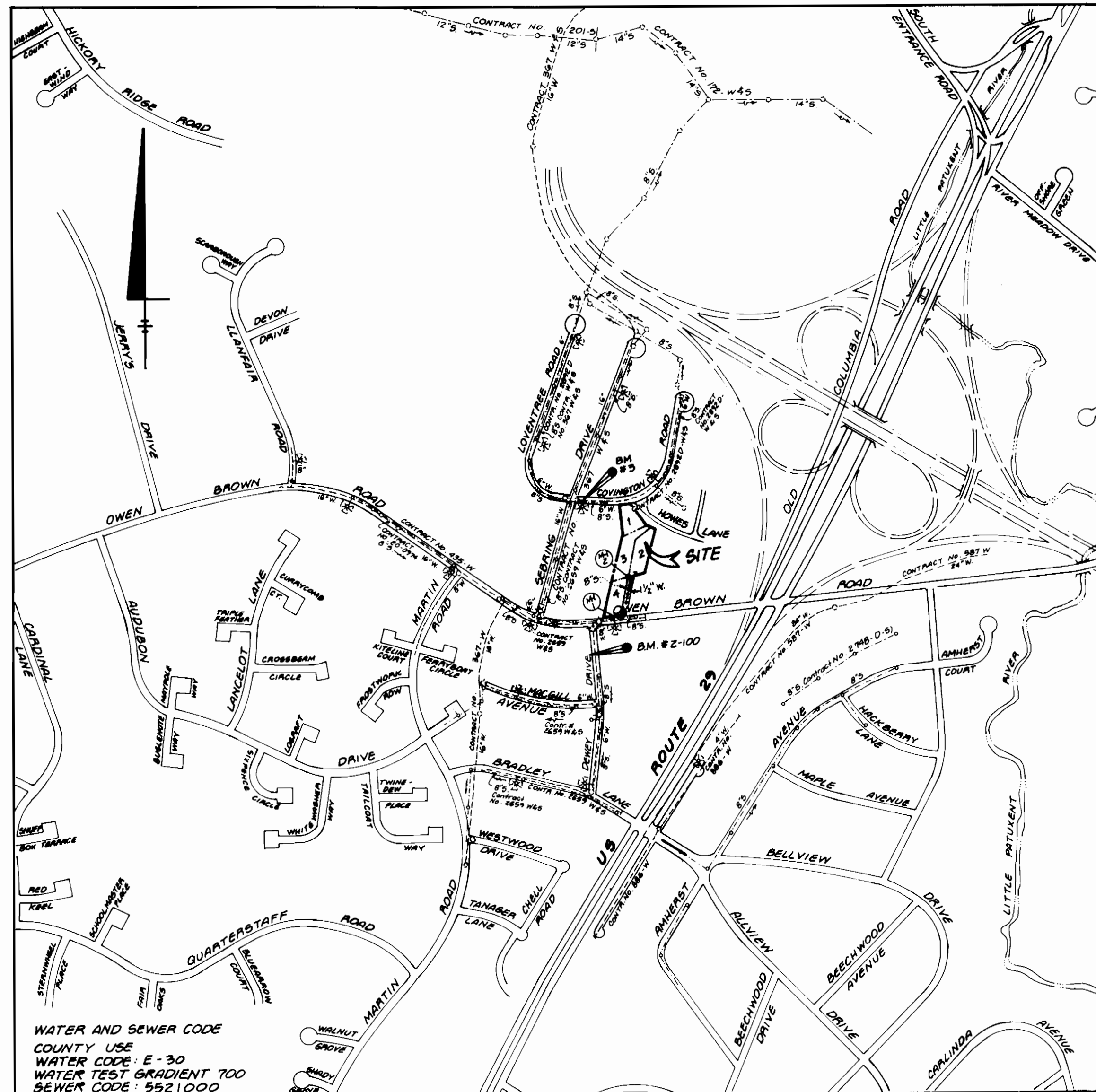


GENERAL NOTES

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 inspector, 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. Datum.
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. Any cost incurred to the contractor for tunneling or bracing at poles shall be included in unit prices bid for excavation and backfill.
6. For details not shown on the drawings use Howard County Standard Details.
7. For materials and construction methods use Howard County Standard Specifications and Howard County Design Manual, Volume IV, 1989 Amendments. The Contractor shall have Volume IV, 1989 Amend. on the job site.
8. Contractor shall locate existing utilities a minimum of two (2) weeks in advance of construction operations in the vicinity of proposed utilities at his own expense.
9. Contractor shall notify the following utilities or agencies at least five (5) working days before starting work shown on these plans.
 - State Highway Administration - 531-5533
 - Baltimore Gas & Electric Company - Underground Damage Control - 859-9004
 - Baltimore Gas & Electric Company - Contractor Services - 850-4620
 - Baltimore Gas & Electric Company - Trouble Shooting - 298-9001
 - "Miss Utility" - 1-800-257-7777
 - Chesapeake & Potomac (C & P) Telephone Company - 1-800-257-7777
 - Bureau of Utilities Howard County - 315-4900
 - Colonial Pipeline Company - 795-1390
10. Trees are to be protected from damage to maximum extent. Trees located within the construction strip are not to be removed or damaged by the contractor.
11. Contractor shall remove trees, stumps, and roots along line of excavation as directed by the inspector. Payment for such removal shall be included in the unit price bid for excavation and backfill.
12. Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
13. All water mains to be DIP Class 52 unless otherwise noted.
14. Top of all water mains to have a minimum of 3'-1/2' cover unless otherwise noted.
15. Valves adjacent to trees shall be strapped to trees.
16. Block all fittings with concrete.
