

**QUANTITY TABLE**

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH (excluding drops)	11	10		Atlantic Conc. Products Inc.
DROP MH, TYPE "A"	1	1		Atlantic Conc. Prod. Inc. / A-1 Pipe
DROP MH, TYPE "B"	2	2		Atlantic Conc. Prod. Inc. / A-1 Pipe
INTERMEDIATE LANDING	5	1		Atlantic Conc. Prod. Inc.
8" SEWER MAIN	1519 L.F.	986'		J.M. Manufacturing / A-1
8" D.I.P. SEWER MAIN	1441 L.F.	1356'		Atlantic States
4" SEWER HOUSE CONNECTION	1283 L.F.			
# DROP HOUSE CONNECTIONS	29			
# SEWER HOUSE CONNECTIONS	16			
# MH CONNECTIONS	6	14		Atlantic States
8" WATER	4124 L.F.	3759'		Mueller Co.
6" WATER	117 L.F.			
4" WATER	217 L.F.	217'		Mueller Co.
F.H.	7	7		Mueller Co.
F.H.T. & V.	7			
8"x8" CROSS	1			
8"x8" T	2			
8"x6" T	0			
8"x4" T	1			
8" V	10			
6" V	0			
4" V	1			
8" CAP & PLUG	3	1		Mueller Co.
8" PLUG & BUTTRESS	1			
8" CAP & BUTTRESS	2			
6" CAP & BUTTRESS	0			
4" CAP & BUTTRESS	1			
# WHC (3/4" & 1")	10			
# TWHC	19			
3/4" WHC	454 L.F.	517'		Cambridge-Lee
1" WHC	438 L.F.	420'		Cambridge-Lee
1 1/2" AIR RELEASE MH	1			
BLOW OFF MH	1			
1/16 H8	2			

NAME OF UTILITY CONTRACTOR: *Gains Co. Inc.*  
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE

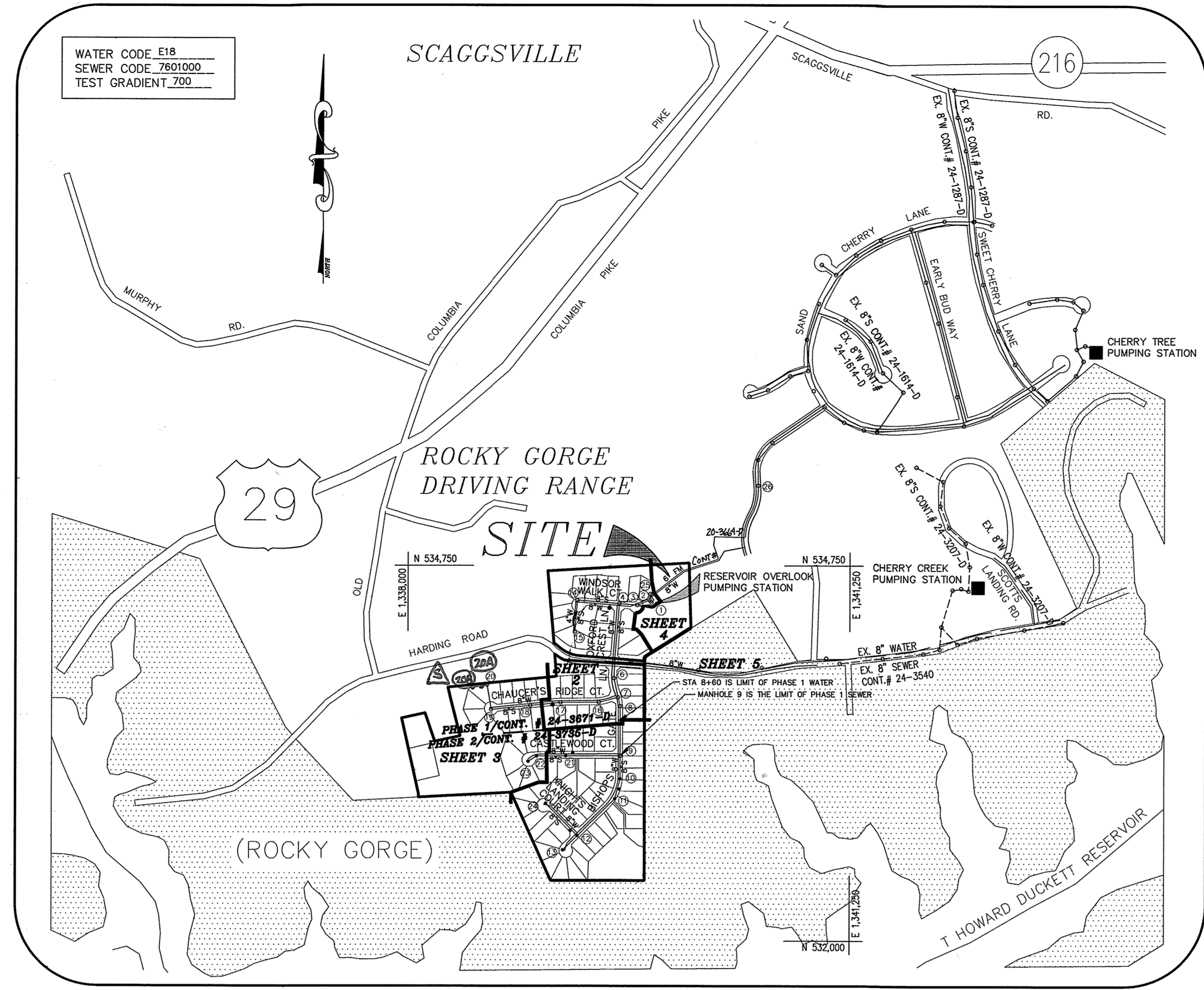
NOTE:  
 - THE SPOIL FROM THE TRENCHING OPERATIONS IS TO BE PLACED ON THE UPHILL SIDE OF CONSTRUCTION.  
 - WATER & SEWER LINES ARE TO BE LIMITED TO THREE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ONE WORK DAY.

NOTE  
 THESE WATER AND SEWER CONSTRUCTION PLANS (SHEETS 1 THRU 12) RESERVOIR OVERLOOK PHASE I WILL SUPERCEDE THE WATER AND SEWER CONSTRUCTION PLANS (SHEETS 1 THRU 15) APPROVED AND SIGNED BY CHIEF, DEVELOPMENT ENGINEERING ON 6/3/98.

**VICINITY MAP**

SCALE : 1" = 600'

TYPE OF BUILDING	SFD	TOTAL LOTS	55
No. OF UNITS			48
No. OF WATER HOUSE CONNECTION			48
No. OF SEWER HOUSE CONNECTIONS			30
DRAINAGE AREA	LITTLE PATUXENT TREATMENT PLANT LITTLE PATUXENT WATER RECLAMATION PLANT		



**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 BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED TO 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. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
 STATE HIGHWAY ADMINISTRATION (410) 531-5533  
 BG & E CO. CONTRACTOR SERVICES (410) 850-4620  
 BG & E CO. UNDERGROUND DAMAGE CONTROL (410) 787-9068  
 MISS UTILITY 1-800-257-7777  
 COLONIAL PIPELINE CO. (410) 795-1390  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS (410) 313-4900  
 BUREAU OF UTILITIES (410) 313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED OUTSIDE 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.
- 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 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 SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- ALL SEWER MAINS SHALL BE P.V.C. OR D.I.P. 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.
- 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 COVERS, STANDARD DETAIL G5.52. 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 WATER METERS TO BE LOCATED INSIDE PROPOSED UNITS.
- STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- ALL CLEANOUTS AND BALL VALVES ARE TO BE LOCATED AT THE WATER, SEWER AND UTILITY EASEMENT LINE.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
- ON-SITE SEDIMENT CONTROL TO BE PROVIDED BY F-98-61.
- ALL SEWER HOUSE CONNECTIONS TO BE 4" IN SIZE.
- ALL WATER HOUSE CONNECTIONS TO BE 3/4" IN SIZE UNLESS OTHERWISE NOTED.
- ALL CELLARS WILL HAVE SERVICE TO LOWEST FLOOR UNLESS OTHERWISE NOTED.
- THERE WILL BE NO THIN SEWER HOUSE CONNECTIONS ON SITE UNLESS APPROVED BY HOWARD COUNTY.
- ALL WATER MAINS TO BE 8", 6", OR 4" DIP CLASS 52.
- THE EXISTING WELL AND SEPTIC SERVICING THE EXISTING HOUSE ARE TO BE ABANDONED.
- STORM DRAIN SYSTEM INDICATED FOR INFORMATIONAL PURPOSES ONLY, SEE ROAD PLANS FOR CONSTRUCTION DATA.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- IF MATERIAL IS WITHIN 8% OF OPTIMUM MOISTURE, WORKING THE MATERIAL UNTIL REQUIRED COMPACTION IS ACHIEVED IS CONTRACTOR'S RESPONSIBILITY.
- THE CONSTRUCTION IS TO BE LIMITED TO THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ANY ONE WORKING DAY.
- APPLICATION WAS APPROVED ON MAY 4, 1998, BY THE MDE NON-TIDAL WETLANDS & WATERWAYS DIVISION FOR THE TEMPORARY DISTURBANCE OF THE WETLANDS, FLOODPLAIN, STREAM, AND THEIR BUFFERS FOR THE INSTALLATION OF A 6" FORCE MAIN AND 8" WATER MAIN UNDER AUTHORIZATION # 97-NI-0052/199761555.

