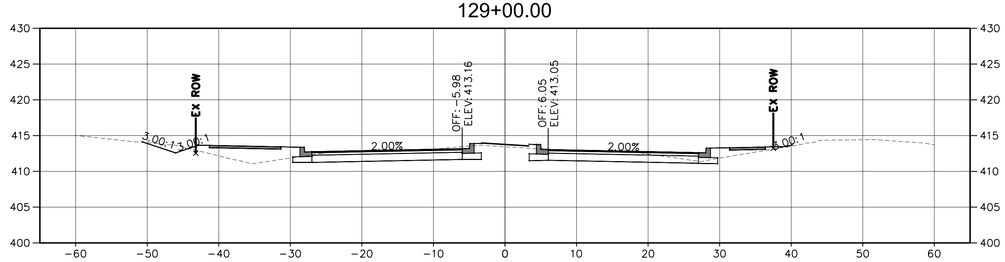
128+50.00



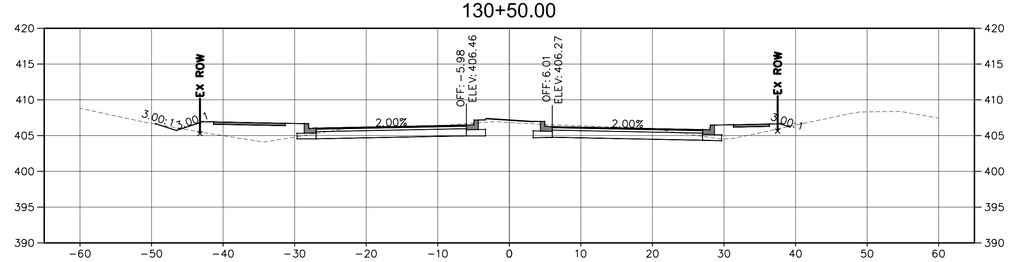
130+00.00



129+00.00



130+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-18

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

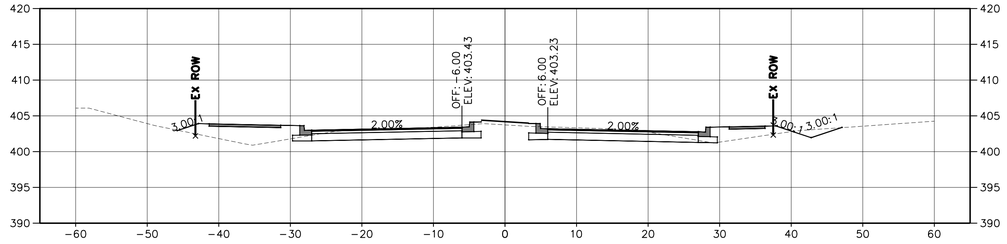
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

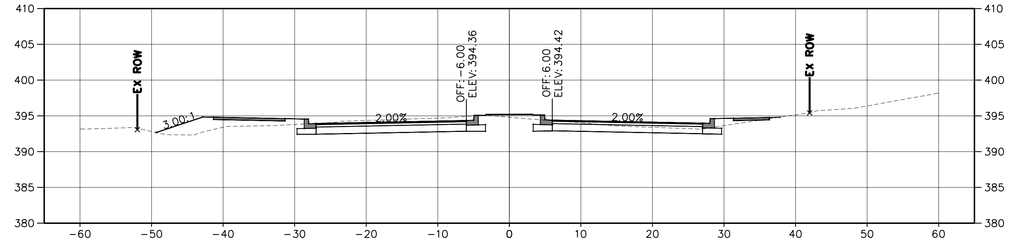
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 100OF 106

