

# PUBLIC WATER AND SEWER PLANS

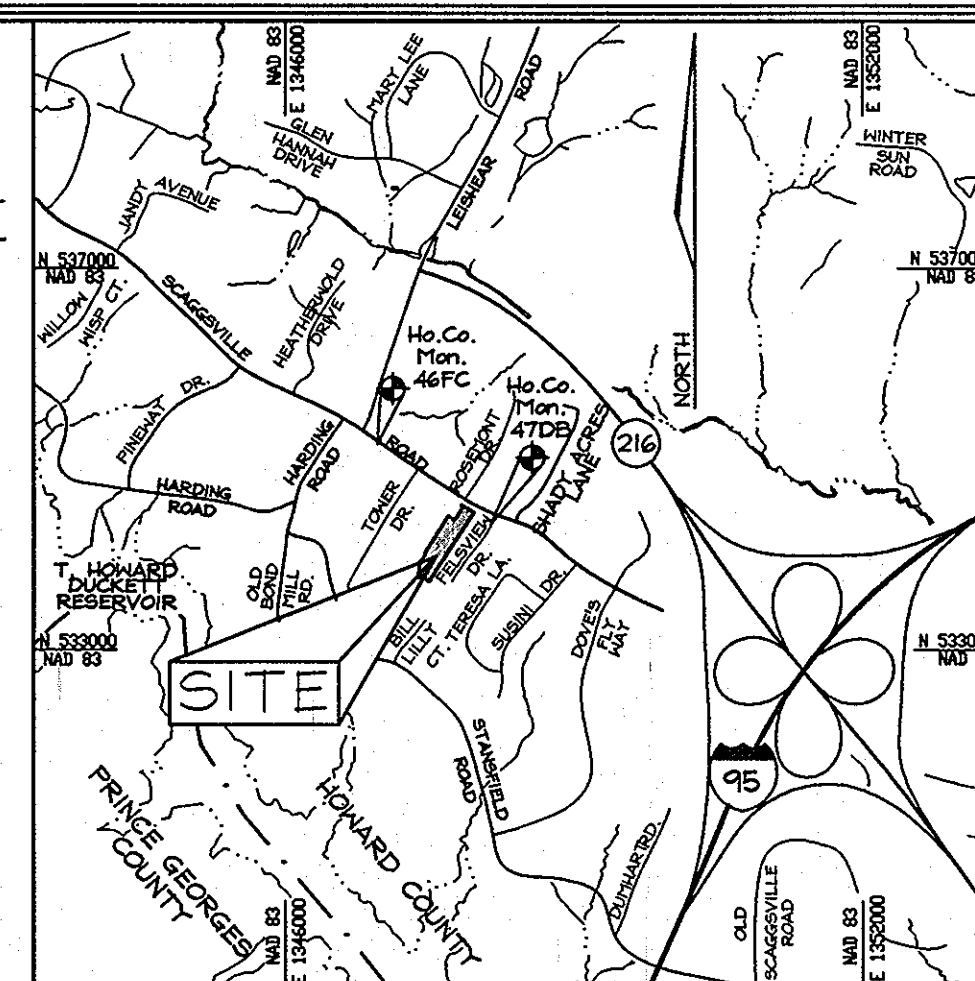
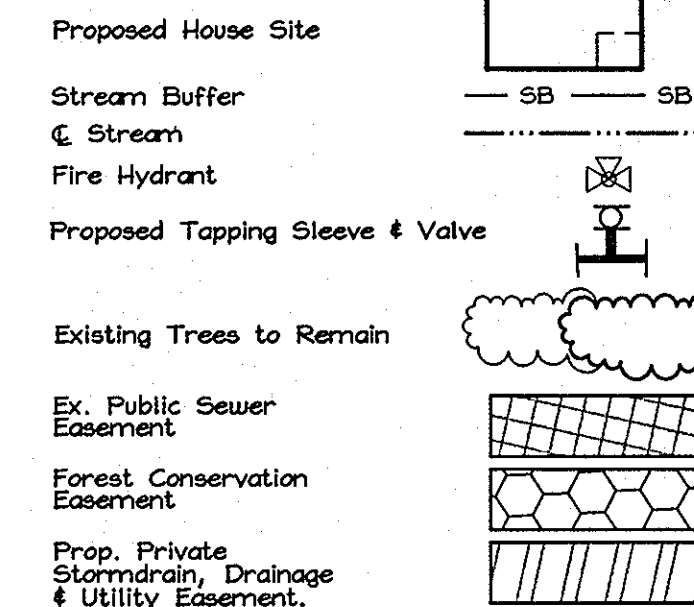
## THE HILLSIDE AT ROCKY GORGE VII

### LOTS 1 THRU 11

### HOWARD COUNTY, MARYLAND

## CONTRACT NO. 24-4464-D

#### LEGEND



VICINITY MAP  
SCALE: 1"=2000'  
ADC MAP 18 EB

#### BENCHMARKS

Howard County geodetic control stations: Denotes. (see Vicinity Map and General Note 3, this sheet).  
Sta. 47DB - N 534,316.933 E 1,348,131.274 E.L.: 398.56  
Sta. 46FC - N 535,145.945 E 1,346,954.043 E.L.: 403.75

#### GENERAL NOTES

##### PART I - GENERAL

- Approximate locations of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- Topography and existing utilities are based on a Field Run Topographic Survey prepared by C.B. Miller & Associates in November 2001.
- Survey Control:
  - Benchmark Locations are:
    - 46FC - 20.6' east from utility pole G4E #840720, 42' west of west (left) driveway gate post, and 15' north of the edge of Scaggsville Road.
    - 47DB - 3' southwest from the end of the curb of Feltaveu Drive, 18' southeast from a 4" Dogwood tree, and 33.1' east from an 8" cherry tree.
  - Horizontal Control is based on the Maryland State Reference System NAD83/91, per Control Stations 46FC and 47DB.
  - Vertical Control is based on the Maryland State Reference System NAD88, per Control Stations 46FC and 47DB.
- 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 the 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 monies 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 (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 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 working days before starting work shown on these Plans:
 

AT&T	1,800,252,1133
BGE (Construction Services)	410,850,4620
BGE (Emergency)	410,685,1400
Bureau of Utilities	410,313,4900
Colonial Pipeline Company	410,795,1390
Miss Utility	1,800,257,7777
State Highway Administration	410,531,5533
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 construction of the main.
- The Contractor shall notify the Bureau of Highways, Howard County, at 410,313,7450 at least five working days before open cutting or boring/jacking of any County road for laying water/sewer mains or house connections. The approval of these Drawings will constitute compliance with DPM requirements per Section 18.114(c) of the Howard County Code.
- Trees shall be set back 5' from all WHCs.

##### 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 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 restrained and buttressed with concrete in accordance with Standard Details. Soil around 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 the existing water system.
- All water house connections shall be for inside meter settings unless otherwise noted on the plans or in specifications.
- All WHCs shall be copper.
- THE WATER MAIN COVERED BY THIS CONTRACT SHALL BE PVC-C900.