17. Bury line elevations on fire hydrants shall be set to the elevations shown on the drawings. All fire hydrants shall be strapped and buttressed with concrete in accordance with standard details. Soil around the fire hydrant to be compacted in accordance with Sections 1000 & 1005 of the Standard Specifications.
18. All water house connections shall be for an inside meter setting.
19. The contractor shall not operate any water main valves on the existing system except as noted on the Plans sheet 2 of 3.
20. All sewer mains shall be C.S.P.X., V.C.P.X. or P.V.C. unless otherwise noted.
21. The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
22. All manholes shall be 4'-0" inside diameter, unless otherwise noted.
23. Water main and water house connection lines must have a minimum of one foot separation from the sanitary sewer and sewer house connections as they cross. Except at crossings, water and sewer lines shall have a minimum horizontal separation of 10'.
24. Manholes designated thus: WT, shall have a Watertight Frame and Cover.
25. All DIP fittings shall be in accordance with AWWA specification C-153 Ductile Iron Compact Fittings, 3-inch through 12 inch for water and other liquids.
26. All sewer house connections shall be 4" dia except the S.H.C. to lot 1, which shall be 6" D.I.P.
27. The Contractor shall notify in writing all property owners who will be without service, due to the closing of the existing water valve, a minimum of 48 hours in advance of the scheduled shutdown.

BENCH MARKS:

- B.M. #3 ELEV. 390.12
+ CUT ON NW BOLT TOP RING OF FIRE HYDRANT
SOUTH EAST CORNER OF COVINGTON ROAD AND
SEBRING DRIVE.
- B.M. #2-100 ELEV. 401.90
SPIKE IN BASE OF UTILITY POLE # 251251
WEST SIDE OF DEWEY DRIVE 230' SOUTH OF
OWEN BROWN ROAD



WATER AND SEWER CODE
 COUNTY USE
 WATER CODE: E-30
 WATER TEST GRADIENT 700
 SEWER CODE: 5521000

TYPE OF BUILDING	SINGLE FAMILY DETACHED
NO. OF LOTS	4
NO. OF WHC'S	3
NO. OF S.H.C.'S	3
DRAINAGE AREA	LITTLE PATUXENT
WASTEWATER TREATMENT PLANT	LITTLE PATUXENT
	WATER QUALITY MANAGEMENT CENTER SAVAGE - HOWARD COUNTY

VICINITY MAP
SCALE: 1" = 600'

DEVELOPER'S CERTIFICATE

"I/we certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer 2/12/92
Date

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer 1/21/92
Date

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Signature 2/12/92
DATE

U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT

Signature 2/11/92
DATE

WARD 3 CD

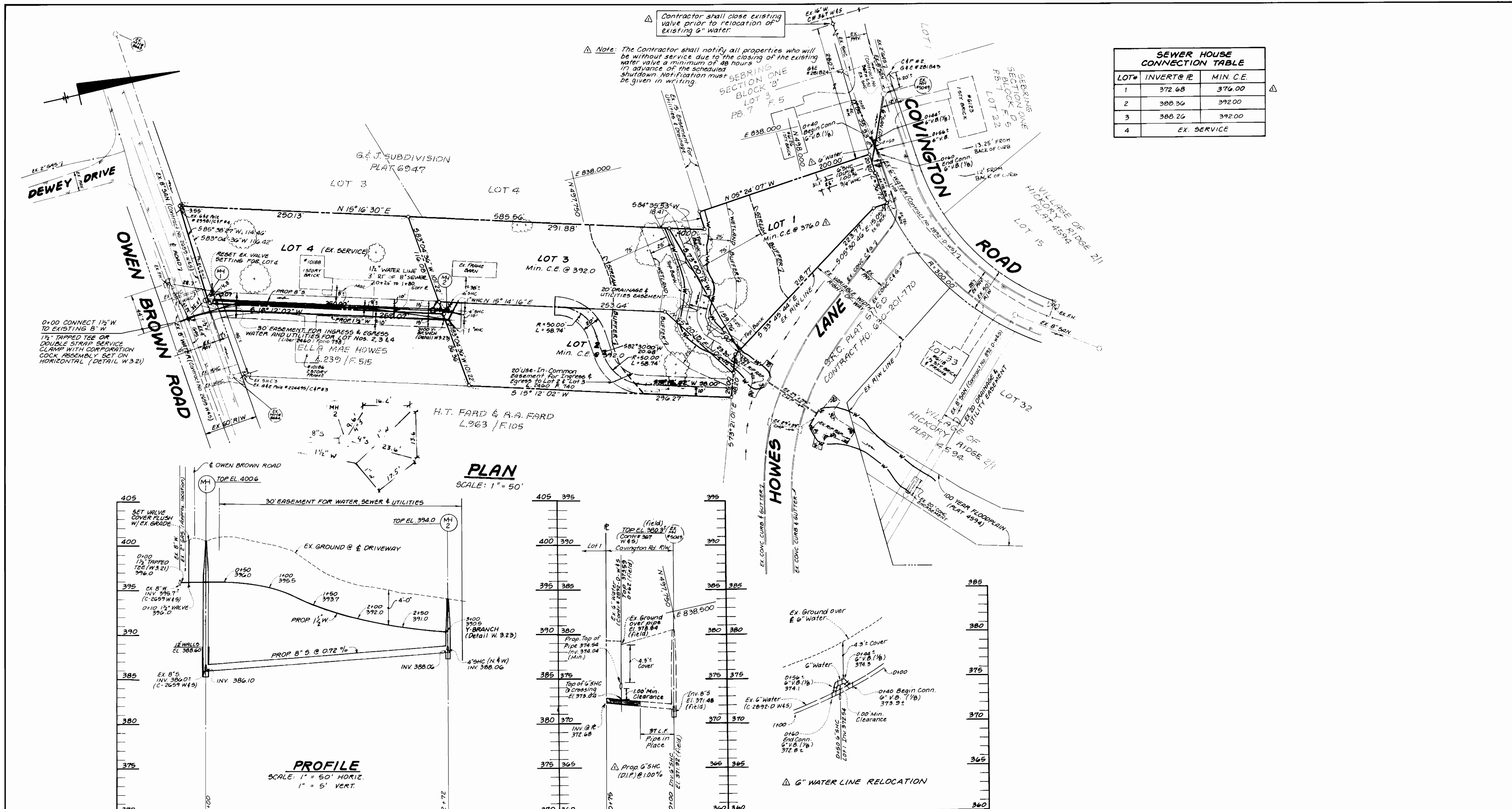
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION & FINAL RD CONSTRUCTION PLANS F-81-246

ITEM	QUANTITIES			
	QUANTITIES ESTIMATED	QUANTITIES AS BUILT	TYPE	MANUFACTURER / SUPPLIER
3/4" WHC	13 LF	13 LF	COPPER	WATER PRO INC.
1 1/2" W	300 LF	300 LF	COPPER	WATER PRO INC.
8" S	272 LF	262 LF	PVC	WATER PRO INC.
6" SHC (DIP)	75 LF	76 LF	D.I.P.	WATER PRO INC.
4" SHC	28 LF	31 LF	PVC	WATER PRO INC.
4" MANHOLE	2 EA.	2 EACH	PRE-CAST CONC.	WATER PRO INC.
1" WHC	35 LF	35 LF	COPPER	WATER PRO INC.
1 1/2" VALVE	1 EA.	1 EACH	BRASS	WATER PRO INC.
6" W	20 LF			
6" V.B. (1/2")	4 EA.	4 EACH	D.I.P.	WATER PRO INC.

Name of Utility Contractor: _____

CHECK BOX: Survey & Drafting Div. As Built Date 1/21/93

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Signature</i> 2-3-92 DATE</p> <p><i>Signature</i> 2-6-92 DATE</p>	<p>LAND DESIGN ENGINEERING, INC.</p> <p>10620 GUILFORD ROAD SUITE 210 JESSUP, MARYLAND 20794 PHONE: (301) 880-0034, (301) 604-6264</p> <p><i>Signature</i> 1/21/92</p>	<p>DES BDB</p> <p>ORN KBW</p> <p>CHK RLM</p> <p>DATE 11-4-91</p> <p>BY NO</p>	<p>TITLE SHEET</p> <p>11-4-91</p> <p>DATE 5-29-92</p> <p>REVISION</p> <p>600 SCALE MAP NO. 36 BLOCK NO. 13</p>	<p>HOWES ACRES</p> <p>LOTS 1 THRU 4 CONTRACT NO. 24-3145-D 5TH ELECTION DISTRICT</p>	<p>SCALE AS SHOWN</p> <p>SHEET 1 OF 3</p>
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SEWER HOUSE CONNECTION TABLE		
LOT#	INVERT @ R	MIN. C.E.
1	372.68	376.00
2	388.36	392.00
3	388.26	392.00
4	EX. SERVICE	

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

John M. Hester 2/12/92
 SIGNATURE DATE
 U.S. SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

John L. Robertson 2/11/92
 SIGNATURE DATE
 HOWARD S.C.D.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATION & FINAL RD. CONSTRUCTION PLANS F. 89-24G

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James P. ... 4/3/92
 DIRECTOR OF PUBLIC WORKS DATE

Robert ... 2-6-92
 CHIEF BUREAU OF UTILITIES DATE

... 2-13-92
 CHIEF BUREAU OF ENGINEERING DATE

... 2/12/92
 CHIEF LAND DEVELOPMENT DATE

LAND DESIGN ENGINEERING, INC.
 10620 GUILFORD ROAD
 SUITE 210
 JESSUP, MARYLAND 20794
 PHONE: (410) 880-0034, (301) 604-6264

Robert May 12/1/92

DES.	BDB				
DEN.	KBW				
CHE.	RLM				
DATE:	KBW	△	Raise G" Water Line, Revise SHC Profile and Add Crossing Profile	9-29-92	
11-4-91	BY	NO.	REVISION	DATE	

