
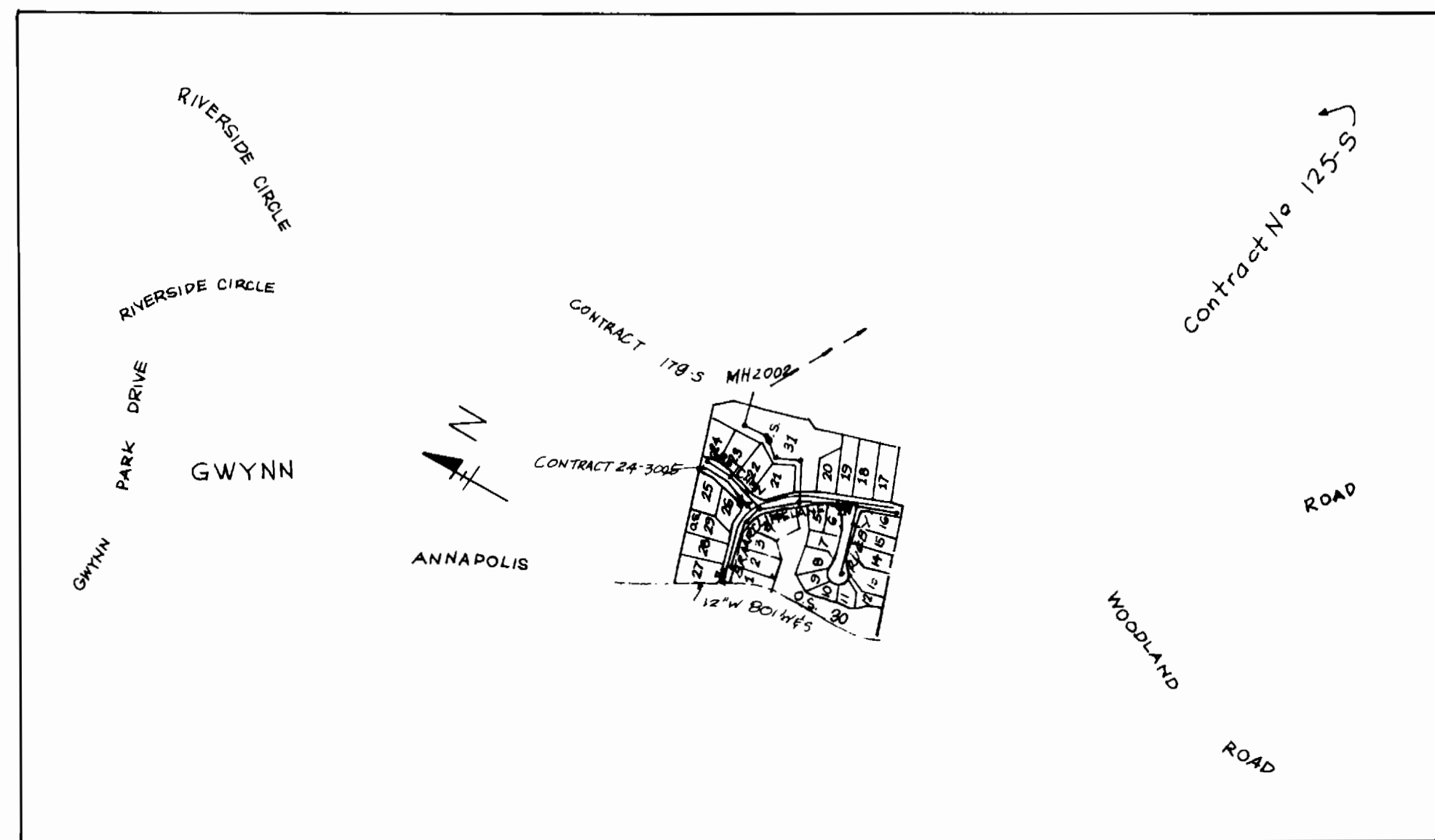


QUANTITIES			
ITEM	EST'D	AS-BUILT	SUPPLIER
8" SEWER	2,234 L.F.	2,177.90 L.F.	A&P SUPPLIERS INC.
6" WATER	370 L.F.	370.0 L.F.	" "
8" WATER	1,825 L.F.	1,815 L.F.	" "
4" SHC	769 L.F.	840.50 L.F.	" "
12"x8" TAPPING SLEEVE	1 EACH	1 EACH	" "
3/4" WHC	413 L.F.	466 L.F.	" "
1" WHC	229 L.F.	261 L.F.	" "
MANHOLES	17 EACH	14	ATLANTIC CONCRETE INC.
F.H.W/6" V	3 EACH	3 EACH	A&P SUPPLIERS INC.
6" VALVES	1 EACH	1 EACH	" "
8" VALVES	2 EACH	2 EACH	" "
6"x8" TEE	1 EACH	—	" "
8"x8" TEE	1 EACH	1 EACH	A&P SUPPLIERS INC.
8"x6" TEE	4 EACH	4 EACH	" "

• 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, any cost incurred by the owner for 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, Volume IV, Standard Specifications and Details for Construction. The contractor shall have a copy of Volume IV on the job, "1989 Amendments".
- 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.
- Contractor 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
 - Baltimore Gas & Electric Co. - Contractor Services 850-4620
 - Baltimore Gas & Electric Co. Under Ground Damage Control - 859-9004
 - Baltimore Gas & Electric Co. Trouble Shooting - 298-9001
 - Mias Utility - 1-559-0100
 - Colonial Pipeline Co. - 795-1390
 - Bureau of Utilities, Howard County Department of Public Works - 992-2366
- 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 minimum of 3'-1/2' 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.
- All fittings shall be buttressed or anchored with concrete in accordance with 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 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on the existing water system.
- All sewer mains shall be C.S.P.X., R.C.S.P., V.C.P.X., P.V.C. unless otherwise noted.
- The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- 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 Detail 65.52. 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.
- All D.I.P. fittings shall in accordance with A.W.W.A. specifications C-153 - DUCTILE IRON COMPACT FITTING 3" through 12" for water & other liquids.



