

SHC SCHEDULE		
LOT #	INV.	Ø/PL/EASEMENT
4	467.96	
5	465.12	
6	459.69	
7	455.47	
8	456.70	
9	455.10	
10	446.54	
11	446.62	

WATER MAIN TABULATION CHART		
WOOD POINT PL. (WL STA 0+00 TO 4+71.51)		
LOCATION	APPURTENANCE	
N 569456.715 E 1371401.189	TSV	
Q STA. 4+83.75 O/S 5' RT.	8"X6" T	
Q STA. 4+83.75 O/S 6' RT.	6" V	
Q STA. 4+83.75 O/S 13.00' LT.	F.H.	
N 569464.397 E 1371413.047	6" V	
N 569459.101 E 1371416.594	F.H.	
PRIVATE DRIVEWAY (WL STA 4+71.51 TO 8+62.50)		
LOCATION	APPURTENANCE	
N 569749.085 E 1371845.783	1/16 H.B.	
N 569751.182 E 1371857.360	1/16 H.B.	
N 569748.932 E 1371865.883	1/8 H.B.	
N 569742.102 E 1371870.377	8"X4" R	
N 569662.522 E 1371922.733	1/8 H.B.	
N 569660.795 E 1371930.858	1/8 H.B.	
N 569770.277 E 1372095.918	4" C & B	

MANHOLE LOCATION CHART		
MH #	LOCATION	
1	N 569944.423	E 1371892.056
2	N 569926.773	E 1371895.144
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7	N 569671.450	E 1371928.830
8	N 569778.610	E 1372090.391
9	WOOD POINT PL. Q	STATION 2+27.80 O/S 5.0' LT.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
6-6-01
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**MILDENBERG,
BOENDER & ASSOC., INC.**
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Ball (301) 621-5521 Wash. (410) 997-0298 Fax

5/10/01

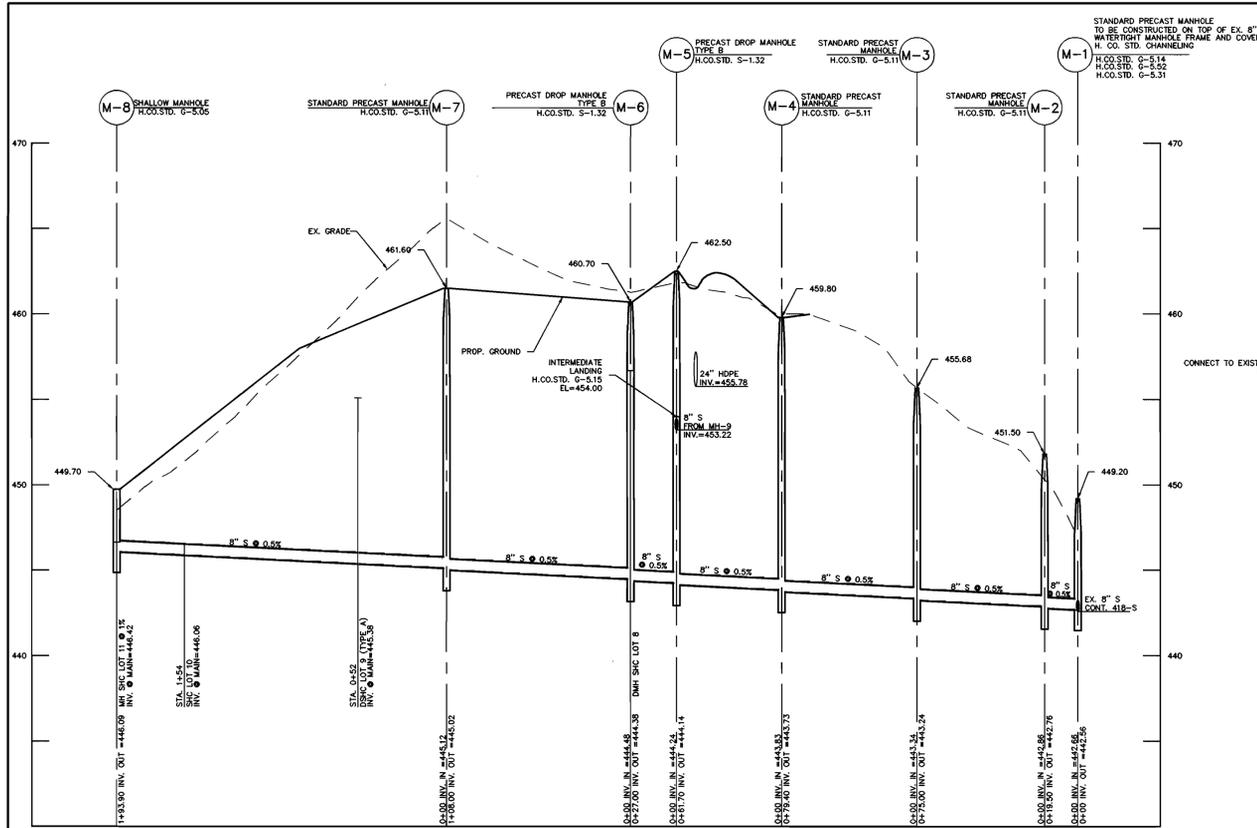
engineering	SAA				
illustration	SAA				
approval	RJH				
project	99026				
date	MAY 2001	BY	NO.	REVISION	DATE