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*D. Dickens* 1/13/99  
 DEVELOPER'S SIGNATURE  
 CLUSSE DICKENS, RESERVOIR OVERLOOK, L.C.  
 DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*John B. Mildenberg* 1/22/99  
 ENGINEER'S SIGNATURE  
 JOHN B. MILDENBERG  
 ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

*Carol Simmonds* 1/22/99  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE

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

*John R. Roberts* 1/22/99  
 HOWARD SCD

PLAN REFERENCE NUMBERS

F-88-112	P-98-03
S-97-07	F-98-01
WP-97-62	GP-98-99
WP-97-138	20-3664-P

**CONTRACT # 24-3671-D**  
**RESERVOIR OVERLOOK**  
**LOTS 1 THRU 28 & 84 THRU 110**  
**PHASE 1:**  
**WATER AND SEWER MAIN EXTENSIONS**  
**HOWARD COUNTY, MARYLAND**  
**DEPARTMENT OF PUBLIC WORKS**

**INDEX OF DRAWINGS**

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER AND SEWER PLAN
3	WATER AND SEWER PLAN
4	WATER AND SEWER PLAN
5	WATER PLAN AND PROFILE
6	WATER PROFILES
7	WATER PROFILES
8	SEWER PROFILES
9	SEWER PROFILES
10	SEWER PROFILES
11	SEWER PROFILES
12	SEDIMENT CONTROL NOTES AND DETAILS

CONTRACT NO.: 24-3671-D  
 RESERVOIR OVERLOOK  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*R. Bainger* 1-20-99  
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

*John B. Mildenberg* 1/25/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5075 Dursley Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0296 Ball. (301) 621-5321 Wash. (410) 997-0296 Fax.

engineering	SJD	REV	3	As-Built	4/27/99
illustration	SJD	REV	5	HARDWARE-ED SEWER EXTENSION (UTILITIES UL)	4/29/99
approval	SJD		4	REVISE QUANTITY TABLE & ADD CONTRACT # IN VICINITY MAP	7/16/00
project	SJD		2	REVISE QUANTITY TABLE	1/8/99
	RCJ		1	REVISE QUANTITY TABLE	9/29/98
date		BY	NO.	REVISION	DATE

**TITLE SHEET**

600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

**RESERVOIR OVERLOOK,**  
**LOTS 1 THRU 28 & 84 THRU 110**  
 CONTRACT # 24-3671-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 AS SHOWN  
**1 OF 12**

**WATER MAIN TABULATION CHART**

WINDSOR WALK COURT		
STATION	APPURTENANCE	DIST. FROM C
0+45.54	1/16 BEND	7' LT.
1+38	8" V	7' LT.
1+40	8"x6" T	7' LT.
1+42	8" V	7' LT.
1+94	8"x6" F.H.T.	7' LT.
1+94	6" V	7' LT.
1+94	6" V	16.1' LT.
4+34.3	8"x4" T	28.8' RT.
4+35.9	4" V	27.2' RT.
4+37	8" C&B	32.1' RT.

OXFORD CREST LANE		
STATION	APPURTENANCE	DIST. FROM C
0+06.20	8" V	7' LT.
4+17	8" V	7' LT.

BISHOPS GATE LANE		
STATION	APPURTENANCE	DIST. FROM C
0+04.61	8" V	7' RT.
2+42.3	8"x8" T	7' RT.
2+44.3	8" V	7' RT.
4+26.94	8"x6" FHT	7' RT.
4+26.94	8" V	5' RT.
4+26.94	6" V	16.1' LT.
4+38.95	8" P&B	7' RT.

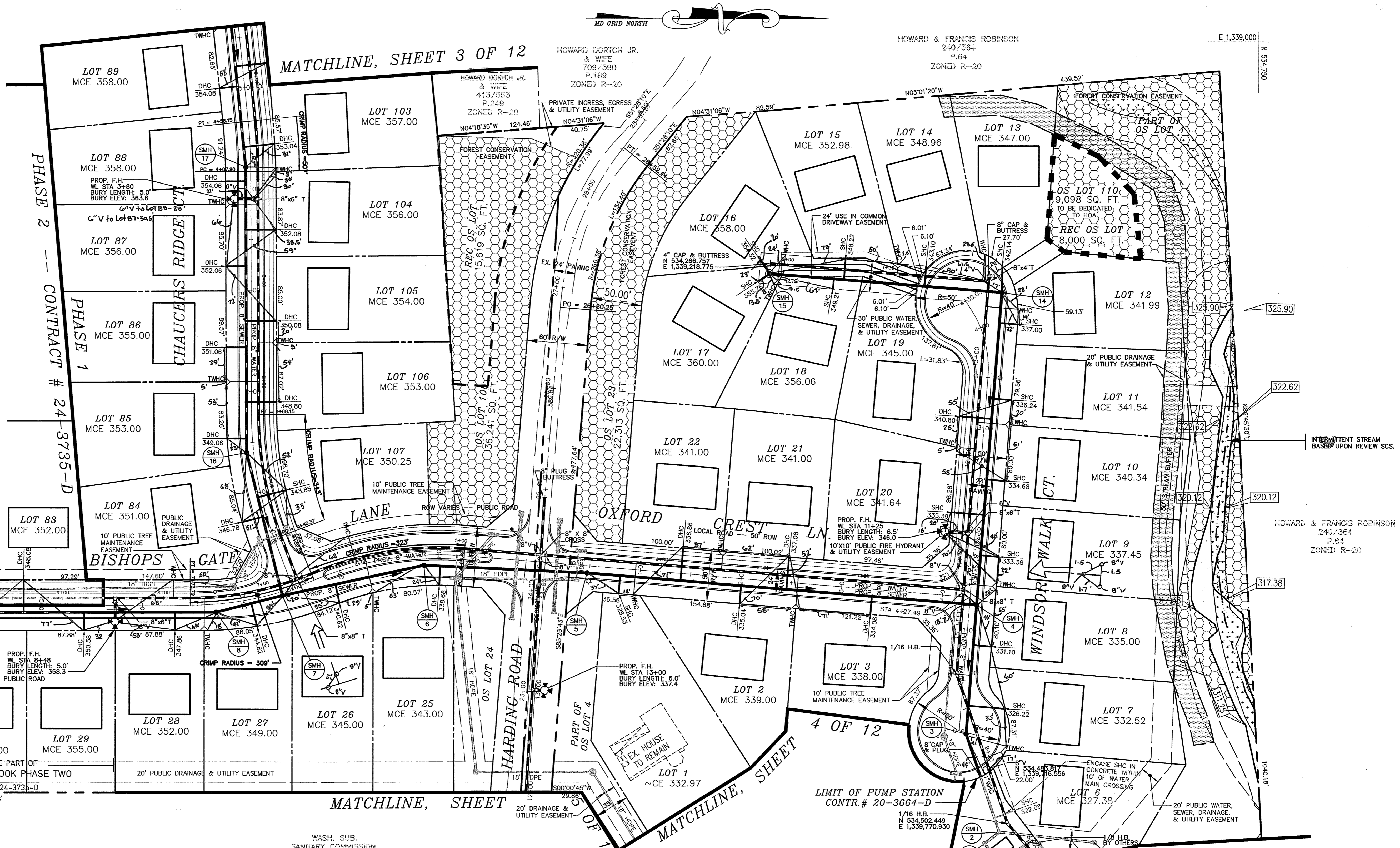
  

CHAUCERS RIDGE COURT		
STATION	APPURTENANCE	DIST. FROM C
0+10	8" V	7' RT.
3+90.07	8"x6" FHT	7' RT.
3+90.07	6" V	5' RT.
3+90.07	6" V	16.1' LT.
6+08.66	8"x6" FHT	7' RT.
8+93.69	8"x6" FHT	7' RT.
8+93.69	6" V	5' RT.
8+93.69	6" V	21.9' LT.
9+46	8" C&B	7' LT.

HARDING ROAD		
STATION	APPURTENANCE	DIST. FROM C
13+24.95	8"x6" FHT	11.5' RT.
13+24.95	6" V	13.5' RT.
13+24.95	6" V	21.5' RT.
6+78.39	8"x6" FHT	10.6' RT.
6+78.39	6" V	12.6' RT.
6+78.39	6" V	21.6' RT.
23+01.97	8"x6" FHT	3.2' RT.
23+01.97	6" V	5.2' RT.
23+01.97	6" V	15.2' RT.
24+29.94	8" V	0.8' RT.
24+35.34	8"x6" CROSS	0.7' RT.
24+40.75	8" V	0.7' RT.
24+92.27	8" P&B	0.3' LT.

NOTE: - CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.  
 - FOR ALL APPURTENANCES OUTSIDE OF THE ROAD RIGHT-OF-WAY, SEE PLAN VIEW FOR NORTHING AND EASTING LOCATION INFORMATION.



**MANHOLE LOCATION CHART**

MH #	ROAD OR NORTHING & EASTING	CL STATION	OFFSET
1	BY OTHERS		
2	BY OTHERS		
3	WINDSOR WALK COURT EAST	0+02.34	7.00' RT.
4	WINDSOR WALK COURT	1+25.49	7.00' RT.
5	OXFORD CREST LANE	0+47.67	7.00' RT.
6	BISHOPS GATE LANE	1+15.24	10.00' LT.
7	BISHOPS GATE LANE	2+61.26	3.78' LT.
8	BISHOPS GATE LANE	3+27.79	8.02' LT.
9	BISHOPS GATE LANE	6+88.83	7.00' LT.
14	WINDSOR WALK COURT	4+18.37	34.66' RT.
15	WINDSOR WALK COURT WEST	LP 1+00.91	198.25' LT.
16	CHAUCERS RIDGE COURT	1+40.43	7.00' LT.
17	CHAUCERS RIDGE COURT	4+21.62	4.98' LT.
18	CHAUCERS RIDGE COURT	6+45.00	7.00' LT.
19	CHAUCERS RIDGE COURT	9+35.13	7.00' LT.
20	CHAUCERS RIDGE COURT	LP 1+89.77	138.24' LT.
25	N 535,207.139 E 1,340,575.025		
26	BY OTHERS		

NOTE: CONTRACTOR TO VERIFY THE LOCATION OF APPURTENANCES WITHIN EASEMENTS.

PLAN REFERENCE NUMBERS

F-88-112	P-98-03
S-97-07	F-98-61
WP-97-62	GP-98-99
WP-97-138	20-3664-D

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*Robert M. Benjamin* 1-20-99  
CHIEF, BUREAU OF UTILITIES

*Howe...* 1/25/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 987-0286 Balt. (301) 621-5521 Wash. (410) 987-0286 P.O.

engineering	SJD	RFW	3	As-Built	6/27/99
illustration	SJD				
approval					
project	SJD	2		REVISE FH LOCATIONS & ADD PHASE LINE	1/9/99
97084	RCJ	1		REVISE MCE & GRADE AT ROW	9/30/98
date					
MAY 1998	BY NO.			REVISION	

Water & Sewer As-Built

**WATER AND SEWER PLAN**

600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

**RESERVOIR OVERLOOK,**  
LOTS 1 THRU 28 & 84 THRU 110  
CONTRACT # 24-3671-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
1"=50'  
2 of 12

CONTRACT NO.: 24-3671-D  
RESERVOIR OVERLOOK  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

WASH. SUB. SANITARY COMMISSION. 221/74

PAUL PANITZ 1132/540 P.47 ZONED R-20

SIEVE AND PATI BURKE 3948/439 P.71 ZONED R-20

FRED E. SISSON & WIFE 407/389 P.72 ZONED R-20

MILDRED E. MITCHELL 485/386 P.73 ZONED R-20

JOAN M. BUCKINGHAM 1090/137 P.278 ZONED R-20

LLOYD BARNES & WIFE 227/369 P.74 ZONED R-20

HOWARD & FRANCIS ROBINSON 240/364 P.64 ZONED R-20

HOWARD DORTCH JR. & WIFE 709/590 P.189 ZONED R-20

CONTRACT NO.: 24-3671-D RESERVOIR OVERLOOK WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND



ROCKY GORGE RESERVOIR

WASH. SUB. SANITARY COMMISSION. 221/74

E 1,338,750

N 533,000

E 1,338,750

N 533,000

PLAN REFERENCE NUMBERS	
F-88-112	P-98-03
S-97-07	F-98-61
WP-97-62	GP-98-99
WP-97-138	Zo-3661-P

PHASE 2 CONTRACT # 24-3735-D

PHASE 1

MATCHLINE,

SHEET 2 OF 12

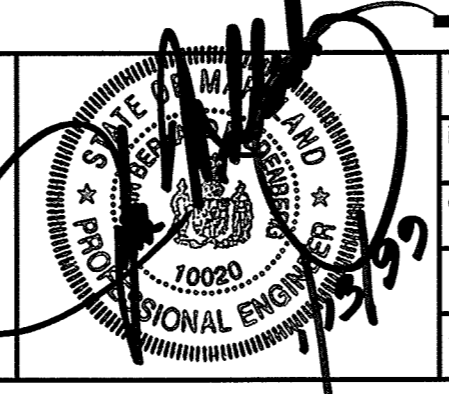
Water & Sewer As-Builts

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC. Engineers Planners Surveyors

5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042 (410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 PA



engineering	SJD	REW	3	As-Builts	4/27/99
illustration	SJD <td>ZCK <td>4 <td>HARDING RD SEWER EXTENSION (UTILITIES UNLIMITED)</td> <td>4/20/99</td> </td></td>	ZCK <td>4 <td>HARDING RD SEWER EXTENSION (UTILITIES UNLIMITED)</td> <td>4/20/99</td> </td>	4 <td>HARDING RD SEWER EXTENSION (UTILITIES UNLIMITED)</td> <td>4/20/99</td>	HARDING RD SEWER EXTENSION (UTILITIES UNLIMITED)	4/20/99
approval					
project	SJD	2		ADD PRIVATE SEWER & UTILITY EASEMENT & ADD PHASING	1/8/99
date	97084	RCJ	1	REVISE MCE, GRADE AT ROW, & LOT 109	10/1/98
date	MAY 1998	BY	NO.	REVISION	DATE

# WATER AND SEWER PLAN

RESERVOIR OVERLOOK, LOTS 1 THRU 28 & 84 THRU 110 CONTRACT # 24-3671-D SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

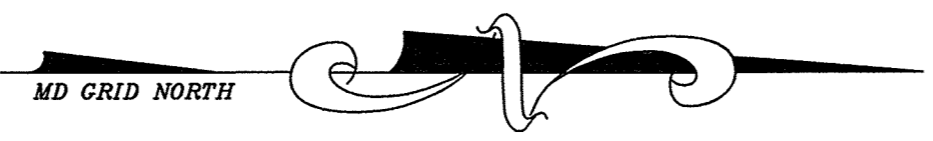
scale 1"=50' 3 of 12

Robert M. Benjamin 1-20-99 CHIEF, BUREAU OF UTILITIES DATE

Michael J. ... 1/25/99 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

MATCHLINE, SHEET

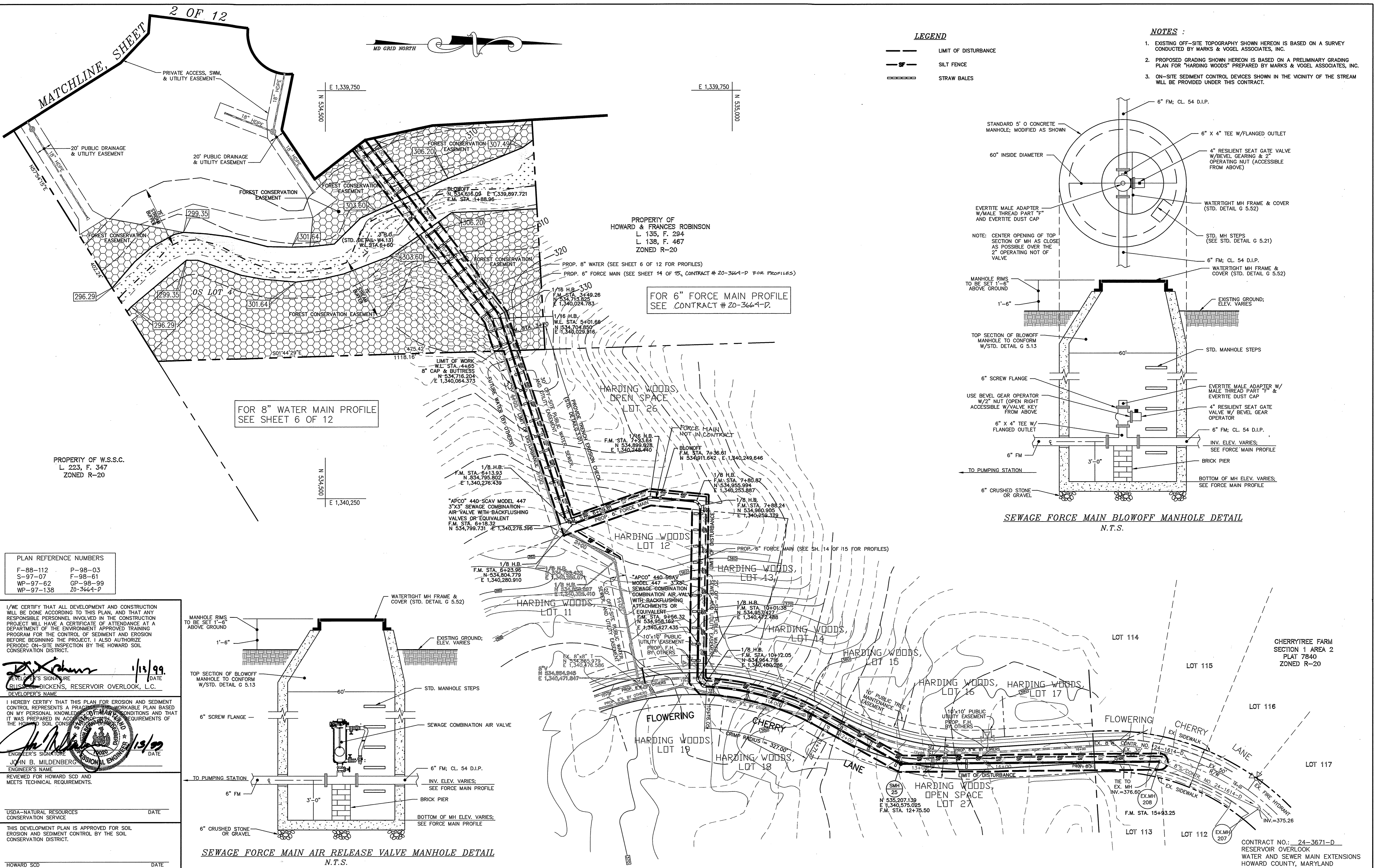


LEGEND

- LIMIT OF DISTURBANCE
- - - SILT FENCE
- STRAW BALES

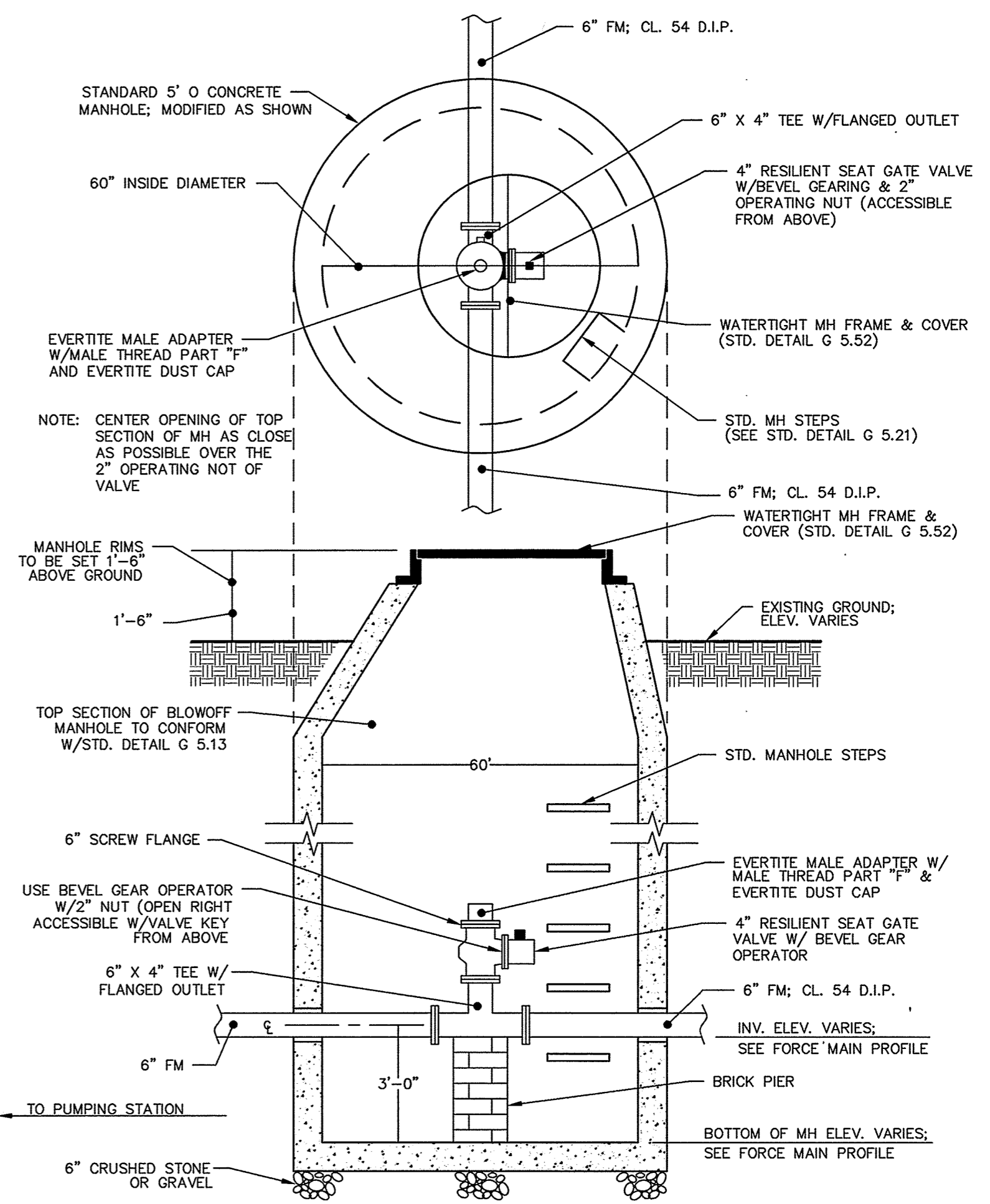
NOTES :

- EXISTING OFF-SITE TOPOGRAPHY SHOWN HEREON IS BASED ON A SURVEY CONDUCTED BY MARKS & VOGEL ASSOCIATES, INC.
- PROPOSED GRADING SHOWN HEREON IS BASED ON A PRELIMINARY GRADING PLAN FOR "HARDING WOODS" PREPARED BY MARKS & VOGEL ASSOCIATES, INC.
- ON-SITE SEDIMENT CONTROL DEVICES SHOWN IN THE VICINITY OF THE STREAM WILL BE PROVIDED UNDER THIS CONTRACT.

