

OFF-SITE WATER EXTENSION EMERSON SECTION ONE 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 44-3874-D

SHEET INDEX

1	TITLE SHEET
2	PLAN AND PROFILE OF A WATER MAIN

BENCHMARKS

TRAVERSE POINT 102
ELEVATION 346.19
N 536,499.165
E 1,353,974.017
LOCATED NEAR THE
INTERSECTION OF GORMAN
ROAD AND SKYLARK BLVD.

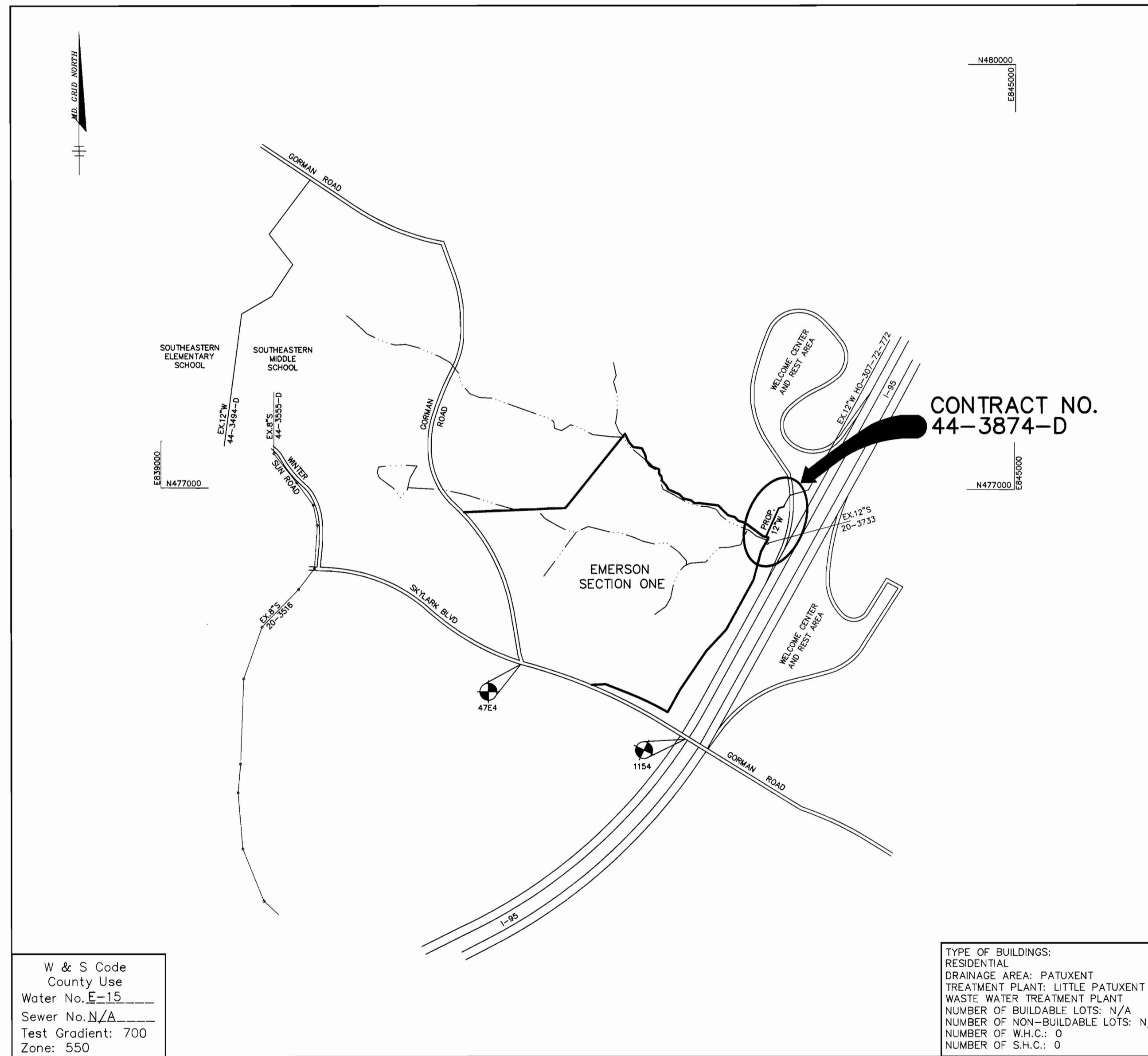
TRAVERSE POINT 1154
ELEVATION 347.45
N 536,018.069
E 1,355,129.333
LOCATED NEAR THE
I-95 BRIDGE ALONG
GORMAN ROAD

HOWARD COUNTY
CONTROL STATION 47E4
ELEVATION 339.00
N 535,846.16
E 1,355,431.23
LOCATED NEAR THE
I-95 BRIDGE ALONG
GORMAN ROAD

GENERAL NOTES

1. Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates.
3. All vertical controls are based on U.S.G.S. data.
4. All pipe elevations shown are invert elevations.
5. Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractor's work requires the bracing of additional poles, any cost incurred by the owner for bracing of additional poles or damages shall be deducted from money owed the contractor. The contractor shall coordinate with the utility companies to schedule the bracing of the poles.
6. For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction. (Latest Edition). The contractor shall have a copy of Volume IV on the job.
7. Where test pits have been made on existing utilities, they are noted by the symbol at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
8. Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:

State Highway Administration	410-531-5533
BGE Contractor Services	410-850-4620
BGE Underground Damage Control	410-291-4607
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	410-549-4120
Bureau of Utilities, Howard County Department of Public Works	410-313-4900
Bell Atlantic	1-800-446-5266
9. Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
10. Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
11. All water mains to be D.I.P. Class 52 unless otherwise noted.
12. Tops of all water mains to have a minimum of 3'-1/2' cover unless otherwise noted.
13. Valves adjacent to tees shall be strapped to tees.
14. All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
15. Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be restrained and buttressed with concrete in accordance with Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
16. The contractor shall not operate any water main valves on the existing water system.
17. All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
18. Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
19. The fire hydrant shall be installed as per standard detail W.1.11.
20. Fire hydrants will be located 3' FROM BACK OF CURB unless otherwise noted.
21. For sprinkler systems, all townhomes or multi-family dwelling units should have a minimum of 1" connection with a 3/4" meter.
22. The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five (5) working days before any open cut of any County road or boring/packing operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114(a) of the Howard County Code.
23. Howard County DPW is hereby granted permission to access private lots shown on these plans in order to maintain public water and sewer house connections at the curb stops and/or cleanouts.
24. State Highway Utility Permit issued for this construction, Permit # 7-ho-5497.



VICINITY MAP
SCALE : 1"=600'

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
12" WATER	260 LF			
12" VALVE	1 EA			
CONCRETE ANCHORS	8 EA			

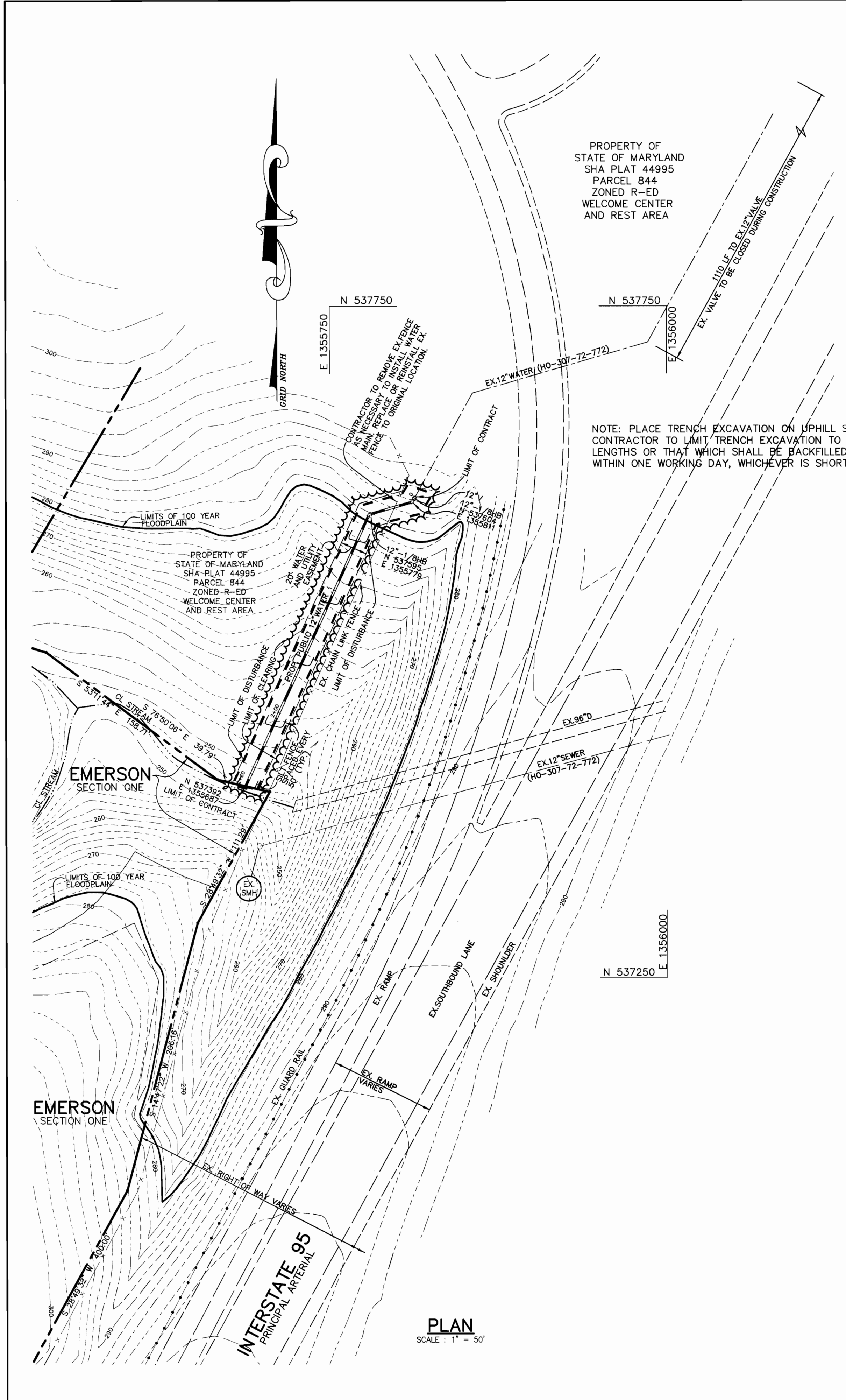
NAME OF UTILITY CONTRACTOR :	
Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications.	CHECKBOX
<i>John P. Robertson</i> 8/30/00	AS-BUILT DATE
Review for Howard Soil Conservation District and meet technical requirements.	SURVEY AND DRAFTING DIVISION
<i>Cheryl J. Simmons</i> 08/30/00	
NATURAL RESOURCES CONSERVATION SERVICE	
This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.	
HOWARD SOIL CONSERVATION DISTRICT	DATE

W & S Code
County Use
Water No. E-15
Sewer No. N/A
Test Gradient: 700
Zone: 550

TYPE OF BUILDINGS:
RESIDENTIAL
DRAINAGE AREA: PATUXENT
TREATMENT PLANT: LITTLE PATUXENT
WASTE WATER TREATMENT PLANT
NUMBER OF BUILDABLE LOTS: N/A
NUMBER OF NON-BUILDABLE LOTS: N/A
NUMBER OF W.H.C.: 0
NUMBER OF S.H.C.: 0

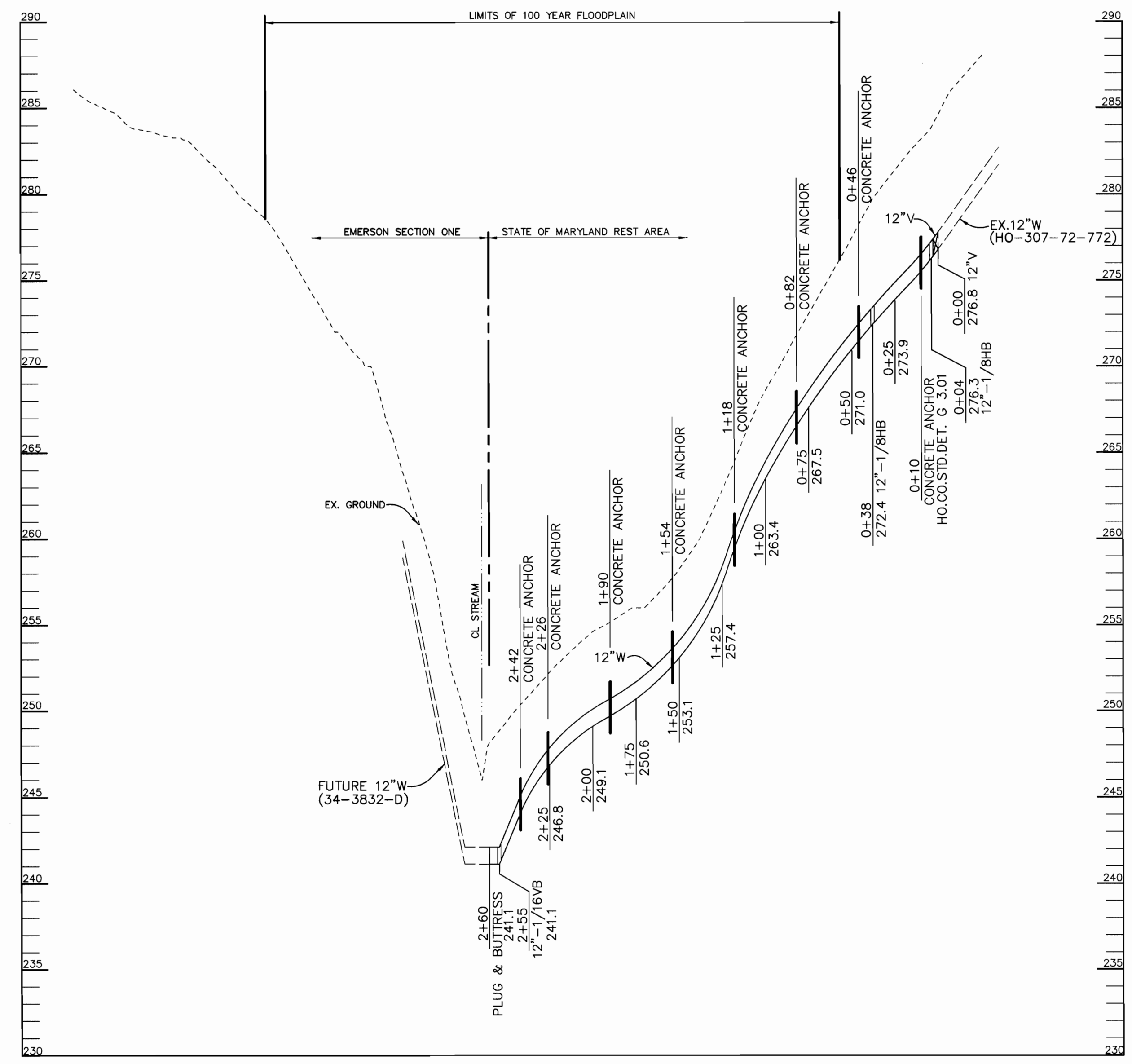
F:\PROJECT\092121\WS-OFF1.DWG Tue Aug 08 14:59:38 2000 RIEMER MUEGGE & ASSOCIATES, INC.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>R. B. Berman</i> 8-15-00 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Cheryl J. Simmons</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	 RIEMER MUEGGE & ASSOCIATES INC ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8118 Centre Park Drive, Columbia, MD 21046 Tel 410.987.8800 fax 410.987.8282 99212/WS-OFF1.DWG	 ARTHUR E. MUEGGE #8707	DES: C.J.R. DRN: DAM CHK: DATE: 8/9/00	BY NO. REVISION DATE	TITLE SHEET 600' SCALE MAP NO. <u>47</u> BLOCK NO. <u>3, 8 & 9</u>	OFF-SITE WATER EXTENSION EMERSON SECTION ONE 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 44-3874-D	SCALE AS SHOWN SHEET 1 OF 2
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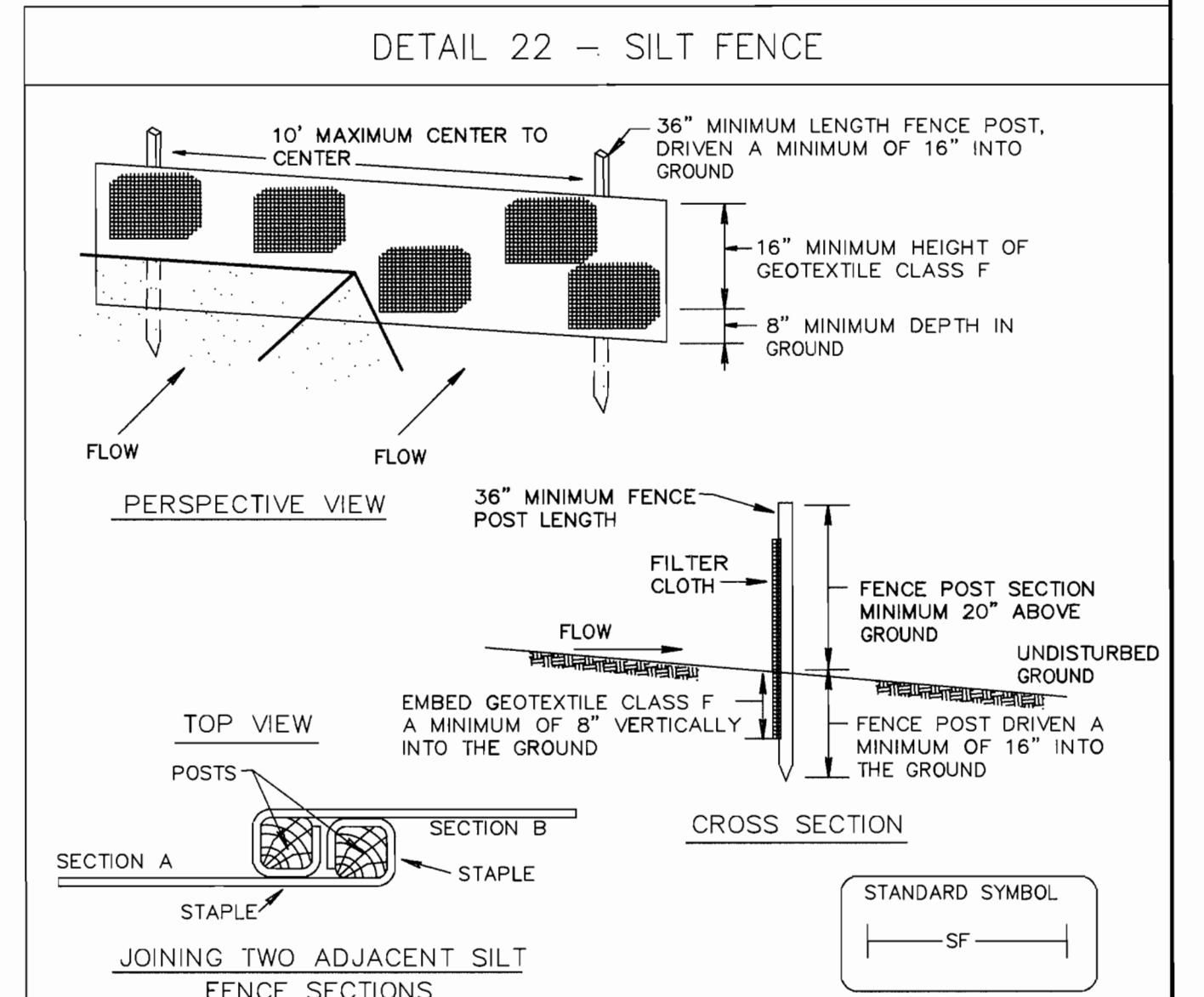


PROPERTY OF
STATE OF MARYLAND
SHA PLAT 44995
PARCEL 844
ZONED R-ED
WELCOME CENTER
AND REST AREA

NOTE: PLACE TRENCH EXCAVATION ON UPHILL SIDE OF TRENCH.
CONTRACTOR TO LIMIT TRENCH EXCAVATION TO THREE PIPE
LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED
WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.



PROFILE
SCALE:
HOR. - 1" = 50'
VERT. - 1" = 5'



- Construction Specifications**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
 - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ² / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
 - Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
 - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

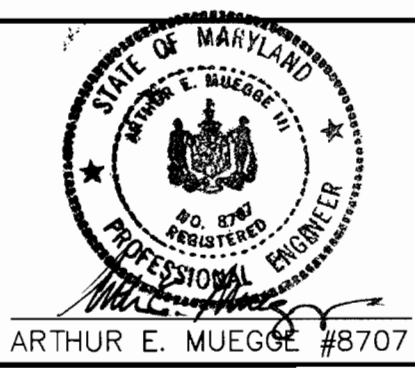
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

R. J. Berman
CHIEF, BUREAU OF UTILITIES 8-15-00 DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Arthur E. Muegge
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

RIEMER MUEGGE & ASSOCIATES INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8616 Centre Park Drive, Columbia, MD 21046
tel 410.987.8600 fax 410.987.8682
99212/WS-OFF2.DWG



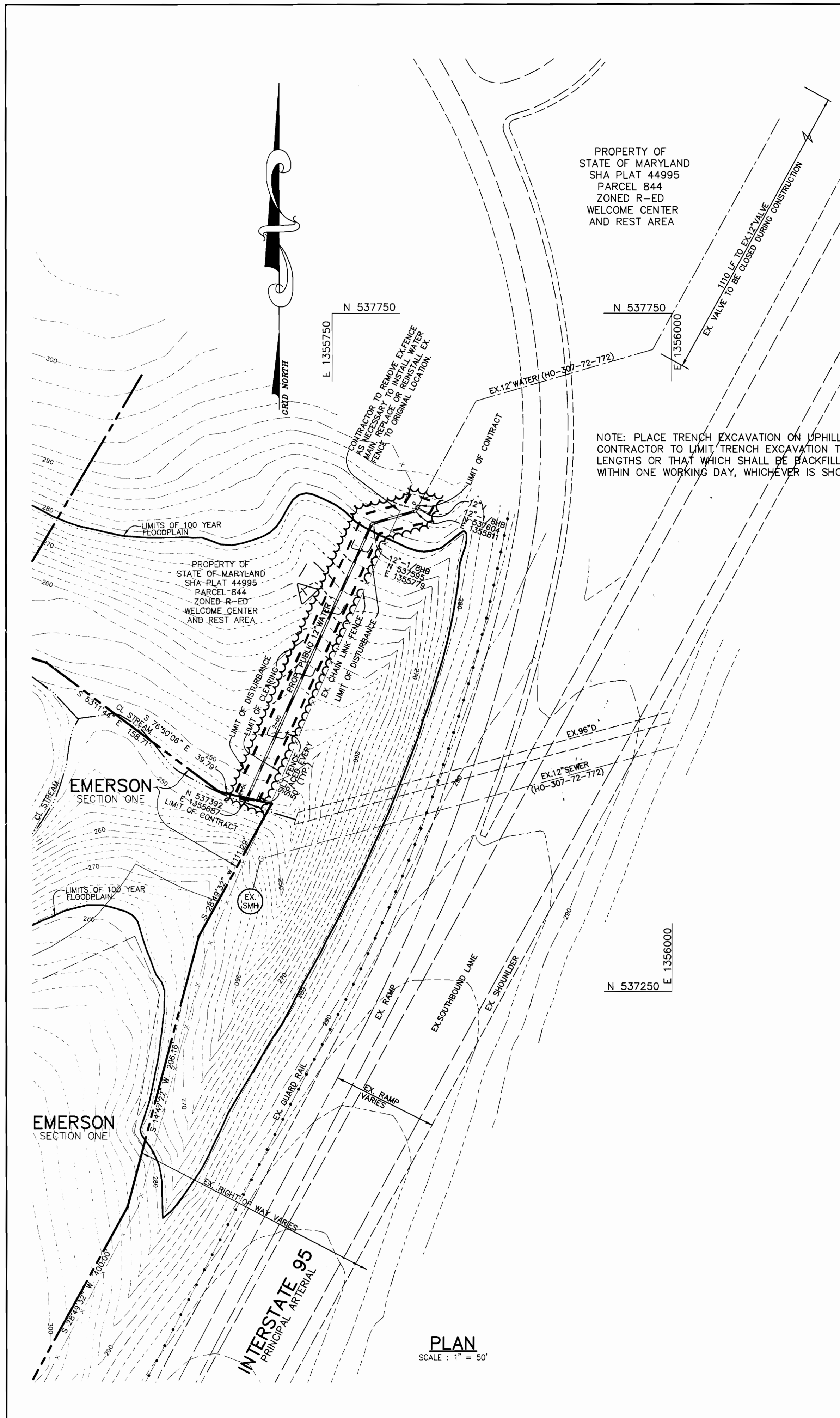
DES:	C.J.R.				
DRN:	DAM				
CHK:					
DATE:	8/9/00				
BY:		NO.	REVISION	DATE	

**PLAN AND PROFILE
OF A WATER MAIN**

600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

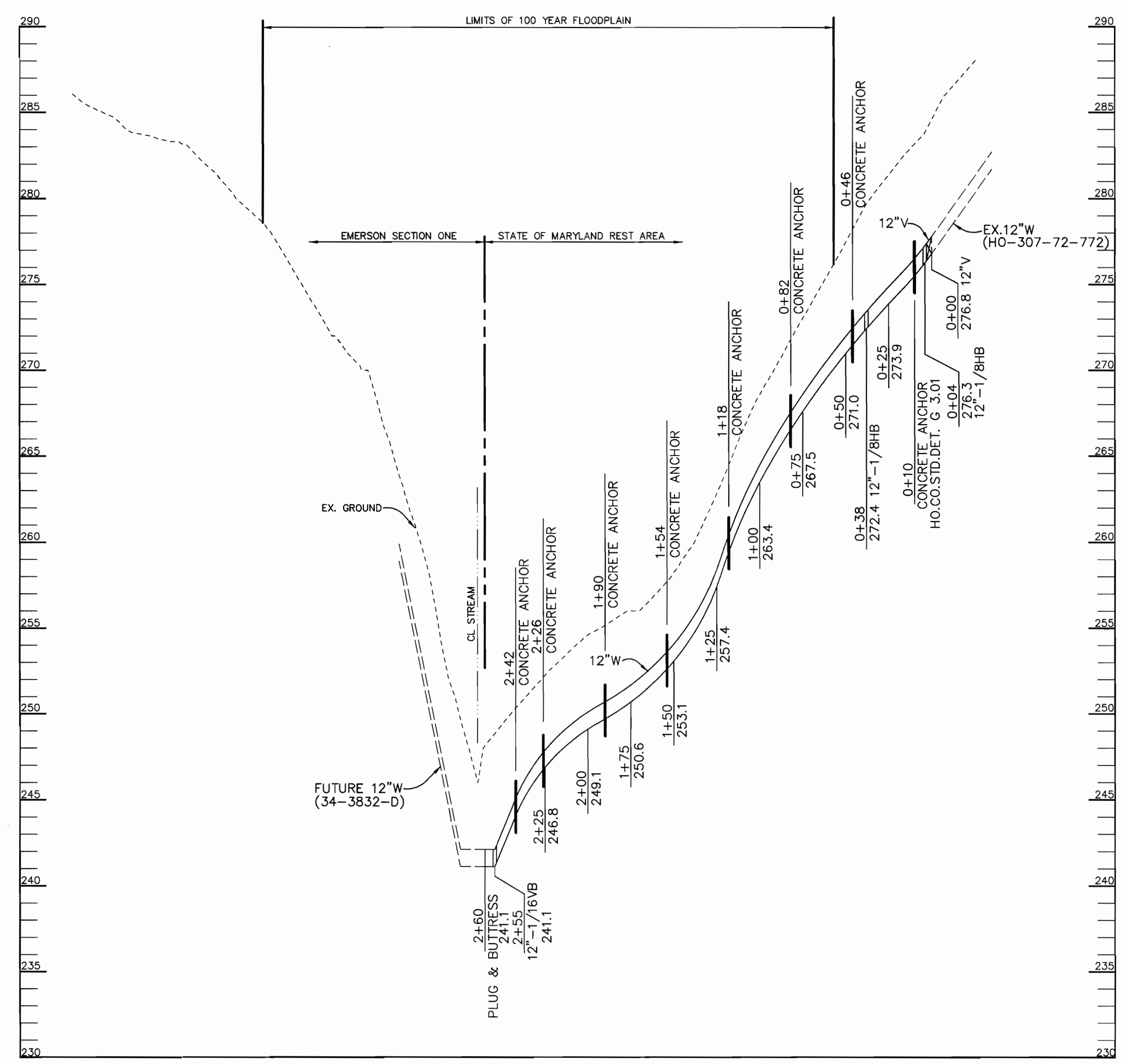
**OFF-SITE WATER EXTENSION
EMERSON
SECTION ONE**
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 44-3874-D

SCALE AS SHOWN
SHEET 2 OF 2

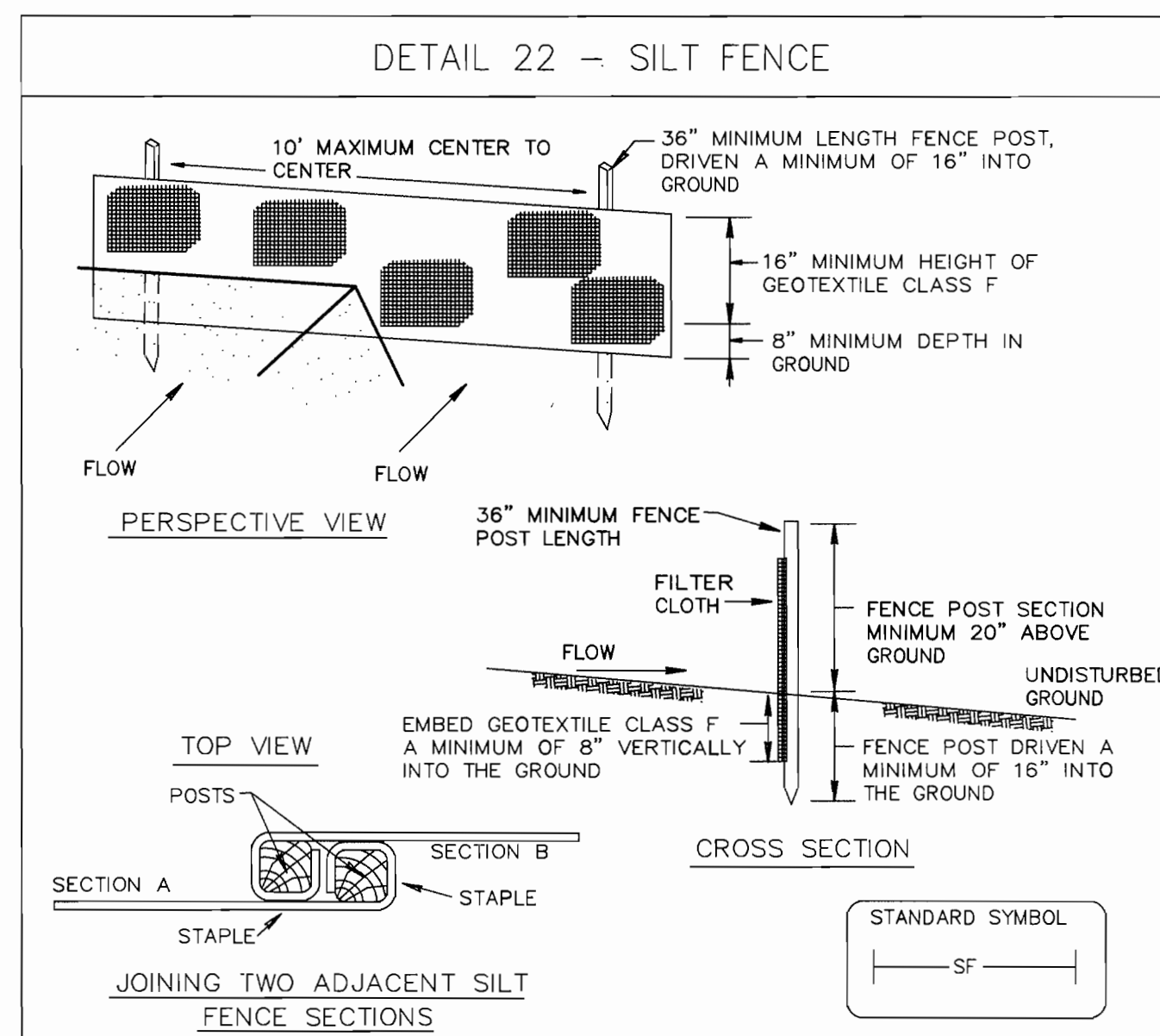


PROPERTY OF
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NOTE: PLACE TRENCH EXCAVATION ON UPHILL SIDE OF TRENCH.
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U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

PAGE
E-15-3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

F:\PROJECT\99212\WS-OFF2.dwg Tue Aug 08 15:06:00 2000 RIEMER MUEGGE & ASSOCIATES, INC.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert Berman</i> 8-15-00 CHIEF, BUREAU OF UTILITIES DATE		DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>Arthur E. Muegge</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE		 RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive, Columbia, MD 21045 Tel: 410.987.8900 Fax: 410.987.8282 99212/WS-OFF2.DWG		 ARTHUR E. MUEGGE #8707		DES: C.J.R. DRN: DAM CHK: DATE: 8/9/00		DELETED 20" WATER & UTILITY EASEMENT 10-23-00 BY: NO. REVISION DATE		PLAN AND PROFILE OF A WATER MAIN 600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9		OFF-SITE WATER EXTENSION EMERSON SECTION ONE 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 44-3874-D SCALE AS SHOWN SHEET 2 OF 2	
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SHEET INDEX

1	TITLE SHEET
2	PLAN AND PROFILE OF A WATER MAIN

OFF-SITE WATER EXTENSION

EMERSON

SECTION ONE

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

CONTRACT NO. 44-3874-D

BENCHMARKS

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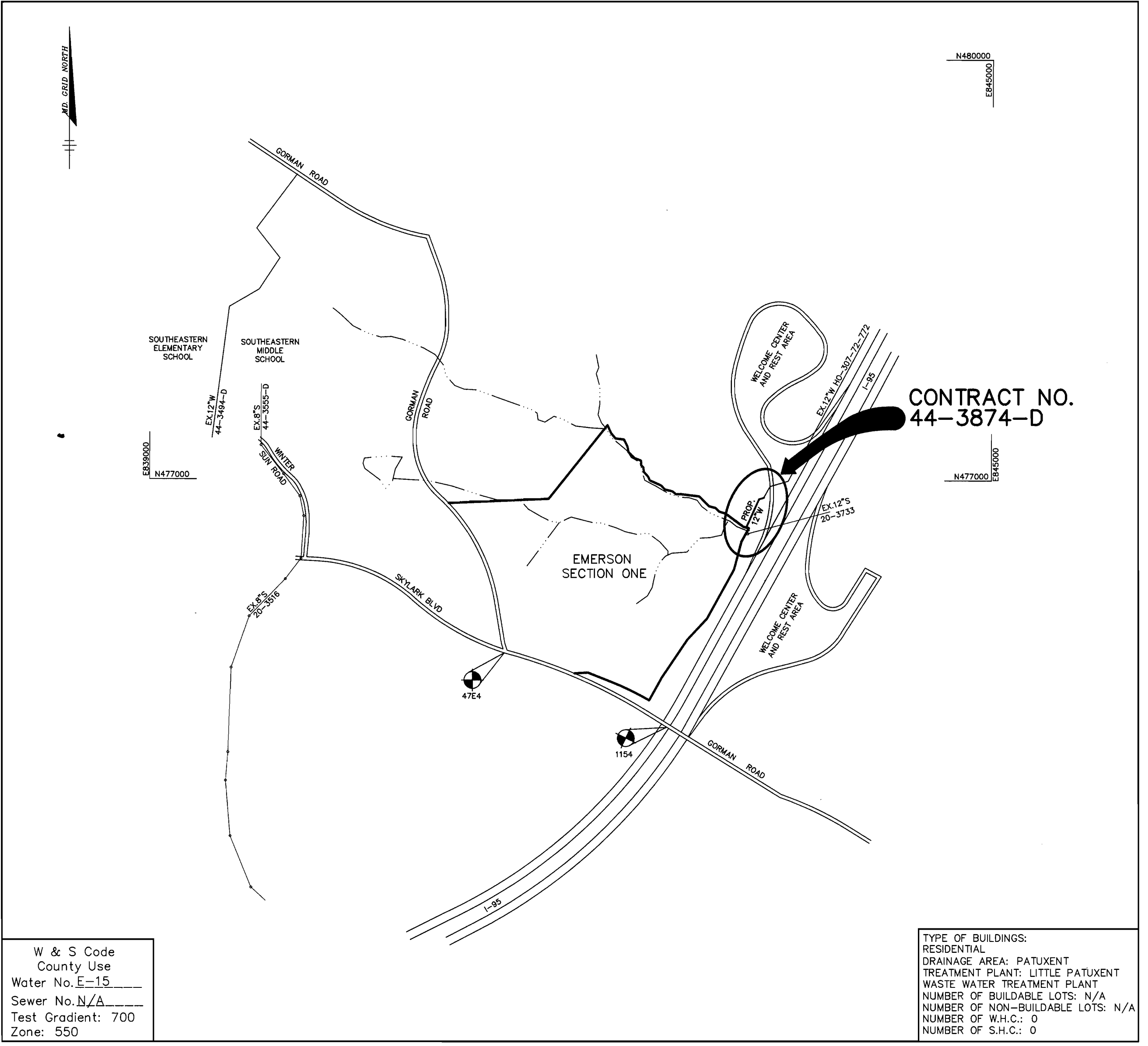
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24. State Highway Utility Permit issued for this construction, Permit # 7-ho-5497.



VICINITY MAP
SCALE : 1"=600'

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
12" WATER	260 LF	260 LF	C.L. 52	GRIFFIN PIPE
12" VALVE	1 EA	1 EA	GATE VALVE	MUELLER/BROS.
CONCRETE ANCHORS	8 EA	(ELIMINATED)		

NAME OF UTILITY CONTRACTOR : C.C.S. (HTI SUBCONTRACTOR)

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications.

John R. ... 8/30/00

Review for Howard Soil Conservation District and meets technical requirements.

Cheryl J. ... 08/30/00

NATURAL RESOURCES CONSERVATION SERVICE DATE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

HOWARD SOIL CONSERVATION DISTRICT DATE

W & S Code
County Use
Water No. E-15
Sewer No. N/A
Test Gradient: 700
Zone: 550

TYPE OF BUILDINGS:
RESIDENTIAL
DRAINAGE AREA: PATUXENT
TREATMENT PLANT; LITTLE PATUXENT
WASTE WATER TREATMENT PLANT
NUMBER OF BUILDABLE LOTS: N/A
NUMBER OF NON-BUILDABLE LOTS: N/A
NUMBER OF W.H.C.: 0
NUMBER OF S.H.C.: 0

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<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>R. H. ...</i> 8-15-00 CHIEF, BUREAU OF UTILITIES DATE</p>	<p>DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND</p> <p><i>Arthur E. Muegge</i> 8/14/00 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE</p>
---	--

RIEMER MUEGGE & ASSOCIATES INC.

ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING

8818 Green Park Drive, Columbia, MD 21046
Tel 410.987.8200 Fax 410.987.8202

99212/WS-OFF1.DWG

ARTHUR E. MUEGGE #8707

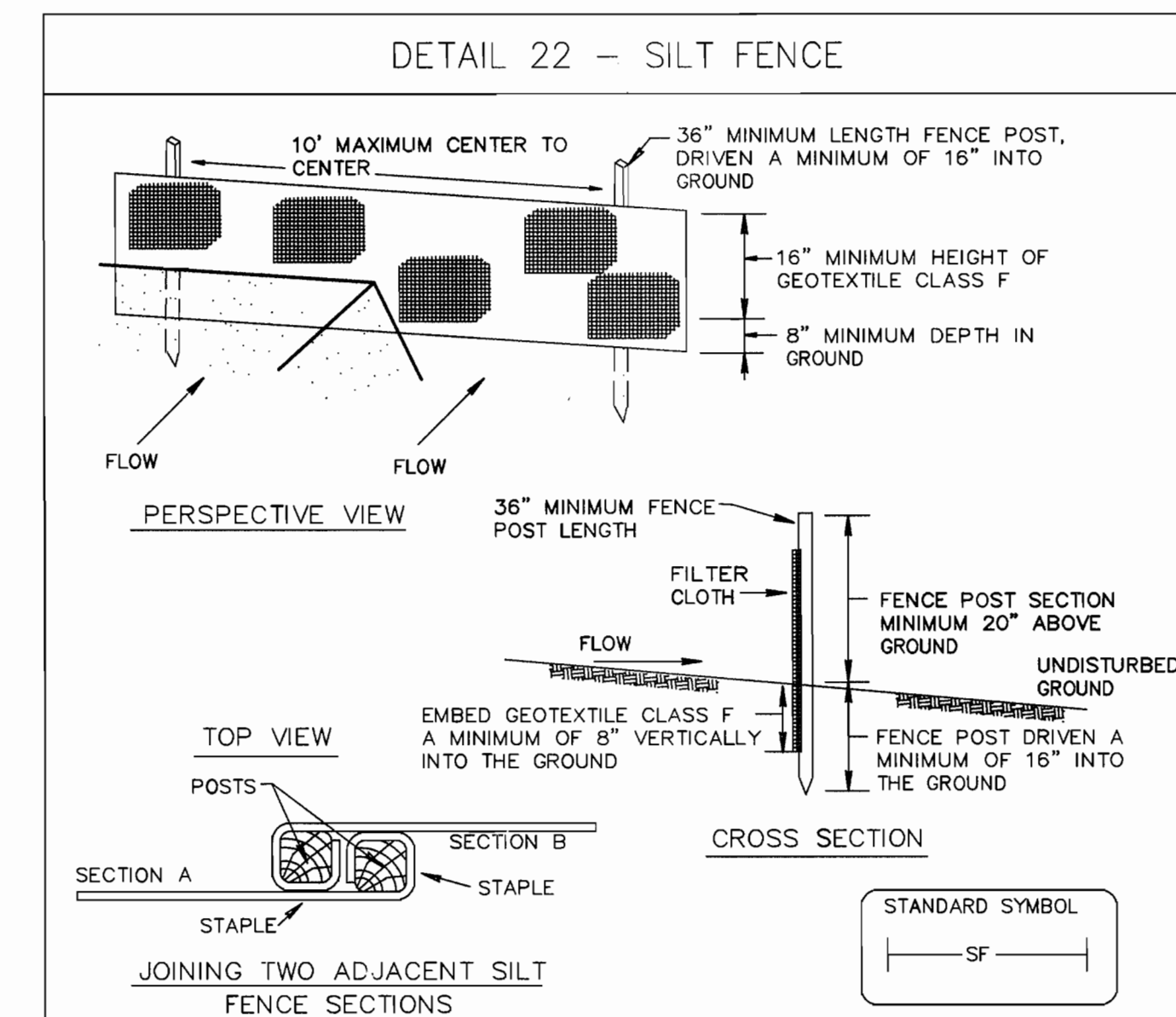
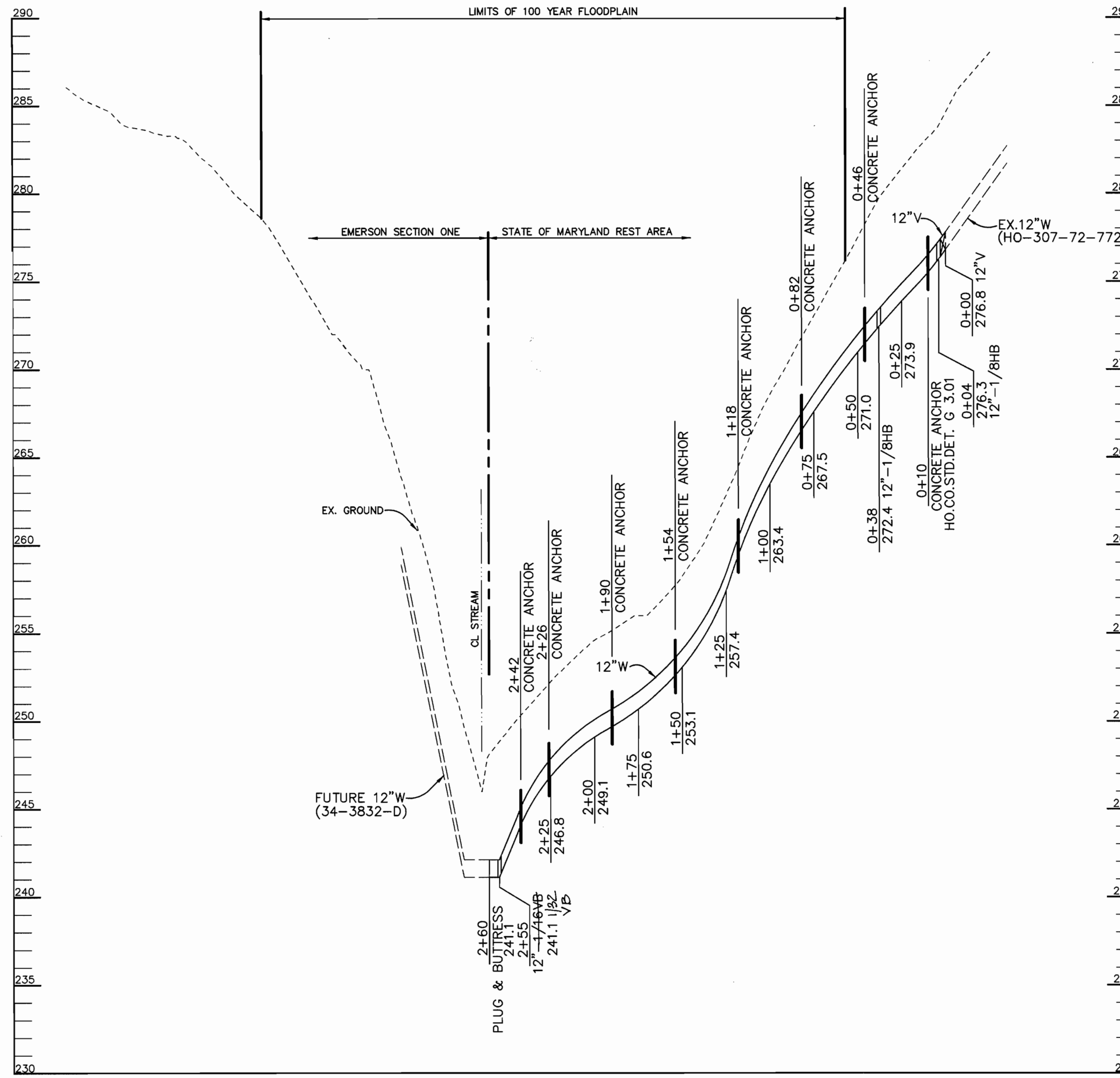
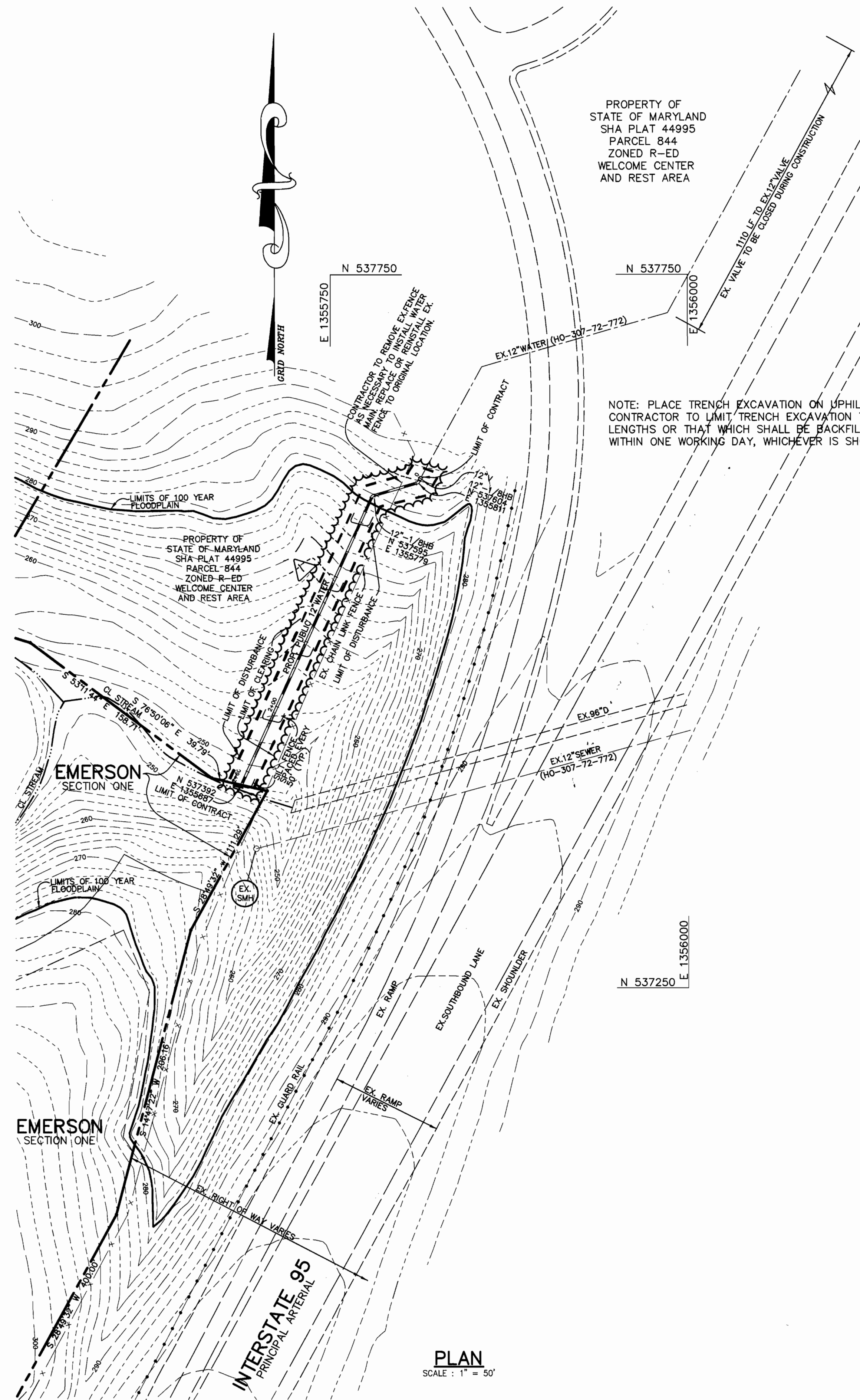
DES:	C.J.R.		
DRN:	DAM		
CHK:			
DATE:	8/9/00		
BY:	KCI	1	AS-BUILT DATA ADDED TO PLAN
NO.:			
REVISION:			
DATE:	8/14/00		