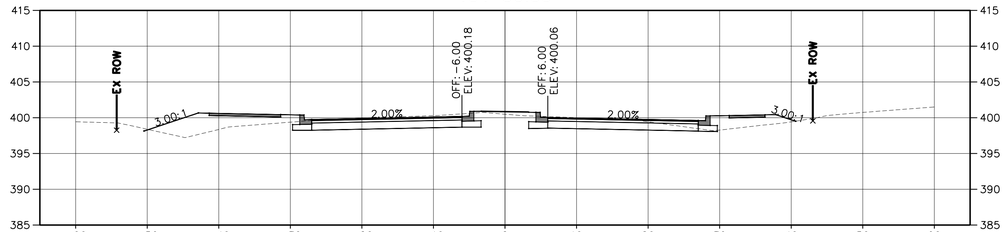
131+00.00



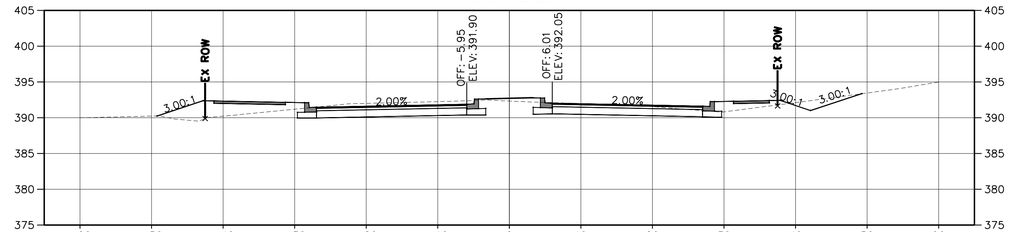
132+50.00



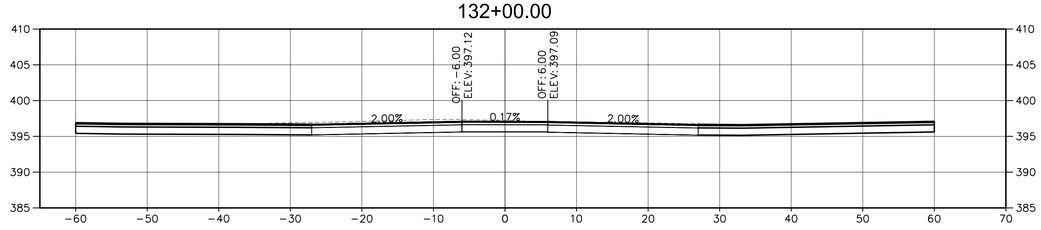
131+50.00



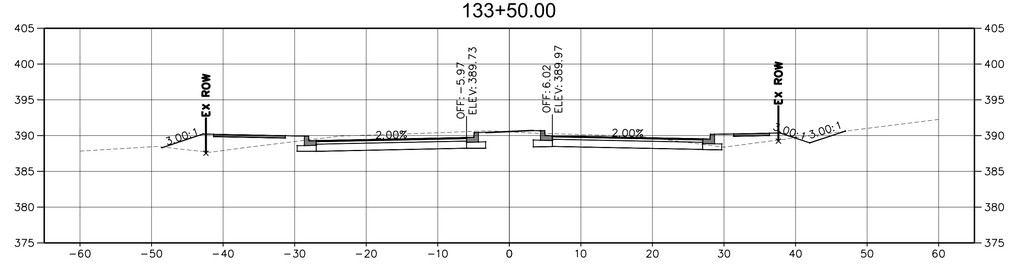
133+00.00



132+00.00



133+50.00



NOTE:
CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-19

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

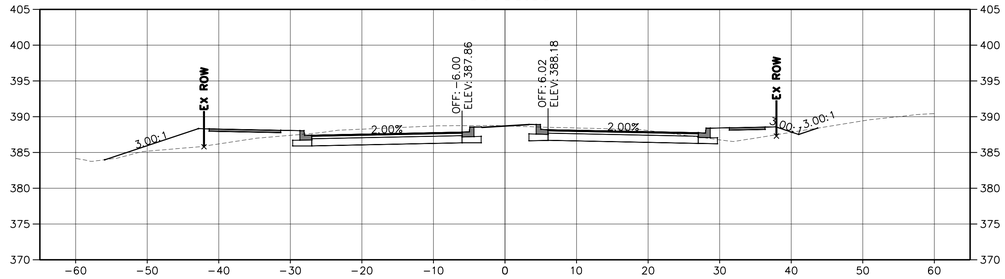
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

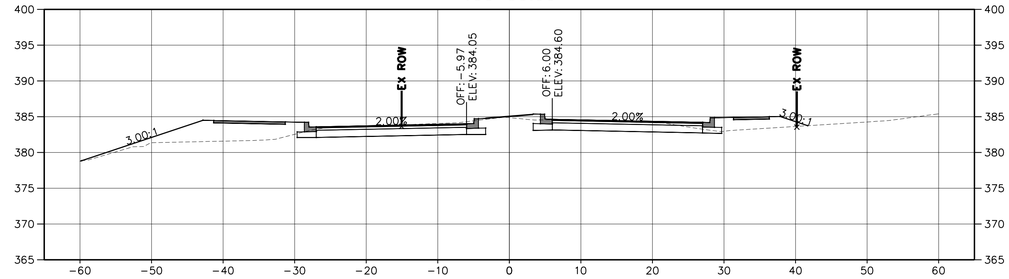
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 10 OF 106

