

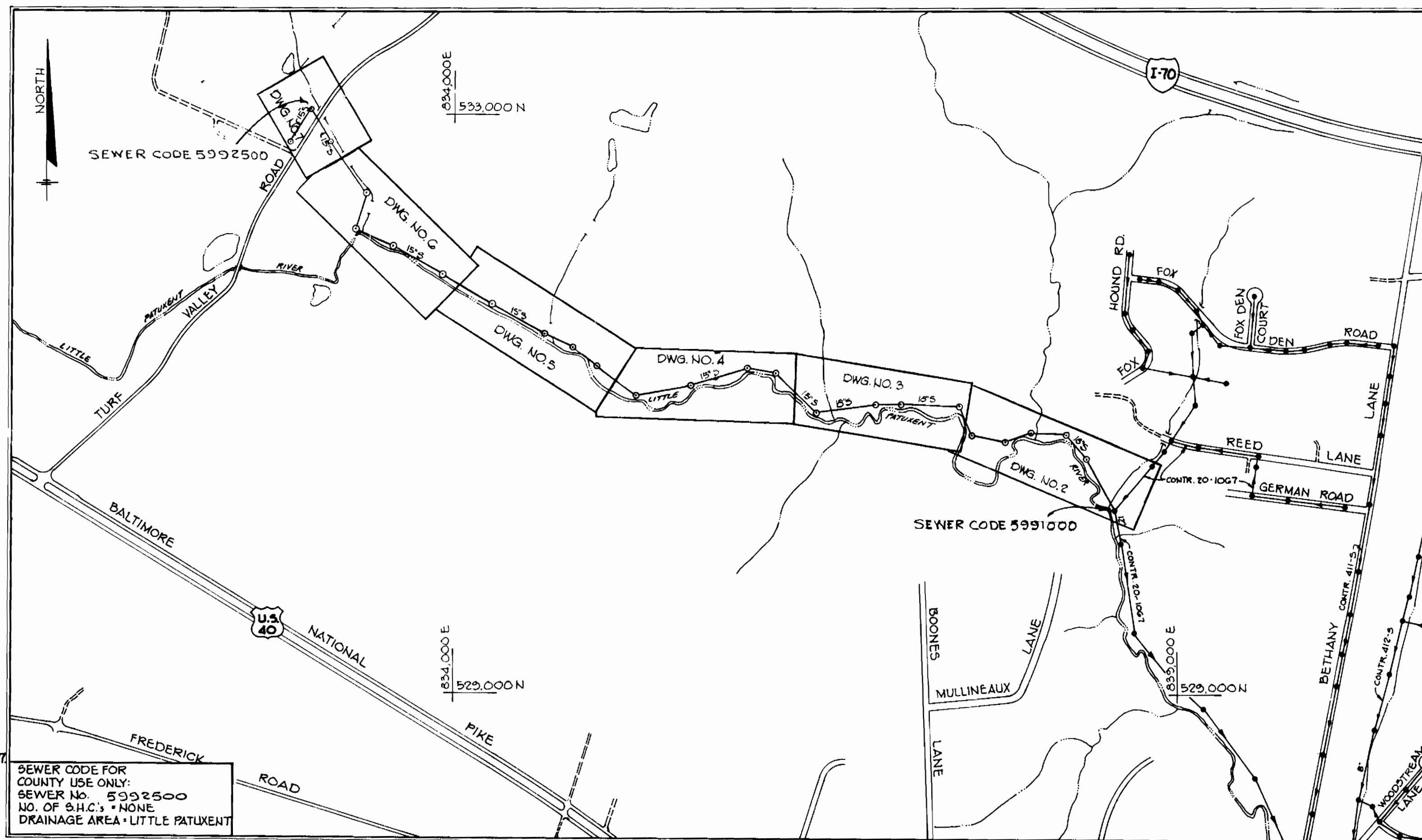
SHEET INDEX	
SHEET NO.	ITEM
1	Location Map
2	Plan and Profile of Sewer Mains
3	Plan and Profile of Sewer Mains and Details
4	Plan and Profile of Sewer Mains and Details
5	Plan and Profile of Sewer Mains
6	Plan and Profile of Sewer Mains
7	Plan and Profile of Sewer Mains and Details of Sediment Control Devices

SEQUENCE OF CONSTRUCTION

- 1) Install sediment and erosion control devices according to plan.
- 2) Clear and grub right-of-way for the construction of Sewer Main.
- 3) Install silt fence daily along the low side of the limits of construction. This silt fence shall be removed as construction proceeds upstream when the disturbed area has been stabilized and with approval of the soil conservation service.
- 4) Complete construction of sanitary sewer main.
- 5) Restabilize all disturbed areas in accordance with permanent seeding notes.
- 6) Upon approval of Soil Conservation Service inspector, remove all sediment control devices.

SEDIMENT CONTROL CONSTRUCTION NOTES

- 1) Excavated topsoil shall be kept separate from the subsoil and shall be replaced in their natural order.
- 2) References called for on the Sediment Control Construction plan and details are made to "The Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas."
- 3) Straw bale dikes, stone outlet structures, temporary earth diversion berms, temporary stream access culverts, etc. shown on the plans may be added to, deleted, or adjusted as field conditions may require.
- 4) All spoil materials shall be stockpiled on the uphill side of the construction area. When obstruction prevent this, see detail sheet.
- 5) All sediment control facilities will be installed in accordance with the Standards and Specifications for Soil Erosion and Sediment Control in Developing Areas as prepared by the U.S. Department of Agriculture Soil Conservation Service.
- 6) All disturbed areas are to be dressed and stabilized according to the permanent seeding schedules as soon as proper weather conditions exist for the establishment of permanent vegetative cover.
- 7) Fertilizer and lime rates may be changed through authorization by the Howard Soil Conservation District if soil tests determine a reduction in the specified rates is justified.
- 8) All sediment control facilities to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.



VICINITY MAP
SCALE: 1"=600'

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.
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 \ominus invert elevations.
5. Clear all utilities by a minimum of 6'. Clear all poles 2'-0" minimum or tunnel as required.
6. For all standard details see standards bound in Specifications.
7. Contractor shall locate existing utilities in advance of construction operations in the vicinity of proposed utilities.
8. Contractor shall notify the following utilities or agencies at least five (5) days before starting work shown on these plans:
 - State Highway Administration - 591-5533
 - Baltimore Gas and Electric Company - Underground Electric Distribution Engineering - "Damage Control" - 254-5601
 - Baltimore Gas and Electric Company - Underground Gas Distribution Engineering - 553-0100
 - Chesapeake and Potomac Telephone Company - 725-9976
 - American Telephone and Telegraph - Cable Location Division 301-593-5535.
 - Colonial Pipeline Company - 751-4641
9. 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.
10. The contractor shall remove trees, stumps and roots along line of excavation as directed by the engineer. Payment for such removal shall be included in the unit price bid for excavation and backfill sewer mains.
11. 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.
12. All sewer mains to be C.S.P.X., V.C.P.X. or A.C.P. Class 2400 unless otherwise noted.
13. The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole walls.
14. All manholes shall be 4'-0" inside diameter, unless otherwise noted.
15. All manholes deeper than 12' shall have 12" walls.

PERMANENT SEEDING NOTES

- Final Stabilization Will Take Place As Soon As Possible as Weather Conditions Permit, As Follows:
- 1) Apply dolomitic limestone at the rate of 2 tons per acre (one ton per acre if application of one ton per acre was made for temporary seeding).
 - 2) Apply 0-20-20 Fertilizer at the rate of 200 lbs. per acre harrow or disc lime and 0-20-20 fertilizer into the soil to a minimum depth of 3" lawns or high maintenance areas will be dragged and leveled with a yard rake. At the time of seeding apply 400 lbs. of 33-00 urea-form fertilizer and 500 lbs. of 10-20-20 or equivalent fertilizer per acre.
 - 3) Seed with a mixture of certified Marion Kentucky Bluegrass - 40 lbs. per acre; Common Kentucky Bluegrass @ 40 lbs. per acre; Red Fescue, Pennlawn or Jamestown @ 20 lbs. per acre.
 - 4) Mulch with unweathered small grain straw at the rate of 1/2 to 2 tons per acre and anchor with a cutback asphalt or emulsified asphalt at the rate of 5 gal. per 1,000 sq. ft.
 - 5) Seed all slopes with a mixture of certified Kentucky 31 tall fescue @ 50 lbs. per acre and inoculated Korean Lespedeza @ 15 lbs. per acre.
 - 6) Sodded swales shall be Kentucky 31 tall fescue.

TURF VALLEY INTERCEPTOR

CONTRACT NO. 20-1177-D

HOWARD COUNTY, MARYLAND

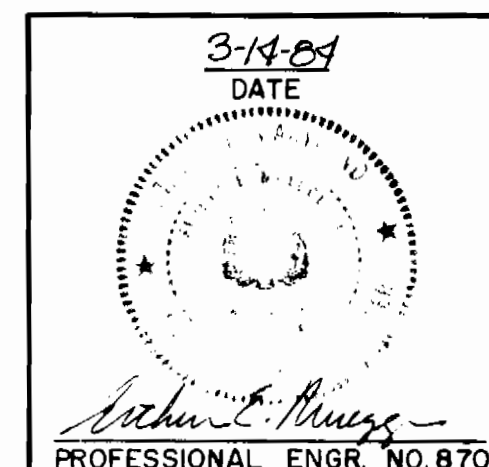
- 2) Daily silt fence installation shall tie into or be in addition to the proposed straw bale dikes. Field adjustments shall be made with approval of the sediment control inspector to provide a continuous silt barrier.

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

APPROVED: *Robert J. Zick* 3-16-84
HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
James H. Nelson 3-16-84
U.S. SOIL CONSERVATION SERVICE DATE

QUANTITIES		
ITEM	ESTIMATED AS BUILT	MATERIAL SUPPLIER
18" Sewer	1170 L.F.	
8" Sewer	4 L.F.	JOHNS-MANVILLE
18" Sewer	5345 L.F.	GRAY CONC. PIPE CO.
18" D.I.P. Sewer	1005 L.F.	GRIFFIN PIPE PROD.
Manholes	752 V.F.	ATLANTIC PRECAST CO.
Manhole Covers	24 EA.	B&C UTILITY SUPPLY I.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

William E. Newman 3-27-84
DIRECTOR OF PUBLIC WORKS - DATE

Robert M. Brennan 3-22-84
CHIEF - BUREAU OF UTILITIES - DATE

William E. Newman 3-27-84
CHIEF - BUREAU OF ENGINEERING - DATE

Robert M. Brennan 3-22-84
CHIEF - LAND DEVELOPMENT DIVISION

CONTRACT NO. 20-1177-D

LOCATION MAP

TURF VALLEY
INTERCEPTOR SEWER
ELECTION DISTRICT NO. 2

DRAWING NO. 1 OF 7
SCALE 1"=600'

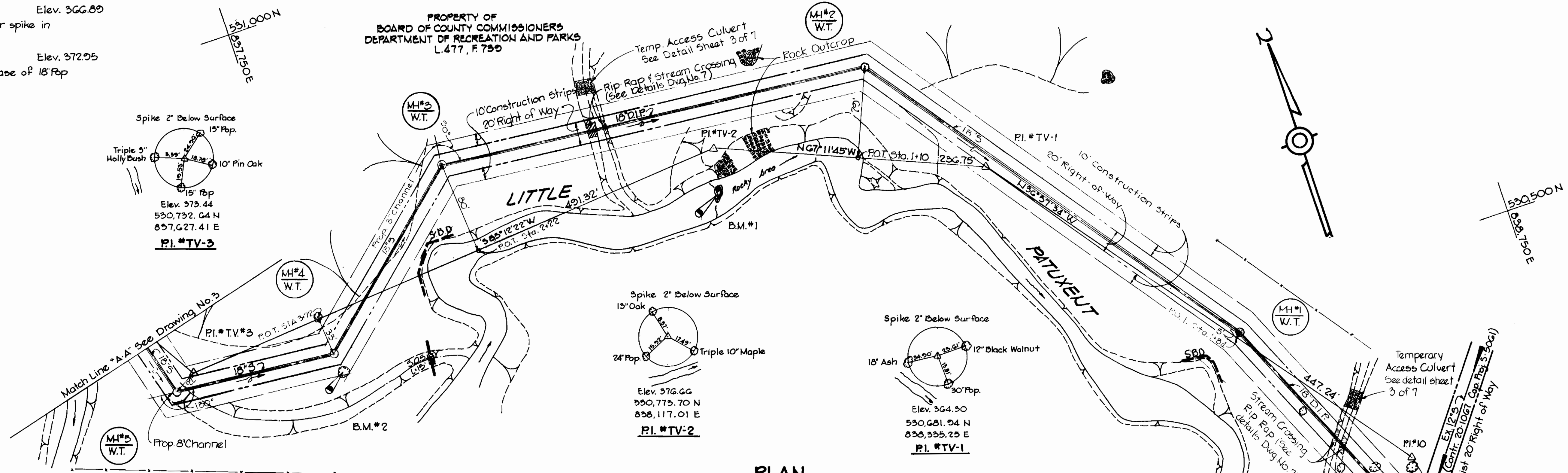
THE RIEMER GROUP INC.
8659 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21043

AS-BUILT January 14, 1985

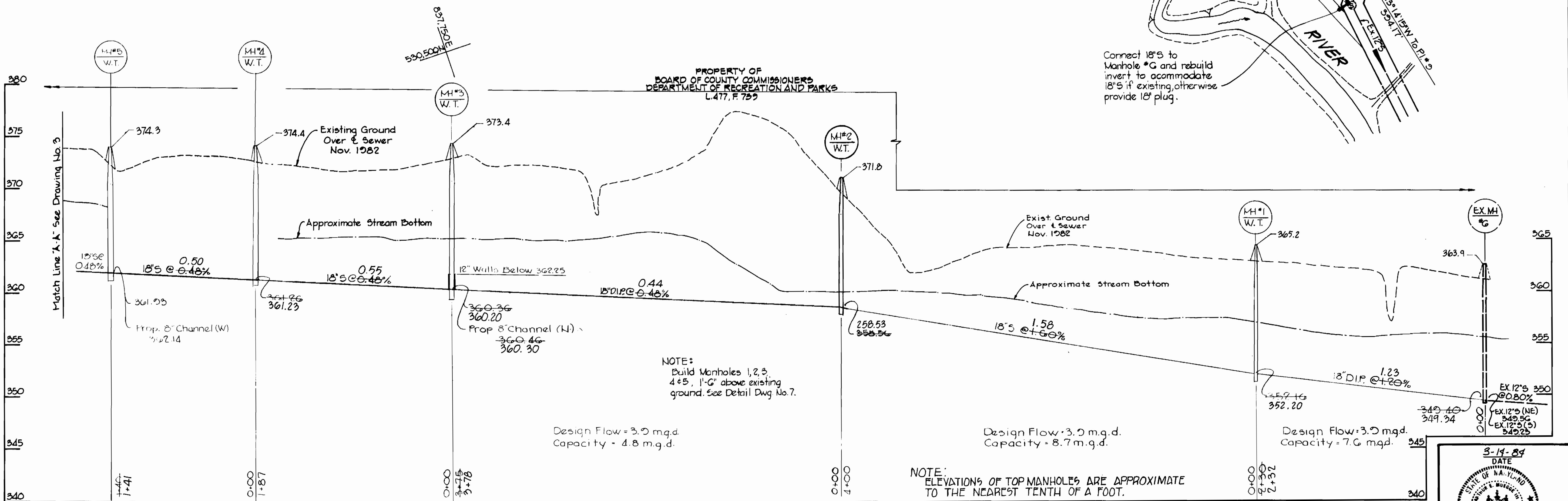
MARCH 14, 1984

B.M. #1 Elev. 366.89
Bent over spike in a rock.

