

# FINAL WATER AND SEWER CONSTRUCTION PLANS

for

## MILK PRODUCERS-SOUTH

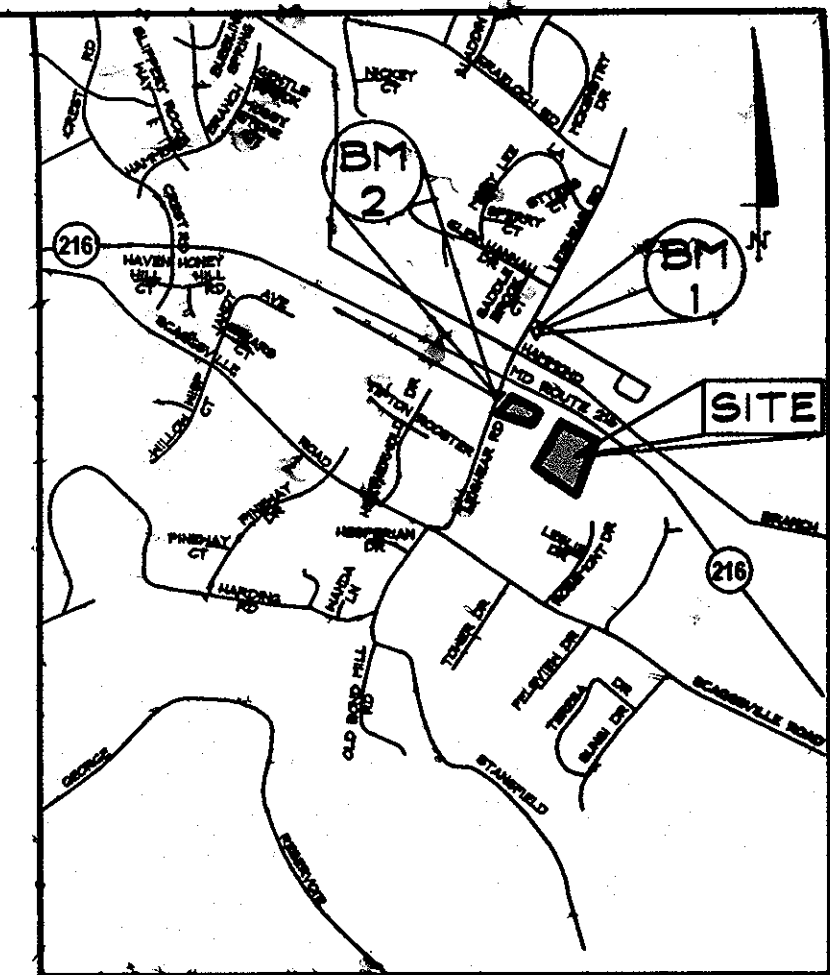
CONTRACT NUMBER 24-4570-D  
6TH ELECTION DISTRICT HOWARD COUNTY, MD

### BENCHMARK

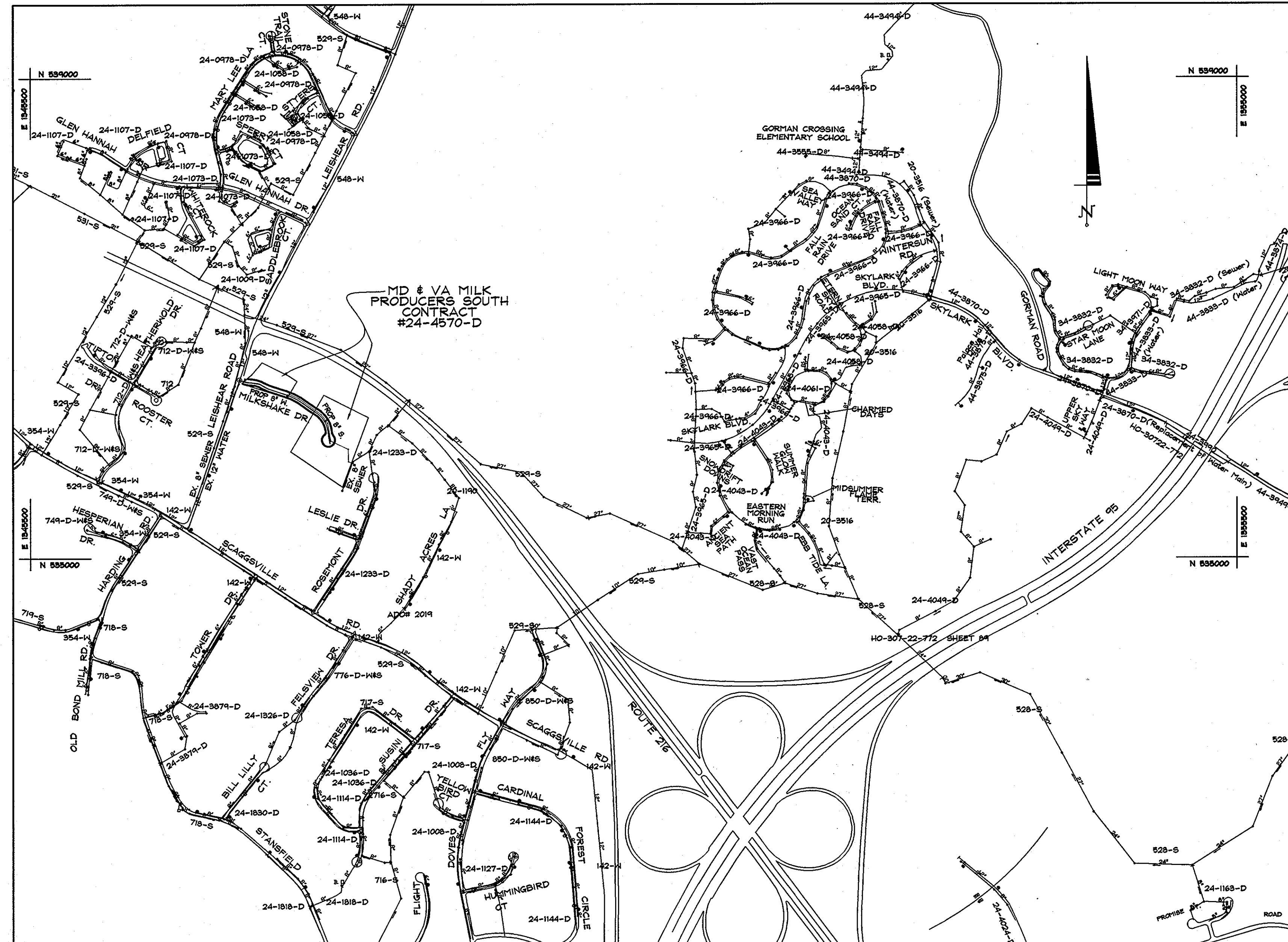
#### DESCRIPTION

**BENCHMARK #1**  
N 537144.819  
E 1347443.963  
B.M. 46FB (CONCRETE MONUMENT)  
ELEV. 317.324

**BENCHMARK #2**  
N 536547.4034  
E 1347214.5476  
B.M. DDC POINT #99 (1/2" STEEL REBAR)  
ELEV. 332.04



VICINITY MAP  
SCALE: 1"=2000'



### DRAWING LEGEND

- BOUNDARY LINE
- N 06°45'45"W 120.00' EXISTING PROPERTY BOUNDARY
- EX. ROAD / EDGE OF PAVING
- EX. SEWER LINE & MANHOLES, CLEAN-OUTS
- EX. OVERHEAD ELECTRIC & UTILITY POLES
- PROP. CURB & GUTTER
- PROPOSED ROAD CENTERLINE
- PROP. 18" SD
- PROP. 8" WATER
- PROPOSED STORM DRAIN W/ INLETS & MANHOLE
- PROPOSED WATER LINE
- PROPOSED SEWER AND MANHOLES
- ROAD STATION

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 214 OF THE SPECIFICATIONS AND AS SHOWN ON F-09-061. 309

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

*John R. Robertson* 3/28/11  
HOWARD SOIL CONSERVATION DISTRICT DATE

WATER AND SEWER CODES  
WATER NO.: E 15  
SEWER NO.: 74-55000  
TEST GRADIENT: 700  
ZONE: 550

LOCATION PLAN  
SCALE: 1"=600'

TYPE OF BUILDING: RESIDENTIAL  
DRAINAGE AREA: LITTLE PATUXENT  
TREATMENT PLANT: LITTLE PATUXENT WASTE RECLAMATION PLANT  
NUMBER OF BUILDABLE LOTS: 12  
NUMBER OF SHC: 11 (1 TWN)  
NUMBER OF WHC: 11 (1 TWN)

### GENERAL NOTES

- 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.
- Topographic field surveys were performed in November, 2007 by Deltario Design Consultants, Inc.
- The coordinates shown on the drawings are based on Maryland State Reference System NAD '83/91' as projected by Howard County Geodetic Control Stations No. 47DC & 47EB. All vertical controls are based on NAVD '85.
- 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 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 @ 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 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 (Underground Damage Control): 410-787-9068  
Bureau of Utilities: 410-313-4300  
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 DPN requirements per Section 18.114(a) of the Howard County Code.