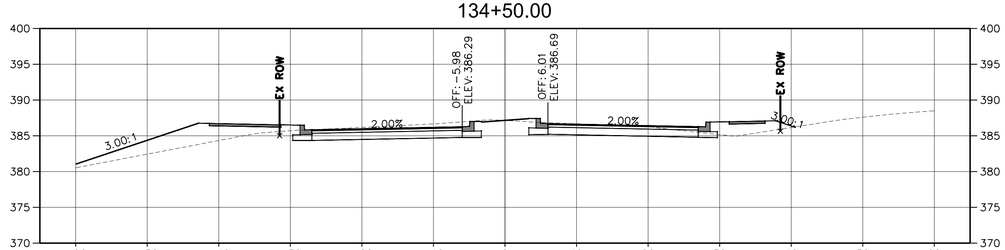
134+00.00



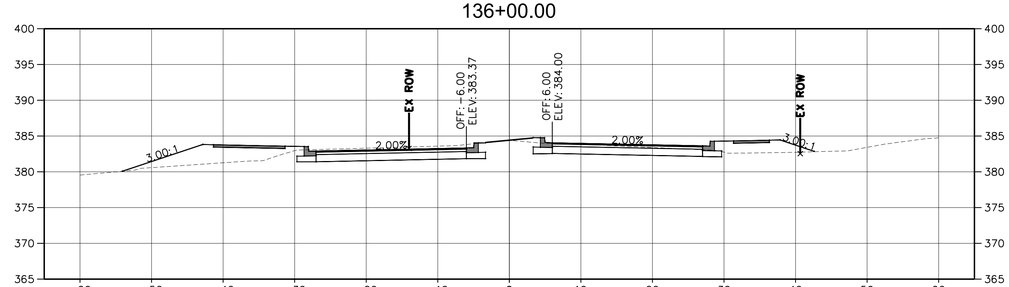
135+50.00



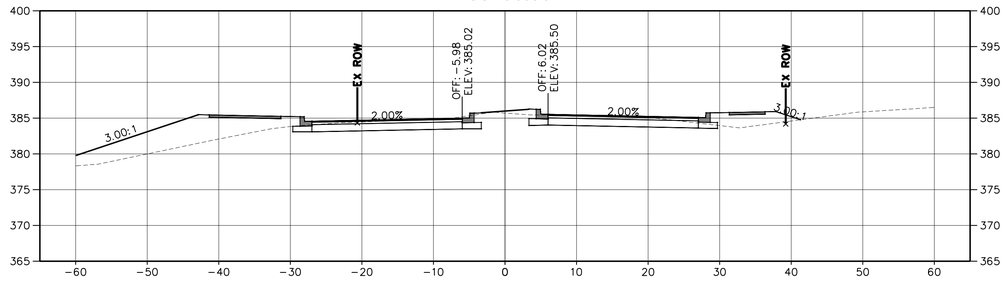
134+50.00



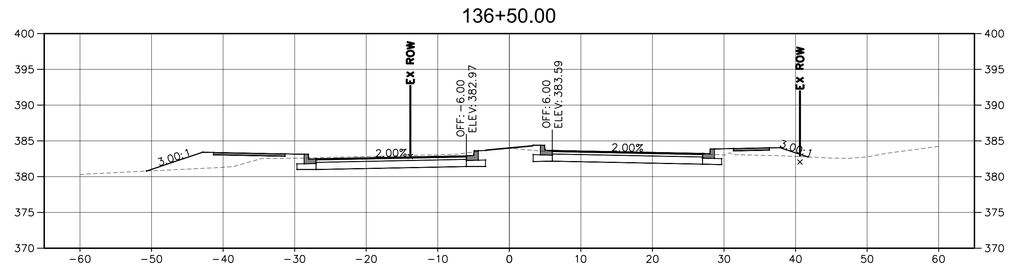
136+00.00



135+00.00



136+50.00



NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

CS-20

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

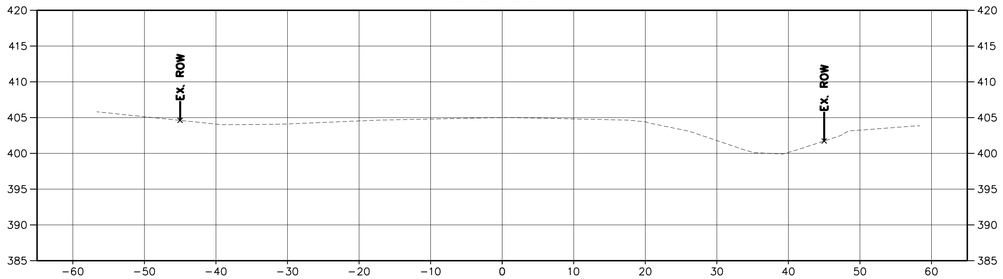
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

