

1	TITLE SHEET
2	PLAN OF WATER AND SEWER EXTENSIONS
3	PROFILES OF WATER AND SEWER EXTENSIONS


WATER AND SEWER EXTENSION NORDAU SUBDIVISION 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4084-D

BENCHMARKS

HOWARD COUNTY MONUMENT 421A
N 543,390.386 E 1,364,912.655 ELEV.312.667
STANDARD STAMPED BRASS OR ALUMINUM DISC ON
CONCRETE MONUMENT, 0.3' BELOW SURFACE
LOCATED ON WEST MARGIN OF MISSION ROAD
340' EAST OF 8783 MISSION ROAD 74.3' NORTH OF
BGE POLE 297906.

HOWARD COUNTY MONUMENT 421B
N 542,366.879 E 1,363,076.003 ELEV.283.120
STANDARD STAMPED BRASS OR ALUMINUM DISC ON
CONCRETE MONUMENT, 0.3' BELOW SURFACE
LOCATED ON SOUTHERN MARGIN OF GUILFORD ROAD
ACROSS FROM MISSION ROAD 19.4' SOUTHEAST OF
BGE POLE 271362.

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 service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- a.) All horizontal controls are based on Maryland State Coordinates, NAD 83/91 as projected by Howard County Horizontal and Vertical Geodetic Control Nos. 421A and 421B
b.) These water and sewer drawings are based on aerial survey maps with maximum two foot contour intervals prepared in Wings Inc. flown in MARCH 2001
- All vertical controls are based on NAVD 88.
- All pipe elevations shown are invert elevations unless otherwise noted on the plans.
- Clear all utilities by a minimum of 12 inches. 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 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 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 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 (Contractor Services) 410-850-4620
BGE (Underground Damage Control) 410-787-9068
Bureau of Utilities 410-313-4900
Colonial Pipeline Co. 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 DPW requirements per Section 18.114(a) of the Howard County Code.

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT			
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER	
8" WATER	107 LF	107 L.F.	CL 52 DIP	U.S. PIPE	BELAIR RD. SUPPLY
6" WATER	377 LF	375 L.F.	CL 52 DIP	U.S. PIPE	" " "
4" WATER	30 LF	23 L.F.	CL 52 DIP	U.S. PIPE	" " "
1" WATER	218 LF	150 L.F.	K COPPER	CAHBRIDGE	" " "
6" VALVES	2 EA	2 EA	R.S.Q.R. GATE V	MUELLER CO.	" " "
4" VALVES	1 EA	1 EA	R.S.Q.R. GATE V	" "	" " "
FIRE HYDRANTS	1 EA	1 EA	MUELLER	" "	" " "
BLOW-OFF	1 EA	1 EA	KUPFERLE	KUPFERLE	" " "
8" SEWER	1023 LF	999 L.F.	P.V.C. S.D.R. 35	NATIONAL PVE	" " "
4" SEWER	396 LF	173 L.F.	P.V.C. S.D.R. 35	NATIONAL PVE	" " "
4" DIA. MANHOLE	10 EA	10 EA	PRECAST	CONTRACTOR	CONTRACTOR PRECAST
DROP MANHOLE TYPE 'B'	1 EA	1 EA	PRECAST	CONTRACTOR	CONTRACTOR PRECAST
8" DIP CL 52 SEWER	281 LF	279 L.F.	CL 52 DIP	U.S. PIPE	BELAIR RD. SUPPLY



W & S Code
County Use
Water No. E-14
Sewer No. 4400000
Test Gradient: 700
Zone: 550

TYPE OF BUILDINGS:
SINGLE FAMILY DETACHED
NO. OF BUILDABLE LOTS: 10
NO. OF WHC: 10
NO. OF SHC: 13
DRAINAGE AREA: LITTLE PATUXENT
TREATMENT PLANT: LITTLE PATUXENT
WASTE WATER TREATMENT PLANT

WATER NOTES

- All water mains shall be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains shall have a minimum of 3'-6" of 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 installed in accordance with Standard Details. The 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 the existing water system.