### WATER GENERAL NOTES

- All water mains to be D.I.P. Class 54 unless otherwise noted.
- Top of all water mains to 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 the 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.
- All water house connections shall be for outside meter setting unless otherwise noted on plans or in specifications.

### SEWER GENERAL NOTES

- All sewer mains shall be DIP 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 and cover, Standard Detail G5.52.
- House(s) with the symbol "C.N.S." indicates that the cellar cannot be served.

### OWNER/DEVELOPER

MD & VA MILK PRODUCERS ASSN., INC.  
C/O THOMAS BARBUTI  
WHITEFORD TAYLOR & PRESTON, LLP  
7 SAINT PAUL STREET  
BALTIMORE, MD 21202  
410-913-7987

ITEMS	QUANTITIES ESTIMATED	QUANTITIES AS-BUILT		SUPPLIER
		QUANTITIES	TYPE	
8" SEWER MAIN	860			
SEWER MANHOLE	8			
SEWER MANHOLE (vert. ft.)	78			
4" SHC	4			
4" DHC TYPE A	2			
4" DHC TYPE B	4			
6" TOHC TYPE B	1			
8" WATER MAIN	995			
6" WATER MAIN	50			
8x6 TEE	3			
FIRE HYDRANT	3			
12" WHC	10			
12" TWHC	1			

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Silva C. ...* 3/28/11  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
*Mark Thayer* 4/1/11  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**DeMario**  
DESIGN CONSULTANTS  
192 East Main Street  
Westminster, MD 21157  
Phone: (410) 385-0550  
Fax: (410) 385-0564  
eMail: ddd@demariodesign.com

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. 25420, Expiration Date: 7/20/12.