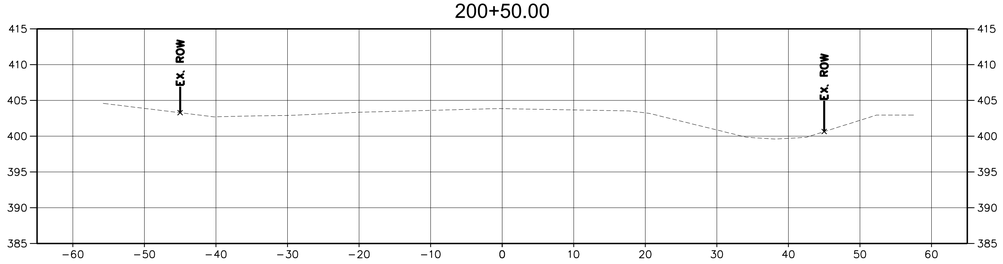
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 102OF 106

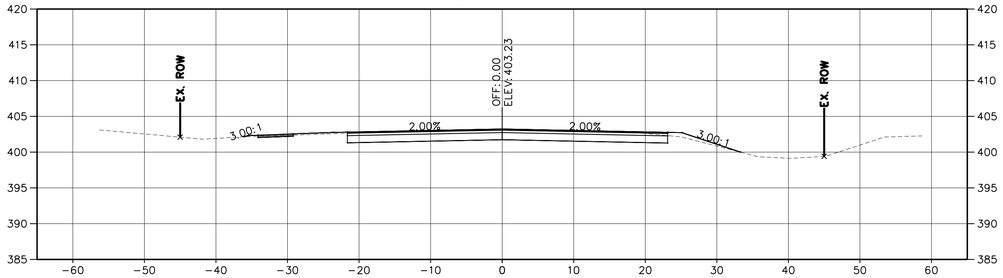
200+00.00



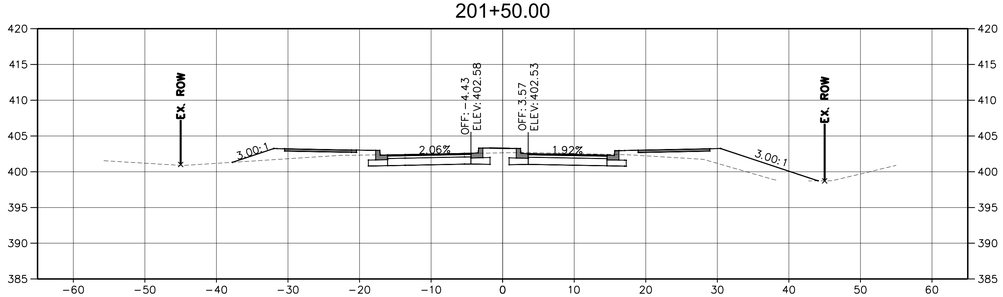
200+50.00



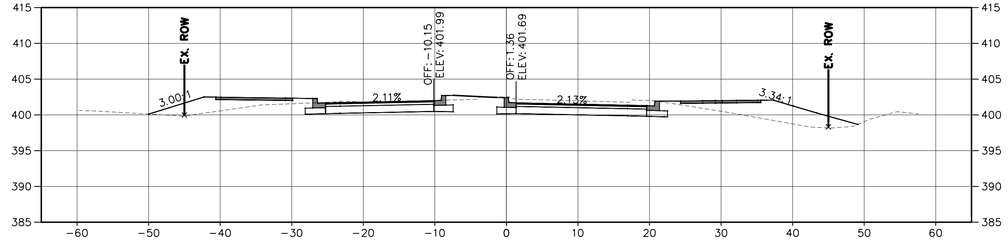
201+00.00



201+50.00



202+00.00



202+50.00

SEE ROUNDABOUT CROSS SECTIONS

203+00.00

SEE ROUNDABOUT CROSS SECTIONS

NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-6352
EMAIL: AMT1@AMTENGINEERING.COM

CS-21

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 103 OF 106

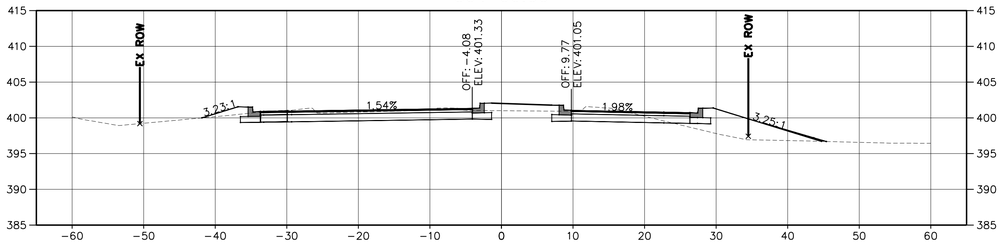
300+00.00

SEE ROUNDABOUT CROSS SECTIONS

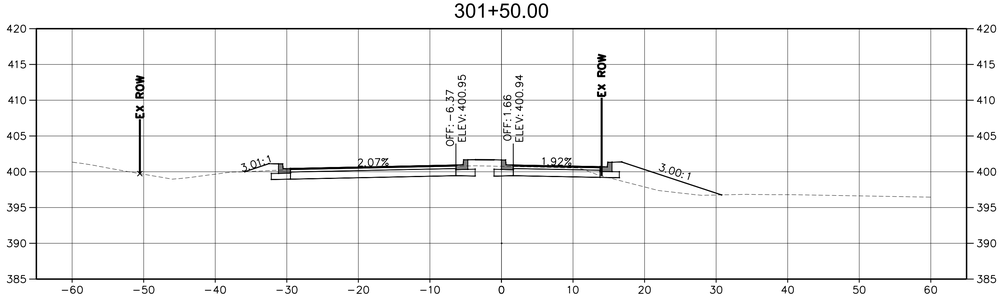
300+50.00

SEE ROUNDABOUT CROSS SECTIONS

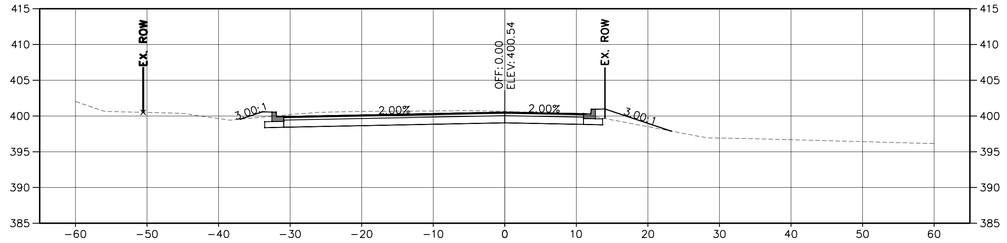
301+00.00



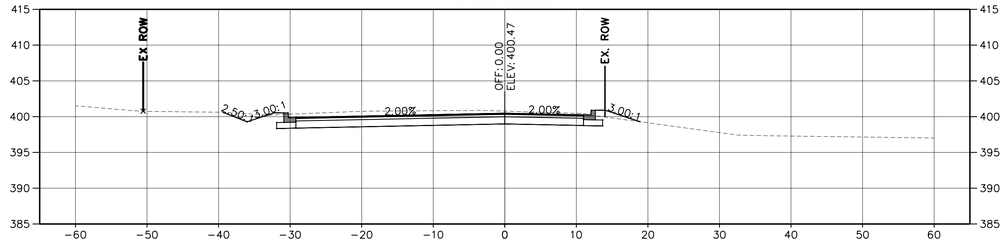
301+50.00



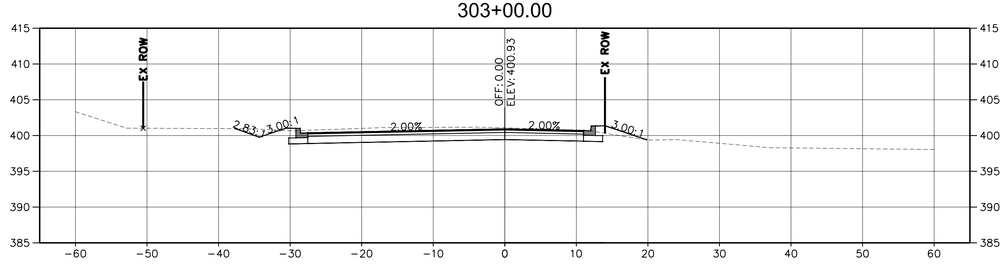