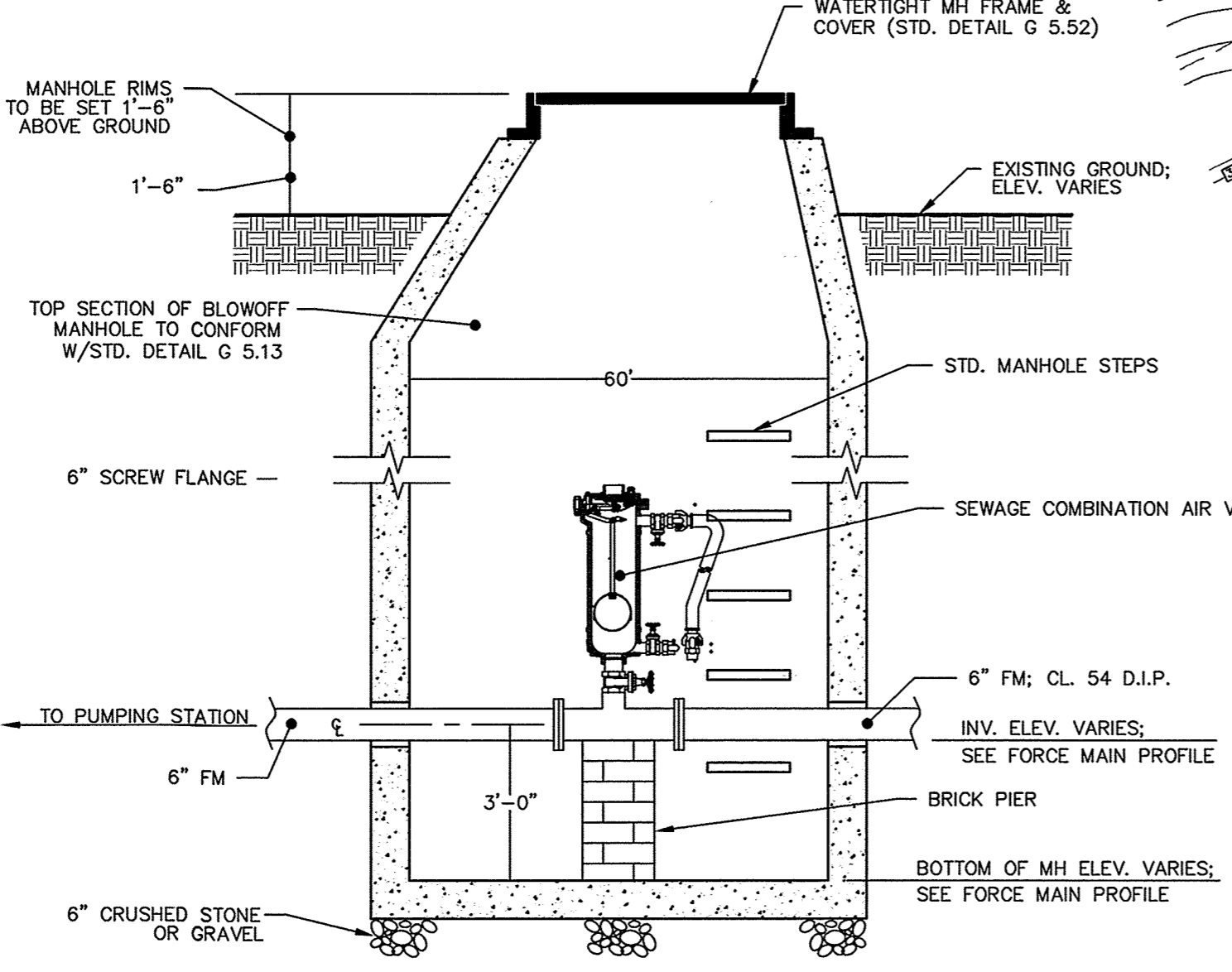


FOR 6" FORCE MAIN PROFILE SEE CONTRACT # 20-3664-D.

FOR 8" WATER MAIN PROFILE SEE SHEET 6 OF 12



SEWAGE FORCE MAIN BLOWOFF MANHOLE DETAIL N.T.S.



SEWAGE FORCE MAIN AIR RELEASE VALVE MANHOLE DETAIL N.T.S.

PLAN REFERENCE NUMBERS

F-88-112	P-98-03
S-97-07	F-98-61
WP-97-62	GP-98-99
WP-97-138	Z0-3664-D

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 1/13/99  
DEVELOPER'S SIGNATURE DATE  
RUSSIAN DICKENS, RESERVOIR OVERLOOK, L.C.  
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 1/13/99  
ENGINEER'S SIGNATURE DATE  
JOHN B. MILDENBERG  
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

HOWARD SCD DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*[Signature]* 1-20-99  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 1/25/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 937-0296 Balt. (301) 621-5521 Wash. (410) 937-0296 Fax.

engineering	SJD			
illustration	SJD			
approval	SJP	4	NOTE FORCE MAIN CONTRACT #	7/16/00
project	SJD	2	CORRECT STATIONING OF APPURTENANCES & REVISE LOT NUMBERS AND MATCHLINE NUMBERS.	1/11/99
date				
MAY 1998	BY	NO.	REVISION	DATE

**WATER AND SEWER PLAN**

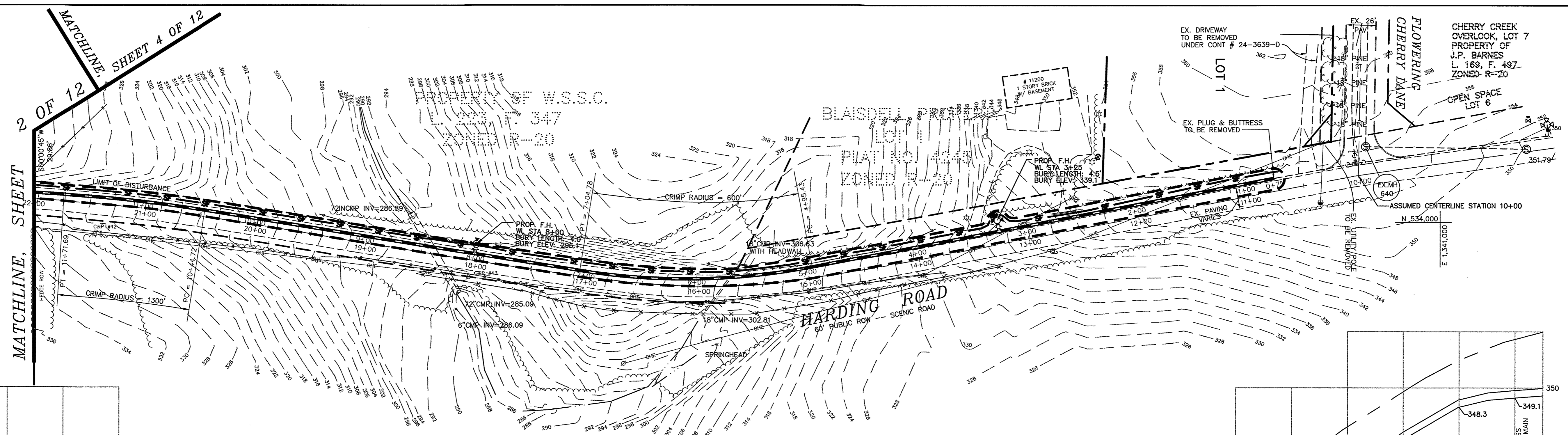
600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

**RESERVOIR OVERLOOK,**  
LOTS 1 THRU 28 & 84 THRU 110  
CONTRACT # 24-3671-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

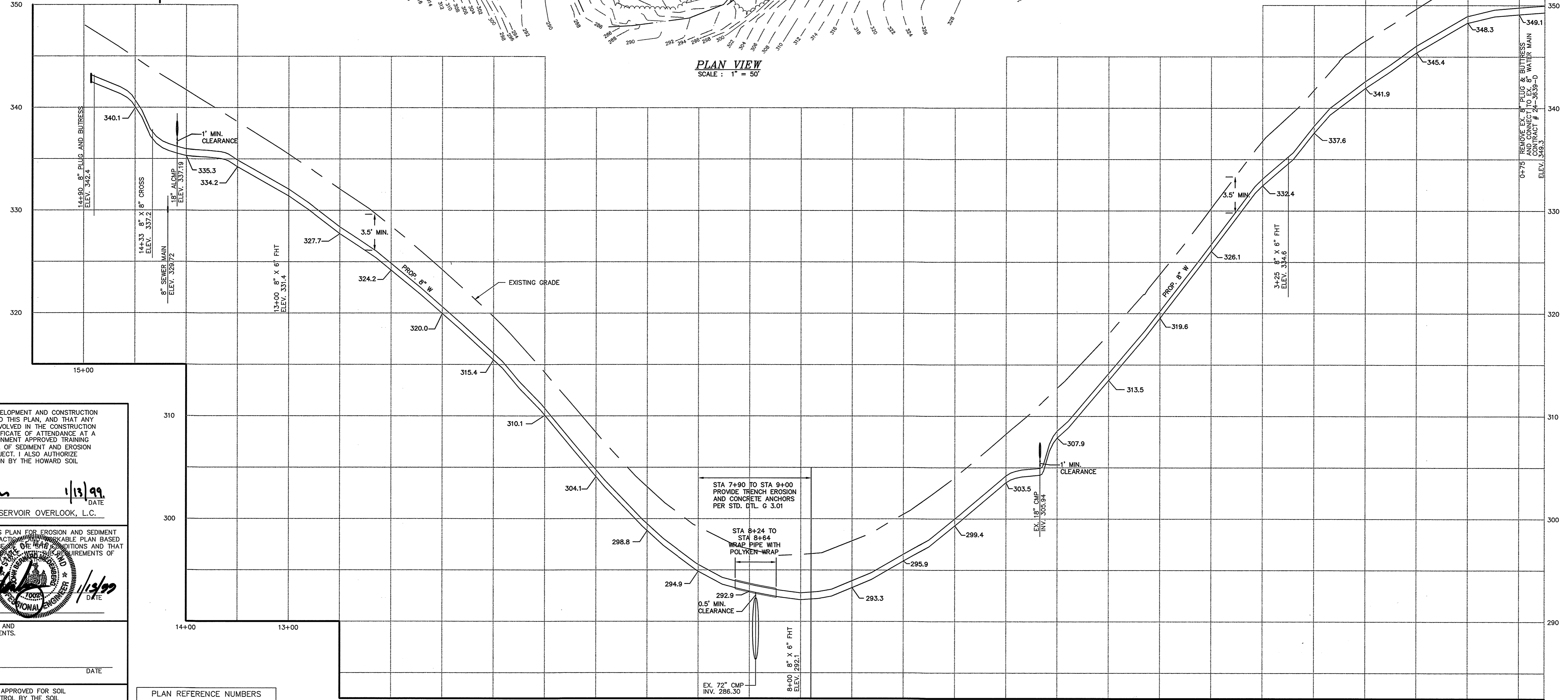
scale  
1"=50'  
4 of 12

**LEGEND**

- EX. EDGE OF GRAVEL
- EX. POWER POLE
- EX. OVERHEAD ELEC.
- EX. LIGHT POLE
- EX. GUY POLE
- EX. SANITARY MH
- EX. WATER VALVE
- WATER METER
- EX. WELL
- EX. FIRE HYDRANT
- EX. EDGE OF CONC.
- EX. EDGE OF PAVEMENT
- EX. GUARD RAIL
- EX. FENCE
- EX. WOODLINE
- EX. STREAM CENTERLINE
- EXISTING TREE