*Mark Thayer* 3/8/11  
MARK THAYER PROFESSIONAL ENGINEER #25420

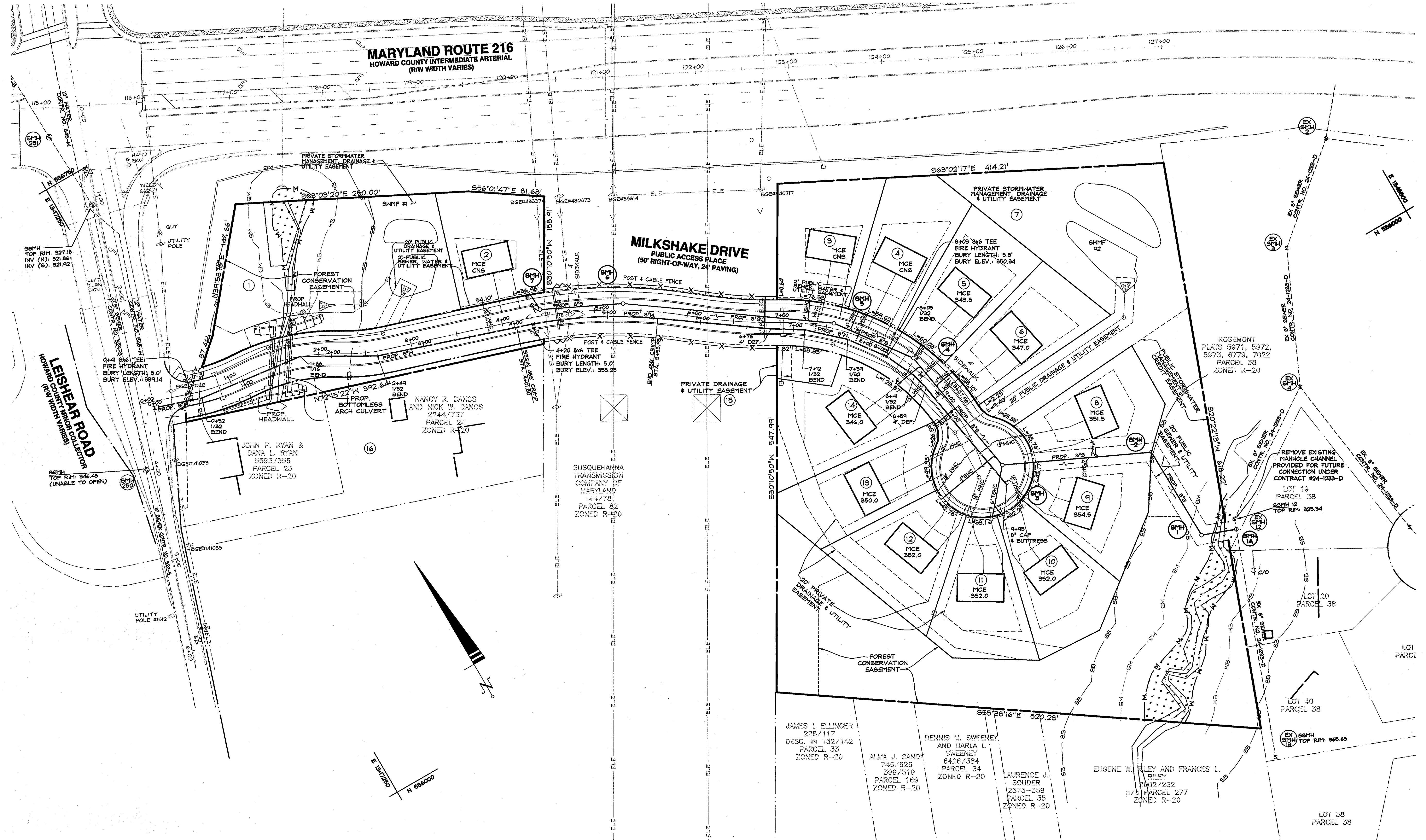
DES. BY: JCO/LJC				
DRN. BY: SDS				
CHK. BY: MRT				
DATE: 3/7/11				

NO.	REVISIONS	DRN.	DATE

COVER SHEET

WATER & SEWER CONSTRUCTION PLANS  
MD & VA MILK PRODUCERS SOUTH  
LOTS 2-6, 8-14 & OPEN SPACE LOTS 1,7 & 15  
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
CONTRACT NO. 24-4570-D

SCALE: AS SHOWN  
SHEET 1 OF 3



WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
2	MILKSHAKE DR		
3	MILKSHAKE DR		
4	MILKSHAKE DR		
5	MILKSHAKE DR		
6	MILKSHAKE DR		
8	MILKSHAKE DR		
9	MILKSHAKE DR		
10	MILKSHAKE DR		
11	MILKSHAKE DR		
12	MILKSHAKE DR		
13	MILKSHAKE DR		
14	MILKSHAKE DR		

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
2	MILKSHAKE DR		
3	MILKSHAKE DR		
4	MILKSHAKE DR		
5	MILKSHAKE DR		
6	MILKSHAKE DR		
8	MILKSHAKE DR		
9	MILKSHAKE DR		
10	MILKSHAKE DR		
11	MILKSHAKE DR		
12	MILKSHAKE DR		
13	MILKSHAKE DR		
14	MILKSHAKE DR		

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 BALTIMORE, MD 21202  
 410-915-7987

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Chief, Bureau of Utilities  
 3/11/11

DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY, MARYLAND  
 Chief, Development Engineering Division  
 4/1/11

**DeMario**  
 DESIGN CONSULTANTS  
 ENGINEERS, PLANNERS, SURVEYORS, LANDSCAPE ARCHITECTS  
 1022 East Main Street, Westminster, MD 21157  
 Phone: (410) 385-0550 Fax: (410) 385-0554  
 www.demariodesign.com eMail: dcd@demariodesign.com

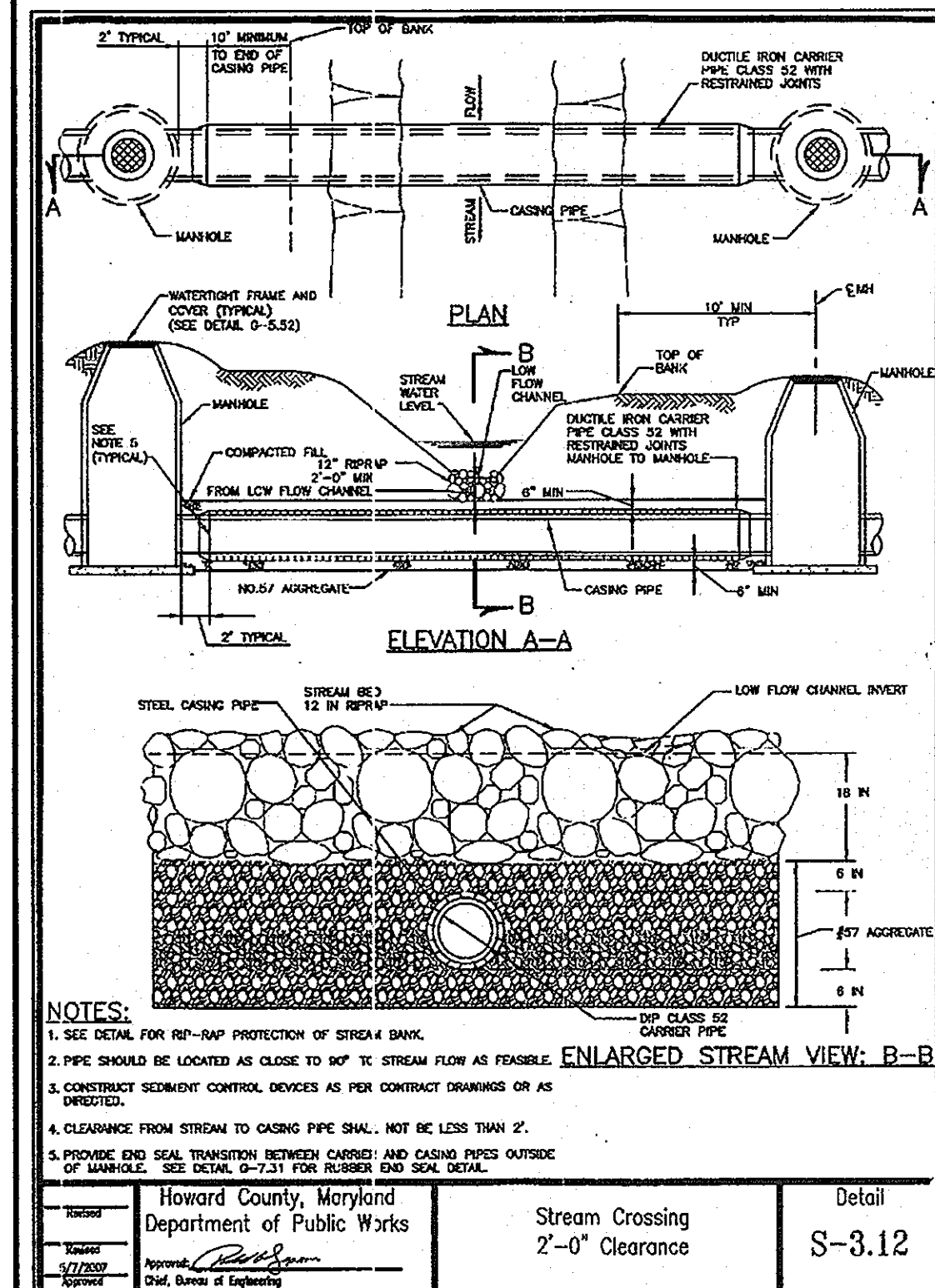
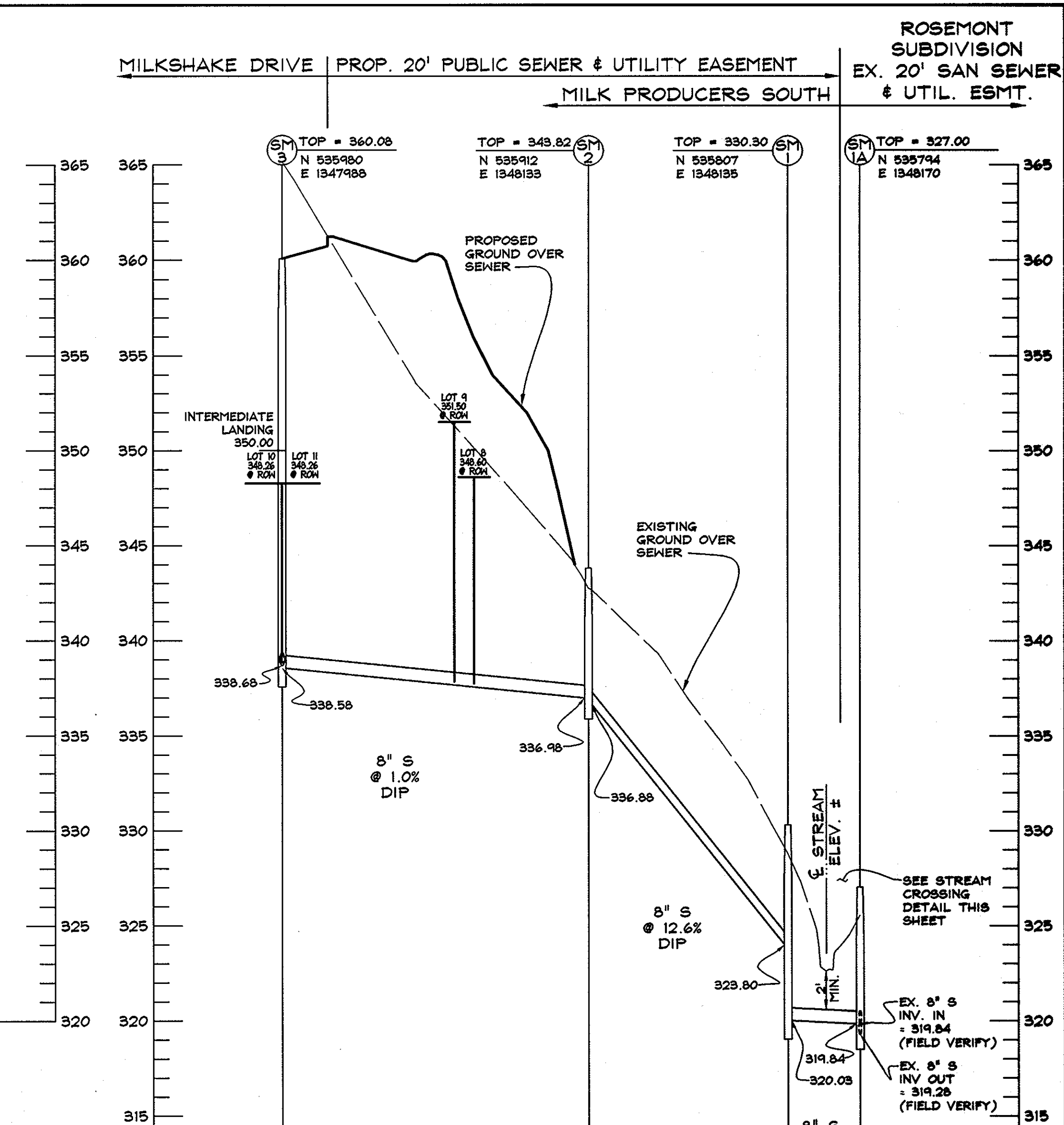
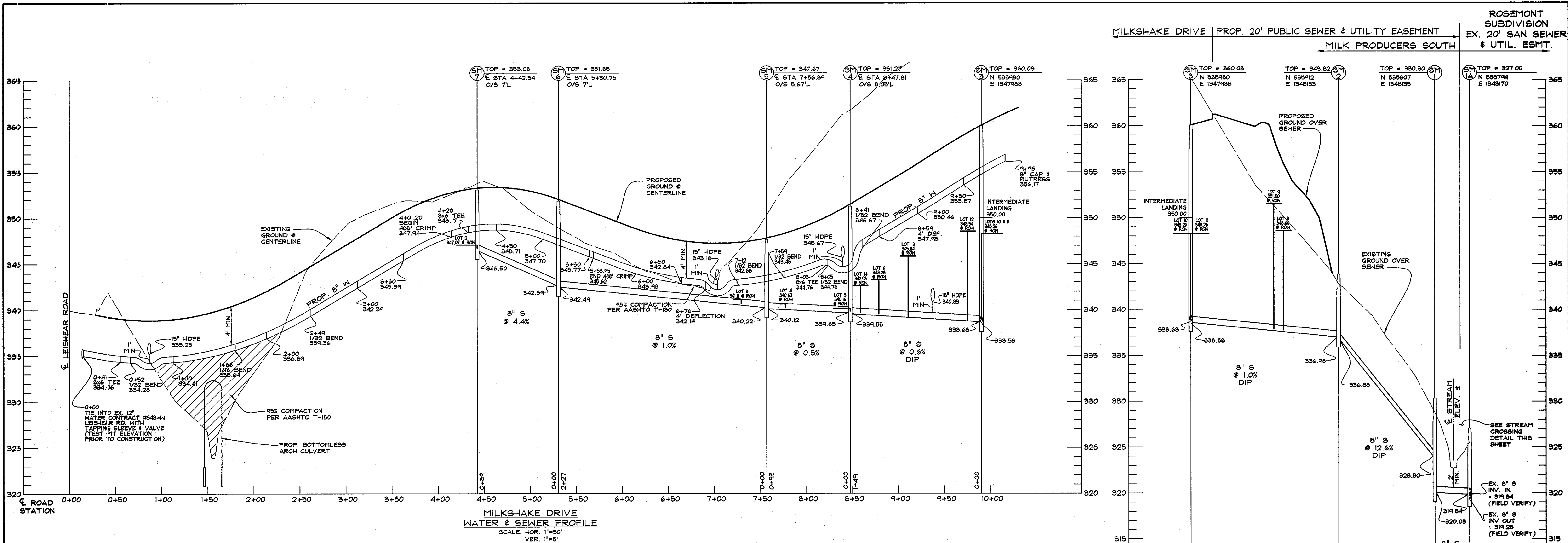
Professional Certification  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland, License No. 25420, Expiration Date: 7-20-12  
 MARK THAYER PROFESSIONAL ENGINEER #25420

DES. BY:	JCO/LJC				
DRN. BY:	SDS				
CHK. BY:	MRT				
DATE:	3/7/11				

**FINAL WATER AND SEWER PLAN**  
 600 SCALE MAP NO.: 46 BLOCK NO.: 12

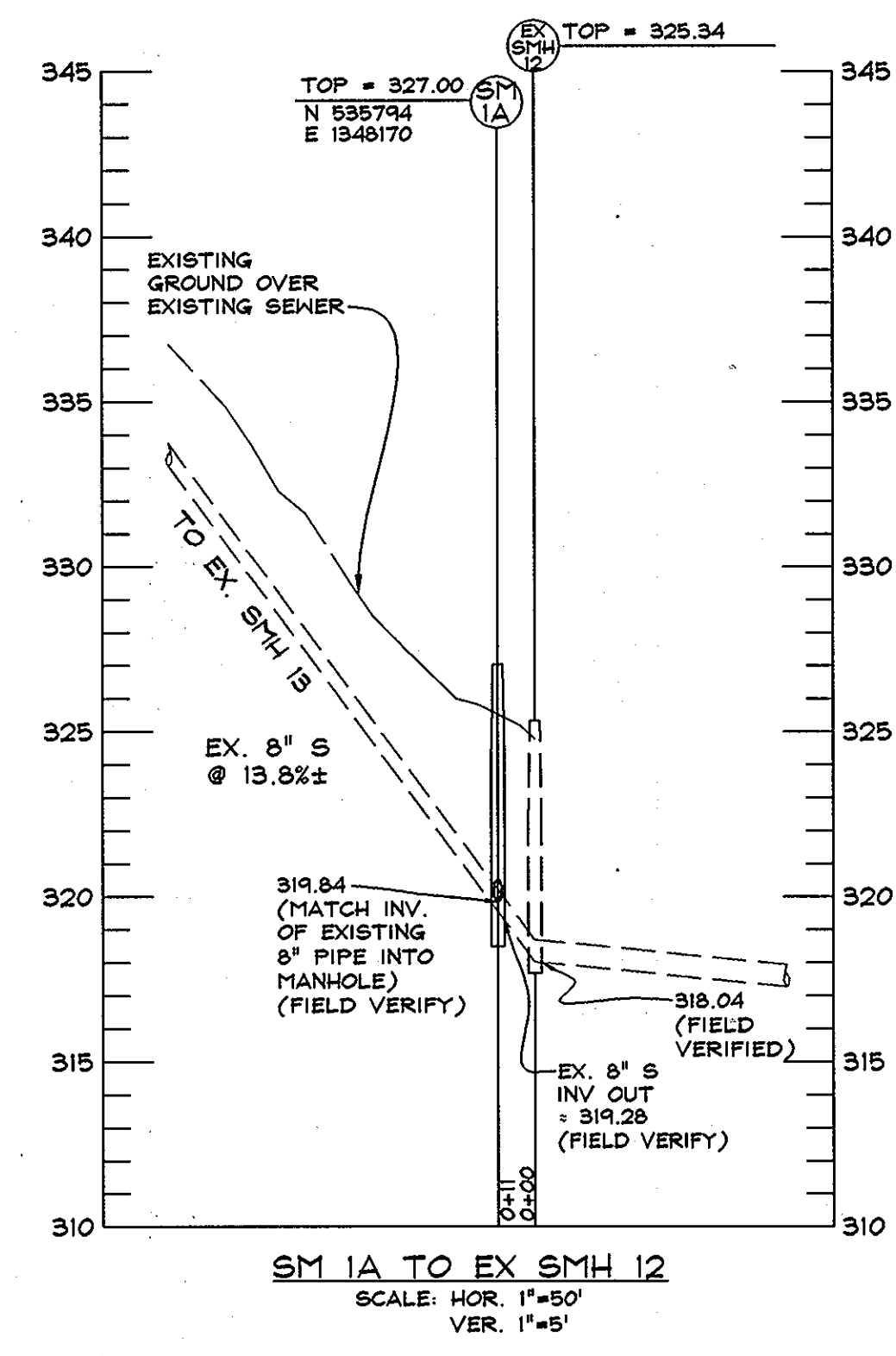
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 LOTS 2-6, 8-14 & OPEN SPACE LOTS 1, 7 & 15  
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 CONTRACT NO. 24-4570-D

SCALE:  
 1" = 50'  
 SHEET  
 2 OF 3



STRUCTURE	TYPE	DETAIL	INV. IN EXISTING	INV. OUT EXISTING	RIM ELEV.	LOCATION
EX. SM12	4' MANHOLE (DOGHOUSE OVER EX. SEWER) WITH WATERTIGHT FRAME & COVER	G-5.14	319.84/319.84 EX.	319.28 (EX.)	327.00	N 535794 E 1348170
SM 1A	4' DROP MANHOLE TYPE B WITH WATERTIGHT FRAME & COVER	G-5.52	323.80	320.03	330.30	N 535807 E 1348135
SM 1	4' MANHOLE	G-5.12	336.98	336.88	343.82	N 535912 E 1348133
SM 2	4' DROP MANHOLE TYPE B	G-5.12	338.68	338.58	360.08	N 535980 E 1347988
SM 3	4' MANHOLE	G-5.12	339.65	339.55	351.27	8+47.81, 8.05' L
SM 4	4' MANHOLE	G-5.12	340.22	340.12	347.67	7+56.89, 5.67' L
SM 5	4' MANHOLE	G-5.12	342.59	342.49	353.08	4+42.54, 7' L
SM 6	4' MANHOLE	G-5.12	-	346.50	353.08	4+42.54, 7' L
SM 7	4' MANHOLE	G-5.12	-	346.50	353.08	4+42.54, 7' L

LOT #	SHC/DHC	LOCATION	INV @ MAIN	INV @ R/W	INV @ HOUSE	PCE	SHC SLOPE
2	SHC	@ SM17	346.67	347.07	347.75	CNS	2%
3	SHC	0+28	340.67	341.11	342.02	CNS	2%
4	SHC	0+74	340.19	340.65	341.74	CNS	2%
5	SHC	@ SM14	339.82	340.16	341.32	343.8	2%
6	DHC TYPE A	1+11	339.52	343.28	344.50	347.0	2%
8	DHC TYPE B	0+60	337.74	348.60	349.00	351.5	2%
9	DHC TYPE B	0+70	337.85	351.50	352.00	354.5	2%
10	TDHC TYPE B	@ SM13	338.85	348.26	349.50	352.0	2%
11	TDHC TYPE B	@ SM13	338.85	348.26	349.50	352.0	2%
12	DHC TYPE B	0+13	338.95	348.54	349.50	352.0	2%
13	DHC TYPE B	0+74	339.50	345.84	347.50	350.0	2%
14	DHC TYPE A	1+38	339.65	342.58	343.50	346.0	2%



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