**WATER AND SEWER
PLAN**
600' SCALE MAP NO. 31 BLOCK NO. 14

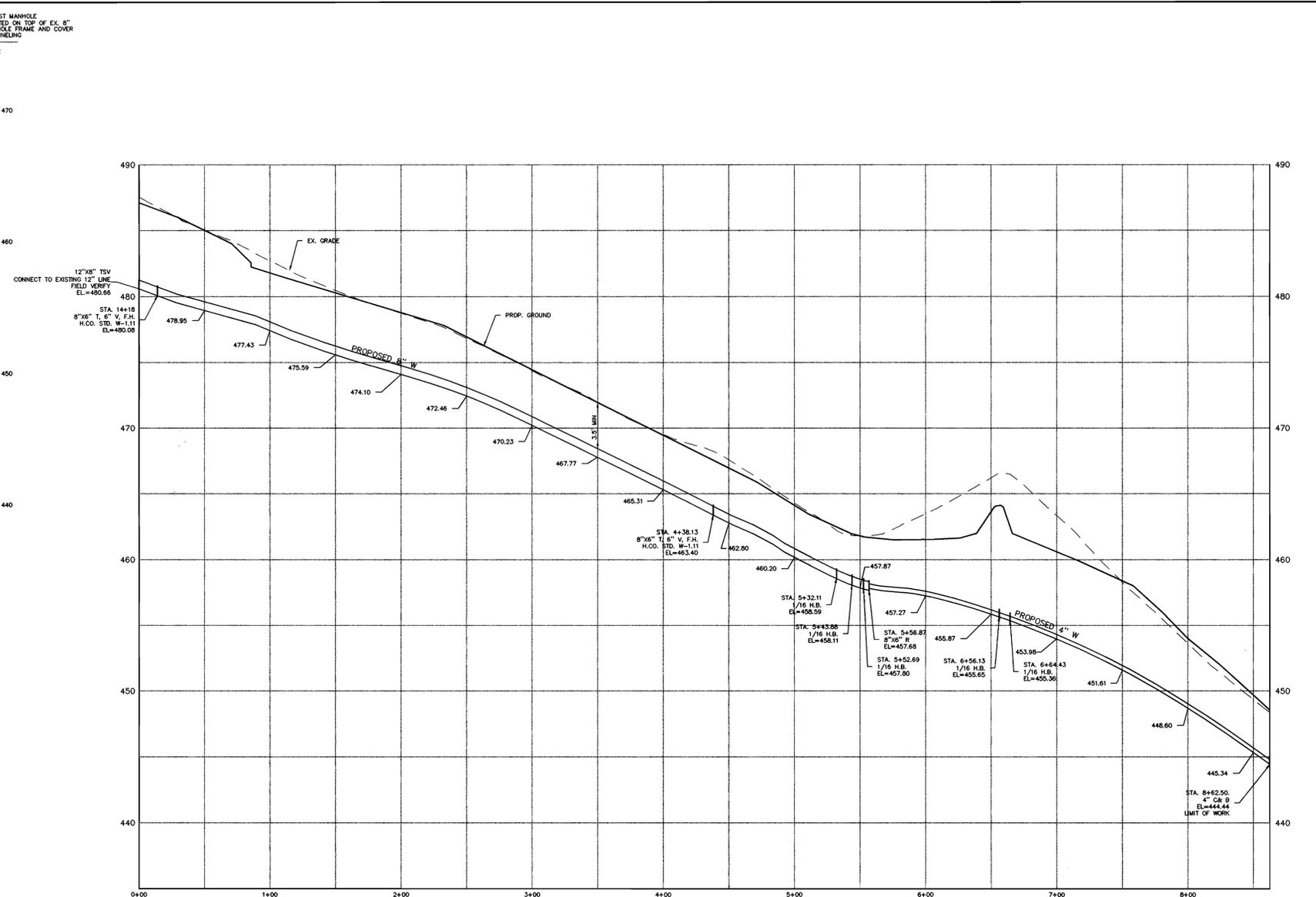
ZANTI PROPERTY
LOT 4 THRU 13
CONTRACT NO. 14-3827-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