**PLAN VIEW**  
SCALE: 1" = 50'



**8" MAIN HARDING ROAD**  
ALL STATIONING IS WATER MAIN STATIONING  
HORIZONTAL SCALE: 1" = 50'  
VERTICAL SCALE: 1" = 5'

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 1/13/99  
DEVELOPER'S SIGNATURE DATE  
ROBERT D. HENNING, RESERVOIR OVERLOOK, L.C.  
DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 1/13/99  
ENGINEER'S SIGNATURE DATE  
JOHN B. MILDENBERG  
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

HOWARD SCD DATE

PLAN REFERENCE NUMBERS

F-88-112	P-98-03
S-97-07	F-98-61
WP-97-62	GP-98-99
WP-97-138	20-3664-P

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

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Engineers Planners Surveyors

5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 987-0286 Balt. (301) 621-5521 Wash. (410) 987-0286 Pa.

engineering	SJD		
illustration	SJD		
approval			
project	97084		
date	MAY 1998		

**WATER PLAN AND PROFILE**

**RESERVOIR OVERLOOK,  
LOTS 1 THRU 28 & 84 THRU 110**

CONTRACT # 24-3671-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
AS SHOWN

5 of 12

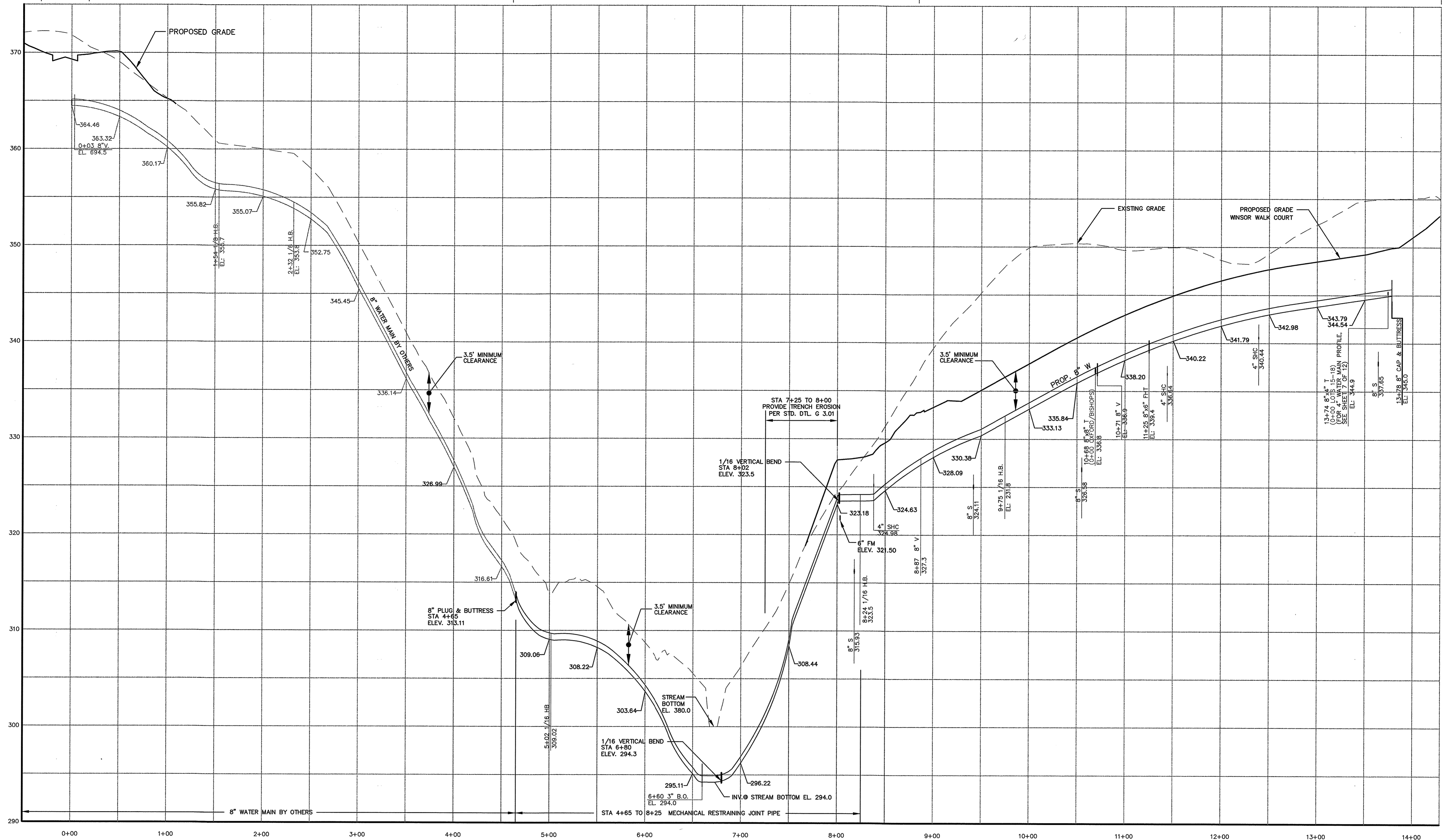
F:\97084\DWG\FINAL\98-184-WS-5.DWG

FLOWERING  
CHERRY LANE

OFF-SITE PUBLIC WATER, SEWER, & UTILITY EASEMENT

PUBLIC WATER, SEWER, & UTILITY EASEMENT

WINDSOR WALK COURT



**8" MAIN OFFSITE THROUGH WINDSOR WALK COURT**

ALL STATIONING IS WATER MAIN STATIONING  
HORIZONTAL SCALE : 1" = 50'  
VERTICAL SCALE : 1" = 5'

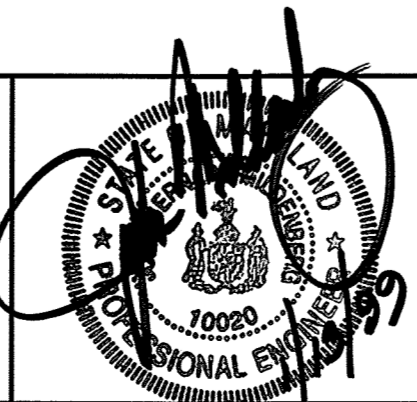
CONTRACT NO.: 24-3671-D  
RESERVOIR OVERLOOK  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

**MILDENBERG,  
BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors

5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 997-0296 Dail. (301) 621-5321 Wash. (410) 997-0298 Fax.



engineering	SD				
illustration	SD				
approval					
project	SD	2	REVISE LOT & SHEET NUMBERS	1/12/99	
	RCJ	1	ADD VERTICAL BENDS	10/1/98	
date					
MAY 1998	BY	NO.	REVISION	DATE	

**WATER PROFILES**

600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

**RESERVOIR OVERLOOK,**  
LOTS 1 THRU 28 & 84 THRU 110  
CONTRACT # 24-3671-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