B.M. #2 Elev. 372.95
Nail in base of 18" Pop roof.



PLAN
SCALE: 1"=50'



PROFILE
HOR. 1"=50'
VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John F. Nunn 3-17-84
DIRECTOR OF PUBLIC WORKS - DATE

Robert M. Reimer 3-22-84
CHIEF - BUREAU OF UTILITIES - DATE

John E. Reimer 3-22-84
CHIEF - BUREAU OF ENGINEERING - DATE

William J. Reimer 3-22-84
CHIEF - LAND DEVELOPMENT DIVISION

CONTRACT NO. 20-1177-D

PLAN AND PROFILE
SEWER MAIN

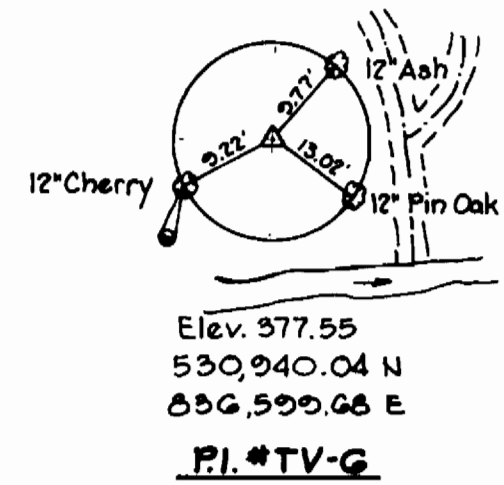
TURF VALLEY
INTERCEPTOR SEWER
ELECTION DISTRICT NO. 2

DRAWING NO. 2 OF 7
SCALE AS SHOWN
DATE 3-17-84
PROFESSIONAL ENGR. NO. 8707

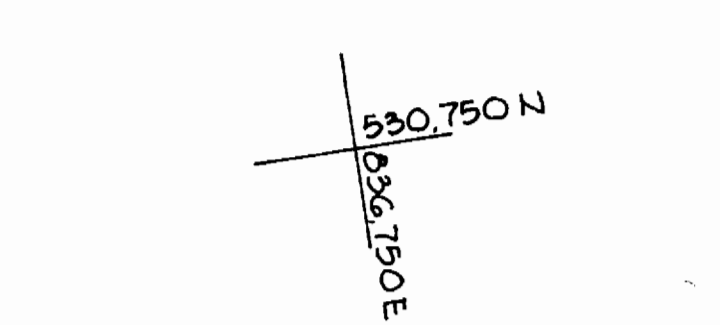
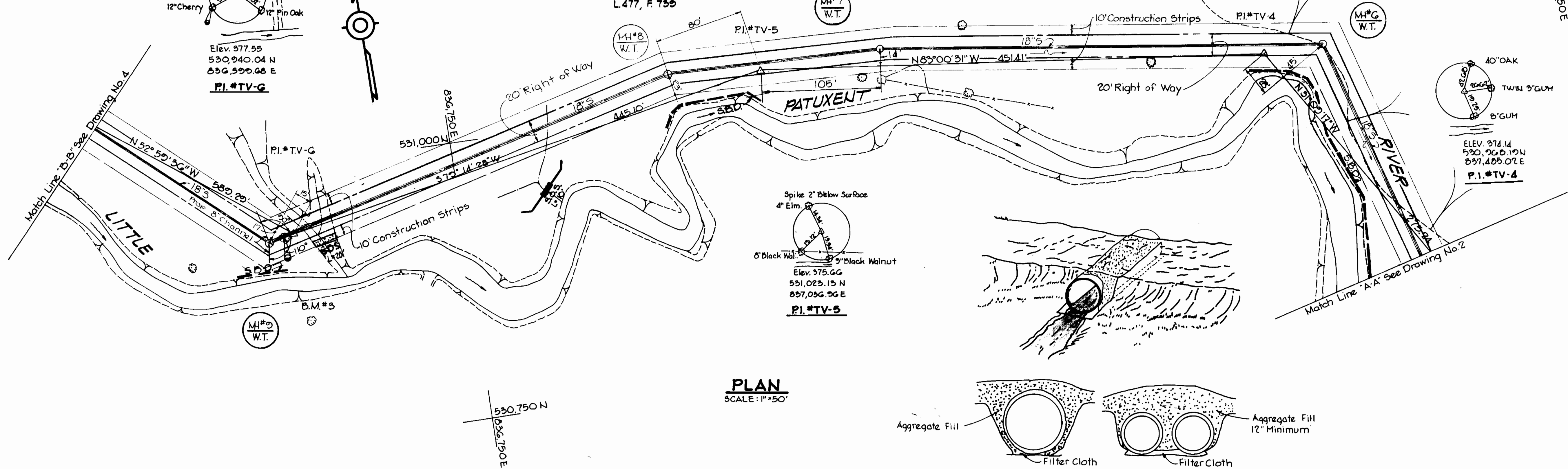
THE RIEMER GROUP, INC.
8659 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21043

Turf Valley
Interceptor Sewer
Contract No. 20-1177-D

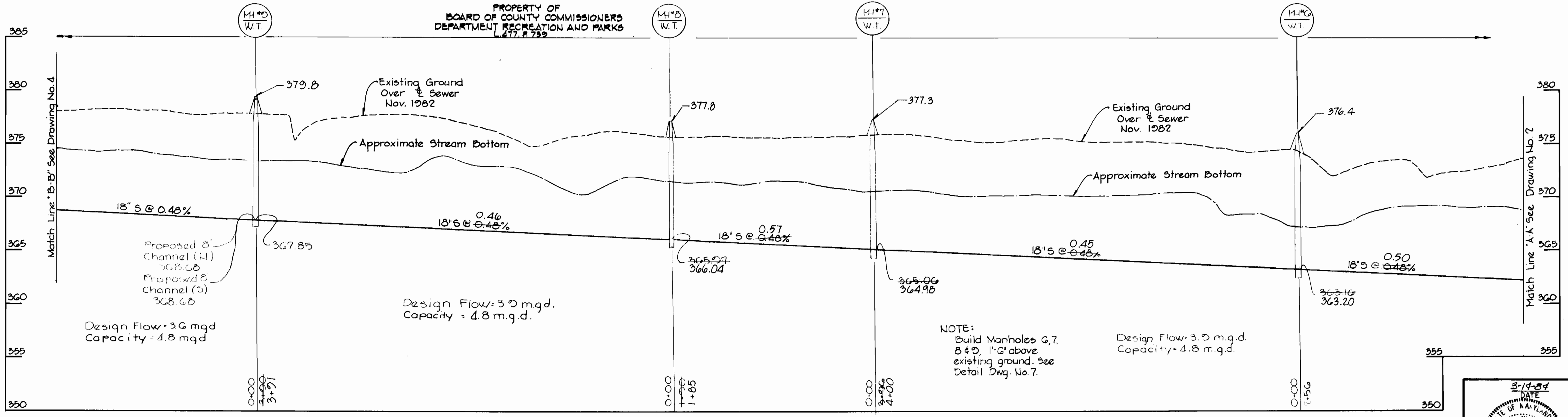
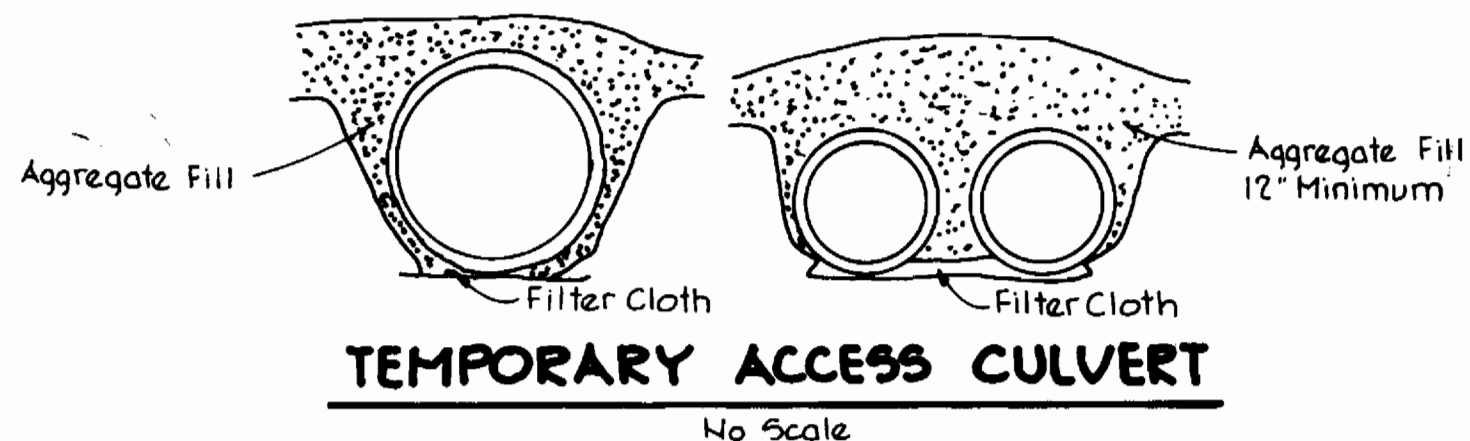
B.M. #3 Elev. 379.16
Spike in base of
12" Cherry



PROPERTY OF
BOARD OF COUNTY COMMISSIONERS
DEPARTMENT OF RECREATION AND PARKS
L.477, P. 739



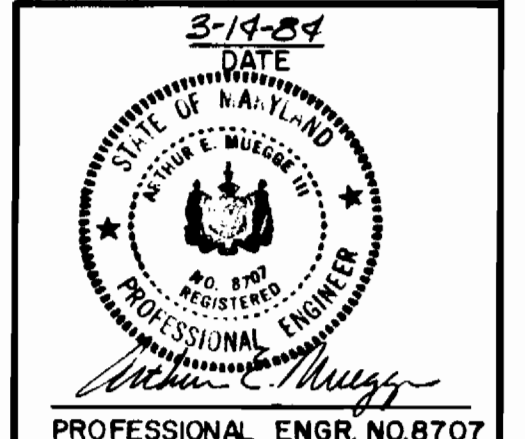
PLAN
SCALE: 1"=50'



PROFILE
SCALE: HOR: 1"=50', VERT: 1"=5'

NOTE:
Build Manholes 6, 7,
8 & 9, 1'-0" above
existing ground, see
detail Dwg. No. 7.

Design Flow: 3.9 m.g.d.
Capacity: 4.8 m.g.d.

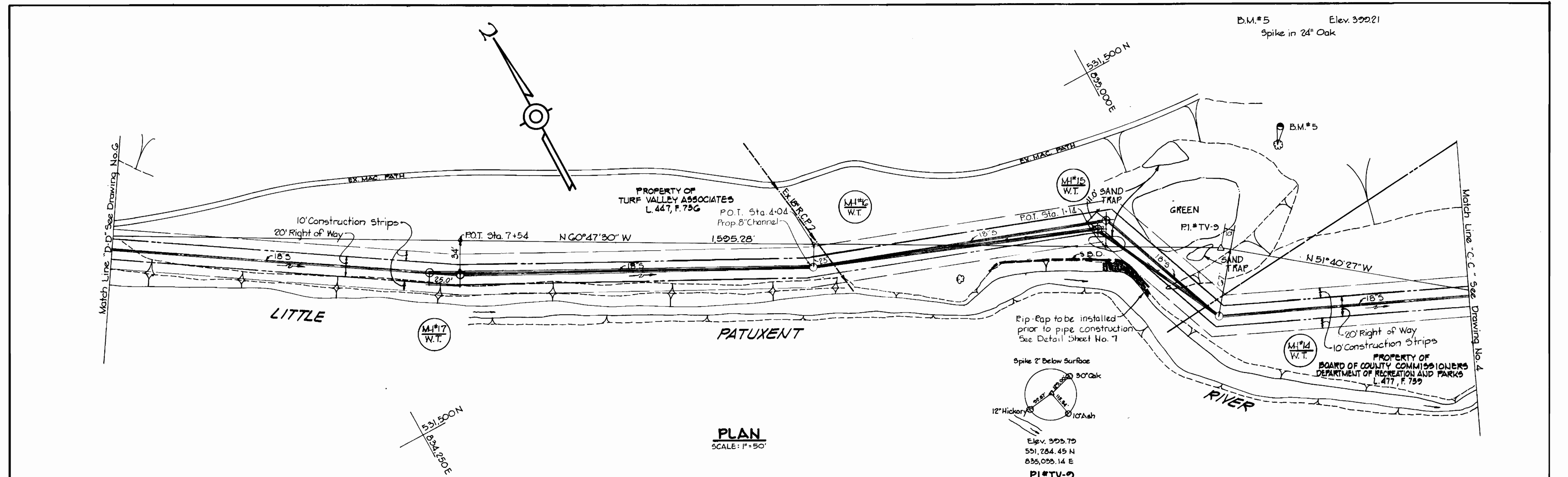


Turf Valley
Interceptor Sewer
Contract No. 20-1177-D

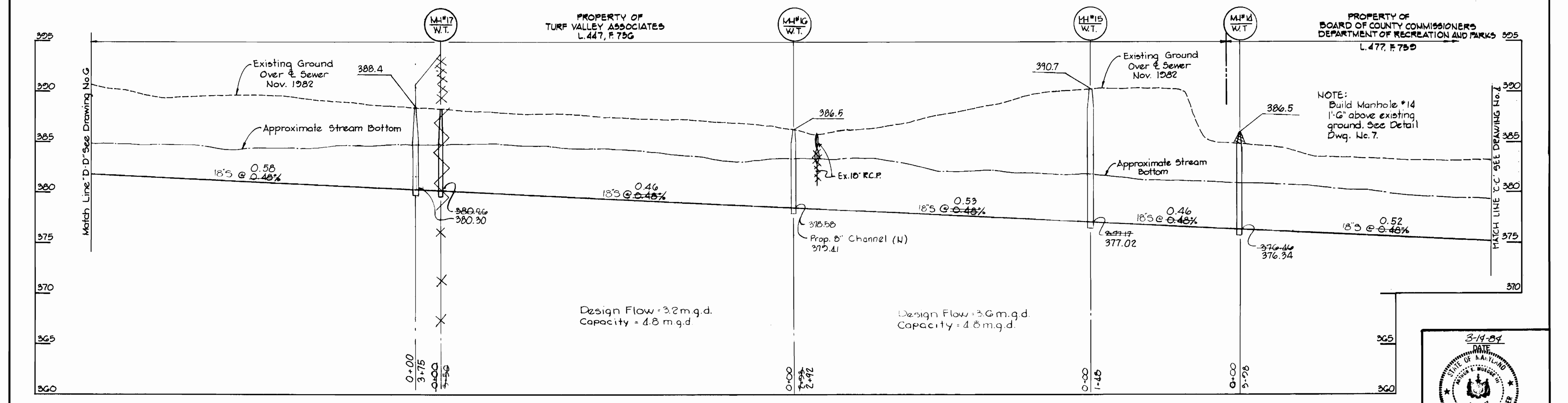
THE RIEMER GROUP, INC. 8659 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21043	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works - DATE 3-27-84 Chief Bureau of Utilities - DATE 3-22-84	Chief - Bureau of Engineering - DATE 3-27-84 Chief - Land Development Division	CONTRACT NO. 20-1177-D	PLAN AND PROFILE SEWER MAIN	TURF VALLEY INTERCEPTOR SEWER ELECTION DISTRICT NO. 2	DRAWING NO. 3 OF 7 SCALE AS SHOWN	17-530/837.5 17-531/837.5
	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works - DATE 3-27-84 Chief Bureau of Utilities - DATE 3-22-84			CONTRACT NO. 20-1177-D	TURF VALLEY INTERCEPTOR SEWER ELECTION DISTRICT NO. 2	DRAWING NO. 3 OF 7 SCALE AS SHOWN	17-530/837.5 17-531/837.5

AS-BUILT January 16, 1985

MARCH 14, 1984

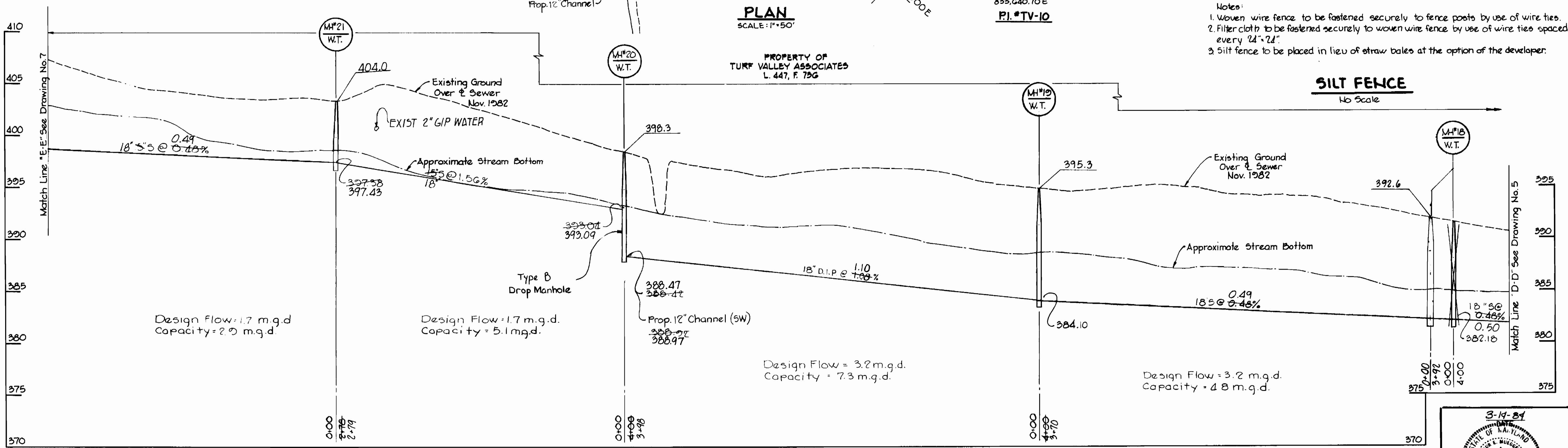
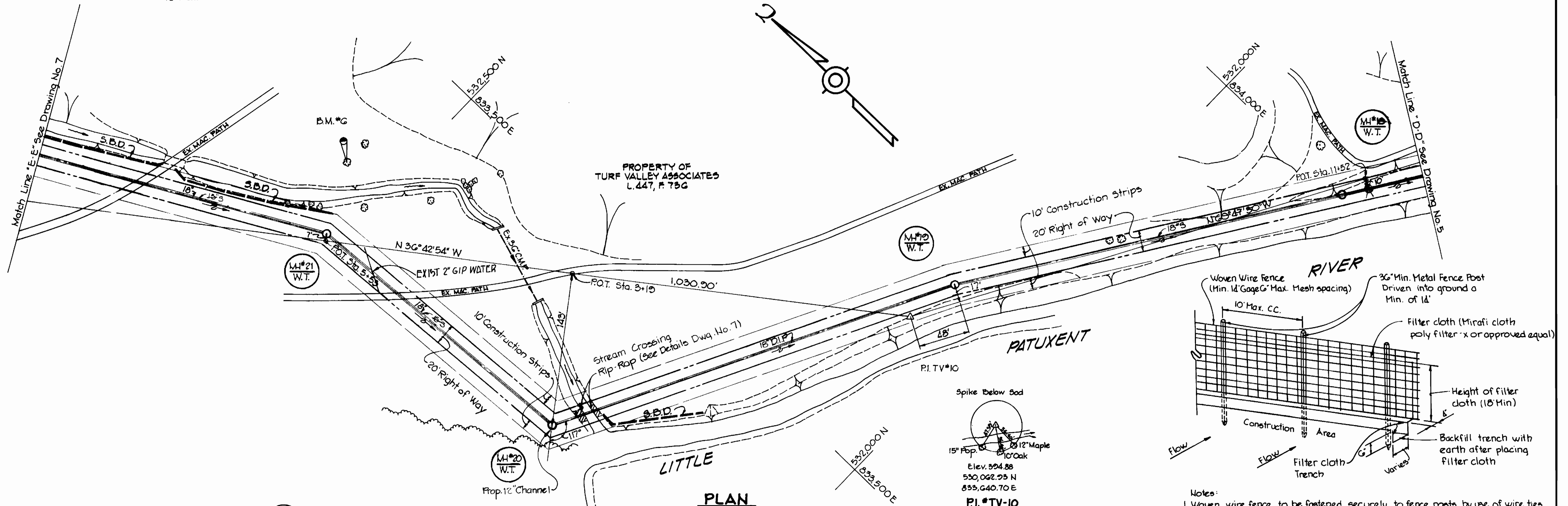


NOTES:
 1. MH#15 HAS BEEN RELOCATED AS PER REQUEST OF THE DEVELOPER TO AVOID DAMAGE TO THE GREEN.
 2. MH#18 HAS BEEN RELOCATED AS PER REQUEST OF THE DEVELOPER AS THE PROPOSED LOCATION OF THE MANHOLE IS APPROXIMATELY AT THE CENTER OF THE "TEE". SUBSEQUENTLY MH#17 HAS TO BE RELOCATED SO THAT THE DISTANCE FROM MH#17 TO MH#18 IS LESS THAN 400 FT.



THE RIEMER GROUP, INC. 8659 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21043	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works - DATE Chief - Bureau of Utilities - DATE	DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief - Bureau of Engineering - DATE Chief - Land Development Division	CONTRACT NO. 20-1177-D	PLAN AND PROFILE SEWER MAIN	TURF VALLEY INTERCEPTOR SEWER ELECTION DISTRICT NO. 2	DRAWING NO. 5 OF 7 SCALE AS SHOWN	DATE 3-19-84 STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER Turf Valley Interceptor Sewer Contract No. 20-1177-D PROFESSIONAL ENGR. NO. 8707
	AS-BUILT - January 18, 1985 MARCH 14, 1984		10-531/834 10-531/834.5				

B.M.*G Elev. 401.81
Spike in root of
12" Ash.



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

THE RIEMER GROUP, INC.
8659 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 3-27-84
DIRECTOR OF PUBLIC WORKS - DATE