scale
1" = 50'
2 OF 3

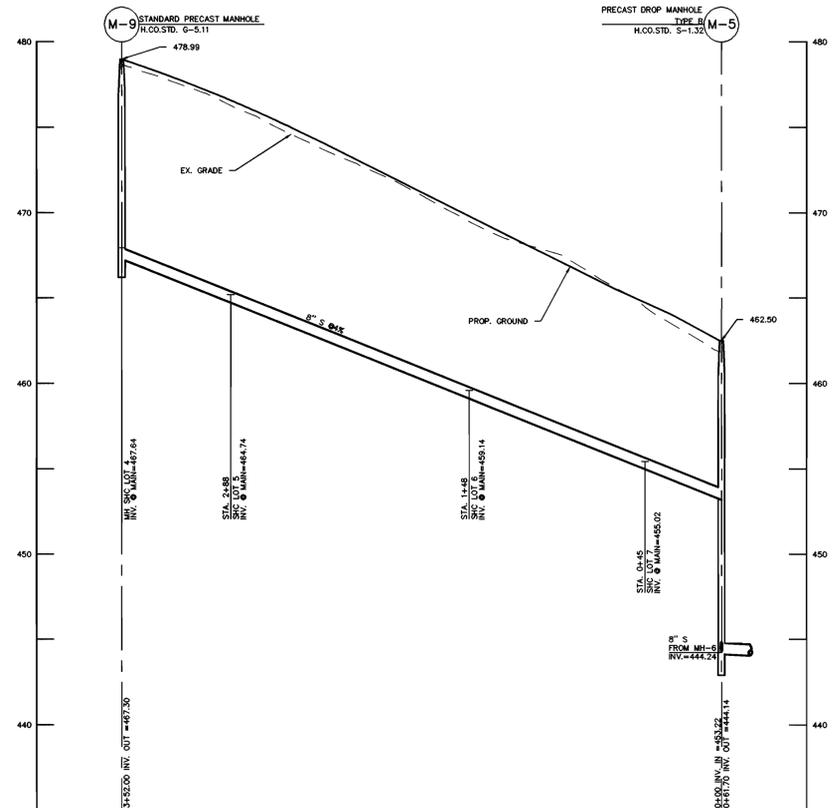
99026(DWG) FINAL (W&S) COVER



PROP. 8" SEWER PROFILE (M-8 TO M-1)
 SCALE: 1" = 50' (HOR.)
 1" = 5' (VERT.)



PROP. WATER PROFILE
 SCALE: 1" = 50' (HOR.)
 1" = 5' (VERT.)

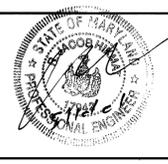


PROP. 8" SEWER PROFILE (M-9 TO M-5)
 SCALE: 1" = 50' (HOR.)
 1" = 5' (VERT.)

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 6-6-01
 DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 6/1/01
 DATE

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 937-0296 Fax: (301) 621-5521 Wash. (410) 937-0298 Fax



engineering SAA			
illustration SAA			
approval RJH			
project 99026			
date MAY 2001	BY NO.	REVISION	DATE

