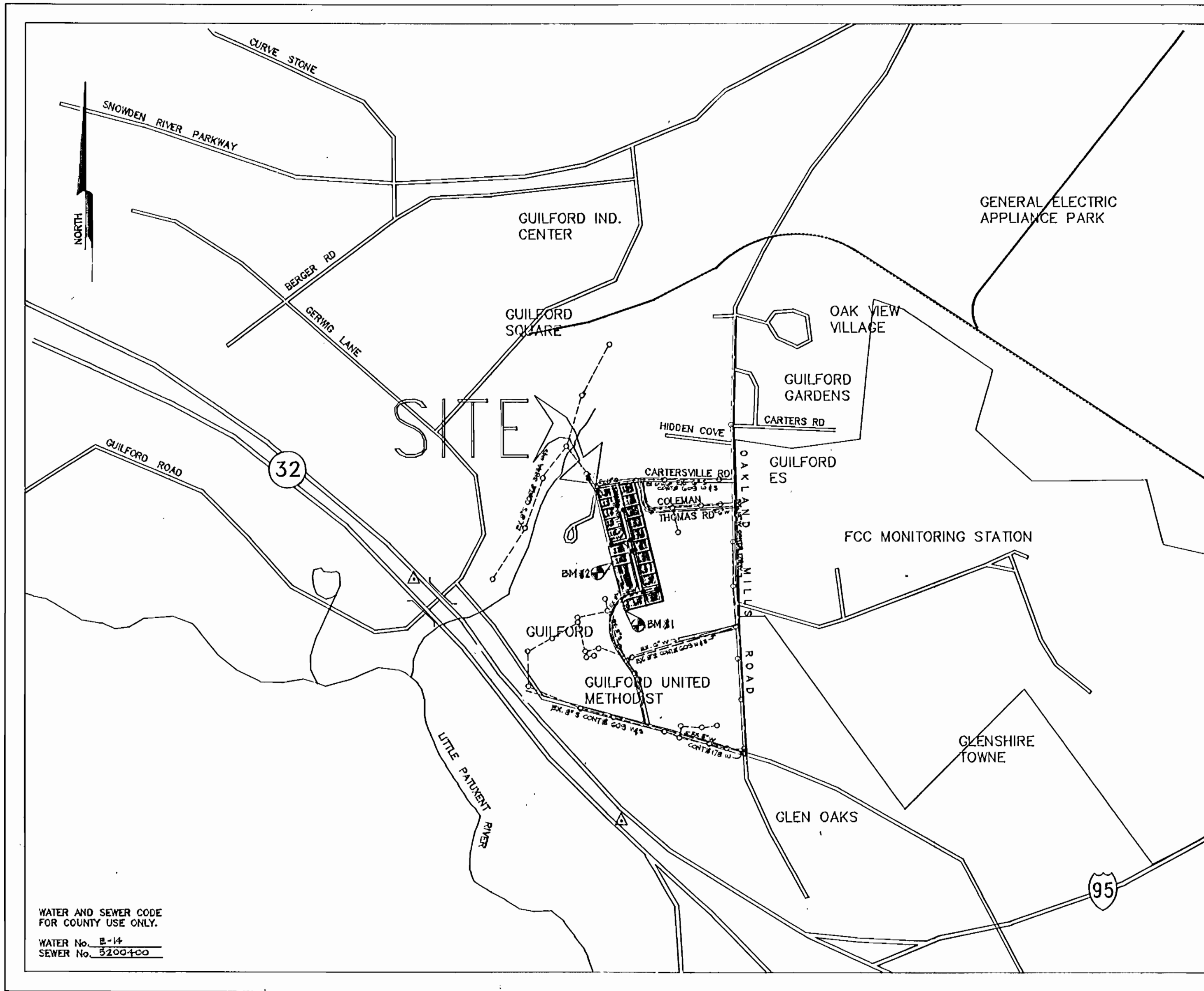


QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	A S - BUILT	MANUFACTURER/SUPPLIER
8" SEWER PVC	774 L.F.	640 L.F.	134 L.F.	NATIONAL / MUNICIPAL
8" WATER	1310 L.F.	1201 L.F.	109 L.F.	GRIFFIN / MUNICIPAL
4" WATER	40 L.F.	40 L.F.	0 L.F.	GRIFFIN / MUNICIPAL
1" V.C.	125 L.F.	100 L.F.	25 L.F.	CAMERON / MUNICIPAL
3/4" V.C.	215 L.F.	215 L.F.	0 L.F.	CAMERON / MUNICIPAL
4" S.C.	100 L.F.	100 L.F.	0 L.F.	NATIONAL / MUNICIPAL
8" VALVE	1 EACH	1 EACH	0 EACH	KENNEDY / MUNICIPAL
4" VALVE	2 EACH	2 EACH	0 EACH	KENNEDY / MUNICIPAL
8" TEE	2 EACH	2 EACH	0 EACH	GRIFFIN / MUNICIPAL
4" TEE	2 EACH	2 EACH	0 EACH	GRIFFIN / MUNICIPAL
3" REDUCER	1 EACH	1 EACH	0 EACH	GRIFFIN / MUNICIPAL
2" REDUCER	1 EACH	1 EACH	0 EACH	GRIFFIN / MUNICIPAL
3" BLOW-OFF	1 EACH	1 EACH	0 EACH	KUPPERLE / MUNICIPAL
1/2" HB	1 EACH	1 EACH	0 EACH	GRIFFIN / MUNICIPAL
1/2" HB	1 EACH	1 EACH	0 EACH	GRIFFIN / MUNICIPAL
FIRE HYDRANT	2 EACH	2 EACH	0 EACH	KENNEDY / MUNICIPAL
MANHOLES	8 EACH	8 EACH	0 EACH	ATLANTIC
1/2" DRAIN	1 EACH	1 EACH	0 EACH	ATLANTIC
2" SEWER DUCT	453 L.F.	453 L.F.	0 L.F.	ATLANTIC
NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED				
SURVEY AND GRADING DIVISION AS BUILT DATE:				

SEWER STRUCTURE SCHEDULE		
MH No.	RIM ELEVATION	LOCATION
MH-1	343.47	N 1208 40.315, E 4143 318.264
MH-2	350.50	N 1208 40.712, E 4143 171.785
MH-3	343.11	CL OF ROBINSON DRIVE STA. 1+48.28, OFFSET 10' LEFT.
MH-4	354.03	CL OF THORNTON WOODS WAY STA. 4+109.8, OFFSET 10' RT.
MH-5	352.05	CL OF THORNTON WOODS WAY STA. 4+72.5, OFFSET 10' RT.
MH-6	349.93	CL OF THORNTON WOODS WAY STA. 3+50, OFFSET 10' RT.
MH-7	344.19	CL OF RIDGEVIEW DRIVE STA. 12+72.83, OFFSET 10' RT.
MH-8	344.19	CL OF RIDGEVIEW DRIVE STA. 13+72.83, OFFSET 10' RT.



TYPE OF BUILDING	SINGLE FAMILY