##### PART III - SEWER

- All sewer mains shall be D.I.P. Class 52 or P.V.C. unless otherwise noted.
- The Contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
- Force mains shall be D.I.P. only.
- 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 & covers, Standard Detail #5-52. Where watertight manhole frame and cover is used, set top of frame 1" to 6" above finished grade unless otherwise noted on the drawings.
- House(s) with the symbol "C.N.S." indicates that cellar cannot be served.

QUANTITIES				
NAME OF UTILITY CONTRACTOR:				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:				
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
MANHOLE	5 EA.	5	Precast	Atlantic Concrete Products, Inc.
8" SEWER	351 L.F.	351 L.F.	SDR 35	HD Supply/North American
8" DIP SEWER	251 L.F.	251 L.F.	D.I.P. CL 52	HD Supply/US Pipe
4" SHC	161 L.F.	161 L.F.	SDR 35	HD Supply/North American
12" x 8" TAPPING SLEEVE AND VALVE	1 EA.	1		HD Supply/Ford Meter Box Kennedy Valve
8" WATER PVC-C900	771 L.F.	771 L.F.	C900	HD Supply/North American
1 1/2" WHC	155 L.F.	155 L.F.	Copper	HD Supply/Cambridge Lee
FIRE HYDRANT	2 EA.	2	C502	HD Supply/Kennedy Valve
8" CAP & BUTTRESS	1 EA.	1	Megalug	HD Supply/Ford Meter Box
PAVEMENT REPLACEMENT	10 SY.	10 SY.	2.5mm/19.0mm	

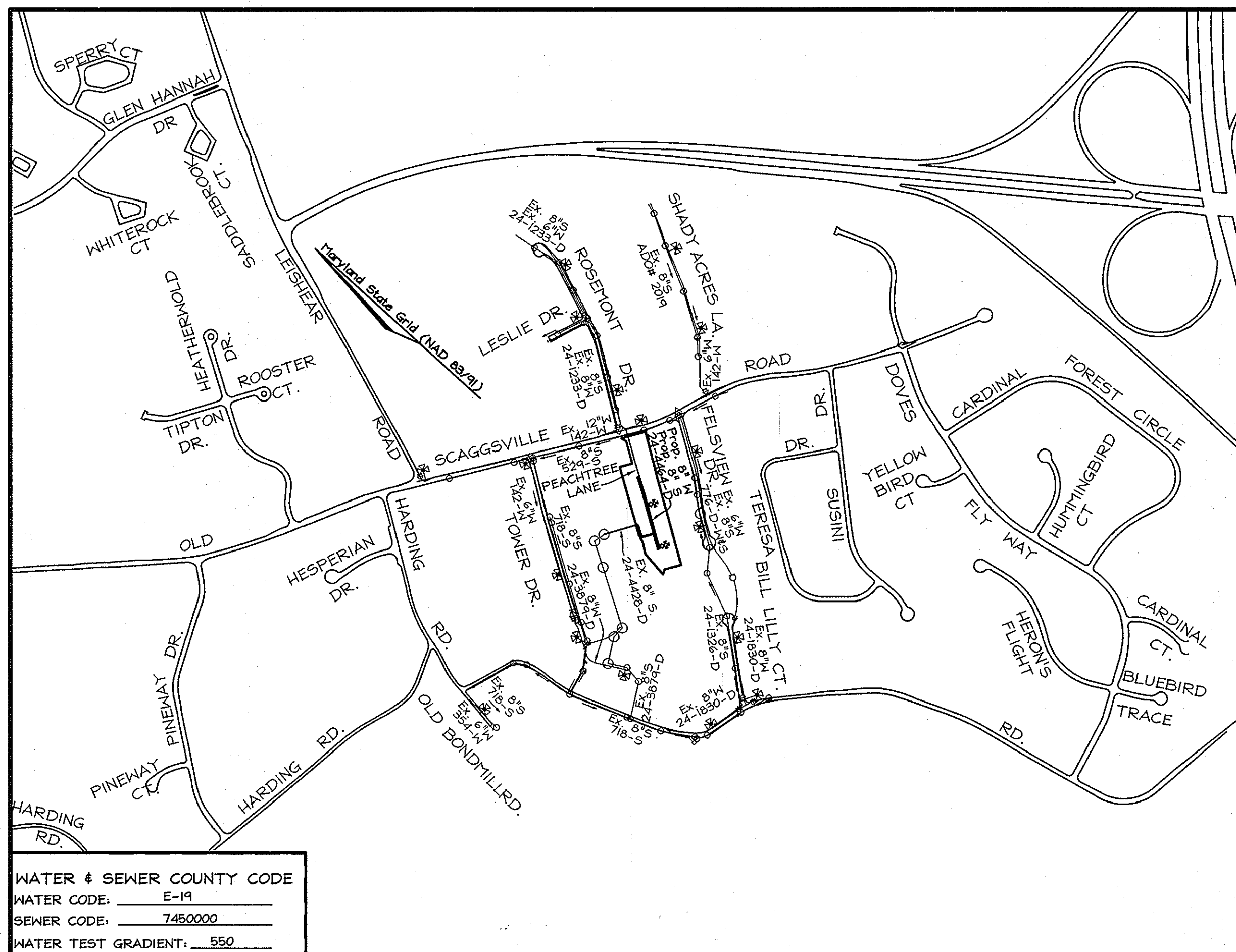
NAME OF UTILITY CONTRACTOR: Utilities Unlimited, Inc.  
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: 4-11-12

LOT FRONTAGE CHART	
Lot #	Total frontage along R/W
1	26.54'
2	2.67'
3	2.67'
4	2.67'
5	2.67'
6	2.67'
7	2.67'
8	2.67'
9	2.67'
10	106.55'

SHEET INDEX		
DESCRIPTION	SHEET No.	
Cover Sheet	1 of 3	
Water & Sewer Plan	2 of 3	
Water & Sewer Profiles	3 of 3	

AS-BUILT CHART					
WATER HOUSE CONNECTION (WHC) & SEWER HOUSE CONNECTION (SHC)					
UNIT #	LENGTH	TO	UNIT #	LENGTH	TO
1	40' to 3" MH-13	44' to Lot 1 SHC	1	44' to Lot 1 WHC	11' to SMH-13
2	32' to Lot 3 WHC	61' to SMH-12	2	14.5' to Lot 2 WHC	9.5' to SMH-12
3	31.5' to Lot 3 WHC	67' to FH @ Sta 4+87	3	83.5' to Lot 3 WHC	94.5' to SMH-12
4	10.5' to Lot 4 SHC	30.5' to 6" V @ Sta 7+56	4	27' to 6" V @ Sta 7+56	22' to SMH-14
5	18' to Lot 5 SHC	38' to SMH-14	5	48.5' to FH @ Sta 7+56	15' to Lot 5 WHC
6	20.5' to Lot 6 SHC	43' to SMH-11	6	20.5' to Lot 6 WHC	43.5' to SMH-11
7	20.5' to Lot 7 SHC	31.5' to Lot 3 WHC	7	42' to Lot 7 WHC	70.5' to Lot 1 WHC
8	23' to Lot 8 SHC	53.5' to SMH-12	8	24' to SMH-12	62' to FH @ Sta 4+87
9	42' to Lot 4 SHC	91' to Lot 1 WHC	9	23' to SMH-13	42' to Lot 4 WHC
* C.T.S. (STA 4+87)	13.5' to 6" V @ Sta 4+87	63' to SMH-12	* C.T.S. (STA 7+56)	22' to SMH-14	44' to Lot 4 WHC