WATER AND SEWER PROFILES

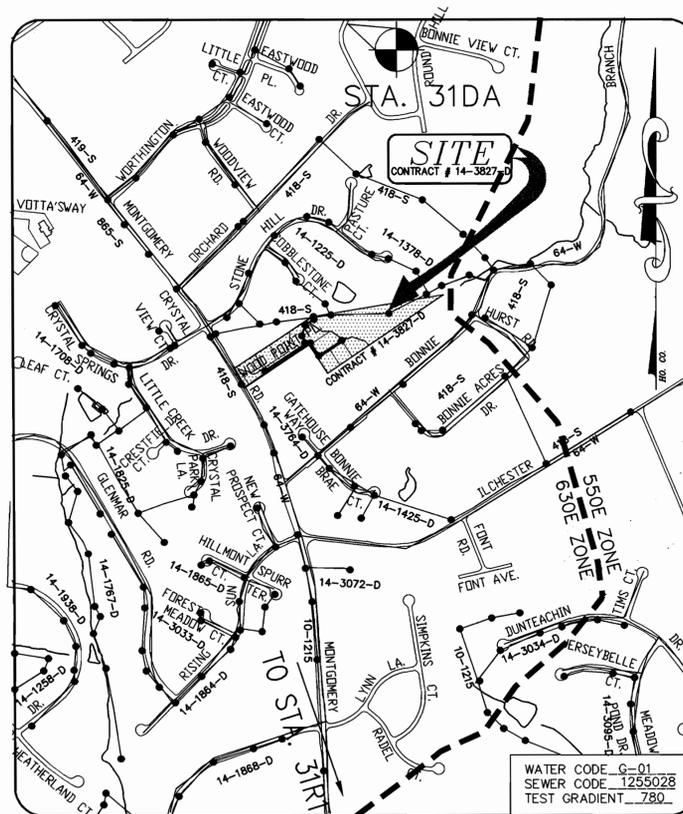
600' SCALE MAP NO. 31 BLOCK NO. 14

ZANTI PROPERTY
 LOT 4 THRU 13
 CONTRACT No. 14-3827-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

scale AS SHOWN
 3 OF 3

99026 DWD FINAL W&S PROFILES

ITEMS	QUANTITIES ESTIMATED	QUANTITIES		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STD. MANHOLE	6 EACH			
STD. WATER TIGHT MANHOLE	1 EACH			
TYPE B DROP MANHOLE "TYPE B"	1 EACH			
STD. SHALLOW MANHOLE	1 EACH			
MANHOLE, VERTICAL FEET	197 L.F.			
8" SEWER MAIN	1,075 L.F.			
4" SEWER HOUSE CONNECTION	127 L.F.			
# SEWER HOUSE CONNECTIONS	4 EACH			
# DROP HOUSE CONNECTIONS	1 EACH			
# MH CONNECTIONS	2 EACH			
8" WATER	605 L.F.			
4" WATER	338 L.F.			
1" WATER HOUSE CONNECTION	145 L.F.			
F.H.	2 EACH			
8"x 6" T	2 EACH			
6" V	2 EACH			
12"x8" TSV	1 EACH			
8"x 4" R	1 EACH			
4" CAP & BUTTRESS	1 EACH			
# 1" WHC	8 EACH			
1/16 H.B. (8")	2 EACH			
1/8 H.B. (8")	1 EACH			
1/8 H.B. (4")	2 EACH			
NAME OF UTILITY CONTRACTOR:				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				



VICINITY MAP

SCALE : 1" = 600'

TYPE OF BUILDING	SEF
No. OF UNITS	8
No. OF WATER HOUSE CONNECTION	8
No. OF SEWER HOUSE CONNECTIONS	7
DRAINAGE AREA	BONNIE BRANCH, PATAPSCO
TREATMENT PLANT	PATAPSCO WASTEWATER TREATMENT PLANT, BALTIMORE

EROSION AND SEDIMENT CONTROL FOR THIS CONTRACT IS PROVIDED UNDER F-01-98

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 (NAD 83)
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- HORIZONTAL AND VERTICAL DATUMS BASED ON (NAD'83) MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.
 STA No. 31R1 N 565,303.465 E 1,372,517.678 EL = 401.678
 STA No. 31DA N 571,982.845 E 1,372,144.970 EL = 482.359
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". 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 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
 (410) 795-1390
 COLONIAL PIPELINE CO.
 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.
- 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 18.114(c) OF HOWARD COUNTY CODE.
- 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.
- 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. UNLESS OTHERWISE NOTED.
- 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.
- 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 UNDER F-01-98
- ALL SEWER HOUSE CONNECTIONS TO BE 4" IN SIZE.
- ALL WATER HOUSE CONNECTIONS TO BE 1" IN SIZE UNLESS OTHERWISE NOTED.
- ALL CELLARS WILL HAVE SERVICE TO LOWEST FLOOR UNLESS OTHERWISE NOTED.
- THERE WILL BE NO TWIN SEWER HOUSE CONNECTIONS ON SITE UNLESS APPROVED BY HOWARD COUNTY.
- ALL WATER MAINS TO BE 8", OR 4" DIP CLASS 52.
- ROADS, GRADING, STORM DRAIN AND STORM WATER MANAGEMENT INDICATED FOR INFORMATIONAL PURPOSES ONLY. SEE ROAD PLANS FOR CONSTRUCTION DATA.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- EXISTING WHC ON LOT 8 WILL BE ABANDONED.
- EXISTING HOUSE WILL BE SERVED BY THE EXISTING SHC TO REMAIN.