NUMBER OF LOTS	18
No. OF WATER HOUSE CONNECTIONS	18
No. OF SEWER HOUSE CONNECTIONS	18
DRAINAGE AREA	LITTLE PATENT RIVER
TREATMENT PLANT	SAVAGE

LOCATION MAP
SCALE: 1" = 600'

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. data.
- All pipe elevations shown are invert elevations.
- 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 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.
- For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Vol. IV, Standard specifications and Detail for Construction (Latest Edition). 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 been dug shall be located by the contractor two weeks in advance of the construction operations at his own expense.
- Contractors shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:
 - State Highway Administration 531-5533
 - BG&E Co. Contractor Services 850-4620
 - BG&E Co. Under Ground Damage Control 787-9068
 - Miss Utility 1 800 257-7777
 - Colonial Pipeline Co. 795-1390
 - Howard County Department of Public Works Bureau of Utilities 313-4900
- 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.
- Contractors 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 minimum of 3 1/2' cover 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 the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- All sewer mains shall be D.I.P. RCP, VCPX, CSPX, RCCP and P.V.C. unless otherwise noted.
- The contractor shall provide a joint in all sewer mains with in 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Details G5.52. Where watertight manhole frame and cover is used, set top of frame 1" - 6" above finished grade unless otherwise noted on the drawings.
- House(s) with the symbol "C.N.S" indicates that cellar cannot be served.