Measurement #3	Measurement #2
31' to Lot 4 WHC	71' to FH @ Sta 4+87
14.5' to Lot 2 SHC	55.5' to SMH-10
42' to Lot 3 WHC	10.5' to Lot 4 WHC
41.5' to FH @ Sta 7+56	37' to SMH-14
38.5' to FH @ Sta 7+56	51' to Lot 4 WHC
51' to Lot 4 WHC	67' to SMH-11
64' to FH @ Sta 4+87	23' to Lot 8 WHC
32' to Lot 2 WHC	37' to Lot 4 SHC
47' to SMH-13	
60.5' to Lot 3 WHC	



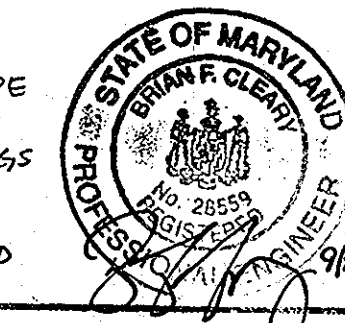
WATER & SEWER COUNTY CODE  
WATER CODE: E-19  
SEWER CODE: 7450000  
WATER TEST GRADIENT: .550

#### LOCATION PLAN

SCALE: 1"=600'

TYPE OF BUILDING:	Single Family Detached
NO. OF LOTS/PARCELS:	10
NO. OF WATER HOUSE CONNECTIONS:	9
NO. OF SEWER HOUSE CONNECTIONS:	9
SEWER SHED:	Little Patuxent
TREATMENT PLANT:	Patapsco

- PART II - WATER CONT.**
- TRACER WIRE AND CONTINUITY TEST STATION SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL.
  - FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORD RECEIVED.
  - UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUND SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.



Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 28559, Expiration Date: 7-22-13  
FOR REVISIONS BY BENCHMARK ENGINEERING, INC. ONLY.

**PROFESSIONAL CERTIFICATION**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 34684, Expiration Date: July 8, 2004.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 214 OF THE STANDARD SPECIFICATIONS AND WITH ROAD CONSTRUCTION PLANS F-07-77

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.  
*John R. Plutson* 11/19/07  
SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*[Signature]*  
U.S. SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

**FSH Associates**  
Engineers Planners Surveyors  
6339 Howard Lane, Elkridge MD 21075  
Tel: 410-587-5200 Fax: 410-796-1562  
E-mail: info@fsh.com

DESIGN BY: MLT  
DRAWN BY: HS  
CHECKED BY: ZYF  
DATE: Nov. 2, 2007

LEM 2	COMPLETED TABLES	6-29-12
BEI 1	CHANGE WATER MAIN TO PVC-C900	9-27-11
BY NO.	REVISION	DATE

FINAL WATER AND SEWER COVER SHEET  
600' SCALE MAP NO.: 46 BLOCK NO.: 18

**THE HILLSIDE AT ROCKY GORGE VII**  
LOTS 1 THRU 11  
A RESUBDIVISION OF LOT 2 THE HILLSIDE AT ROCKY GORGE V PLAT #16290 AND LOTS 1 & 2 THE HILLSIDE AT ROCKY GORGE VI PLAT #16520  
CONTRACT NO. 24-4464-D

SCALE: As Shown  
SHEET NO. 1 OF 3

TAX MAP 46 GRID 18  
6th ELECTION DISTRICT  
ZONED R-20  
PARCELS 92 and 149  
HOWARD COUNTY, MARYLAND

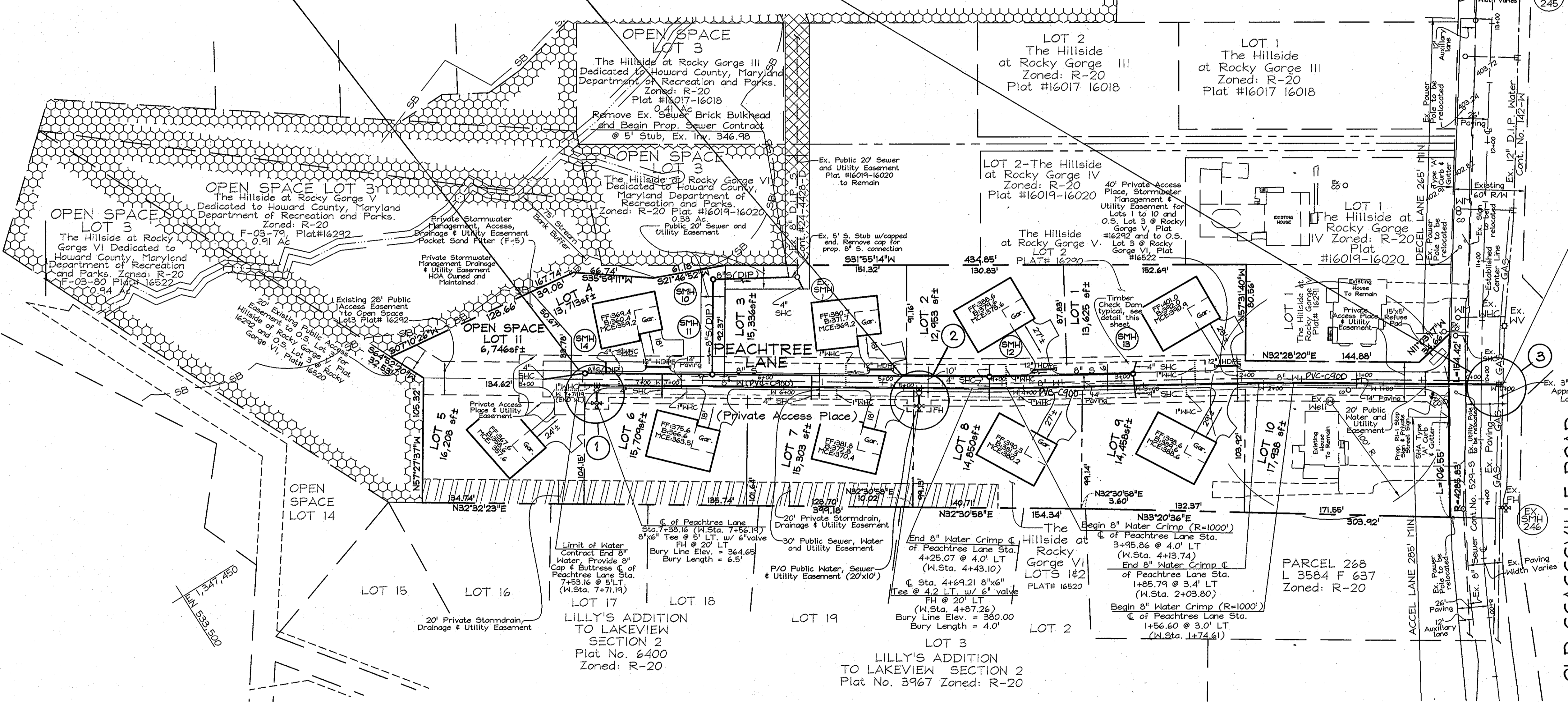
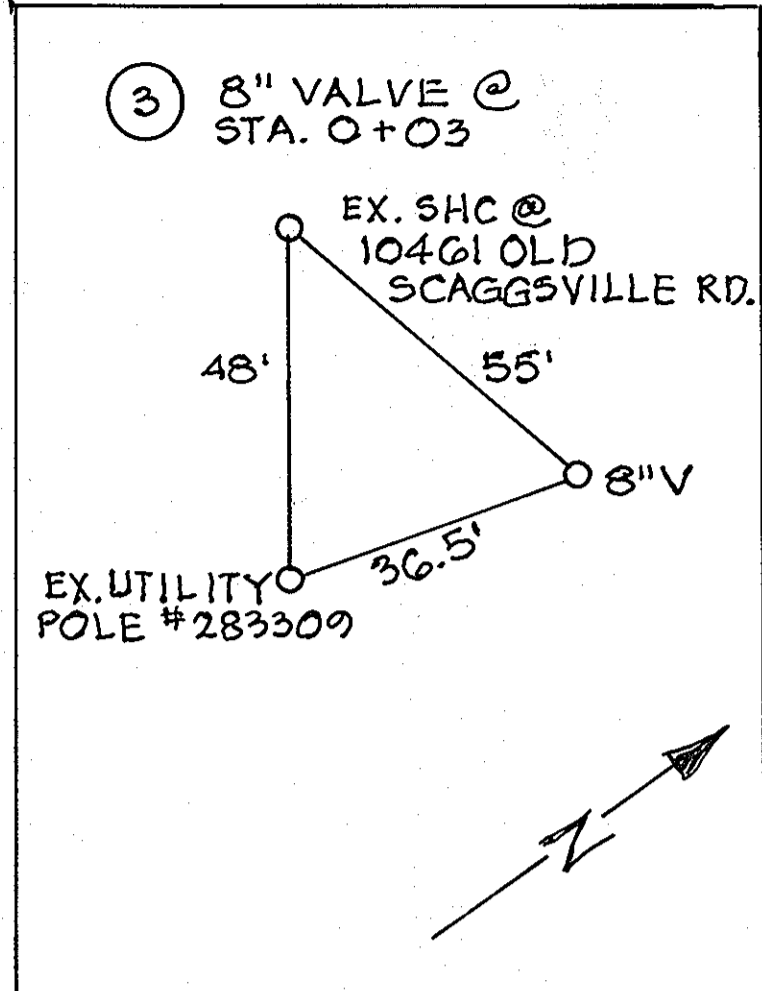
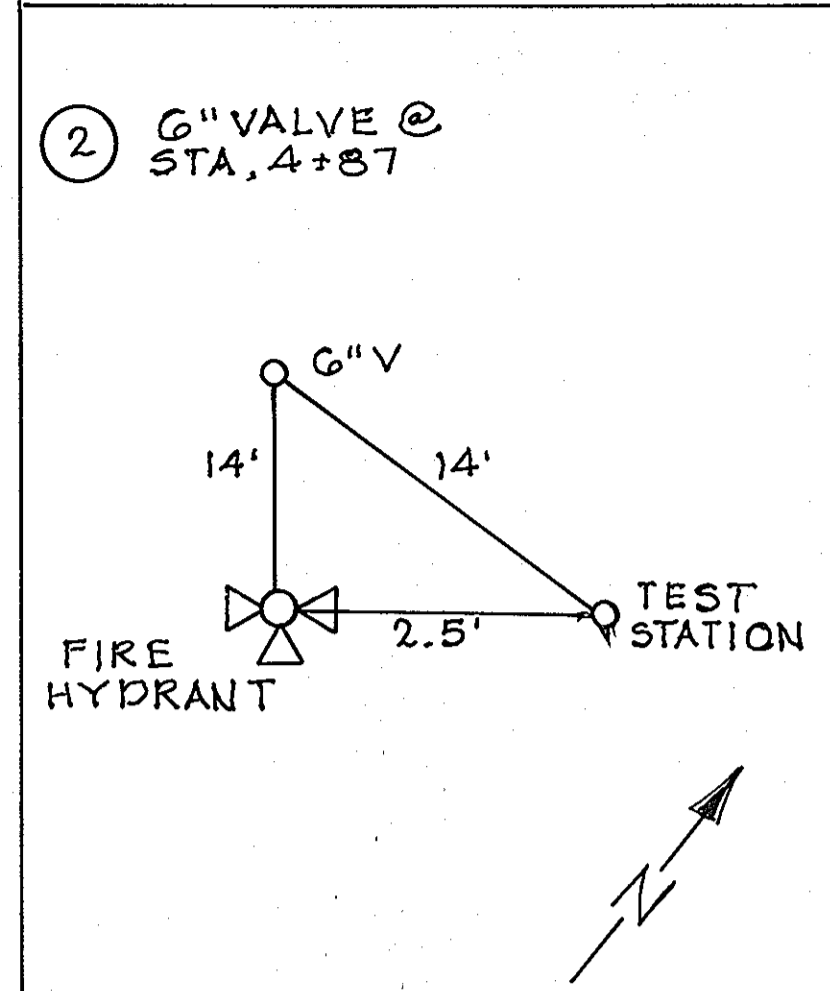
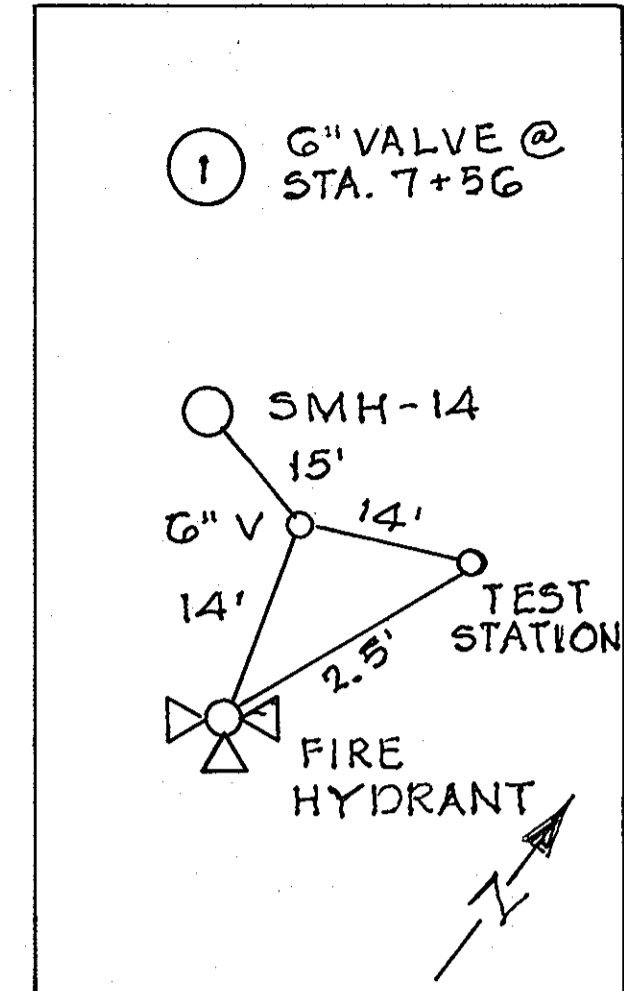
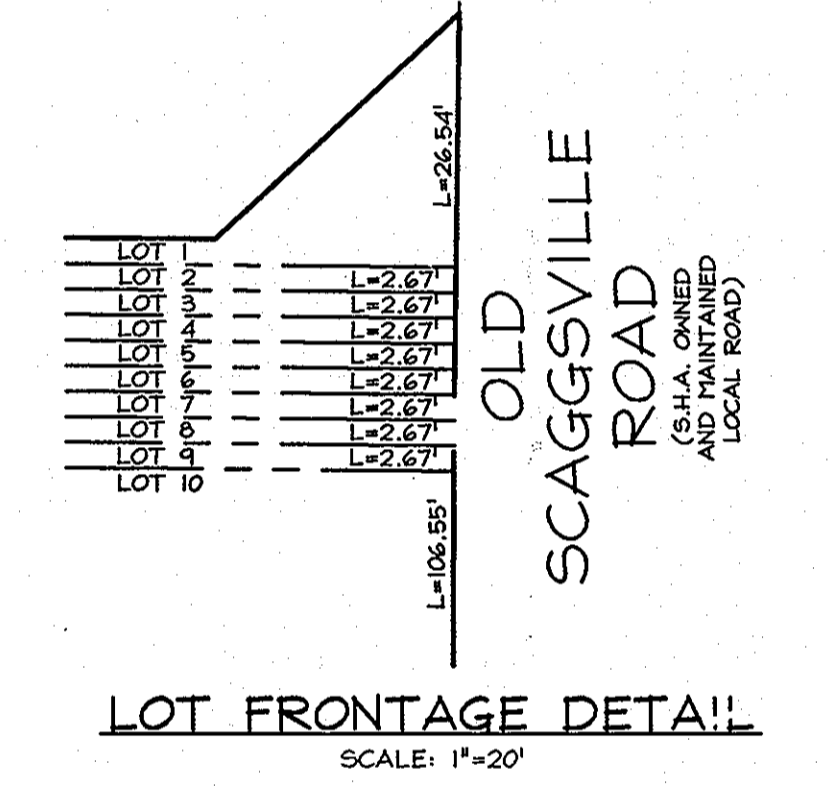
**OWNER/DEVELOPER**  
Scaggsville Road Investment, LLP  
c/o Paul Hinkle  
1501 Park Avenue  
Baltimore, Maryland 21217

Lot #	Station along Water Line	Offset from Water Line*
1	2+58.27	20.00' RT
2	4+14.44	20.00' RT
3	5+50.00	20.00' RT
4	7+57.76	20.00' RT
5	7+60.03	26.00' LT**
6	4+81.24	10.00' LT
7	5+56.00	10.00' LT
8	4+03.98	10.00' LT
9	2+64.27	10.00' LT

\*Note: All WHC's are extended to the easement line.  
\*\*See Plan View for Alignment of WHC Lot 5.

Lot #	Inv. @ Main	Inv. @ Esmt.	Basement	MCE
1	386.20	386.41	392.00	390.90
2	372.81	373.01	374.60	377.20
3	358.90 (D.H.C.)	359.13	371.70	360.80
4	357.00 (D.H.C.)	357.20	360.40	354.20
5	352.20	352.91	358.60	357.80
6	360.50 (D.H.C.)	360.90	366.60	365.30
7	365.67	366.07	372.80	370.60
8	375.40	375.80	381.30	380.30
9	383.50	383.90	389.60	388.60

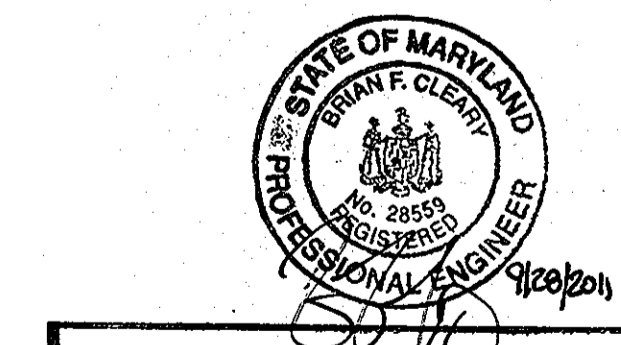
MH #	Station	Offset	Type
SMH 10	N 834,016.32	E 1,347,468.54	STD 4'-0" MH (Ho.Co. Std. Det. G-5.12)
SMH 11	6+41.87	5.13' RT	STD. 4'-0" MH (Ho.Co. Std. Detail G-5.12) w/ Type 'B' Drop Conn. (Detail S-1.32) & Intermediate Landing (G-5.16)
SMH 12	4+10.62	6.0' RT	STD 4'-0" MH (Ho.Co. Std. Det. G-5.12)
SMH 13	2+40.55	6.0' RT	Type 'B' Drop MH (Ho.Co. Std. Det. S-1.32) & Intermediate Landing (G-5.16)
SMH 14	7+48.16	5.0' RT	STD 4'-0" MH (Ho.Co. Std. Det. G-5.12)



12"x8" Tapping Sleeve & Valve Scaggsville Road @ Sta. 9+97.1 @ 18' RT. (W.Sta. 0+00) (Note: The contractor shall locate the existing Gas Line prior to providing connection to the existing 12" water. Contractor shall ensure a minimum one foot clearance between water and gas crossing and one foot separation between the valve box and the existing gas line.)

Note: All sewer mains shown on this plan are public mains.  
CONTRACTOR SHALL FIELD VERIFY LOCATION AND DEPTHS OF EXISTING UTILITIES PRIOR TO CONNECTION OF 8" WATER MAIN.

**PROFESSIONAL CERTIFICATION**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 34689, Expiration Date: July 8, 2009.



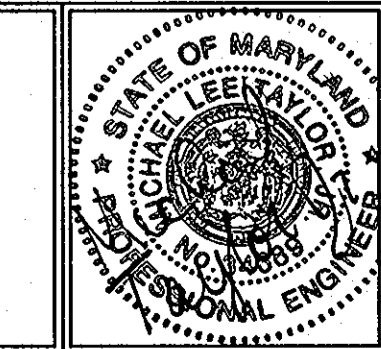
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License No. 28559, Expiration Date: 7-22-13  
FOR REVISIONS BY BEAUMARK ENGINEERING INC.

**OWNER/DEVELOPER**  
Scaggsville Road Investment, LLP  
c/o Paul Hinkle  
1501 Park Avenue  
Baltimore, Maryland 21217

DEPARTMENT OF PUBLIC WORKS  
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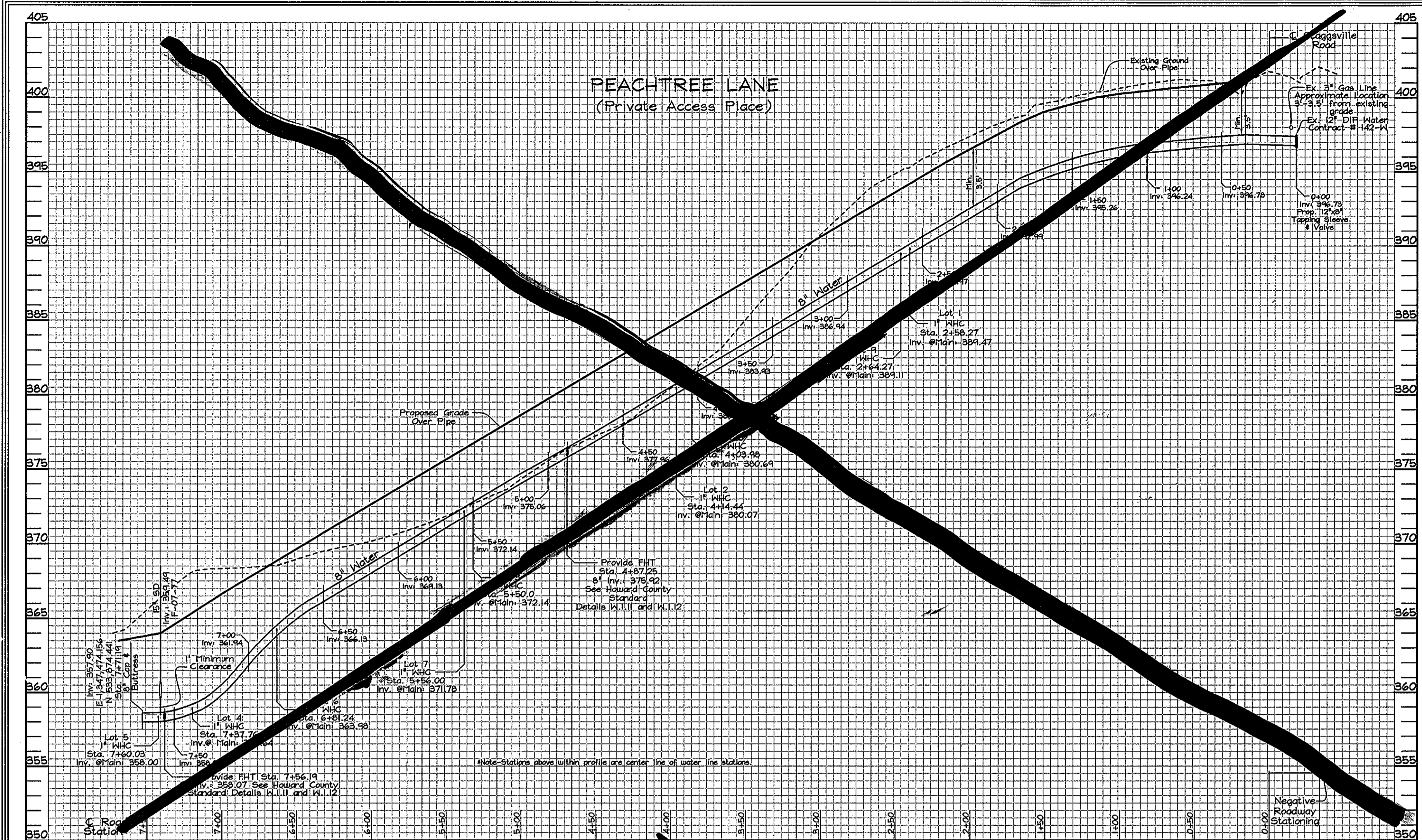


DESIGN BY:	MLT	
DRAWN BY:	HS	
CHECKED BY:	ZYF	
DATE:	Nov. 2, 2007	
LEM 2	ADDED SURVEY CONTROLS	6-29-12
BEI 1	CHANGE WATER MAIN TO PVC-C900	9-27-11
BY NO.	REVISION	DATE

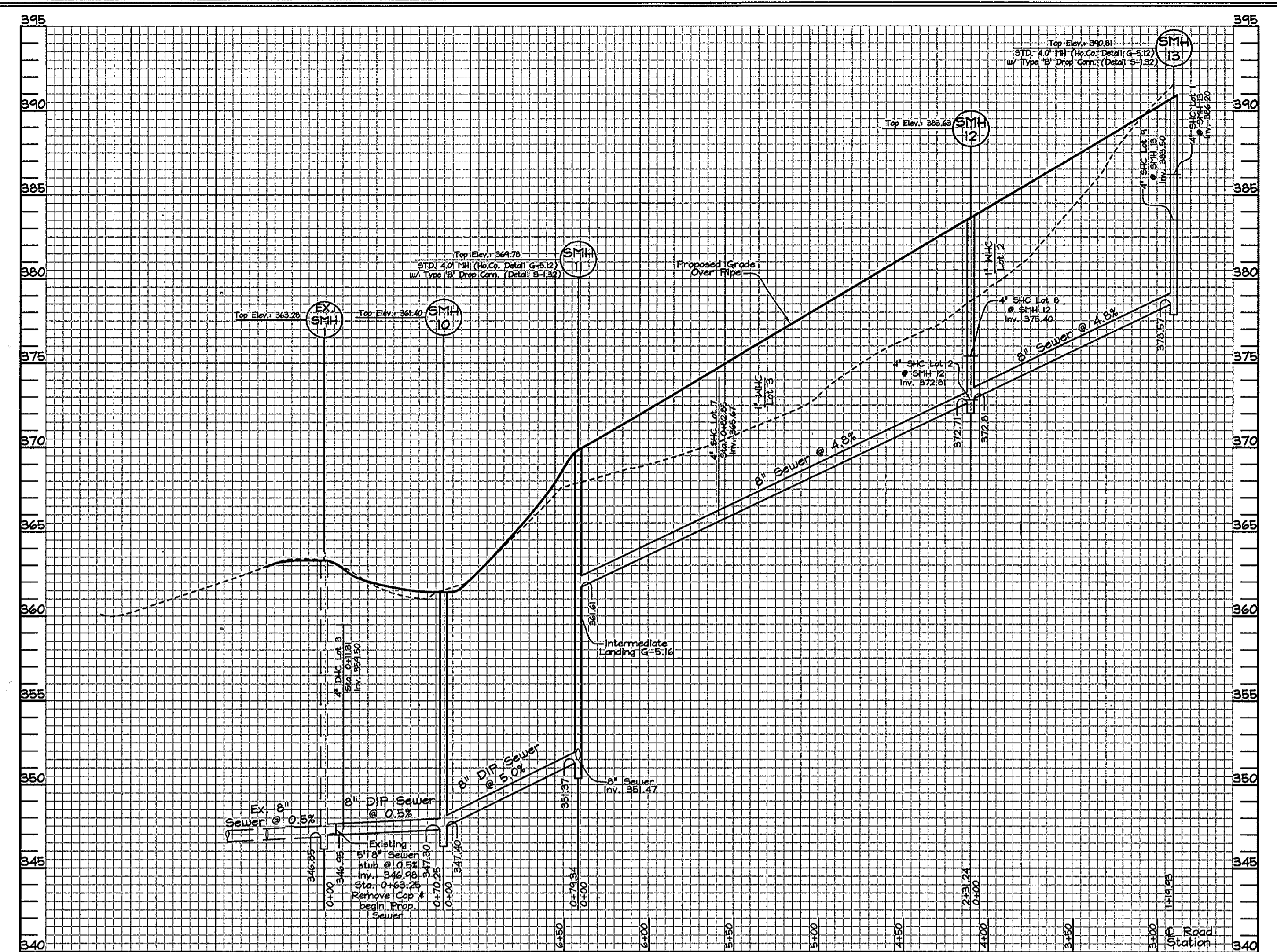
**FINAL WATER AND SEWER PLAN**  
600' SCALE MAP NO.: 46 BLOCK NO.: 18

**THE HILLSIDE AT ROCKY GORGE VII**  
LOTS 1 THRU 11  
A RESUBDIVISION OF LOT 2 THE HILLSIDE AT ROCKY GORGE V PLAT #16290 AND LOTS 1 & 2 THE HILLSIDE AT ROCKY GORGE VI PLAT #16520  
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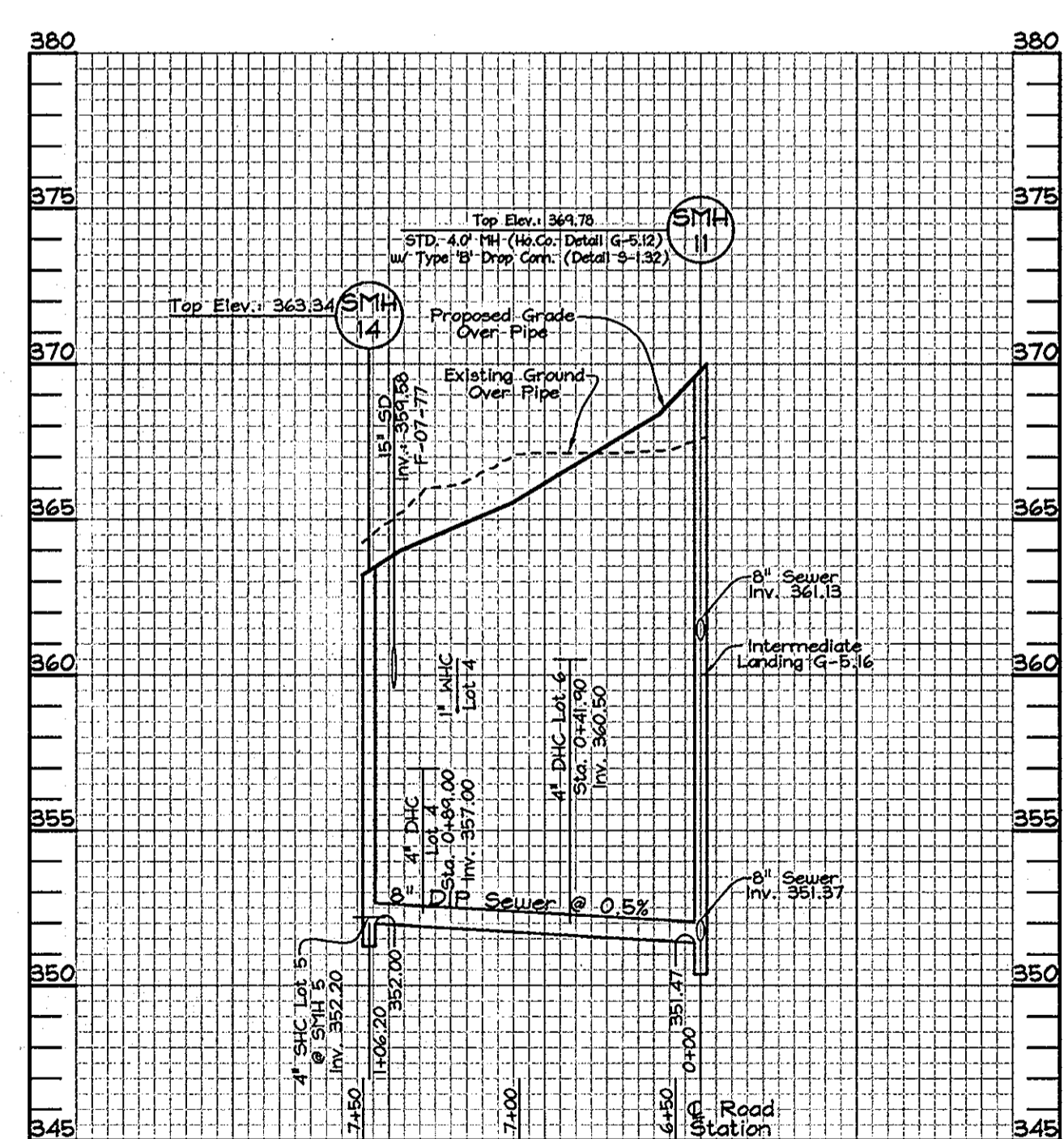
SCALE: As Shown  
SHEET NO. 2 OF 3



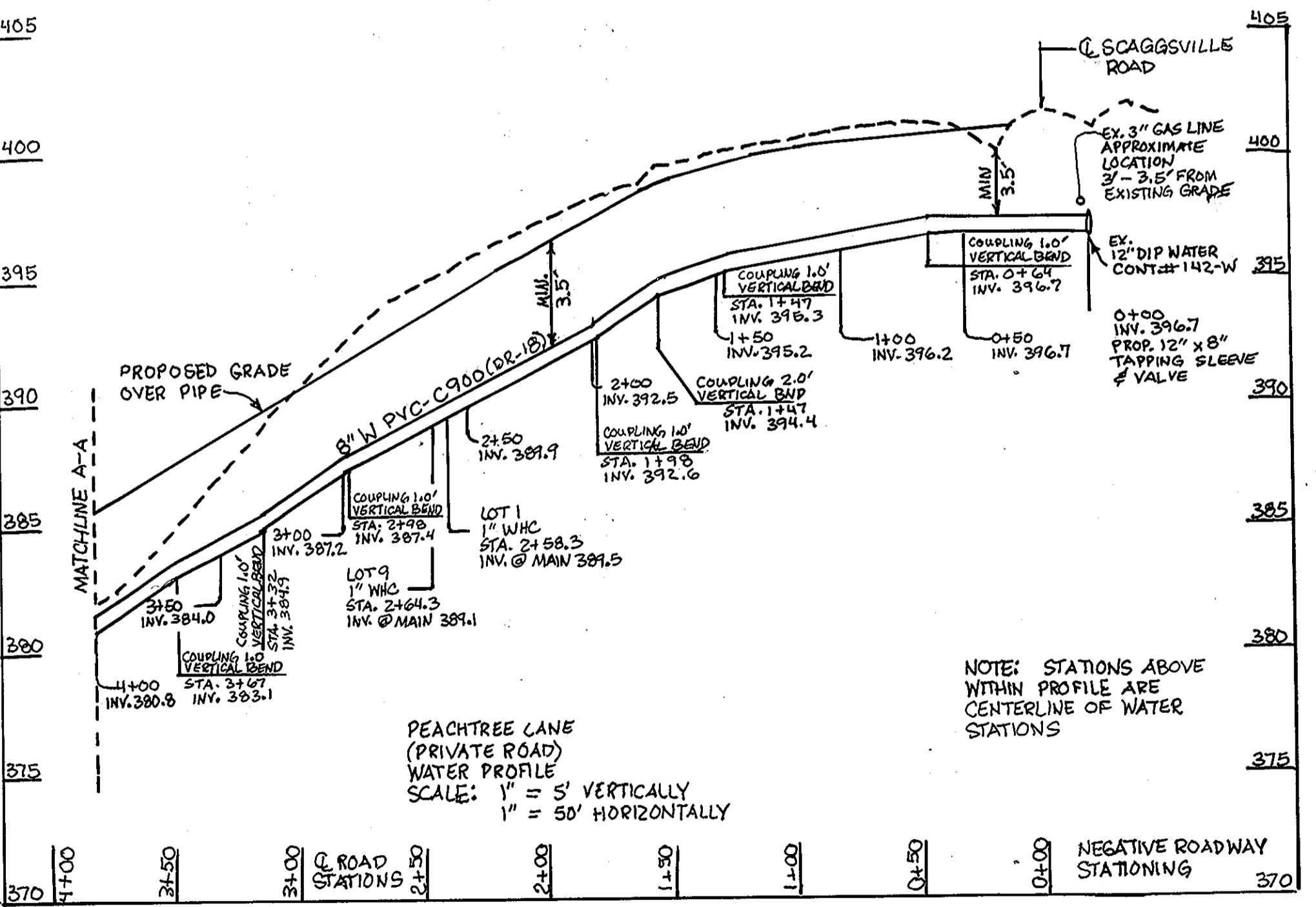
**WATER PROFILE**  
 Scale: Horizontal-1"=50'  
 Vertical-1"=5'



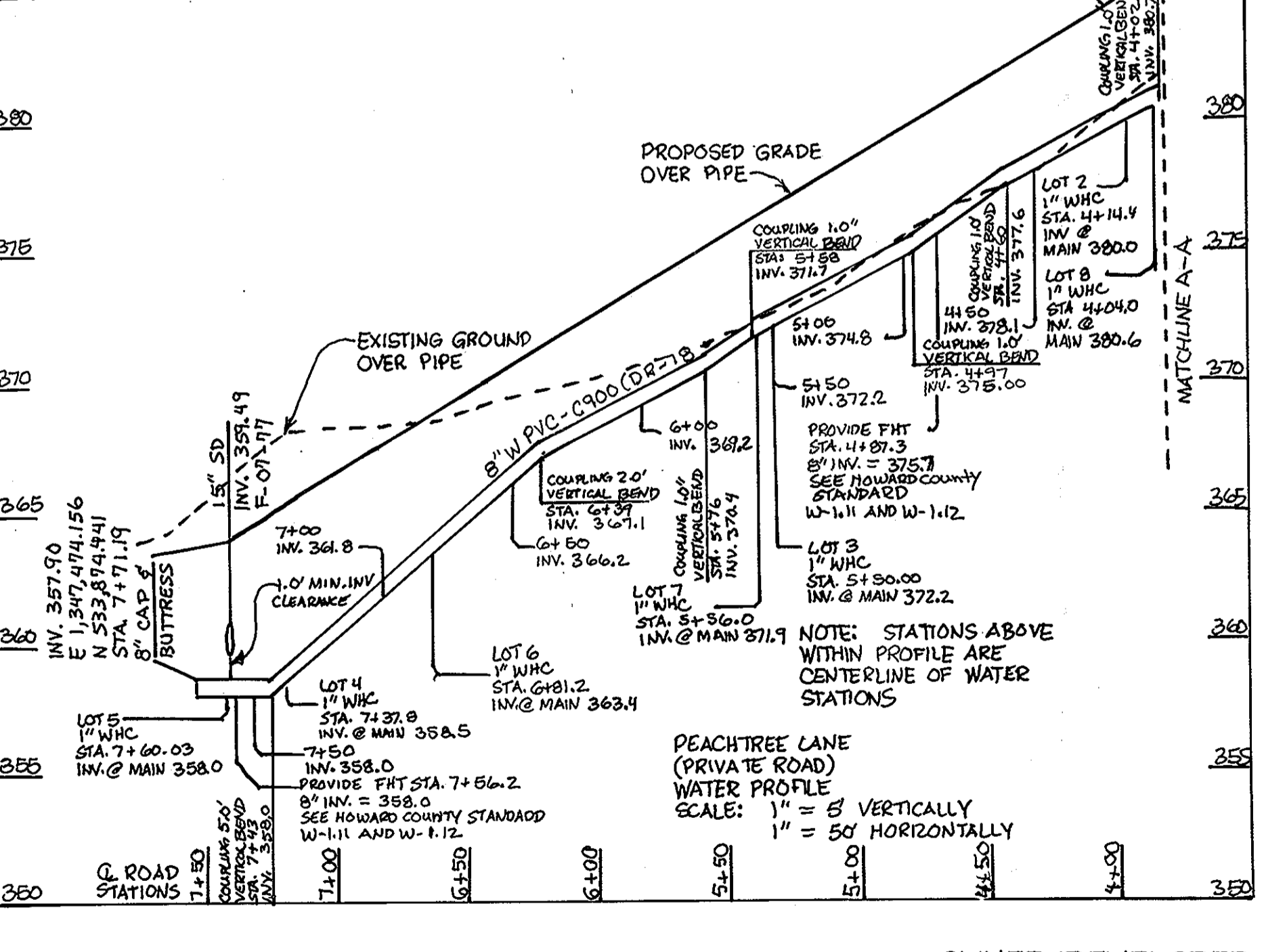
**SEWER PROFILE**  
 Scale: Horizontal-1"=50'  
 Vertical-1"=5'



**SEWER PROFILE**  
 Scale: Horizontal-1"=50'  
 Vertical-1"=5'



**PEACHTREE LANE (PRIVATE ROAD) WATER PROFILE**  
 Scale: 1" = 5' VERTICALLY  
 1" = 50' HORIZONTALLY



**PEACHTREE LANE (PRIVATE ROAD) WATER PROFILE**  
 Scale: 1" = 5' VERTICALLY  
 1" = 50' HORIZONTALLY

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DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 W. Michael A. Gorman  
 CHIEF, BUREAU OF UTILITIES  
 11/21/07 DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 11/21/07 DATE

**FSH Associates**  
 Engineers Planners Surveyors  
 6339 Howard Lane, Elkridge MD 21075  
 Tel: 410-567-5200 Fax: 410-796-1592  
 E-mail: info@fsh.com

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 [Signature]

DESIGN BY: MLT  
 DRAWN BY: HIGGAR  
 CHECKED BY: ZYF  
 DATE: Nov. 2, 2007

BET	NO.	REVISION	DATE
1	1	SHOW REVISED WATER PROFILES	9/27/11

**FINAL WATER AND SEWER PROFILES**  
 600' SCALE MAP NO.: 46 BLOCK NO.: 18

**THE HILLSIDE AT ROCKY GORGE VII**  
 LOTS 1 THRU 11  
 A RESUBDIVISION OF LOT 2 THE HILLSIDE AT ROCKY GORGE V PLAT #16290 AND LOTS 1 & 2 THE HILLSIDE AT ROCKY GORGE VI PLAT #16520  
 CONTRACT NO. 24-4464-D  
 TAX MAP 46 GRID 18 PARCELS 92 and 149  
 6th ELECTION DISTRICT ZONED R-20 HOWARD COUNTY, MARYLAND

SCALE: As Shown  
 SHEET NO. 3 OF 3