INDEX OF DRAWINGS

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER AND SEWER PLAN
3	WATER AND SEWER PROFILES

OWNER/DEVELOPER
 ELLICOTT CITY LAND HOLDING CO.
 8000 MAIN STREET
 ELLICOTT CITY MARYLAND 21043
 PHONE No. (410) 740-2100

CONTRACT No. 14-3827-D
ZANTI PROPERTY
LOTS 4 THRU 13

WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

PLAN REFERENCE NUMBERS

F-86-184	WP-00-107
SP-00-04	F-01-98

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.

DEVELOPER'S SIGNATURE: *Don Reuwen* DATE: *5/10/01*
 DEVELOPER'S NAME: *Don Reuwen*

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

ENGINEER'S SIGNATURE: *R. JACOB HIKMAT* DATE: *5/22/01*
 ENGINEER'S NAME: *R. JACOB HIKMAT*

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

Jim Meyer DATE: *5/22/01*
 USF NATURAL RESOURCES CONSERVATION SERVICE

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

John M. ... DATE: *5/22/01*
 HOWARD SCD

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
Ruth Reuwen 6-6-01
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
Ruth Reuwen 6/1/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0286 Ball. (301) 621-5521 Wash. (410) 997-0286 Fax

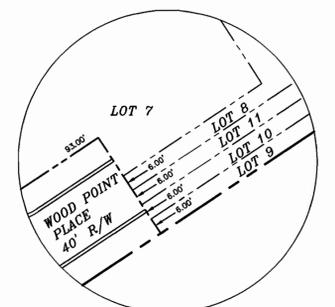
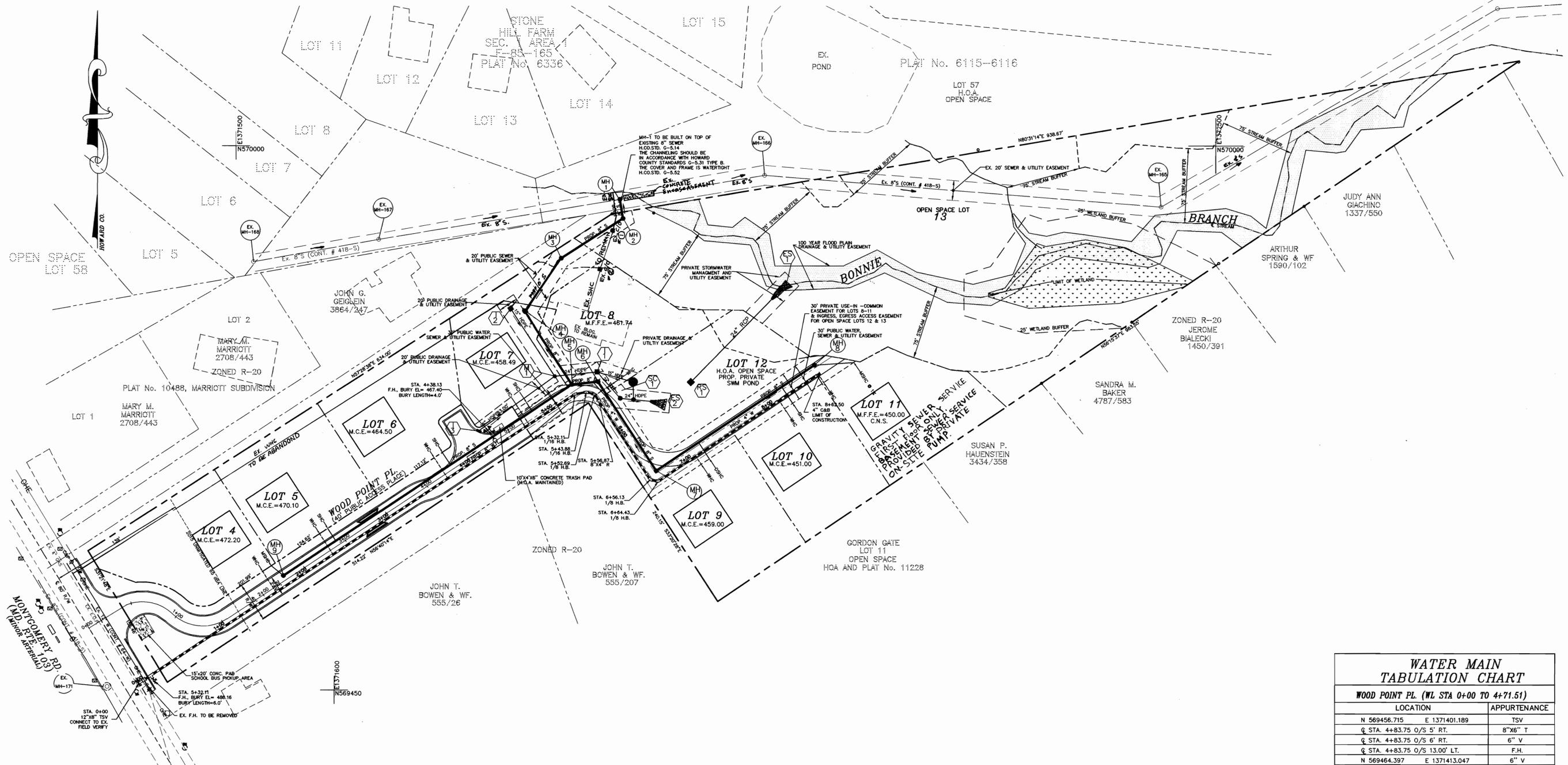