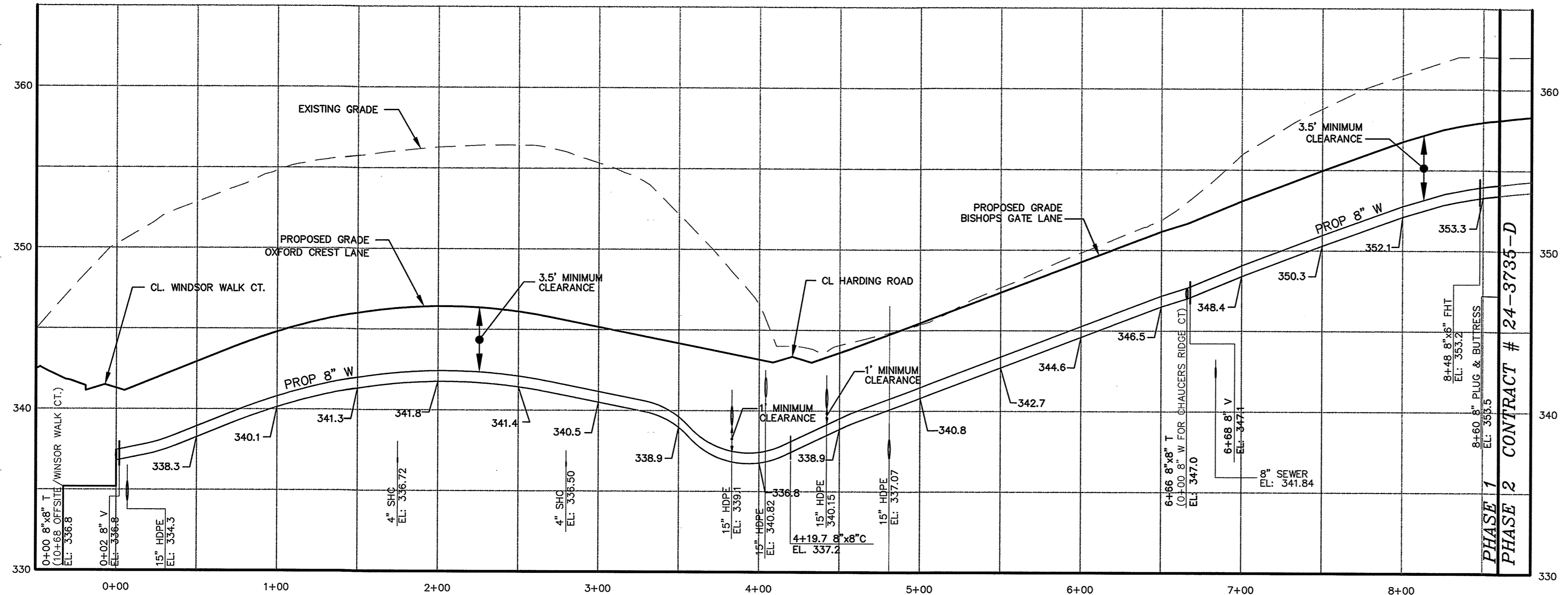
scale  
AS SHOWN

6 OF 12

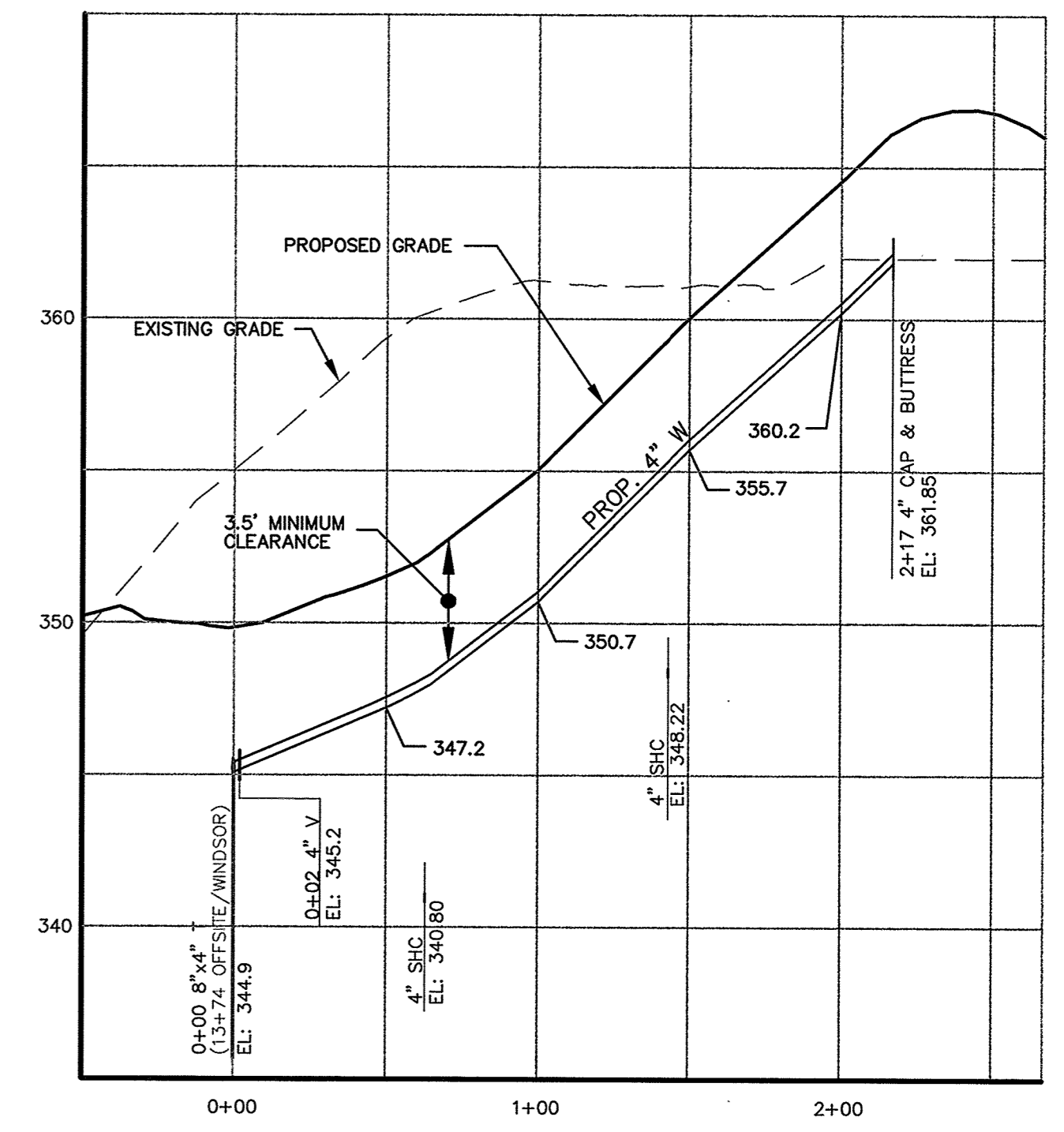
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Robert M. Dennis 1-20-99  
CHIEF, BUREAU OF UTILITIES DATE

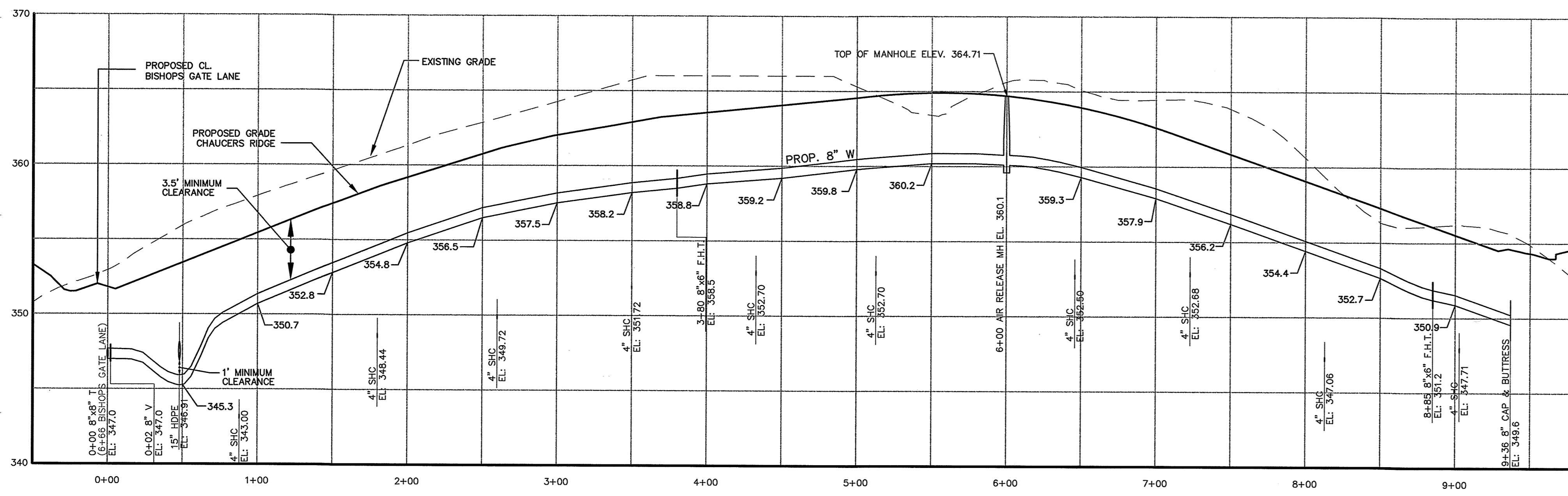
12569  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



**8" MAIN OXFORD CREST AND BISHOPS GATE LANE**  
 ALL STATIONING IS WATER MAIN STATIONING  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'



**4" EXTENSION, LOTS 15-18**  
 ALL STATIONING IS WATER MAIN STATIONING  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'



**8" MAIN CHAUCER'S RIDGE**  
 ALL STATIONING IS WATER MAIN STATIONING  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'

F:\97084\DWG\FINAL\W&S\84-PROOF.DWG

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert M. Beaman CHIEF, BUREAU OF UTILITIES 1-20-99 DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND [Signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION 1/25/99 DATE
--	---

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5072 Dorsey Hall Drive, Suite 202, Elkocott City, Maryland 21042  
 (410) 997-0298 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax

**PROFESSIONAL ENGINEER**  
 [Seal]

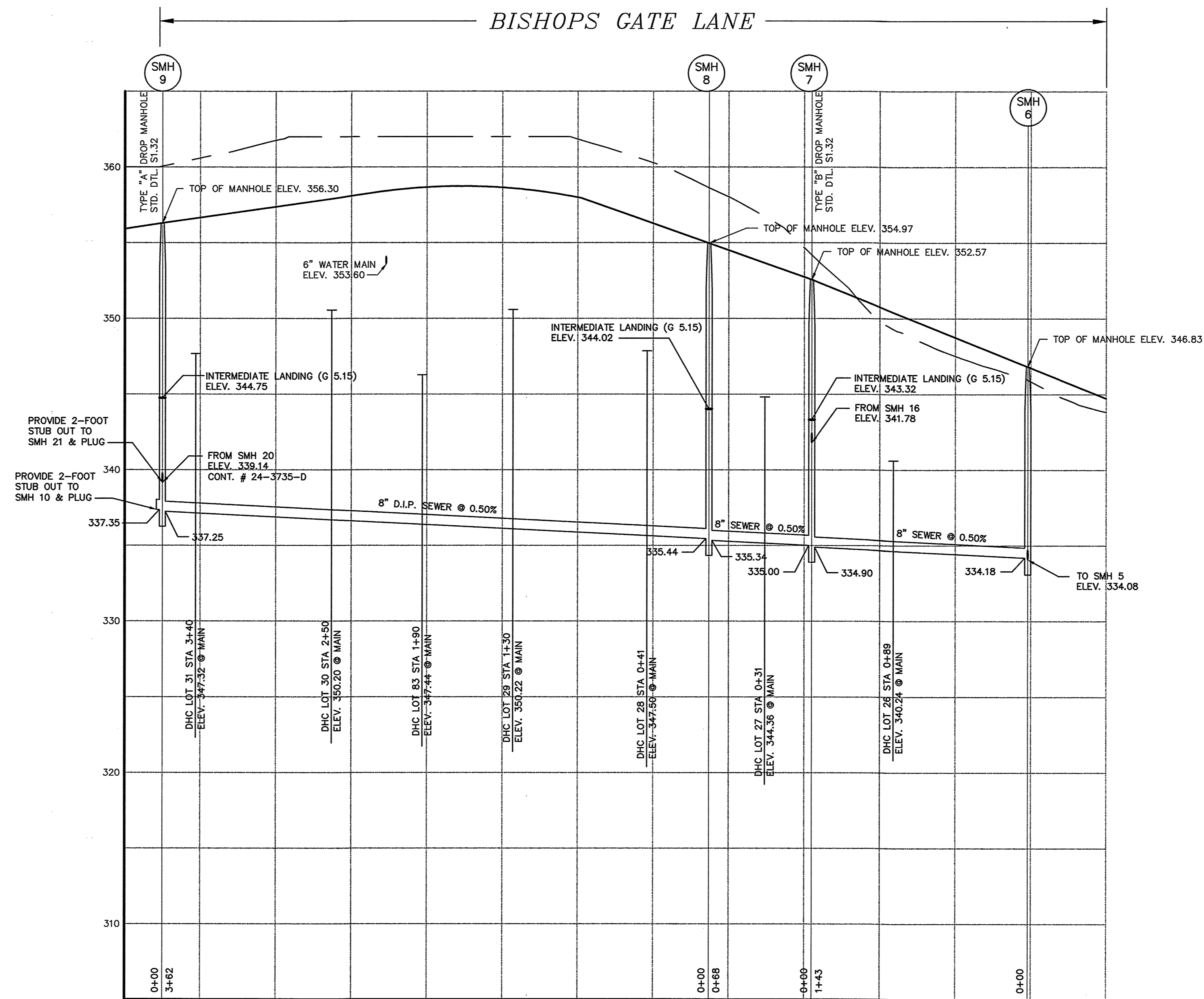
engineering	SD				
illustration	SD				
approval					
project	SD	2	REVISE FH LOCATIONS & REMOVE PHASE 2 PROFILES	1/12/99	
RCJ	1		REVISE PROPOSED GRADE, WATER MAIN, & CROSSINGS	10/1/98	
date					
MAY 1998	BY	NO.	REVISION	DATE	

**WATER PROFILES**

600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

**RESERVOIR OVERLOOK,**  
 LOTS 1 THRU 28 & 84 THRU 110  
 CONTRACT # 24-3671-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

CONTRACT NO.: 24-3671-D  
 RESERVOIR OVERLOOK  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND



**SEWER PROFILE - SMH 13 TO SMH 6**

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

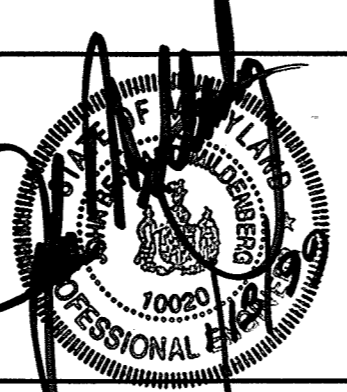
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CONTRACT NO.: 24-3671-D  
 RESERVOIR OVERLOOK  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0286 Balt. (301) 621-5321 Wash. (410) 997-0286 Fax



engineering	SJD				
illustration	SJD				
approval					
project	SJD	2	PROVIDE STUBS AT SMH 9 & REMOVE PHASE 2	1/12/99	
	RCJ	1	REVISE PROPOSED GRADE, SHC, & 8" SEWER	10/6/98	
date					
MAY 1998	BY	NO.	REVISION	DATE	

**SEWER PROFILES**

**RESERVOIR OVERLOOK,**  
 LOTS 1 THRU 28 & 84 THRU 110  
 CONTRACT # 24-3671-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

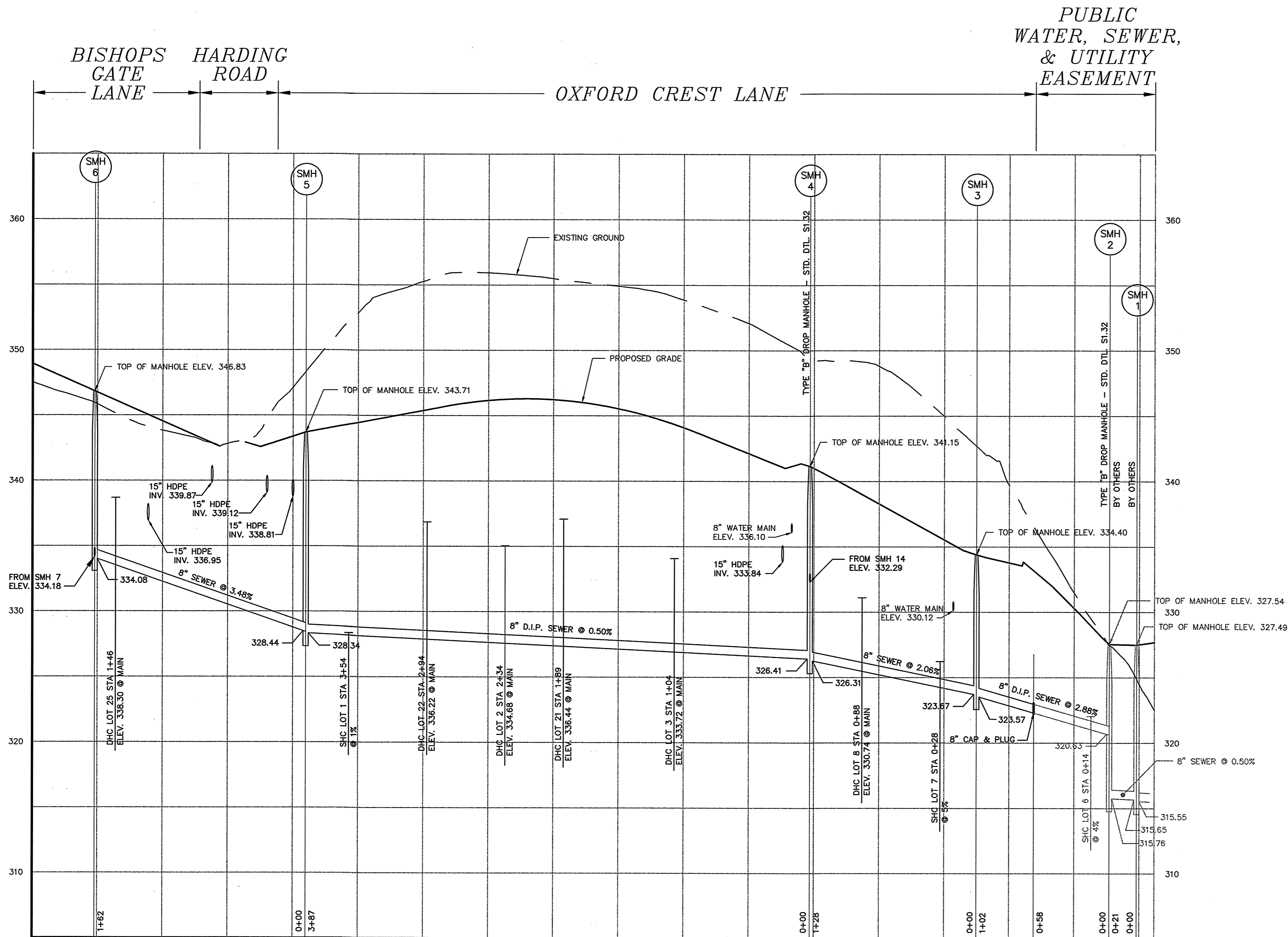
scale  
 AS SHOWN  
**8 OF 12**

Robert J. Cunniff 1-20-99  
 CHIEF, BUREAU OF UTILITIES DATE

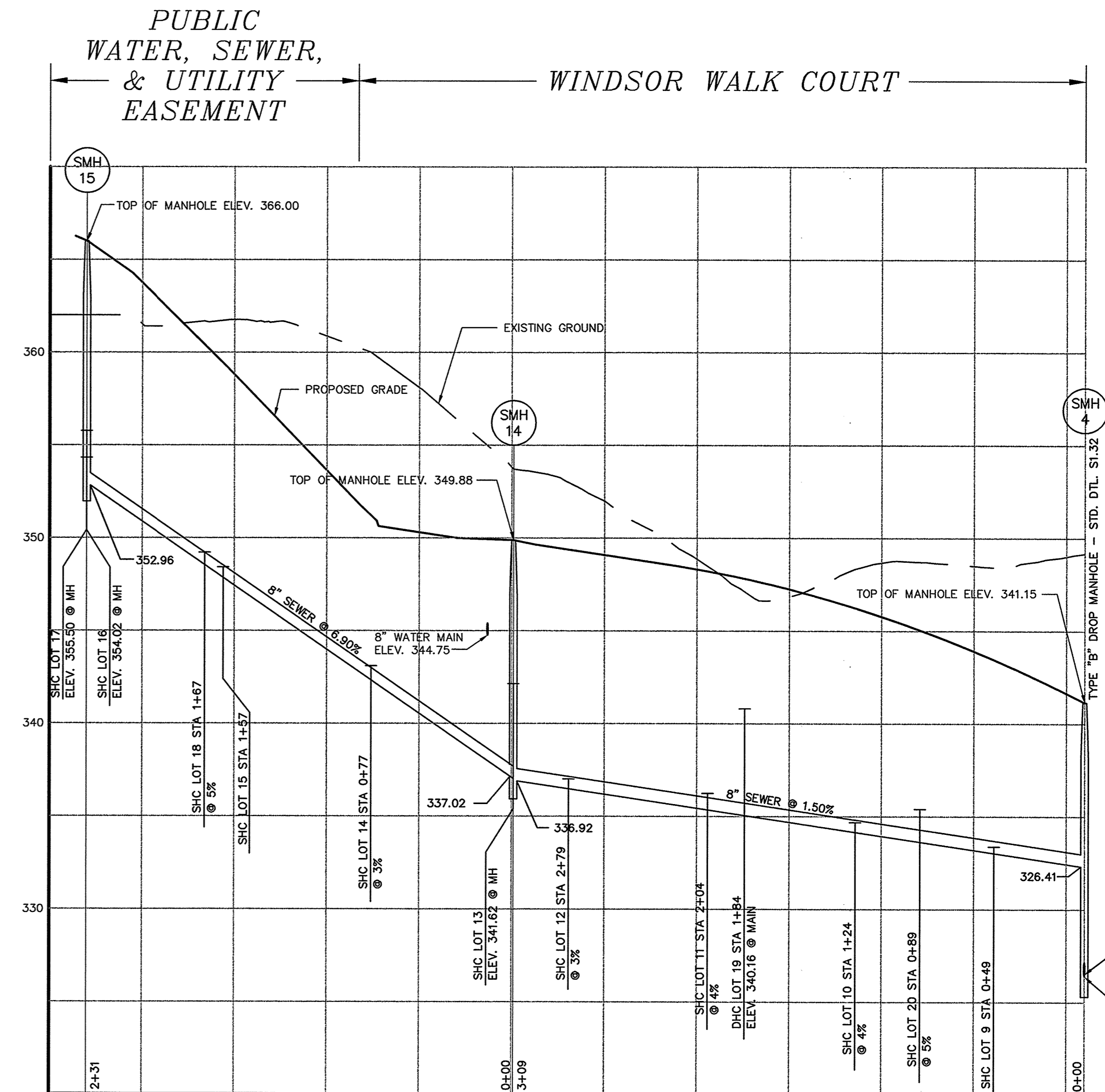
1/25/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

600' SCALE MAP NO. 46 BLOCK NO. 15 & 16





**SEWER PROFILE - SMH 6 TO SMH 1**  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'



**SEWER PROFILE - SMH 15 TO SMH 4**  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'

PUBLIC  
 WATER, SEWER,  
 & UTILITY  
 EASEMENT

PUBLIC  
 WATER, SEWER,  
 & UTILITY  
 EASEMENT

CONTRACT NO.: 24-3671-D  
 RESERVOIR OVERLOOK  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

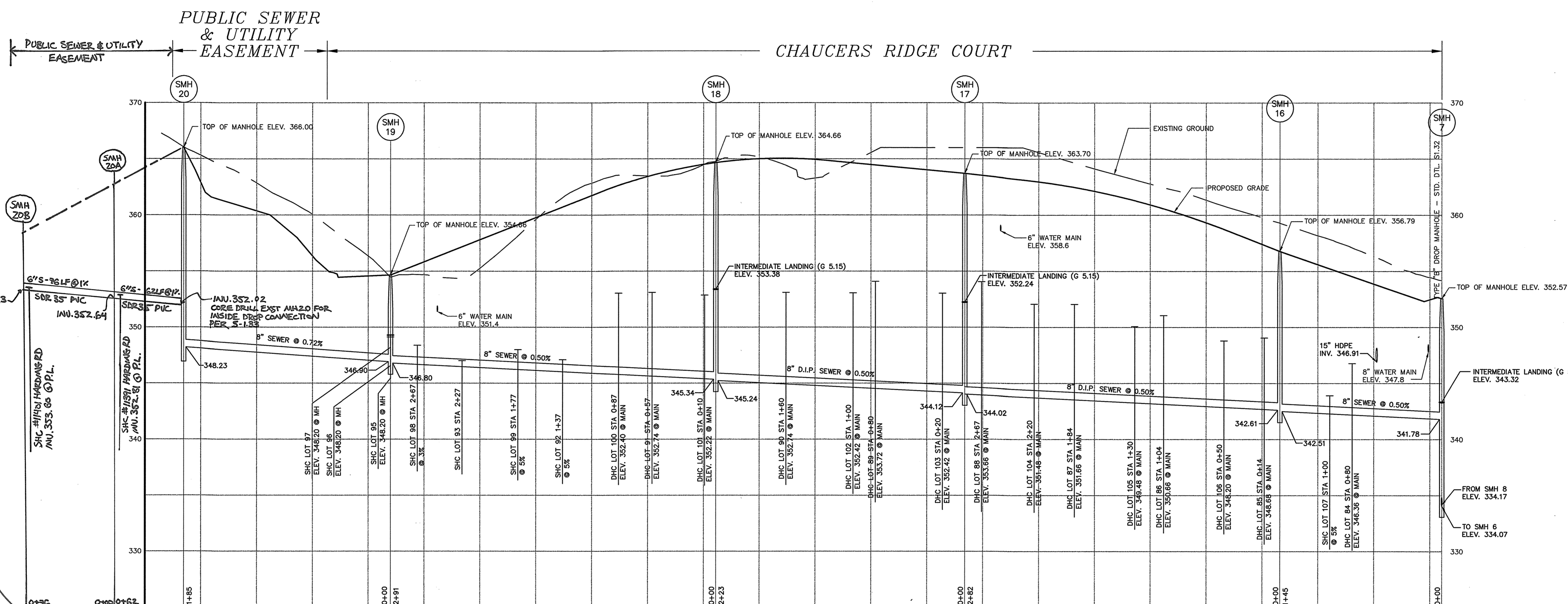
DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
 Robert W. Bauman 1-20-99  
 CHIEF, BUREAU OF UTILITIES DATE

**MILDENBERG,  
 BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5072 Dursley Hall Drive, Suite 202, Ellicott City, Maryland 21113  
 (410) 937-0286 Ext. (301) 621-5221 Wash. (410) 937-0288 Pa.

engineering	SJD			
illustration	SJD			
approval				
project	SJD	2	REVISE LOT NUMBERS	1/12/99
date	RCJ	1	REVISE PROPOSED GRADE & PIPE BETWEEN SMH 15 TO SMH 14 & SMH 6 TO SMH 5.	10/8/98
MAY 1998	BY	NO.	REVISION	DATE

**SEWER PROFILES**  
 600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

**RESERVOIR OVERLOOK,  
 LOTS 1 THRU 28 & 84 THRU 110**  
 CONTRACT # 24-3671-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND



SEWER PROFILE - SMH 20 TO SMH 7  
 HORIZONTAL SCALE : 1" = 50'  
 VERTICAL SCALE : 1" = 5'

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DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Robert M. Bennett 1-20-99  
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
 [Signature] 1/25/99  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG, BOENDER & ASSOC., INC.**  
 Engineers Planners Surveyors  
 5072 Dorsey Hall Drive, Suite 202, Elliott City, Maryland 21422  
 (410) 897-0286 Balt. (301) 621-5521 Wash. (410) 897-0286 P

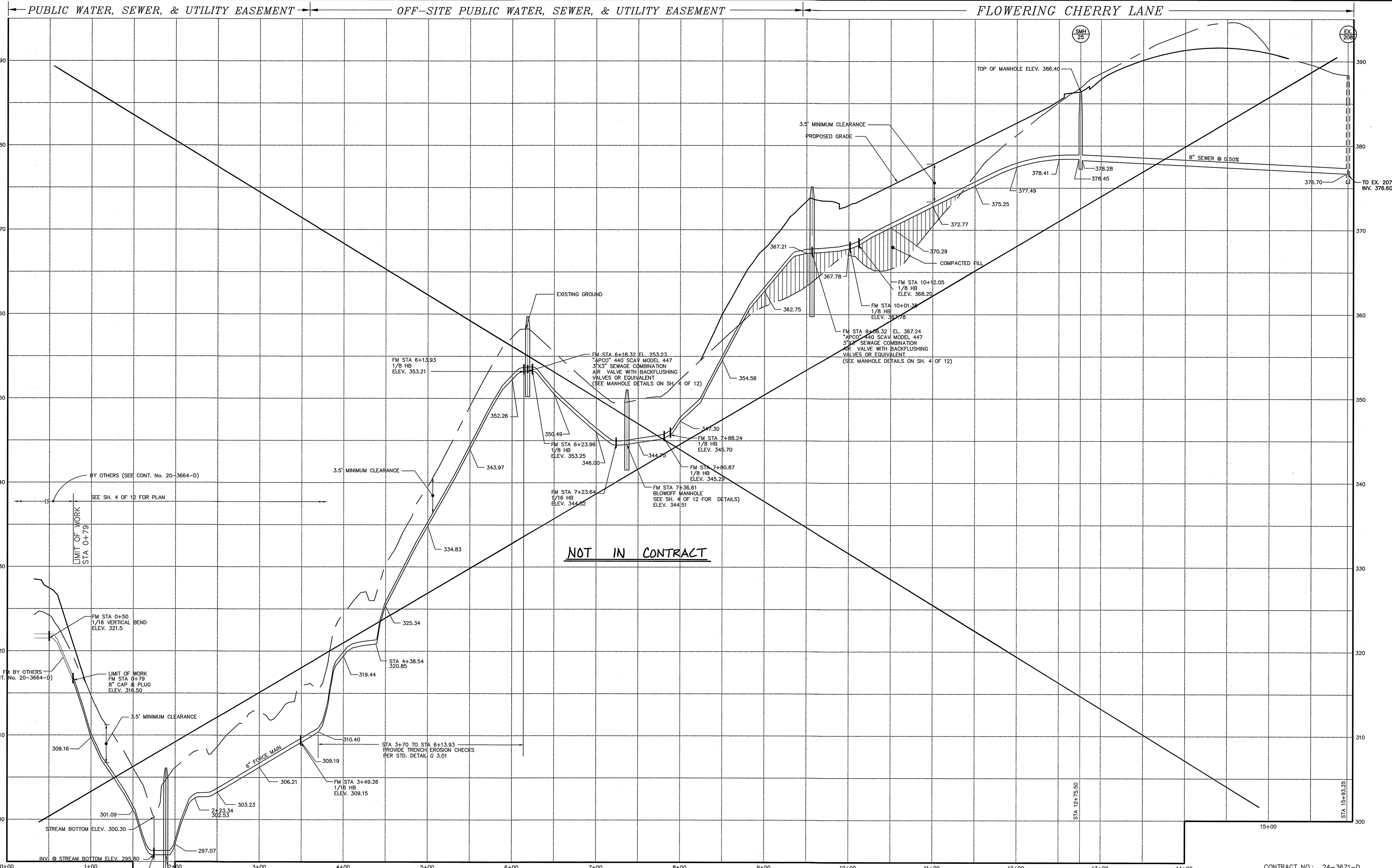
engineering	SJD			
illustration	SJD			
approval	[Signature]			
project	97084	3	HARDING RD SEWER EXTENSION (UTILITIES UNLD)	4/20/99
date	MAY 1998			

**SEWER PROFILES**  
 600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

**RESERVOIR OVERLOOK,**  
 LOTS 1 THRU 28 & 84 THRU 110  
 CONTRACT # 24-3671-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale AS SHOWN  
 10 OF 12

CONTRACT NO.: 24-3671-D  
 RESERVOIR OVERLOOK  
 WATER AND SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND



**NOT IN CONTRACT**

**SEWER PROFILE - FORCE MAIN TO SMH 28**

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

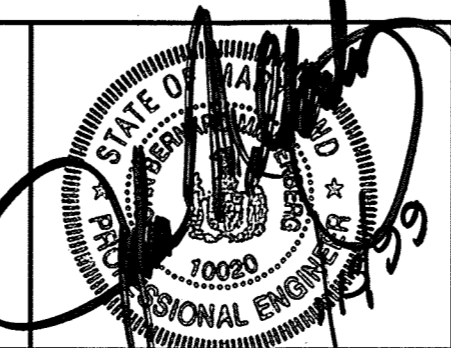
NOTE: FIELD LOCK GASKET FOR THE ENTIRE FORCE MAIN.

CONTRACT NO.: 24-3671-D  
RESERVOIR OVERLOOK  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
Robert W. Beigner 1-20-99  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
[Signature] 1/25/99  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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Engineers Planners Surveyors  
5072 Dorsey Hill Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 897-0296 Balt. (301) 621-5521 Wash. (410) 897-0288 Pa.



engineering	SJD			
illustration	SJD			
approval	SJP	4	LABEL NOT IN CONTRACT	7/16/00
project	SJD	2	CORRECT STATIONING & ELEVATIONS.	1/12/99
date	RCJ	1	ADD VERTICAL BEND NOTES.	10/9/98
date				
MAY 1998	BY	NO.	REVISION	DATE

**SEWER PROFILES**  
600' SCALE MAP NO. 46 BLOCK NO. 15 & 16

**RESERVOIR OVERLOOK,**  
LOTS 1 THRU 28 & 84 THRU 110  
CONTRACT # 24-3671-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