TYPE OF BUILDING: SFD
 Number of Lots: 31
 No. of water main connections: 28
 No. of sewer main connections: 28
 DRAINAGE AREA: Little pithead
 TREATMENT PLANT: DATAPSS via
 Route 103 pumping
 Station.

VICINITY MAP
 SCALE 1" = 600'
 WATER CODE - F 13
 SEWER CODE - 5750000

AS-BUILT
 COMPLETED 7-16-91

THIS PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 APPROVED: *John R. Robertson* 9/24/90
 HOWARD CO. SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.
 APPROVED: *James M. Helms* 4/24/90
 U.S. SOIL CONSERVATION SERVICE DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL AND STANDARD SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE FINAL PLANS F-90-100.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. Helms 4/24/90
 DIRECTOR OF PUBLIC WORKS DATE

Robert J. Brown 4-18-90
 CHIEF, BUREAU OF UTILITIES DATE

Michael J. Ryan 4-24-90
 CHIEF, BUREAU OF ENGINEERING DATE

Paul J. Ryan 4/25/90
 CHIEF, LAND DEVELOPMENT DIVISION DATE

oria engineering inc.
 Consulting Engineers • Land Planners • Surveyors
 3230 Bethany Lane, Suite 4, Ellicott City, Maryland
 301-465-0400