engineering	SAA				
illustration	SAA				
approval	RJH				
project	99026	MB	1	REVISE 8" SEWER MAIN QUANTITY	01/31/02
date	MAY 2001	BY	NO.	REVISION	DATE

TITLE SHEET
 600' SCALE MAP NO. 31 BLOCK NO. 14

ZANTI PROPERTY
 LOT 4 THRU 13
 CONTRACT No. 14-3827-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 scale AS SHOWN 1 OF 3

98026/DWG/FINAL/MSK/COVER



FRONTAGE DETAIL
SCALE 1"=30'

WATER MAIN TABULATION CHART		
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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
6-6-01
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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5/16/01

engineering SAA
illustration SAA
approval RJH
project 99026
date MAY 2001

REVISION
REVISE LOCATION OF MH-4

WATER AND SEWER PLAN

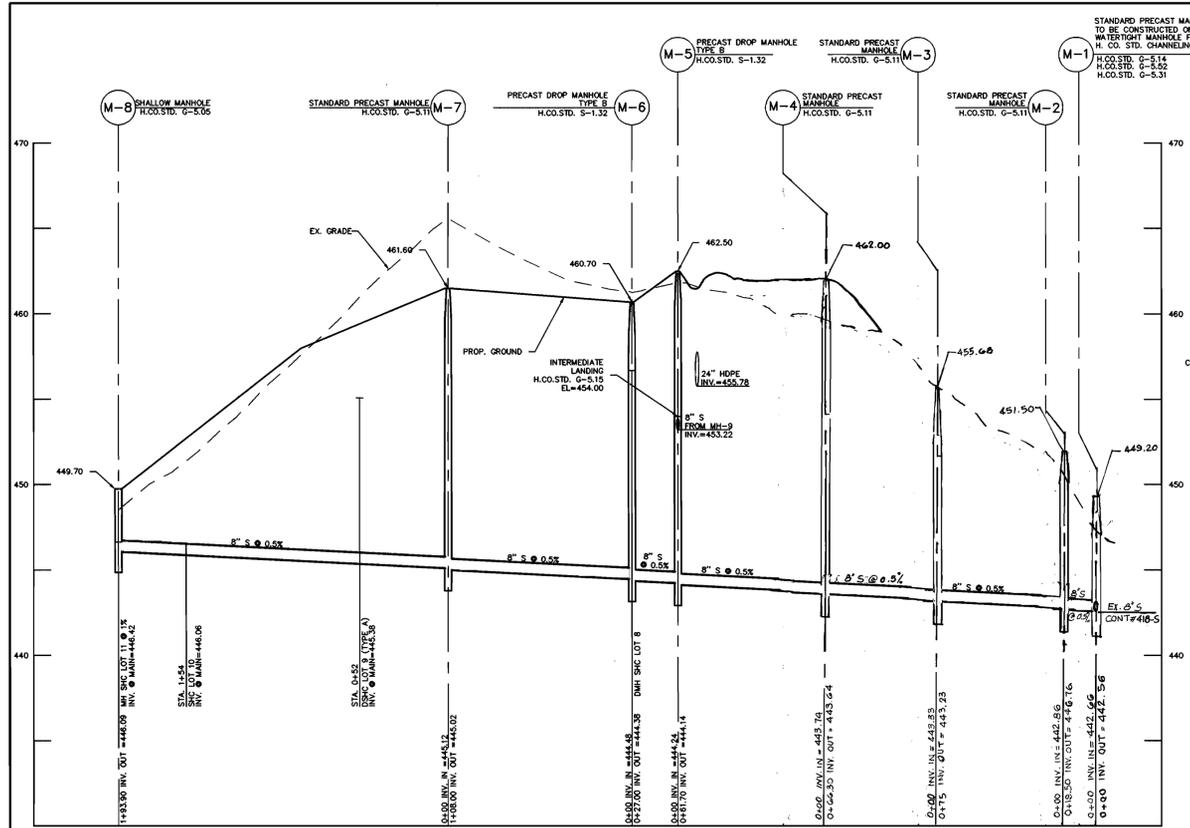
600' SCALE MAP NO. 31 BLOCK NO. 14

ZANTI PROPERTY
LOT 4 THRU 13
CONTRACT No. 14-3827-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