[Signature] 3-22-84
CHIEF BUREAU OF UTILITIES - DATE

[Signature] 3-14-84
CHIEF - BUREAU OF ENGINEERING - DATE

[Signature] 3-14-84
CHIEF - LAND DEVELOPMENT DIVISION

CONTRACT NO. 20-1177-D

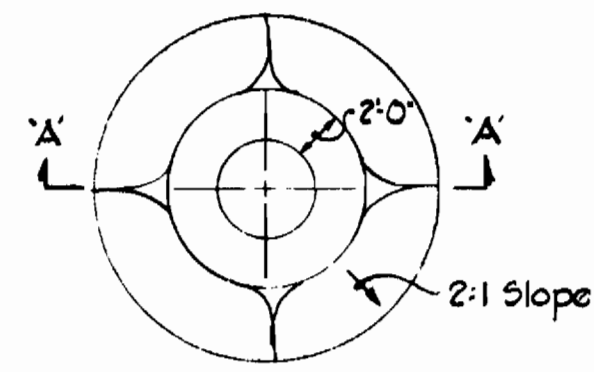
PLAN AND PROFILE
SEWER MAIN

TURF VALLEY
INTERCEPTOR SEWER
ELECTION DISTRICT NO. 2

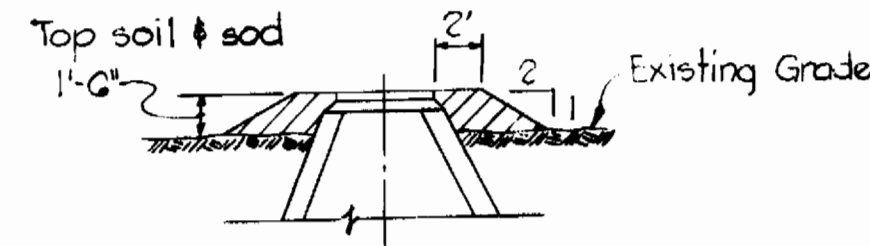
DRAWING NO. 6 OF 7
SCALE AS SHOWN

Turf Valley Interceptor Sewer
Contract No. 20-1177-D

[Signature]
PROFESSIONAL ENGR. 8707



PLAN

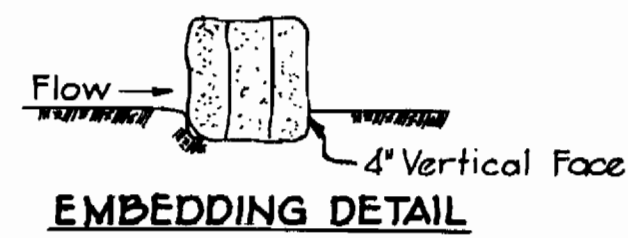


SECTION "A-A"

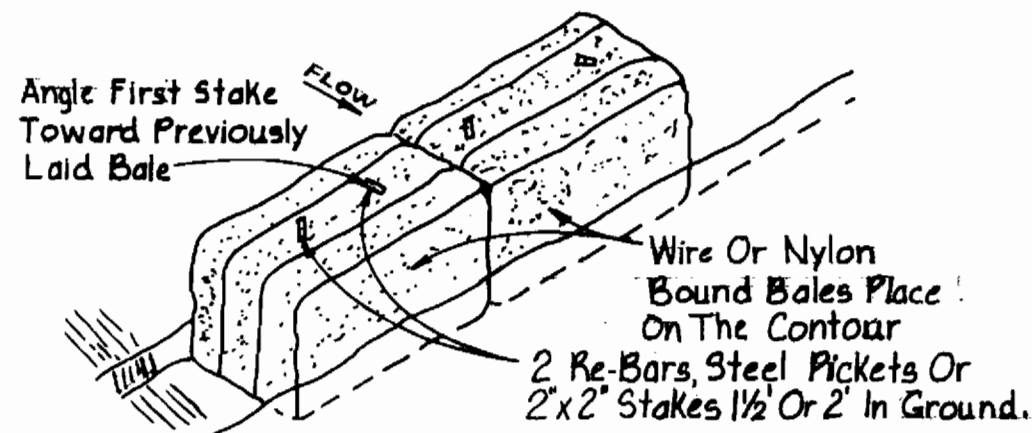
Notes:

- 1) All manhole frame and covers shall be flush with grade except when shown on Profile to be set higher than grade.
- 2) Manhole frame and covers to be set higher than grade shall be set in accordance with this detail.
- 3) Manhole frames and covers to be set higher than 1'-6" shall be set as noted on the Profile and in accordance with this Detail.

FILL AROUND MH's 1 THRU 14
No Scale



EMBEDDING DETAIL



ANCHORING DETAIL

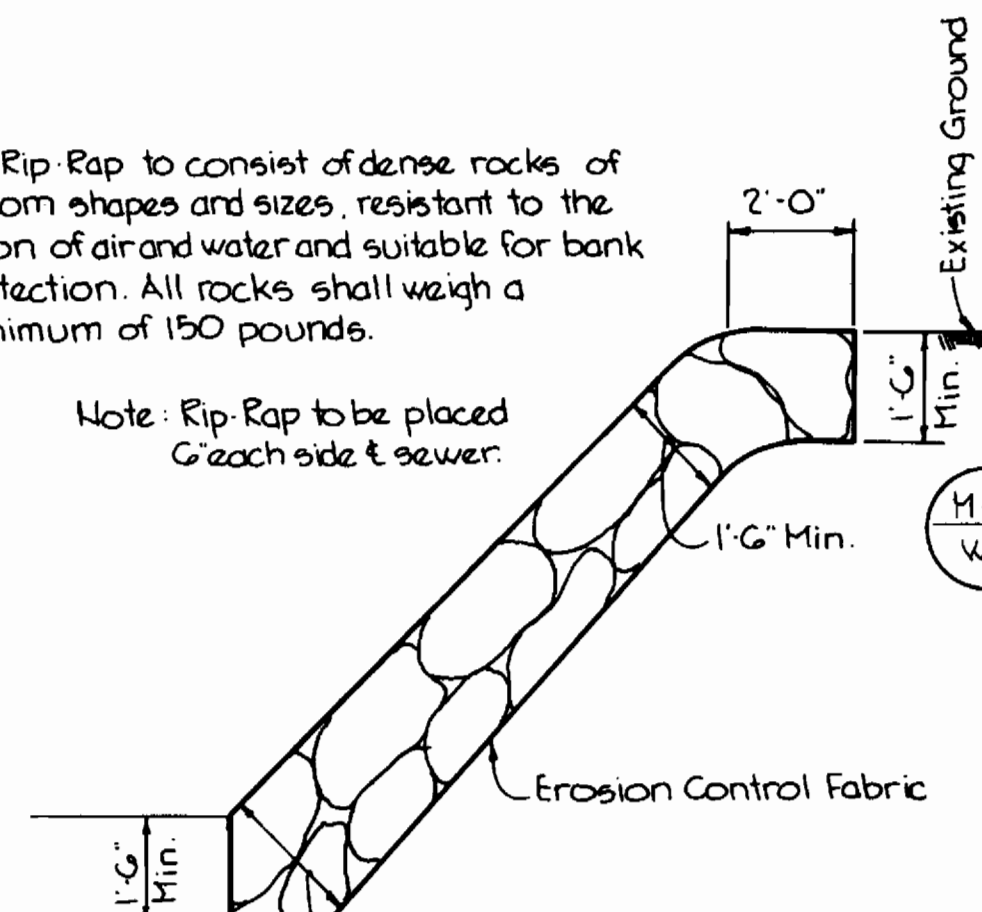
- Construction Specifications
- 1) Bales shall be placed in a row with ends tightly abutting the adjacent bales.
 - 2) Each bale shall be embedded in the soil a minimum of 4".
 - 3) Bales shall be securely anchored in place by stakes or re-bars driven through the bales. The first stake in each bale shall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

STRAW BALE DIKE
No Scale

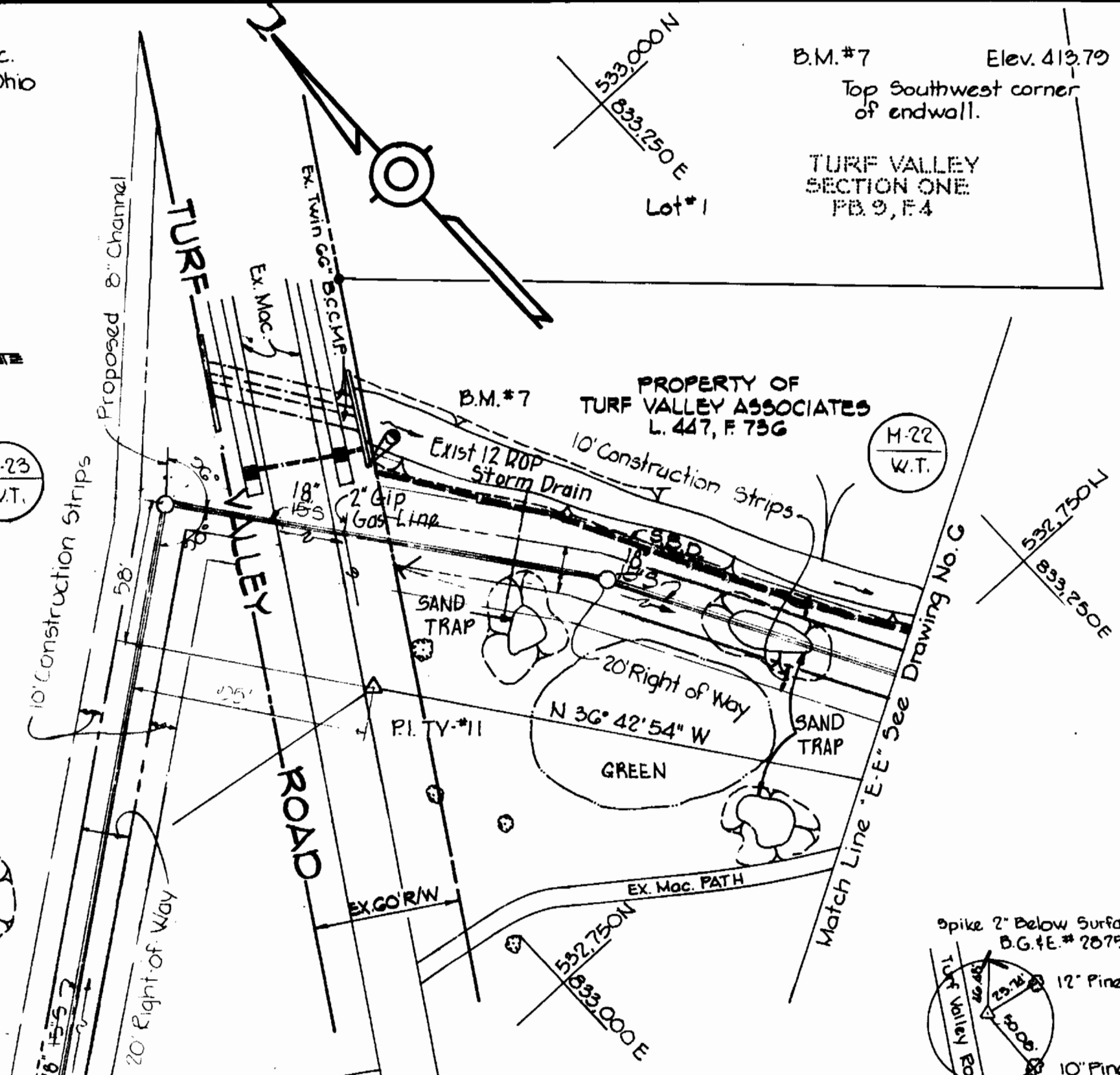
Note: Poly Filter X shall be as manufactured by Carthage Mills Inc. Erosion Control Division, 124 W. 66th Street Cincinnati, Ohio or approved equal.

Rip Rap to consist of dense rocks of random shapes and sizes, resistant to the action of air and water and suitable for bank protection. All rocks shall weigh a minimum of 150 pounds.

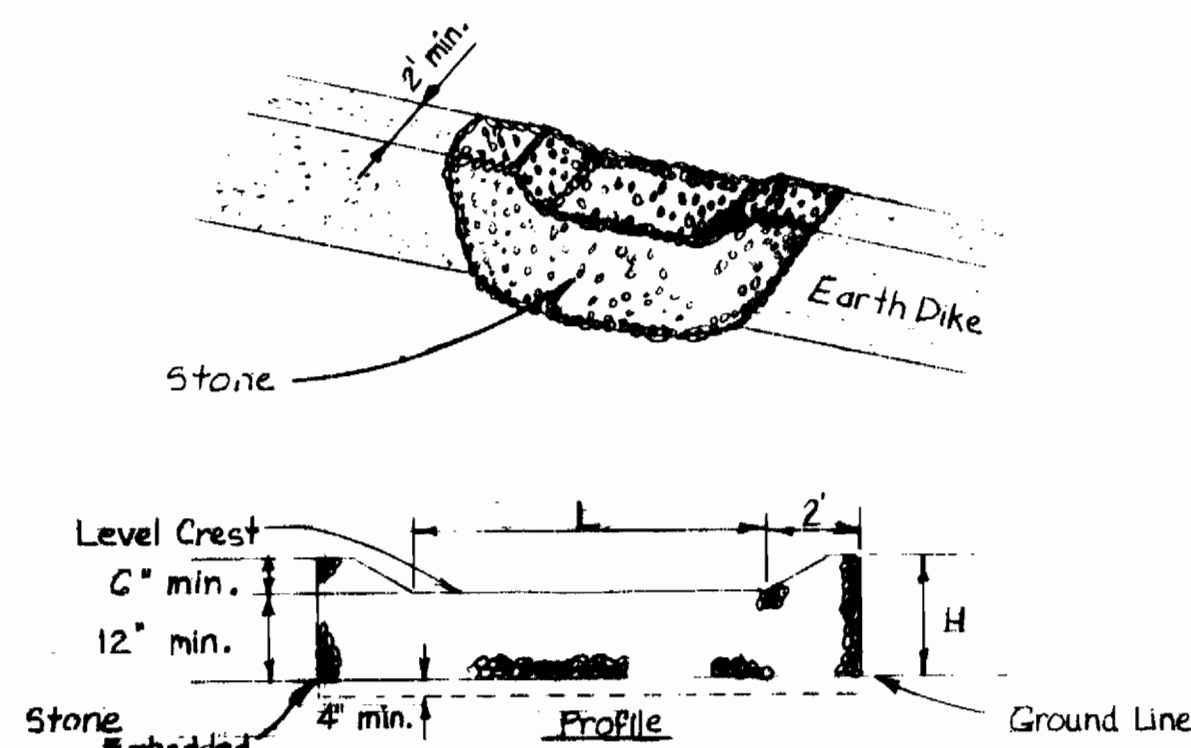
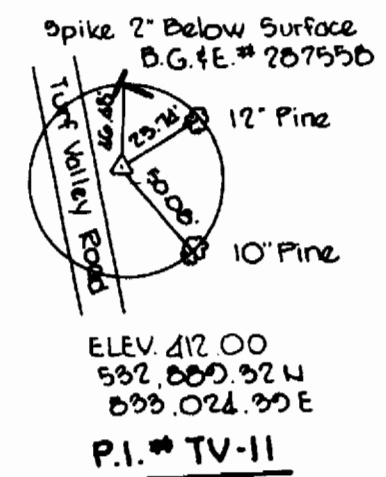
Note: Rip Rap to be placed Gracch side & sewer.



RIP-RAP DETAIL
No Scale



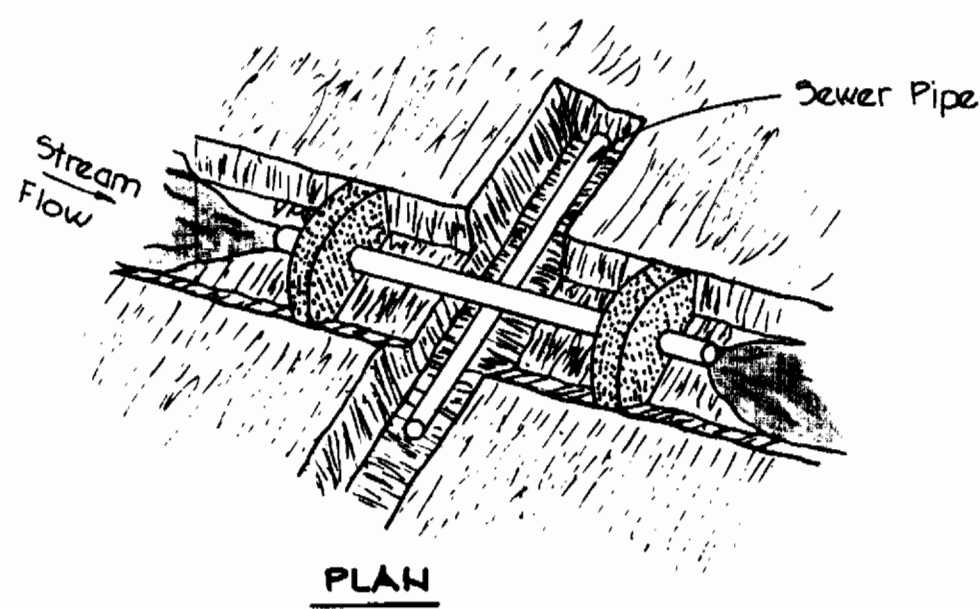
PLAN
SCALE: 1" = 50'



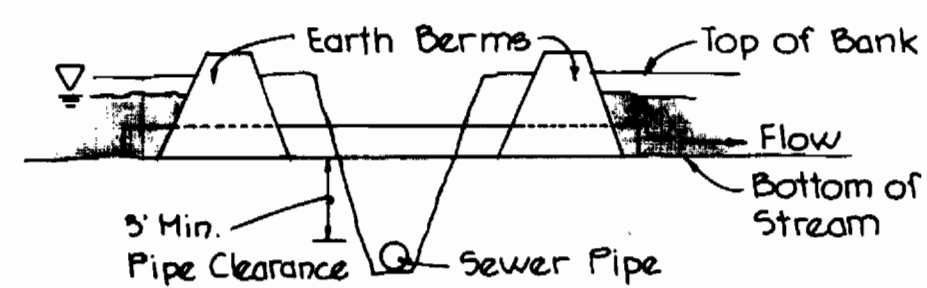
Construction Specifications

1. The stone shall be crushed stone. Gravel may be used if crushed stone is not available. The stone shall meet MSHA Size No. 2 or AASHTO designation M43 Size No. 2 or 24.
2. The crest of the stone dike shall be at least six inches lower than the lowest elevation of the top of the earth dike and shall be level.
3. The stone outlet structure shall be embedded into the soil a minimum of four inches.
4. The minimum length, in feet, of the crest of the stone outlet structure shall be equal to six times the number of acres of contributing drainage area.
5. The stone outlet structure shall be inspected after each rain, and the stone shall be replaced when the structure ceases to function as intended due to silt accumulation among the stone, washout, construction traffic damage, etc.
6. Standard Symbol

STONE OUTLET STRUCTURE
No Scale

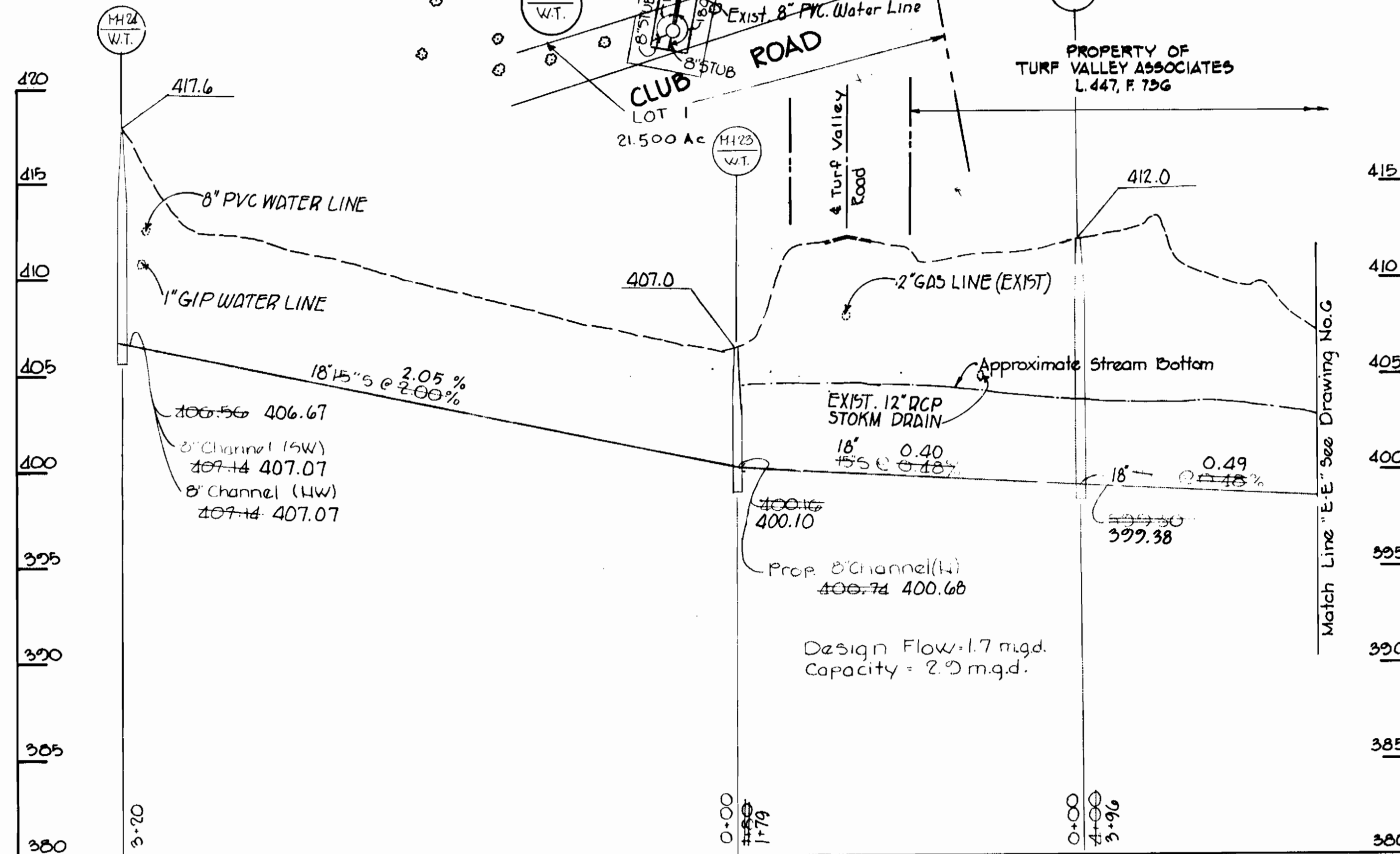


PLAN



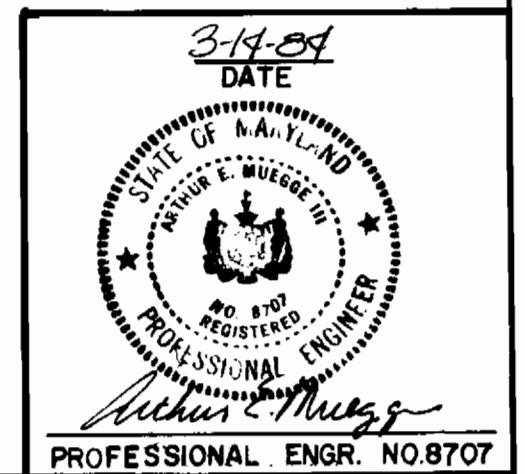
PROFILE

STREAM CROSSING DETAIL
NO SCALE



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

Turf Valley Interceptor Sewer
Contract No. 20-1177-D



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works - DATE
Richard M. Neugebauer 3-22-84
Chief - Bureau of Utilities - DATE

Chief - Bureau of Engineering - DATE
Chief - Land Development Division

CONTRACT NO. 20-1177-D

PLAN AND PROFILE OF
SEWER MAINS AND DETAILS

TURF VALLEY
INTERCEPTOR SEWER
ELECTION DISTRICT NO. 2

DRAWING NO. 7
OF 7
SCALE AS SHOWN

AS-BUILT January 22, 1985

MARCH 14, 1984

THE RIEMER GROUP, INC.
8659 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21043