BENCHMARKS

BENCH MARK # 1	ELEV. 343.92
BENCH MARK # 2	ELEV. 338.71

THORNTON WOODS
LOTS 1 THRU 20
CONTRACT No. 24-3241-D
WATER AND SEWER MAIN EXTENTSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE 13 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F-13-58

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

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

APPROVED: *John L. Robertson* 4/13/93
HOWARD COUNTY SOIL CONSERVATION DISTRICT

James M. Helms 4/13/93
S.O. SOIL CONSERVATION SERVICE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James M. Helms 4/13/93
DIRECTOR OF PUBLIC WORKS

John L. Robertson 4-13-93
CHIEF, BUREAU OF ENGINEERING

Woria Engineering Inc.
CONSULTING ENGINEERS-LAND PLANNERS-SURVEYORS
3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD.
410-465-0400



DES: MLL	9-28-93	ADDED CONC. ENCAGEMENT PER STATE HEALTH DEPT.
DRN: AVG		
CHK: MLL		
DATE: 3-9-93	BY NO. 4	REVISION

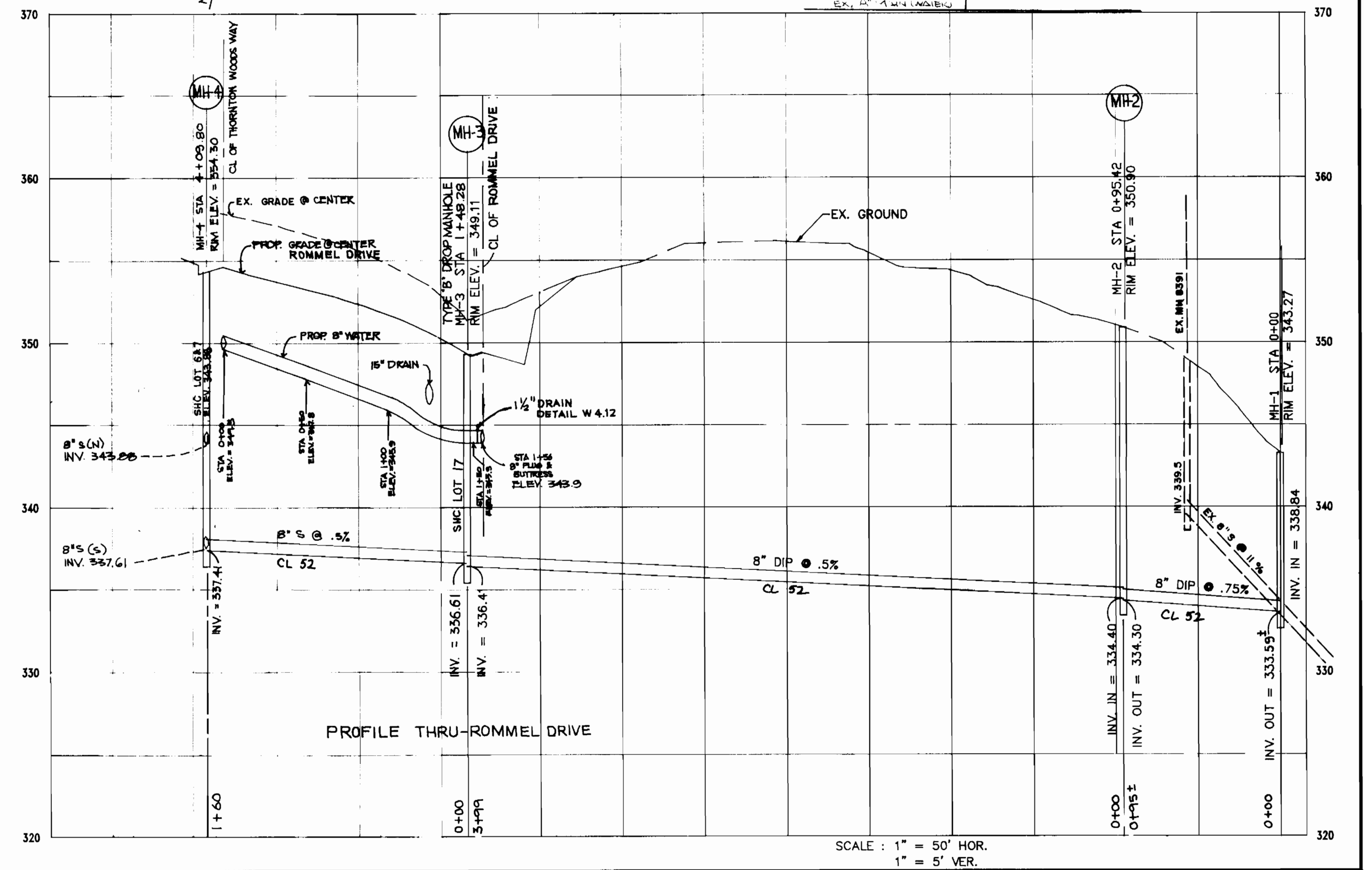
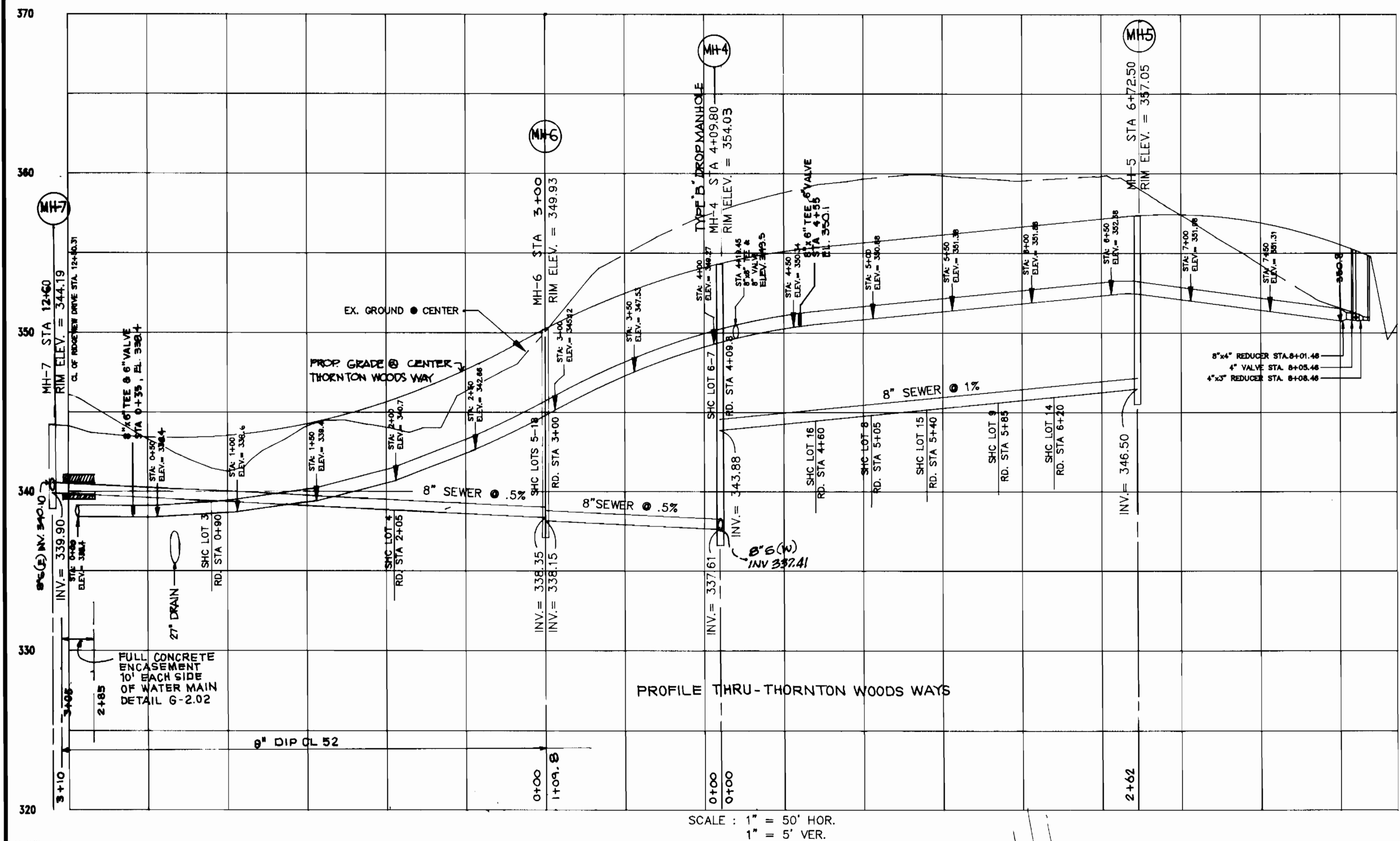
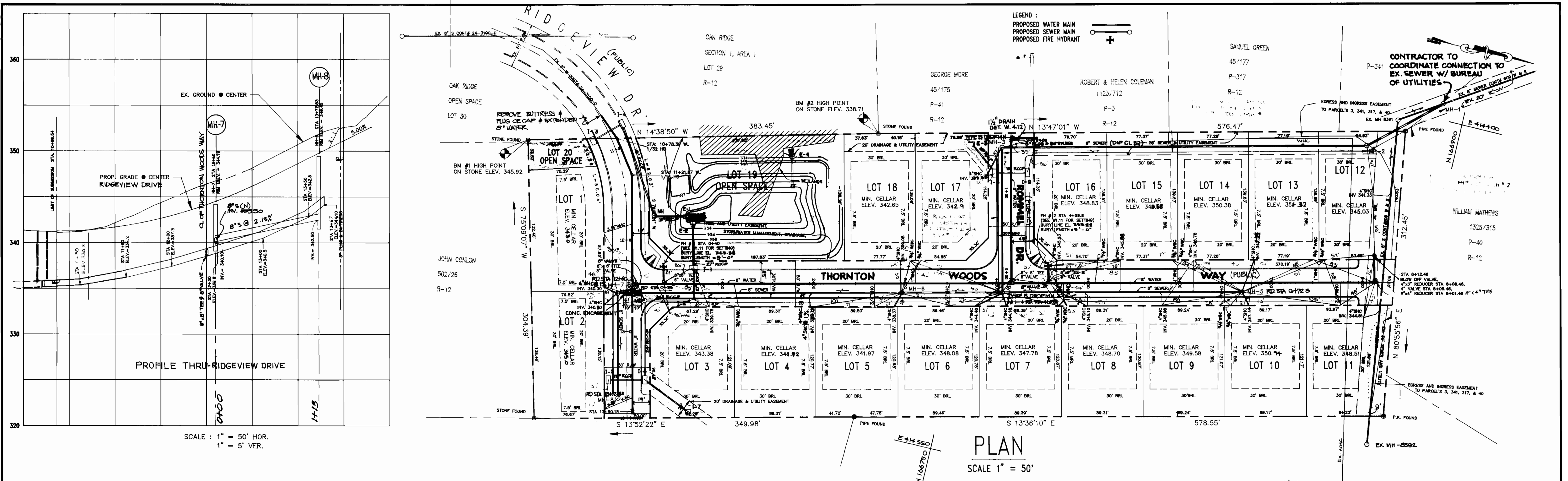
COVER

CONTRACT NO. 24-3241-D

THORNTON WOODS SUBDIVISION
LOTS 1 THRU 20
TAX MAP 42 PARCEL 49
6th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 2



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. ... 4/3/93
 DIRECTOR OF PUBLIC WORKS DATE

... 4/5/93
 CHIEF, BUREAU OF ENGINEERING DATE

... 3-26-93
 CHIEF, BUREAU OF UTILITIES DATE

... 4/5/93
 CHIEF, LAND DEVELOPMENT DIVISION DATE

loria Engineering Inc.
 CONSULTING ENGINEERS-LAND PLANNERS-SURVEYORS
 3230 BETHANY LANE, SUITE 4, ELLICOTT CITY, MD.
 410-465-0400

DES :	MLL	5-28-93	ADDED CONCRETE ENCASUREMENT PER STATE HEALTH
DRN :	AVG		DEPT.
CHK :	MLL		
DATE :	2-25-93		
BY :			
NO. :			
REVISION :			
DATE :			
NO. :			

PLAN & PROFILE OF WATER & SEWER MAINS
 CONTRACT NO. 24-3241-D
 600' SCALE MAP NO. 42 BLOCK

THORNTON WOODS SUBDIVISION
 LOTS 1 THRU 20
 TAX MAP 42 PARCEL 49
 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 2
AS-BUILT