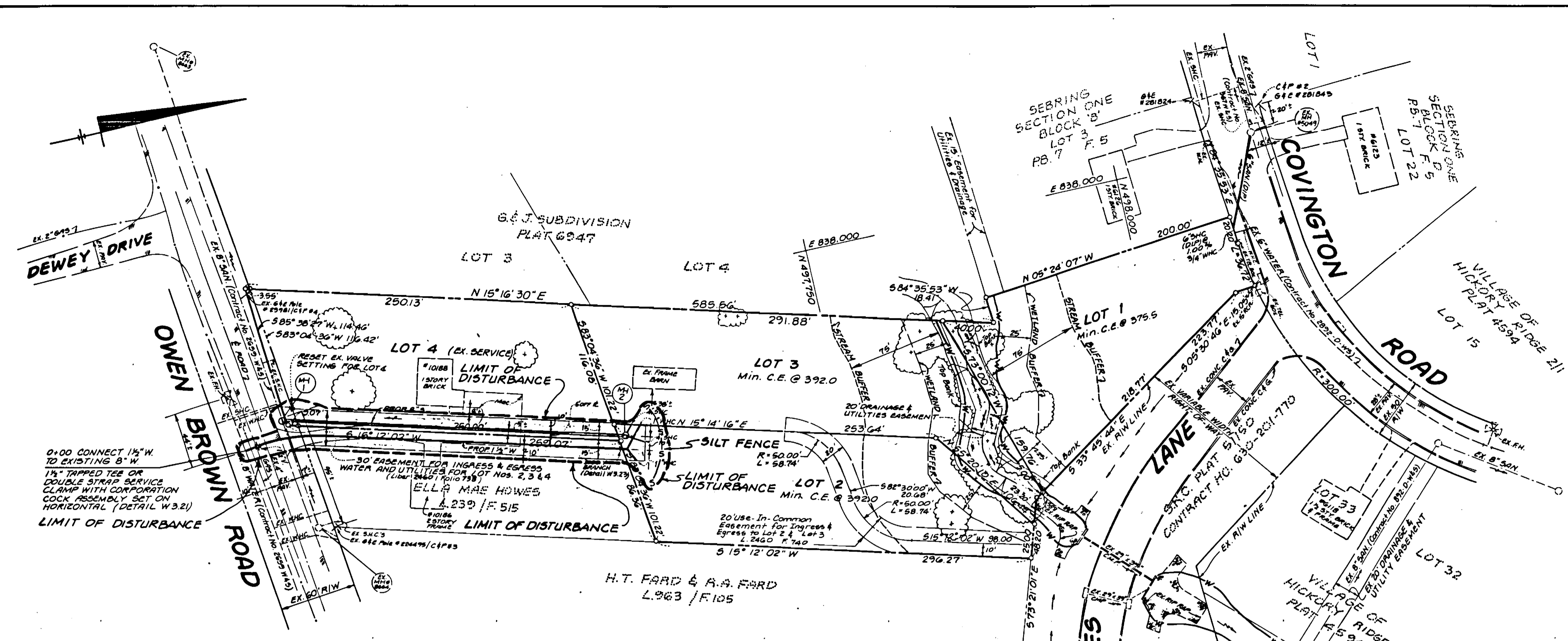
PLAN AND PROFILE

600 SCALE MAP NO. 36 BLOCK NO. 13

HOWES ACRES
 LOTS 1 THRU 4
 CONTRACT NO. 24-3145-D
 5TH ELECTION DISTRICT

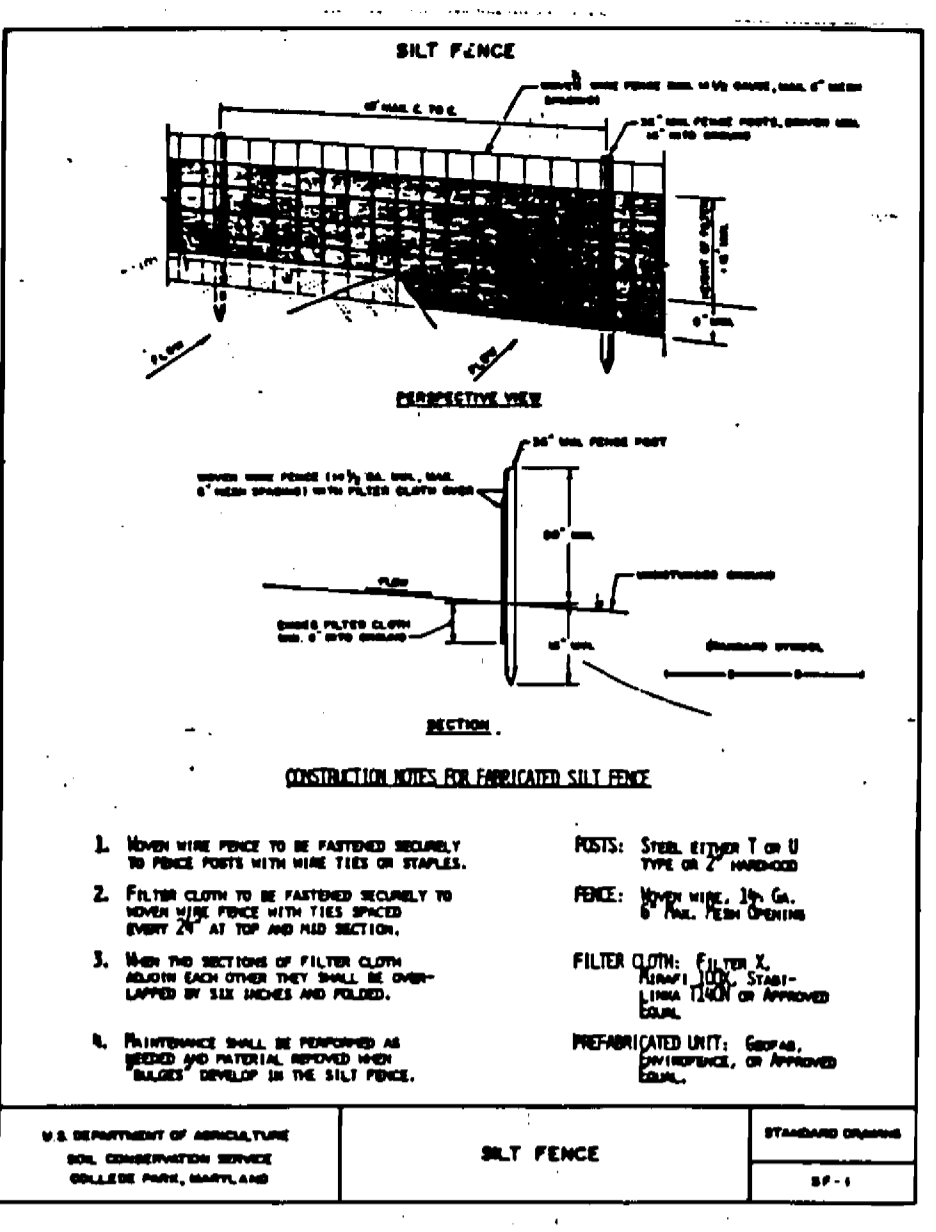
SCALE AS SHOWN

SHEET 2 OF 3



SEWER HOUSE CONNECTION TABLE		
LOT#	INVERT @ R	MIN. C.E.
1	372.45	375.50
2	388.36	392.00
3	388.26	392.00
4	EX. SERVICE	

- CONSTRUCTION SEQUENCE:**
1. Obtain a grading permit.
 2. Clear and grub for Sediment Control measures only.
 3. Install silt fence and clear limits of construction.
 4. Construct proposed sewer main, manholes and water main.
 5. Upon backfilling trenches, fine grade and stabilize with seed and mulch.
 6. All Sediment Control measures to remain in place until removal is approved by the Sediment Control Inspector.



HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Soil Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.

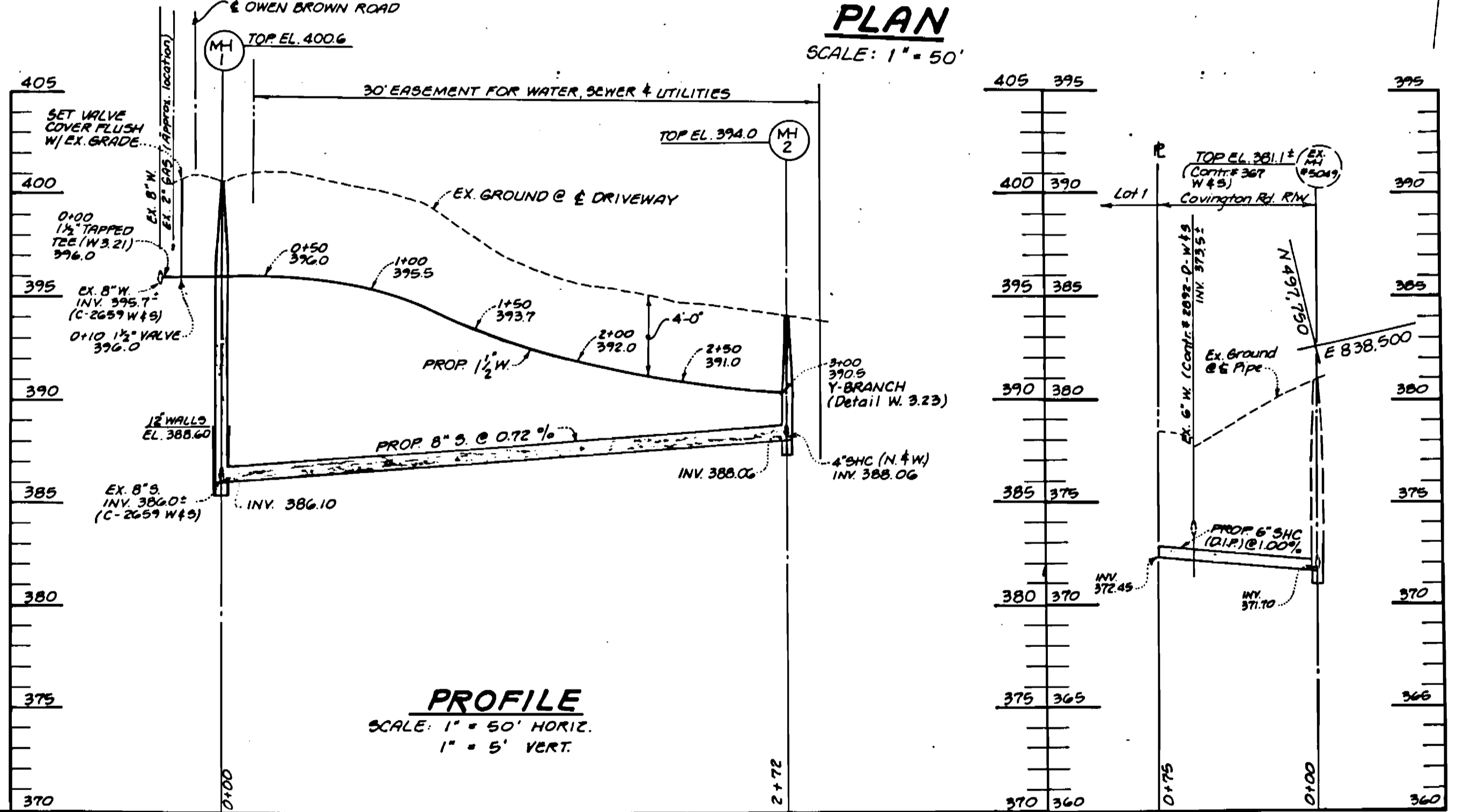
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) **Preferred** - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.).
- 2) **Acceptable** - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with GR the per acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with GR the Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq. ft.) of vernal ryegrass. During the period of October 16 thru February 20, protect site by Option (1) - 2 tons per acre of well encircled straw mulch and seed as soon as possible in the spring. Option (2) - Use seed. Option (3) - Seed with GR the Kentucky 31 Tall Fescue mulch with 2 tons/acre well encircled straw.

Mulching - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted straw mulch immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flint areas. On slopes 0 feet or higher, use 340 gallons per acre (0 gal/1000 sq. ft.) for anchoring.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseedings.



- STANDARD SEDIMENT CONTROL NOTES**
- 1) A minimum of 48 hours notice must be given to the Howard County Department of Inspection, Licenses and Permits, Sediment Control Division prior to the start of any construction, (800-3454).
 - 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current HAWARD STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
 - 3) Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days on all other disturbed or graded areas on the project site.
 - 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
 - 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding rates do not allow for proper germination and establishment of grasses.
 - 6) All sediment control structures are to remain in place and are to be maintained in operable condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
 - 7) **Site Analysis:**
 Total Area of Site: 2.503 Acres ±
 Area Disturbed: 0.211 Acres ±
 Area to be seeded or paved: 0.10 Acres ±
 Area to be vegetatively stabilized: 0.307 Acres ±
 Total Cut: 1100 Cu. Yds.
 Total Fill: 1100 Cu. Yds.
 Offsite waste/harbor area location: N/A
 - 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 - 9) Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
 - 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
 - 11) Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.

LEGEND

— — — — — SILT FENCE

- - - - - LIMIT OF DISTURBANCE

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

[Signature]
Signature of Developer

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

[Signature]
Signature of Engineer

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[Signature]
U.S. SOIL CONSERVATION SERVICE

2/12/92
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

[Signature]
HOWARD S.C.D.

2/4/92
DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 215 OF THE STANDARD SPECIFICATION & FINAL RD. CONSTRUCTION PLANS F-89-246

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works
2-6-92

Chief - Bureau of Utilities

LAND DESIGN ENGINEERING, INC.
10620 GUILFORD ROAD
SUITE 210
JESSUP, MARYLAND 20794
PHONE: (410) 880-0034, (301) 604-G264

DES.	APP.	CHK.	DATE
	ARB.		
	K.B.W.		
	R.L.M.		
11-4-91			

PLAN AND PROFILE
-FOR-
SEDIMENT CONTROL

600 SCALE MAP NO. 34 BLOCK NO. 13

HOWES ACRES
LOTS 1 THRU 4
CONTRACT NO. 24-3145-D
5TH ELECTION DISTRICT

SCALE AS SHOWN
SHEET 3 OF 3