DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS

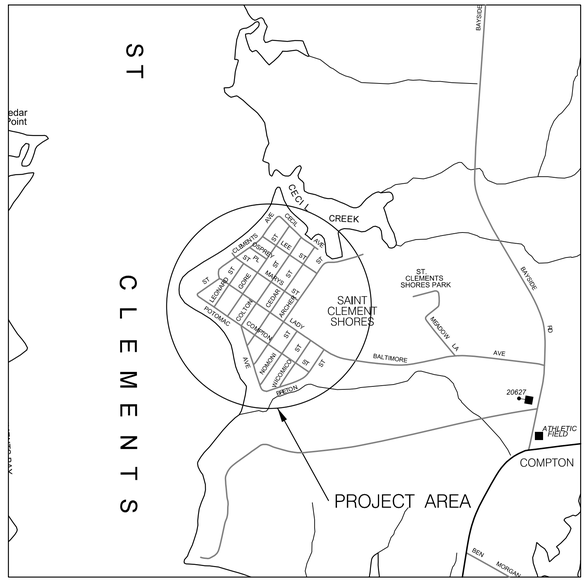
SMC-22-DPWT-120711

FINAL DESIGN PLAN

INDEX OF SHEETS

GENERAL NOTES

1. ALL CONSTRUCTION RELATED TO STORMDRAIN IMPROVEMENT SHALL BE IN ACCORDANCE WITH THE ST. MARY'S COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION (DPW&T) DESIGN AND CONSTRUCTION STANDARDS.
2. CONTRACTOR SHALL CONTACT THE ENGINEERING DEPARTMENT, ST. MARY'S COUNTY METROPOLITAN COMMISSION, FORTY–EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION. PHONE NUMBER 301–737–7400. CONTRACTOR TO ALSO CONTACT THE ENGINEERING DEPARTMENT BEFORE RESTARTING WORK AFTER WORK HAS STOPPED FOR MORE THAN FIVE DAYS.
3. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT (800)–257–7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
4. ALL CONNECTIONS TO EXISTING UTILITIES BUILT BY OTHERS SHALL BE PERFORMED UNDER THIS CONTRACT.
5. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE GROUND FIELD OBSERVATIONS, MISS UTILITY PAINT MARKINGS, AND RECORD DRAWINGS. ADDITIONAL BURIED UTILITIES OR STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES. ALL SUBSURFACE UTILITIES/STRUCTURES SHOWN ARE TO BE CONSIDERED APPROXIMATE LOCATION ONLY. UNDERGROUND UTILITIES MUST BE VERIFIED BY TEST PITS AND PROTECTED DURING CONSTRUCTION. IN CASE OF BREAKAGE OF ANY EXISTING SEWER PIPE, RESULTANT SEWAGE OVERFLOW AND/OR SPILL SHALL IMMEDIATELY BE REPORTED TO THE OWNER. THE CONTRACTOR SHALL BE LIABLE FOR ALL SEWAGE OVERFLOW AND/OR SPILL CLEAN UP COSTS INCURRED BY THE OWNER AND/OR STATE OF MARYLAND.
6. THE CONTRACTOR SHALL PROTECT ALL TREES FROM DAMAGE BEYOND THE LIMITS OF DISTURBANCE. ANY DAMAGE SHALL BE RECTIFIED TO THE SATISFACTION OF THE OWNER.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS NECESSARY FOR CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF ANY CHANGES OR CONDITIONS REQUIRED BY ANY PERMIT.
8. THESE DRAWINGS WERE PREPARED BASED ON AS–BUILT AND OTHER CONSTRUCTION DOCUMENTS, WHICH MAY OR MAY NOT BE COMPLETELY ACCURATE. SCALING OF THESE DRAWINGS SHALL BE FOR ESTIMATING PURPOSES ONLY AND ALL DIMENSIONS SCALED SHALL BE CONSIDERED APPROXIMATE AND SHALL BE FIELD VERIFIED.
9. CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, STANDARDS, SPECIFICATIONS AND REQUIREMENTS.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS IN ACCORDANCE WITH ST. MARY'S COUNTY AND MARYLAND STATE HIGHWAY ADMINISTRATION (SHA) STANDARD SPECIFICATIONS, LATEST EDITION. REFER TO DWG. MOT1 FOR ADDITIONAL REQUIREMENTS.
11. ONLY THE AMOUNT OF TRENCH THAT CAN BE OPENED, WORKED IN AND THEN STABILIZED IN A WORK DAY SHALL BE DONE SO. IF STABILIZATION DOES NOT OCCUR AT THE END OF THE WORK DAY, THEN APPROPRIATE EROSION CONTROLS, SEDIMENT CONTROLS AND SAFETY CONTROLS SHALL BE INSTALLED.
12. A PRE–CONSTRUCTION MEETING IS REQUIRED PRIOR TO START OF CONSTRUCTION. MATERIALS DELIVERED TO THE SITE FOR WATER AND SEWER CONSTRUCTION MUST BE INSPECTED BY THE OWNER PRIOR TO START OF WORK.



LOCATION MAP

SCALE: 1" = 1000'

HORIZONTAL DATUM	NAD 83 /91
VERTICAL DATUM	NAVD 88

TOPOGRAPHICAL DATA FROM SEPTEMBER, 2022 SURVEY BY KRIS CONSULTANTS, LLC

APPROVED FOR CONSTRUCTION

XXXXXXXXXXX, P.E.
DPW&T ST. MARY'S COUNTY

DATE:

ST. MARY'S COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVAL DATE: _____

DIRECTOR: _____

SOIL CONSERVATION DISTRICT

OWNER: ST. MARY'S COUNTY GOVERNMENT

DEVELOPER: ST. MARY'S COUNTY GOVERNMENT

APPLICANT: ST. MARY'S COUNTY GOVERNMENT

VOLUME OF CUT: TBD
VOLUME OF FILL: TBD
TOTAL DISTURBED AREA: 4.88 ACRES
AREA TO BE VEGETATIVELY STABILIZED: TBD
TOTAL ACRES OF SITE: 4.88 ACRES

OWNER'S /DEVELOPER'S CERTIFICATION

ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT, OR ALL OF THESE, WILL BE DONE PURSUANT TO THIS PLAN AND ALL THAT RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPT OF ENVIRONMENT APPROVED TRAINING PROGRAM BEFORE BEGINNING THE PROJECT.

SIGNATURE OWNER /DEVELOPER _____ DATE _____

PRINT NAME _____ TITLE _____

DESIGN CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES 1 & II INCLUDING SUPPLEMENTS, THE ENVIRONMENT ARTICLE SECTIONS 4–101 THROUGH 116 AND SECTIONS 4–201 AND 215, AND THE CODE OF MARYLAND REGULATIONS (COMAR) 26.17.01 AND COMAR 26.17.02 FOR EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT, RESPECTIVELY.

DESIGNER'S SIGNATURE _____ DATE 01/18/2024

PRINT NAME ARUN GURUNG

MARYLAND LICENSE NO. 51941
(PE) R.L.S., R.L.A., OR R.A.
(CIRCLE ONE)

SEAL

CONSULTANT CERTIFICATION

I HEREBY CERTIFY THAT THE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROVED EROSION AND SEDIMENT CONROL ORDINANCES, REGULATIONS, STANDARDS, AND CRITERIA.

LICENSE NO. 51941 EXPIRATION DATE 12/10/2025

DESIGN DOCUMENT ONLY NOT FOR CONSTRUCTION

BRUDIS & ASSOCIATES, INC.
Consulting Engineers
11000 Broken Land Parkway, Suite 450
Columbia, Maryland 21044
Phone 410-884-3607
www.brudis.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAW OF THE STATE OF MARYLAND.

LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:	DK/AG
DRAWN:	AM
CHECKED:	MB
DATE:	02/09/23
SCALE:	

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

TITLE SHEET

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. **T–01**

SHEET 1 OF 56

PLOTTED: $DATE$
FILE: $FILE$

LEGEND

- DRAINAGE AREA BOUNDARY
- PROPOSED SWALE
- EXISTING CONTOUR
- W_x EXISTING WATER LINE
- SS_x EXISTING SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE
- PROPOSED RIPRAP

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SCALE:	1"=30'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
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DRAINAGE IMPROVEMENT PLAN

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. DD-01

SHEET 02 OF 56

PLOTTED: $DATE$
FILE: $FILE$

LEGEND

- DRAINAGE AREA BOUNDARY
- PROPOSED SWALE
- EXISTING CONTOUR
- W_x EXISTING WATER LINE
- SS_x EXISTING SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE
- PROPOSED RIPRAP

30′ 0 30′ 60′

SCALE: 1"=30′

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DRAINAGE
IMPROVEMENT PLAN

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO.
DD-02

SHEET
3 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET DD-01

MATCHLINE SEE SHEET DD-04

MATCHLINE SEE SHEET DD-05

N

N 224700
E 1396500

N 224300
E 1396300

E 1397000
N 224300

OSPREY PL

ST CLEMENTS AVENUE

GORE STREET

COLTON STREET

ST MARYS STREET

LEONARD STREET

CLASS I RIPRAP
L: 7'
W: 9'
T: 1'

39618 OSPREY PL
39624 OSPREY PL
39630 OSPREY PL
39627 OSPREY PL
22370 GORE ST.
22363 COLTON ST.
22350 COLTON ST.
22353 COLTON ST.
22360 GORE ST.
22344 COLTON ST.
22343 COLTON ST.
39606 ST MARYS ST.
39610 ST MARYS ST.
39618 ST MARYS ST.
39613 ST MARYS ST.
39621 ST MARYS ST.
39603 ST MARYS ST.
22316 ST CLEMENTS AVE
22338 LEONARD ST.
22340 GORE ST.
22350 GORE ST.
39639 ST MARYS ST.
39649 ST MARYS ST.
22323 COLTON ST.

LEGEND

- DRAINAGE AREA BOUNDARY
- PROPOSED SWALE
- EXISTING CONTOUR
- W_x EXISTING WATER LINE
- SS_x EXISTING SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE
- PROPOSED RIPRAP

30′ 0 30′ 60′
SCALE: 1"=30′

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DRAINAGE
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ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO.
DD-03

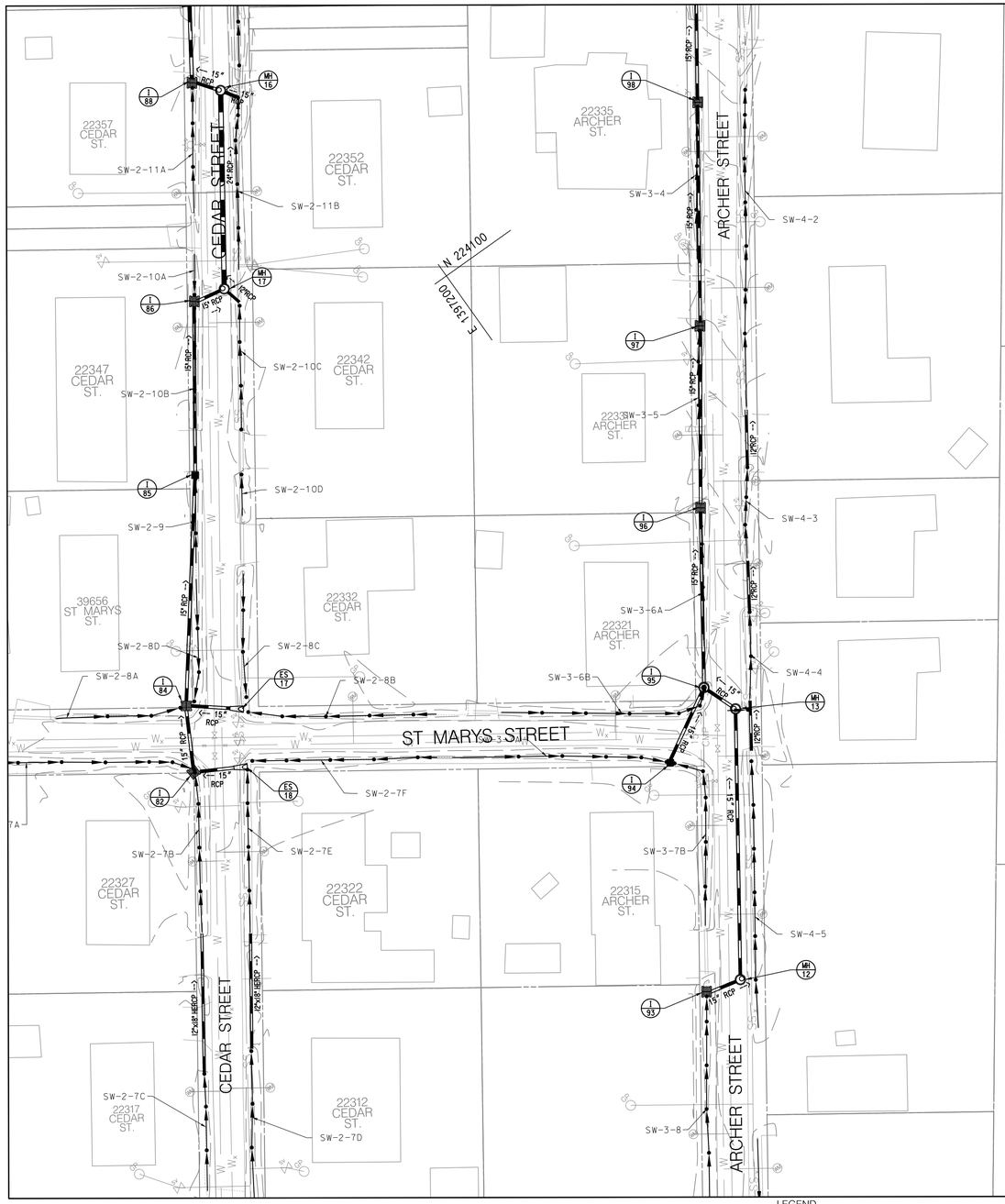
SHEET
4 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET DD–01

MATCHLINE SEE SHEET DD–02

MATCHLINE SEE SHEET DD–03



MATCHLINE SEE SHEET DD–06

MATCHLINE SEE SHEET DD–07

LEGEND

- DRAINAGE AREA BOUNDARY
- PROPOSED SWALE
- EXISTING CONTOUR
- W_x EXISTING WATER LINE
- SS_x EXISTING SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE

30′ 0 30′ 60′

SCALE: 1"=30′

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DRAINAGE IMPROVEMENT PLAN

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. DD-04

SHEET 5 OF 56

PLOTTED: $DATE$
FILE: $FILE$

LEGEND

- DRAINAGE AREA BOUNDARY
- PROPOSED SWALE
- EXISTING CONTOUR
- EXISTING WATER LINE
- EXISTING SEWER LINE (SS x)
- PROPOSED PIPE
- EXISTING PIPE
- PROPOSED RIPRAP

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DRAINAGE IMPROVEMENT PLAN

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. DD-05

SHEET 6 OF 56

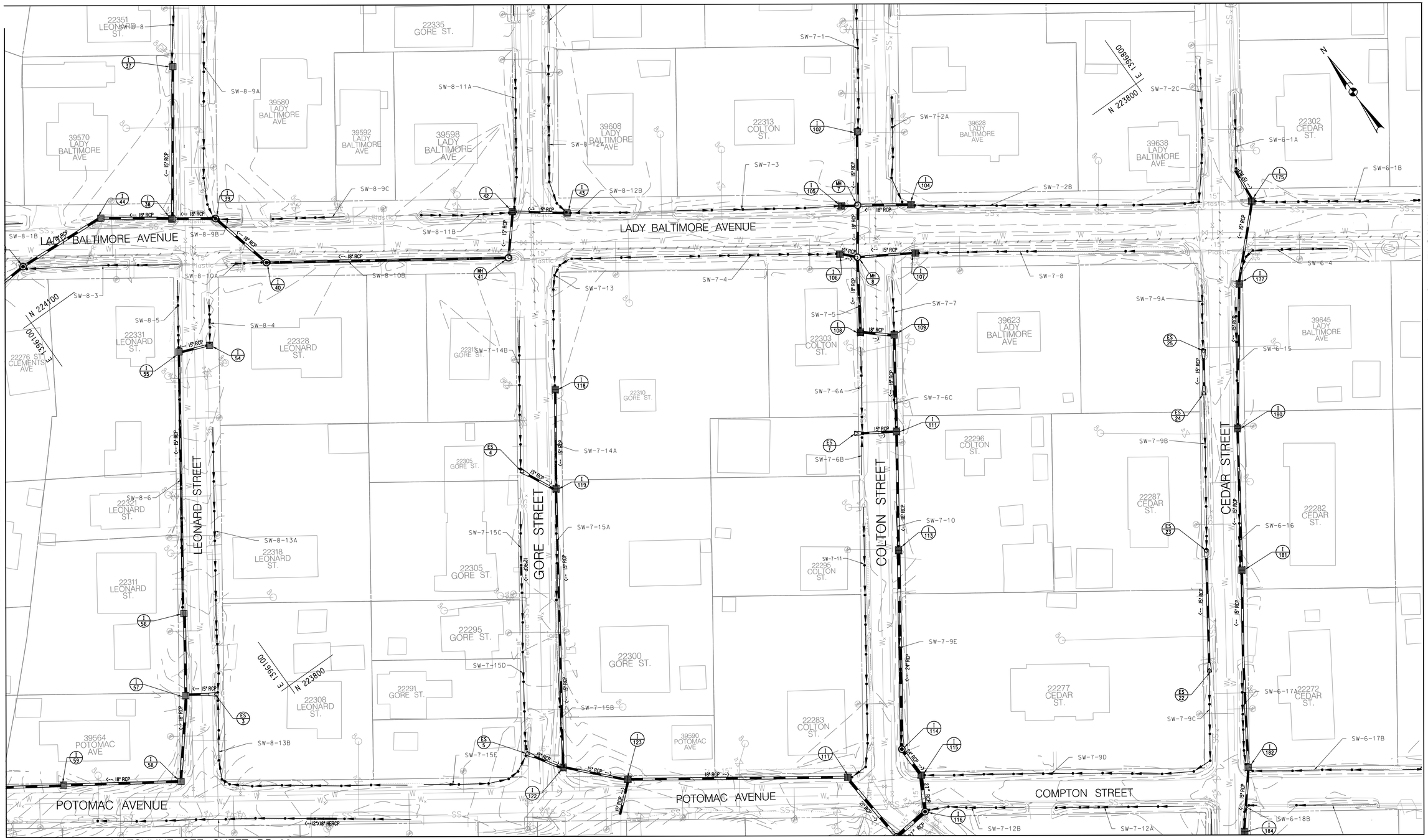
PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET DD-03

MATCHLINE SEE SHEET DD-04

MATCHLINE SEE SHEET DD-05

MATCHLINE SEE SHEET DD-07



LEGEND

- DRAINAGE AREA BOUNDARY
- PROPOSED SWALE
- EXISTING CONTOUR
- W_x EXISTING WATER LINE
- SS_x EXISTING SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE

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ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. DD-06

SHEET 7 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET DD-04

MATCHLINE SEE SHEET DD-06

MATCHLINE SEE SHEET DD-09

MATCHLINE SEE SHEET DD-10

LEGEND

- DRAINAGE AREA BOUNDARY
- DITCH FLOW LINE
- EXISTING CONTOUR
- W_x WATER LINE
- SS_x SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE

30' 0 30' 60'

SCALE: 1"=30'

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DRAINAGE IMPROVEMENT PLAN

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

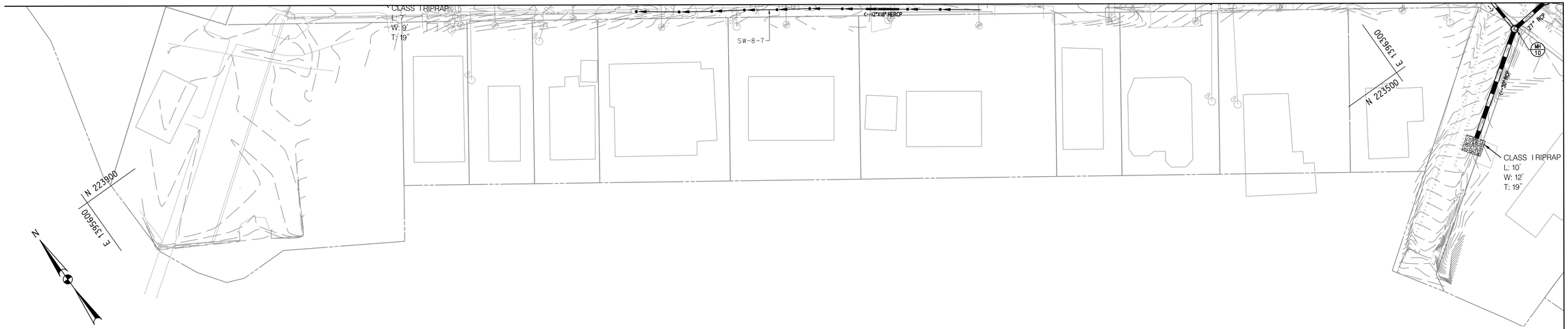
DWG NO. DD-07

SHEET 08 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET DD-05

MATCHLINE SEE SHEET DD-06



MATCHLINE SEE SHEET DD-09

LEGEND

- DRAINAGE AREA BOUNDARY
- PROPOSED SWALE
- EXISTING CONTOUR
- W_x EXISTING WATER LINE
- SS_x EXISTING SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE
- PROPOSED RIPRAP

E 1395600
N 223500

30′ 0 30′ 60′
SCALE: 1"=30′

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DRAINAGE
IMPROVEMENT PLAN

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO.
DD-08

SHEET
9 OF 56

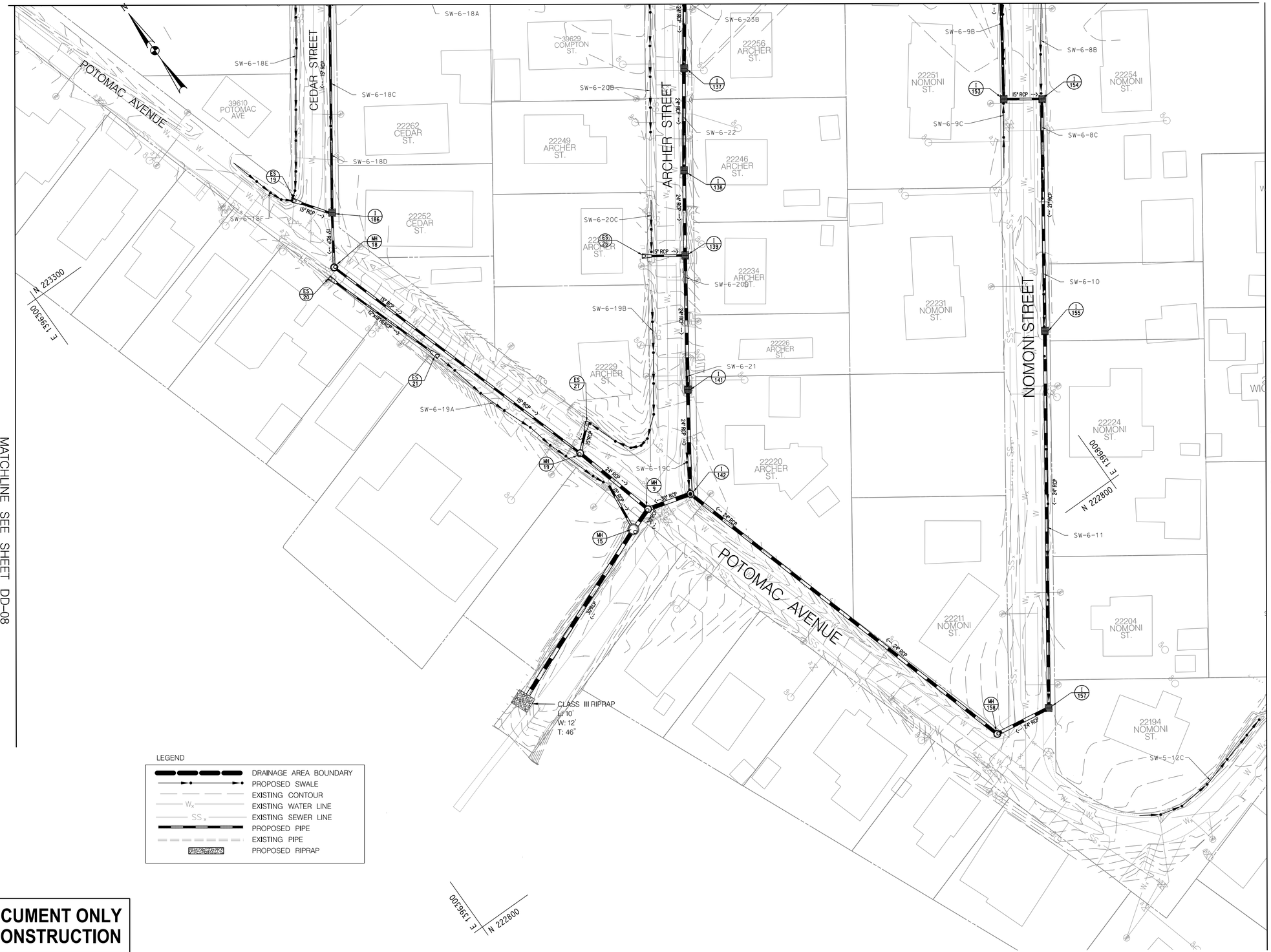
PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET DD-06

MATCHLINE SEE SHEET DD-07

MATCHLINE SEE SHEET DD-08

MATCHLINE SEE SHEET DD-10



LEGEND

- DRAINAGE AREA BOUNDARY
- PROPOSED SWALE
- EXISTING CONTOUR
- W_x EXISTING WATER LINE
- SS_x EXISTING SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE
- PROPOSED RIPRAP

30' 0 30' 60'

SCALE: 1" = 30'

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DRAINAGE IMPROVEMENT PLAN

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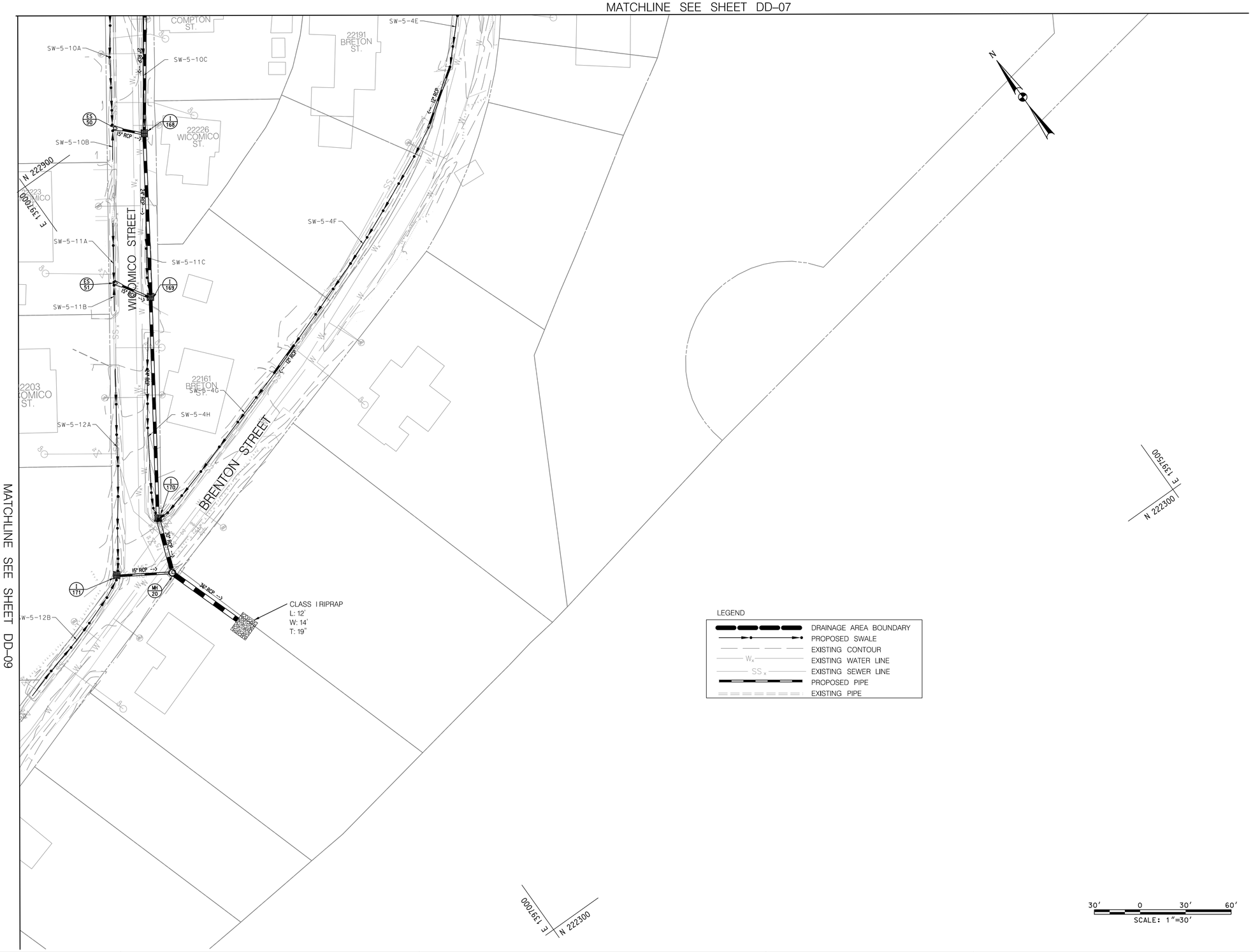
DWG NO. DD-09

SHEET 10 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET DD-07

MATCHLINE SEE SHEET DD-09



LEGEND

- DRAINAGE AREA BOUNDARY
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- EXISTING CONTOUR
- W_x EXISTING WATER LINE
- SS_x EXISTING SEWER LINE
- PROPOSED PIPE
- EXISTING PIPE

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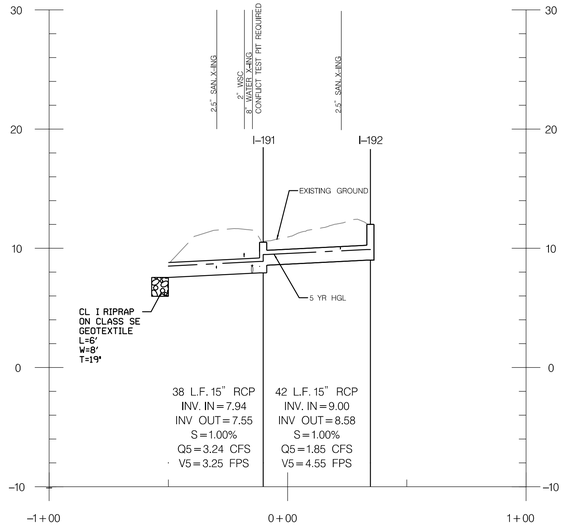
DWG NO. DD-10

SHEET 11 OF 56

PLOTTED: $DATE$
FILE: $FILE$



NOTES:

1. CONTRACTOR SHALL FIELD VERIFY THE UTILITY CROSSINGS. IN CASE OF ANY UTILTY CONFLICT OR SITUATION WHERE A MINIMUM VERITICAL SPEARATION OF 12" CANNOT BE PROVIDED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY.

2. ALL KNOWN UNDERGROUND UTILTIES SHOWN ON THE STORM DRAIN PLAN AND PROFILES ARE BASED ON THE BEST AVAILABLE AS-BUILT AND THE DESIGN PLAN INFORMATION PROVIDED BY ST. MARY'S COUNTY. THE LCOATIONS AND DEPTH HAVE NOT BEEN VERIFIED BY TEST PITS AND THE ENGINEER ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THIS INFORMATION. IF IN DOUBT, CONTRACTOR SHALL TEST PIT THE UNDERGROUND UTILTY AND INFORM THE ST. MARY'S COUNTY AND THE ENGINEER OF RECORD IN CASE ANY DISCREPANCY IS FOUND.

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LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:	DK/AG
DRAWN:	AM
CHECKED:	MB
DATE:	02/09/23
SCALE:	

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

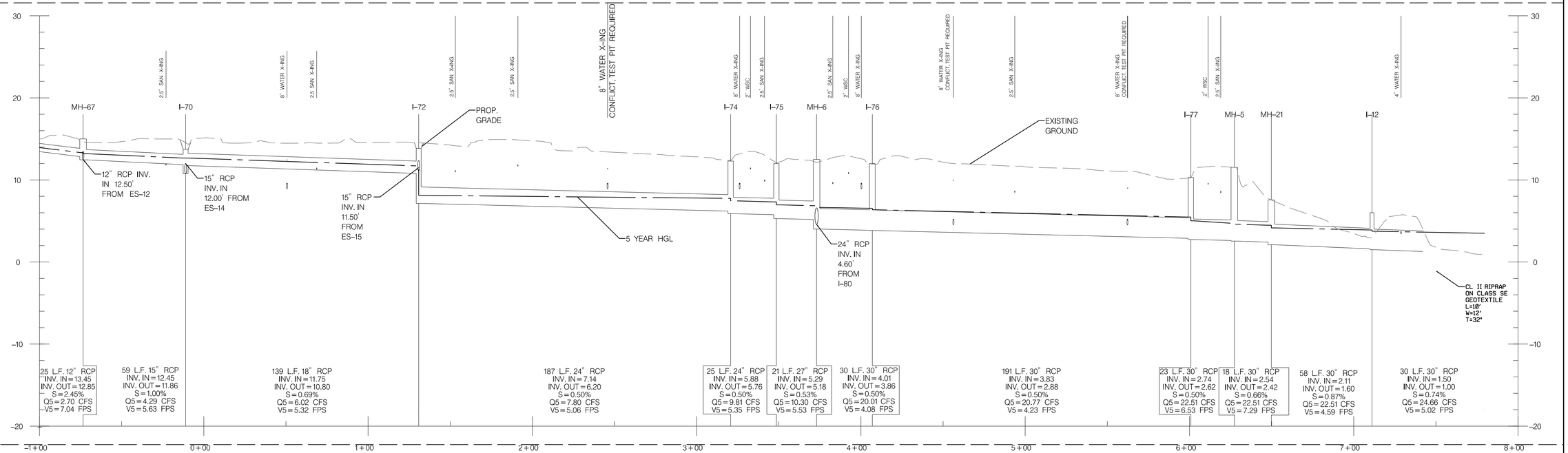
DRAINAGE PROFILES
(POI 1)

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. DP-01

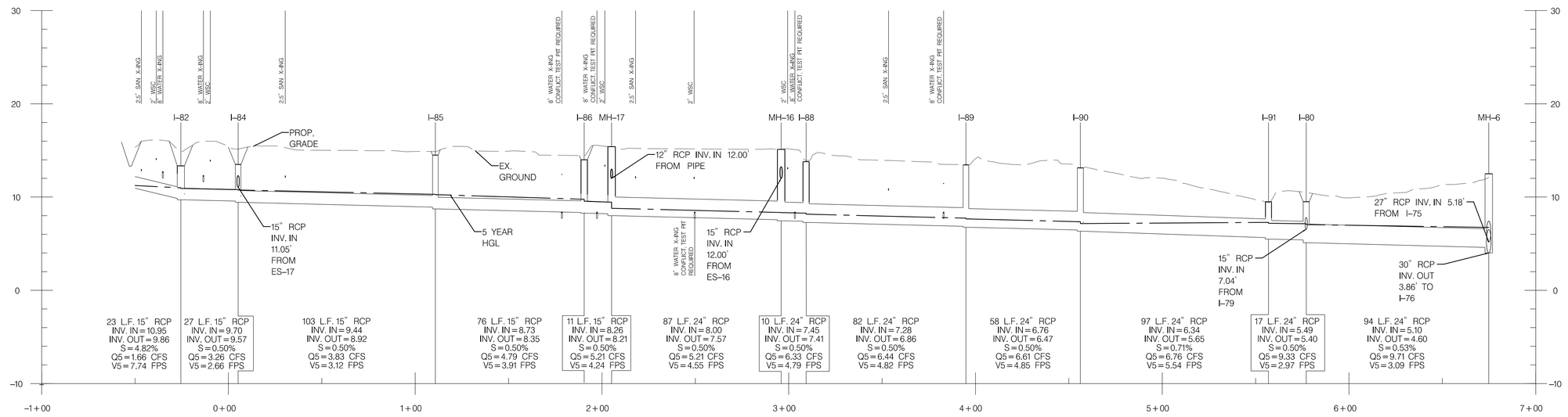
SHEET 12 OF 56

PLOTTED: $DATE$
FILE: $FILE$



MH–67 TO POI 2 OUTFALL PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I–82 TO MH–6 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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SCALE:

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DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

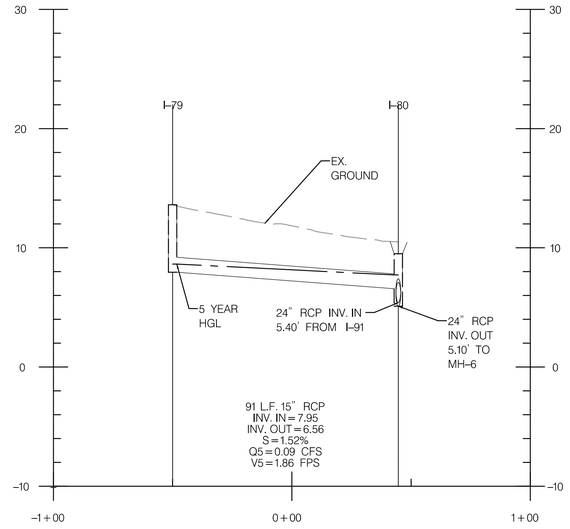
DRAINAGE PROFILES (POI 2)

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. DP–02

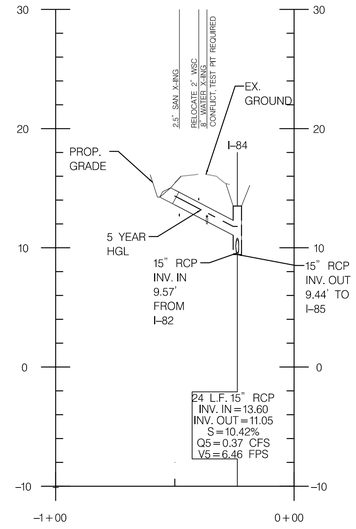
SHEET 13 OF 56

PLOTTED: $DATE$
FILE: $FILE$



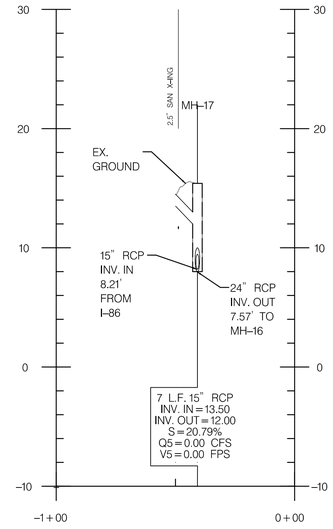
I–79 TO I–80 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



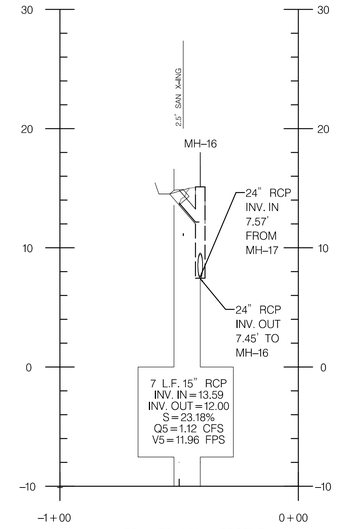
ES–17 TO I–84 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



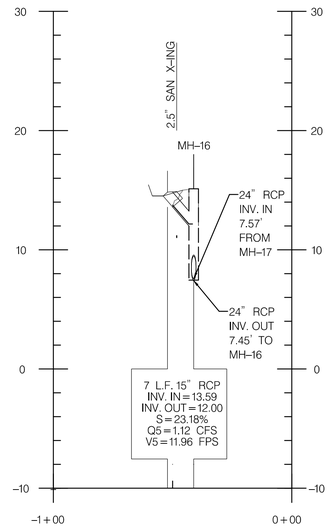
PIPE TO MH–17 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



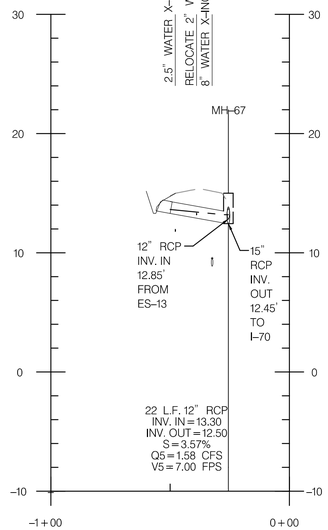
ES–16 TO MH–17 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



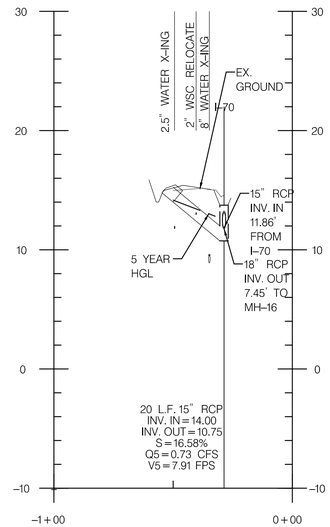
ES–16 TO MH–16 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



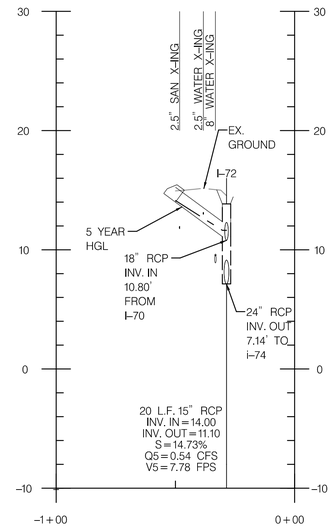
ES–12 TO MH–67 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES–14 TO I–70 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES–15 TO I–72 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

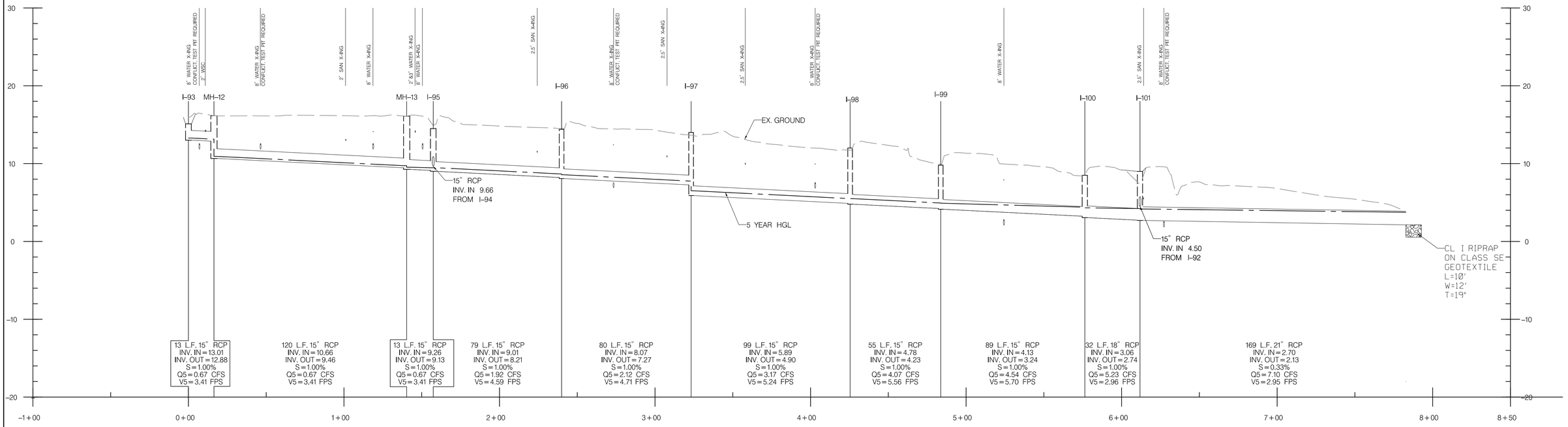
DRAINAGE PROFILES
(POI–2)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

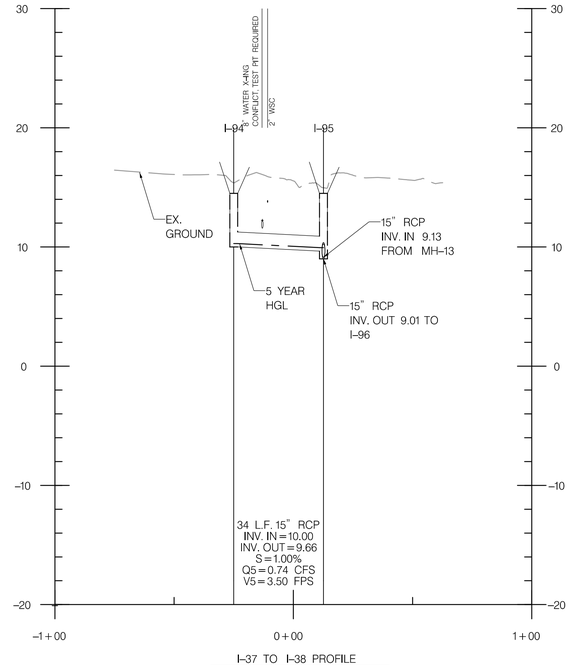
DWG NO.
DP–03

SHEET
14 OF 56

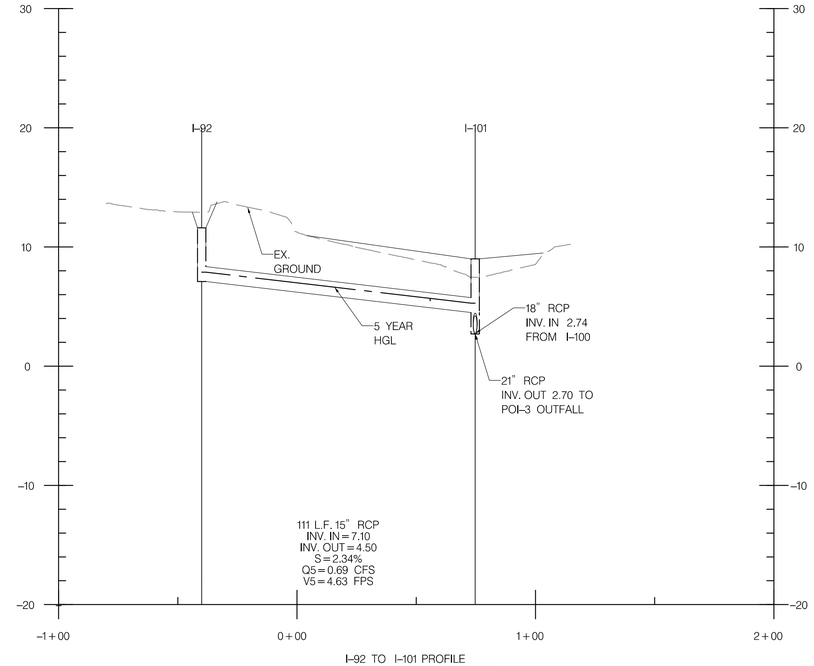
PLOTTED: $DATE$
FILE: $FILE$



I-93 TO POI 3 OUTFALL PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I-37 TO I-38 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I-92 TO I-101 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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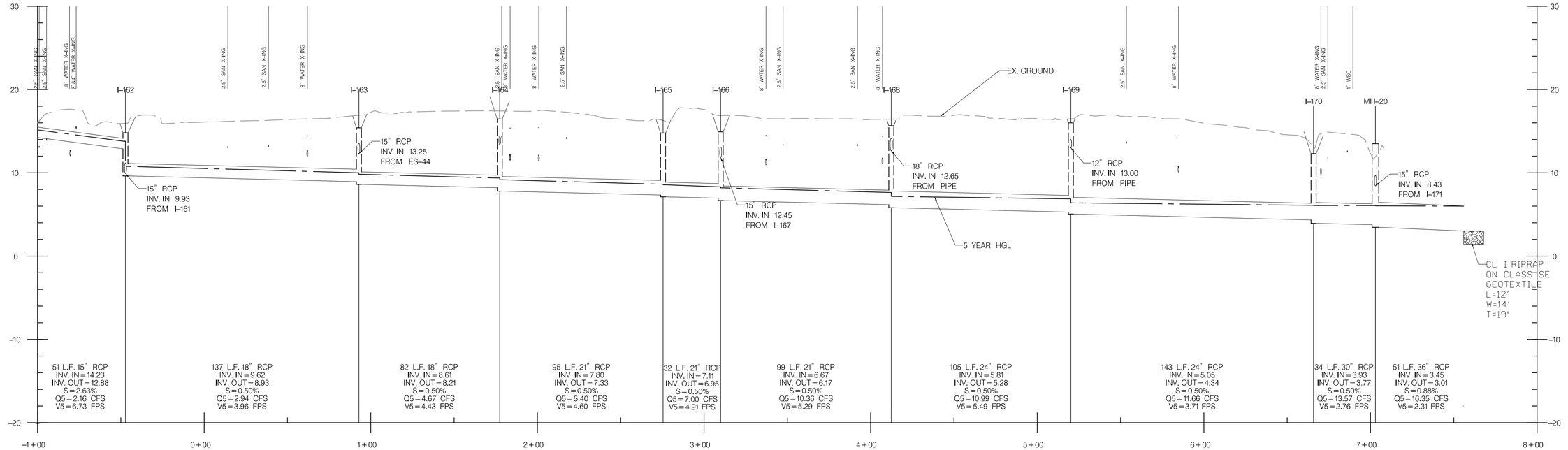
DRAINAGE PROFILES
(POI-3)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

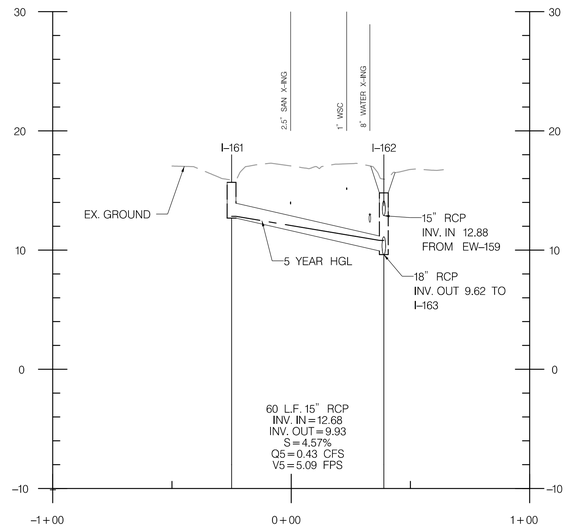
DWG NO.
DP-04

SHEET
15 OF 56

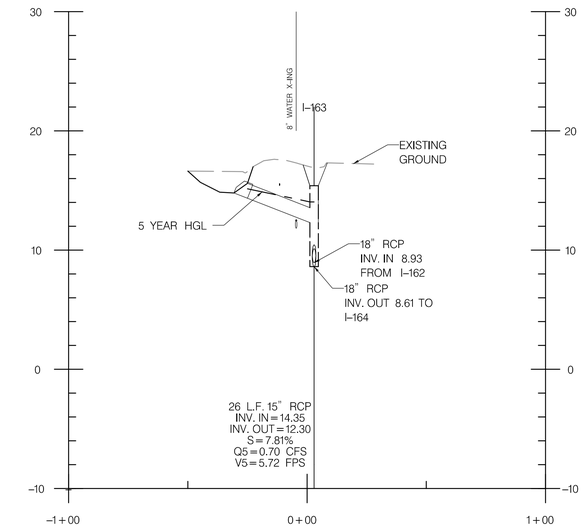
PLOTTED: $DATE$
FILE: $FILE$



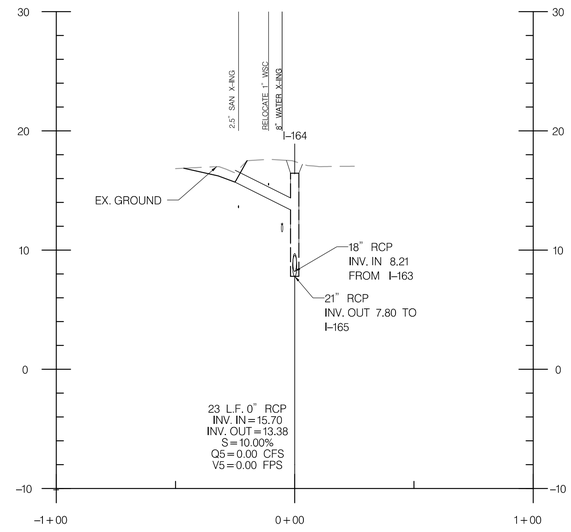
I-162 TO POI 5 OUTFALL PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I-161 TO I-162 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES-44 TO I-163 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



PIPE TO I-164 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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DEPARTMENT OF PUBLIC WORKS
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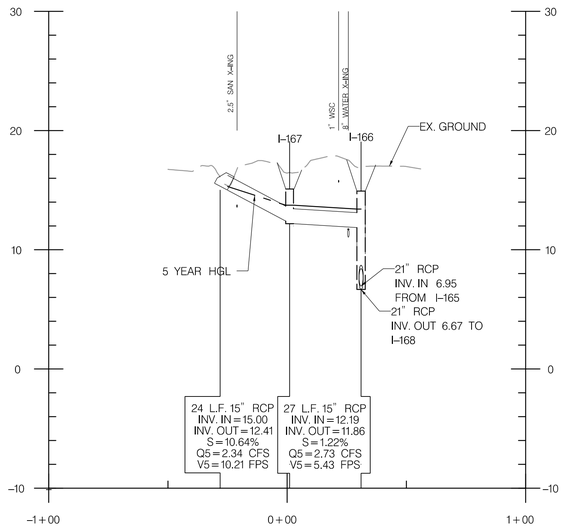
DRAINAGE PROFILES
(POI-5)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

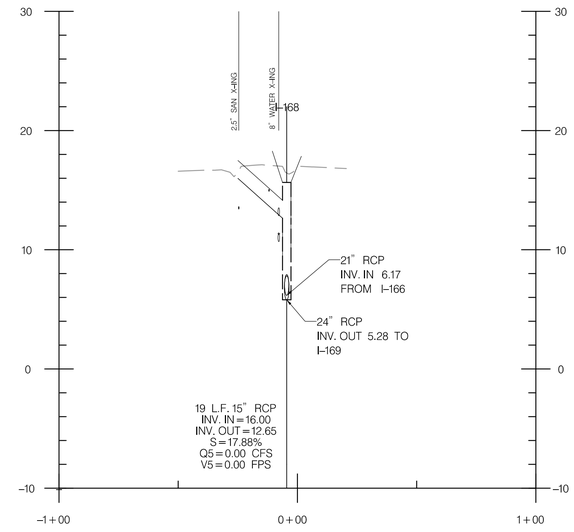
DWG NO.
DP-05

SHEET
16 OF 56

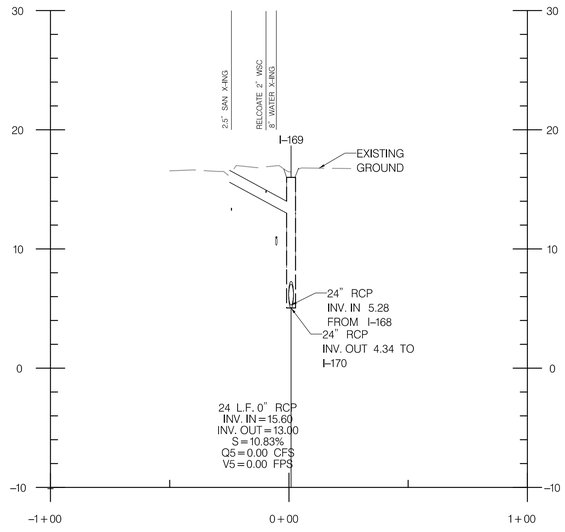
PLOTTED: $DATE$
FILE: $FILE$



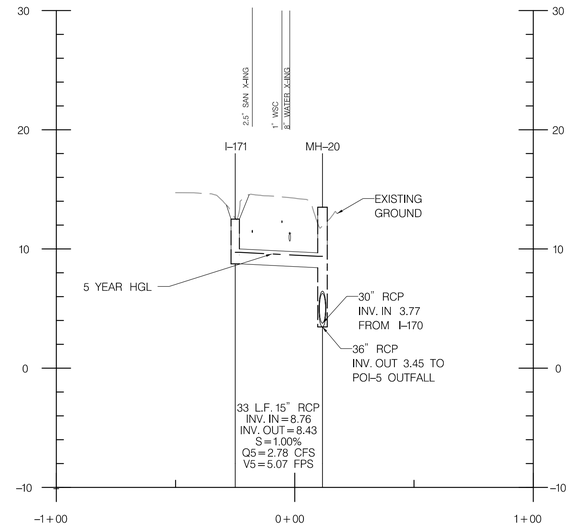
ES–49 TO I–166 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



PIPE TO I–168 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



PIPE TO I–169 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I–93 TO POI 3 OUTFALL PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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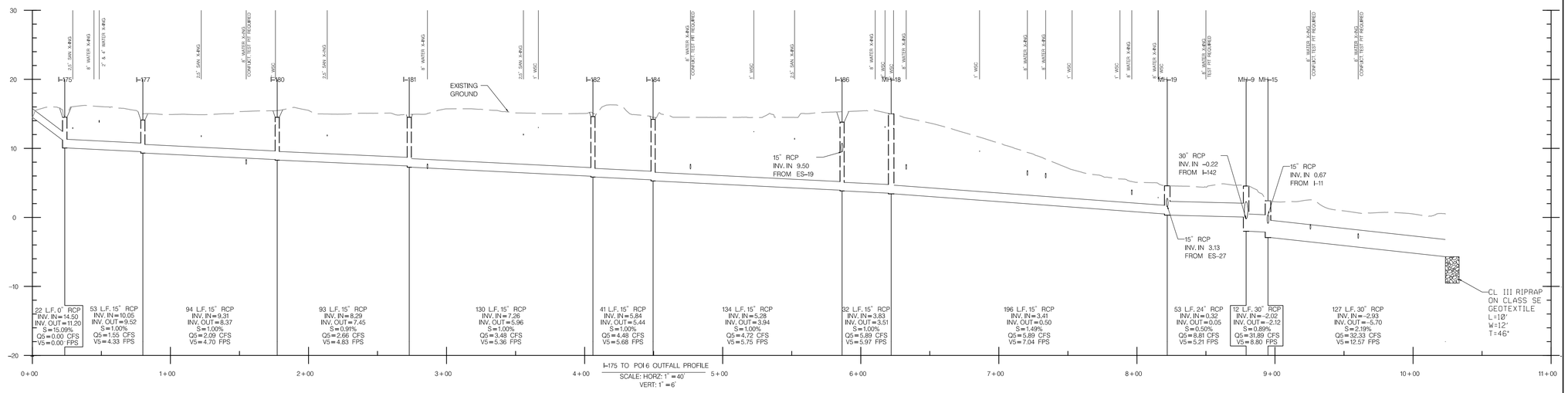
DRAINAGE PROFILES
(POI–5)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

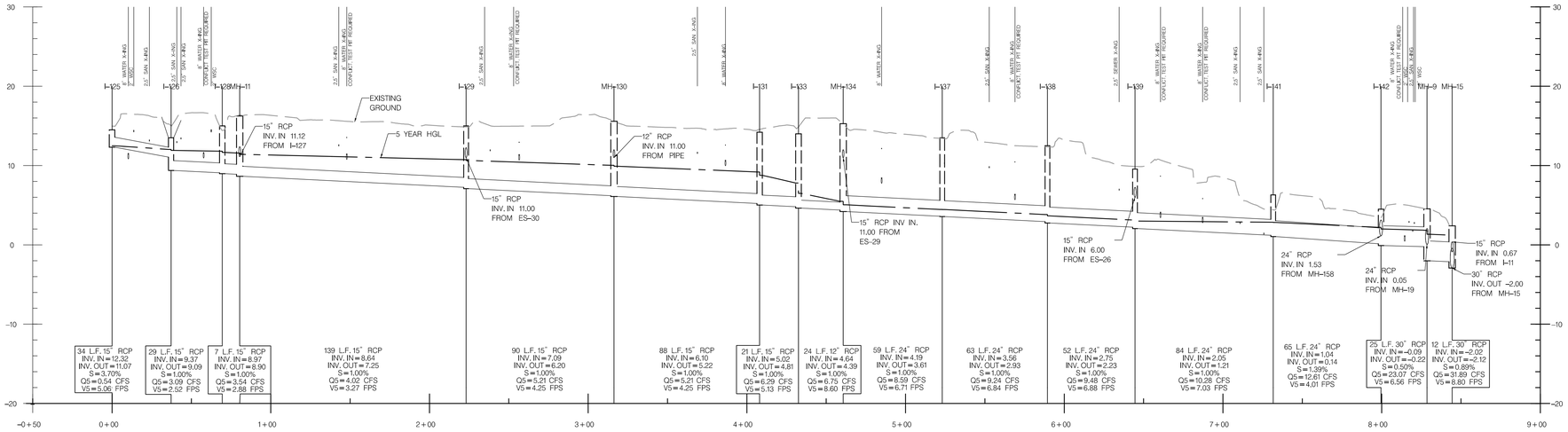
DWG NO.
DP–06

SHEET
17 OF 56

PLOTTED: $DATE$
FILE: $FILE$



I-175 TO POI6 OUTFALL PROFILE
SCALE: HORZ: 1" = 40'
VERT: 1" = 6'



I-125 TO MH-1 PROFILE
SCALE: HORZ: 1" = 40'
VERT: 1" = 8'

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CHECKED:	MB
DATE:	02/09/23
SCALE:	1"=##'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

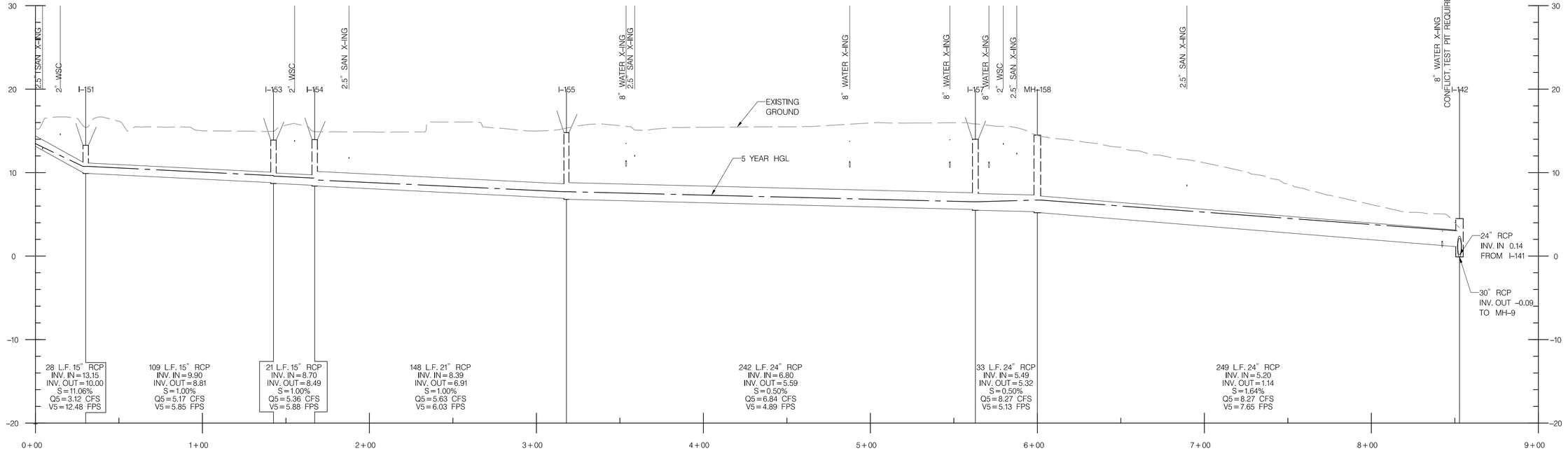
DRAINAGE PROFILES (POI-6)

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

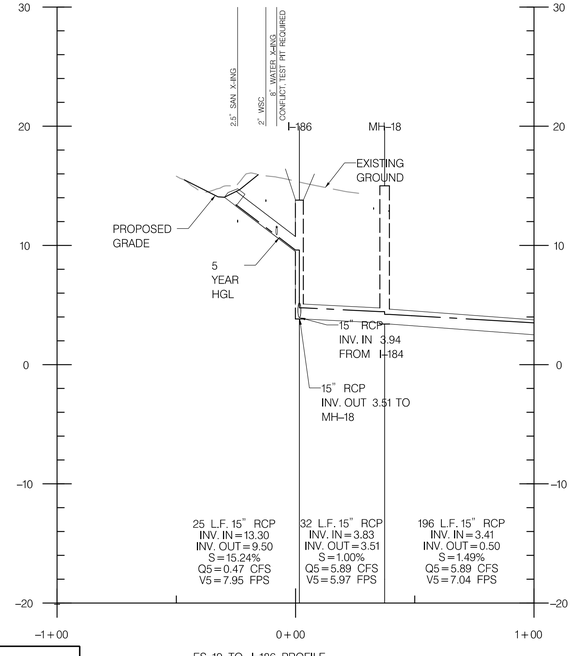
DWG NO. DP-07

SHEET 18 OF 56

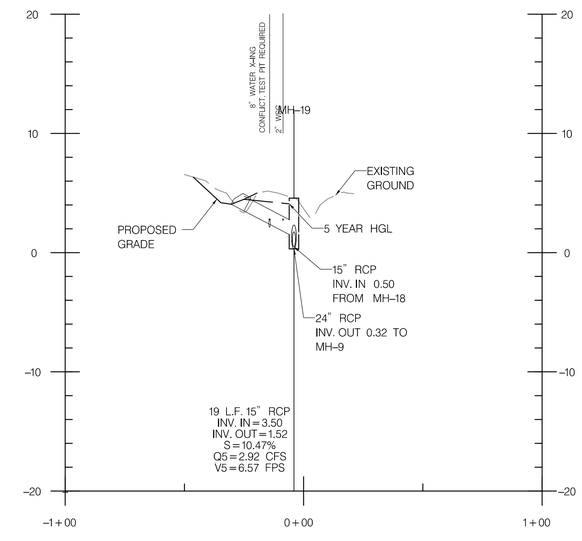
PLOTTED: $DATE$
FILE: $FILE$



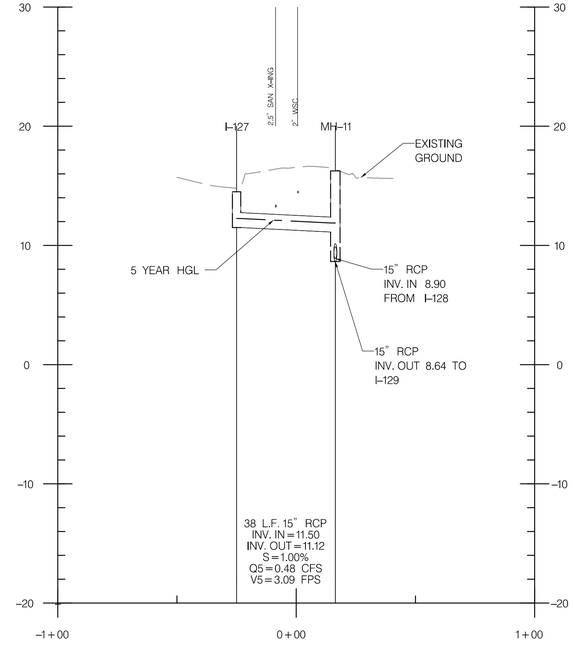
I-151 TO I-142 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES-19 TO I-186 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES-27 TO MH-19 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I-127 TO MH-11 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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SCALE:	1"=##'

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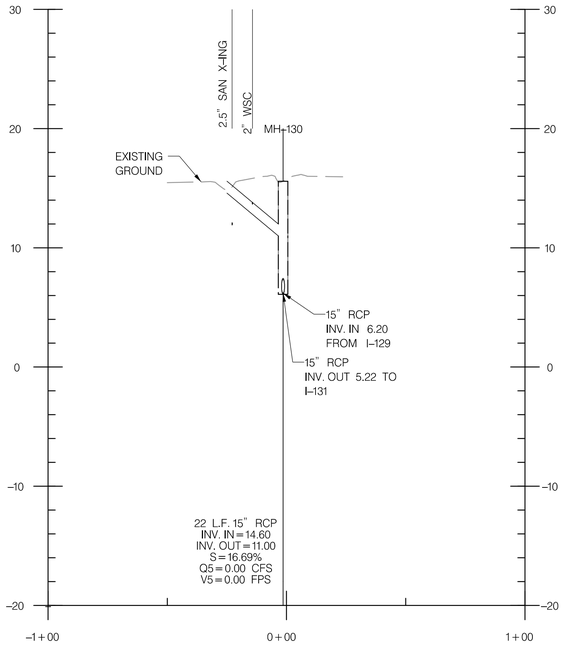
DRAINAGE PROFILES
(POI-6)

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

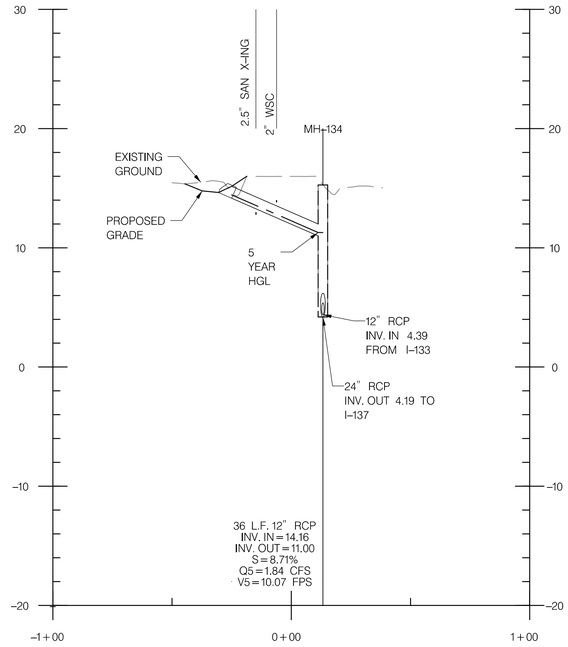
DWG NO.
DP-08

SHEET
19 OF 56

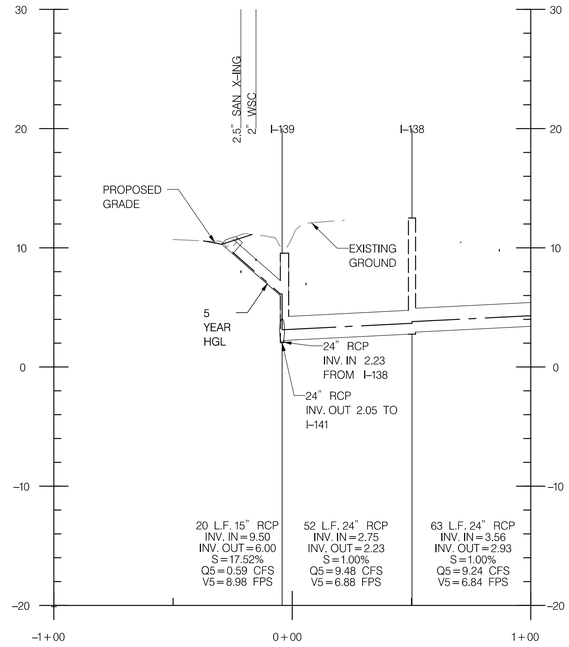
PLOTTED: $DATE$
FILE: $FILE$



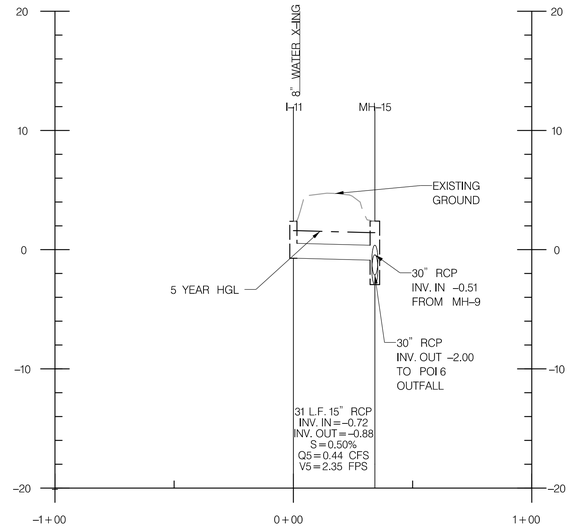
PIPE TO MH-130 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES-29 TO MH-134 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES-26 TO I-139 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I-1 TO MH-1 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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DESIGNED: DK/AG
DRAWN: AMK
CHECKED: MB
DATE: 02/09/23
SCALE: 1"=##'

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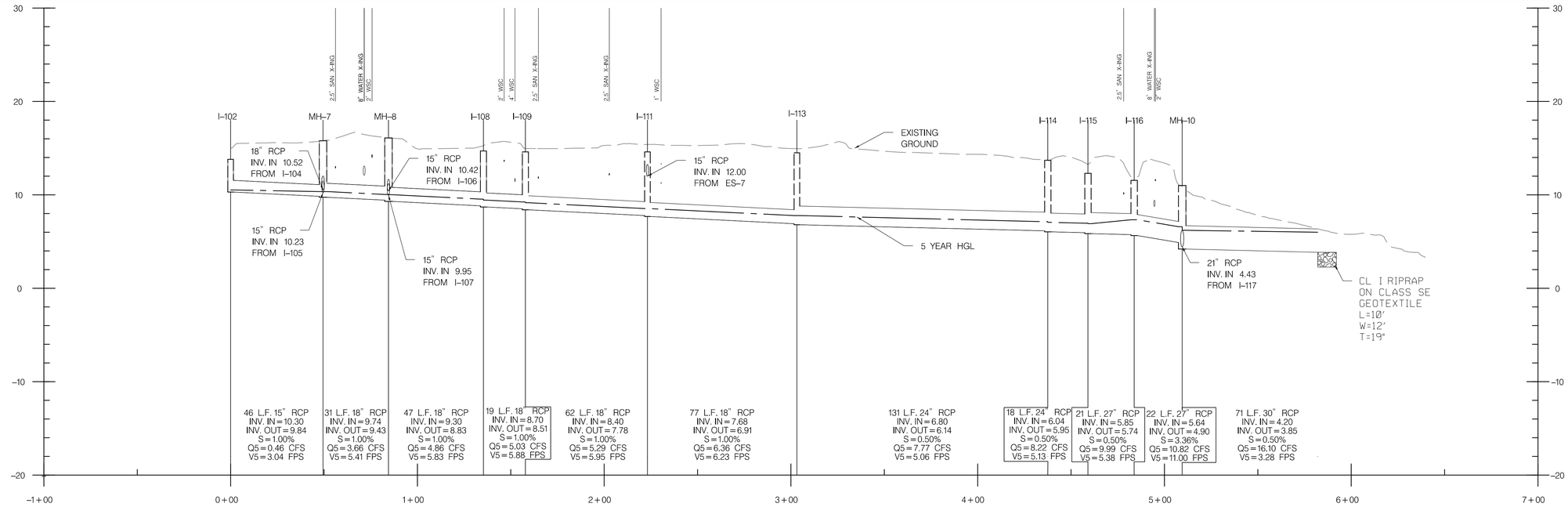
DRAINAGE PROFILES
(POI-6)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO.
DP-09

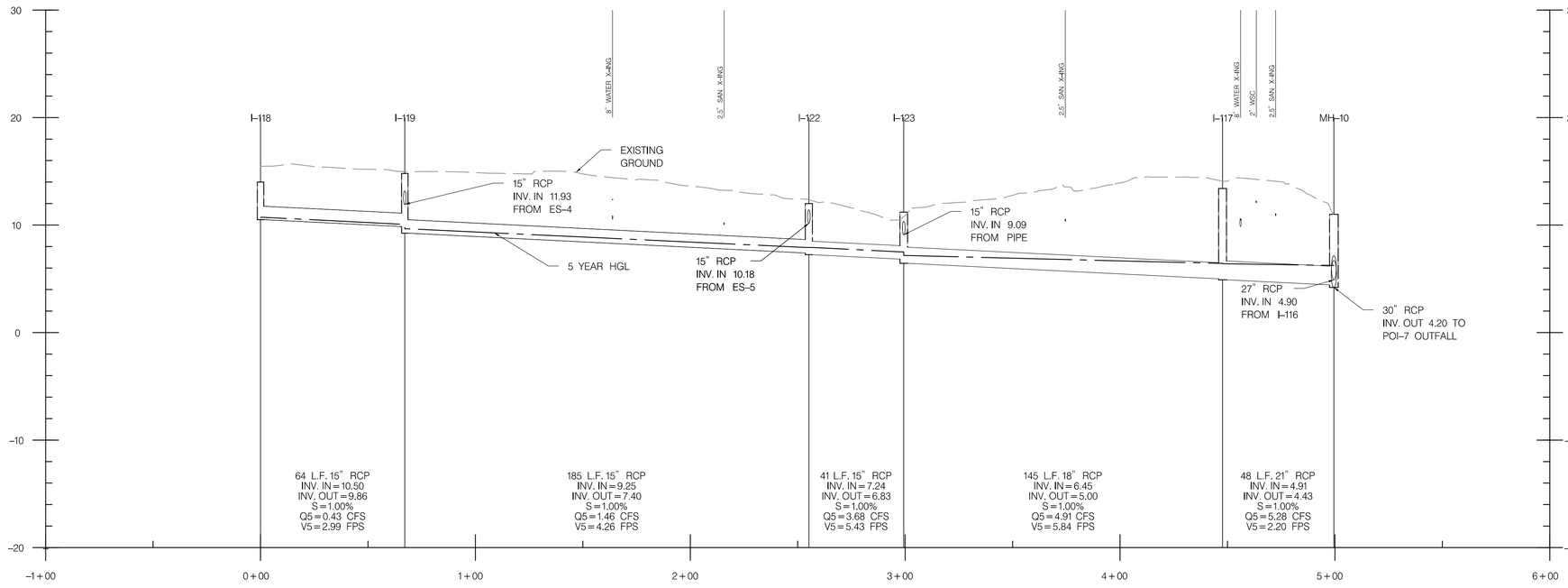
SHEET
20 OF 56

PLOTTED: $DATE$
FILE: $FILE$



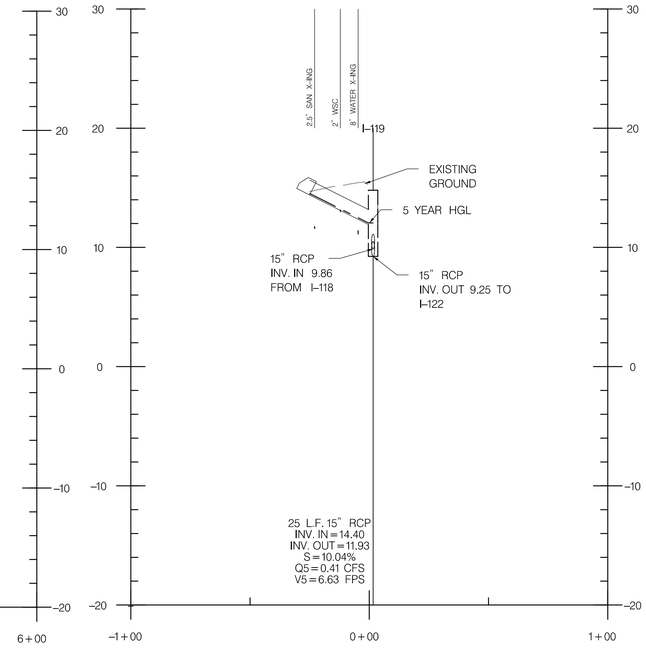
I-102 TO POI 7 OUTFALL PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I-118 TO MH-10 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES-4 TO I-119 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAW OF THE STATE OF MARYLAND.

LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:	DK/AG
DRAWN:	AMK
CHECKED:	MB
DATE:	02/09/23
SCALE:	1"=##'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

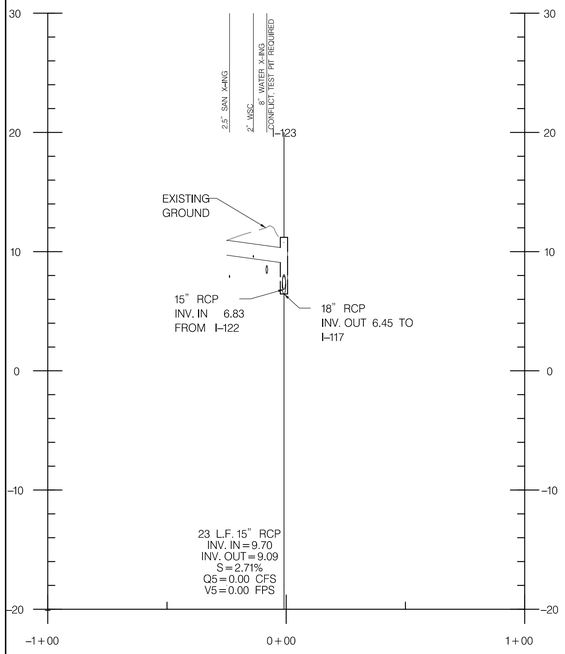
DRAINAGE PROFILES (POI-7)

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. DP-10

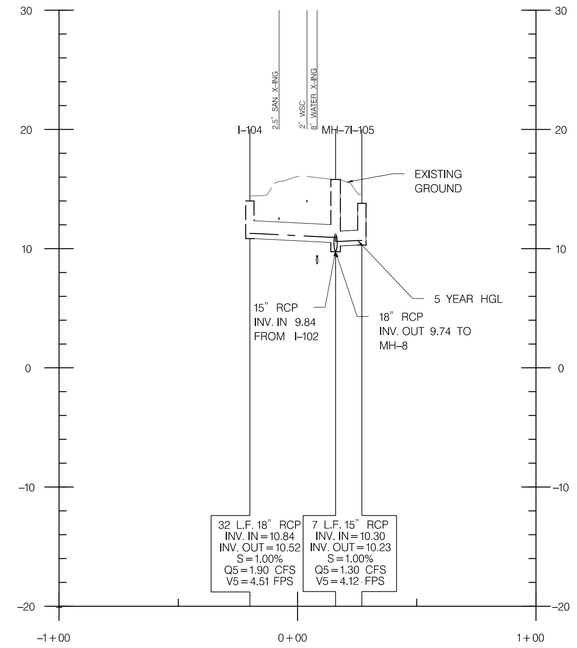
SHEET 21 OF 56

PLOTTED: $DATE$
FILE: $FILE$



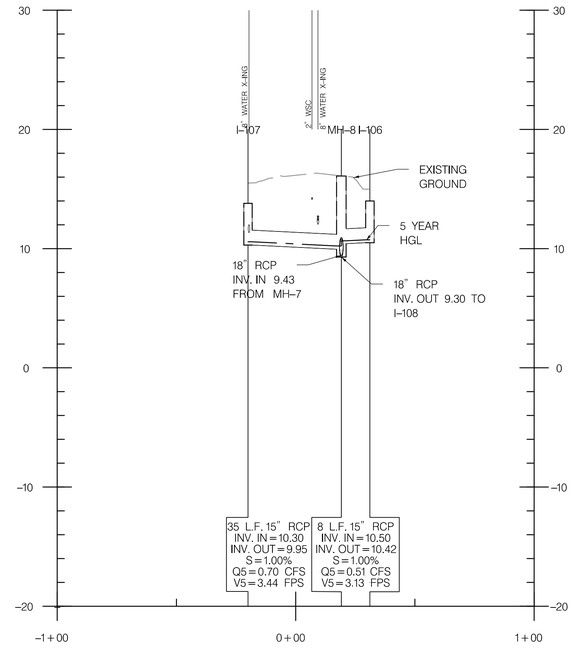
PIPE TO I–123 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



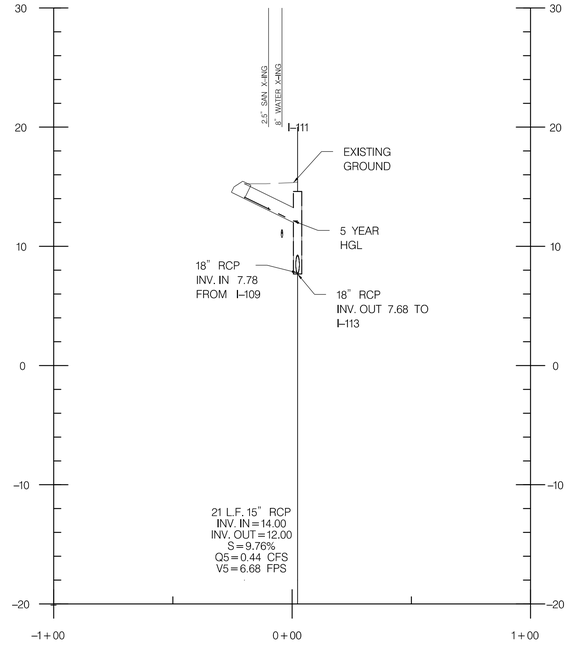
I–104 TO I–105 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I–107 TO I–108 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



ES–7 TO I–111 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED: DK/AG
DRAWN: AMK
CHECKED: SMB
DATE: 02/09/23
SCALE: 1"=##'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

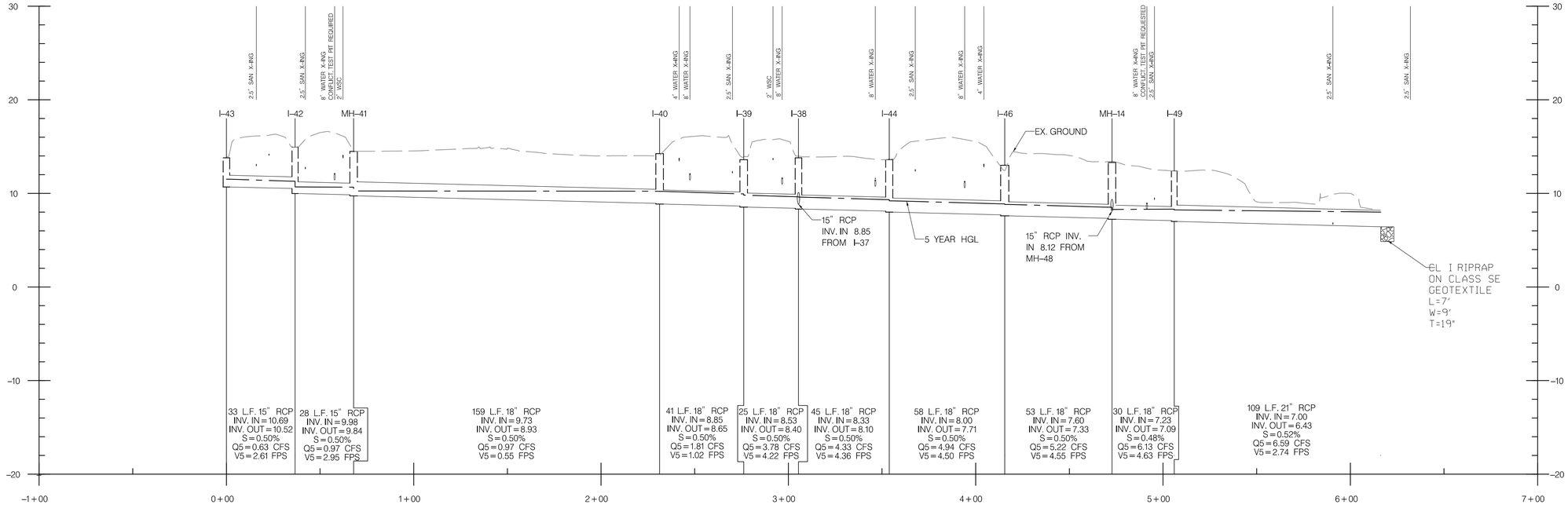
DRAINAGE PROFILES
(POI–7)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

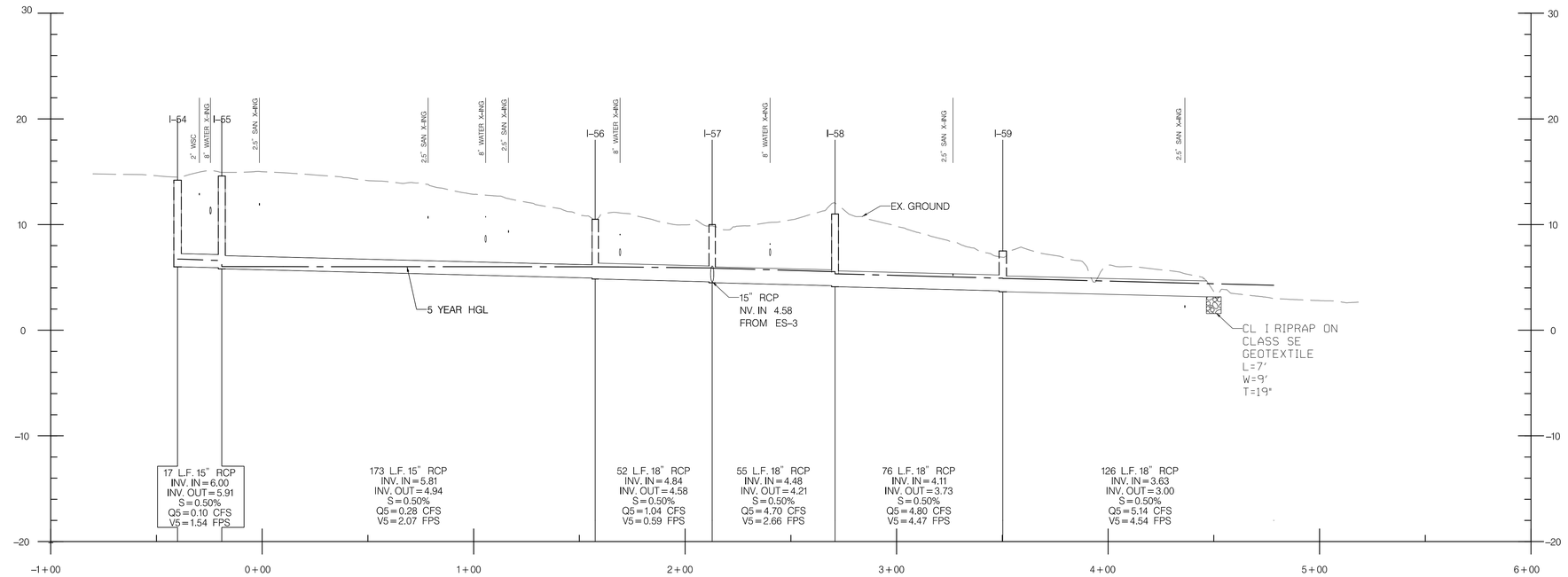
DWG NO.
DP–11

SHEET
22 OF 56

PLOTTED: $DATE$
FILE: $FILE$



I–43 TO POI 8 OUTFALL PROFILE
SCALE: HORZ: 1" = 30'



I–54 TO POI–8 OUTFALL PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:	DK/AG
DRAWN:	AM
CHECKED:	MB
DATE:	02/09/23
SCALE:	1"=30'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

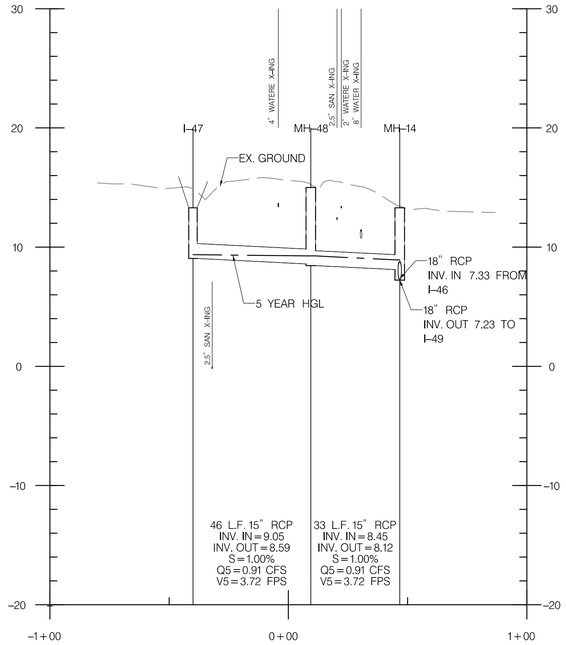
DRAINAGE PROFILES
(POI–8)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

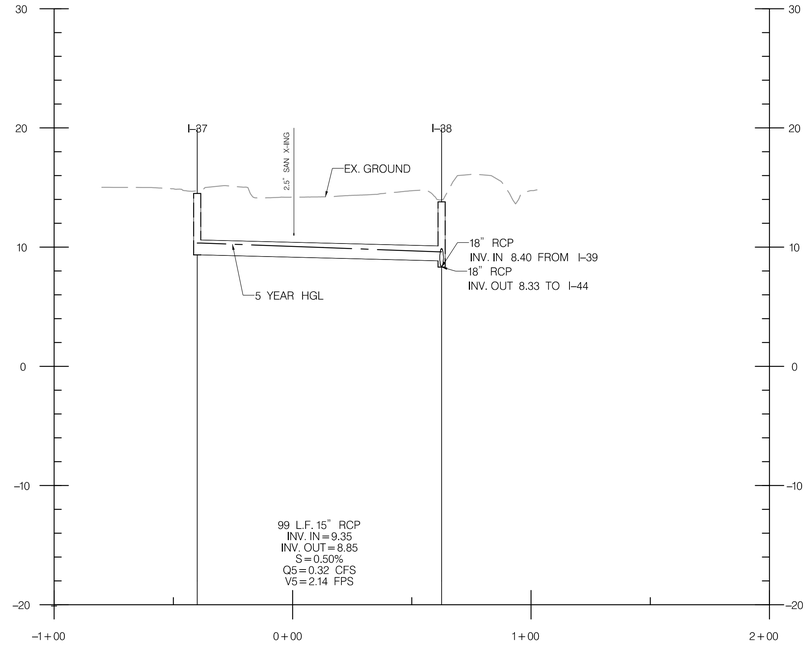
DWG NO.
DP-12

SHEET
23 OF 56

PLOTTED: $DATE$
FILE: $FILE$



I-47 TO MH-14 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I-37 TO I-38 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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DESIGNED:	DK/AG
DRAWN:	AMK
CHECKED:	MB
DATE:	02/09/23
SCALE:	1"=##'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

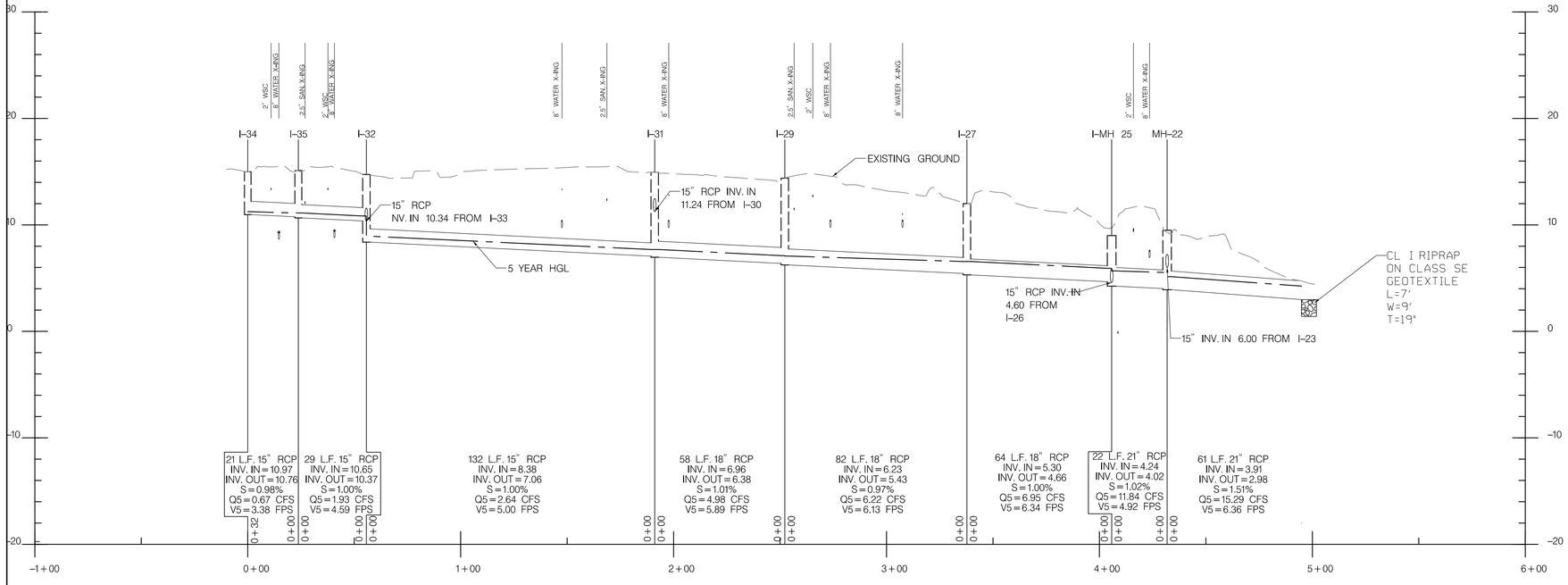
DRAINAGE PROFILES
(POI-8)