302+00.00



302+50.00



303+00.00



NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-22

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

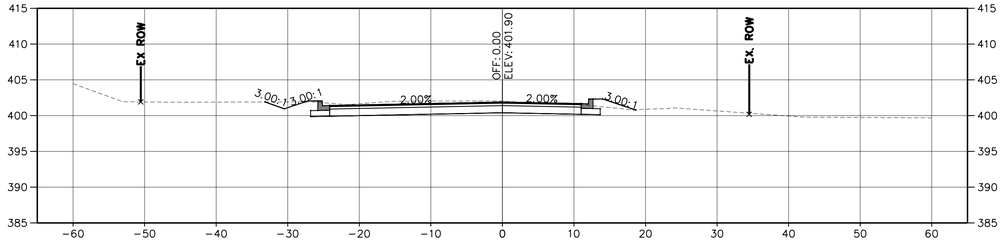
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

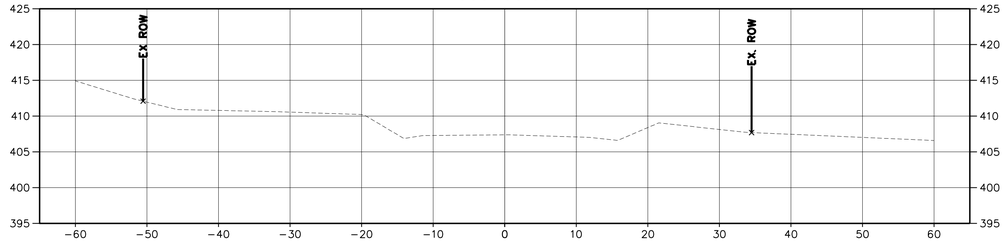
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 104 OF 106

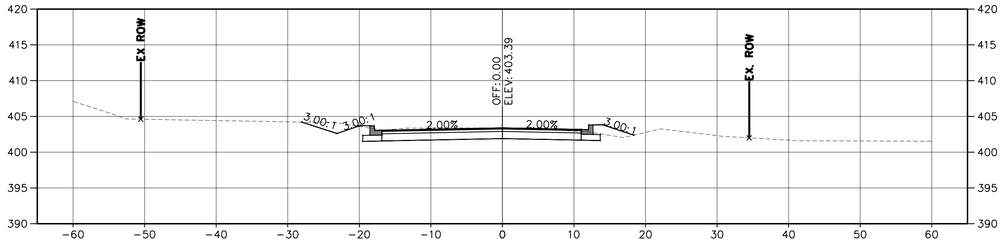
303+50.00



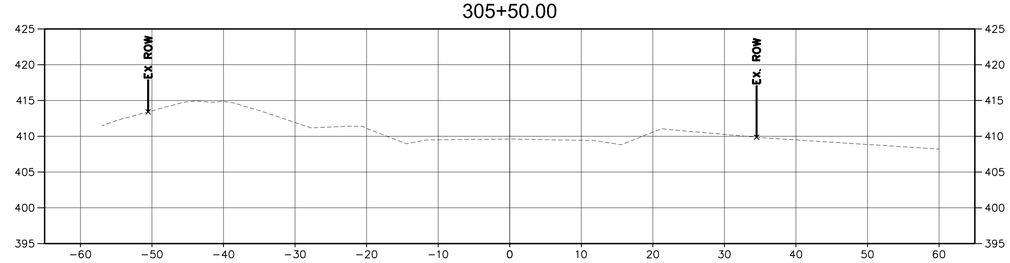
305+00.00



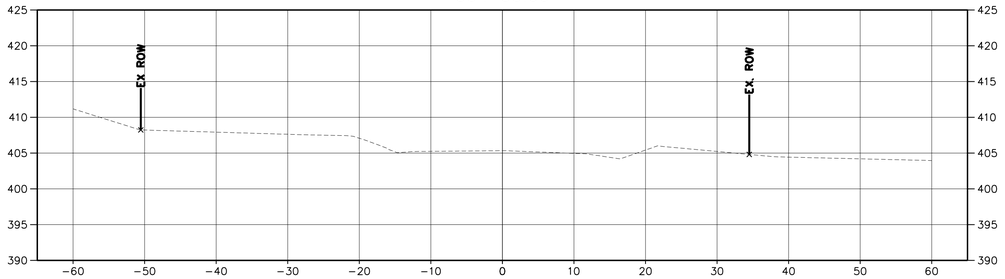
304+00.00



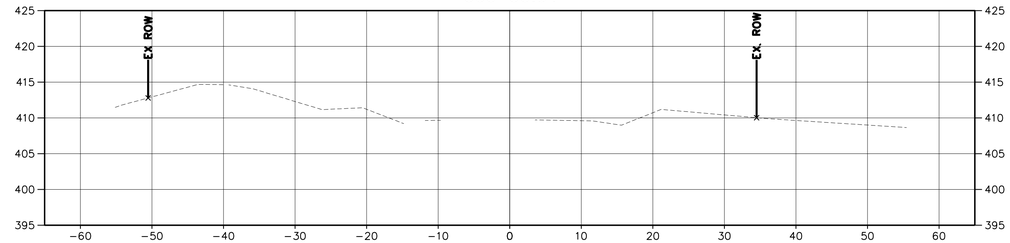
305+50.00



304+50.00



305+53.91



NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-4552
EMAIL: AMT1@AMTENGINEERING.COM

CS-23

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

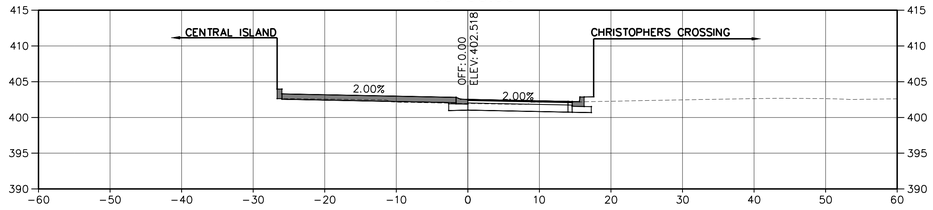
RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

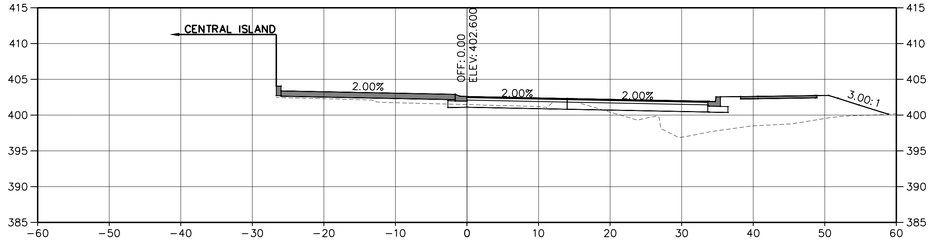
DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 105OF 106