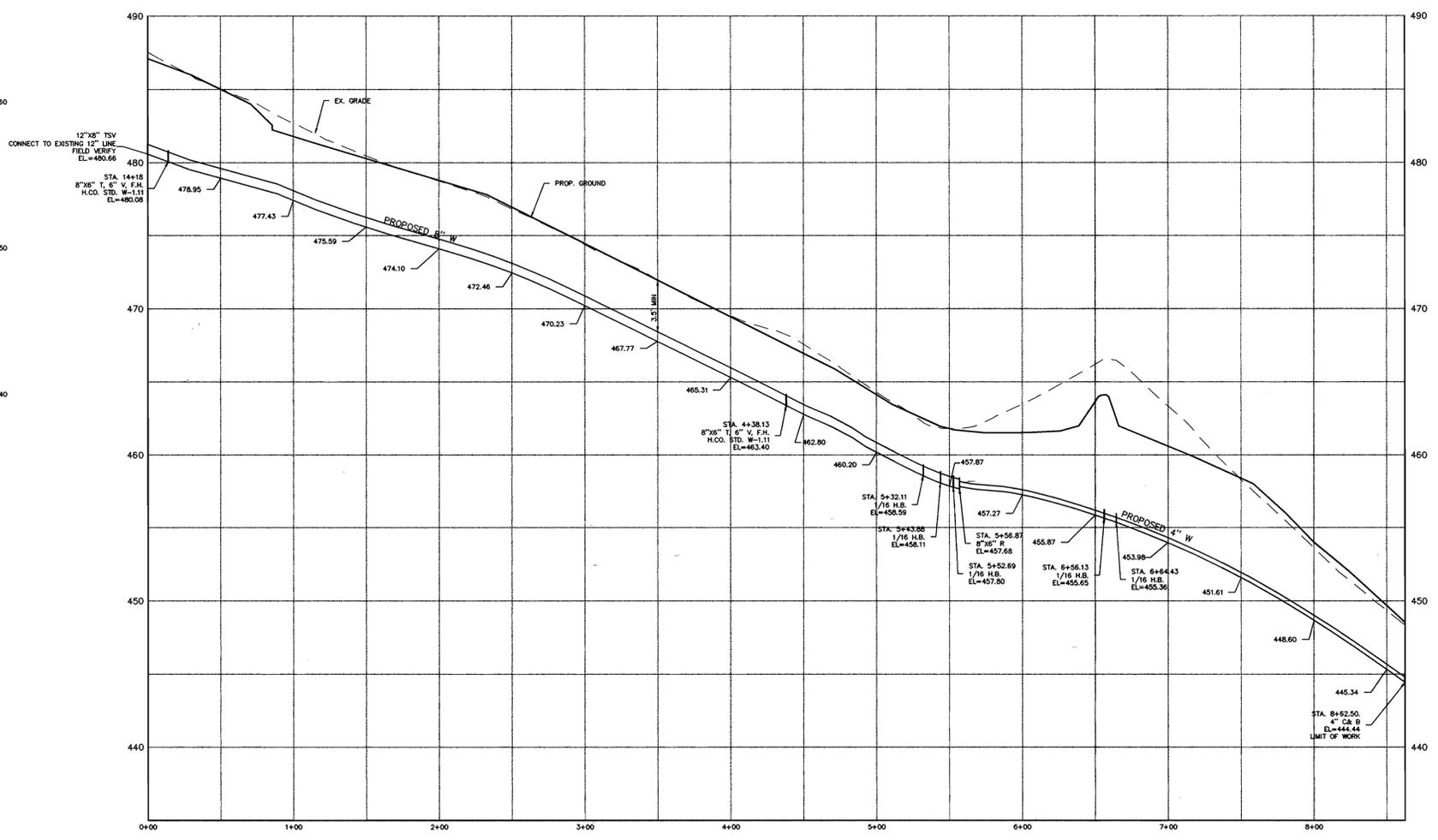
scale
1" = 50'
2 OF 3

99026.DWG (FINAL) W&S COVER

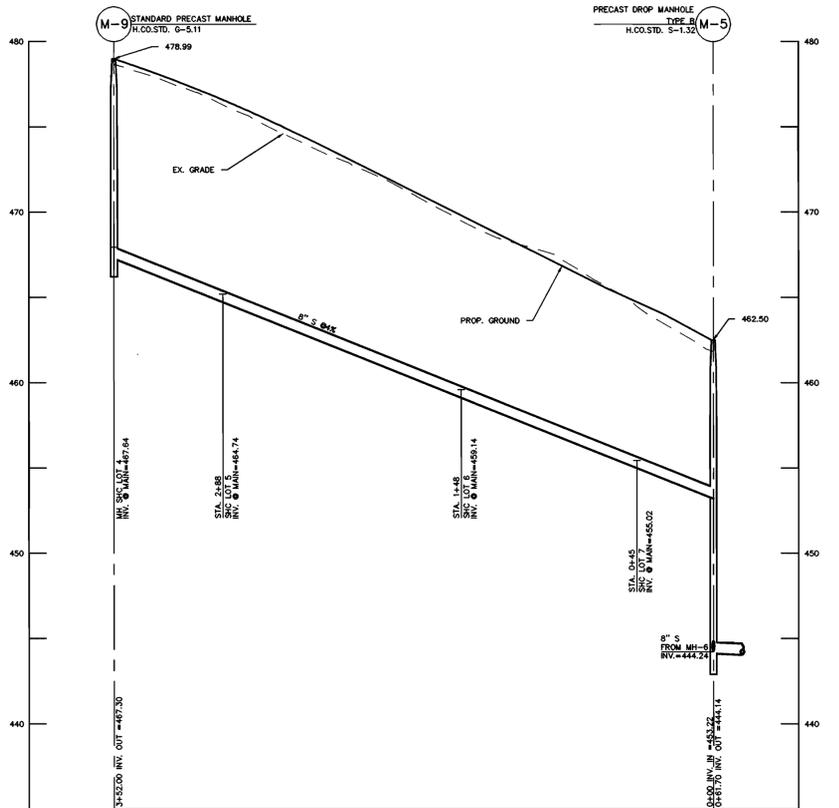
STANDARD PRECAST MANHOLE TO BE CONSTRUCTED ON TOP OF EX. 8" WATERPROOF MANHOLE FRAME AND COVER
 H.C.O. STD. CHANNELING
 H.C.O. STD. G-5.14
 H.C.O. STD. G-5.31



PROP. 8" SEWER PROFILE (M-8 TO M-1)
 SCALE: 1" = 50' (HOR.)
 1" = 5' (VERT.)



PROP. WATER PROFILE
 SCALE: 1" = 50' (HOR.)
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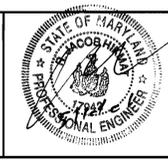
PROP. 8" SEWER PROFILE (M-9 TO M-5)
 SCALE: 1" = 50' (HOR.)
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99026 DWG. FINAL W&S PROFILES

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 R. J. H. B. 6-6-01
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 6/16/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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 (410) 997-0286 Ball (301) 621-5521 Wash (410) 997-0288 Fax



engineering	SAA				
illustration	SAA				
approval	RJH				
project	99026				
date	MAY 2001				
	BY NO.	REVISION	DATE		
		REVISE PROFILE TO REFLECT CHANGE IN MH-4	1/31/02		

WATER AND SEWER PROFILES
 600' SCALE MAP NO. 31 BLOCK NO. 14

ZANTI PROPERTY
 LOT 4 THRU 13
 CONTRACT No. 14-3827-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND