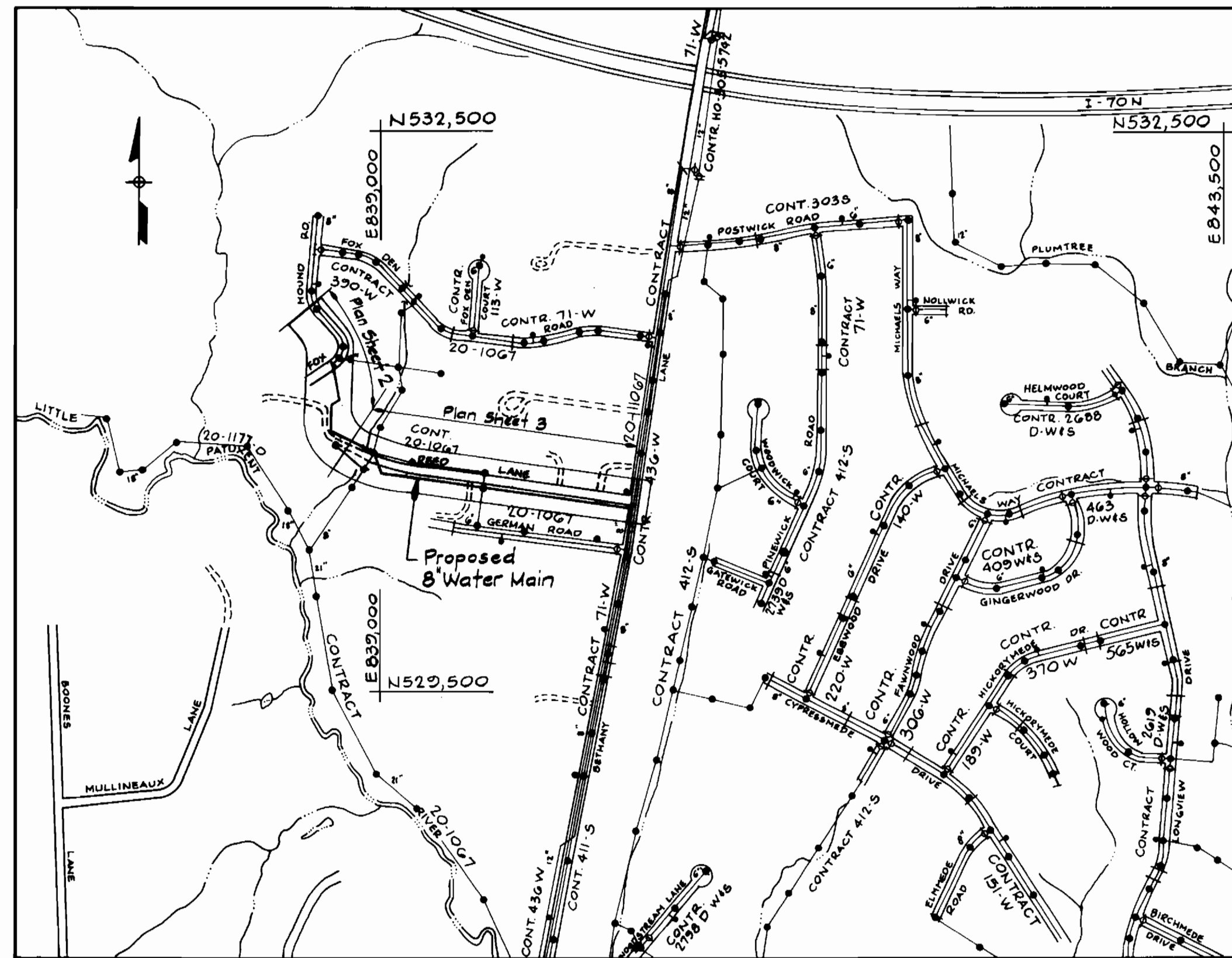


INDEX OF SHEETS

NUMBER	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE
3	PLAN AND PROFILE
4	DETAILS

RESTORATION SCHEDULE	
STATION	MATERIAL
0+00 TO 2+75	SEED
2+75 TO 4+50	SOD
4+50 TO 4+68	MACADAM
4+68 TO 6+30	SOD
6+30 TO 6+55	RIPRAP
6+55 TO 6+77	SOD
6+77 TO 6+95	MACADAM
6+95 TO 8+25	SOD
8+25 TO 8+45	MACADAM
8+45 TO 12+55	SOD
12+55 TO 12+75	MACADAM
12+75 TO 21+10	SOD
21+10 TO 21+16	MACADAM

ITEM	QUANTITIES		MATERIAL	SUPPLIER
	ESTIM.	AS BUILT		
8" WATER MAIN	2129 L.F.			
8" WATER MAIN VALVE	2 EACH			
8"x8" TAP SLEEVE & VALVE	1 EACH			
FIRE HYDRANTS	5 EACH			
3/4" HOUSE CONNECTIONS	250 L.F.			
AIR RELEASE VALVE (3/4")	1 EACH			
RIPRAP SLOPE PROTECT.	15 S.Y.			
3/4" METER VAULT SETTING	1 EACH			
BLOW OFF VALVE	1 EACH			



TYPE OF BUILDING-SINGLE FAMILY RESIDENTIAL  
 NUMBER OF PARCELS: 9  
 NUMBER OF WATER HOUSE CONN.: 9  
 DRAINAGE AREA: 100 AC.  
**VICINITY MAP**  
 SCALE: 1" = 600'  
 WATER CODE: H08

GENERAL NOTES:

- 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.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6".
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- 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 YET BEEN DUG SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
 STATE HIGHWAY ADMINISTRATION : 531-5533  
 BALTIMORE GAS & ELECTRIC CO. CONTRACTOR SERVICES : 850-4620  
 BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL : 859-9004  
 BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING : 298-9001  
 MISS UTILITY : 1-559-0100  
 COLONIAL PIPELINE COMPANY : 795-1390  
 BUREAU OF UTILITIES, HOWARD CO. DEPARTMENT OF PUBLIC WORKS : 992-2366  
 C. & P. TELEPHONE COMPANY : 1-800-257-7777
- 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.
- 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.
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MIN. OF 3.5' COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 FROM THE STANDARD SPECIFICATIONS
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM. CALL HOWARD CO. BUREAU OF UTILITIES AT 992-2366. COORDINATE THE TIE-IN TO THE EXISTING 8" WATER AT LEAST FIVE WORKING DAYS PRIOR TO SCHEDULING.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.