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO.
DP-13

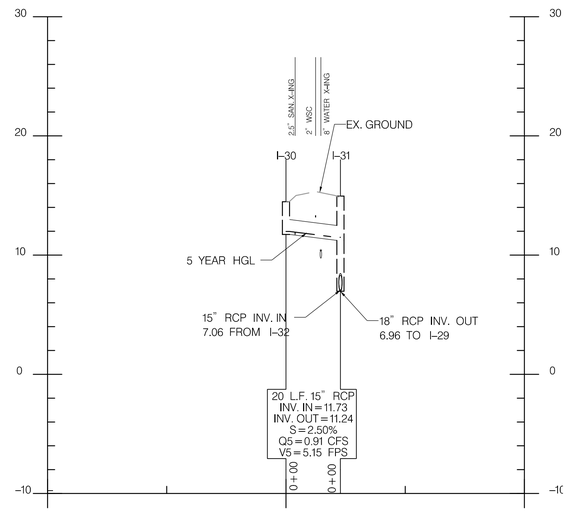
SHEET
24 OF 56

PLOTTED: $DATE$
FILE: $FILE$



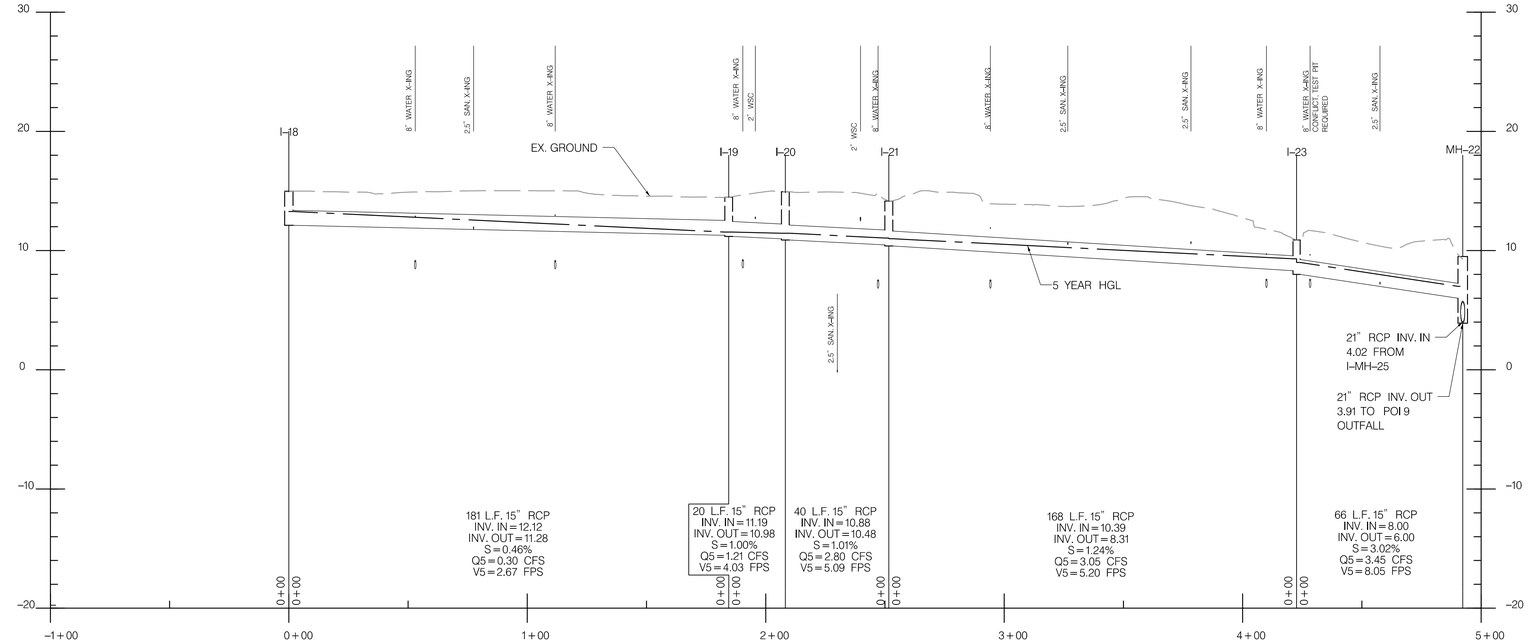
I–34 TO POI 9 OUTFALL PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



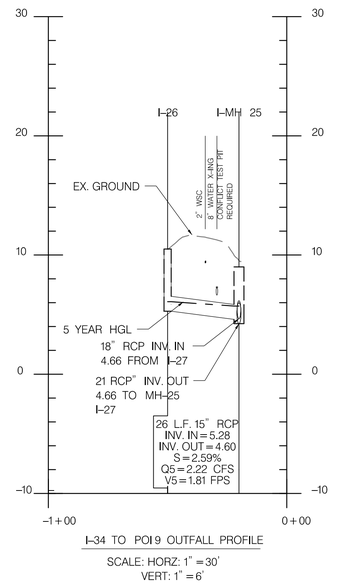
I–30 TO I–31 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



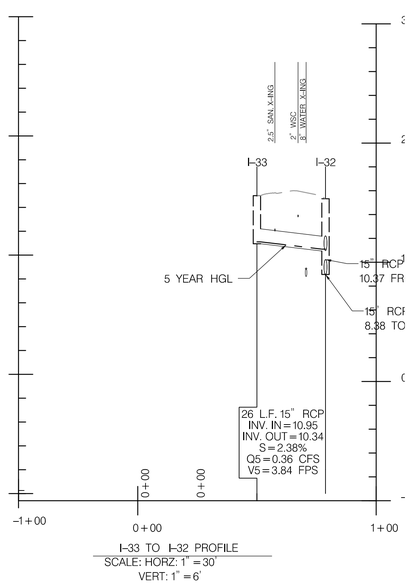
I–18 TO MH–22 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I–34 TO POI 9 OUTFALL PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I–33 TO I–32 PROFILE

SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:	DWAG
DRAWN:	AMK
CHECKED:	SMB
DATE:	02/09/23
SCALE:	1"=##'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

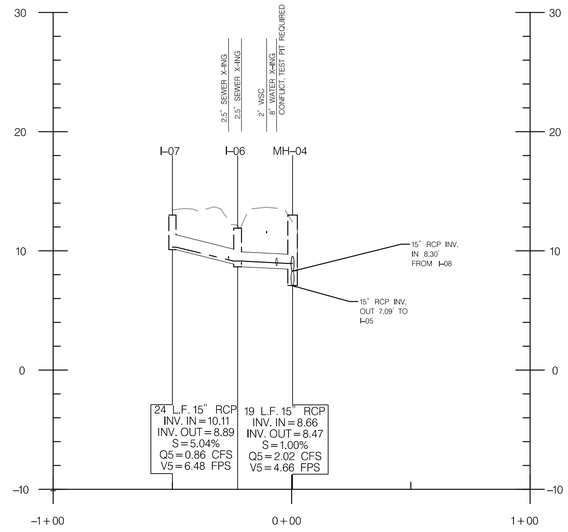
DRAINAGE PROFILES
(POI–9)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

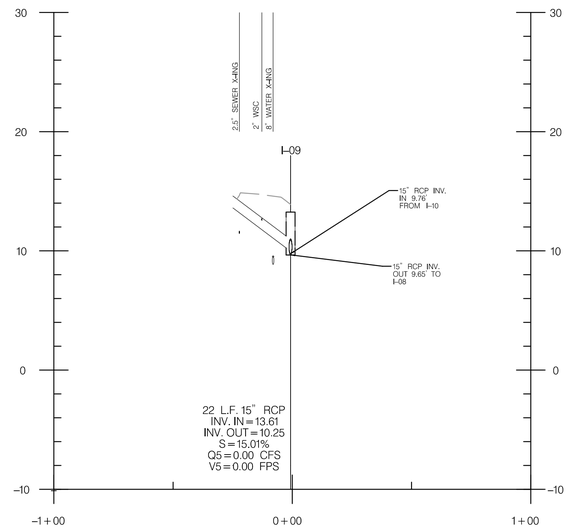
DWG NO.
DP–14

SHEET
25 OF 56

PLOTTED: $DATE$
FILE: $FILE$



I–06 TO MH–04 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



PIPE TO I–09 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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DATE:	02/09/23
SCALE:	

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DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

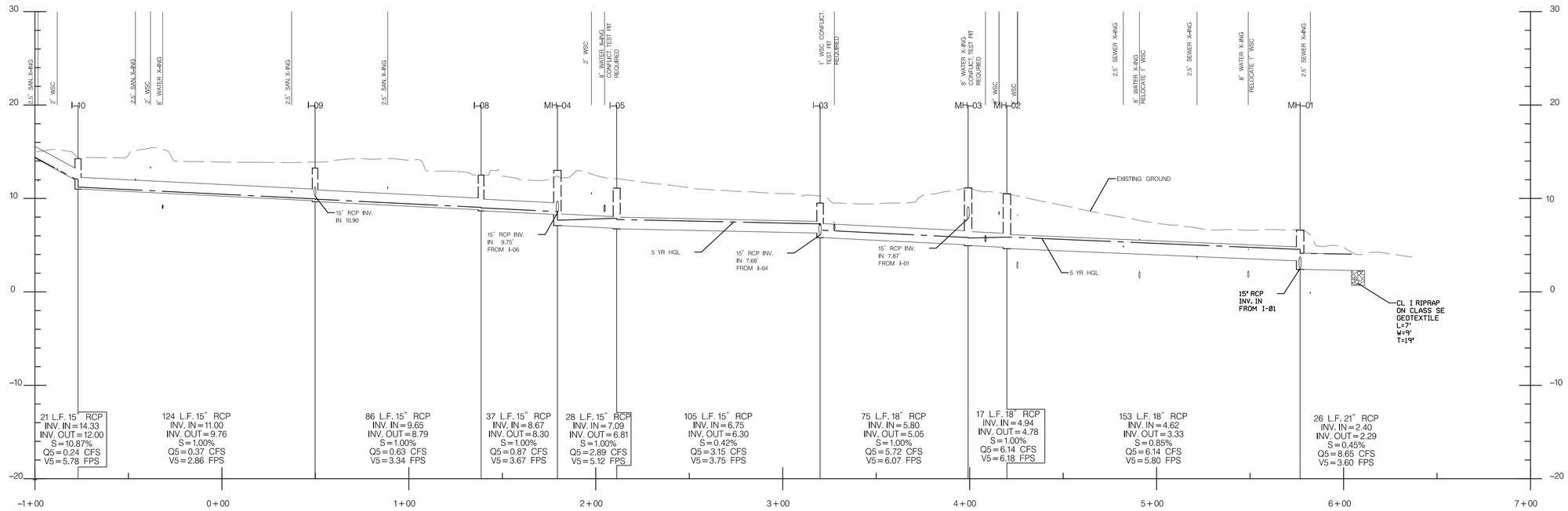
DRAINAGE PROFILES
(POI–10)

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

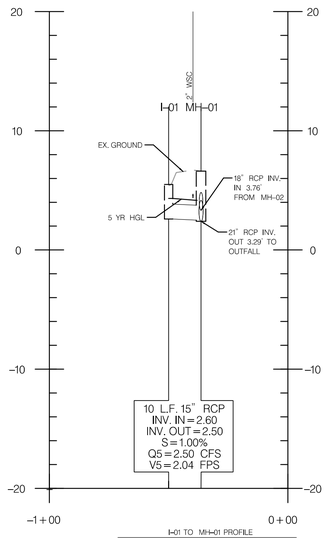
DWG NO.
DP–15

SHEET
26 OF 56

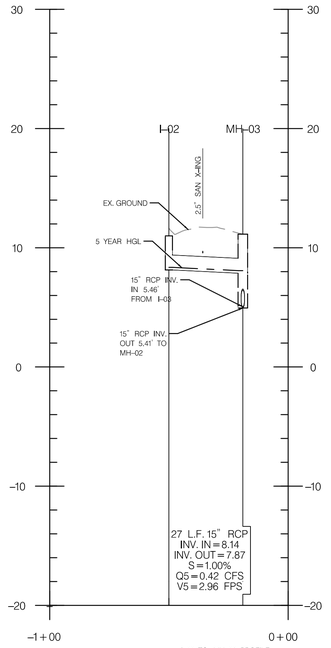
PLOTTED: $DATE$
FILE: $FILE$



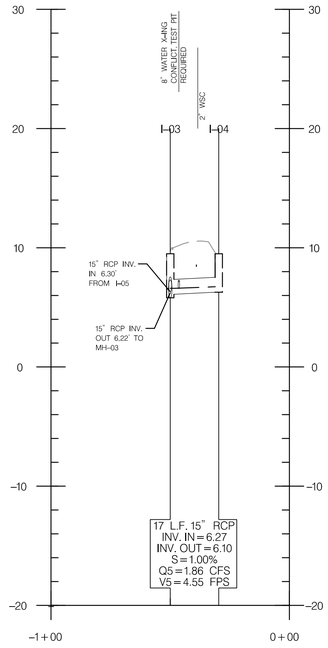
I–10 TO POI 10 OUTFALL PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I–01 TO MH–01 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I–02 TO MH–03 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'



I–03 TO I–04 PROFILE
SCALE: HORZ: 1" = 30'
VERT: 1" = 6'

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LICENSE NUMBER 51941
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SCALE:	

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DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

DRAINAGE PROFILES (POI–10)

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. DP–16

SHEET 27 OF 56

PLOTTED: $DATE$
FILE: $FILE$

STRUCTURE SCHEDULE

NO.	STATION	OFFSET	BASELINE	DEPTH	MD STANDARD NO., TYPE	T.S.	REMARKS
I-01	1+81.0	9.0 LT	ST CLEMENTS	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	5.5'	SINGLE
I-21	6+22.7	11.2 RT	ST CLEMENTS	0.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.2'	SINGLE
I-23	7+93.8	11.9 RT	ST CLEMENTS	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	10.9'	SINGLE
I-47	12+38.1	19.1 LT	ST CLEMENTS	0.8'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.3'	SINGLE
I-49	13+31.6	19.4 LT	ST CLEMENTS	1.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.4'	SINGLE
I-MH 25	8+60.6	10.6 LT	ST CLEMENTS	4.8'**	STD SINGLE K CATCHPIT	9.0'	
MH-01	1+81.5	4.5 RT	ST CLEMENTS	3.3'**	PRECAST MANHOLE	6.6'	
MH-02	3+38.1	2.2 RT	ST CLEMENTS	5.4'**	PRECAST MANHOLE	10.5'	
MH-14	12+98.4	17.9 LT	ST CLEMENTS	6.1'**	PRECAST MANHOLE	13.3'	
MH-22	8+63.4	15.2 RT	ST CLEMENTS	5.6'**	PRECAST MANHOLE	9.5'	
MH-48	12+79.1	14.0 RT	ST CLEMENTS	6.6'**	PRECAST MANHOLE	15.0'	
ES-59	14+36.5	14.2 LT	ST CLEMENTS	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
I-12	5+21.1	20.8 RT	CECIL AVENUE	1.0'	MD-381.02 PRECAST YARD INLET	6.0'	
I-191	1+80.9	5.6 RT	CECIL AVENUE	2.0'**	MD-374.06 SINGLE WR INLET	10.5'	
I-192	2+25.6	10.9 RT	CECIL AVENUE	3.0'**	MD-374.06 SINGLE WR INLET	12.0'	
I-02	+27.3	13.0 RT	LEE STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	11.0'	SINGLE
I-03	+89.9	9.9 LT	LEE STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	9.5'	SINGLE
I-04	+84.7	9.8 RT	LEE STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	9.5'	SINGLE
I-05	1+98.6	10.9 LT	LEE STREET	0.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	11.1'	SINGLE
I-06	2+42.5	15.8 RT	LEE STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	11.9'	SINGLE
I-07	2+45.4	11.3 LT	LEE STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.0'	SINGLE
I-100	9+10.6	23.6 RT	LEE STREET	1.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	8.5'	SINGLE
I-101	8+77.0	11.3 RT	LEE STREET	2.8'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	9.0'	SINGLE
I-74	4+48.7	13.9 RT	LEE STREET	2.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.3'	SINGLE
I-75	4+76.8	14.1 RT	LEE STREET	3.2'	MD-384.01 48" DIAMETER PRECAST MANHOLE	12.0'	BASS & HAYS FOUNDRY, 300-24 MANHOLE GRATE OR APPROVED EQ
I-79	6+70.2	8.7 LT	LEE STREET	2.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.6'	SINGLE
I-80	5+75.6	7.1 LT	LEE STREET	0.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	9.5'	SINGLE
I-90	6+76.3	14.9 RT	LEE STREET	3.3'	MD-384.01 48" DIAMETER PRECAST MANHOLE	13.1'	BASS & HAYS FOUNDRY, 300-24 MANHOLE GRATE OR APPROVED EQ
I-91	5+75.4	12.9 RT	LEE STREET	0.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	9.5'	SINGLE
I-92	7+62.3	11.4 RT	LEE STREET	1.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	11.6'	SINGLE
MH-03	+10.8	13.2 LT	LEE STREET	5.7'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	11.1'	
I-08	3+85.8	10.8 RT	GORE STREET	0.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.5'	SINGLE
I-09	4+74.6	9.8 RT	GORE STREET	0.1'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.3'	SINGLE
I-10	6+01.2	10.4 RT	GORE STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.3'	SINGLE
I-118	12+56.0	11.6 LT	GORE STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.0'	SINGLE
I-119	13+23.2	11.1 LT	GORE STREET	2.1'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.8'	SINGLE
I-122	15+11.1	13.2 LT	GORE STREET	1.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.0'	SINGLE
I-42	11+35.9	15.4 RT	GORE STREET	1.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.9'	SINGLE
I-43	11+37.2	21.4 LT	GORE STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.8'	SINGLE
MH-04	3+45.0	9.8 RT	GORE STREET	5.9'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	13.0'	
ES-4	13+10.6	12.3 RT	GORE STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-5	15+1.9	10.4 RT	GORE STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
I-102	10+47.9	12.6 RT	COLTON STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.8'	SINGLE
I-104	10+97.5	22.9 LT	COLTON STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.0'	SINGLE
I-105	10+97.7	24.0 RT	COLTON STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.8'	SINGLE
I-106	11+30.2	25.5 RT	COLTON STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.0'	SINGLE
I-107	11+30.2	25.3 LT	COLTON STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.8'	SINGLE
I-108	11+83.1	12.4 RT	COLTON STREET	2.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.7'	SINGLE
I-109	11+85.0	10.2 LT	COLTON STREET	2.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.6'	SINGLE
I-111	12+50.3	11.0 LT	COLTON STREET	3.4'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.6'	SINGLE
I-113	13+30.3	11.1 LT	COLTON STREET	4.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-114	14+64.4	11.3 LT	COLTON STREET	4.2'	MD-384.01 48" DIAMETER PRECAST MANHOLE	13.7'	BASS & HAYS FOUNDRY, 300-24 MANHOLE GRATE OR APPROVED EQ
I-115	14+82.2	24.1 LT	COLTON STREET	3.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.3'	SINGLE
I-70	6+39.1	11.4 RT	COLTON STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.7'	SINGLE
I-72	4+97.3	9.8 RT	COLTON STREET	3.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.9'	SINGLE
I-76	2+66.0	11.2 RT	COLTON STREET	4.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.0'	SINGLE
I-77	+72.5	11.2 RT	COLTON STREET	4.1'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	10.3'	SINGLE
MH-5	+72.1	15.4 LT	COLTON STREET	9.0'**	MD-384.03 60" DIAMETER PRECAST MANHOLE	11.5'	
MH-6	2+83.3	18.3 LT	COLTON STREET	8.5'**	MD-384.03 60" DIAMETER PRECAST MANHOLE	12.5'	
MH-67	7+01.6	11.4 RT	COLTON STREET	2.6'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	15.0'	

STRUCTURE SCHEDULE

NO.	STATION	OFFSET	BASELINE	DEPTH	MD STANDARD NO., TYPE	T.S.	REMARKS
MH-7	10+97.3	13.0 RT	COLTON STREET	6.1'**	PRECAST MANHOLE	15.8'	
MH-8	11+32.4	13.8 RT	COLTON STREET	6.8'**	PRECAST MANHOLE	16.1'	
MH-21	+69.0	37.7 LT	COLTON STREET	5.5'**	STD DROP MANHOLE	7.6'	
ES-7	12+50.8	9.0 LT	COLTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-12	7+11.6	9.5 LT	COLTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-13	7+26.6	12.1 RT	COLTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-14	6+39.2	7.6 LT	COLTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-15	4+97.5	9.3 LT	COLTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
I-175	10+92.9	22.2 LT	CEDAR STREET	0.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-177	11+48.7	13.1 LT	CEDAR STREET	1.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.1'	SINGLE
I-180	12+45.9	10.6 LT	CEDAR STREET	2.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-181	13+41.5	12.2 LT	CEDAR STREET	3.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-182	14+74.5	14.7 LT	CEDAR STREET	5.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.6'	SINGLE
I-184	15+18.0	11.4 LT	CEDAR STREET	5.4'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.2'	SINGLE
I-186	16+54.8	11.1 LT	CEDAR STREET	6.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.8'	SINGLE
I-82	7+64.1	14.6 RT	CEDAR STREET	0.1'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.4'	SINGLE
I-84	7+33.7	17.6 RT	CEDAR STREET	0.6'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.5'	SINGLE
I-85	6+28.3	12.2 RT	CEDAR STREET	2.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-86	5+48.8	11.4 RT	CEDAR STREET	2.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.0'	SINGLE
I-88	4+48.8	11.1 RT	CEDAR STREET	3.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.8'	SINGLE
I-89	3+63.4	12.7 RT	CEDAR STREET	3.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.5'	SINGLE
MH-16	4+52.4	1.9 LT	CEDAR STREET	7.7'**	PRECAST MANHOLE	15.1'	
MH-17	5+43.2	2.4 LT	CEDAR STREET	7.4'**	PRECAST MANHOLE	15.4'	
ES-17	7+35.6	7.0 LT	CEDAR STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-18	7+62.5	8.8 LT	CEDAR STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-19	16+47.0	12.6 RT	CEDAR STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-22	14+7.7	10.5 RT	CEDAR STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-23	13+29.4	11.6 RT	CEDAR STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-24	12+20.6	11.8 RT	CEDAR STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-25	11+94.5	11.9 RT	CEDAR STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
I-125	10+26.6	13.7 RT	ARCHER STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-126	10+26.8	23.6 LT	ARCHER STREET	0.6'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.5'	SINGLE
I-127	10+58.8	24.7 RT	ARCHER STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-128	10+58.5	26.4 LT	ARCHER STREET	2.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.0'	SINGLE
I-129	12+06.2	13.4 LT	ARCHER STREET	4.4'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.0'	SINGLE
I-131	13+91.0	13.5 LT	ARCHER STREET	5.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.2'	SINGLE
I-137	14+97.9	13.4 LT	ARCHER STREET	6.4'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.5'	SINGLE
I-138	15+64.2	12.8 LT	ARCHER STREET	6.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.5'	SINGLE
I-139	16+19.5	13.0 LT	ARCHER STREET	4.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	9.6'	SINGLE
I-141	17+06.5	13.8 LT	ARCHER STREET	1.8'	MD-384.01 48" DIAMETER PRECAST MANHOLE	6.3'	BASS & HAYS FOUNDRY, 300-24 MANHOLE GRATE OR APPROVED EQ
I-142	17+74.2	14.8 LT	ARCHER STREET	1.1'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	4.5'	SINGLE
I-93	8+01.4	11.2 RT	ARCHER STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.1'	SINGLE
I-94	6+96.5	26.8 RT	ARCHER STREET	1.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-95	6+62.3	11.0 RT	ARCHER STREET	2.0'	MD-384.01 48" DIAMETER PRECAST MANHOLE	14.5'	BASS & HAYS FOUNDRY, 300-24 MANHOLE GRATE OR APPROVED EQ
I-96	5+80.1	11.8 RT	ARCHER STREET	2.8'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.4'	SINGLE
I-97	4+96.9	11.2 RT	ARCHER STREET	4.6'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.0'	SINGLE
I-98	3+94.6	11.2 RT	ARCHER STREET	3.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.0'	SINGLE
I-99	3+36.4	11.7 RT	ARCHER STREET	2.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	9.8'	SINGLE
MH-11	10+63.6	16.4 LT	ARCHER STREET	7.6'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	16.3'	
MH-12	7+96.1	4.3 LT	ARCHER STREET	5.5'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	16.1'	
MH-13	6+72.2	3.3 LT	ARCHER STREET	6.8'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	16.1'	
MH-130	12+99.4	12.6 LT	ARCHER STREET	9.5'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	15.6'	
MH-134	14+35.6	14.6 LT	ARCHER STREET	11.1'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	15.3'	
ES-26	16+19.5	7.3 RT	ARCHER STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-29	14+9.7	10.3 RT	ARCHER STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-30	11+99.0	9.3 RT	ARCHER STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-31	12+92.4	7.5 RT	ARCHER STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
I-151	3+68.8	12.7 RT	NOMONI STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.3'	SINGLE
I-153	4+81.0	11.3 RT	NOMONI STREET	1.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.9'	SINGLE
I-154	4+81.3	13.6 LT	NOMONI STREET	2.1'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.0'	SINGLE
I-155	6+32.0	13.0 LT	NOMONI STREET	4.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.8'	SINGLE
I-157	8+76.6	11.6 LT	NOMONI STREET	5.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.0'	SINGLE
MH-158	8+78.8	26.1 RT	NOMONI STREET	9.3'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	14.5'	
ES-32	1+50.5	12.2 RT	NOMONI STREET	1.0'	MD-369.00 STANDARD CONCRETE END SECTION HORIZONTAL ELLIPTICAL PIPE		
ES-33	+67.9	11.6 RT	NOMONI STREET	1.0'	MD-369.00 STANDARD CONCRETE END SECTION HORIZONTAL ELLIPTICAL PIPE		

STRUCTURE SCHEDULE

NO.	STATION	OFFSET	BASELINE	DEPTH	MD STANDARD NO., TYPE	T.S.	REMARKS
I-161	+20.1	46.0 RT	WICOMICO STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.7'	SINGLE
I-162	+41.0	14.3 LT	WICOMICO STREET	1.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.8'	SINGLE
I-163	1+81.0	16.2 LT	WICOMICO STREET	3.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.4'	SINGLE
I-164	2+65.6	13.8 LT	WICOMICO STREET	5.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	16.5'	SINGLE
I-165	3+63.6	15.3 LT	WICOMICO STREET	4.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.8'	SINGLE
I-166	3+98.1	13.9 LT	WICOMICO STREET	4.8'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.9'	SINGLE
I-167	3+96.6	16.2 RT	WICOMICO STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.1'	SINGLE
I-168	5+00.5	11.6 LT	WICOMICO STREET	6.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.7'	SINGLE
I-169	6+08.2	14.0 LT	WICOMICO STREET	7.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	16.0'	SINGLE
I-170	7+53.9	16.8 LT	WICOMICO STREET	4.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.3'	SINGLE
I-171	7+91.0	11.1 RT	WICOMICO STREET	0.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.5'	SINGLE
ES-42	1+34.7	12.4 RT	WICOMICO STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-43	1+54.6	12.4 RT	WICOMICO STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-44	1+80.0	9.4 RT	WICOMICO STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-47	2+64.5	8.8 RT	WICOMICO STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-50	4+97.8	6.3 RT	WICOMICO STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-51	5+99.2	7.8 RT	WICOMICO STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
MH-20	8+46.5	17.3 LT	BRENTON STREET	10.0'**	MD-384.03 60" DIAMETER PRECAST MANHOLE	13.5'	
I-18	2+14.4	11.0 LT	OSPREY PL	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.0'	SINGLE
I-19	+29.8	11.2 LT	OSPREY PL	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-20	+27.7	12.2 RT	OSPREY PL	0.6'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.9'	SINGLE
I-26	+18.2	14.5 LT	ST. MARY STREET	1.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	10.5'	SINGLE
I-27	+74.5	12.7 RT	ST. MARY STREET	3.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	12.0'	SINGLE
I-29	1+60.0	15.0 RT	ST. MARY STREET	4.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.4'	SINGLE
I-30	2+21.1	9.2 LT	ST. MARY STREET	0.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-31	2+21.1	13.6 RT	ST. MARY STREET	4.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.0'	SINGLE
I-32	3+56.5	13.7 RT	ST. MARY STREET	2.8'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.7'	SINGLE
I-33	3+63.0	14.2 LT	ST. MARY STREET	0.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.0'	SINGLE
I-34	3+93.6	8.4 LT	ST. MARY STREET	0.5'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.0'	SINGLE
I-35	3+88.5	14.7 RT	ST. MARY STREET	1.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	15.1'	SINGLE
I-38	1+55.9	15.2 LT	LADY BALTIMORE AVENUE	2.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.8'	SINGLE
I-39	1+84.9	15.2 LT	LADY BALTIMORE AVENUE	1.6'	MD-384.01 48" DIAMETER PRECAST MANHOLE	13.6'	BASS & HAYS FOUNDRY, 300-24 MANHOLE GRATE OR APPROVED EQ
I-40	2+18.7	15.1 RT	LADY BALTIMORE AVENUE	1.9'	MD-384.01 48" DIAMETER PRECAST MANHOLE	14.3'	BASS & HAYS FOUNDRY, 300-24 MANHOLE GRATE OR APPROVED EQ
I-44	1+07.7	16.8 LT	LADY BALTIMORE AVENUE	2.1'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.6'	SINGLE
I-46	+54.7	15.0 RT	LADY BALTIMORE AVENUE	1.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.0'	SINGLE
MH-41	3+81.8	14.7 RT	LADY BALTIMORE AVENUE	4.7'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	14.5'	
ES-38	16+69.4	12.8 LT	LADY BALTIMORE AVENUE	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-39	16+96.4	12.5 RT	LADY BALTIMORE AVENUE	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
I-116	7+89.6	14.1 LT	POTOMAC AVENUE	2.4'	MD-384.03 60" DIAMETER PRECAST MANHOLE	11.6'	BASS & HAYS FOUNDRY, 300-24 MANHOLE GRATE OR APPROVED EQ
I-117	7+35.9	13.3 LT	POTOMAC AVENUE	5.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	13.4'	SINGLE
I-123	5+87.6	13.4 LT	POTOMAC AVENUE	1.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	11.2'	SINGLE
I-58	2+86.8	14.2 LT	POTOMAC AVENUE	3.4'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	11.0'	SINGLE
I-59	2+07.3	13.2 LT	POTOMAC AVENUE	0.4'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	7.5'	SINGLE
MH-15	13+33.0	22.1 RT	POTOMAC AVENUE	4.4'**	MD-384.03 60" DIAMETER PRECAST MANHOLE	2.4'	
MH-10	7+84.7	11.1 RT	POTOMAC AVENUE	6.8'**	MD-384.03 60" DIAMETER PRECAST MANHOLE	11.0'	
MH-18	10+75.8	2.4 RT	POTOMAC AVENUE	11.6'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	15.0'	
MH-19	12+75.8	3.5 RT	POTOMAC AVENUE	4.3'**	MD-384.01 48" DIAMETER PRECAST MANHOLE	4.6'	
MH-9	13+32.8	6.2 RT	POTOMAC AVENUE	4.9'**	MD-384.03 60" DIAMETER PRECAST MANHOLE	4.5'	
ES-20	10+79.4	9.8 RT	POTOMAC AVENUE	1.0'	MD-369.00 STANDARD CONCRETE END SECTION HORIZONTAL ELLIPTICAL PIPE		
ES-21	11+62.5	8.6 RT	POTOMAC AVENUE	1.0'	MD-369.00 STANDARD CONCRETE END SECTION HORIZONTAL ELLIPTICAL PIPE		
ES-27	12+68.9	13.6 LT	POTOMAC AVENUE	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-58	+81.8	11.8 LT	POTOMAC AVENUE	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
I-133	4+86.7	11.7 LT	COMPTON STREET	5.9'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.0'	SINGLE
ES-29	4+48.2	13.1 LT	COMPTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-49	9+1.3	9.1 LT	COMPTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-54	11+39.1	32.7 LT	COMPTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-55	11+39.1	23.4 RT	COMPTON STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-56	10+32.2	14.2 RT	COMPTON STREET	1.0'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
ES-57	10+10.6	12.8 RT	COMPTON STREET	1.0'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		
I-37	2+45.1	13.6 RT	LEONARD STREET	1.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.5'	SINGLE
I-54	4+33.0	8.2 LT	LEONARD STREET	4.7'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.2'	SINGLE
I-55	4+37.1	12.5 RT	LEONARD STREET	5.3'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	14.6'	SINGLE
I-56	6+13.5	11.9 RT	LEONARD STREET	2.2'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	10.5'	SINGLE
I-57	6+68.8	11.6 RT	LEONARD STREET	2.0'	MD-378.05 STANDARD SINGLE OR DOUBLE TYPE K INLET OPEN-END GRATE	10.0'	SINGLE
ES-3	6+68.9	8.0 LT	LEONARD STREET	1.3'	MD-368.01 STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE		

DESIGN DOCUMENT ONLY
NOT FOR CONSTRUCTION

BRUDIS & ASSOCIATES, INC.
Consulting Engineers
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PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAW OF THE STATE OF MARYLAND.

LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED: DK/AG
DRAWN: AM
CHECKED: MB
DATE: 02/09/23
SCALE:

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

STRUCTURE SCHEDULE

ST. CLEMENTS SHORES DRAINAGE
SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO.
DP-17

PIPE SCHEDULE

FROM	TO	SIZE	TYPE	LENGTH	INV.IN	INV.OUT	REMARKS
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	30'	14.5'	14.4'	·
FREE_ENT	FREE_EXT	15"	RCP, CLASS IV, B	20'	10.4'	10.3'	·
FREE_ENT	I-169	12"	RCP, CLASS IV, B	26'	15.6'	13.0'	·
FREE_ENT	I-09	12"	RCP, CLASS IV, B	25'	13.6'	10.9'	·
ES-30	I-129	15"	RCP, CLASS IV, B	20'	14.1'	11.0'	·
FREE_ENT	I-151	15"	RCP, CLASS IV, B	31'	13.2'	10.0'	·
FREE_ENT	MH-17	12"	RCP, CLASS IV, B	10'	13.5'	12.0'	·
FREE_ENT	I-164	12"	RCP, CLASS IV, B	25'	15.7'	13.4'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	18'	14.5'	14.5'	·
ES-14	I-70	15"	RCP, CLASS IV, B	22'	14.0'	12.0'	·
FREE_ENT	FREE_EXT	15"	RCP, CLASS IV, B	44'	13.9'	13.7'	·
ES-26	I-139	15"	RCP, CLASS IV, B	22'	9.5'	6.0'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	27'	13.9'	13.7'	·
FREE_ENT	FREE_EXT	23"	RCP, CLASS IV, B	23'	14.7'	13.6'	·
FREE_ENT	I-162	15"	RCP, CLASS IV, B	53'	14.2'	12.9'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	18'	14.4'	14.3'	·
ES-44	I-163	15"	RCP, CLASS IV, B	28'	14.4'	13.3'	·
ES-7	I-111	15"	RCP, CLASS IV, B	23'	14.0'	12.0'	·
FREE_ENT	MH-130	12"	RCP, CLASS IV, B	24'	14.6'	11.0'	·
ES-4	I-119	15"	RCP, CLASS IV, B	27'	14.4'	11.9'	·
FREE_ENT	I-123	15"	RCP, CLASS IV, B	25'	9.7'	9.1'	·
FREE_ENT	MH-16	15"	RCP, CLASS IV, B	9'	13.6'	12.0'	·
ES-5	I-122	15"	RCP, CLASS IV, B	27'	12.3'	10.2'	·
ES-13	MH-67	12"	RCP, CLASS IV, B	27'	13.5'	12.9'	·
ES-3	I-57	18"	RCP, CLASS IV, B	17'	4.7'	4.6'	·
ES-19	I-186	15"	RCP, CLASS IV, B	27'	13.3'	9.5'	·
FREE_ENT	I-168	18"	RCP, CLASS IV, B	21'	16.0'	12.7'	·
ES-15	I-72	15"	RCP, CLASS IV, B	22'	14.0'	11.5'	·
ES-12	MH-67	12"	RCP, CLASS IV, B	25'	13.3'	12.5'	·
ES-27	MH-19	15"	RCP, CLASS IV, B	21'	3.5'	3.1'	·
ES-20	ES-21	23"	RCP, CLASS IV, B	75'	14.6'	10.5'	·
ES-29	MH-134	12"	RCP, CLASS IV, B	39'	14.2'	11.0'	·
FREE_ENT	I-10	15"	RCP, CLASS IV, B	24'	14.3'	12.0'	·
ES-17	I-84	15"	RCP, CLASS IV, B	27'	13.6'	11.1'	·
ES-56	ES-57	12"	RCP, CLASS IV, B	14'	16.1'	16.0'	·
FREE_ENT	FREE_EXT	15"	RCP, CLASS IV, B	22'	14.7'	14.6'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	16'	14.5'	14.4'	·
FREE_ENT	FREE_EXT	15"	RCP, CLASS IV, B	48'	15.2'	15.0'	·
ES-42	ES-43	15"	RCP, CLASS IV, B	12'	14.7'	14.6'	·
FREE_ENT	FREE_EXT	23"	RCP, CLASS IV, B	64'	15.5'	14.9'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	23'	15.1'	14.9'	·
FREE_ENT	FREE_EXT	23"	RCP, CLASS IV, B	53'	15.4'	15.0'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	27'	14.4'	14.2'	·
ES-18	I-82	15"	RCP, CLASS IV, B	25'	10.9'	9.9'	·
ES-25	ES-24	15"	RCP, CLASS IV, B	19'	15.0'	14.9'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	24'	14.9'	14.8'	·
ES-23	ES-22	15"	RCP, CLASS IV, B	71'	15.5'	15.1'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	30'	15.6'	15.5'	·
ES-33	ES-32	23"	RCP, CLASS IV, B	74'	16.1'	15.7'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	23'	13.6'	13.5'	·
ES-39	ES-38	15"	RCP, CLASS IV, B	19'	15.1'	15.0'	·
FREE_ENT	FREE_EXT	15"	RCP, CLASS IV, B	23'	14.8'	14.7'	·

PIPE SCHEDULE

FROM	TO	SIZE	TYPE	LENGTH	INV.IN	INV.OUT	REMARKS
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	25'	15.5'	15.4'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	24'	15.9'	15.4'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	23'	15.3'	15.2'	·
FREE_ENT	FREE_EXT	12"	RCP, CLASS IV, B	23'	15.3'	15.0'	·
FREE_ENT	FREE_EXT	15"	RCP, CLASS IV, B	43'	14.7'	14.5'	·
FREE_ENT	FREE_EXT	23"	RCP, CLASS IV, B	21'	15.0'	14.8'	·
FREE_ENT	I-175	15"	RCP, CLASS IV, B	24'	14.5'	11.2'	·
FREE_ENT	FREE_EXT	15"	RCP, CLASS IV, B	22'	14.5'	14.4'	·
ES-49	I-167	15"	RCP, CLASS IV, B	26'	15.0'	13.1'	·
I-01	MH-01	15"	RCP, CLASS IV, B	14'	3.9'	3.8'	·
I-02	MH-03	15"	RCP, CLASS IV, B	31'	8.1'	7.9'	·
I-03	MH-03	15"	RCP, CLASS IV, B	80'	6.2'	5.5'	·
I-04	I-03	15"	RCP, CLASS IV, B	21'	7.9'	7.7'	·
I-05	I-03	15"	RCP, CLASS IV, B	109'	6.7'	6.3'	·
I-06	MH-04	15"	RCP, CLASS IV, B	24'	9.9'	9.8'	·
I-07	I-06	15"	RCP, CLASS IV, B	28'	11.3'	10.1'	·
I-08	MH-04	15"	RCP, CLASS IV, B	41'	8.7'	8.3'	·
I-09	I-08	15"	RCP, CLASS IV, B	89'	9.7'	8.8'	·
I-10	I-09	15"	RCP, CLASS IV, B	127'	11.0'	9.8'	·
I-100	I-101	18"	RCP, CLASS IV, B	36'	3.1'	2.7'	·
I-101	FREE_EXT	21"	RCP, CLASS IV, B	209'	2.7'	2.0'	·
I-102	MH-7	15"	RCP, CLASS IV, B	50'	10.3'	9.8'	·
I-104	MH-7	18"	RCP, CLASS IV, B	36'	10.8'	10.5'	·
I-105	MH-7	15"	RCP, CLASS IV, B	12'	10.3'	10.2'	·
I-106	MH-8	15"	RCP, CLASS IV, B	12'	10.5'	10.4'	·
I-107	MH-8	15"	RCP, CLASS IV, B	40'	10.3'	9.9'	·
I-108	I-109	18"	RCP, CLASS IV, B	23'	8.7'	8.5'	·
I-109	I-111	18"	RCP, CLASS IV, B	66'	8.4'	7.8'	·
FREE_ENT	MH-15	15"	RCP, CLASS IV, B	35'	0.8'	0.7'	·
I-111	I-113	18"	RCP, CLASS IV, B	81'	7.7'	6.9'	·
I-113	I-114	24"	RCP, CLASS IV, B	135'	6.8'	6.1'	·
I-114	I-115	24"	RCP, CLASS IV, B	22'	6.0'	5.9'	·
I-115	I-116	27"	RCP, CLASS IV, B	25'	5.9'	5.7'	·
I-116	MH-10	27"	RCP, CLASS IV, B	26'	5.6'	4.9'	·
I-117	MH-10	21"	RCP, CLASS IV, B	52'	4.9'	4.4'	·
I-118	I-119	15"	RCP, CLASS IV, B	68'	10.5'	9.9'	·
I-119	I-122	15"	RCP, CLASS IV, B	188'	9.2'	7.4'	·
I-12	FREE_EXT	36"	RCP, CLASS IV, B	69'	1.5'	1.0'	·
I-122	I-123	15"	RCP, CLASS IV, B	45'	7.2'	6.8'	·
I-123	I-117	18"	RCP, CLASS IV, B	149'	6.4'	5.0'	·
I-125	I-126	15"	RCP, CLASS IV, B	38'	12.3'	11.1'	·
I-126	I-128	15"	RCP, CLASS IV, B	32'	9.4'	9.1'	·
I-127	MH-11	15"	RCP, CLASS IV, B	42'	11.5'	11.1'	·
I-128	MH-11	15"	RCP, CLASS IV, B	12'	9.0'	8.9'	·
I-129	MH-130	15"	RCP, CLASS IV, B	94'	7.1'	6.2'	·
I-131	I-133	15"	RCP, CLASS IV, B	25'	5.0'	4.8'	·
I-133	MH-134	12"	RCP, CLASS IV, B	29'	4.6'	4.4'	·
I-137	I-138	24"	RCP, CLASS IV, B	67'	3.6'	2.9'	·
I-138	I-139	24"	RCP, CLASS IV, B	56'	2.8'	2.2'	·
I-139	I-141	24"	RCP, CLASS IV, B	88'	2.0'	1.2'	·
I-141	I-142	24"	RCP, CLASS IV, B	68'	1.0'	0.1'	·
I-142	MH-9	30"	RCP, CLASS IV, B	30'	-0.1'	-0.2'	·
I-151	I-153	15"	RCP, CLASS IV, B	113'	9.9'	8.8'	·
I-153	I-154	15"	RCP, CLASS IV, B	25'	8.7'	8.5'	·
I-154	I-155	21"	RCP, CLASS IV, B	151'	8.4'	6.9'	·
I-155	I-157	24"	RCP, CLASS IV, B	245'	6.8'	5.6'	·

PIPE SCHEDULE

FROM	TO	SIZE	TYPE	LENGTH	INV.IN	INV.OUT	REMARKS
I-157	MH-158	24"	RCP, CLASS IV, B	38'	5.5'	5.3'	·
I-161	I-162	15"	RCP, CLASS IV, B	64'	12.7'	9.9'	·
I-162	I-163	18"	RCP, CLASS IV, B	141'	9.6'	8.9'	·
I-163	I-164	18"	RCP, CLASS IV, B	85'	8.6'	8.2'	·
I-164	I-165	21"	RCP, CLASS IV, B	99'	7.8'	7.3'	·
I-165	I-166	21"	RCP, CLASS IV, B	35'	7.1'	7.0'	·
I-166	I-168	21"	RCP, CLASS IV, B	103'	6.7'	6.2'	·
I-167	I-166	15"	RCP, CLASS IV, B	31'	12.8'	12.5'	·
I-168	I-169	24"	RCP, CLASS IV, B	108'	5.8'	5.3'	·
I-169	I-170	24"	RCP, CLASS IV, B	146'	5.0'	4.3'	·
I-170	MH-20	30"	RCP, CLASS IV, B	38'	3.9'	3.8'	·
I-171	MH-20	15"	RCP, CLASS IV, B	37'	8.8'	8.4'	·
I-175	I-177	15"	RCP, CLASS IV, B	57'	10.1'	9.5'	·
I-177	I-180	15"	RCP, CLASS IV, B	98'	9.3'	8.4'	·
I-18	I-19	15"	RCP, CLASS IV, B	185'	13.1'	11.3'	·
I-180	I-181	15"	RCP, CLASS IV, B	96'	8.3'	7.5'	·
I-181	I-182	15"	RCP, CLASS IV, B	134'	7.3'	6.0'	·
I-182	I-184	15"	RCP, CLASS IV, B	44'	5.8'	5.4'	·
I-184	I-186	15"	RCP, CLASS IV, B	137'	5.3'	3.9'	·
I-186	MH-18	15"	RCP, CLASS IV, B	36'	3.8'	3.5'	·
I-19	I-20	15"	RCP, CLASS IV, B	24'	11.2'	11.0'	·
I-191	FREE_EXT	15"	RCP, CLASS IV, B	40'	8.5'	8.1'	·
I-192	I-191	15"	RCP, CLASS IV, B	45'	9.0'	8.6'	·
I-20	I-21	15"	RCP, CLASS IV, B	44'	10.9'	10.5'	·
I-21	I-23	15"	RCP, CLASS IV, B	171'	10.4'	8.7'	·
I-23	MH-22	15"	RCP, CLASS IV, B	70'	8.0'	6.0'	·
I-26	I-MH 25	15"	RCP, CLASS IV, B	30'	5.3'	4.6'	·
I-27	I-MH 25	18"	RCP, CLASS IV, B	69'	5.3'	4.7'	·
I-29	I-27	18"	RCP, CLASS IV, B	86'	6.2'	5.4'	·
I-30	I-31	15"	RCP, CLASS IV, B	23'	11.7'	11.2'	·
I-31	I-29	18"	RCP, CLASS IV, B	62'	7.0'	6.4'	·
I-32	I-31	15"	RCP, CLASS IV, B	136'	8.4'	7.1'	·
I-33	I-32	15"	RCP, CLASS IV, B	29'	11.0'	10.3'	·
I-34	I-35	15"	RCP, CLASS IV, B	24'	11.0'	10.8'	·
I-35	I-32	15"	RCP, CLASS IV, B	33'	10.7'	10.4'	·
I-37	I-38	15"	RCP, CLASS IV, B	103'	9.3'	8.9'	·
I-38	I-44	18"	RCP, CLASS IV, B	49'	8.3'	8.1'	·
I-39	I-38	18"	RCP, CLASS IV, B	29'	8.5'	8.4'	·
I-40	I-39	18"	RCP, CLASS IV, B	46'	8.9'	8.6'	·
I-42	MH-41	15"	RCP, CLASS IV, B	32'	10.0'	9.8'	·
I-43	I-42	15"	RCP, CLASS IV, B	37'	10.7'	10.5'	·
I-44	I-46	18"	RCP, CLASS IV, B	62'	8.0'	7.7'	·
I-46	MH-14	18"	RCP, CLASS IV, B	58'	7.6'	7.3'	·
I-47	MH-48	15"	RCP, CLASS IV, B	50'	9.1'	8.6'	·
I-49	FREE_EXT	21"	RCP, CLASS IV, B	136'	7.0'	6.3'	·
I-54	I-55	15"	RCP, CLASS IV, B	22'	6.0'	5.9'	·
I-55	I-56	15"	RCP, CLASS IV, B	177'	5.8'	4.9'	·
I-56	I-57	18"	RCP, CLASS IV, B	56'	4.8'	4.6'	·
I-57	I-58	18"	RCP, CLASS IV, B	58'	4.5'	4.2'	·
I-58	I-59	18"	RCP, CLASS IV, B	80'	4.1'	3.7'	·
I-59	FREE_EXT	18"	RCP, CLASS IV, B	129'	3.6'	3.0'	·
I-70	I-72	18"	RCP, CLASS IV, B	142'	11.8'	10.8'	·
I-72	I-74	24"	RCP, CLASS IV, B	190'	7.1'	6.2'	·
I-74	I-75	24"	RCP, CLASS IV, B	29'	5.9'	5.8'	·
I-75	MH-6	27"	RCP, CLASS IV, B	25'	5.3'	5.2'	·
I-76	I-77	30"	RCP, CLASS IV, B	194'	3.8'	2.9'	·

PIPE SCHEDULE

FROM	TO	SIZE	TYPE	LENGTH	INV.IN	INV.OUT	REMARKS
I-77	MH-5	30"	RCP, CLASS IV, B	27'	2.7'	2.6'	·
I-79	I-80	15"	RCP, CLASS IV, B	95'	8.0'	7.0'	·
I-80	MH-6	24"	RCP, CLASS IV, B	98'	5.1'	4.6'	·
I-82	I-84	15"	RCP, CLASS IV, B	31'	9.7'	9.6'	·
I-84	I-85	15"	RCP, CLASS IV, B	106'	9.4'	8.9'	·
I-85	I-86	15"	RCP, CLASS IV, B	80'	8.7'	8.3'	·
I-86	MH-17	15"	RCP, CLASS IV, B	15'	8.3'	8.2'	·
I-88	I-89	18"	RCP, CLASS IV, B	86'	7.3'	6.9'	·
I-89	I-90	24"	RCP, CLASS IV, B	62'	6.8'	6.5'	·
I-90	I-91	24"	RCP, CLASS IV, B	101'	6.3'	5.6'	·
I-91	I-80	24"	RCP, CLASS IV, B	20'	5.5'	5.4'	·
I-92	I-101	15"	RCP, CLASS IV, B	115'	7.1'	4.5'	·
I-93	MH-12	15"	RCP, CLASS IV, B	17'	13.0'	12.9'	·
I-94	I-95	15"	RCP, CLASS IV, B	38'	10.0'	9.7'	·
I-95	I-96	15"	RCP, CLASS IV, B	83'	9.0'	8.2'	·
I-96	I-97	15"	RCP, CLASS IV, B	84'	8.1'	7.3'	·
I-97	I-98	15"	RCP, CLASS IV, B	103'	5.9'	4.9'	·
I-98	I-99	15"	RCP, CLASS IV, B	59'	4.8'	4.2'	·
I-99	I-100	15"	RCP, CLASS IV, B	93'	4.1'	3.2'	·
I-MH 25	MH-22	21"	RCP, CLASS IV, B	26'	4.2'	4.0'	·
MH-01	FREE_EXT	21"	RCP, CLASS IV, B	60'	3.3'	3.0'	·
MH-02	MH-01	18"	RCP, CLASS IV, B	157'	5.1'	3.8'	·
MH-03	MH-02	15"	RCP, CLASS IV, B	21'	5.4'	5.2'	·
MH-04	I-05	15"	RCP, CLASS IV, B	32'	7.1'	6.8'	·
MH-10	FREE_EXT	30"	RCP, CLASS IV, B	132'	4.2'	3.6'	·
MH-11	I-129	15"	RCP, CLASS IV, B	143'	8.6'	7.3'	·
MH-12	MH-13	15"	RCP, CLASS IV, B	124'	10.7'	9.5'	·
MH-13	I-95	15"	RCP, CLASS IV, B	18'	9.3'	9.1'	·
MH-130	I-131	15"	RCP, CLASS IV, B	92'	6.1'	5.2'	·
MH-134	I-137	24"	RCP, CLASS IV, B	63'	4.2'	3.6'	·
MH-14	I-49	18"	RCP, CLASS IV, B	34'	7.2'	7.1'	·
MH-15	FREE_EXT	30"	RCP, CLASS IV, B	129'	-2.0'	-4.8'	·
MH-158	I-142	24"	RCP, CLASS IV, B	253'	5.2'	1.5'	·
MH-16	I-88	15"	RCP, CLASS IV, B	14'	7.5'	7.4'	·
MH-17	MH-16	24"	RCP, CLASS IV, B	91'	8.0'	7.6'	·
MH-18	MH-19	15"	RCP, CLASS IV, B	200'	3.4'	0.5'	·
MH-19	MH-9	24"	RCP, CLASS IV, B	58'	0.3'	0.0'	·
MH-20	FREE_EXT	36"	RCP, CLASS IV, B	53'	3.5'	3.0'	·
MH-21	I-12	30"	RCP, CLASS IV, B	62'	2.1'	1.6'	·
MH-22	FREE_EXT	21"	RCP, CLASS IV, B	96'	3.9'	2.5'	·
MH-41	I-40	18"	RCP, CLASS IV, B	164'	9.7'	8.9'	·
MH-48	MH-14	15"	RCP, CLASS IV, B	38'	8.5'	8.1'	·
MH-5	MH-21	30"	RCP, CLASS IV, B	23'	2.5'	2.4'	·
MH-6	I-76	30"	RCP, CLASS IV, B	35'	4.0'	3.9'	·
MH-67	I-70	15"	RCP, CLASS IV, B	63'	12.5'	11.9'	·
MH-7	MH-8	18"	RCP, CLASS IV, B	36'	9.7'	9.4'	·
MH-8	I-108	18"	RCP, CLASS IV, B	51'	9.3'	8.8'	·
MH-9	MH-15	30"	RCP, CLASS IV, B	16'	-0.4'	-0.5'	·

PIPE SIZE	TYPE	MATERIAL	TOTAL LENGTH	REMARKS
12"	CLASS IV	CONCRETE	575'	·
15"	CLASS IV	CONCRETE	5894'	·
18"	CLASS IV	CONCRETE	2109'	·
21"	CLASS IV	CONCRETE	967'	·
23"	CLASS IV	CONCRETE	310'	·
24"	CLASS IV	CONCRETE	1938'	·
27"	CLASS IV	CONCRETE	76'	·
30"	CLASS IV	CONCRETE	686'	·
36"	CLASS IV	CONCRETE	122'	·

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PROFESSIONAL CERTIFICATION

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LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:	DK/AG
DRAWN:	AM
CHECKED:	MB
DATE:	02/09/23
SCALE:	

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

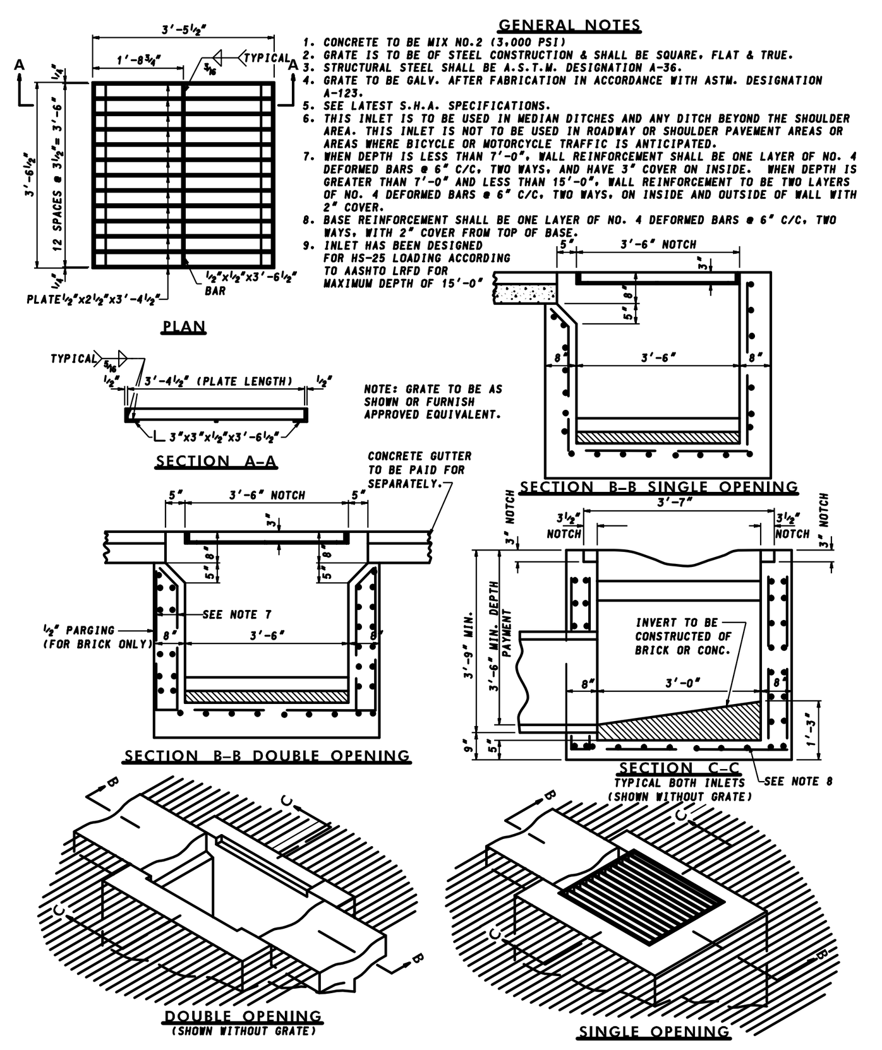
PIPE SCHEDULE

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. DP-18

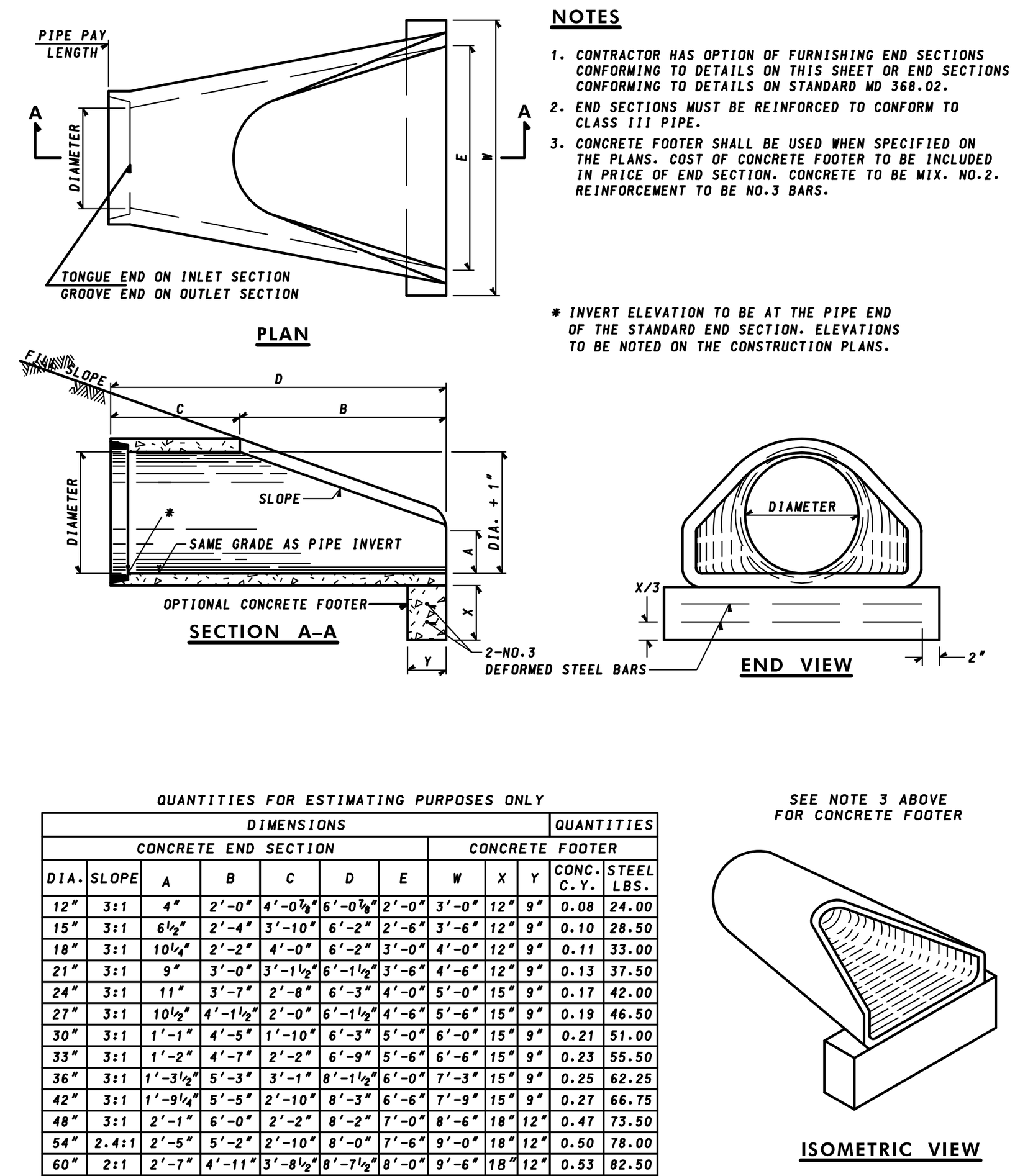
SHEET 29 OF 56

PLOTTED:$DATE$
FILE: $FILE$



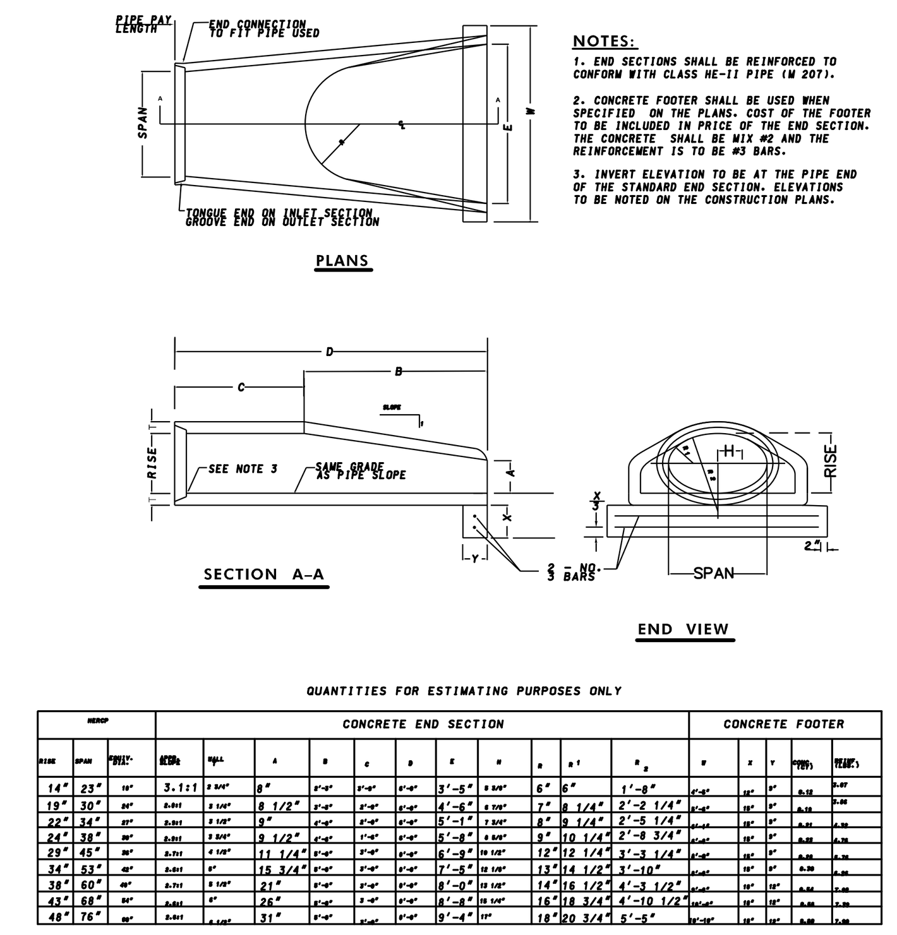
STANDARD SINGLE OR DOUBLE OPENING TYPE K INLET OPEN - END GRATE

MD 378.05



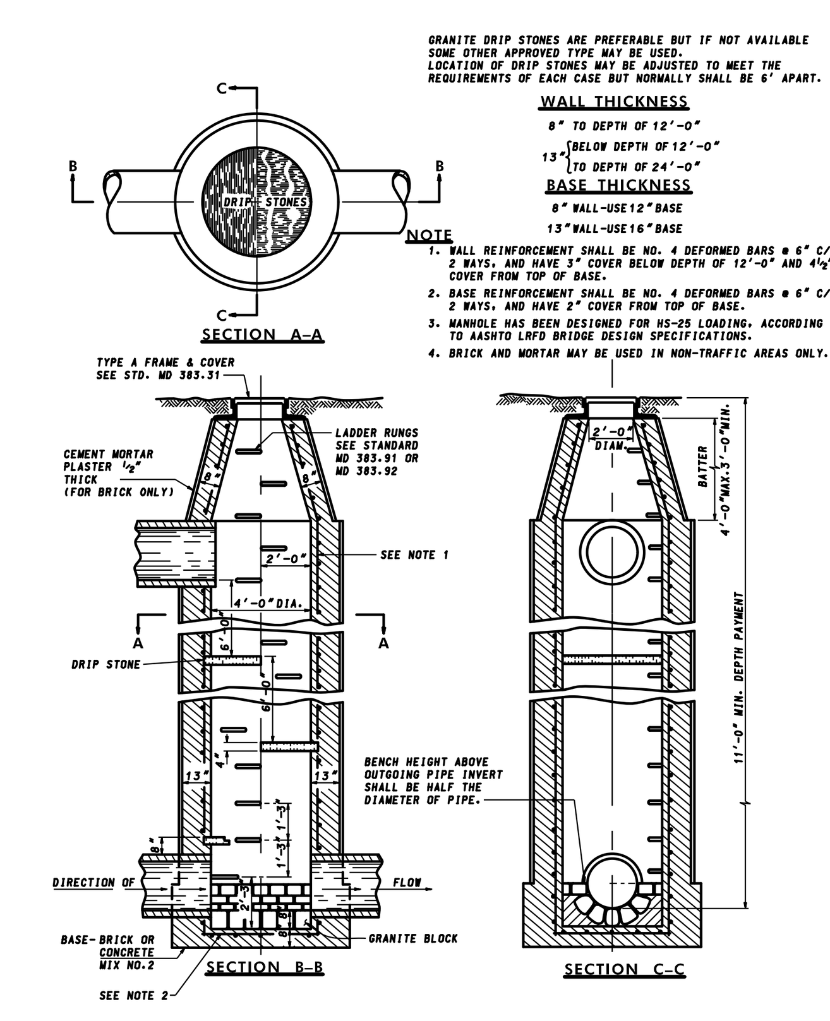
STANDARD CONCRETE END SECTION ROUND CONCRETE PIPE

MD 368.01



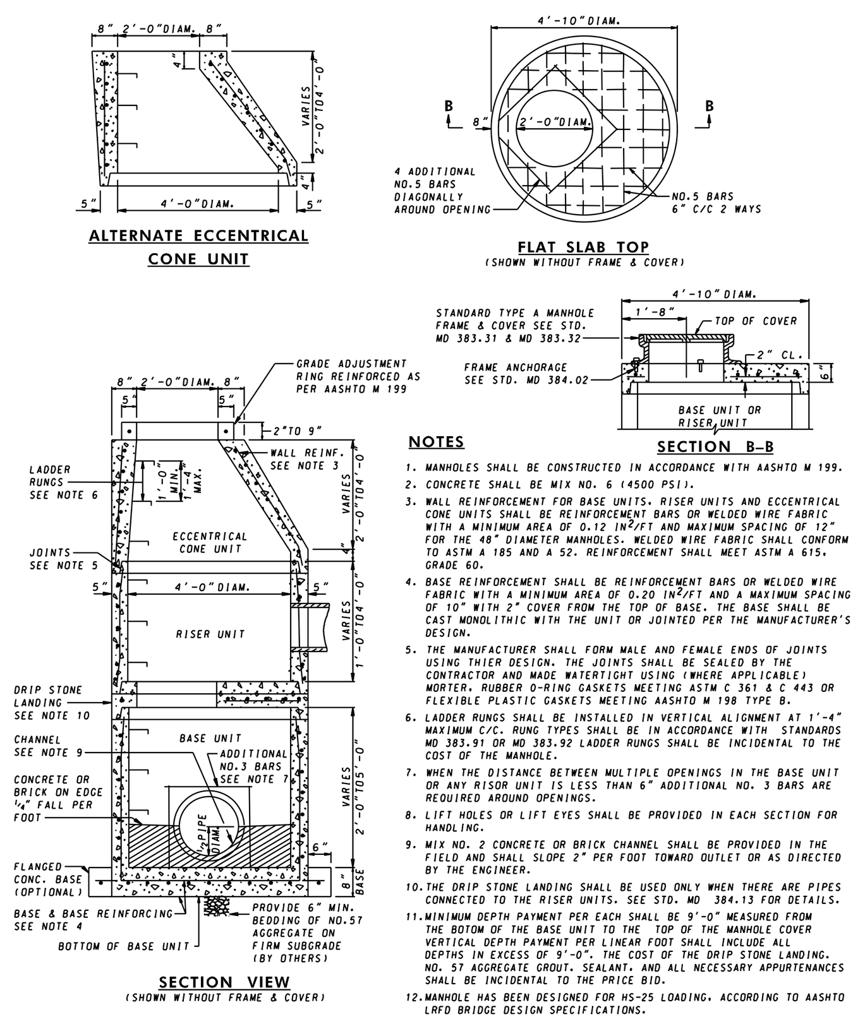
STANDARD CONCRETE END SECTION HORIZONTAL ELLIPTICAL PIPE

MD 369.00



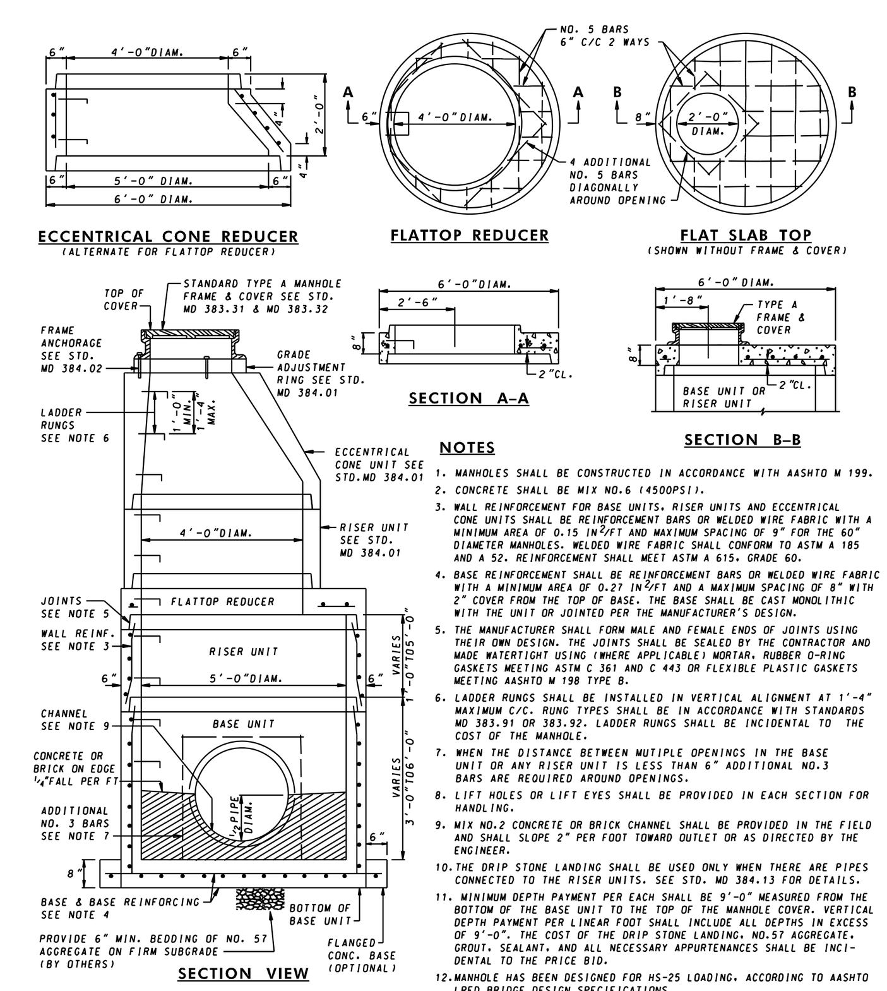
STANDARD DROP MANHOLE

MD 383.11



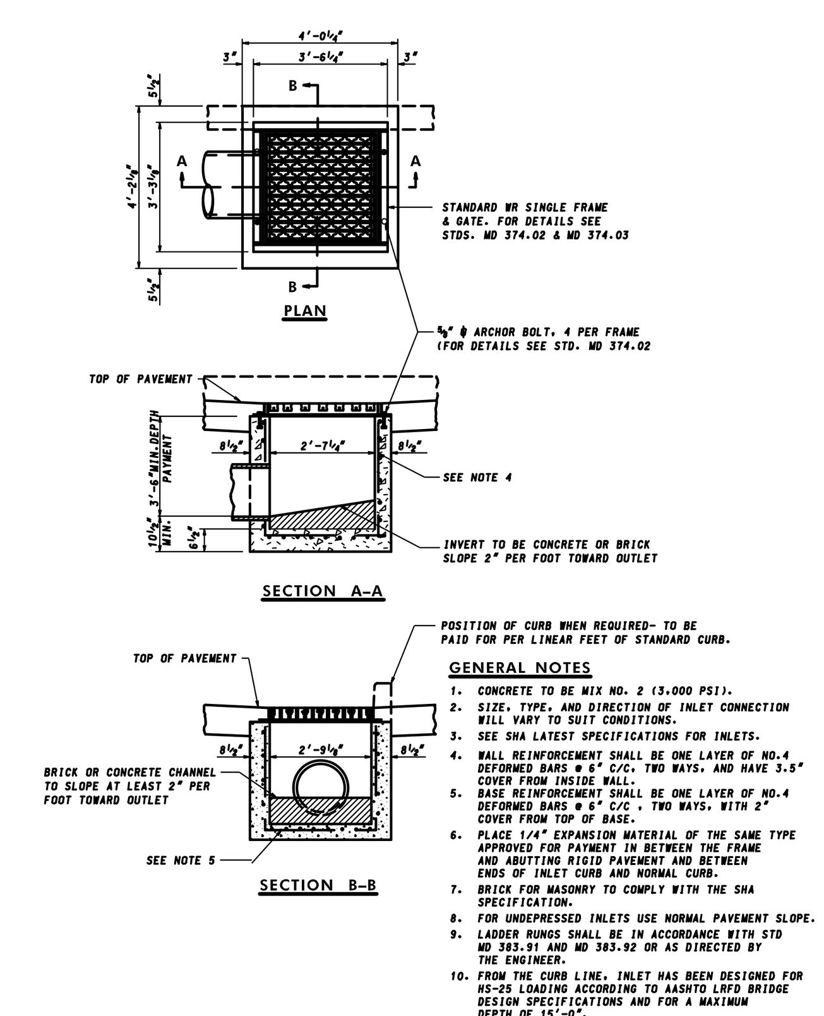
48" DIAMETER PRECAST MANHOLE FOR 12" TO 24" PIPES

MD 384.01



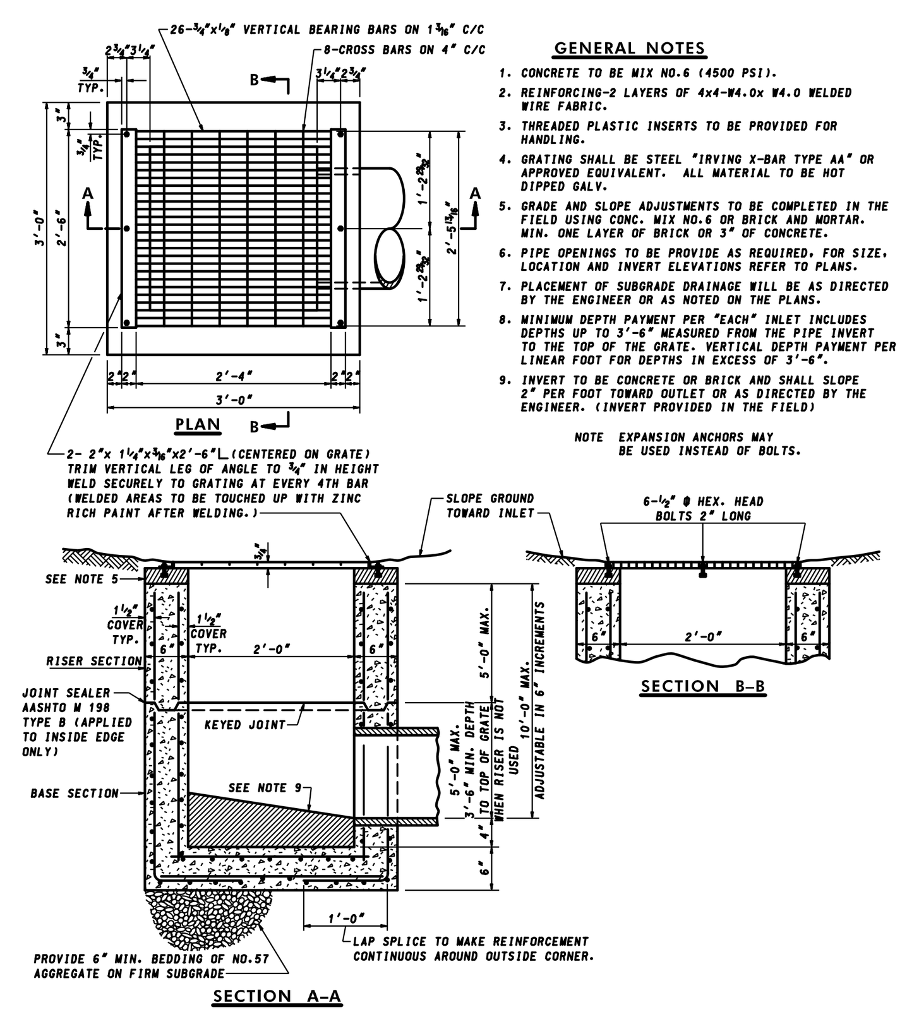
60" DIAMETER PRECAST MANHOLE FOR 27" TO 36" PIPES

MD 384.03



SINGLE WR INLET

MD 374.06



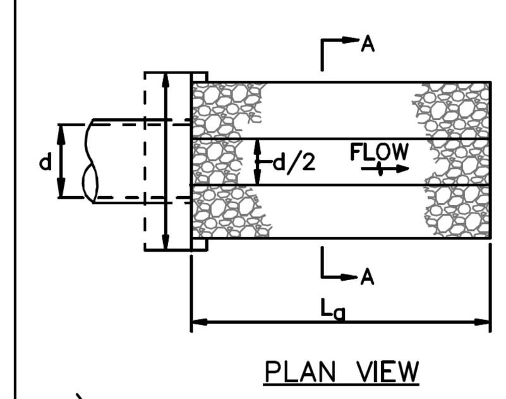
PRECAST YARD INLET

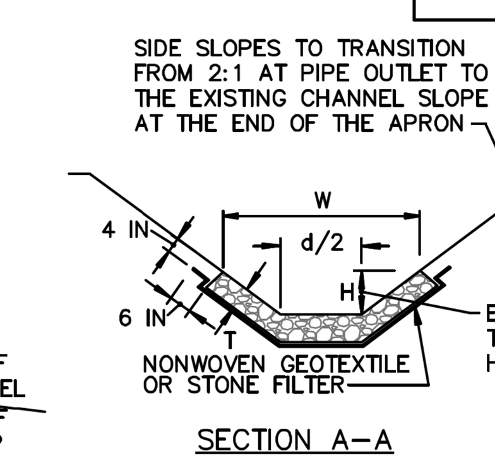
STANDARD NO. MD 381.02

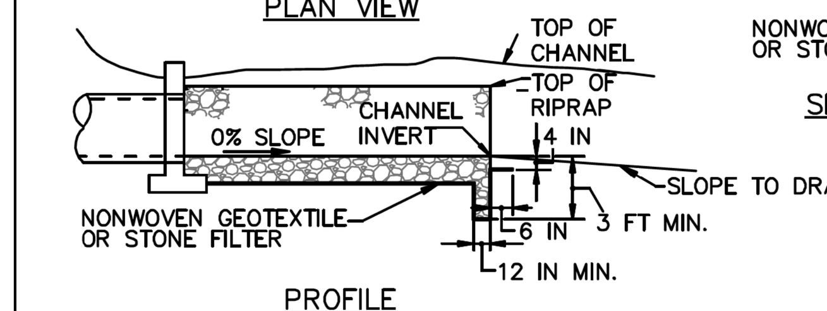
DETAIL D-4-1-B ROCK OUTLET PROTECTION II

STANDARD SYMBOL: ROPII

DISCHARGE TO CONFINED CHANNEL SECTION







RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (3/8 TO 1½ INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH 0% SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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

D.21

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LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:
DRAWN:
CHECKED:
DATE: 02/09/23
SCALE:

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

DRAINAGE DETAILS

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO. SMC-22-DPWT-120711

DWG NO. DP-19

PLOTTED: $DATE$
FILE: $FILE$

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LEGEND

DRAINAGE SWALE CENTERLINE	EXISTING PIPE
DRAINAGE AREA BOUNDARY	PROPOSED PIPE
SEWER LINE (SS$_x$)	
WATER LINE (W$_x$)	PROPOSED RIPRAP

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CHECKED:	MB
DATE:	02/09/23
SCALE:	1" = 30'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

DRAINAGE SWALES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-01

SHEET 31 OF 56

PLOTTED: $DATE$
FILE: $FILE$

LEGEND

DRAINAGE SWALE CENTERLINE
DRAINAGE AREA BOUNDARY
SEWER LINE
WATER LINE
EXISTING PIPE
PROPOSED PIPE
PROPOSED RIPRAP

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EXPIRATION DATE: 12/30/2023

DESIGNED:
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CHECKED:
DATE: 02/09/23
SCALE: 1"=30'

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

DRAINAGE SWALES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-02

SHEET 32 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET SW-01

MATCHLINE SEE SHEET SW-04

MATCHLINE SEE SHEET SW-05

MATCHLINE SEE SHEET SW-06

30′ 0 30′ 60′
SCALE: 1"=30′

LEGEND

DRAINAGE SWALE CENTERLINE
DRAINAGE AREA BOUNDARY
SEWER LINE
WATER LINE
EXISTING PIPE
PROPOSED PIPE
PROPOSED RIPRAP

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DESIGNED:	
DRAWN:	
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DATE: 02/09/23	
SCALE: 1"=30'	

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
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DRAINAGE SWALES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-03

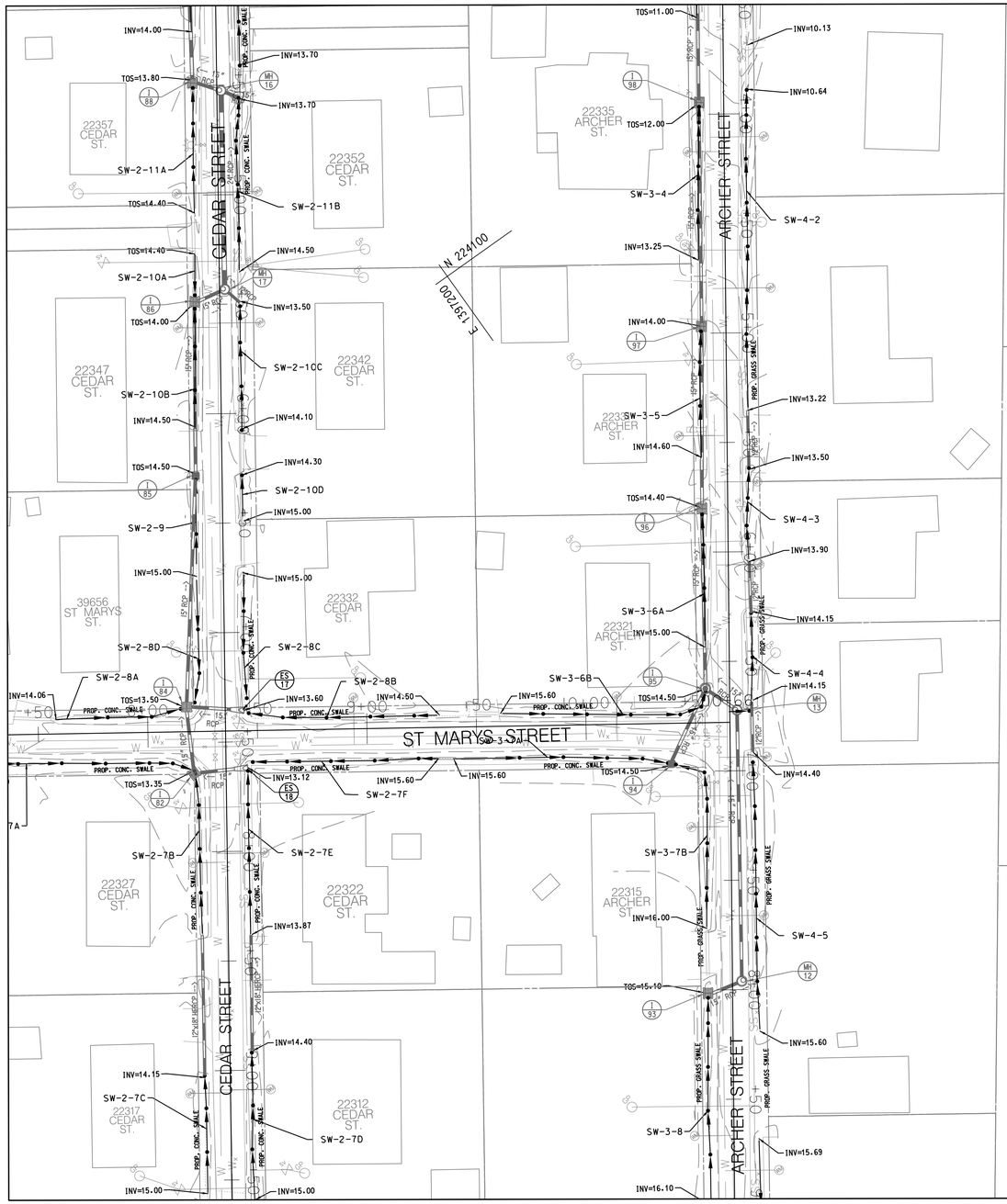
SHEET 33 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET SW-01

MATCHLINE SEE SHEET DD-02

MATCHLINE SEE SHEET SW-03



MATCHLINE SEE SHEET SW-06

MATCHLINE SEE SHEET SW-07

30′ 0 30′ 60′

SCALE: 1"=30′

LEGEND

DRAINAGE SWALE CENTERLINE
DRAINAGE AREA BOUNDARY
SEWER LINE
WATER LINE
EXISTING PIPE
PROPOSED PIPE
PROPOSED RIPRAP

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DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
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P.O BOX 508, CALIFORNIA, MARYLAND 20619

DRAINAGE SWALES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-04

SHEET 34 OF 56

PLOTTED: $DATE$
FILE: $FILE$

LEGEND

DRAINAGE SWALE CENTERLINE
DRAINAGE AREA BOUNDARY
SEWER LINE
WATER LINE
EXISTING PIPE
PROPOSED PIPE
PROPOSED RIPRAP

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DRAINAGE SWALES

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CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-05

SHEET 35 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET SW-03

MATCHLINE SEE SHEET SW-04

MATCHLINE SEE SHEET SW-05

MATCHLINE SEE SHEET SW-07

MATCHLINE SEE SHEET SW-08

MATCHLINE SEE SHEET SW-09

LEGEND

DRAINAGE SWALE CENTERLINE
DRAINAGE AREA BOUNDARY
SEWER LINE
WATER LINE
EXISTING PIPE
PROPOSED PIPE
PROPOSED RIPRAP

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

DESIGN DOCUMENT ONLY
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PLOTTED: $DATE$
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DRAINAGE SWALES

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CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-06

SHEET 36 OF 56

MATCHLINE SEE SHEET SW-04

MATCHLINE SEE SHEET SW-06

MATCHLINE SEE SHEET SW-09

MATCHLINE SEE SHEET SW-10

LADY BALTIMORE AVENUE

ARCHER STREET

NOMONI STREET

WICOMICO STREET

BRENTON STREET

COMPTON STREET

N 223200

E 1397700

N 223500

E 1396900

N 223200

E 1396900

30′ 0 30′ 60′

SCALE: 1"=30′

LEGEND

DRAINAGE SWALE CENTERLINE
DRAINAGE AREA BOUNDARY
SEWER LINE
WATER LINE
EXISTING PIPE
PROPOSED PIPE
PROPOSED RIPRAP

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DRAINAGE SWALES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

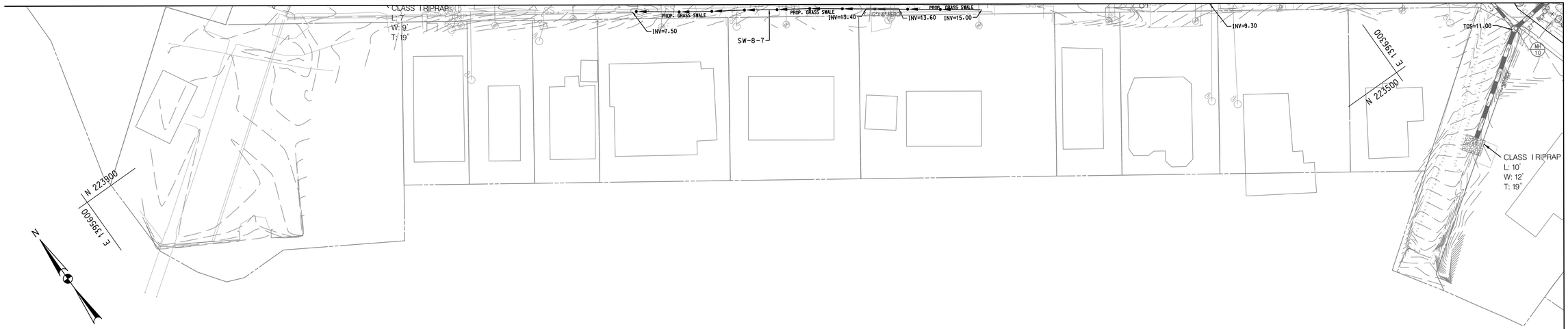
DWG NO. SW-07

SHEET 37 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET SW-05

MATCHLINE SEE SHEET SW-06



MATCHLINE SEE SHEET SW-09

LEGEND

DRAINAGE SWALE CENTERLINE	EXISTING PIPE
DRAINAGE AREA BOUNDARY	PROPOSED PIPE
SEWER LINE	PROPOSED RIPRAP
WATER LINE	

30′ 0 30′ 60′
SCALE: 1"=30′

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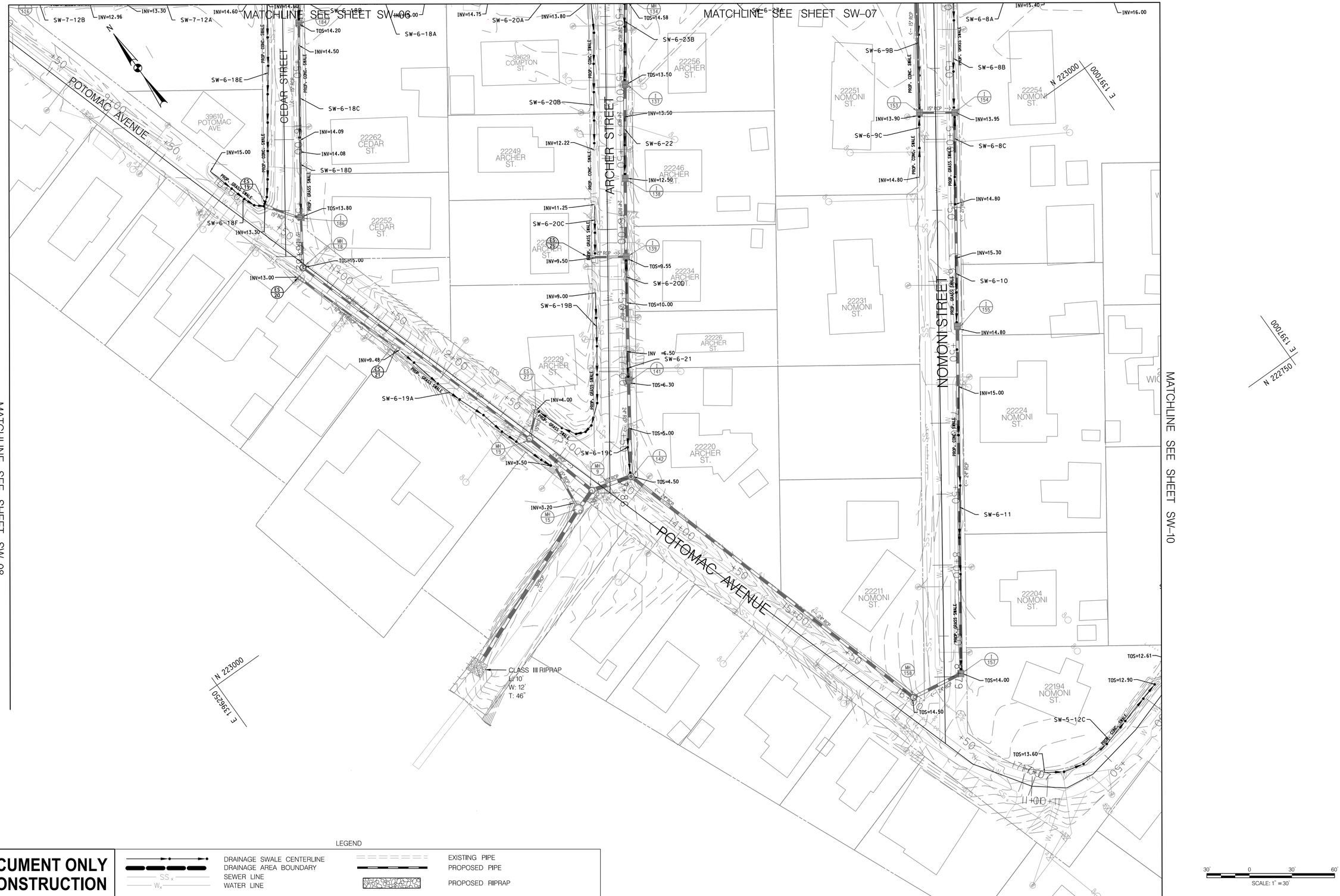
DRAINAGE SWALES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-08

SHEET 38 OF 56

PLOTTED: $DATE$
FILE: $FILE$



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LEGEND

- DRAINAGE SWALE CENTERLINE
- DRAINAGE AREA BOUNDARY
- SEWER LINE
- WATER LINE
- EXISTING PIPE
- PROPOSED PIPE
- PROPOSED RIPRAP

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DRAINAGE SWALES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-09

SHEET 39 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET SW-09

MATCHLINE SEE SHEET SW-07

LEGEND

DRAINAGE SWALE CENTERLINE
DRAINAGE AREA BOUNDARY
SEWER LINE
WATER LINE
EXISTING PIPE
PROPOSED PIPE
PROPOSED RIPRAP

30′ 0 30′ 60′
SCALE: 1"=30′

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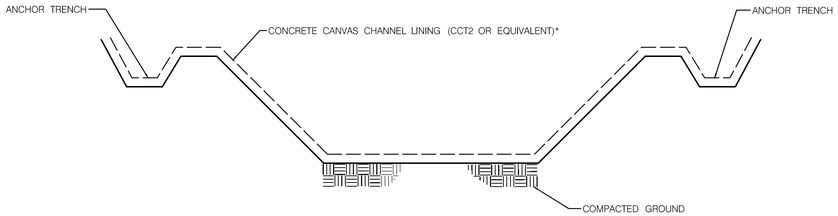
DRAINAGE SWALES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. SW-10

SHEET 40 OF 56

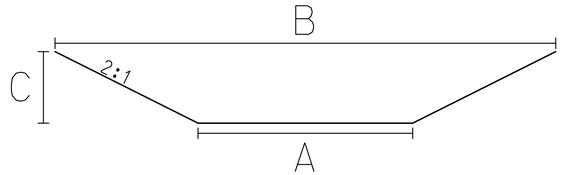
PLOTTED: $DATE$
FILE: $FILE$



CONCRETE CANVAS LINE SWALE TYPICAL SECTION

NOT TO SCALE

*FOR INSTALLATION SEE MANUFACTURER'S SPECIFICATION & METHODS



GRASS SWALE TYPICAL SECTION

NOT TO SCALE

FOR SWALES DIMENSIONS SEE SWALE DESIGN TABLES.