SEWER NOTES

- All sewer mains shall be D.I.P. and 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 18" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.52. Where watertight manhole frames and covers 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.
- The pressure sewer connections installed under contract #24-3662-D for Lots 40, 41, & 42 shall be concreted to gravity sewer under this proposed plan.

NAME OF UTILITY CONTRACTOR : EXCAVATOR EXCAVATIONS

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications F-03-32	CHECKBOX
	AS-BUILT DATE
	SURVEY AND DRAFTING DIVISION

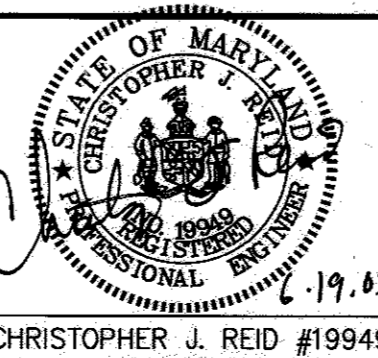
Review for Howard Soil Conservation District and meets technical requirements.
Jim Mays 7-2-03
NATURAL RESOURCES CONSERVATION SERVICE DATE

This plan is approved for erosion and sediment control by the Howard Soil Conservation District.
John K. Liberton 7-2-03
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Ruth Bunn 6-26-03
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
John D. ... 7/7/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
PHRA
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282
CHRISTOPHER J. REID #19949



DES: C.J.R.			
DRN: DAM			
CHK: C.J.R.			
DATE: 6/19/03			
EMR: ADD WHC AND SHC FOR LOTS 55 & 56	4/30/08		
KCI: ASBUILT DATA	10/10/04		
KCI: ASBUILT DATA ADDED TO PLAN	8/26/04		
BY NO.			
REVISION			

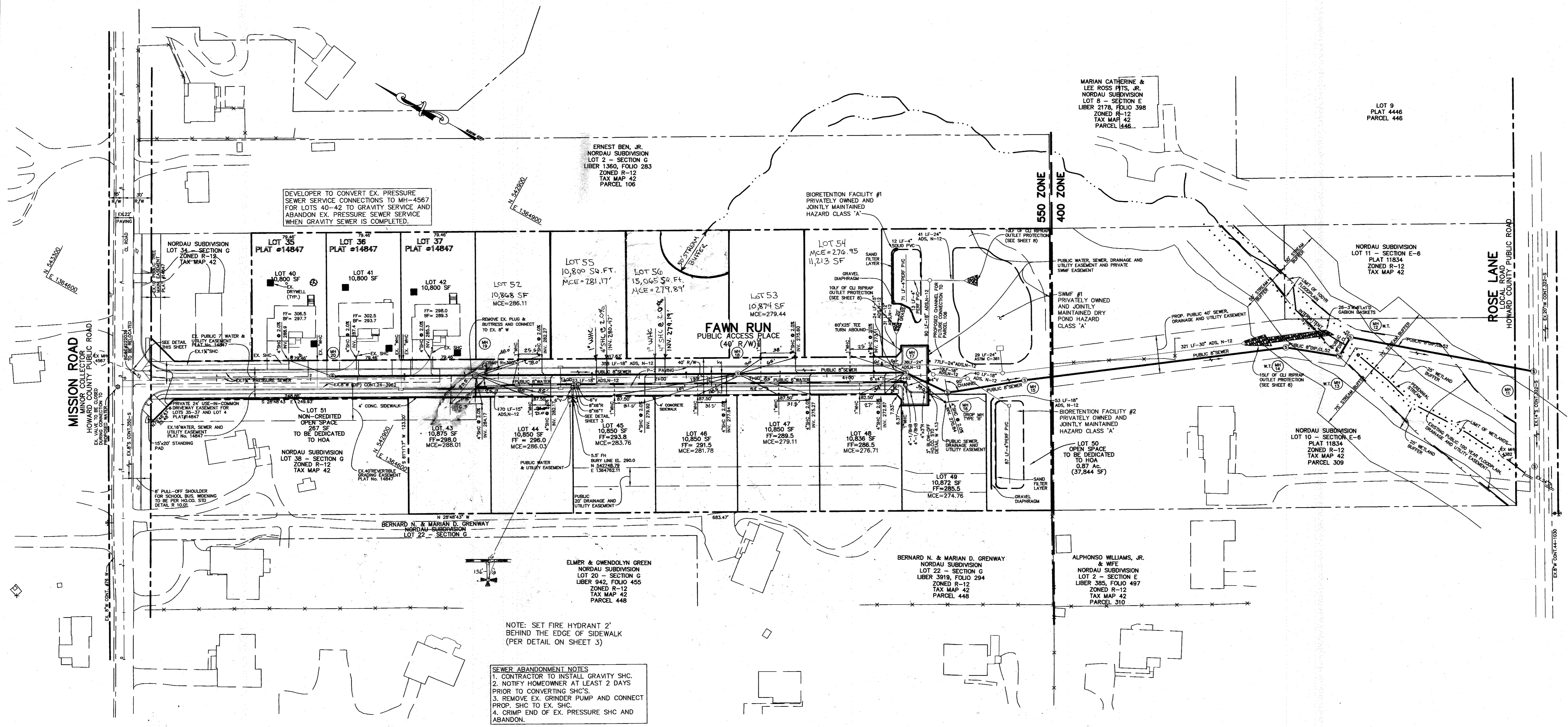
TITLE SHEET
600' SCALE MAP NO. 42 BLOCK NO. 24

NORDAU SUBDIVISION
SECTION G, LOTS 40-56
A RESUBDIVISION OF LOTS 35-37 AND 39
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-4084-D

SCALE AS SHOWN
SHEET 1 OF 3

EX. CONNECTIONS TO MH 4567

ONCE PROPOSED PUBLIC SEWER IS FUNCTIONING, DISCONNECT EX. 8" SEWER FROM MH-4567 AND GROUT/SEAL THIS MANHOLE AND CHANNEL.

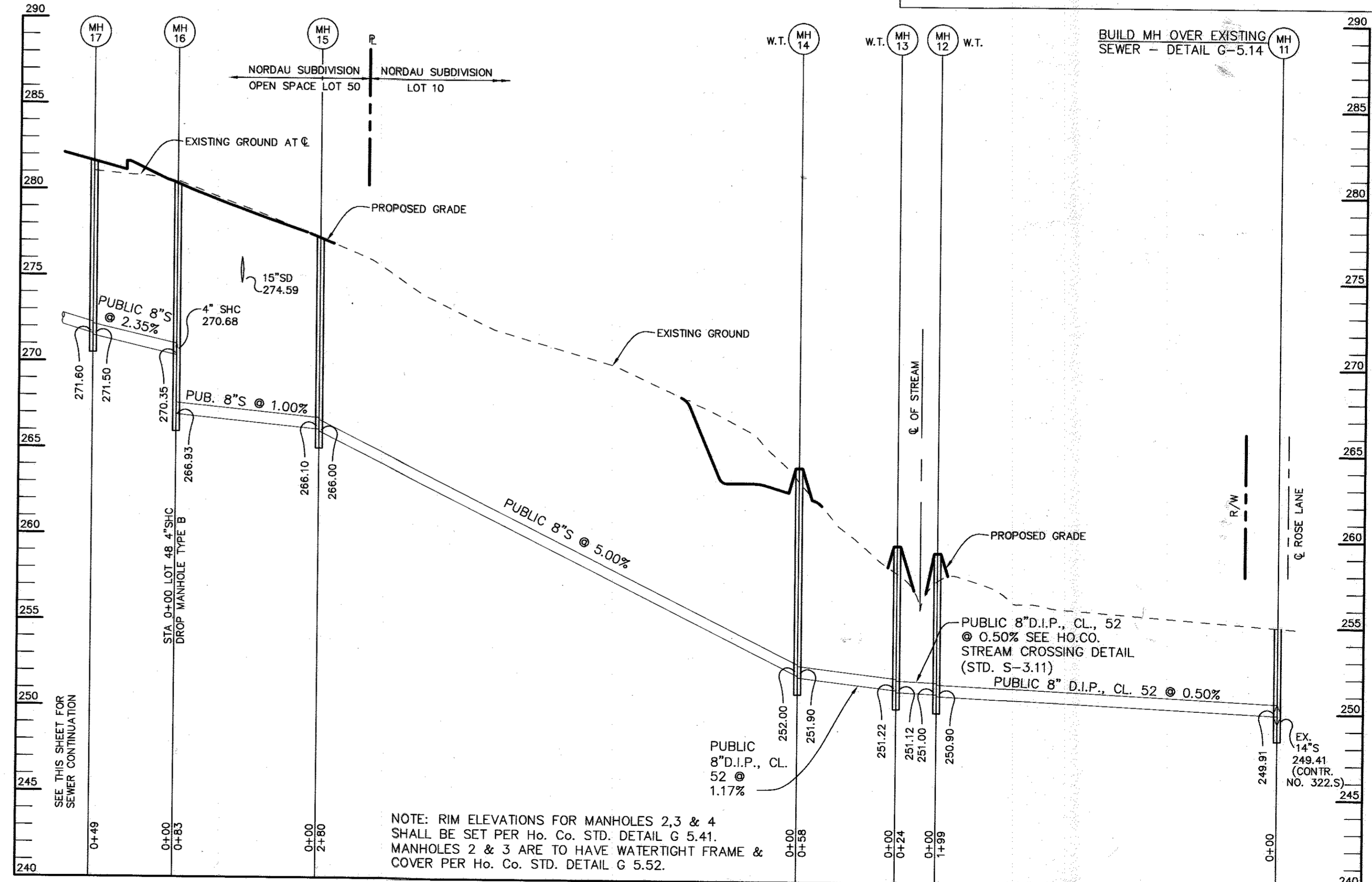
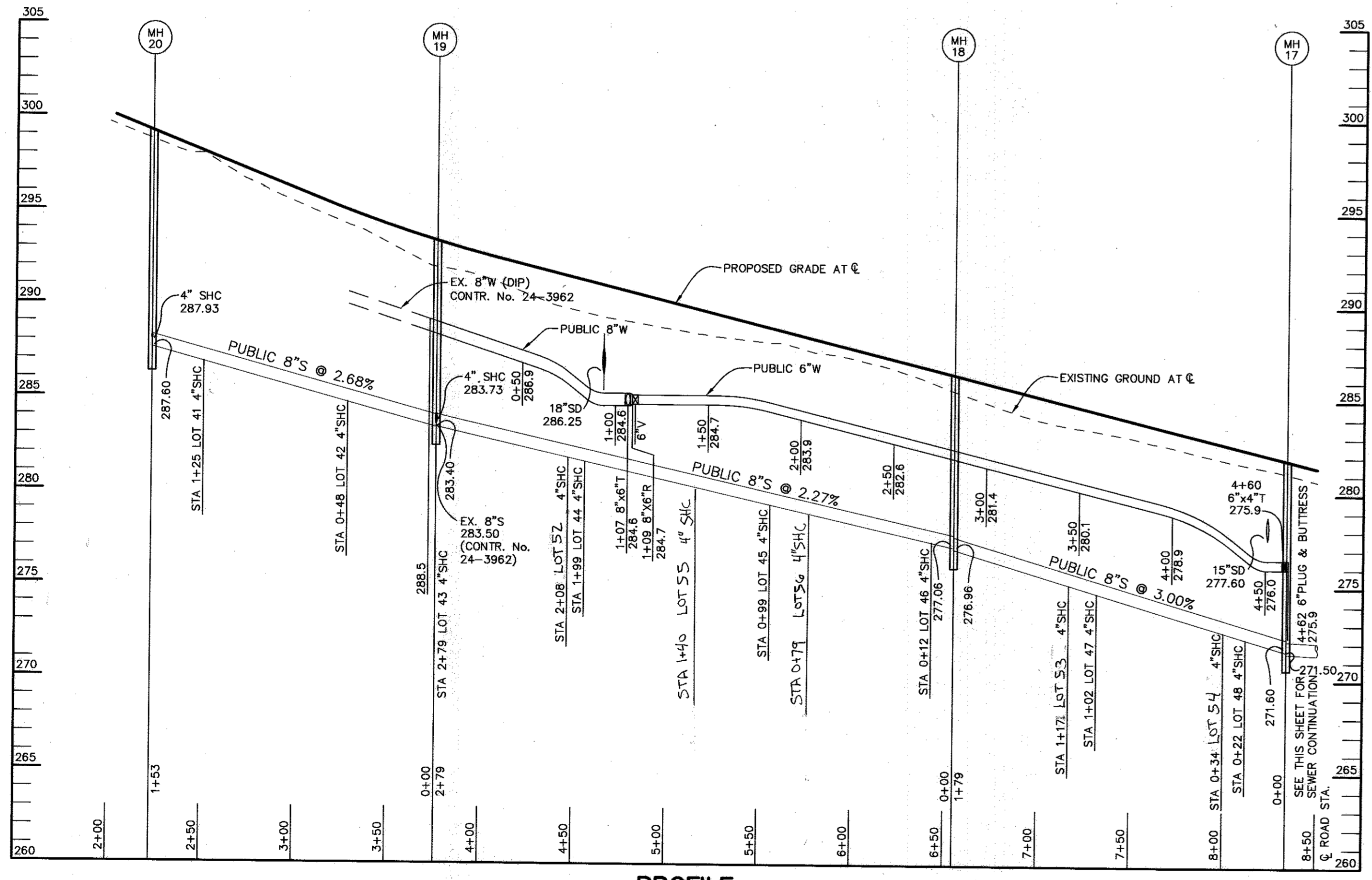
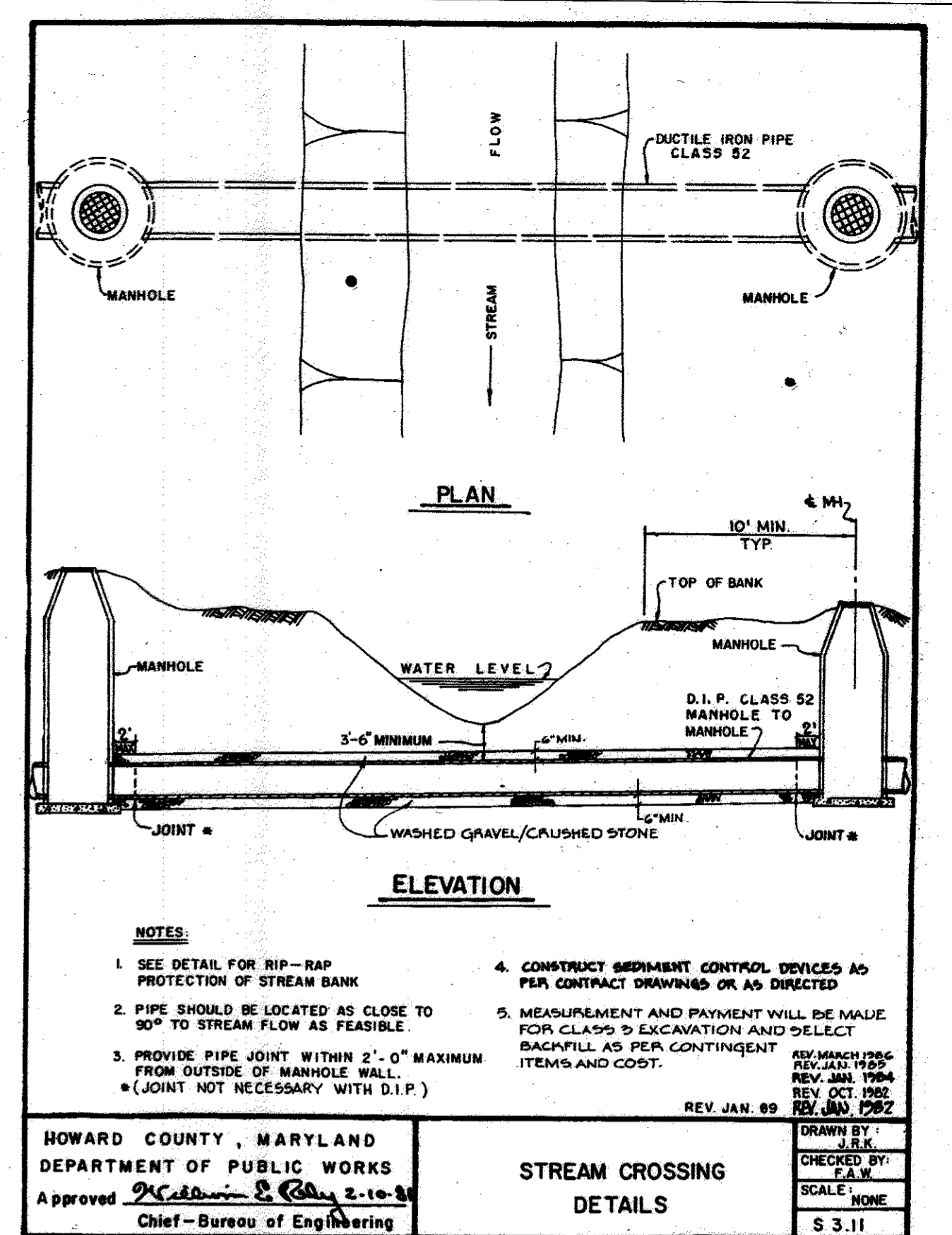
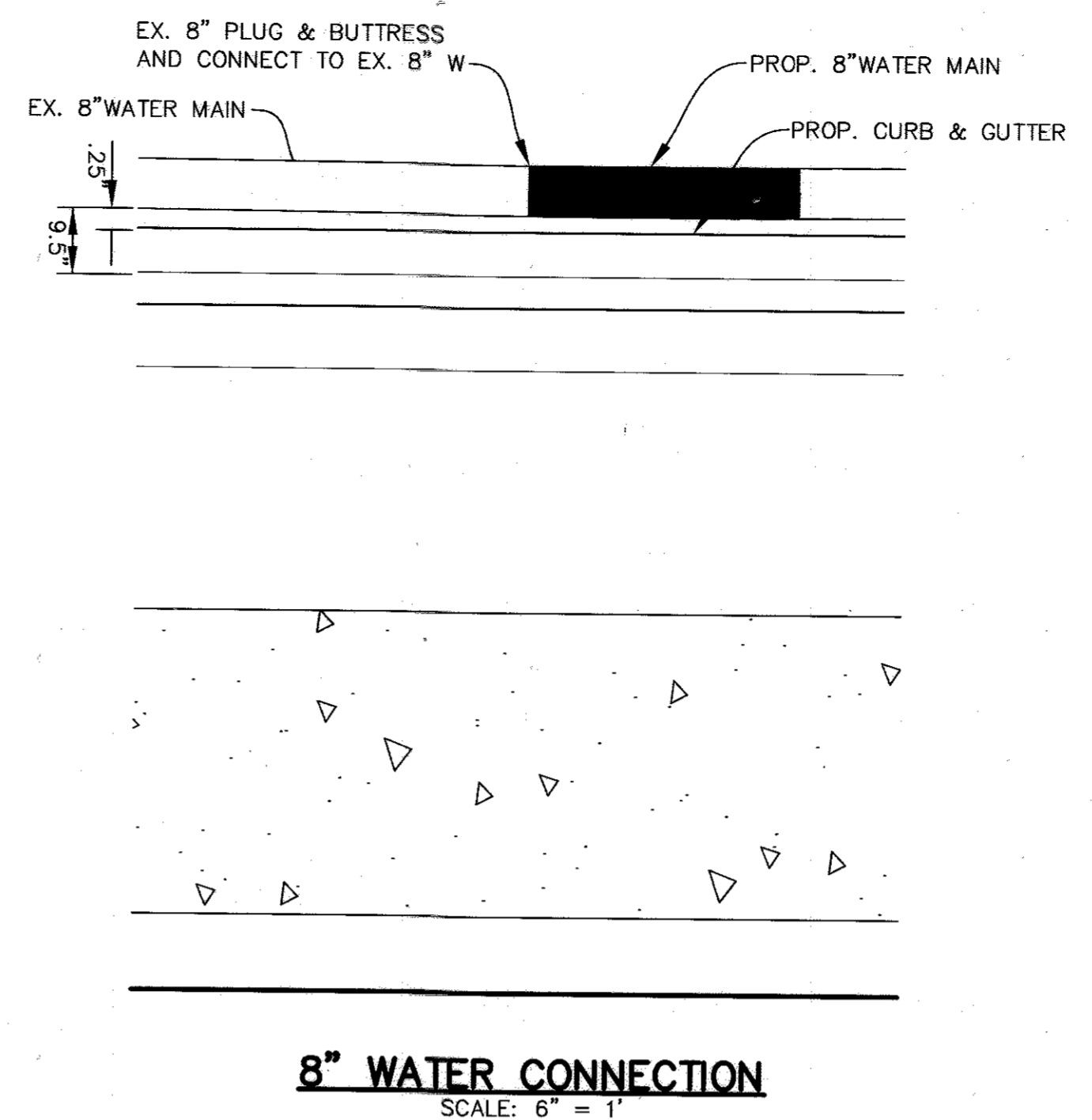
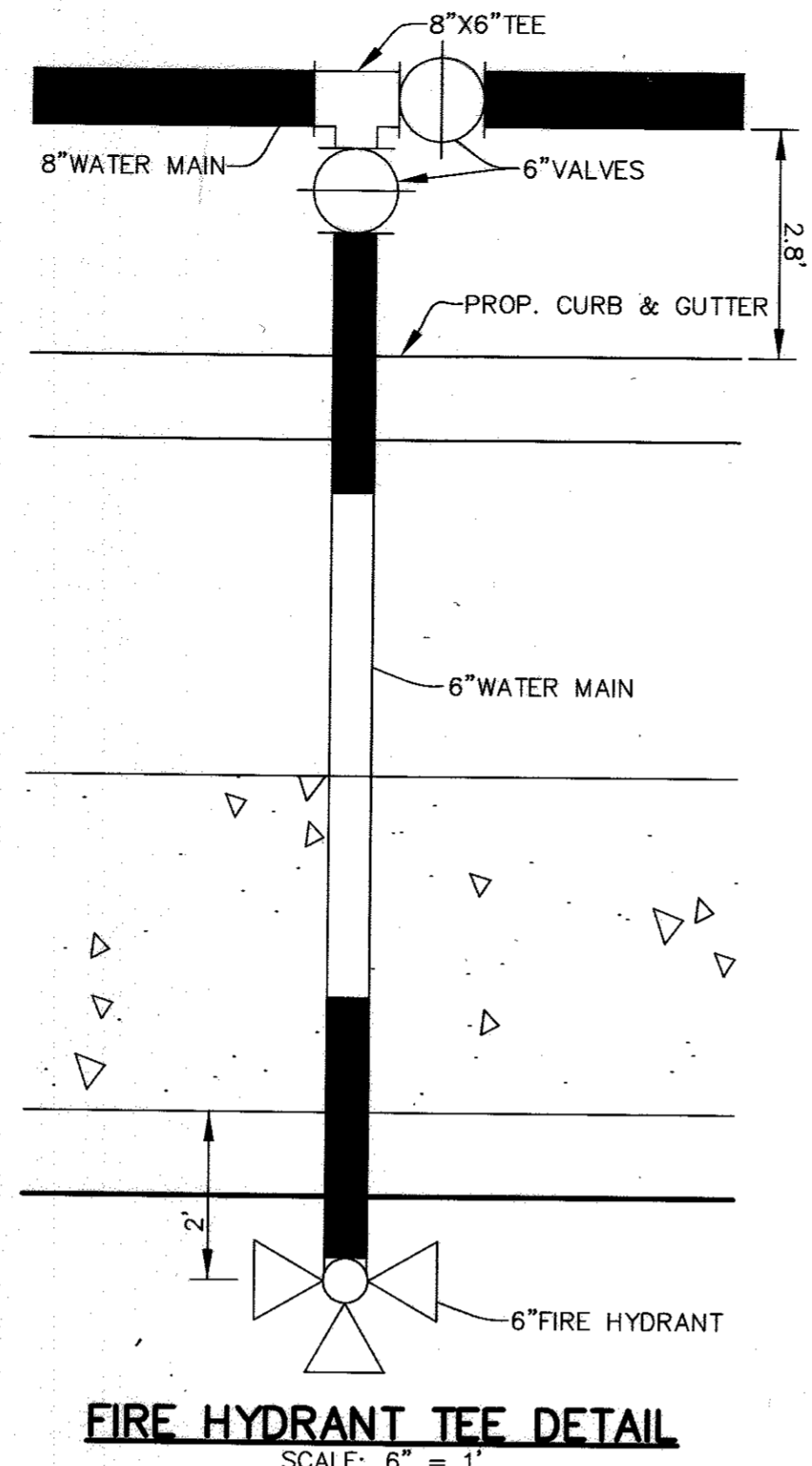


PLAN
SCALE: 1" = 50'

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Ruth Benjamin</i> 6-26-03 CHIEF, BUREAU OF UTILITIES DATE</p>	<p>DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND</p> <p><i>Christopher J. Reid</i> 7/1/03 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE</p>	<p>Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects.</p> <p>PHRA</p> <p>8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282</p>	<p>CHRISTOPHER J. REID #19949</p>	<table border="1"> <tr> <td>DES:</td> <td>C.J.R.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DRN:</td> <td>DAM</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CHK:</td> <td>C.J.R.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>DATE:</td> <td>6/19/03</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>REVISIONS:</p> <table border="1"> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>EMR ADD WHC AND SHC FOR LOT 55 & 56</td> <td>4/30/08</td> </tr> <tr> <td>2</td> <td>KCI ASBUILT DATA</td> <td>10/06/04</td> </tr> <tr> <td>3</td> <td>KCI "ASBUILT" WATER AND SEWER ADDED TO PLAN</td> <td>08/01/04</td> </tr> </table>	DES:	C.J.R.					DRN:	DAM					CHK:	C.J.R.					DATE:	6/19/03					NO.	REVISION	DATE	1	EMR ADD WHC AND SHC FOR LOT 55 & 56	4/30/08	2	KCI ASBUILT DATA	10/06/04	3	KCI "ASBUILT" WATER AND SEWER ADDED TO PLAN	08/01/04	<p>PLAN OF WATER AND SEWER MAINS</p> <p>600' SCALE MAP NO. 42 BLOCK NO. 24</p>	<p>NORDAU SUBDIVISION SECTION G, LOTS 40-56 A RESUBDIVISION OF LOTS 35-37 AND 39 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4084-D</p> <p>SCALE AS SHOWN SHEET 2 OF 3</p>
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P:\project\070811-01\Eng\Plans\FINAL\SWSS.DWG, Layout1, 06/19/2003 08:27:30 AM, HP1050C_Mylar.pcs3, Arch D - 24 x 36 in. (landscape), 11'

SEWER STRUCTURE SCHEDULE				
NO.	NORTHING	EASTING	RIM ELEV.	RIM SLOPE
11	541858.95	1365266.39	±255.0	MATCH SLOPE OF EX. PAVING
12	542047.97	1365205.45	258.4 18" ABOVE EX. GR.	0.0%
13	542048.87	1365181.97	259.5 18" ABOVE EX. GR.	0.0%
14	542103.28	1365163.10	264.1 18" ABOVE EX. GR.	0.0%
15	542331.45	1365000.21	276.6	0.0%
16	542397.43	1364949.23	280.3	0.0%
17	542446.24	1364945.74	281.76	-2.5%
18	542603.03	1364860.55	286.24	-2.5%
19	542847.32	1364726.18	293.33	-2.5%
20	542981.38	1364652.45	299.19	-4.0%



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
6-26-93
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
7/1/93
DATE

Patton Harris Rust & Associates, P.C.
Engineers, Surveyors, Planners, Landscape Architects.
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		EM.R. ADD WLC AND SHC FOR LOTS 55 & 56	4/24/08
		K.C.I. ASBUILOT DATA	10/24/04

PROFILES OF
WATER AND SEWER MAINS
600' SCALE MAP NO. 42 BLOCK NO. 24

NORDAU SUBDIVISION
SECTION G, LOTS 40-56
A RESUBDIVISION OF LOTS 35-37 AND 39
6th ELECTION DISTRICT
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SCALE AS SHOWN
SHEET 3 OF 3