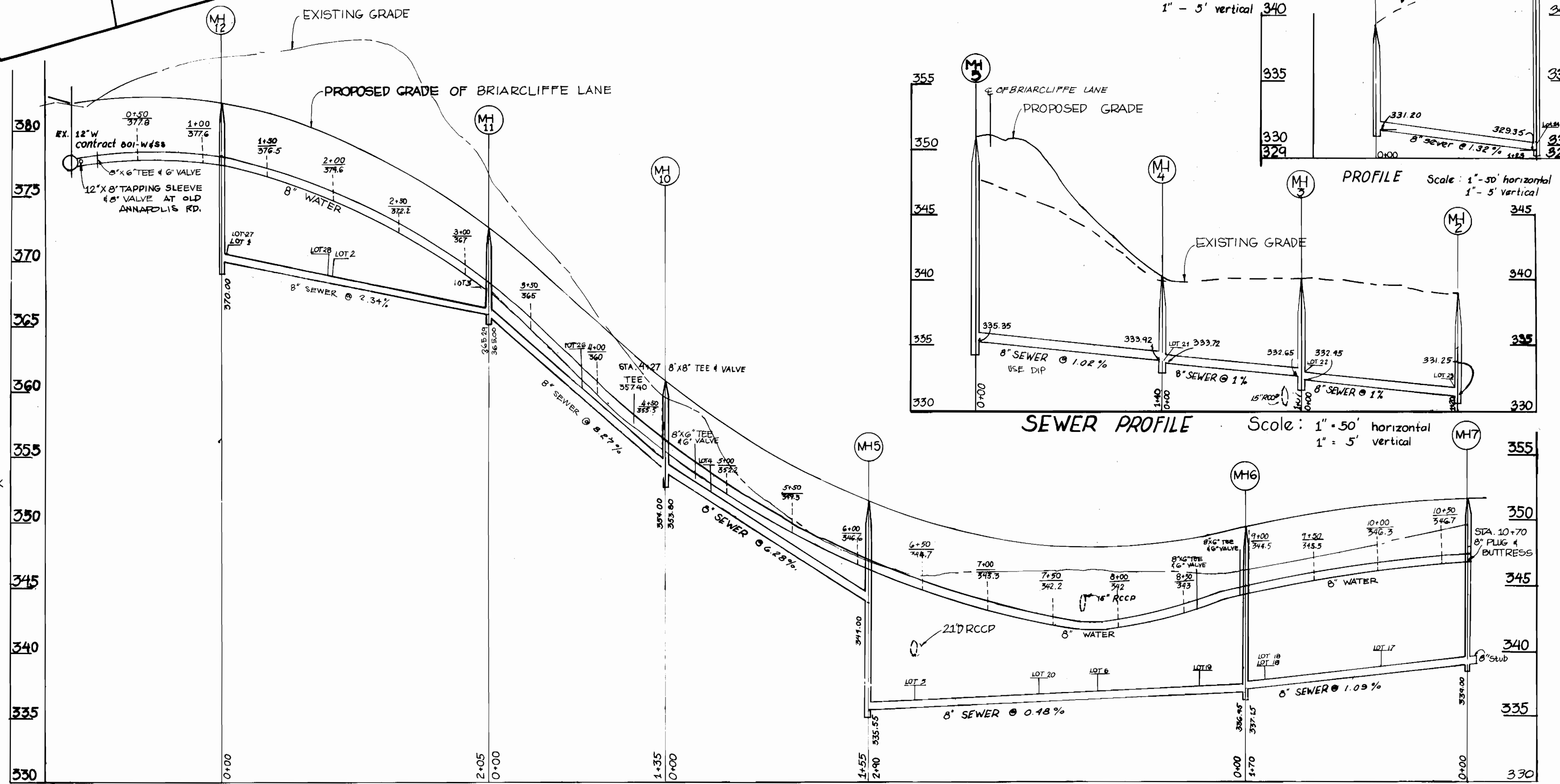
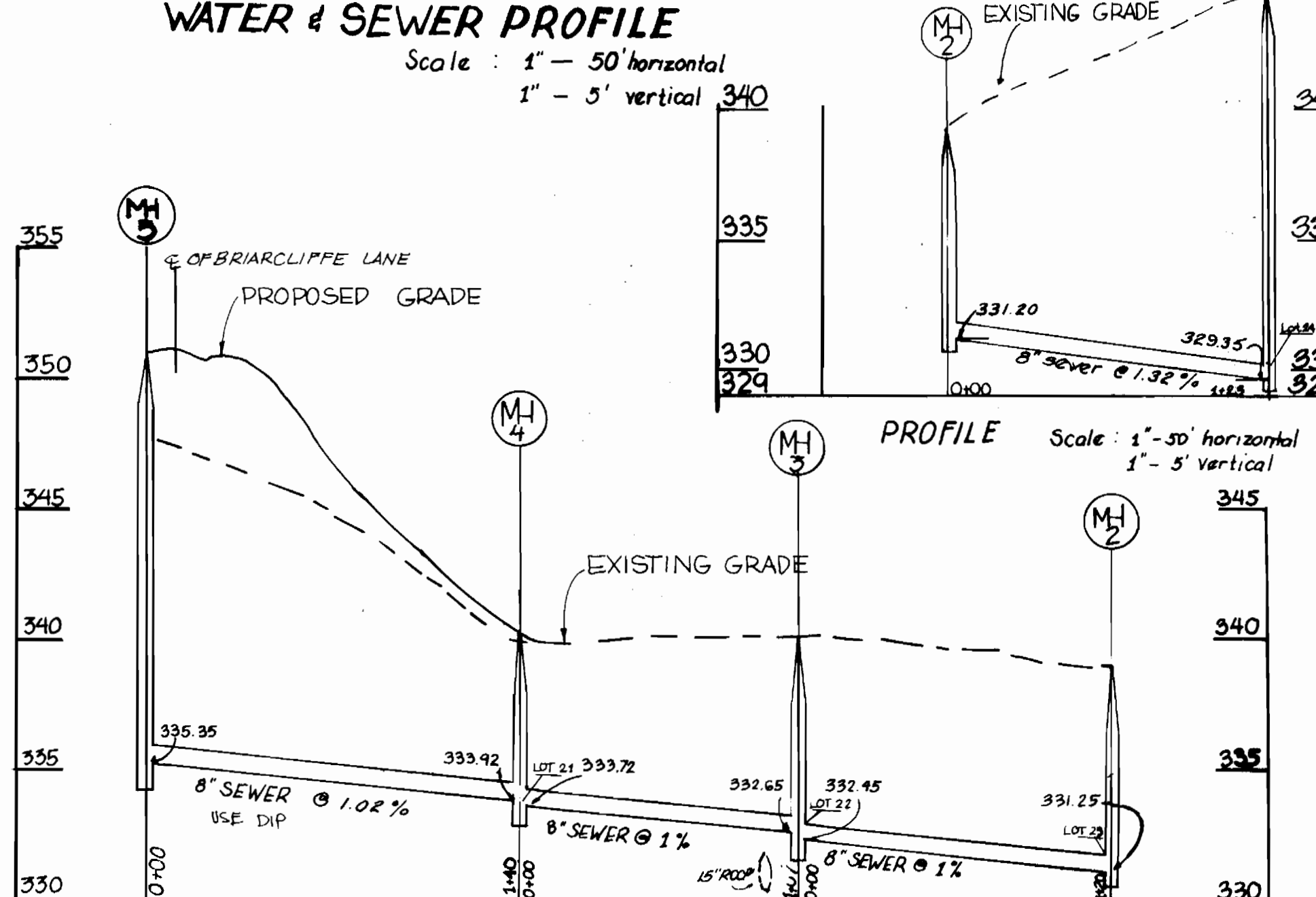
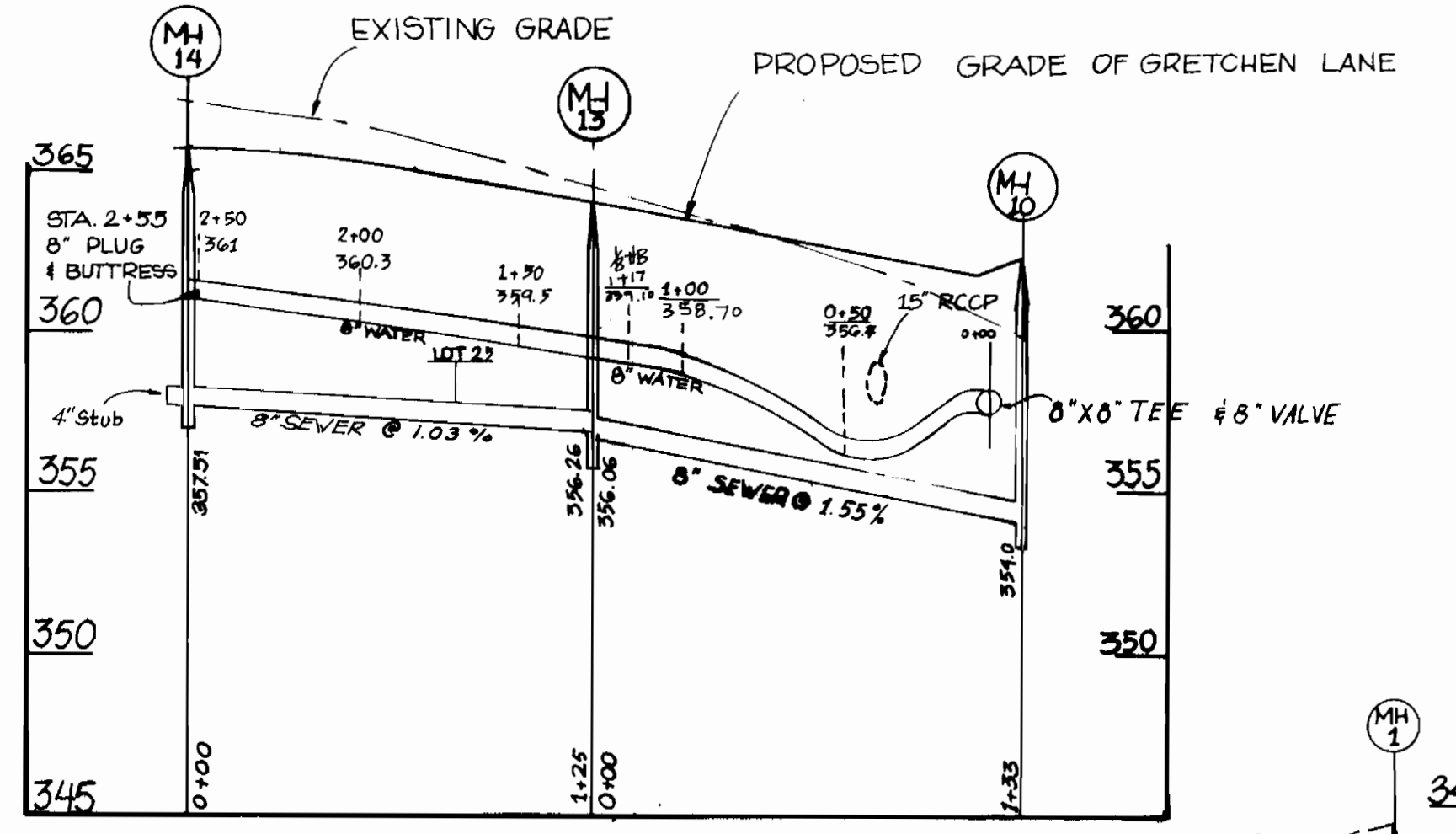
REVISION	DATE
DES:	
DRN: RF	
CHK:	

COVER SHEET
 600' SCALE TAP MAP NO. 30

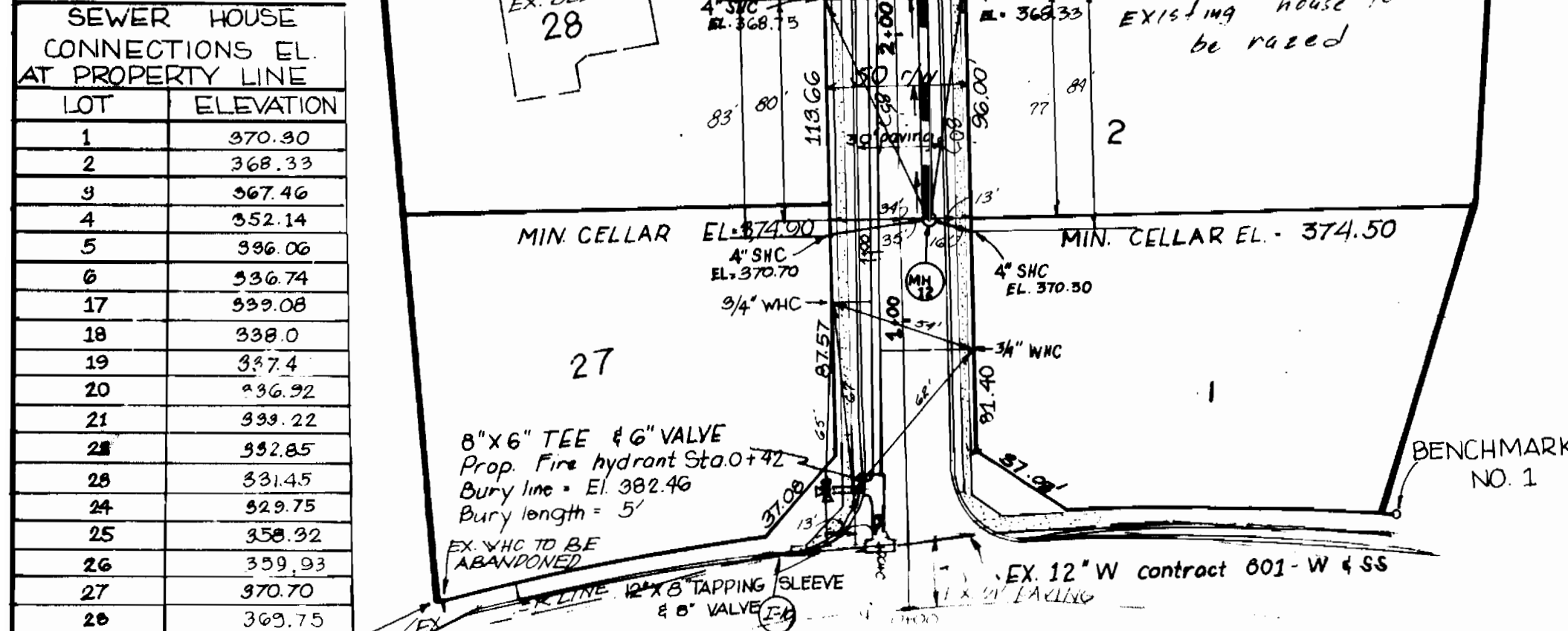
BRIARCLIFFE LOT 1-31
 2nd ELECTION DISTRICT
 HOWARD COUNTY MARYLAND
 CONTRACT NO. 24-3005-D
 SCALE 1"=600'
 SHEET 1 OF 3

OPEN SPACE - LOT 3
DORSEY HALL
SECTION 2, AREA 2 CMP 6394

MANHOLE TABULATION		
MANHOLE NO.	LOCATION	TOP OF RIM ELEVATION
1	SEE PLAN	343.10
2	SEE PLAN	339.3
3	SEE PLAN	340.9
4	SEE PLAN	340.5
5	6+37 OF BRIARCLIFFE LANE 5' RIGHT OF E DROP MANHOLE, TYPE B	350.91
6	9+26 OF BRIARCLIFFE LANE 10' RIGHT OF E	349.56
7	10+96 OF BRIARCLIFFE LANE 10' RIGHT OF E	351.59
8	1+12.50 OF RUGBY COURT 11' LEFT OF E	354.55
9	SEE PLAN	358.36
10	4+77 OF BRIARCLIFFE LANE 2' LEFT OF E	360.44
11	3+40 OF BRIARCLIFFE LANE 8' RIGHT OF E	372.76
12	1+95 OF BRIARCLIFFE LANE 10' RIGHT OF E	381.97
13	1+31 OF GRETCHEN LANE 10' RIGHT OF E	363.05
14	2+50 OF GRETCHEN LANE 7' RIGHT OF E	365.53



LOT	ELEVATION
1	370.90
2	368.33
3	367.46
4	352.14
5	356.06
6	356.74
17	359.08
18	358.0
19	357.4
20	356.52
21	353.22
22	352.85
23	351.45
24	329.75
25	358.32
26	359.93
27	370.70
28	369.75



PLAN
Scale 1" = 50'

BENCHMARK NO. 1
1/2" REBAR WITH CAP SET
EL. 371.82
COORDINATES
N = 315260.00
E = 842497.13

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: 4/24/90
Chief, Bureau of Engineering: 4/24/90
Chief, Bureau of Utilities: 4/18/90
Chief, Land Development Division: 4/23/90

oria engineering inc.
Consulting Engineers - Land Planners - Surveyors
5230 Bethany Lane, Suite 4, Elkott City, Maryland
301-465-0400

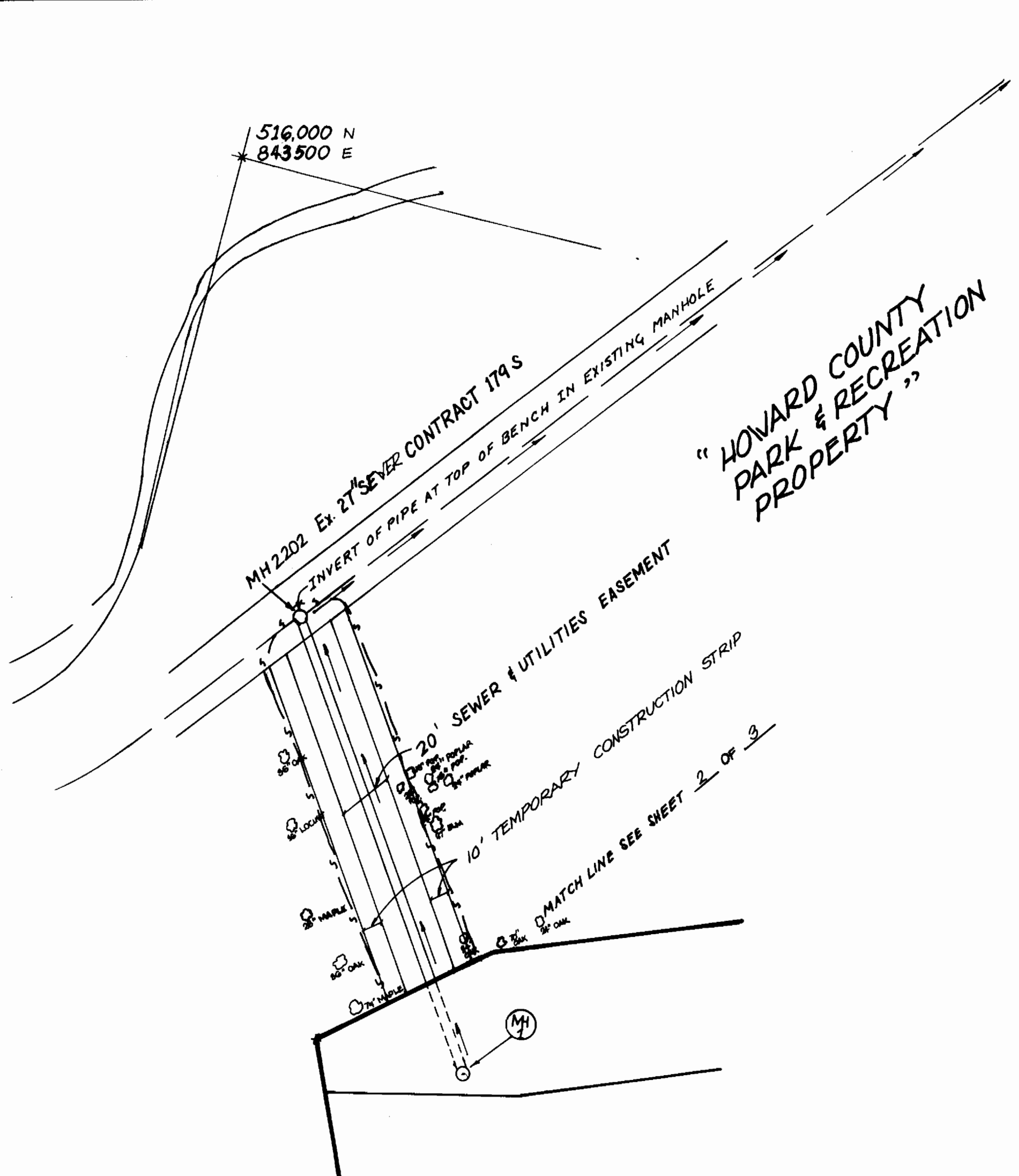
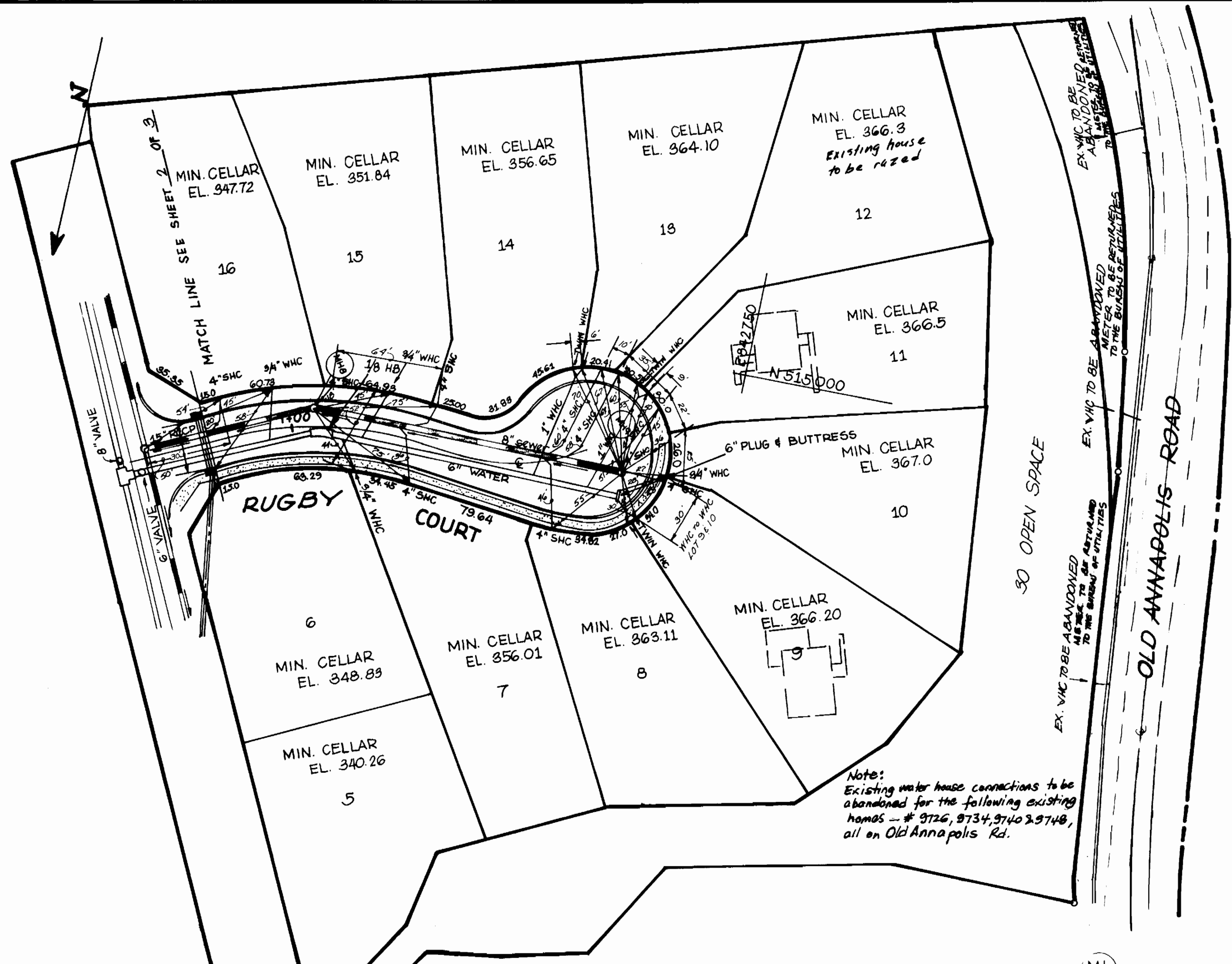
DESIGNER	DATE	REVISION	DATE
M.L.L.	6/20/90	DELETED THE STORM DRAINAGE PIPE FROM THE PROFILE LABEL OLD ANNAPOLIS RD	6/20/90
R.F.	6/20/90	DROPPED INLET/OUTLET PIPE AT MH-11 BY 1.00 FT	7/18/90
M.L.L.			
DATE	4/6/90		

PLAN AND PROFILE OF WATER AND SEWER MAIN
CONTRACT 24-3005-D
600' SCALE MAP NO. 30

AS-BUILT
COMPLETED 7-16-91

BRIARCLIFFE LOT 1-31
2nd ELECTION DISTRICT
HOWARD COUNTY MARYLAND
CONTRACT NO. 24-3005-D

SCALE AS SHOWN
SHEET 2 OF 3



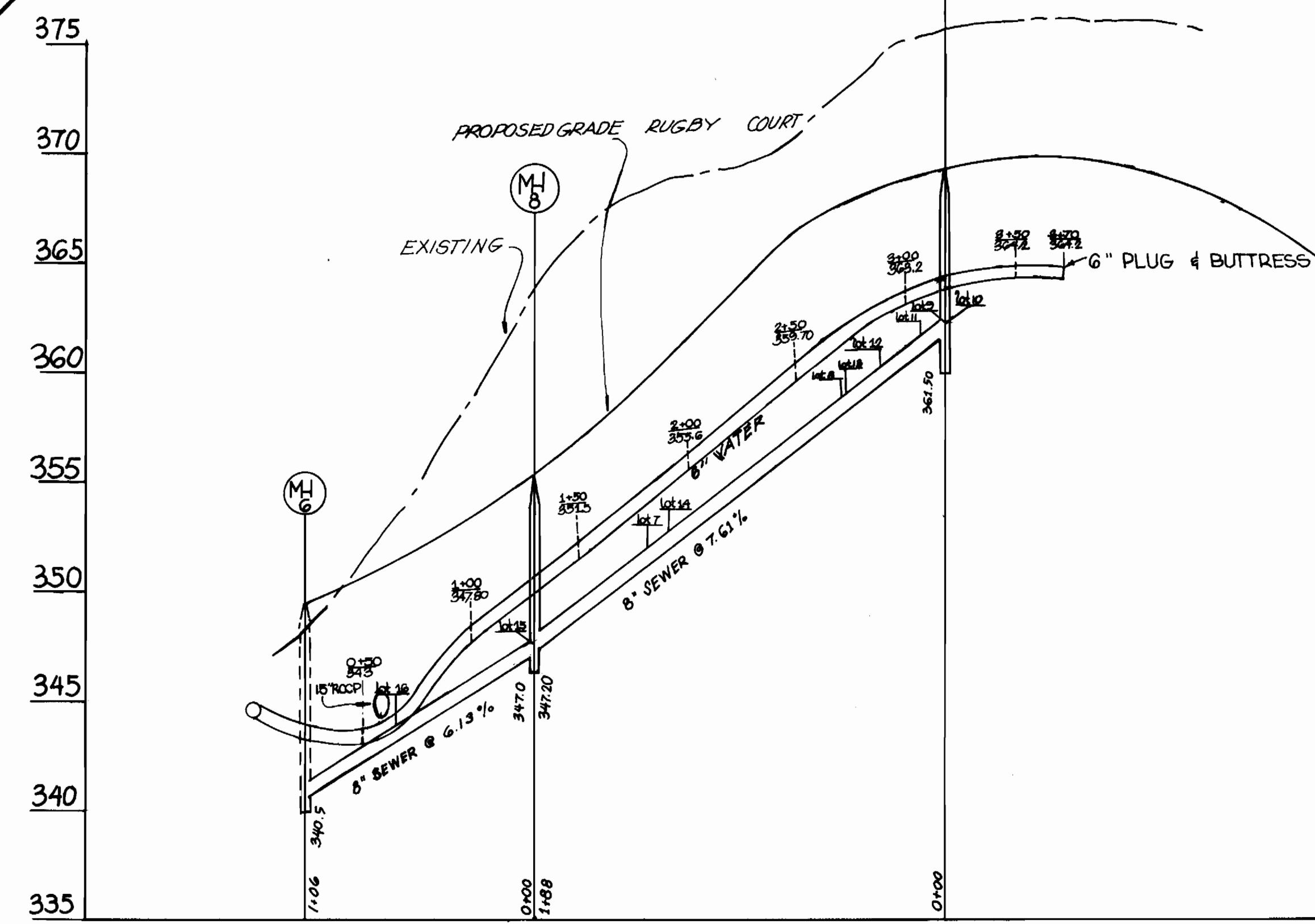
SEQUENCE OF CONSTRUCTION

1. Clear and Grub for installation of sewer lines.
2. Install Sediment Control devices.
3. Place Sewer lines.
4. Backfill & Stabilize all disturbed areas.
5. Remove Sediment Control devices.

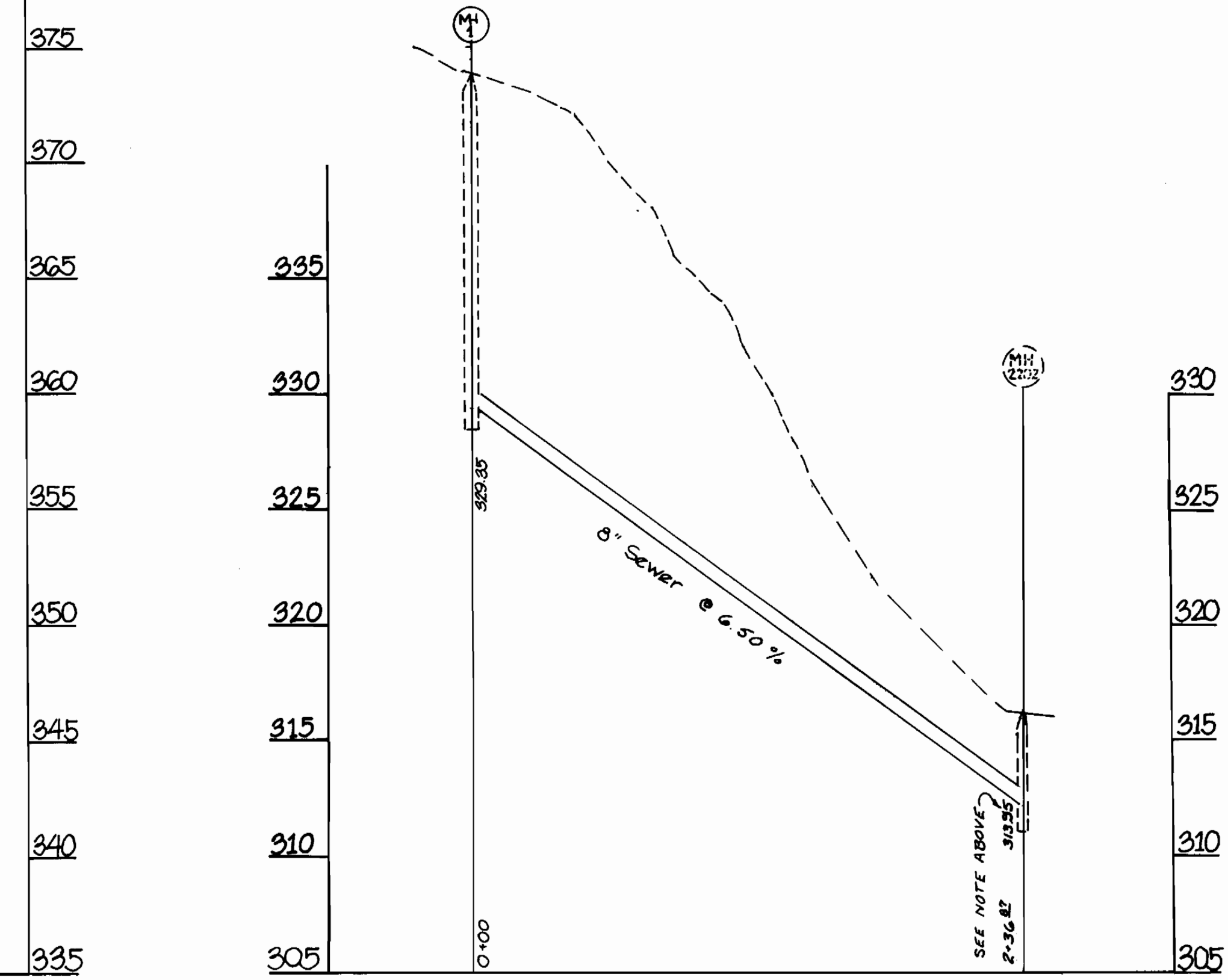
GENERAL NOTES ON CONSTRUCTION WITHIN DEPARTMENT OF RECREATION AND PARKS PROPERTY

1. The fence that is required along the sides of the temporary construction strip shall be a 6 foot high orange-color plastic mesh construction fence. It is to be staked at 10 foot intervals to metal posts, and not attached to existing trees. The fence is to be removed after construction.
2. The disturbed ground is to be restored, reseeded, and left in good condition.
3. Care should be taken to minimize damage to the bark and the root systems of the 24" Oak and 26" Poplar trees that are at the outside edge of the construction strip. They should be outside the construction fence and compaction of soil at their base should be avoided.

SEWER HOUSE CONNECTION INVERTS AT PROPERTY LINE	
LOT	ELEVATION
6	336.74
7	352.01
8	358.91
9	362.10
10	362.90
11	362.10
12	360.20
13	359.40
14	352.45
15	347.54
16	340.98



WATER & SEWER PROFILE SCALE: 1" = 5' VERTICAL
 1" = 50' HORIZONTAL



SEWER PROFILE SCALE: 1" = 5' VERTICAL
 1" = 50' HORIZONTAL

AS-BUILT
 COMPLETED 7-16-91

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James J. ... 4/24/90
 DIRECTOR OF PUBLIC WORKS DATE

Robert ... 4/23/90
 CHIEF, BUREAU OF UTILITIES DATE

... 4-24-90
 CHIEF, BUREAU OF ENGINEERING DATE

... 4/23/90
 CHIEF, LAND DEVELOPMENT DIVISION DATE

loria engineering inc.
 Consulting Engineers - Land Planners - Surveyors
 3230 Bernany Lane, Suite 4, Ellicott City, Maryland
 301-465-0400

DES:		DELETED THE STORM DRAINAGE PIPE PROPOSED ON 24" CONCRETE PIPE	6/20/90
DRN:	RF		
CHK:			
REVISION			

PLAN AND PROFILE
 OF WATER AND SEWER MAIN

CONTRACT 24-3005 - D

600' SCALE MAP NO. 30

BRIARCLIFFE, LOT 1-31
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 CONTRACT NO. 24-3005 - D

SCALE
 1" = 50'

SHEET
 3 OF 3