DESIGN DOCUMENT ONLY
NOT FOR CONSTRUCTION

BRUDIS & ASSOCIATES, INC.
Consulting Engineers
11000 Broken Land Parkway, Suite 450
Columbia, Maryland 21044
Phone 410-884-3607
www.brudis.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAW OF THE STATE OF MARYLAND.

LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:				
DRAWN:				
CHECKED:				
DATE: 02/09/23				
SCALE:	BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

STORMWATER MANAGEMENT DETAILS

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. SW–11

SHEET 41 OF 56

PLOTTED: $DATE$
FILE: $FILE$

CHANNEL NO.	A	B	C	CHANNEL TYPE	REMARKS
POI-1					
SW-1-1A	1	5	Varies	GRASS	
SW-1-1B	1	5	Varies	GRASS	
SW-1-1C	1	5	Varies	GRASS	
SW-1-2A	1	5	Varies	GRASS	
SW-1-2B	1	5	Varies	GRASS	
POI-2					
SW-2-1A	1	5	Varies	GRASS	
SW-2-1B	1	5	Varies	GRASS	
SW-2-1C	1	5	Varies	GRASS	
SW-2-1D	1	5	Varies	GRASS	
SW-2-2A	1	5	Varies	GRASS	
SW-2-2B	1	5	Varies	GRASS	
SW-2-2C	1	5	Varies	GRASS	
SW-2-3A	1	5	Varies	GRASS	
SW-2-3B	1	5	Varies	GRASS	
SW-2-3C	1	5	Varies	GRASS	
SW-2-4A	1	5	Varies	GRASS	
SW-2-4B	1	5	Varies	GRASS	
SW-2-5A	1	5	Varies	GRASS	
SW-2-5B	1	5	Varies	GRASS	
SW-2-5C	1	5	Varies	GRASS	
SW-2-6A	1	5	Varies	GRASS	
SW-2-6B	1	5	Varies	GRASS	
SW-2-6C	1	5	Varies	GRASS	
SW-2-6D	1	5	Varies	GRASS	
SW-2-6E	1	5	Varies	GRASS	
SW-2-6F	1	5	Varies	GRASS	
SW-2-6G	1	5	Varies	GRASS	
SW-2-6H	1	5	Varies	GRASS	
SW-2-6I	1	5	Varies	GRASS	
SW-2-6J	1	5	Varies	CONCRETE	
SW-2-6K	1	5	Varies	CONCRETE	
SW-2-6L	1	5	Varies	CONCRETE	
SW-2-6M	1	5	Varies	GRASS	
SW-2-7A	1	5	Varies	GRASS	
SW-2-7B	1	5	Varies	CONCRETE	
SW-2-7C	1	5	Varies	GRASS	
SW-2-7D	1	5	Varies	CONCRETE	
SW-2-7E	1	5	Varies	GRASS	
SW-2-7F	1	5	Varies	GRASS	
SW-2-8A	1	5	Varies	GRASS	
SW-2-8B	1	5	Varies	GRASS	
SW-2-8C	1	5	Varies	GRASS	
SW-2-8D	1	5	Varies	GRASS	
SW-2-9	1	5	Varies	GRASS	
SW-2-10A	1	5	Varies	GRASS	
SW-2-10B	1	5	Varies	GRASS	
SW-2-10C	1	5	Varies	GRASS	
SW-2-10D	1	5	Varies	GRASS	
SW-2-11A	1	5	Varies	GRASS	
SW-2-11B	1	5	Varies	GRASS	
SW-2-12	1	5	Varies	GRASS	
SW-2-13	1	5	Varies	GRASS	
POI 3					
SW-3-1A	1	5	Varies	GRASS	
SW-3-1B	1	5	Varies	GRASS	
SW-3-2	1	5	Varies	GRASS	
SW-3-3	1	5	Varies	GRASS	
SW-3-4	1	5	Varies	GRASS	
SW-3-5	1	5	Varies	GRASS	
SW-3-6A	1	5	Varies	GRASS	
SW-3-6B	1	5	Varies	GRASS	
SW-3-7A	1	5	Varies	GRASS	
SW-3-7B	1	5	Varies	GRASS	
SW-3-8	1	5	Varies	GRASS	

CHANNEL NO.	A	B	C	CHANNEL TYPE	REMARKS
POI 4					
SW-4-2	1	5	Varies	GRASS	
SW-4-3	1	5	Varies	CONCRETE	
SW-4-4	1	5	Varies	CONCRETE	
SW-4-5	1	5	Varies	CONCRETE	
POI 5					
SW-5-1A	1	5	Varies	GRASS	
SW-5-1B	1	5	Varies	GRASS	
SW-5-1C	1	5	Varies	CONCRETE	
SW-5-1D	1	5	Varies	CONCRETE	
SW-5-2	1	5	Varies	GRASS	
SW-5-3A	1	5	Varies	GRASS	
SW-5-3B	1	5	Varies	GRASS	
SW-5-4A	1	5	Varies	CONCRETE	
SW-5-4B	1	5	Varies	CONCRETE	
SW-5-4C	1	5	Varies	CONCRETE	
SW-5-4D	1	5	Varies	CONCRETE	
SW-5-4E	1	5	Varies	CONCRETE	
SW-5-4F	1	5	Varies	CONCRETE	
SW-5-4G	1	5	Varies	CONCRETE	
SW-5-4H	1	5	Varies	GRASS	
SW-5-5A	1	5	Varies	CONCRETE	
SW-5-5B	1	5	Varies	GRASS	
SW-5-5C	1	5	Varies	CONCRETE	
SW-5-5D	1	5	Varies	CONCRETE	
SW-5-5E	1	5	Varies	GRASS	
SW-5-6A	1	5	Varies	GRASS	
SW-5-6B	1	5	Varies	GRASS	
SW-5-6C	1	5	Varies	GRASS	
SW-5-7A	1	5	Varies	GRASS	
SW-5-7B	1	5	Varies	GRASS	
SW-5-7C	1	5	Varies	GRASS	
SW-5-8A	1	5	Varies	GRASS	
SW-5-8B	1	5	Varies	GRASS	
SW-5-8C	1	5	Varies	GRASS	
SW-5-9A	1	5	Varies	CONCRETE	
SW-5-9B	1	5	Varies	GRASS	
SW-5-10A	1	5	Varies	CONCRETE	
SW-5-10B	1	5	Varies	GRASS	
SW-5-10C	1	5	Varies	GRASS	
SW-5-11A	1	5	Varies	GRASS	
SW-5-11B	1	5	Varies	GRASS	
SW-5-11C	1	5	Varies	GRASS	
SW-5-12A	1	5	Varies	GRASS	
SW-5-12B	1	5	Varies	CONCRETE	
SW-5-12C	1	5	Varies	CONCRETE	

CHANNEL NO.	A	B	C	CHANNEL TYPE	REMARKS
POI 6					
SW-6-1A	1	5	Varies	GRASS	
SW-6-1B	1	5	Varies	GRASS	
SW-6-2A	1	5	Varies	GRASS	
SW-6-2B	1	5	Varies	GRASS	
SW-6-3A	1	5	Varies	GRASS	
SW-6-3B	1	5	Varies	CONCRETE	
SW-6-3C	1	5	Varies	GRASS	
SW-6-4	1	5	Varies	GRASS	
SW-6-5	1	5	Varies	CONCRETE	
SW-6-6	1	5	Varies	GRASS	
SW-6-7A	1	5	Varies	CONCRETE	
SW-6-7B	1	5	Varies	CONCRETE	
SW-6-7C	1	5	Varies	CONCRETE	
SW-6-7D	1	5	Varies	GRASS	
SW-6-7E	1	5	Varies	CONCRETE	
SW-6-7F	1	5	Varies	CONCRETE	
SW-6-7G	1	5	Varies	CONCRETE	
SW-6-7H	1	5	Varies	CONCRETE	
SW-6-7I	1	5	Varies	GRASS	
SW-6-7J	1	5	Varies	CONCRETE	
SW-6-8A	1	5	Varies	GRASS	
SW-6-8B	1	5	Varies	GRASS	
SW-6-8C	1	5	Varies	GRASS	
SW-6-9A	1	5	Varies	GRASS	
SW-6-9B	1	5	Varies	CONCRETE	
SW-6-9C	1	5	Varies	GRASS	
SW-6-10	1	5	Varies	GRASS	
SW-6-11	1	5	Varies	CONCRETE	
SW-6-12A	1	5	Varies	CONCRETE	
SW-6-12B	1	5	Varies	CONCRETE	
SW-6-13	1	5	Varies	CONCRETE	
SW-6-14A	1	5	Varies	GRASS	
SW-6-14B	1	5	Varies	GRASS	
SW-6-15	1	5	Varies	CONCRETE	
SW-6-16	1	5	Varies	CONCRETE	
SW-6-17A	1	5	Varies	GRASS	
SW-6-17B	1	5	Varies	CONCRETE	
SW-6-18A	1	5	Varies	CONCRETE	
SW-6-18B	1	5	Varies	GRASS	
SW-6-18C	1	5	Varies	CONCRETE	
SW-6-18D	1	5	Varies	CONCRETE	
SW-6-18E	1	5	Varies	CONCRETE	
SW-6-19A	1	5	Varies	GRASS	
SW-6-19B	1	5	Varies	GRASS	
SW-6-19C	1	5	Varies	GRASS	
SW-6-20A	1	5	Varies	GRASS	
SW-6-20B	1	5	Varies	GRASS	
SW-6-20C	1	5	Varies	GRASS	
SW-6-20D	1	5	Varies	GRASS	
SW-6-21	1	5	Varies	GRASS	
SW-6-22	1	5	Varies	GRASS	
SW-6-23A	1	5	Varies	GRASS	
SW-6-23B	1	5	Varies	GRASS	
SW-6-24	1	5	Varies	GRASS	
SW-6-25	1	5	Varies	GRASS	

CHANNEL NO.	A	B	C	CHANNEL TYPE	REMARKS
POI 7					
SW-7-1	1	5	Varies	GRASS	
SW-7-2A	1	5	Varies	GRASS	
SW-7-2B	1	5	Varies	CONCRETE	
SW-7-2C	1	5	Varies	CONCRETE	
SW-7-3	1	5	Varies	GRASS	
SW-7-4	1	5	Varies	GRASS	
SW-7-5	1	5	Varies	GRASS	
SW-7-6A	1	5	Varies	GRASS	
SW-7-6B	1	5	Varies	GRASS	
SW-7-6C	1	5	Varies	GRASS	
SW-7-7	1	5	Varies	GRASS	
SW-7-8	1	5	Varies	GRASS	
SW-7-9A	1	5	Varies	CONCRETE	
SW-7-9B	1	5	Varies	CONCRETE	
SW-7-9C	1	5	Varies	CONCRETE	
SW-7-9D	1	5	Varies	CONCRETE	
SW-7-9E	1	5	Varies	GRASS	
SW-7-10	1	5	Varies	GRASS	
SW-7-11	1	5	Varies	GRASS	
SW-7-12A	1	5	Varies	GRASS	
SW-7-12B	1	5	Varies	GRASS	
SW-7-13	1	5	Varies	GRASS	
SW-7-14A	1	5	Varies	GRASS	
SW-7-14B	1	5	Varies	GRASS	
SW-7-15A	1	5	Varies	GRASS	
SW-7-15B	1	5	Varies	GRASS	
SW-7-15C	1	5	Varies	GRASS	
SW-7-15D	1	5	Varies	GRASS	
SW-7-15E	1	5	Varies	GRASS	
POI 8					
SW-8-1A	1	5	Varies	GRASS	
SW-8-1B	1	5	Varies	GRASS	
SW-8-2A	1	5	Varies	GRASS	
SW-8-2B	1	5	Varies	GRASS	
SW-8-3	1	5	Varies	GRASS	
SW-8-4	1	5	Varies	GRASS	
SW-8-5	1	5	Varies	CONCRETE	
SW-8-6	1	5	Varies	GRASS	
SW-8-7	1	5	Varies	GRASS	
SW-8-8	1	5	Varies	GRASS	
SW-8-9A	1	5	Varies	GRASS	
SW-8-9B	1	5	Varies	GRASS	
SW-8-9C	1	5	Varies	GRASS	
SW-8-10A	1	5	Varies	GRASS	
SW-8-10B	1	5	Varies	GRASS	
SW-8-11A	1	5	Varies	GRASS	
SW-8-11B	1	5	Varies	GRASS	
SW-8-12A	1	5	Varies	GRASS	
SW-8-12B	1	5	Varies	GRASS	
SW-8-13A	1	5	Varies	GRASS	
SW-8-13B	1	5	Varies	GRASS	

CHANNEL NO.	A	B	C	CHANNEL TYPE	REMARKS
POI 9					
SW-9-1	1	5	Varies	CONCRETE	
SW-9-2A	1	5	Varies	GRASS	
SW-9-2B	1	5	Varies	CONCRETE	
SW-9-3	1	5	Varies	GRASS	
SW-9-4	1	5	Varies	GRASS	
SW-9-5A	1	5	Varies	GRASS	
SW-9-5B	1	5	Varies	GRASS	
SW-9-6	1	5	Varies	GRASS	
SW-9-7	1	5	Varies	CONCRETE	
SW-9-8A	1	5	Varies	CONCRETE	
SW-9-8B	1	5	Varies	GRASS	
SW-9-9	1	5	Varies	CONCRETE	
SW-9-10	1	5	Varies	GRASS	
SW-9-11	1	5	Varies	CONCRETE	
SW-9-12A	1	5	Varies	GRASS	
SW-9-12B	1	5	Varies	CONCRETE	
SW-9-12C	1	5	Varies	CONCRETE	
SW-9-13A	1	5	Varies	GRASS	
SW-9-13B	1	5	Varies	CONCRETE	

CHANNEL NO.	A	B	C	CHANNEL TYPE	REMARKS
POI 10					
SW-10-1A	1	5	Varies	GRASS	
SW-10-1B	1	5	Varies	GRASS	
SW-10-2A	1	5	Varies	GRASS	
SW-10-2B	1	5	Varies	GRASS	
SW-10-2C	1	5	Varies	GRASS	
SW-10-2D	1	5	Varies	CONCRETE	
SW-10-2E	1	5	Varies	GRASS	
SW-10-3A	1	5	Varies	GRASS	
SW-10-3B	1	5	Varies	GRASS	
SW-10-4	1	5	Varies	GRASS	
SW-10-5A	1	5	Varies	GRASS	
SW-10-5B	1	5	Varies	GRASS	
SW-10-6	1	5	Varies	GRASS	
SW-10-7A	1	5	Varies	GRASS	
SW-10-7B	1	5	Varies	GRASS	
SW-10-8A	1	5	Varies	GRASS	
SW-10-8B	1	5	Varies	CONCRETE	
SW-10-9A	1	5	Varies	GRASS	
SW-10-9B	1	5	Varies	GRASS	

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LICENSE NUMBER 51941
EXPIRATION DATE: 12/10/2025

DESIGNED:
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CHECKED:
DATE: 02/09/23
SCALE:

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

SWALE DESIGN TABLE

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. SW–12

SHEET 42 OF 56

PLOTTED: $DATE$
FILE: $FILE$

EROSION AND SEDIMENT CONTROL NOTES

SEQUENCE OF CONSTRUCTION

PROVIDE A GENERAL SUMMARY OF THE ANTICIPATED E&SC AND A DESCRIPTION OF THE ANTICIPATED STAGES (IF APPLICABLE) WITH A GENERAL OUTLINE OF THE SEQUENCE OF CONSTRUCTION:

IN GENERAL, THE FOLLOWING SEQUENCE OF CONSTRUCTION SHALL BE FOLLOWED:

1. CONTRACTOR SHALL VERIFY THAT ALL REQUIRED PERMITS FOR THE PROPOSED WORK HAVE BEEN OBTAINED. A COPY OF ALL REQUIRED PERMITS SHALL BE MAINTAINED ON-SITE FOR REFERENCES.

2. SCHEDULE A PRE- CONSTRUCTION MEETING WITH ST. MARY SCD (310) 473-8402 EXT. 3, FIVE (5) DAYS IN ADVANCE. (1 DAY)

3. THE LIMIT OF DISTURBANCE (LOD) SHALL BE FIELD DELINEATED AND APPROVED BY DESIGN CONSULTANT REPRESENTATIVE AND ST. MARY'S COUNTY REPRESENTATIVE. ONCE LOD IS APPROVED, INSTALL BLAZE ORANGE CONSTRUCTION FENCING AROUND PERIMETER OF LOD AS SHOWN FOR PHASE 1 OF CONSTRUCTION. (3 DAYS)

4. CLEAR AND GRUB PROJECT AREA AS NEEDED TO INSTALL PERIMETER EROSION AND SEDIMENT CONTROL DEVICES, INCLUDING STABILIZED CONSTRUCTION ENTRANCE, SUPER SILT FENCE, DIVERSION FENCES, EARTH DIKES, SILT FENCES TO COMPLETE PROPOSED WORK, AS SHOWN ON EROSION AND SEDIMENT CONTROL PLAN SHEET AND DESIGN PLAN SHEETS. NOTIFY MDE INSPECTOR ONCE PERIMETER CONTROLS ARE INSTALLED. (2 WEEKS)

5. UNDER A NOAA 3-DAY DRY WEATHER PERIOD AND UTILIZING SAME DAY STABILIZATION, INSTALL PROPOSED STORM DRAIN SYSTEM DOWNSTREAM TO UPSTREAM, ASSOCIATED OUTFALL GRADING AT PROPOSED RIPRAP DITCH.

6. ALL E&SC MEASURES SHALL REMAIN IN PLACE UNTIL WRITTEN AUTHORIZATION IS PROVIDED FOR THEIR REMOVAL FROM MDE INSPECTOR. UPON REMOVAL, ALL REMAINING DISTURBED AREAS SHALL BE STABILIZED IMMEDIATELY WITH TYPE E SOIL STABILIZATION MATTING (STANDARD 709.03.02(E)), SHA TURFGRASS SEEDMIX (STANDARD 920.06.07(A)) AND 4" TOPSOIL. (1 DAY)

ALL EROSION AND SEDIMENT (E&S) CONTROL PRACTICES WILL BE DESIGNED ACCORDING TO THE LATEST 2011 MDE STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS IN ORDER TO PROTECT AND ENHANCE NATURAL RESOURCES AND MAINTAIN NATURAL FLOW PATTERNS. PRACTICES WILL FOCUS ON REDUCING IMPERVIOUS AREAS, STABILIZATION OF EXPOSED SOILS, MANAGEMENT OF STORMWATER RUNOFF, AND RETENTION OF SEDIMENT ON-SITE THROUGH PERIMETER PROTECTION. CARE WILL BE TAKEN TO PROTECT AND AVOID NATURAL RESOURCES AND STEEP SLOPES, WHILE MINIMIZING DISTURBED AREAS. PROVISIONS WILL BE MADE FOR INSPECTION AND MAINTENANCE OF ALL PRACTICES.

CONSTRUCTION NOTES

1. ALL EROSION AND SEDIMENT (E&S) CONTROL PRACTICES WILL BE DESIGNED ACCORDING TO THE 2011 MD STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS IN ORDER TO PROTECT AND ENHANCE NATURAL RESOURCES AND MAINTAIN NATURAL FLOW PATTERNS. PRACTICES WILL FOCUS ON REDUCING IMPERVIOUS AREAS, STABILIZATION OF EXPOSED SOILS, MANAGEMENT OF STORMWATER RUNOFF, AND RETENTION OF SEDIMENT ON-SITE THROUGH PERIMETER PROTECTION. CARE WILL BE TAKEN TO PROTECT AND AVOID NATURAL RESOURCES AND STEEP SLOPES, WHILE MINIMIZING DISTURBED AREAS. PROVISIONS WILL BE MADE FOR INSPECTION AND MAINTENANCE OF ALL PRACTICES.

2. PRIOR TO VEHICLES LEAVING THE LOD, WHEELS OR TRACKS SHALL BE CLEANED TO REMOVE SEDIMENT. VEHICLE CLEANING SHALL BE PERFORMED ON A STABILIZED AREA THAT DRAINS TO AN MDE-APPROVED SEDIMENT CONTROL DEVICE. ALL SEDIMENT SPILLED, DROPPED OR TRACKED ONTO THE ROAD OR PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY BY VACUUMING, SCRAPING, OR SWEEPING.

SWM /E&S NARRATIVE

ALL EROSION AND SEDIMENT (E&S) CONTROL PRACTICES WILL BE DESIGNED ACCORDING TO THE 2011 MD STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS
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EROSION AND SEDIMENT CONTROLS SHALL BE INTEGRATED INTO THE STORMWATER STRATEGY WITH THE USE OF ESD BASINS DOUBLING AS TEMPORARY SEDIMENT TRAPPING DEVICES DURING CONSTRUCTION. PROPOSED DESIGN SHALL MEET ESD TO MEP REQUIREMENTS THROUGH THE INSTALLATION OF ESD PRACTICES INCLUDE MICRO-BIORENTENTION AND GRASS SWALE FACILITIES TO THE MAXIMUM EXTEND PRACTICABLE. BMP FACILITY INCLUDED A BIORETENTION FACILITY WILL BE IMPLEMENTED WHERE DRAINAGE AREA SURPASSES THE USAGE OF AN ESD FACILITY. FACILITIES HAVE BEEN SELECTED TO MINIMIZE IMPACTS TO ADJACENT WOODED AREAS AND PROTECT NATURAL RESOURCES.

INSPECTION AGENCY APPROVAL STATEMENTS

1. APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION FOR INSTALLATION OF PERIMETER CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.

2. APPROVAL SHALL BE REQUESTED UPON FINAL STABILIZATION OF ALL SITES BEFORE REMOVAL OF SEDIMENT CONTROLS.

3. THE CONTRACTOR SHALL NOTIFY MDE, ENFORCEMENT DIVISION, AT LEASE 48 HOURS PRIOR TO COMMENCING CLEARING OR GRADING AT: (410)537-3510 OR MDE, SEDIMENT AND STORMWATER ADMIN, 1800 WASHINGTON BLVD, BALTIMORE, MD 21230-1708.

SEAL

STATE OF MARYLAND · ARJUN GURUNG · 51941 · PROFESSIONAL ENGINEER

CONSULTANT CERTIFICATION

I HEREBY CERTIFY THAT THE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROVED EROSION AND SEDIMENT CONTROL ORDINANCES, REGULATIONS, STANDARDS, AND CRITERIA.

51941 — LICENSE NO.

12/10/2025 — EXPIRATION DATE

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ST. MARY'S COUNTY, MARYLAND
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EROSION AND SEDIMENT CONTROL NOTES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO.
EN–01

SHEET
43 OF 56

PLOTTED: $DATE$
FILE: $FILE$

EROSION AND SEDIMENT CONTROL NOTES

A. Erosion and Sediment Control General Notes

MDE requires that these notes, in their entirety, be included on the erosion and sediment control plan. It is recognized that not every note may apply to all projects. The requirement of any individual note not applicable to the subject project is not binding upon the applicant or the applicant's contractor.

EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. The contractor shall notify MDE at (410) 537-3510 seven (7) days before commencing any land disturbing activity and, unless waived by MDE, shall be required to hold a pre-construction meeting between project representatives and a representative of MDE.

2. The contractor shall notify MDE in writing and by telephone at the following points:
   A. The required pre-construction meeting.
   B. Following installation of sediment control measures.
   C. During the installation of sediment basins (to be converted into permanent stormwater management structures) at the required inspection points (see Inspection Checklist on plan). Notification prior to commencing construction of each step is mandatory.
   D. Prior to removal or modification of any sediment control structure(s).
   E. Prior to removal of all sediment control devices.
   F. Prior to final acceptance.

3. The plan approval letter, approved erosion and sediment control plans, daily log books, and test reports shall be available at the site for inspection by duly authorized officials of MDE and the agency responsible for the project.

4. The contractor shall construct all erosion and sediment control measures per the approved plan and construction sequence and shall have them inspected and approved by the MDE inspector prior to beginning any other land disturbances. Minor sediment control device location adjustments may be made in the field with the approval of the MDE inspector. The contractor shall ensure that all runoff from disturbed areas is directed to the sediment control devices and shall not remove any erosion or sediment control measure without prior permission from MDE inspector. The contractor shall obtain prior agency and MDE approval for modifications to the erosion and sediment control plan and/or sequence of construction.

5. The MDE inspector has the option of requiring additional safety or sediment control measures, if deemed necessary.

6. The contractor shall protect all points of construction ingress and egress to prevent the deposition of materials onto public roads. All materials deposited onto public roads shall be removed immediately.

7. The contractor shall inspect daily and maintain continuously in an effective operating condition all erosion and sediment control measures until such time as they are removed with prior permission from the MDE inspector.

8. Erosion and sediment control for utility construction shall be provided in accordance with approved plans. Utility construction shall only be for areas within the delineated limit of disturbance. Call "Miss Utility" at 1-800-257-7777 48 hours prior to the start of work. When same day stabilization is approved:
   A. Excavated trench material shall be placed on the high side of the trench.
   B. Trenches for utility installation shall be backfilled, compacted, and stabilized at the end of each working day. No more trench shall be opened than can be completed the same day.

9. All water removed from excavated areas shall be passed through an MDE approved dewatering practice or pumped to a sediment trap or basin prior to discharge to a functional storm drain system or to stable ground surface.

10. Concrete washout structures shall be used when concrete trucks, drums, pumps, chutes, or other equipment is rinsed or cleaned on-site.

11. Construction activities producing dust shall implement control measures to avoid the suspension of dust particles and/or prevent dust from blowing off-site or to areas without treatment.

12. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within:
   A. Three (3) calendar days as to the surface of all perimeter controls, 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.

13. Vegetative stabilization shall be performed in accordance with the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control. Refer to appropriate specifications for temporary seeding, permanent seeding, mulching, sodding, and ground covers.

14. When seeding, all disturbed areas with slopes flatter than 2:1 shall be stabilized with 4 inches of topsoil, seed, and mulch. All disturbed areas with slopes 2:1 or steeper shall be stabilized with matting over 2 inches of topsoil and seed.

15. All sediment basins, trap embankments and slopes, perimeter dikes, swales and all disturbed slopes steeper or equal to 3:1 shall be stabilized with seed and anchored straw mulch, sod, or other approved stabilization measures, as soon as possible but no later than three (3) calendar days after establishment. All areas disturbed outside of the perimeter sediment control system shall be minimized. Maintenance shall be performed as necessary to ensure continued stabilization.

16. Permanent swales or other points of concentrated water flow shall be stabilized with seed and an approved erosion control matting, sod, rip-rap, or other approved stabilization measures.

17. For stockpile slopes steeper than 3 horizontal to 1 vertical (3:1), the contractor shall apply seed and anchored straw mulch, sod, or other approved stabilization measures to the face of the stockpile within three (3) calendar days of activity having ceased on the respective face. For slopes 3:1 or flatter, the contractor shall apply stabilization measures to the face of the stockpile within seven (7) calendar days of activity having ceased on the respective face. Maintenance shall be performed as necessary to ensure continued stabilization.

18. For finished grading, the contractor shall provide adequate gradients to prevent water from ponding for more than twenty-four (24) hours after the end of a rainfall event. Drainage courses and swale flow areas may take as long as forty-eight (48) hours after the end of a rainfall event to drain. Areas designed to have standing water shall not be required to meet this requirement.

19. Where deemed appropriate by the engineer or inspector, sediment basins and traps may need to be surrounded with an approved safety fence. The fence must conform to local ordinances and regulations. The developer or owner shall check with local building officials on applicable safety requirements. Where safety fence is deemed appropriate and local ordinances do not specify fencing sizes and types, the following shall be used as a minimum standard: The safety fence shall be made of welded wire and at least 42 inches high, have posts spaced no farther apart than 8 feet, have mesh openings no greater than 2 inches in width and 4 inches in height with a minimum of 14 gauge wire. Safety fence shall be maintained and in good condition at all times.

20. All sediment trap depth dimensions are relative to the outlet elevation. All traps shall have a stable outfall. All traps and basins shall have stable inflow points.

21. Sediment shall be removed and the trap or basin restored to its original dimensions when the sediment has accumulated to one quarter of the total depth of the trap or basin. Total depth shall be measured from the trap or basin bottom to the crest of the outlet.

22. Sediment removed from traps (and basins) shall be placed and stabilized in approved areas, but not within a floodplain, wetland or tree-save area. When pumping sediment laden water, the discharge shall be directed to an MDE approved sediment trapping device prior to release from the site. A sump pit may be used if sediment traps themselves are being pumped out.

23. Prior to removal of sediment control measures, the contractor shall stabilize and have established permanent stabilization for all contributory disturbed areas using sod or an approved permanent seed mixture with required soil amendments and an approved anchored mulch. Wood fiber mulch may only be used in seeding season where the slope does not exceed 10% and grading has been done to promote sheet flow drainage. Areas brought to finished grade during the seeding season shall be permanently stabilized as soon as possible, but not later than three (3) calendar days after establishment for slopes steeper than 3 horizontal to 1 vertical (3:1) and seven (7) calendar days for flatter slopes. When property is brought to finished grade during the months of November through February, and permanent stabilization is found to be impractical, temporary seed and anchored straw mulch shall be applied to disturbed areas. The final permanent stabilization of such property shall be applied by March 15 or earlier if ground and weather conditions allow.

24. Temporary sediment control devices shall be removed with permission of the MDE inspector within thirty (30) calendar days following establishment of permanent stabilization in all contributory drainage areas. Upon removal of sediment control devices, the area disturbed by removal shall be stabilized with topsoil, seed, and mulch, or as specified, within 24 hours of said removal. Stormwater management structures used temporarily for sediment control shall be converted to the permanent configuration within this time period as well.

25. Off-site spoil or borrow areas on State or federal property shall have prior approval by MDE and other applicable State, federal, and local agencies; otherwise approval shall be granted by the local authorities. All waste and borrow areas off-site shall be protected by sediment control measures and stabilized.

26. Site Information:
   A. Area Disturbed 4.88 Acres
   B. Total Cut TBD Cubic Yards
   C. Total Fill TBD Cubic Yards
   D. Off-Site Waste / Borrow Area Location _____

B. Standard Stabilization Note

STANDARD STABILIZATION NOTE

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 steeper than 3 horizontal to 1 vertical (3:1); and seven (7) days as to all other disturbed or graded areas on the project site not under active grading.

5.1 Engineer's Certification

I/We, ARUN GURUNG, do hereby certify that the sediment control provisions shown on this plan are designed in accordance with the guidelines, standards and specifications for soil erosion and sediment control issued by the Maryland Department of the Environment, latest edition.

Signature: _____ Title: PROJECT ENGINEER Date: 12/10/2025

Printed Name: ARUN GURUNG MD Registration No.: 51941

(P.E.)/R.L.S./R.L.A. (Circle One)

DESIGN DOCUMENT ONLY
NOT FOR CONSTRUCTION

BAI
BRUDIS & ASSOCIATES, INC.
Consulting Engineers
11000 Broken Land Parkway, Suite 450
Columbia, Maryland 21044
Phone 410-884-3607
www.brudis.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAW OF THE STATE OF MARYLAND.

LICENSE NUMBER 51941
EXPIRATION DATE: 12/30/2023

DESIGNED: DK/AG
DRAWN: AM
CHECKED: MB
DATE: 02/09/23
SCALE:

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

EROSION AND SEDIMENT CONTROL NOTES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. **EN–02**

SHEET 44 OF 56

PLOTTED: $DATE$
FILE: $FILE$

EROSION AND SEDIMENT CONTROL NOTES

B-4 STANDARDS AND SPECIFICATIONS

FOR

VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-1 STANDARDS AND SPECIFICATIONS

FOR

INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

A. Incremental Stabilization - Cut Slopes

1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
   a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
   b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
   c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
   d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

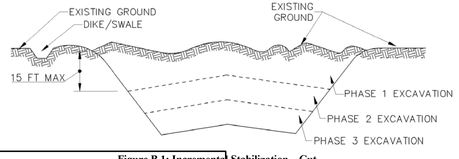

Figure B.1: Incremental Stabilization – Cut

B. Incremental Stabilization - Fill Slopes

1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
   a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
   b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
   c. Place Phase 1 fill, prepare seedbed, and stabilize.
   d. Place Phase 2 fill, prepare seedbed, and stabilize.
   e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

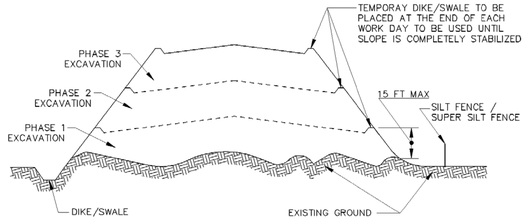

Figure B.2: Incremental Stabilization – Fill

B-4-2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

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.

95% DESIGN (OWNER'S REVIEW) NOT FOR CONSTRUCTION

SEAL

STATE OF MARYLAND — KEVIN GIRONE — 51941 — PROFESSIONAL ENGINEERS

CONSULTANT CERTIFICATION

I HEREBY CERTIFY THAT THE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROVED EROSION AND SEDIMENT CONTROL ORDINANCES, REGULATIONS, STANDARDS, AND CRITERIA.

51941 — LICENSE NO.

12/102025 — EXPIRATION DATE

DESIGN DOCUMENT ONLY NOT FOR CONSTRUCTION

BRUDIS & ASSOCIATES, INC.
Consulting Engineers
11000 Broken Land Parkway, Suite 450
Columbia, Maryland 21044
Phone 410-884-3607
www.brudis.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAW OF THE STATE OF MARYLAND.

LICENSE NUMBER 51941
EXPIRATION DATE: 12/30/2023

DESIGNED: DK/AG
DRAWN: AM
CHECKED: MB
DATE: 02/09/23
SCALE:

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

EROSION AND SEDIMENT CONTROL NOTES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. **EN–03**

SHEET 45 OF 56

PLOTTED: $DATE$
FILE: $FILE$

EROSION AND SEDIMENT CONTROL NOTES

B-4-3 STANDARDS AND SPECIFICATIONS

FOR

SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

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; P_2O_5 (phosphorous), 200 pounds per acre; K_2O (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.

B-4-4 STANDARDS AND SPECIFICATIONS

FOR

TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 7a **Seed Mixture** (from Table B.1):					**Fertilizer Rate (10-20-20)**	**Lime Rate**
No.	**Species**	**Application Rate (lb/ac)**	**Seeding Dates**	**Seeding Depths**		
	FOXTAIL MILLET (SETARIA ITALICA)	30	MAY 1 – AUG 14	0.5"	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	PEARL MILLET (PENNISETUM GLAUCUM)	20	MAY 1 – AUG 14	0.5"		

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 7a **Seed Mixture** (from Table B.3):					**Fertilizer Rate (10-20-20)**			**Lime Rate**
No.	**Species**	**Application Rate (lb/ac)**	**Seeding Dates**	**Seeding Depths**	**N**	**P_2O_5**	**K_20**	
	SWITCH GRASS (PANICUM VIRGATUM)	10	MAY 1 – AUG 14	¼- ½ in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
				¼- ½ in				
				¼- ½ in				

B-4-5 STANDARDS AND SPECIFICATIONS

FOR

PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use
   a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
   b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
   c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency.
   d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .
2. Turfgrass Mixtures
   a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
   b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
      i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
      iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
      iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1½ to 3 pounds per 1000 square feet.

      Notes:
      Select turfgrass varieties from those listed in the most current University of Maryla Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland

      Choose certified material. Certified material is the best guarantee of cultivar purity. T certification program of the Maryland Department of Agriculture, Turf and Seed Sectio provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures

Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)

Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)

Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

95% DESIGN (OWNER'S REVIEW)
NOT FOR CONSTRUCTION

SEAL

STATE OF MARYLAND · NEAL GUENO · 51941 · PROFESSIONAL ENGINEER

CONSULTANT CERTIFICATION

I HEREBY CERTIFY THAT THE PLANS HAVE BEEN DESIGNED IN ACCORDANCE WITH APPROVED EROSION AND SEDIMENT CONTROL ORDINANCES, REGULATIONS, STANDARDS, AND CRITERIA.

51941 — LICENSE NO.

12/10/2025 — EXPIRATION DATE

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BRUDIS & ASSOCIATES, INC.
Consulting Engineers
11000 Broken Land Parkway, Suite 450
Columbia, Maryland 21044
Phone 410-884-3607
www.brudis.com

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER 51941
EXPIRATION DATE: 12/30/2023

DESIGNED: DK/AG
DRAWN: AM
CHECKED: MB
DATE: 02/09/23
SCALE:

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

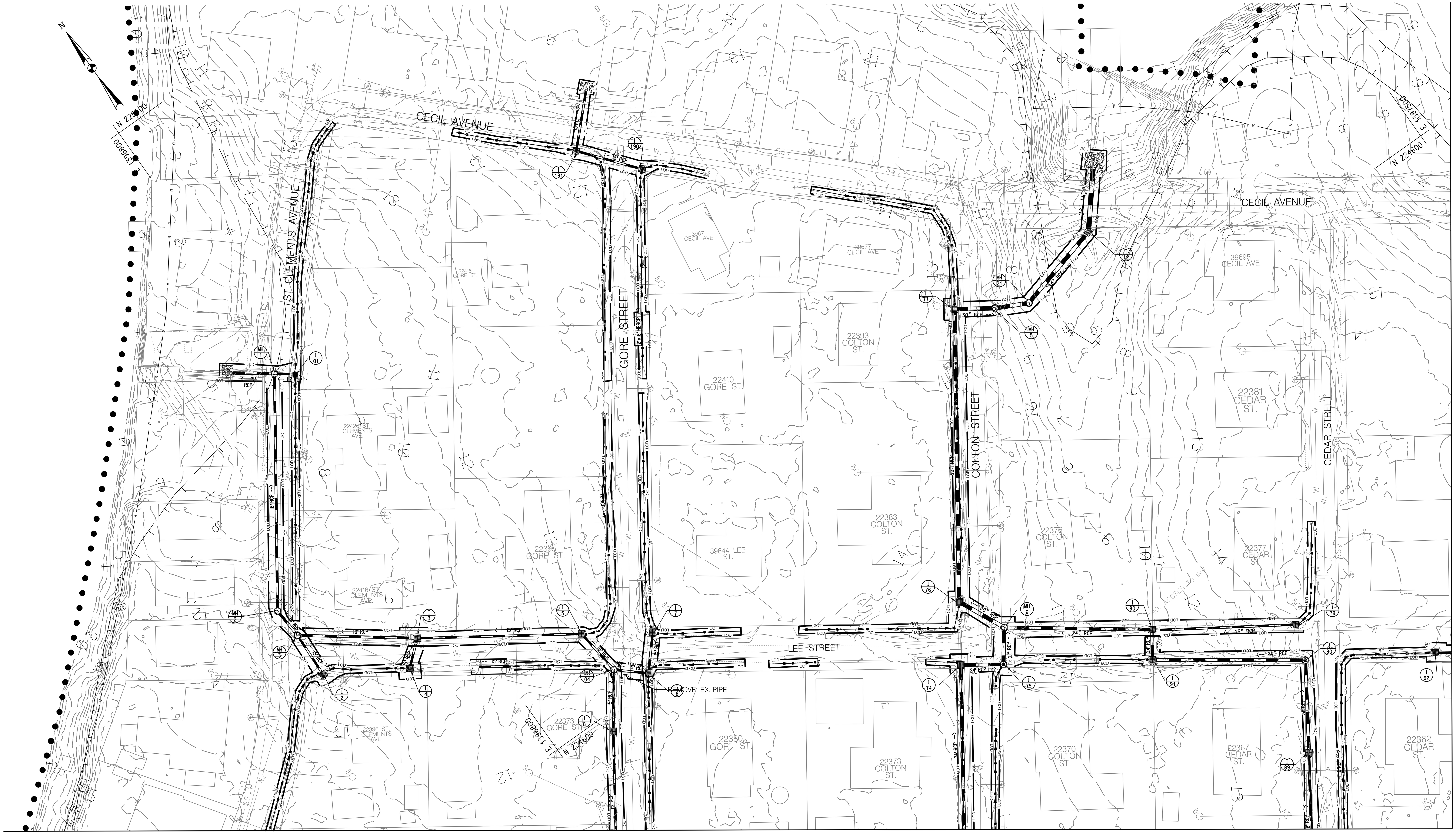
EROSION AND SEDIMENT CONTROL NOTES

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC–22–DPWT–120711

DWG NO. **EN–04**

SHEET 46 OF 56

PLOTTED: $DATE$
FILE: $FILE$



MATCHLINE SEE SHEET ES-03

MATCHLINE SEE SHEET ES-04

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

UTILITY CONSTRUCTION NOTE

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DAILY STABILIZATION NOTE

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LEGEND

Symbol	Description
LOD — LOD	LIMIT OF DISTURBANCE
DF — DF	DIVERSION FENCE
	TEMPORARY RIPRAP OUTLET PROTECTION
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	FLOODPLAIN BOUNDARY
● ● ● ● ● ●	WETLAND BOUNDARY
B — B	WETLAND BUFFER
	SAME DAY STABILIZATION

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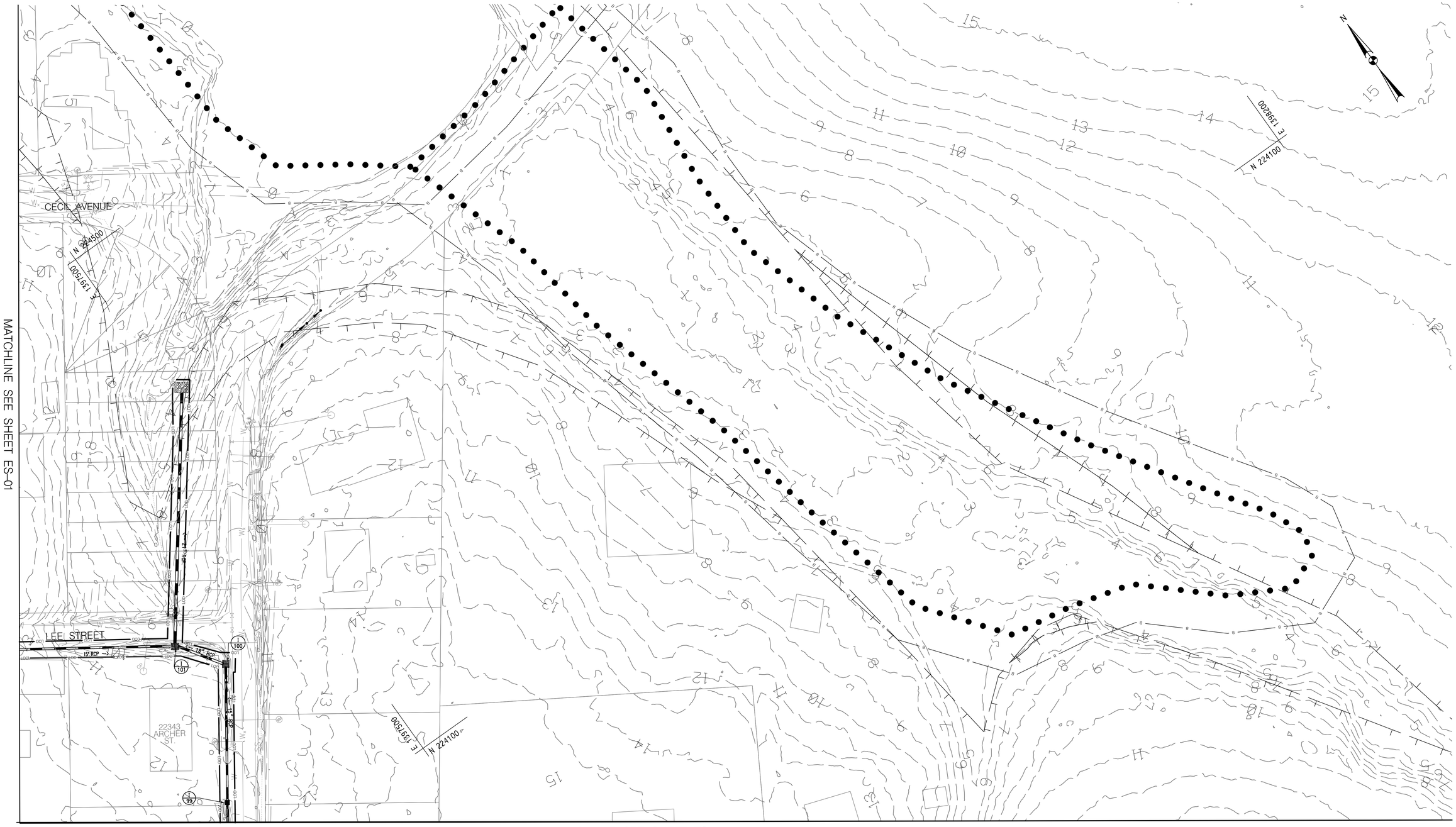
EROSION AND SEDIMENT CONTROL PLAN SHEET

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO. SMC-22-DPWT-120711

DWG NO. ES-01

PLOTTED: $DATE$
FILE: $FILE$



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CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. ES-02
SHEET 48 OF 56

PLOTTED: $DATE$
FILE: $FILE$

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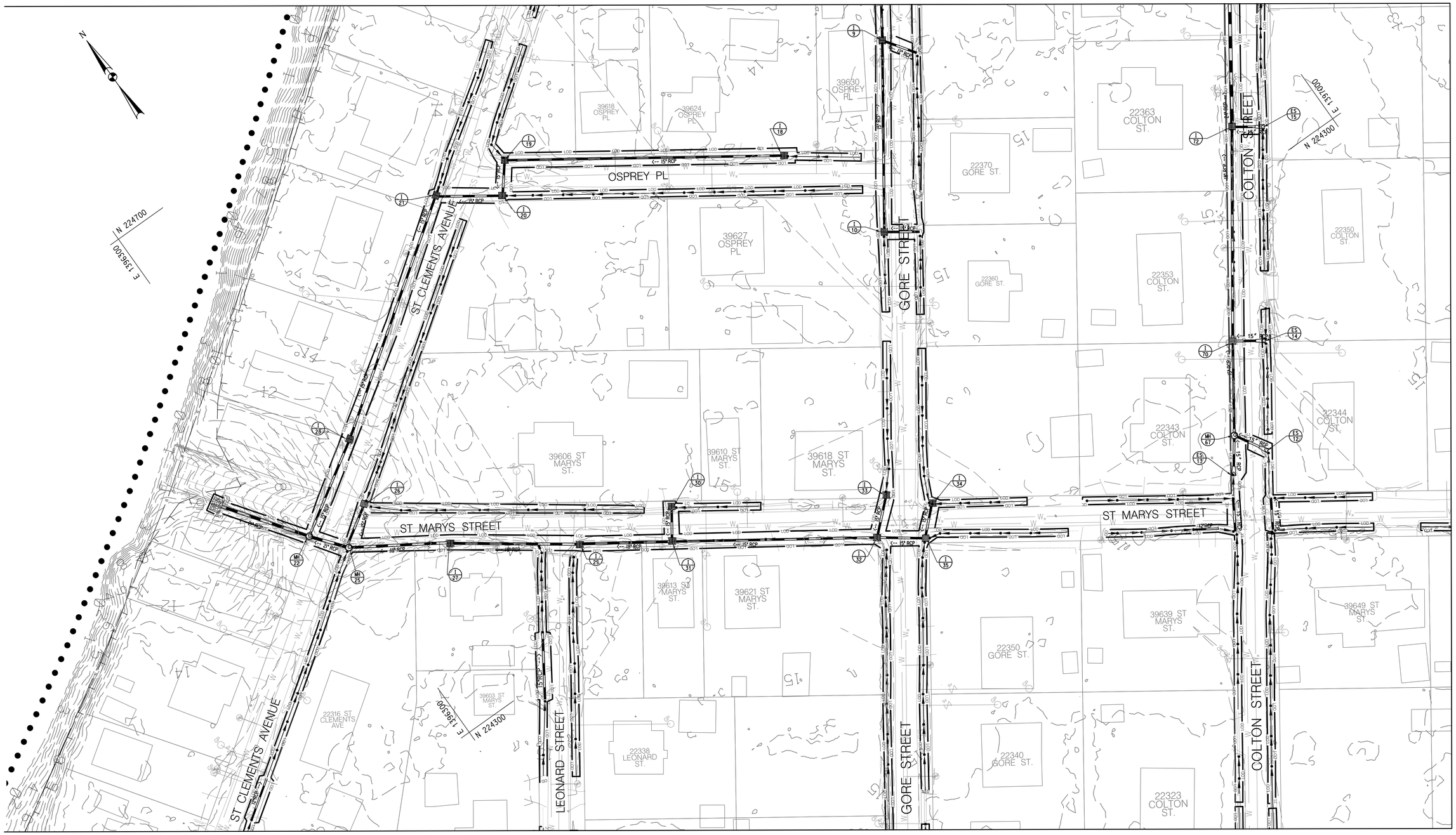

MATCHLINE SEE SHEET ES-04

MATCHLINE SEE SHEET ES-05

MATCHLINE SEE SHEET ES-06

30′ 0 30′ 60′
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DWG NO. ES-03

SHEET 49 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET ES-01

MATCHLINE SEE SHEET ES-02

MATCHLINE SEE SHEET ES-03

MATCHLINE SEE SHEET ES-06

MATCHLINE SEE SHEET ES-07

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SMC-22-DPWT-120711

DWG NO. ES-04

SHEET 50 OF 56

PLOTTED $DATE$
FILE $FILE$

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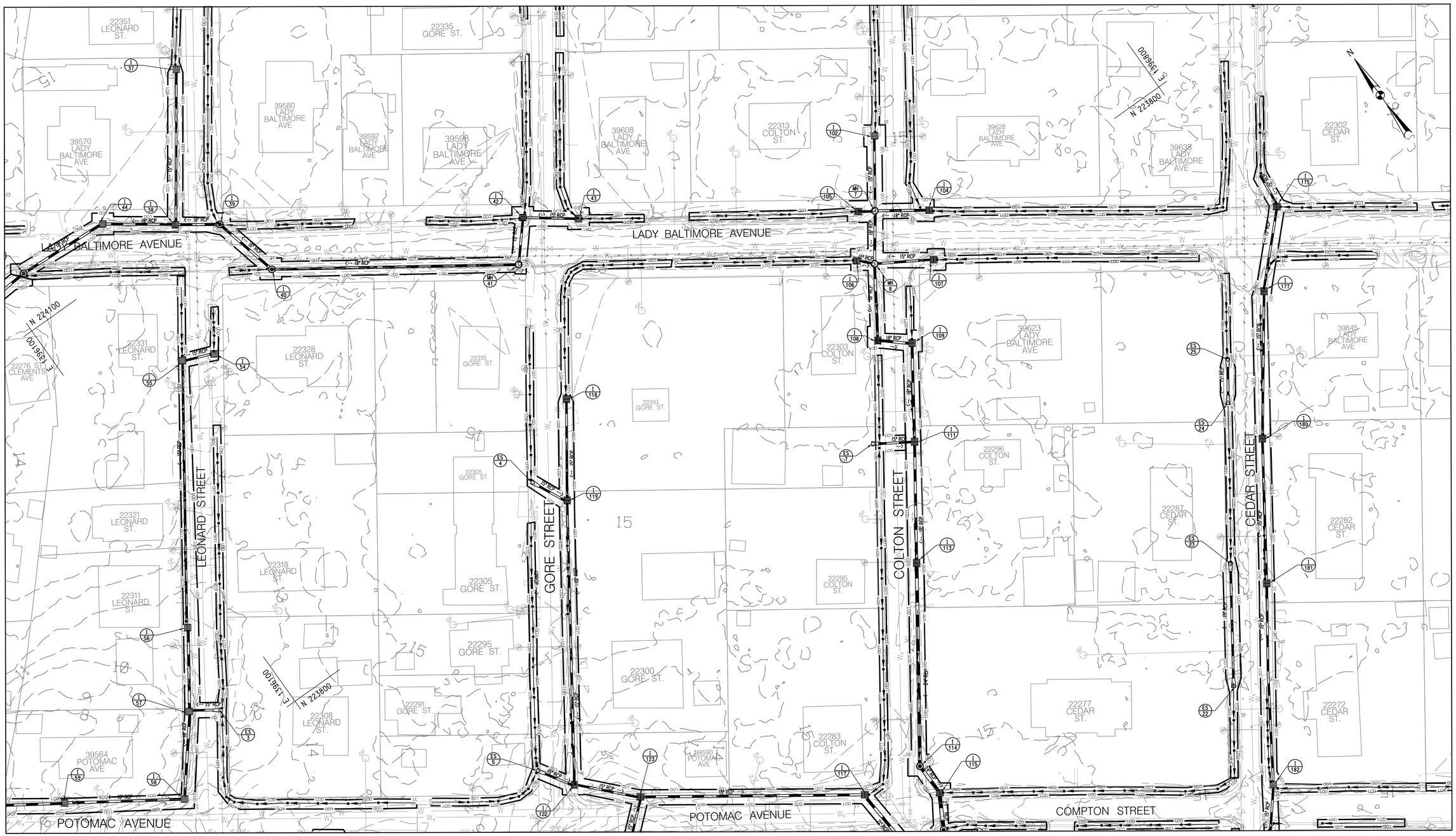
EROSION AND SEDIMENT CONTROL PLAN SHEET

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. ES-05

SHEET 51 OF 56

PLOTTED: $DATE$
FILE: $FILE$



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CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. ES-06

SHEET 52 OF 56

PLOTTED: $DATE$
FILE: $FILE$

MATCHLINE SEE SHEET ES-04

MATCHLINE SEE SHEET ES-06

MATCHLINE SEE SHEET ES-09

MATCHLINE SEE SHEET ES-10

30′ 0 30′ 60′

SCALE: 1"=30′

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ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. ES-07

SHEET 53 OF 56

PLOTTED $DATE$
FILE $FILE$

MATCHLINE SEE SHEET ES-05

MATCHLINE SEE SHEET ES-06

MATCHLINE SEE SHEET ES-09

E 1395600
N 223500

LEGEND

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www.brudis.com

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAW OF THE STATE OF MARYLAND.

LICENSE NUMBER 51941
EXPIRATION DATE: 12/30/2023

DESIGNED: DK/AG
DRAWN: AM
CHECKED: MB
DATE: 02/09/23
SCALE: 1″=30′

BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS
AND TRANSPORTATION
ST. MARY'S COUNTY, MARYLAND
P.O BOX 508, CALIFORNIA, MARYLAND 20619

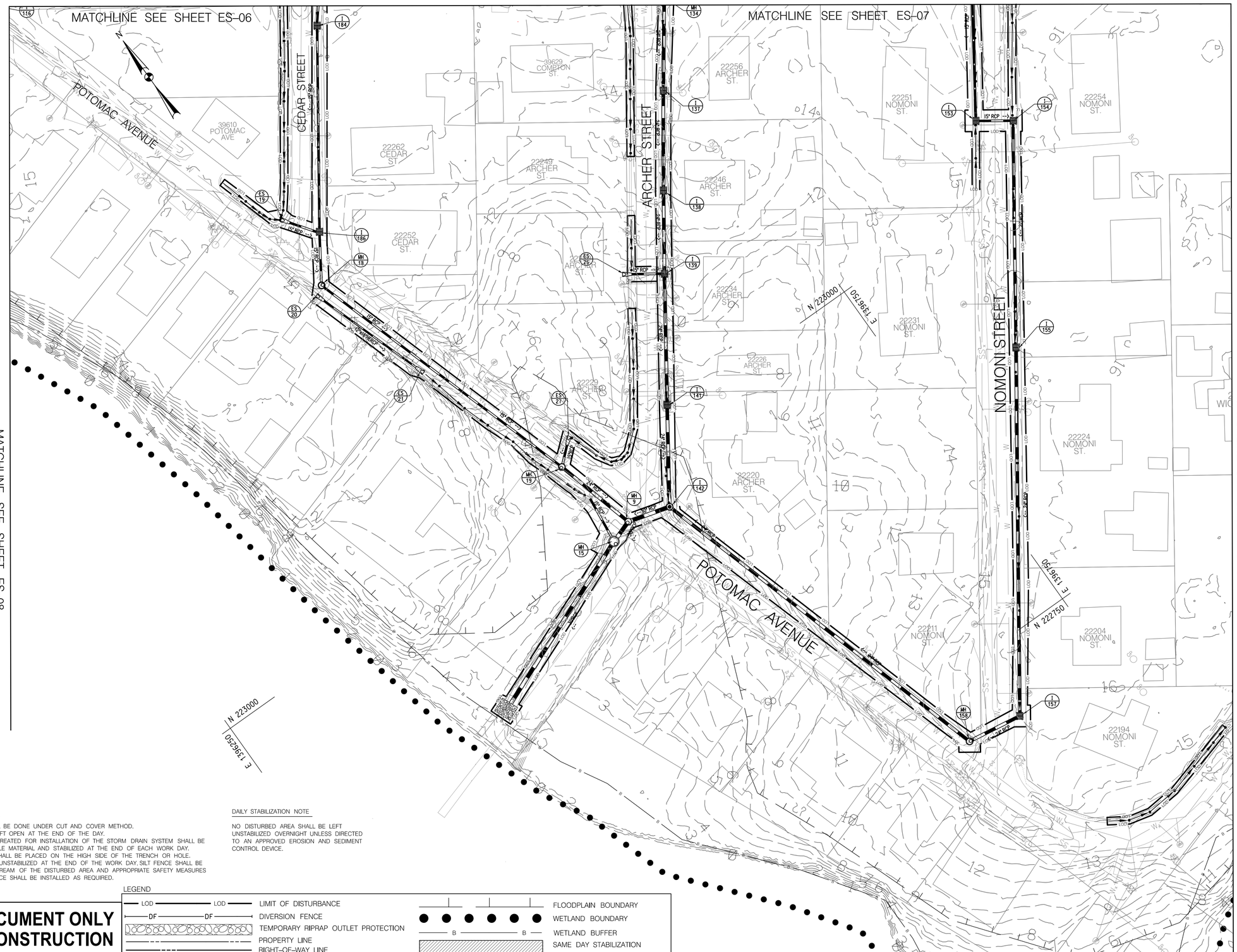
EROSION AND SEDIMENT CONTROL PLAN SHEET

ST. CLEMENTS SHORES DRAINAGE SYSTEM IMPROVEMENTS
CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. ES-08

SHEET 54 OF 56

PLOTTED: $DATE$
FILE: $FILE$



UTILITY CONSTRUCTION NOTE

1.THE PROPOSED WORK SHALL BE DONE UNDER CUT AND COVER METHOD.
2. NO TRENCHES SHALL BE LEFT OPEN AT THE END OF THE DAY.
3. ALL TRENCHES OR HOLES CREATED FOR INSTALLATION OF THE STORM DRAIN SYSTEM SHALL BE BACKFILLED WITH THE SUITABLE MATERIAL AND STABILIZED AT THE END OF EACH WORK DAY.
4.THE EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF THE TRENCH OR HOLE.
5. IF AN AREA MUST BE LEFT UNSTABILIZED AT THE END OF THE WORK DAY, SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF THE DISTURBED AREA AND APPROPRIATE SAFETY MEASURES SUCH AS BLAZE ORANCE FENCE SHALL BE INSTALLED AS REQUIRED.

DAILY STABILIZATION NOTE

NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS DIRECTED TO AN APPROVED EROSION AND SEDIMENT CONTROL DEVICE.

LEGEND

- LOD — LOD — LIMIT OF DISTURBANCE
- DF — DF — DIVERSION FENCE
- TEMPORARY RIPRAP OUTLET PROTECTION
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- FLOODPLAIN BOUNDARY
- WETLAND BOUNDARY
- B — B — WETLAND BUFFER
- SAME DAY STABILIZATION

DESIGN DOCUMENT ONLY
NOT FOR CONSTRUCTION

BAI
BRUDIS & ASSOCIATES, INC.
Consulting Engineers
11000 Broken Land Parkway, Suite 450
Columbia, Maryland 21044
Phone 410-884-3607
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CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. ES-09

SHEET 55 OF 56

PLOTTED: $DATE$
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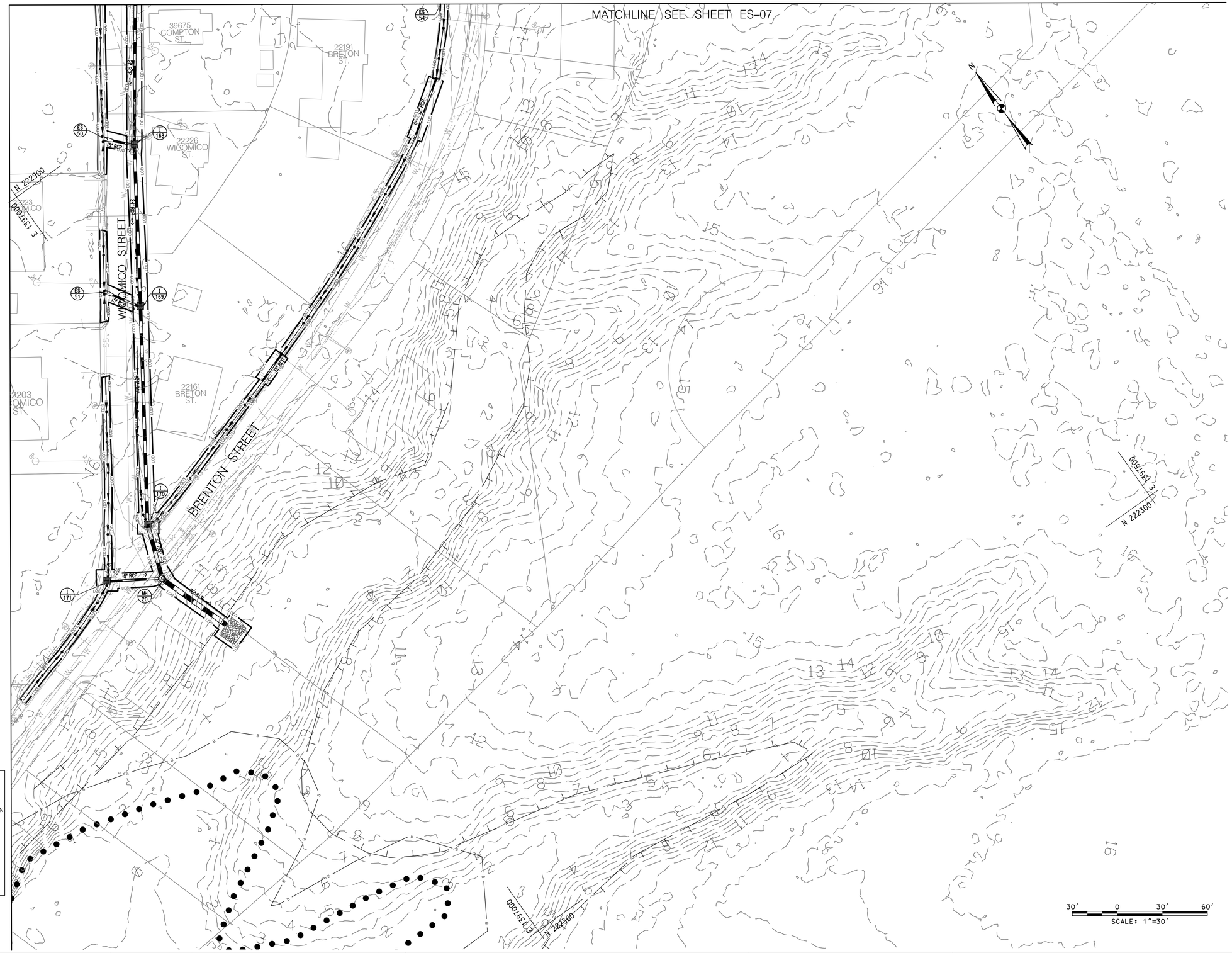
MATCHLINE SEE SHEET ES-09

MATCHLINE SEE SHEET ES-07



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CONTRACT NO.
SMC-22-DPWT-120711

DWG NO. ES-10

SHEET 55 OF 56

PLOTTED: $DATE$
FILE: $FILE$