TITLE SHEET

600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

OFF-SITE WATER EXTENSION
EMERSON
SECTION ONE
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 44-3874-D

SCALE AS SHOWN
SHEET 1 OF 2



Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut; or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pond per linear foot.
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Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
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U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-15-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

F:\PROJECT\99212\WS-OFF2.dwg Tue Aug 08 15:06:00 2000 RIEMER MUEGGE & ASSOCIATES, INC.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Roland Berman
CHIEF, BUREAU OF UTILITIES

8-15-00
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

William Dammann
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE

RIEMER MUEGGE & ASSOCIATES INC.

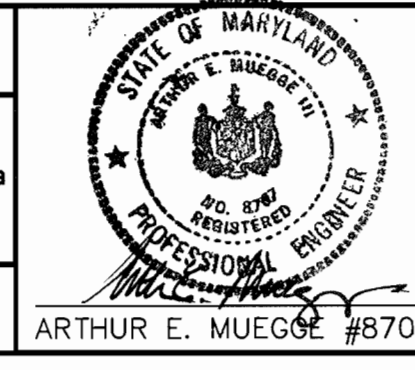
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING

8810 Green Park Drive, Columbia, MD 21046

tel 410.987.8900 fax 410.987.9292

99212/WS-OFF2.DWG

ARTHUR E. MUEGGE #8707



DES:	C.J.R.			
DRN:	DAM			
CHK:	K/C.I. 2	1/32 V/B REVISED AND SHOWN ON PLAN	01/14/02	
	C.J.R. Δ	DELETED 20' WATER & UTILITY EASEMENT	10-23-00	
DATE:	8/9/00			
BY:	NO.	REVISION	DATE	

PLAN AND PROFILE OF A WATER MAIN

600' SCALE MAP NO. 47 BLOCK NO. 3, 8 & 9

OFF-SITE WATER EXTENSION SECTION ONE

6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 44-3874-D

SCALE AS SHOWN

SHEET 2 OF 2