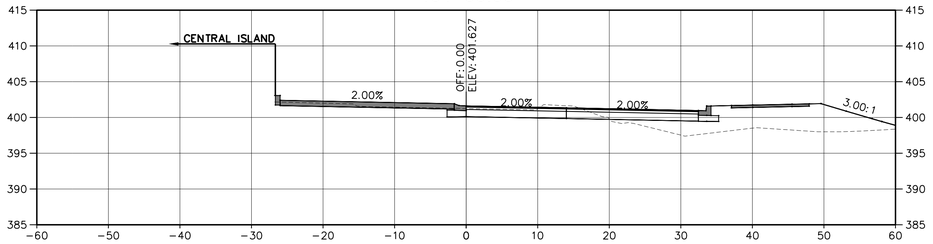
400+00.00



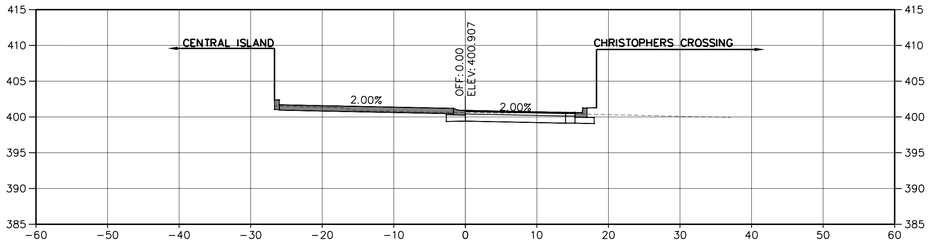
400+50.00



401+00.00



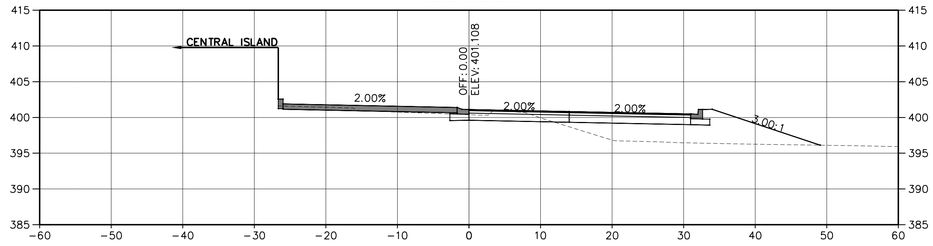
401+50.00



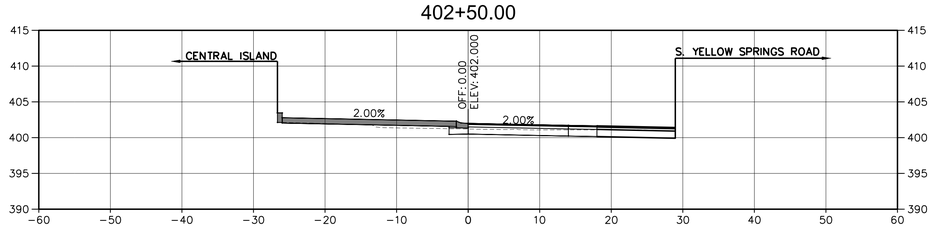
NOTE:

CROSS SECTIONS SHOWN ARE CONCEPTUAL AND ARE BASED ON ROADWAY TYPICAL SECTIONS WITH 3:1 SIDESLOPES, AND DO NOT INCLUDE ANY DRAINAGE IMPROVEMENTS SHOWN ON PLANS SUCH AS DITCHES, OUTFALLS OR STORMWATER MANAGEMENT FEATURES.

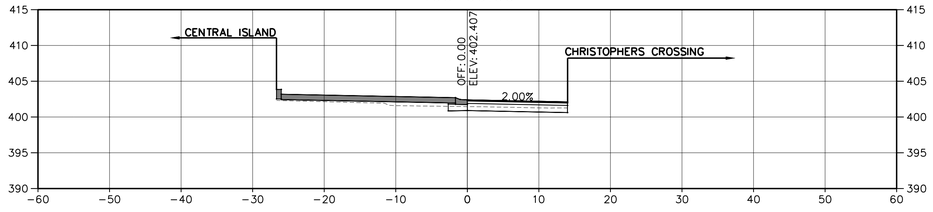
402+00.00



402+50.00



403+00.00



REVISIONS		
MARK	DATE	DESCRIPTION

REGISTRATION STAMP

A. MORTON THOMAS AND ASSOCIATES, INC.
CONSULTING ENGINEERS
901 DULANEY VALLEY ROAD, SUITE 710 TOWSON, MD 21204
(410) 752-8552
EMAIL: AMT1@AMTENGINEERING.COM

CS-24

FREDERICK COUNTY, MARYLAND
DIVISION OF PUBLIC WORKS
DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
OFFICE OF TRANSPORTATION ENGINEERING
FREDERICK COUNTY, MARYLAND

RECONSTRUCTION OF
CHRISTOPHERS CROSSING
FROM WHITTIER DRIVE TO
WALTER MARTZ /POOLE JONES ROAD

CROSS SECTIONS

DATE: SEPTEMBER 2020 SCALE: 1"=10'

AMT FILE NO. 15-0758.007 SHEET NO. 106OF 106