# CONTRACT NO. 44-1787

## REED LANE ROUTINE WATER MAIN EXTENSION HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

ENGINEER'S CERTIFICATION

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 Howard County Soil Conservation District.

*Ernest D. Kelly* 4/28/88  
 WALLACE, MONTGOMERY & ASSOCIATES Date  
 1544 York Road  
 Lutherville, Maryland 21093  
 (301) 494-9093

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*James M. Helms* 4/10/88  
 US SOIL CONSERVATION SERVICE DATE

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

APPROVED:

*John R. Robertson* 4/16/89  
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

WALLACE, MONTGOMERY & ASSOCIATES  
 1544 YORK ROAD  
 LUTHERVILLE, MARYLAND 21093  
 (301) 494-9093

*Robert W. Berman* 12-12-88  
 CHIEF, BUREAU OF UTILITIES DATE

*Ernest D. Kelly* 12-10-88  
 CHIEF, BUREAU OF ENGINEERING DATE  
*Clifford D. Linn* 12-8-88  
 CHIEF, UTILITY DESIGN DIVISION DATE

DES: D.E.D.

DRN: D.E.D.

CHK: E.D.R.

DATE: 4/28/88

BY NO.

REVISION

DATE

600' SCALE MAP NO. 17

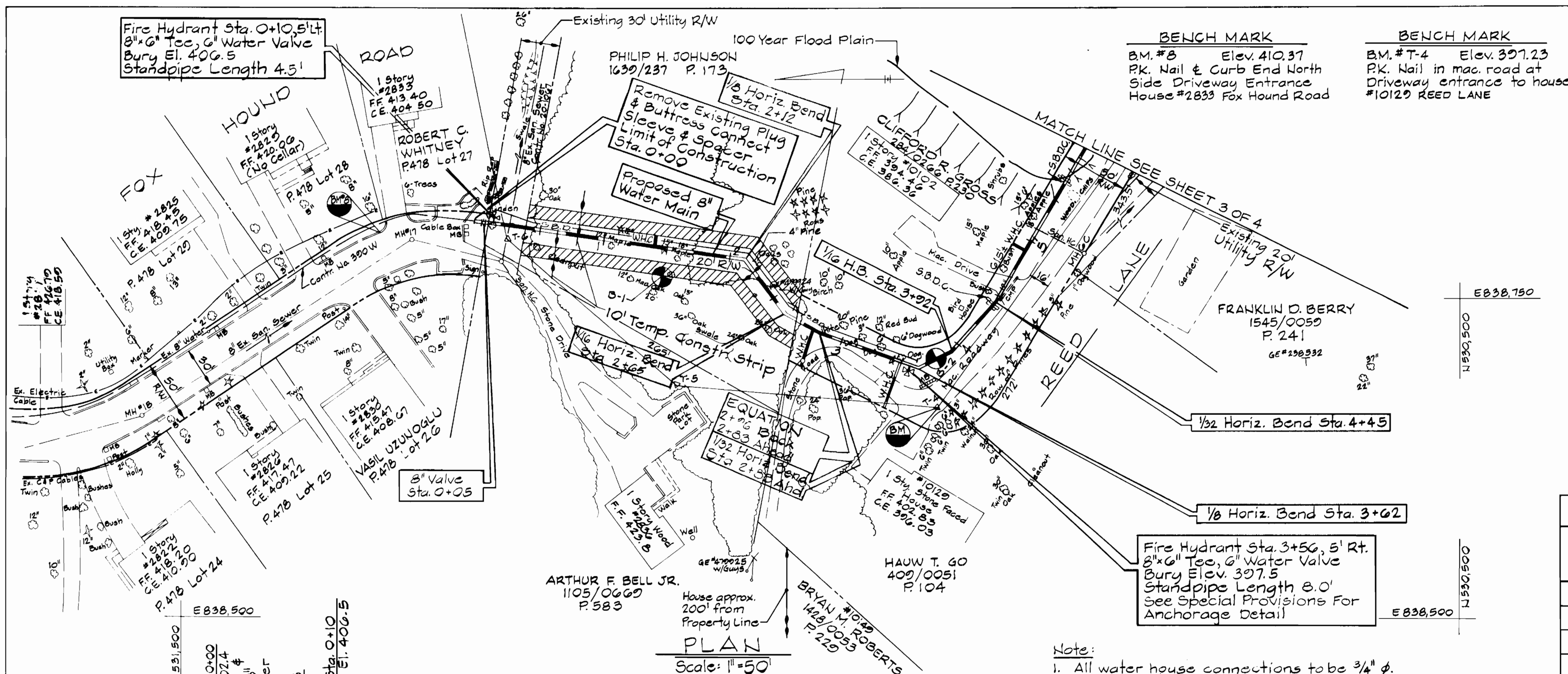
BLOCK NO.

TITLE SHEET

REED LANE ROUTINE WATER MAIN EXTENSION  
 CAPITAL PROJECT W-8161  
 CONTRACT NO. 44-1787  
 ELECTION DISTRICT NO. 2  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

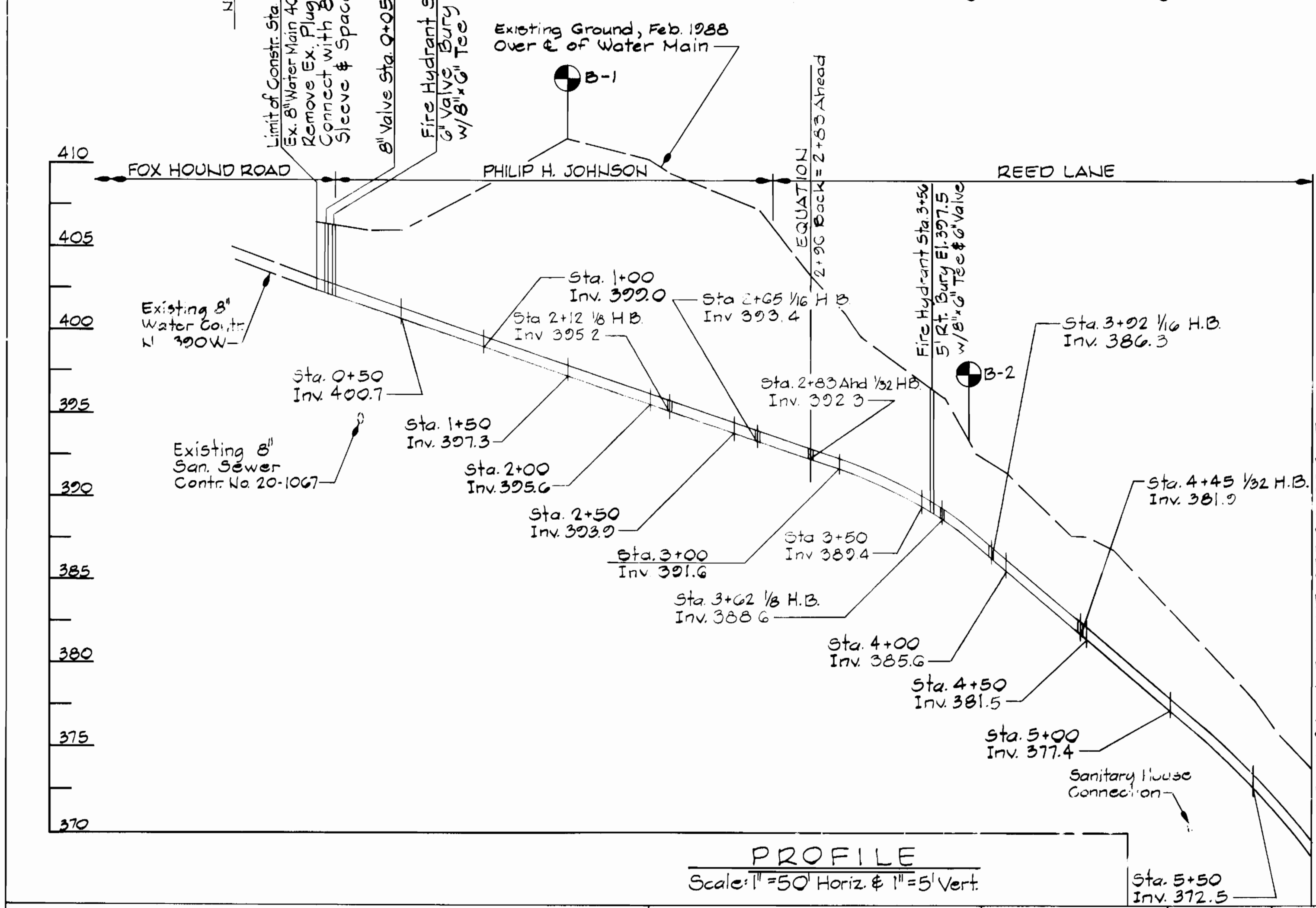
SHEET 1 OF 4



**BENCH MARK**  
 B.M. #B Elev. 410.37  
 P.K. Nail & Curb End North Side Driveway Entrance House #2833 Fox Hound Road

**BENCH MARK**  
 B.M. #T-4 Elev. 397.23  
 P.K. Nail in mac. road at Driveway entrance to house #10129 REED LANE

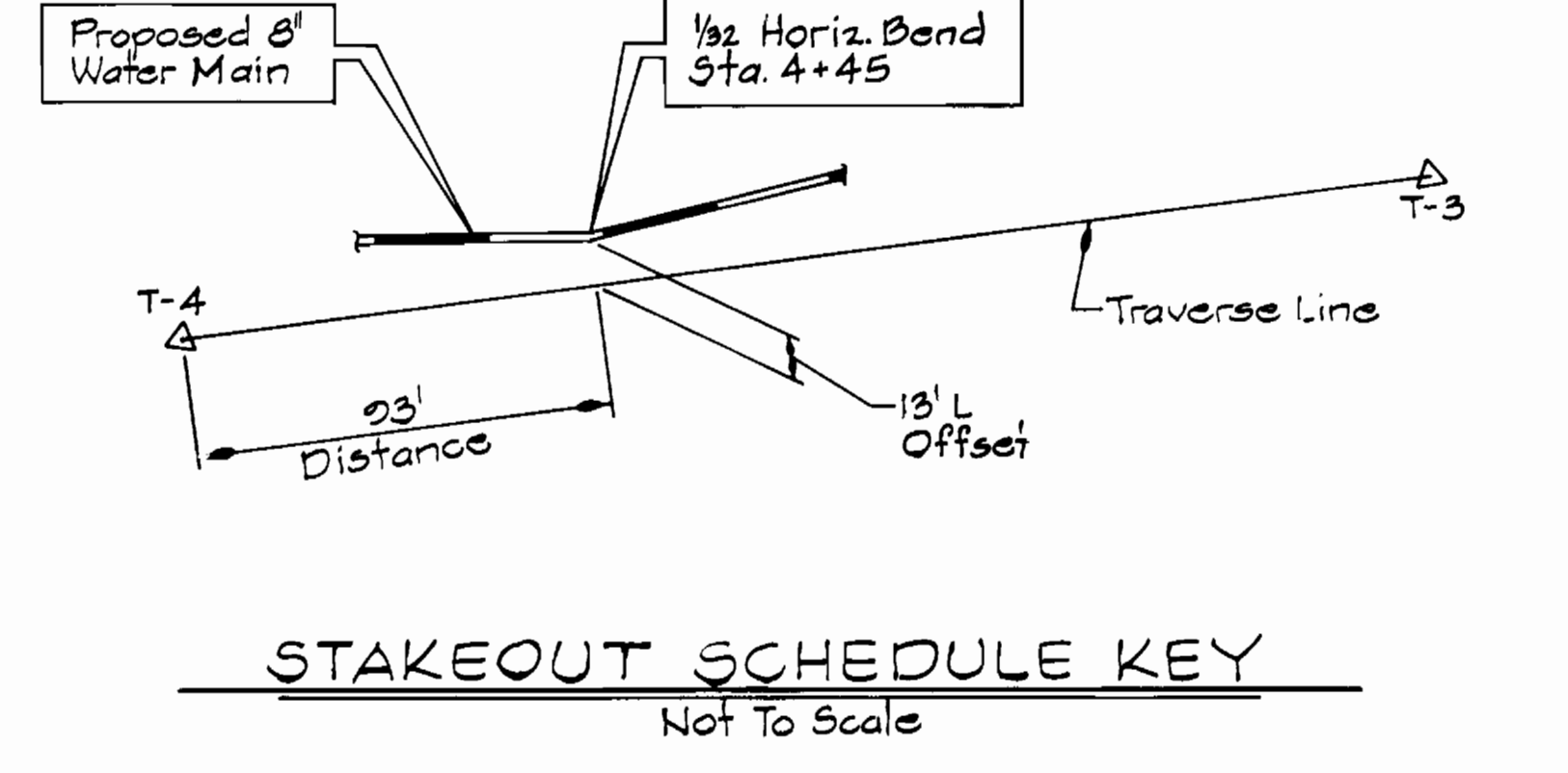
TRAVERSE DESCRIPTION				
Δ POINT	NORTH	EAST	BEARING	DISTANCE
100	530 500.69	840 338.67	N78-20-44 W	339.14
T-1	530 569.20	840 006.52	N82-09-34 W	501.57
T-2	530 637.62	839 509.65	N80-02-52 W	628.61
T-3	530 746.26	838 890.50	N54-05-20 W	277.16
T-4	530 908.83	838 666.02	N04-24-18 E	205.27
T-5	531 113.49	838 681.78	N41-05-42 E	176.18
T-6	531 246.26	838 797.59	N78-25-08 E	625.82
T-7	531 371.20	839 410.66	S89-26-03 E	476.14
T-8	531 367.20	839 886.78	N84-06-14 E	630.64
T-9	531 431.98	840 514.08	S06-23-07 W	28.94
3341002	531403.22	840 510.87	S10-48-06 W	918.81
100	530 500.69	840 338.67		



**Note:**

- All water house connections to be 3/4" φ.
- Provide outside meter settings for 10149 Reed Lane.
- All water house connections are open cut.
- The Contractor will protect existing 4" Pine at Sta. 2+17, 5 feet left or, should damage occur, the tree will be replaced with a comparable tree at a location directed by the property owner.

STAKEOUT LOCATIONS SCHEDULE					
DESCRIPTION	STATION	LOCATION FROM TRAVERSE LINE			
		DIST.	FROM	IN DIRECTION OF	OFFSET FROM TRAV.
Connect to Existing	0+00	15'	T-6	T-7	21' L
8" Valve	0+05	13'	T-6	T-7	16' L
Fire Hydrant Tee	0+10	12'	T-6	T-7	11' L
1/2 Horiz. Bend	2+12	159'	T-4	T-5	101' R
Fire Hydrant Tee	3+56	25'	T-4	T-5	30' R
1/2 Horiz. Bend	3+62	20'	T-4	T-5	29' R
1/6 Horiz. Bend	3+92	40'	T-4	T-3	18' L
1/2 Horiz. Bend	4+45	93'	T-4	T-3	13' L
Blow Off Valve	6+20	268'	T-4	T-3	30' L
1/2 Horiz. Bend	6+63	45'	T-3	T-2	16' L
1/2 Horiz. Bend	7+00	61'	T-3	T-2	18' R
1/2 Horiz. Bend	7+12	72'	T-3	T-2	22' R
1/2 Horiz. Bend	8+10	168'	T-3	T-2	37' R
8" Valve	9+75	333'	T-3	T-2	32' R
Fire Hydrant Tee	10+00	358'	T-3	T-2	31' R
Fire Hydrant Tee	15+00	229'	T-2	T-1	22' R
Fire Hydrant Tee	19+48	163'	T-100	T-1	12' L
Air Release Valve	21+04	7'	T-100	T-1	2' L
Tapping Sleeve & Valve	21+16	-5'	T-100	T-1	1' L
1/6 Horiz. Bend	2+65	124'	T-4	T-5	62' R
1/2 Horiz. Bend	2+83 Ahd.	96'	T-4	T-5	48' R



DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

Wallace J. ...  
 DIRECTOR OF PUBLIC WORKS  
 DATE: 12-12-88

Robert ...  
 CHIEF, BUREAU OF UTILITIES  
 DATE: 12-12-88

WALLACE, MONTGOMERY & ASSOCIATES  
 1544 YORK ROAD  
 LUTHERVILLE, MARYLAND 21093  
 (301)494-9093

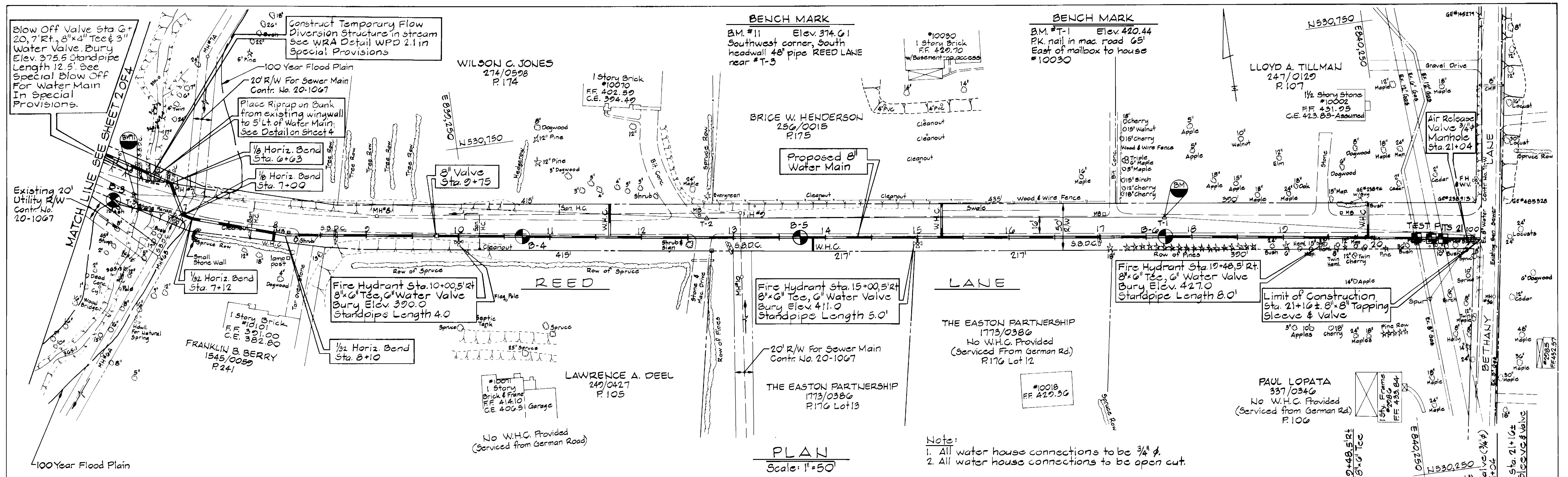
Ernest ...  
 DATE: 4/28/88

DES. E.O.R.	
DRN. S.W.S.	
CHK. E.O.R.	
DATE: 4/28/88	
BY	NO.
REVISION	
DATE	600' SCALE MAP NO. 17 BLOCK NO.

PLAN AND PROFILE OF  
 WATER MAIN EXTENSION

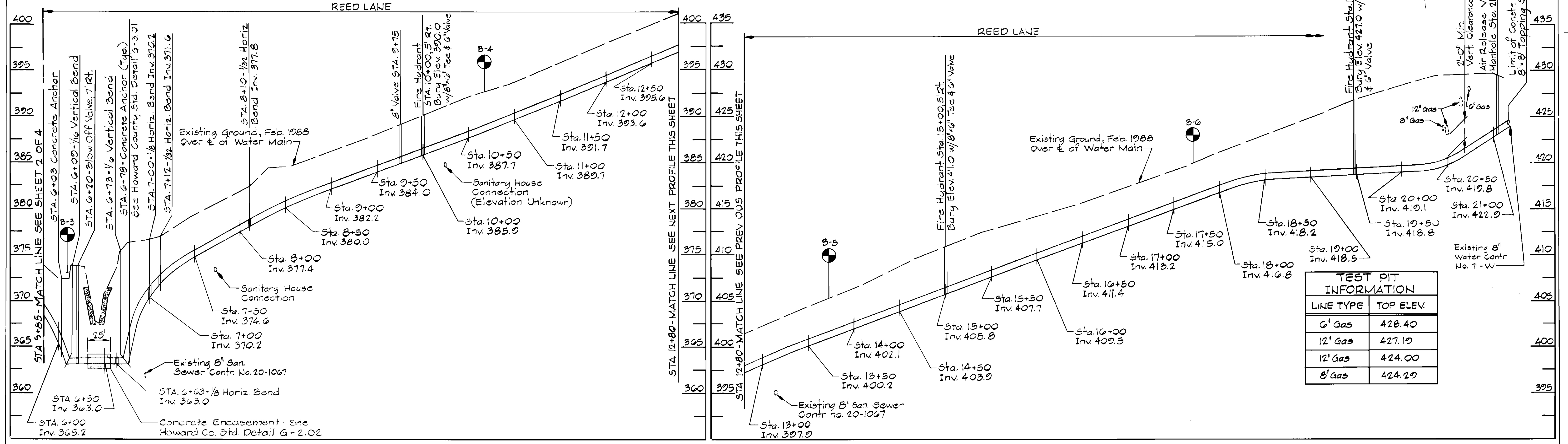
REED LANE ROUTINE WATER EXTENSION  
 CAPITAL PROJECT W-8161  
 CONTRACT NO. 44-1787  
 ELECTION DISTRICT NO. 2  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 2 OF 4



**PLAN**  
Scale: 1"=50'

Note:  
1. All water house connections to be 3/4" φ.  
2. All water house connections to be open cut.

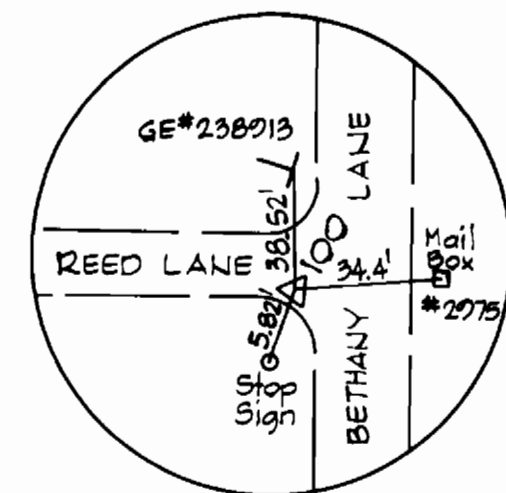


**PROFILE**  
Scale: 1"=50' Horiz. & 1"=5' Vert.

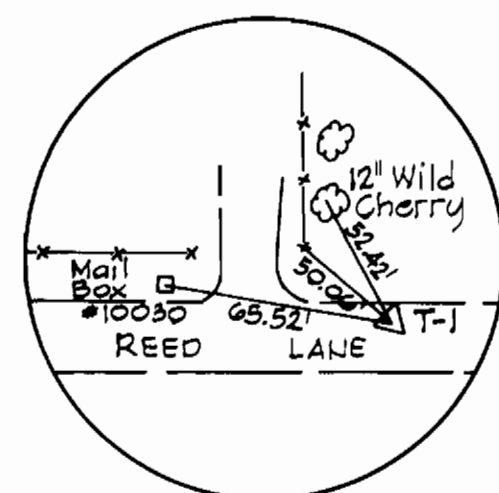
TEST PIT INFORMATION	
LINE TYPE	TOP ELEV.
6" Gas	428.40
12" Gas	427.19
12" Gas	424.00
8" Gas	424.29

**SOIL EROSION AND SEDIMENT CONTROL NOTES:**

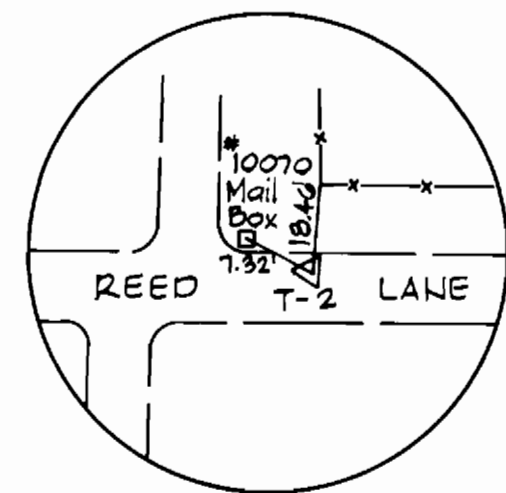
- The Contractor will comply with all requirements of Sediment and Erosion Control set forth in the Contract Drawings, 1983 "Maryland Standards and Specifications for Soil Erosion and Sediment Control", and Volume IV - Section 219 of the Howard County Design Manual.
- The Contractor shall not pump from excavated areas directly into the Howard County Storm Drainage System or any Natural Water Course. Where ground water is encountered during construction, the Contractor shall provide portable or excavated Sediment Traps to prevent Silted Trench water from entering Storm Drainage Systems or natural waterways.
- All excavated material shall be placed on the high side of the trench whenever possible, and confined to an area where it will not obstruct the normal flow or drainage courses.
- All swales shall be equipped with a Sediment Retention device to trap sediment and filter water leaving the Right-of-Way prior to entering any running stream.
- The Contractor shall provide Straw Bale Dikes normal to surface water flow around all vehicle and equipment staging areas as shown in "Detail of a Straw Bale Dike" enclosed in specifications.
- Road side ditches and drainage pipes shall be restored to a condition equal to or better than the original condition following completion of construction.
- The Contractor shall dispose of spoils in accordance with good Soil Conservation practice and in such a manner that none can be carried into any drainage facility or water course. The Contractor shall be responsible for disposing of all spoil or excess excavated material on a site approved by the Soil Conservation District. Documentation of approval and site shall be provided to the Engineer prior to beginning work.
- The Howard County Soil Conservation District must be notified in writing by the Contractor as to where excess material will be disposed or borrow material will be obtained. Prior to beginning any work on this project, copies shall be provided to the Engineer.
- Continuous inspection and maintenance of all Sediment and Erosion Control devices will be required.
- The Contractor shall provide additional Soil Erosion and Sediment Control as required by the Sediment Control Inspection, as work progresses or requires.
- The Contractor shall notify in writing, a Howard County Sediment Control Division representative at least three (3) days prior to starting work. Please contact: Howard County - 992-2436. Copies shall be provided to the Engineer.
- The Contractor shall place a stabilized construction entrance as shown in the Howard County Standard Details, G 6.11 where shown on the Plans unless otherwise directed by the Engineer.
- Sediment Removal - all trapped sediment is to be removed and disposed of at the authorized landfills prior to removal of Sediment Control structures.
  - Seven (7) calendar days for all perimeter Sediment Control structures, dikes, swales, ditches, perimeter slopes and all slopes greater than 3:1.
  - Fourteen (14) days as to all other disturbed or graded areas on the project site.



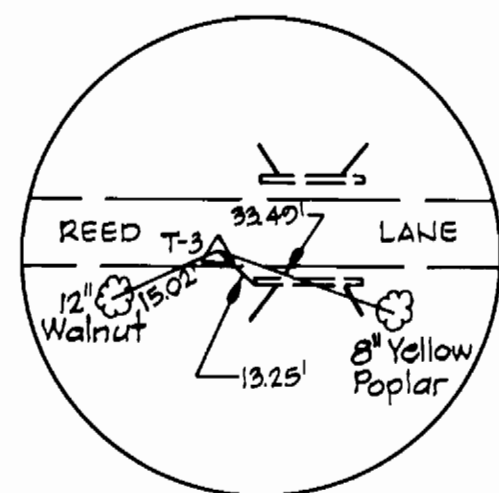
Δ100 (R.R. SPIKE)



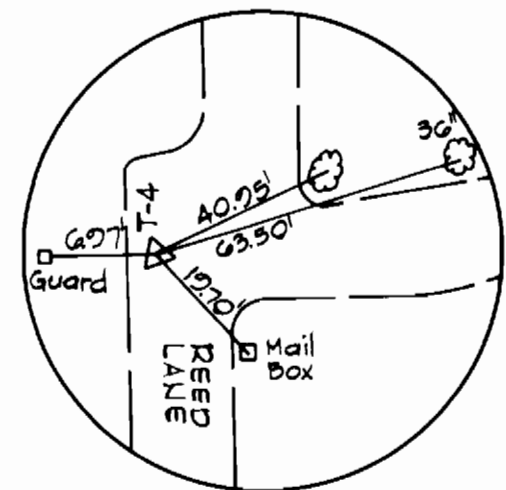
ΔT-1



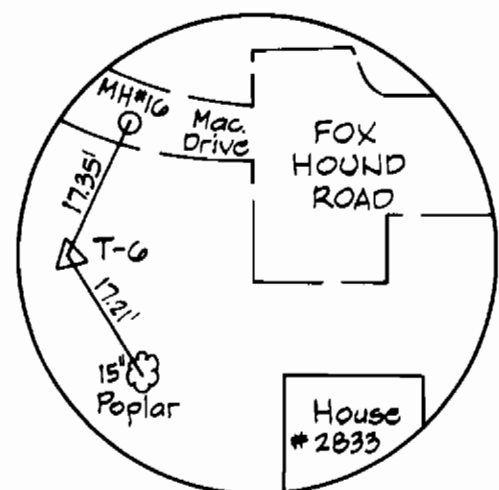
ΔT-2



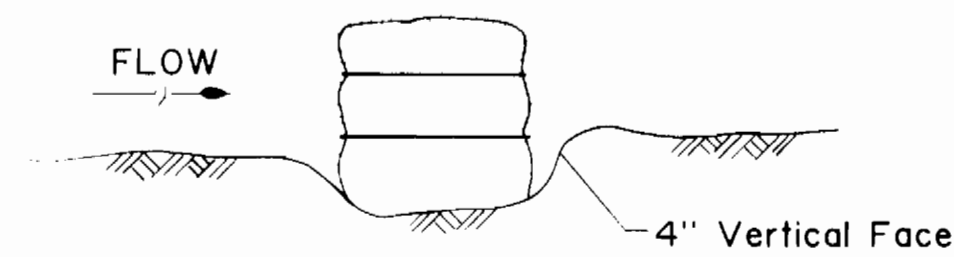
ΔT-3



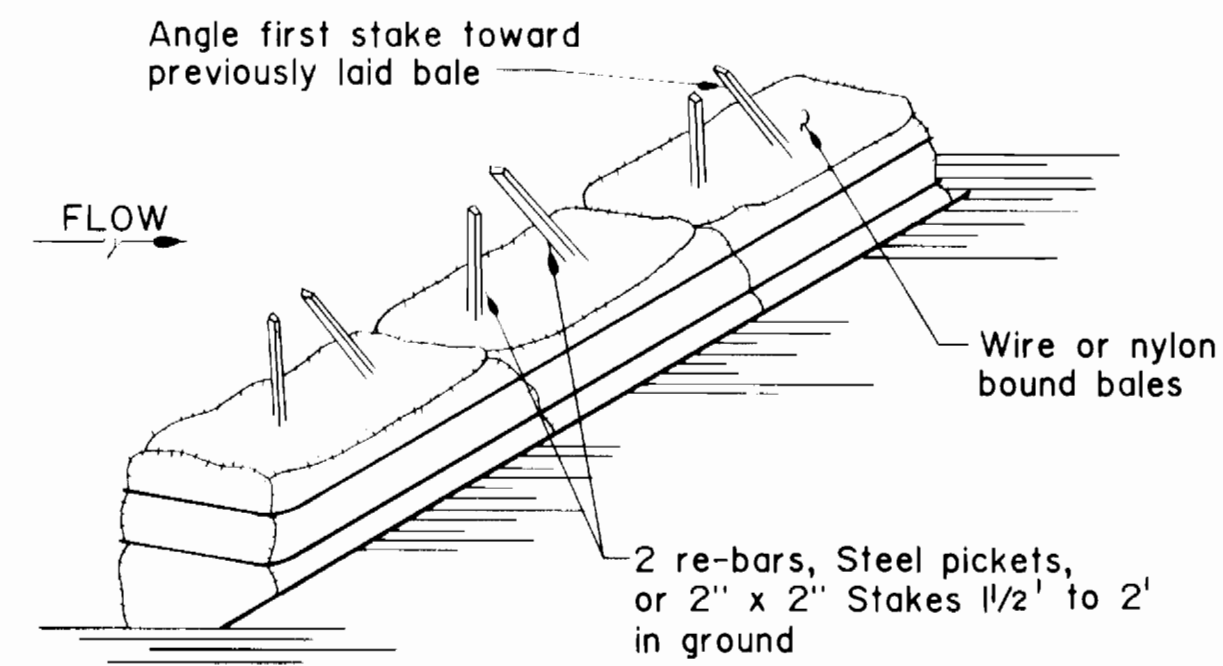
ΔT-4



ΔT-6



EMBEDDING DETAIL



ANCHORING DETAIL

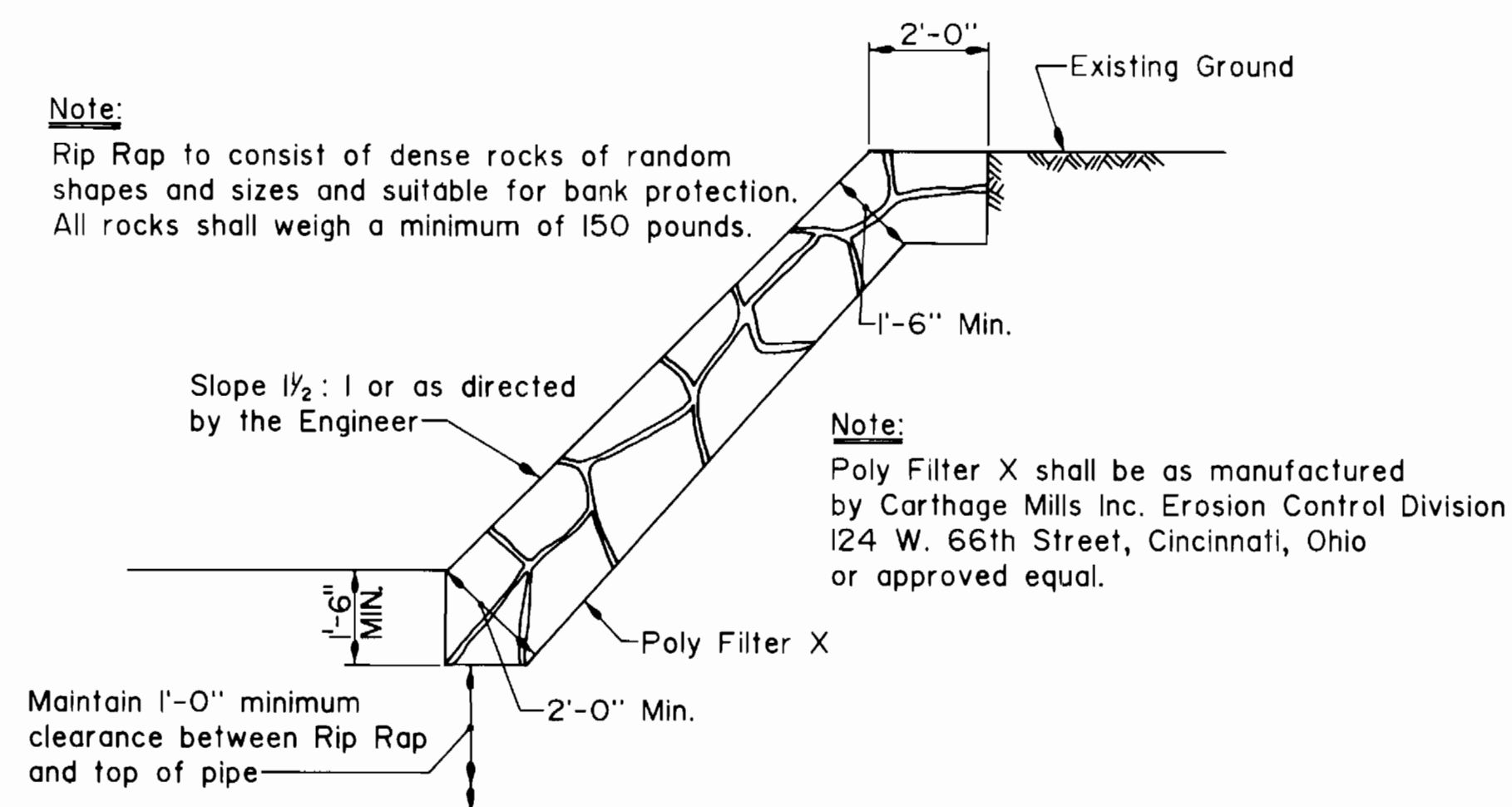
**CONSTRUCTION SPECIFICATIONS**

- Bales shall be placed in a row with ends tightly abutting the adjacent bales.
- Each bale shall be embedded in the soil a minimum of 4".
- Bales shall be securely anchored in place by stakes or re-bars driven thru the bales. The first stake in each bale shall be angled toward previously laid bale to force bales together.
- Inspection shall be frequent and repair or replacement shall be made promptly as needed.
- Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

Standard Symbol  
—S.B.D.—

**STRAW BALE DIKE DETAIL**

Not To Scale



RIP-RAP DETAIL

Scale: 3/8"=1'-0"

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

WALLACE, MONTGOMERY & ASSOCIATES  
1544 YORK ROAD  
LUTHERVILLE, MARYLAND 21093  
(301) 494-9093

*Ernest O. Robinson*

DES: E.D.R.  
DRN: S.W.S.  
CHK: E.D.R.  
DATE: 4/28/88

DETAILS OF  
WATER EXTENSION

REED LANE ROUTINE WATER MAIN EXTENSION  
CAPITAL PROJECT W-8161  
CONTRACT NO. 44-1787  
ELECTION DISTRICT NO. 2  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 4 OF 4

DRAWING

*Lance M. Clark*  
DIRECTOR OF PUBLIC WORKS  
DATE: 12-14-88

*William E. Riley*  
CHIEF BUREAU OF ENGINEERING  
DATE: 12-16-88

*Debra L. Linn*  
CHIEF UTILITY DIVISION  
DATE: 12-8-88

DATE: 6/00 SCALE MAP NO: 17 BLOCK NO: