

PUBLIC WATER AND SEWER PLANS

ARBOR OVERLOOK

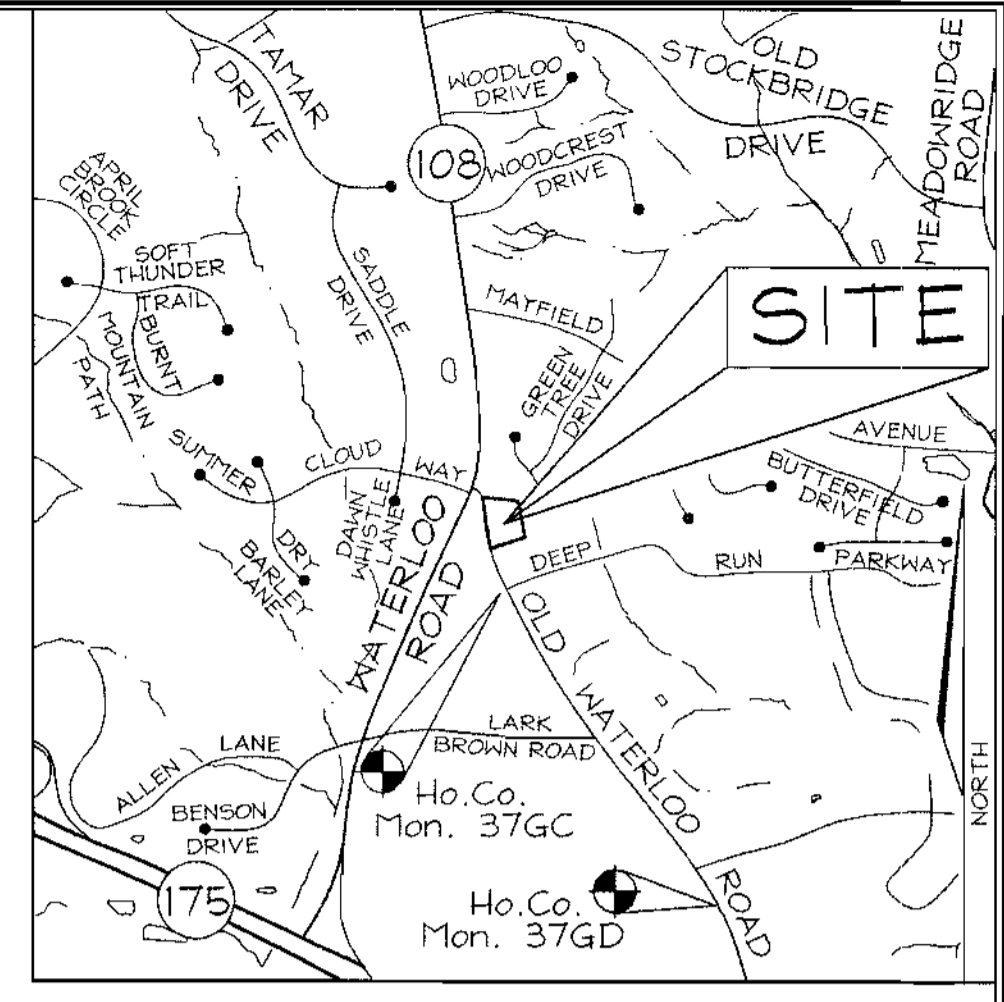
HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-3956-D

LOT #	LOCATION @ WATER LINE
1	Sta. 1+24
2	Sta. 1+47
3	Sta. 2+78
4	Sta. 2+63
5	Sta. 0+34
6	Sta. 0+43
7	Sta. 1+90

Lot #	Inv. @ Main	Inv. @ Easement	Min. Cellar El.
1	324.75	324.92	329.60
2	328.20	329.04	332.87
3	331.01	331.14	335.19
4	330.66	331.06	334.66
5	330.87	331.27	334.82
6	331.15	331.28	335.69
7	327.76	328.19	329.53

NOTE: All SHC at 2.0%



BENCHMARKS
 The coordinates shown hereon are based on the following Howard County Geodetic Controls which are based on the Maryland State Plane Coordinate system.

Control	37GC	N 169,240.7797	E 417,865.2828	El.: 101.1425 (meters)
		N 555,250.791	E 1,370,946.348	El.: 331.832 (feet)
Control	37GD	N 168,627.0373	E 418,294.2157	El.: 88.6734 (meters)
		N 553,237.204	E 1,372,353.605	El.: 290.923 (feet)

NAME OF UTILITY CONTRACTOR :				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
MANHOLE	3	3EA	PRECAST	FREDRICK PRECAST / FREDRICK PRECAST
8" SEWER	367 LF	367 L.F.	SDR-35	DIAMOND/HUGES
4" SHC	89 LF	89 L.F.	SDR-35	DIAMOND/HUGES
4" WATER	337 LF	337 L.F.	DIPOL-52	U.S. PIPE & FOUNDRY/HUGES
1" WHC	111 LF	112 L.F.	COPPER	HONELL METAL/HUGES
8"X12" TS&V	1	1EA	C 200	KEENEY VALVE/HUGES
8"X4" REDUCER	1	1EA	M. J.	TYLER/HUGES
4" CAP & BUTTRESS	2	2EA	M. J.	TYLER/HUGES
4"X4" TEE	1	1EA	M. J.	TYLER/HUGES
I Love You!				



PLAN VIEW
SCALE: 1"=600'

- GENERAL NOTES**
- PART I - GENERAL**
- 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 (NAVD 88).
 - All pipe elevations shown are invert elevations unless otherwise noted on the plans.
 - Clear all utilities by a minimum of 12". Clear all poles by 5'-0" minimum or tunnel as required unless otherwise noted. 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 drawing, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Details 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 [square with X] at the locations of the test pits. 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.
 - The Contractor shall notify the following utility companies or agencies at least five(5) working days before starting work shown on these plans:

State Highway Administration	410.531.5533
BGE (Contractor Services)	410.850.4620
BGE (Underground Damage Control)	410.291.4607
Miss Utility	1.800.257.7777
Colonial Pipeline Company	410.549.4120
Howard County, Dept. of Public Works, Bureau of Utilities	410.313.4900
Howard County Health Department	410.313.2640
Bureau of Utilities	410.313.4900
Verizon	1.800.743.0033 / 410.224.9210
 - Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
 - The contractor shall remove trees, stumps and roots along the line of excavation. Payment for such removal shall be included in the unit price bid for the construction of the main.
 - The contractor shall notify the Bureau of Highways, Howard County, at 410.313.2450 at least five (5) working days before any open cut of any County road or boring/jacking operation in County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 10.11(c) of the Howard County Code.
- PART II - WATER**
- All water mains to be D.I.P., Class 52 unless otherwise noted.
 - Tops of all water mains to have a minimum of 3'-6" 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 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 restrained and buttressed with concrete in accordance with Standard Details. The soil around the fire hydrant shall be compacted in accordance with Section 1000 and Section 1005 of the Standard Specifications.
 - The Contractor shall not operate any water main valves on the existing water system.
 - All water house connections shall be for inside meter settings unless otherwise noted on the plans or in specifications.
 - For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 1' connection with a 3/4" meter.
- PART III - SEWER**
- All sewer mains shall be D.I.P. or P.V.C. unless otherwise noted.
 - 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 & covers, Standard Detail G-5-52, where watertight manhole frames and covers are 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.
 - The Contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS AND WITH ROAD CONSTRUCTION PLANS F-02-109

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

John R. Robertson 11/12/02
 SOIL CONSERVATION DISTRICT DATE

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

Jim Maguire 11/12/02
 DATE

TYPE OF BUILDING:	Single Family Dwelling
NO. OF LOTS/PARCELS:	7
NO. OF WATER HOUSE CONNECTIONS:	7
NO. OF SEWER HOUSE CONNECTIONS:	7
DRAINAGE AREA:	LITTLE PATUXENT RIVER
TREATMENT PLANT:	LITTLE PATUXENT RIVER

WATER # SEWER COUNTY CODE	
WATER CODE:	005
SEWER CODE:	3400000
TEST GRADIENT:	7.00

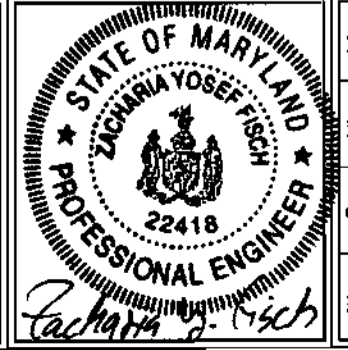
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Beaman 10-31-02
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

William 11/12/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FSH Associates
 Engineers Planners Surveyors
 8316 Forrest Street Ellicott City, MD 21043
 Tel: 410-750-2251 Fax: 410-750-7350
 E-mail: FSHAssociates@cs.com



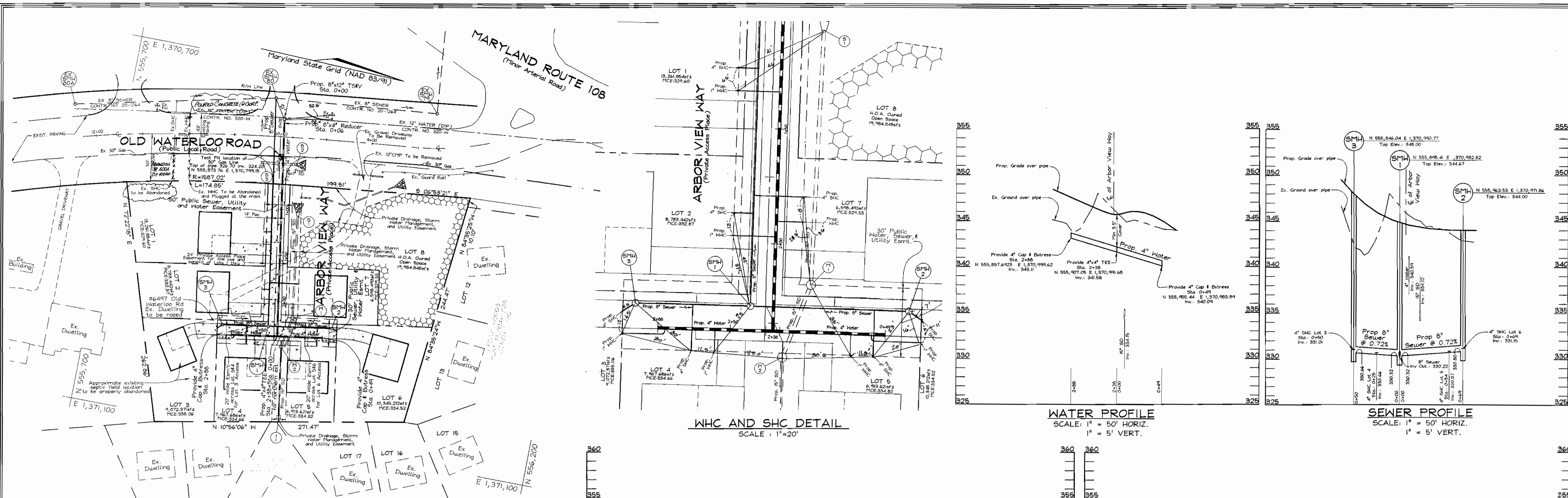
DESIGN BY:	PS		
DRAWN BY:	M2		
CHECKED BY:	ZYF		
DATE:	Oct. 23, 2002		
KCI	1	ASBUILT DATA ADDED TO PLAN	05/27/03
BY NO.		REVISION	DATE

**WATER AND SEWER
PLAN AND PROFILES**

600' SCALE MAP NO.: 37 BLOCK NO.: 20

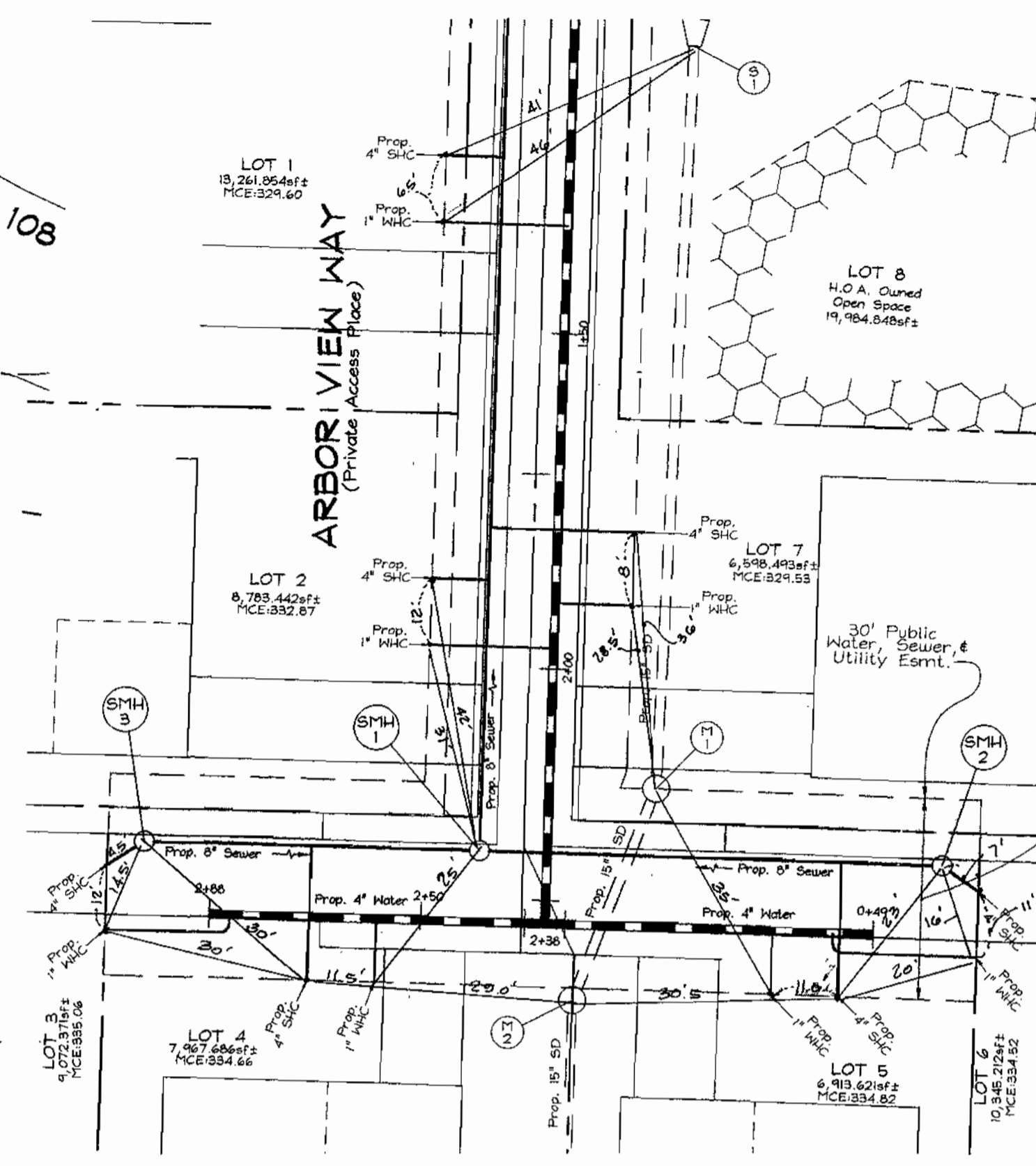
ARBOR OVERLOOK
 LOTS 1 THRU 7 AND OPEN SPACE LOT 8
CONTRACT NO. 24-3956-D
 TAX MAP 37 GRID 20 PARCEL 148
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET NO. 1 OF 2

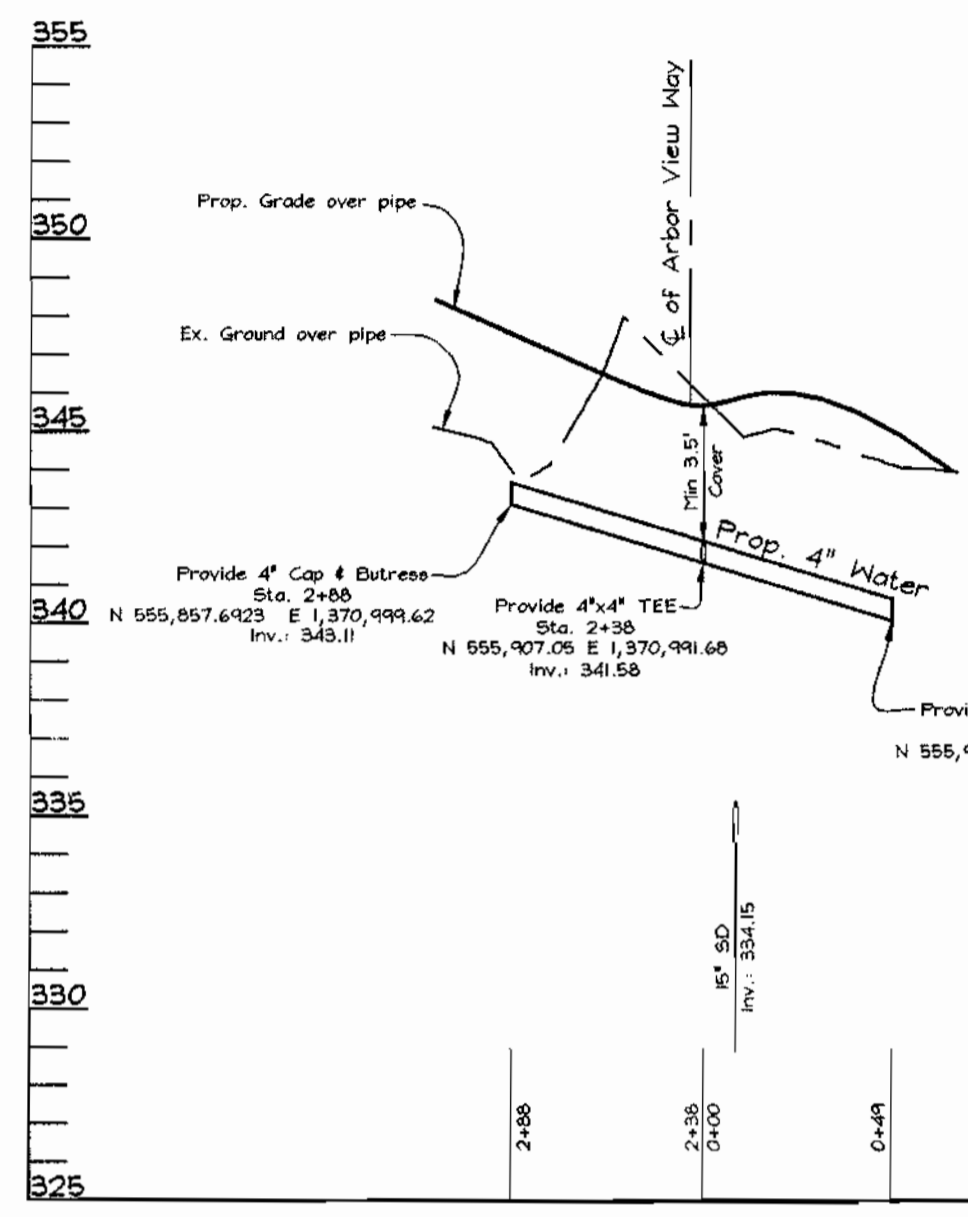


PLAN VIEW
SCALE: 1"=50'

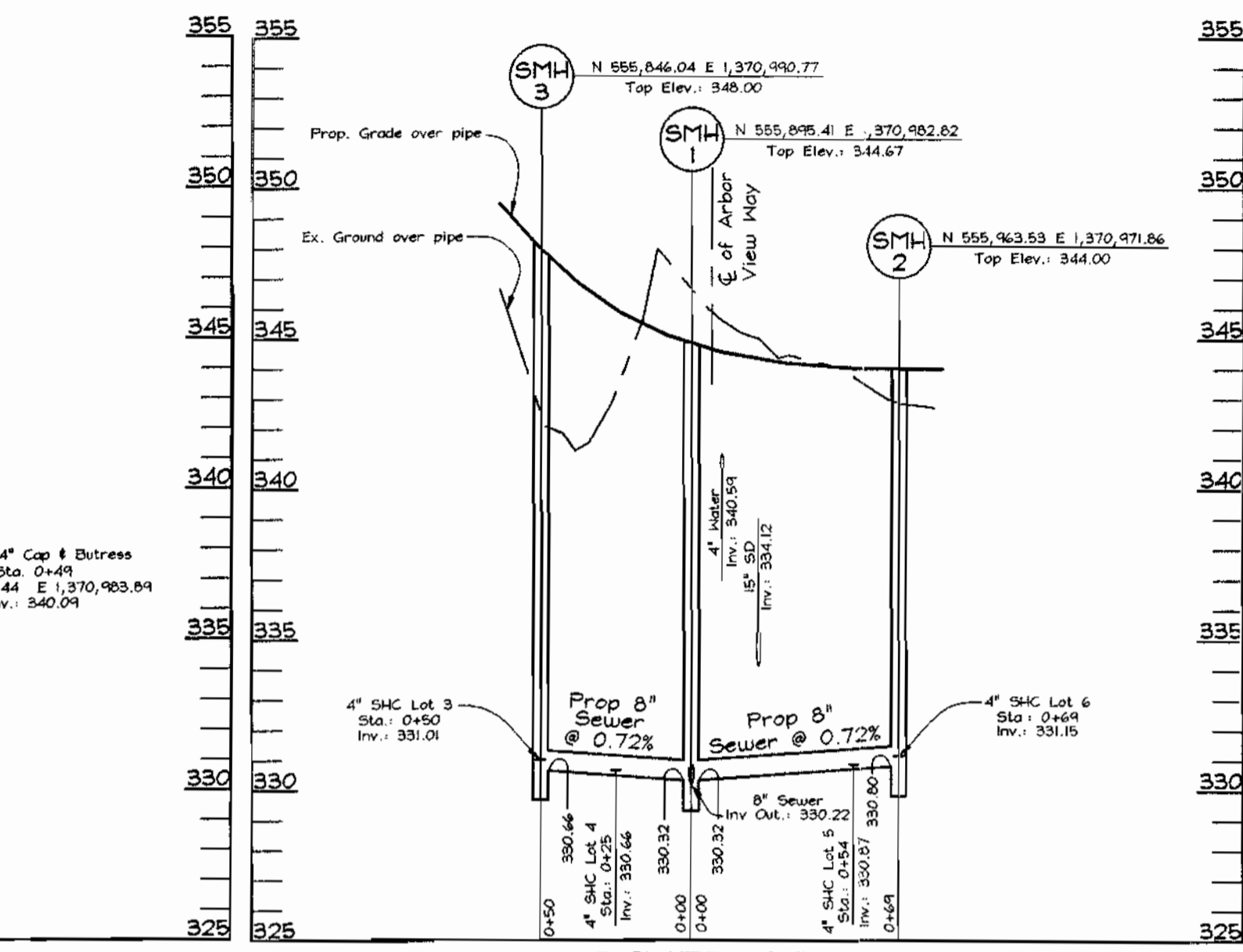
NOTE:
-All water meters to have an inside setting
-All Existing water main is D.I.P.
-For WHC's & SHC's See Detail this Sheet.



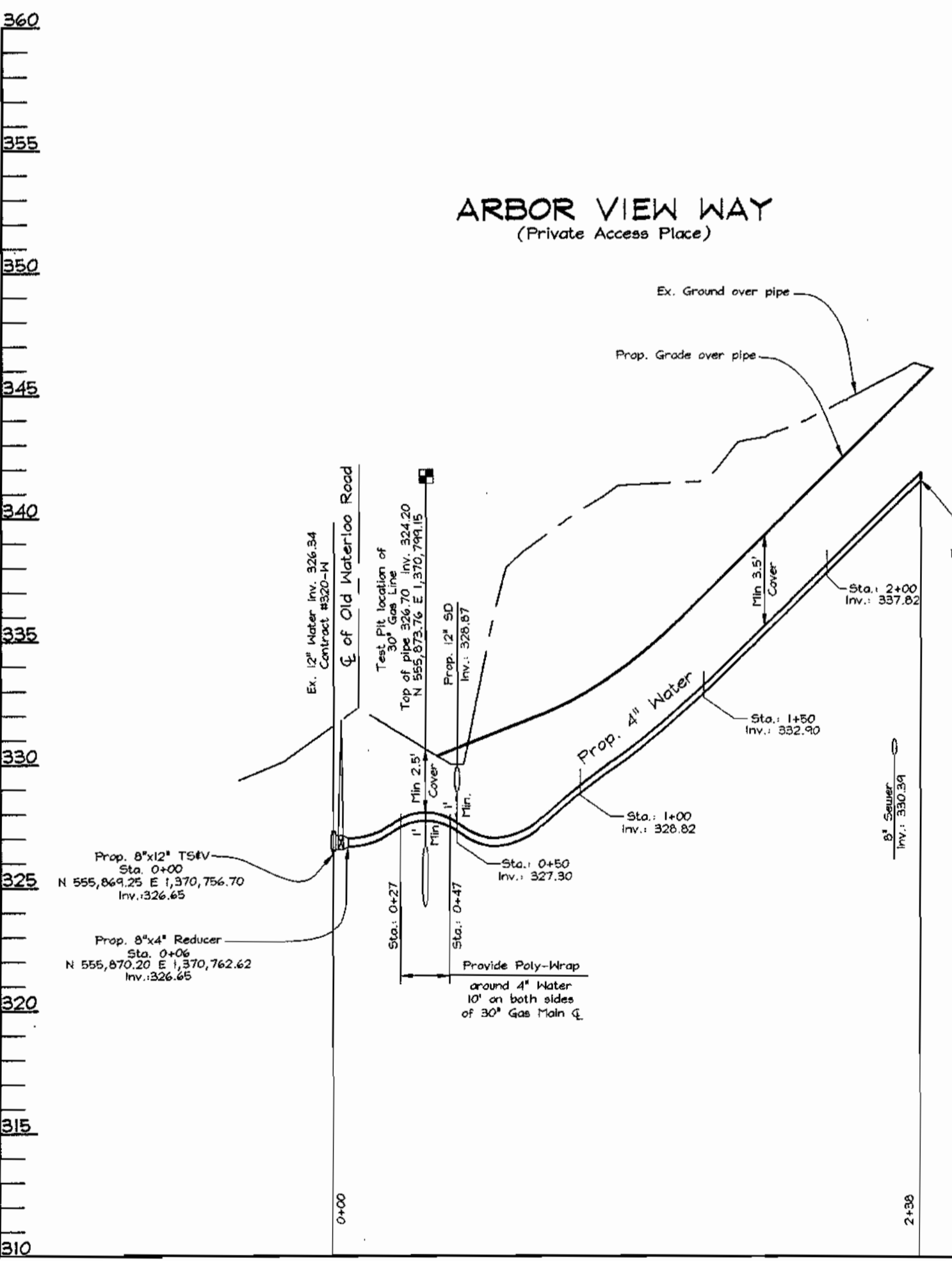
WHC AND SHC DETAIL
SCALE: 1"=20'



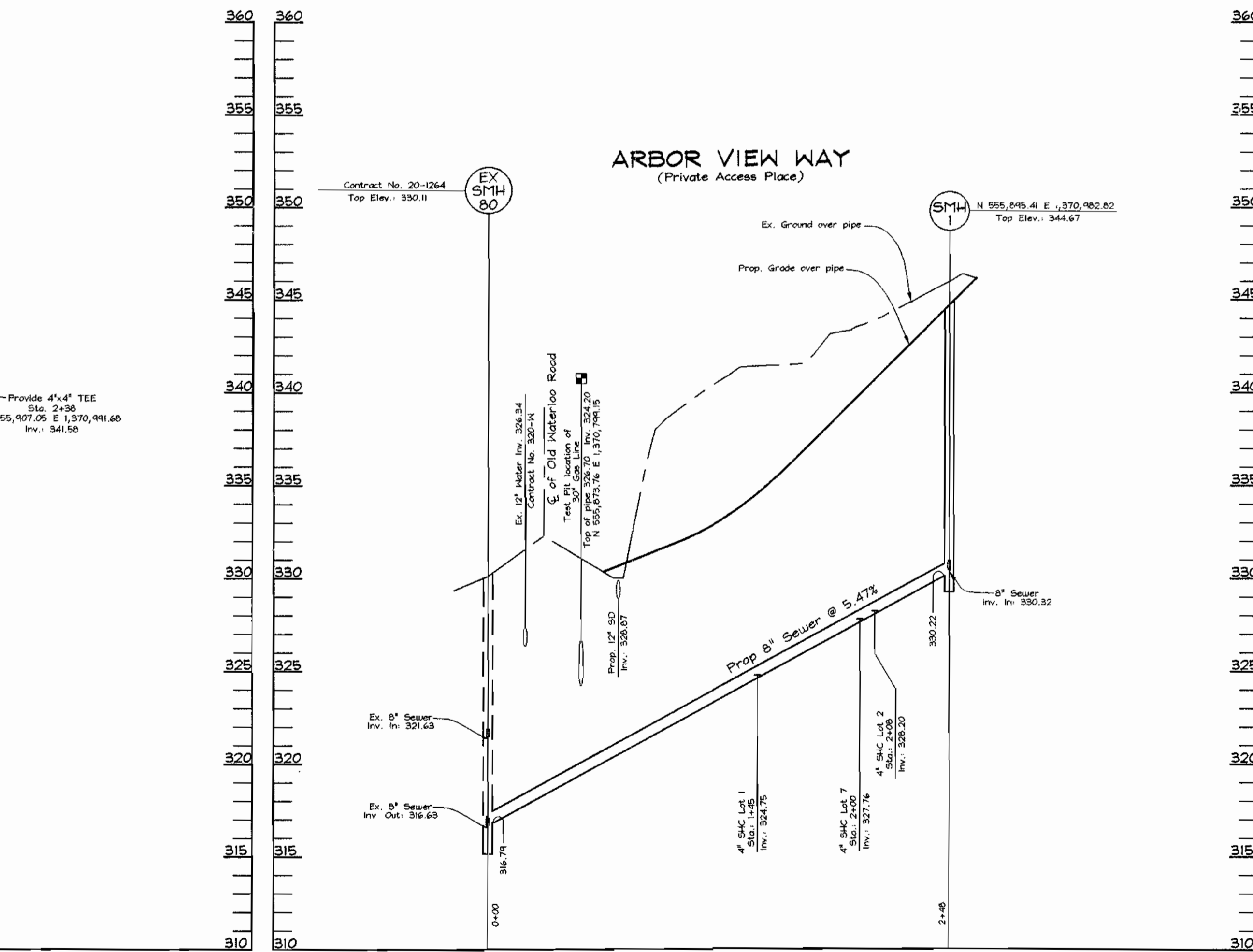
WATER PROFILE
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



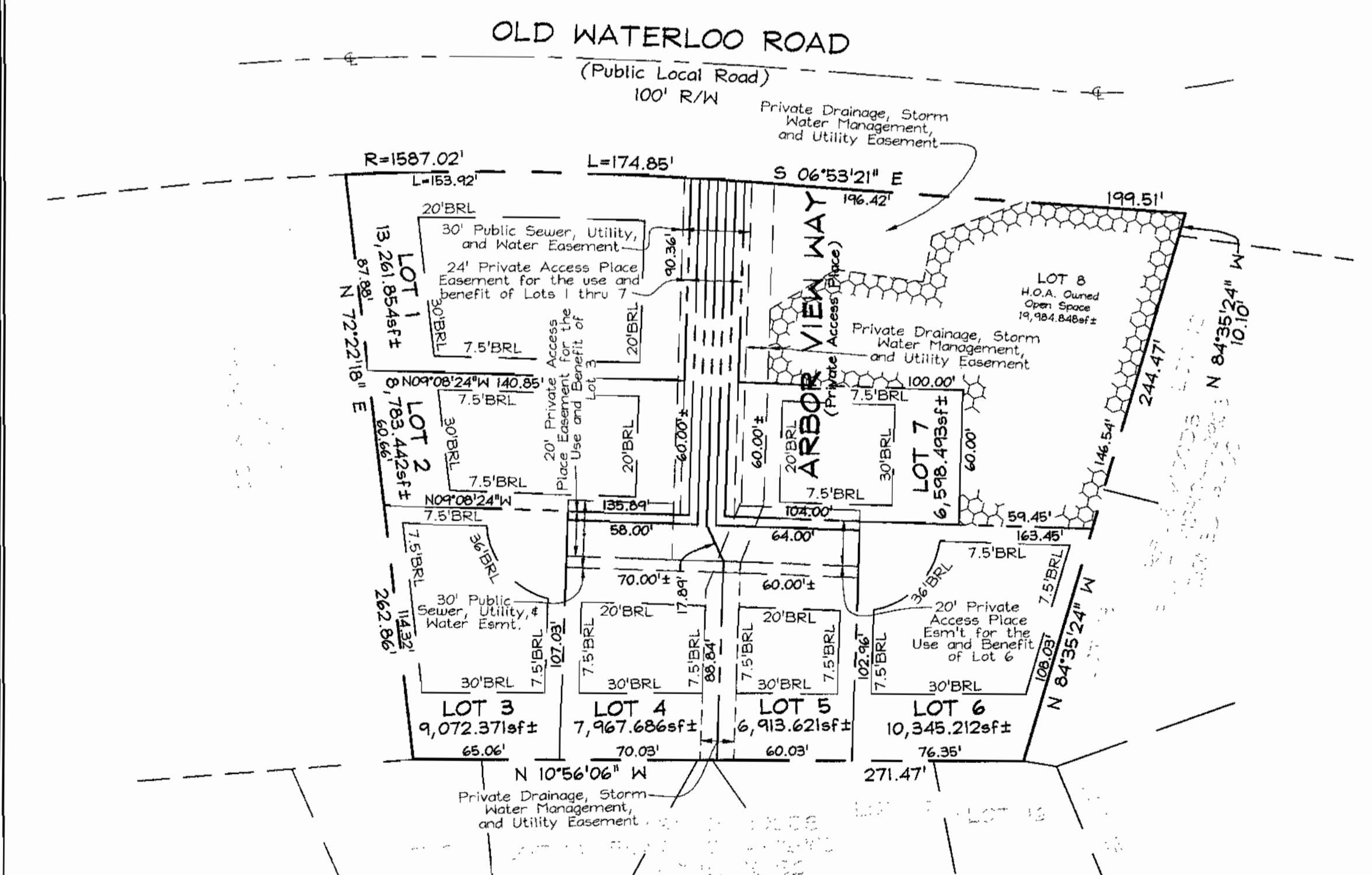
SEWER PROFILE
SCALE: 1" = 50' HORIZ.
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WATER PROFILE
SCALE: 1" = 50' HORIZ.
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SEWER PROFILE
SCALE: 1" = 50' HORIZ.
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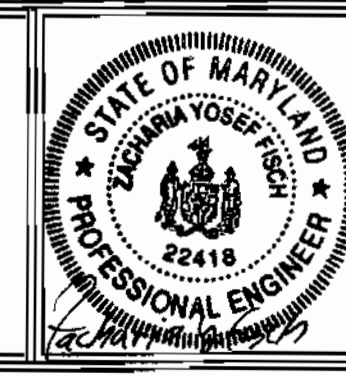


LOT DIMENSION DETAIL
SCALE: 1"=50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
10-31-02
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
11/14/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION

FSH Associates
Engineers Planners Surveyors
8318 Forrest Street, Ellicott City, MD 21043
Tel: 410-750-2251 Fax: 410-750-7100
E-mail: FSHAssociates@cs.com



DESIGN BY: PS	
DRAWN BY: M2	
CHECKED BY: ZYF	
DATE: Oct. 23, 2002	
BY NO.	REVISION
	DATE

**WATER AND SEWER
PLAN AND PROFILES**
600' SCALE MAP NO.: 37 BLOCK NO.: 20

ARBOR OVERLOOK
LOTS 1 THRU 7 AND OPEN SPACE LOT 8
CONTRACT NO. 24-3956-D
TAX MAP 37 GRID 20 PARCEL 148
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET NO. 2 OF 2