

GENERAL NOTES

- PART I**
- 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.
 - THE TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY POTOMAC AERIAL SURVEYS, DATED FEBRUARY 26, 2014. OFFSITE TOPOGRAPHY FROM HOWARD COUNTY GIS.
 - THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED APRIL 30, 2014.
 - HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM 'NAD 83/91' AS PROJECTED BY HOWARD COUNTY. HOWARD COUNTY MONUMENT NOS. 41GE AND 46AA WERE USED FOR THIS PROJECT. ALL VERTICAL CONTROLS ARE BASED ON (NAVD' 88). VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE:
HOWARD COUNTY BENCHMARK 46BTM2
N 540,303.01 E 1,335,232.86 ELEV.: 451.069 FT.
3/4" REBAR - RT. 216 NEAR FULTON ELEMENTARY
HOWARD COUNTY BENCHMARK 46AA
N 540,396.42 E 1,335,505.32 ELEV.: 446.976 FT.
CONCRETE MONUMENT - RT. 216 BETWEEN FULTON AND SCAGGSVILLE
 - 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 IN 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 SYMBOLS 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) 410-637-8713
BGE (EMERGENCY) 410-685-0123
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
 - 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.

PART II - WATER

- ALL WATER MAINS SHALL BE D.I.P. CLASS 54 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 SECTION 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.
- SPRINKLER SYSTEM FOR SINGLE RESIDENTIAL DWELLING UNITS SHALL HAVE WATER HOUSE CONNECTIONS AND WATER METERS THAT ARE SIZED IN ACCORDANCE WITH THE DESIGN OF THE SPRINKLER SYSTEMS. SPRINKLER SYSTEMS FOR SINGLE RESIDENTIAL DWELLINGS SHALL HAVE A MINIMUM OF 1.5" SERVICE CONNECTION WITH A 1" OUTSIDE METER SETTING.
- TRACER WIRES AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.

PART III - SEWER

- ALL SEWER MAINS SHALL BE D.I.P. 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 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE 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.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN F-16-072

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

John R. Clinton 5/14/17
SOIL CONSERVATION DISTRICT DATE

PRIVATE WELL AND SEPTIC CHART		
PROPERTY	ADDRESS	WATER AND SEWER
EXISTING HOUSE	11621 SCAGGSVILLE ROAD	TO BE ABANDONED

NOTE:
WATER METERS WILL NOT BE RELEASED BY HOWARD COUNTY TO ANY NEW BUILDING UNTIL THE EXISTING WELLS AND SEPTIC SYSTEMS HAVE BEEN ABANDONED IN ACCORDANCE WITH HOWARD COUNTY HEALTH DEPARTMENT REGULATIONS AND THE EXISTING BUILDINGS ARE CONNECTED TO THE PUBLIC WATER AND SEWER MAINS.

PROFESSIONAL CERTIFICATE
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. 16183, EXPIRATION DATE 09-27-2018.

AS-BUILTS
9-28-20

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961



DES:	GAH/ML				
DRN:	GAH/ML	0/1	4	Add As-built Information	9-28-22
CHK:	RHV	R/E	3	REVIS TO REFLECT LARGER WATER AND SEWER HOUSE CONNECTIONS FOR OPEN SPACE	12-19-19
DATE:	MARCH 2017	R/E	1	REVISE WATER & SEWER MAIN DESIGN, CORRECT MIN. CELLAR ELEVATIONS AND CHART	9/7/18
BY:	NO.	REVISION			

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Chad B. ... 4/25/17
CHIEF, BUREAU OF UTILITIES DATE

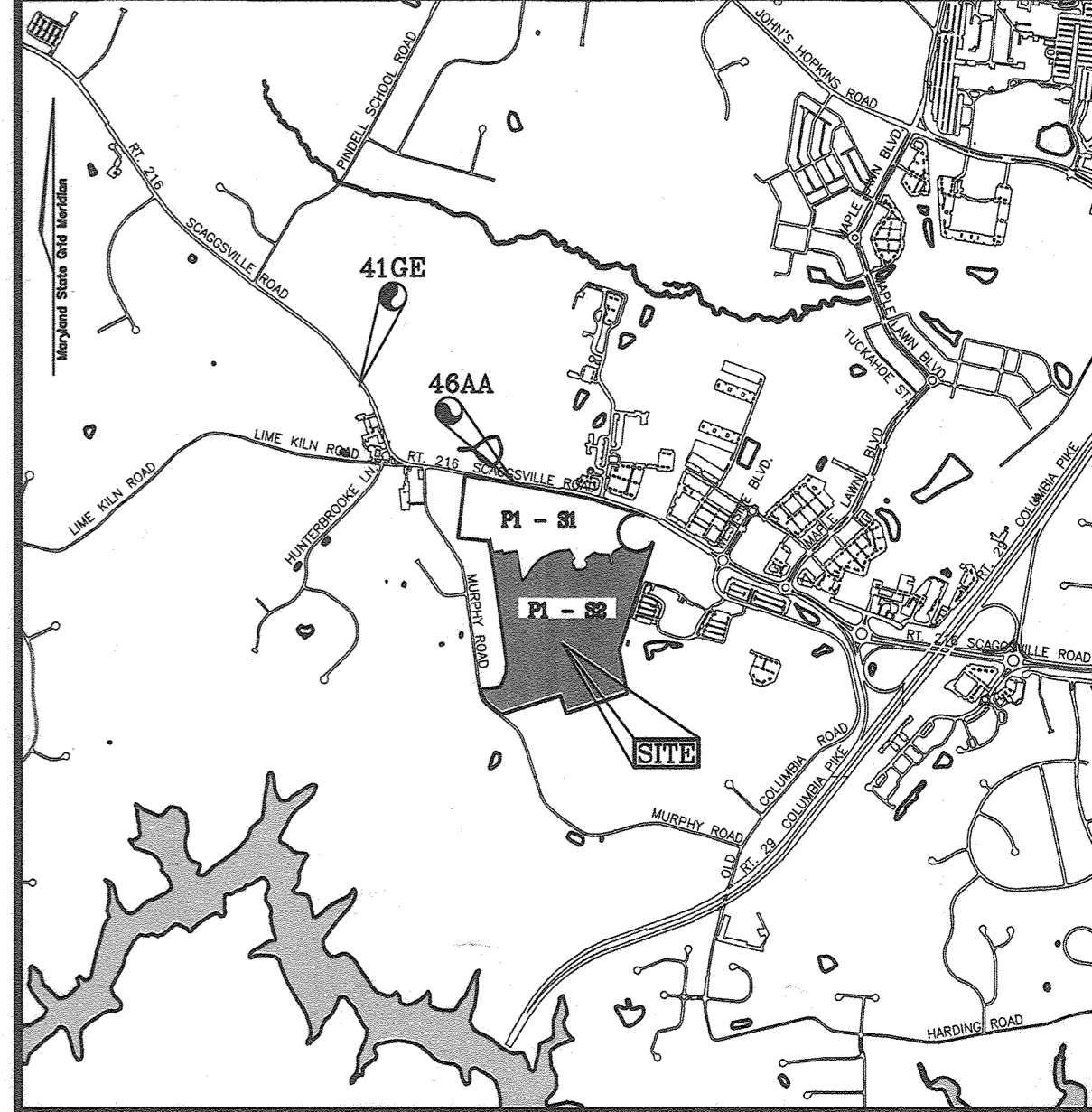
DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Chad ... 5-18-17
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FINAL WATER AND SEWER CONSTRUCTION PLAN
MAPLE LAWN SOUTH
PHASE 1 - SECTION 2
LOTS 70-177 AND OPEN SPACE LOTS 178-182
CONTRACT 24-4989-D

BENCHMARKS

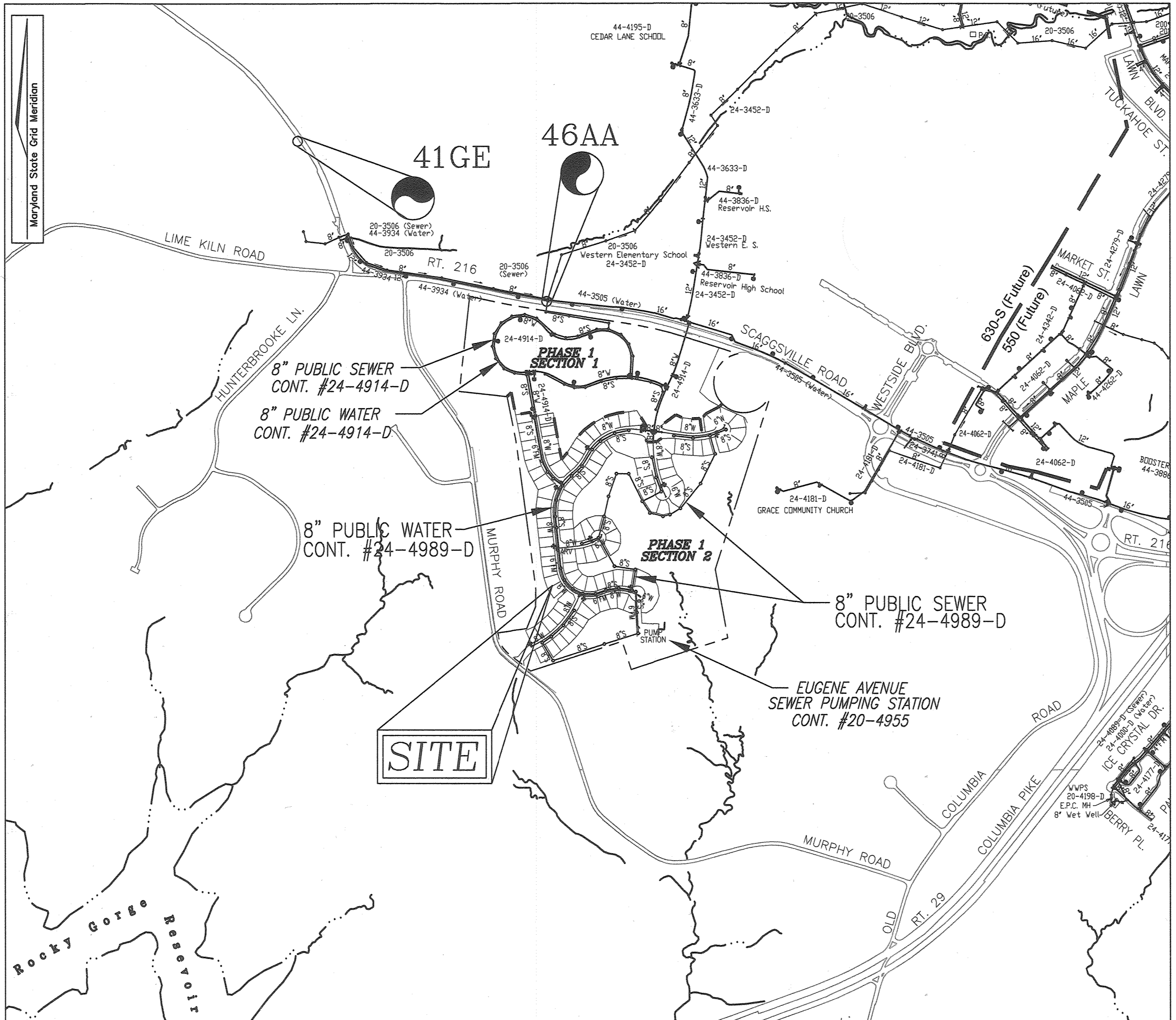
HOWARD COUNTY BENCHMARK 46AA
N 540,396.42 E 1,335,505.31 ELEV.: 447.01 FT.
RT. 216, 33.2' WEST OF BG& E POLE#315163

HOWARD COUNTY BENCHMARK 41GE
N 541,559.78 E 1,333,698.38 ELEV.: 465.05 FT.
RT. 216, 82.4' WEST OF BG & E#55787



VICINITY MAP

SCALE: 1"=2000'
ADC MAP COORDINATES: 39 A-2 & A-3



LOCATION MAP

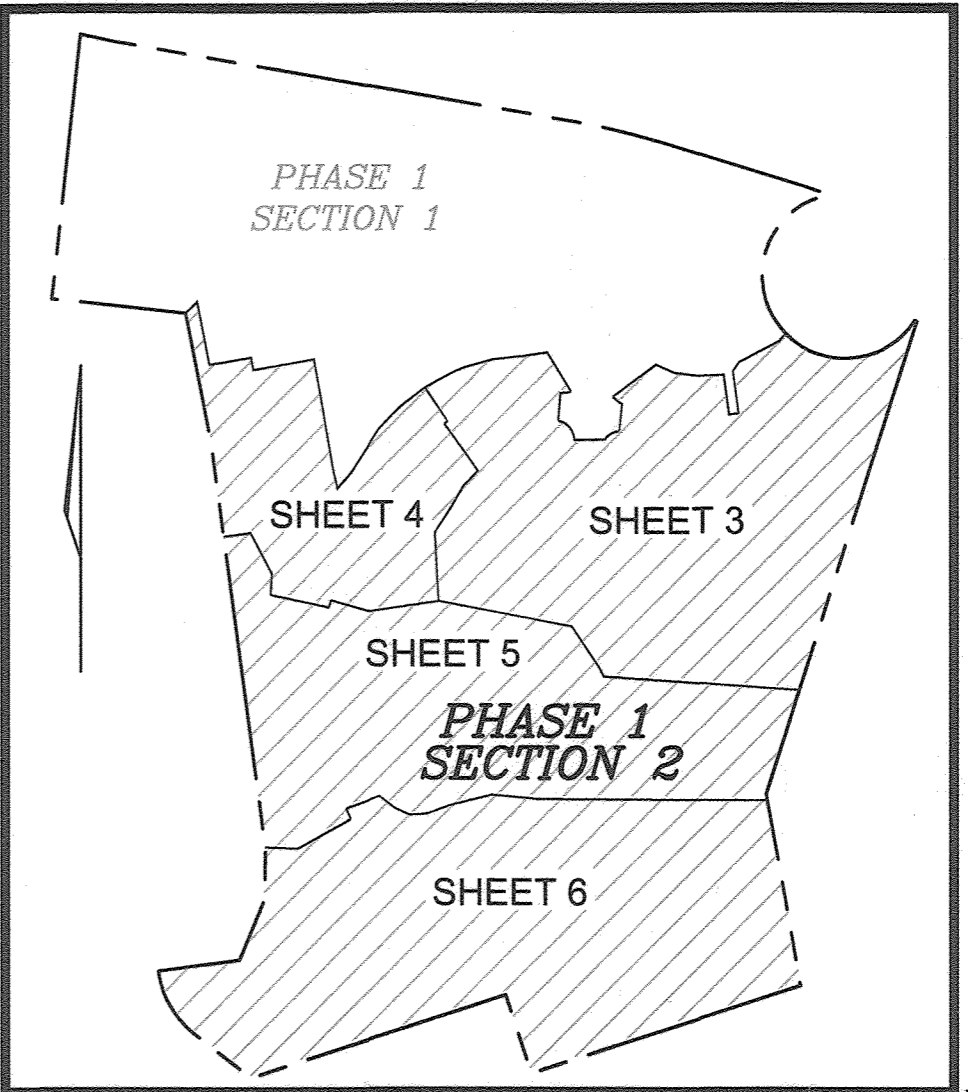
SCALE: 1"=600'

WATER ZONE: 630S
TEST GRADIENT: 780

SHEET INDEX

DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 11
LAYOUT SHEET	2 OF 11
LAYOUT SHEET	3 OF 11
LAYOUT SHEET	4 OF 11
LAYOUT SHEET	5 OF 11
SEWER PROFILES	6 OF 11
SEWER PROFILES	7 OF 11
SEWER PROFILES	8 OF 11
FORCEMAIN SEWER PROFILES	9 OF 11
WATER PROFILES	10 OF 11
WATER PROFILES	11 OF 11

TYPE OF BUILDING:	SFD RESIDENTIAL
NO. OF BUILDABLE LOTS:	112
NO. OF OPEN SPACE LOTS:	2
NO. OF SINGLE WATER HOUSE CONNECTIONS:	114
NO. OF TWIN WATER HOUSE CONNECTIONS:	0
NO. OF SEWER HOUSE CONNECTIONS:	114
NO. OF TWIN SEWER HOUSE CONNECTIONS:	0
DRAINAGE AREA:	HAMMOND BRANCH
TREATMENT PLANT:	LITTLE PATUXENT WWTP



KEY MAP

NOT TO SCALE

LEGEND

- EXISTING WATER MAIN
- PROPOSED SEWER MAIN
- PROPOSED WATER MAIN
- FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED TEE
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- EXISTING SEWER
- SEWER MANHOLE
- PRIVATE WATER HOUSE CONNECTION
- PRIVATE SEWER HOUSE CONNECTION
- PROPOSED SIGN
- PROPOSED LIGHT

1 1/2" COPPER MINUS 220' TO PUMPING STA. FROM METER VAULT
** ADDED SETTING FOR PUMPING STA.
*** TWO TYPES OF SETTERS A.V. McDONALD (FROM LB WATER) AND MUELLE (FROM FERGAUSON)
*** FIRE HYDRANT TYPES: MUELLER AND AMERICAN DARLING

QUANTITIES				
NAME OF UTILITY CONTRACTOR: SEH CONTRACTING				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE: 9-28-2020				
ITEMS	ESTIMATED	QUANTITIES	AS-BUILT	
			TYPE	MANUFACTURER/SUPPLIER
WATER				
8" WATER (DIP CLASS 54)	4,303 LF	4,300 LF	DIP CL54	NATIONAL PIPE / LB WATER
6" WATER (DIP CLASS 54)	482 LF	482 LF	DIP CL54	NATIONAL PIPE / LB WATER
8" VALVE	6 EA	7 EA	GATE VALVE	AMERICAN / LB WATER
8" VALVE	10 EA	10 EA	GATE VALVE	AMERICAN / LB WATER
8"x8" TEE	3 EA	4 EA	DIP CL54	NATIONAL PIPE / LB WATER
8"x6" TEE	10 EA	10 EA	DIP CL54	NATIONAL PIPE / LB WATER
FIRE HYDRANT	10 EA	10 EA	***	MUELLER / LB WATER
1 1/2" WHC	3471 LF	3198 LF	PIPE K COPPER	
8"-CAP AND BUTTRISS	1 EA	2 EA	DIP CL54	TYLER PIPE / LB WATER
6"-CAP AND BUTTRISS	4 EA	4 EA	DIP CL54	TYLER PIPE / LB WATER
1" METER	114 EA	114 EA	FORD	FORD METER BOX / LB WATER
6" 1/8 BEND	2 EA	2 EA	DIP	NATIONAL PIPE / LB WATER
6" 1/16 BEND	1 EA	1 EA	DIP	NATIONAL PIPE / LB WATER
8" 1/16 BEND	8 EA	8 EA	DIP	NATIONAL PIPE / LB WATER
8" TO 6" REDUCER	4 EA	4 EA	DIP	NATIONAL PIPE / LB WATER
SEWER				
6" SEWER (DIP)	2,157 LF	2160 LF	DIP CL54	NATIONAL PIPE / LB WATER
8" SEWER (PVC)	7,117 LF	7117 LF	PVC SDR 35	NATIONAL PIPE / LB WATER
STANDARD MANHOLES	43 EA	43 EA	CONCRETE	CONTRACTORS PRECAST CORP
TYPE 'A' DROP MANHOLE	3 EA	3 EA	CONCRETE	CONTRACTORS PRECAST CORP
TYPE 'B' DROP MANHOLE	4 EA	4 EA	CONCRETE	CONTRACTORS PRECAST CORP
TERMINAL MANHOLE	7 EA	7 EA	CONCRETE	CONTRACTORS PRECAST CORP
GRAVITY TRANSITION MANHOLE	3046 LF	3046 LF	PVC SDR 35	NATIONAL PIPE / LB WATER
4" SMC	1 EA	1 EA	CONCRETE	CONTRACTORS PRECAST CORP
4" CLEANOUT	113 EA	113 EA	CONCRETE	CONTRACTORS PRECAST CORP
AIR RELEASE VALVE MANHOLE	1 EA	1 EA	CONCRETE	CONTRACTORS PRECAST CORP-MODEL U120
EMERGENCY BYPASS MANHOLE	1 EA	1 EA	CONCRETE	CONTRACTORS PRECAST CORP

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

FINAL WATER & SEWER PLAN
CONT. 24-4989-D

COVER SHEET

MAPLE LAWN SOUTH PHASE 1 - SECTION 2

LOTS 70-177 AND OPEN SPACE LOTS 178-182

SCALE AS SHOWN

SHEET 1 OF 11

TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND
ZONED: R-ED-MXD-3



LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- ☀ EXISTING LIGHT POLE
- ☐ EXISTING MAILBOX
- ☐ EXISTING SIGN
- ☐ EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROP. SIDEWALK
- EXISTING FENCE
- PROPOSED WATER MAIN
- ☐ FIRE HYDRANT
- ☐ PROPOSED VALVE
- ☐ PROPOSED TEE
- PROPOSED SEWER
- WATER HOUSE CONNECTION
- SEWER HOUSE CONNECTION

ASBUILT DETAIL #1
FH STA. 12+36.55
SOUTH MAPLE LAWN BLVD.

ITEM	TO	DISTANCE
FH STA. 12+36.55	CONDUCTIVITY VAULT	2.0'
FH STA. 12+36.55	WHC LOT 88	15.5'
FH STA. 12+36.55	6" FH V	9.66'
FH STA. 12+36.55	SMH 23	4.7'
6" FH V	SMH 23	43.5'

ASBUILT DETAIL #2
FH STA. 4+56.73
CHARLES WAY

ITEM	TO	DISTANCE
FH STA. 4+56.73	CONDUCTIVITY VAULT	2.0'
FH STA. 4+56.73	6" FH V	20.8'
6" FH V	6" V	22.5'
FH STA. 4+56.73	8" V	28.3'
6" FH V	8" TEE	22.0'
8" V	CAP & BUTTRESS	38.0'
8" V	SMH 19	16.0'
FH STA. 4+56.73	SMH 19	34.4'

NOTE: FUTURE 8" W INSTALLED TO CAP & BUTTRESS THIS CONTRACT. CAP & BUTTRESS AT R/W LINE.

ASBUILT DETAIL #3
8" x 4" TEE # VALVE STA. 1+52

ITEM	TO	DISTANCE
4" V	I-110	16'
4" V	SMH 75	29'

WATER MAIN LOCATION CHART

WL STA.	APPURTENANCE
WL STA. 12+36.55	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 12+42.06	8" x 6" REDUCER
WL STA. 13+18.06	6" CAP & BUTTRESS
PROP. WATER MAIN 'C'	
WL STA.	APPURTENANCE
WL STA. 4+56.73	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 4+62.23	8" x 6" REDUCER
WL STA. 5+19.48	1/8 H.B.
WL STA. 5+43.75	6" CAP & BUTTRESS
PROP. WATER MAIN 'B'	
WL STA.	APPURTENANCE
WL STA. 1+52	8" x 4" TEE & VALVE

ASBUILTS
9-28-20

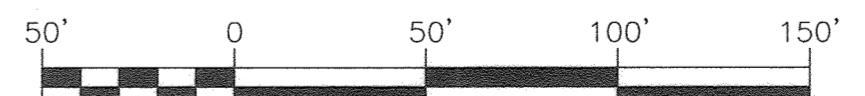
LAYOUT PLAN
SCALE: 1"=50'

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018



ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

MATCH LINE - SEE SHEET 4



OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
4/20/12
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
5.18.17
CHIEF, DEVELOPMENT ENGINEERING DIVISION

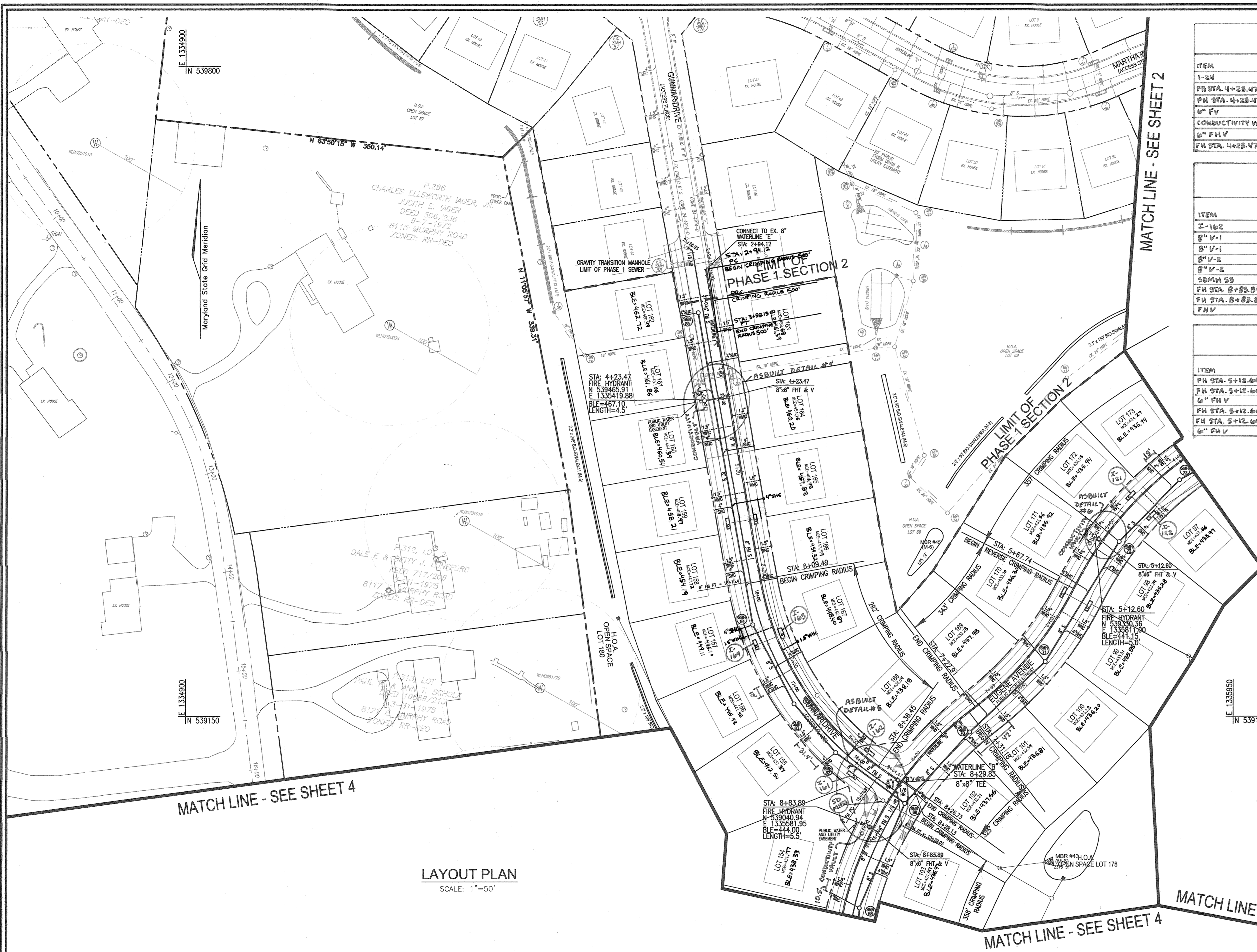
DES:	GAH/ML			
DRN:	GAH/ML			
CHK:	RHV	R/V 3	REVIS TO REFLECT LARGER WATER AND SEWER HOUSE CONNECTIONS FOR OPEN SPACES	12-19-19
		R/V 1	REVISE WATER & SEWER MAIN DEPTH, CORRECT MIN. CELLAR ELEVATIONS AND CHART	9/1/18
DATE:	MARCH 2017	BY NO.	REVISION	DATE

FINAL WATER & SEWER PLAN
CONT. 24-4989-D
LAYOUT SHEET

MAPLE LAWN SOUTH PHASE 1 - SECTION 2
LOTS 70-177 AND OPEN SPACE LOTS 178-182

TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
ZONED: R-ED-MD-3

SCALE AS SHOWN
SHEET 2 OF 11



ASBUILT DETAIL #4
FH STA. 4+23.47
GUNNAR DR.

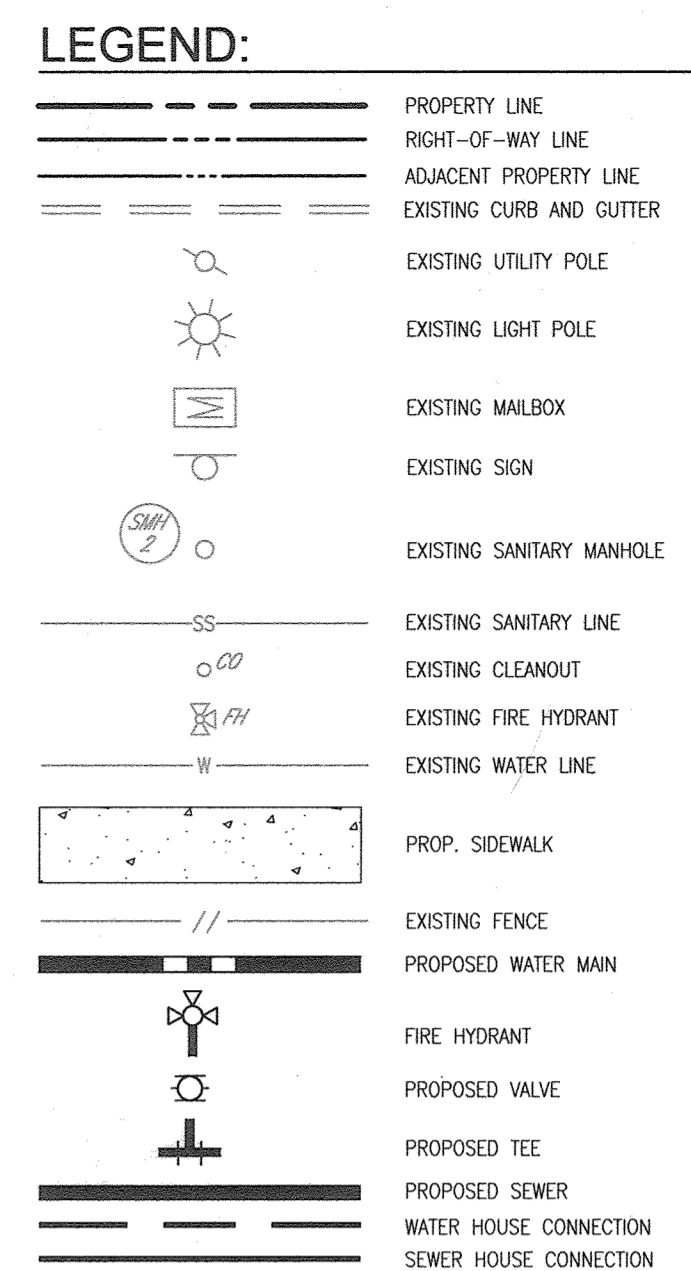
ITEM	TO	DISTANCE
1-24	FH STA. 4+23.47	19.7'
FH STA. 4+23.47	CONDUCTIVITY VAULT	1.9'
6" FHV	CONDUCTIVITY VAULT	23.5'
CONDUCTIVITY VAULT	WHC LOT 160	31'
6" FHV	CLMH I-23	38.7'
FH STA. 4+23.47	WHC LOT 160	31'

ASBUILT DETAIL #5
FH & VALVES STA. 8+83.89
EUGENE AVE & GUNNAR DR.

ITEM	TO	DISTANCE
I-162	8" V-1	38.7'
8" V-1	8" V-2	7.5'
8" V-1	SMH 69	27.3'
8" V-2	SMH 69	19.7'
8" V-2	SDMH 53	22.3'
SDMH 53	FH STA. 8+83.89	29.2'
FH STA. 8+83.89	CONDUCTIVITY VAULT	2.0'
FH STA. 8+83.89	6" FHV	6.0'
FHV	SDMH 53	28.8'

ASBUILT DETAIL #6
FH STA. 5+12.60
EUGENE AVE.

ITEM	TO	DISTANCE
FH STA. 5+12.60	CONDUCTIVITY VAULT	2.0'
FH STA. 5+12.60	6" FHV	8.0'
6" FHV	CONDUCTIVITY VAULT	8.5'
FH STA. 5+12.60	SHC LOT 172	19.0'
FH STA. 5+12.60	SMH 72	26.4'
6" FHV	SMH 72	18.0'



WATER MAIN LOCATION CHART

WL STA.	APPURTENANCE
WL STA. 5+12.60	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 8+29.83	8" x 8" TEE
WL STA. 8+34	8" VALVE
WL STA. 8+83.89	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)

PROP. WATER MAIN 'E'

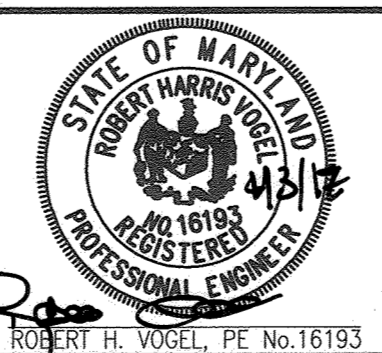
WL STA.	APPURTENANCE
WL STA. 4+23.47	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 8+60	8" VALVE

FORCE MAIN LOCATION CHART

FM STA.	APPURTENANCE
WL STA. 15+39.03	1/8 H.B.
WL STA. 15+39.03	P.T. 348" R
WL STA. 15+50.33	1/8 H.B.
WL STA. 15+74.91	P.C. 302" R
WL STA. 18+15.47	P.T. 302" R
WL STA. 21+51.88	1/8 H.B.

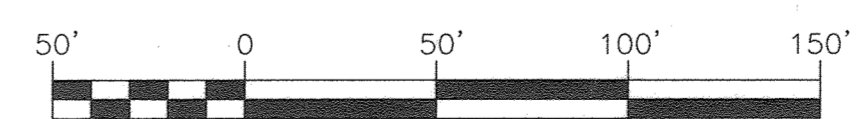
LAYOUT PLAN
SCALE: 1"=50'

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ASBUILTS
42820



FINAL WATER & SEWER PLAN
CONT. 24-4989-D
LAYOUT SHEET

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MAPLE LAWN SOUTH
PHASE 1 - SECTION 2
LOTS 70-177 AND OPEN SPACE LOTS 178-182

TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND
ZONED: R-ED-MXD-3

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Chief
CHIEF, BUREAU OF UTILITIES
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Chief
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

SCALE
AS
SHOWN

SHEET
3 OF 11

MATCH LINE - SEE SHEET 3

MATCH LINE - SEE SHEET 2
MATCH LINE - SEE SHEET 3

MATCH LINE - SEE SHEET 2

ASBUILT DETAIL #7
FH STA. 13+00.80
EUGENE AVE

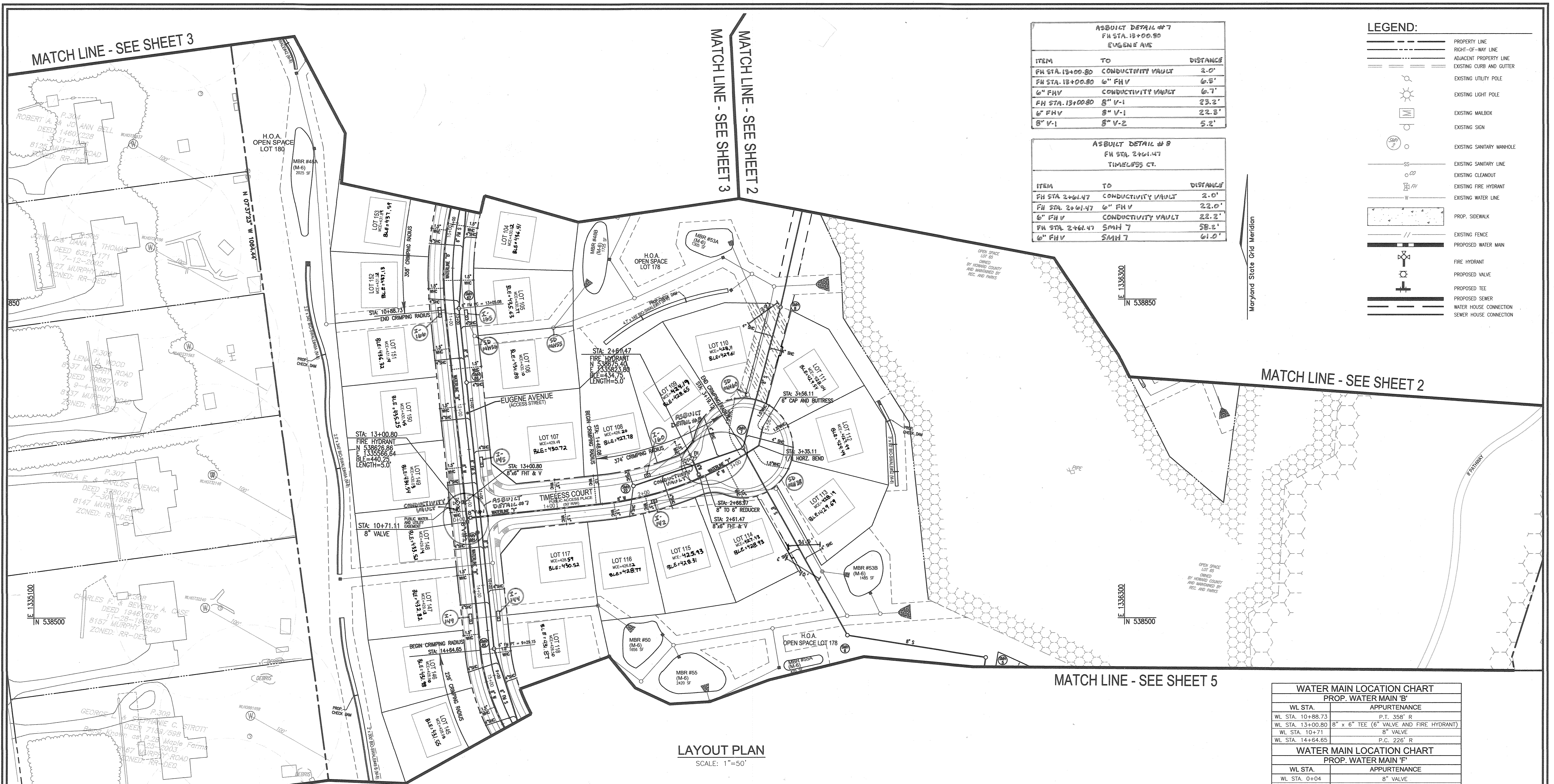
ITEM	TO	DISTANCE
FH STA. 13+00.80	CONDUCTIVITY VAULT	2.0'
FH STA. 13+00.80	6" FH V	6.5'
6" FH V	CONDUCTIVITY VAULT	6.7'
FH STA. 13+00.80	8" V-1	23.2'
6" FH V	8" V-1	22.2'
8" V-1	8" V-2	5.2'

ASBUILT DETAIL #8
FH STA. 2+61.47
TIMELESS CT.

ITEM	TO	DISTANCE
FH STA. 2+61.47	CONDUCTIVITY VAULT	2.0'
FH STA. 2+61.47	6" FH V	22.0'
6" FH V	CONDUCTIVITY VAULT	22.2'
FH STA. 2+61.47	SMH 7	58.2'
6" FH V	SMH 7	61.0'

LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	PROP. SIDEWALK
	EXISTING FENCE
	PROPOSED WATER MAIN
	FIRE HYDRANT
	PROPOSED VALVE
	PROPOSED TEE
	PROPOSED SEWER
	WATER HOUSE CONNECTION
	SEWER HOUSE CONNECTION



MATCH LINE - SEE SHEET 5

MATCH LINE - SEE SHEET 5

WATER MAIN LOCATION CHART

PROP. WATER MAIN 'B'	
WL STA.	APPURTENANCE
WL STA. 10+88.73	P.T. 358' R
WL STA. 13+00.80	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 10+71.11	8" VALVE
WL STA. 14+64.65	P.C. 228' R

WATER MAIN LOCATION CHART

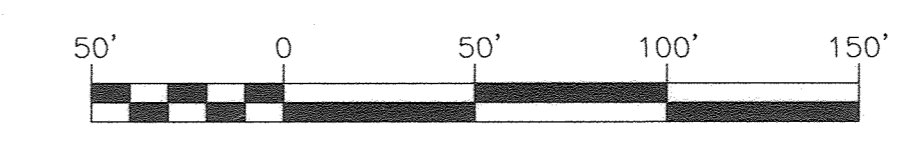
PROP. WATER MAIN 'F'	
WL STA.	APPURTENANCE
WL STA. 0+04	8" VALVE
WL STA. 1+48.08	P.C. 374' R
WL STA. 2+61.47	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 2+66.97	8" TO 6" REDUCER
WL STA. 3+19.12	P.T. 374' R
WL STA. 3+35.11	1/8" HORIZ. BEND
WL STA. 3+56.13	6" CAP AND BUTTRISS

FORCE MAIN LOCATION CHART

PROP. WATER MAIN 'F'	
WL STA.	APPURTENANCE
WL STA. 9+29.15	P.T. 216' R
WL STA. 10+58.23	ARV MANHOLE
WL STA. 13+05.08	P.C. 348' R

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS
WERE PREPARED OR APPROVED BY ME, AND
THAT I AM A FULLY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE
OF MARYLAND, LICENSE NO. 16193
EXPIRATION DATE: 09-27-2018

ASBUILTS
9-28-20



OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

[Signature] 1/15/19
CHIEF, BUREAU OF UTILITIES

[Signature] 5-18-17
CHIEF, DEVELOPMENT ENGINEERING DIVISION

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

[Professional Seal]
ROBERT H. VOGEL, P.E. No. 16193

DES:	GAH/ML			
DRN:	GAH/ML			
CHK:	RHV	RVC 2	REVISE SMH 7 AND SEWER MANHOLE SCHEDULE	11-29-18
		RVE 1	REVISE WATER & SEWER MAIN DESIGN, CORRECT MIN. CELLAR ELEVATIONS AND CHART	8/7/18
DATE:	MARCH 2017	BY	NO.	REVISION

FINAL WATER & SEWER PLAN
CONT. 24-4989-D

LAYOUT SHEET

600' SCALE MAP NO. 46
BLOCK NO. 02

MAPLE LAWN SOUTH PHASE 1 - SECTION 2
LOTS 70-177 AND OPEN SPACE LOTS 178-182

TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND
ZONED: R-ED-MD-3

SCALE AS SHOWN

SHEET 4 OF 11

LEGEND:

	PROPERTY LINE		EXISTING FIRE HYDRANT
	RIGHT-OF-WAY LINE		EXISTING WATER LINE
	ADJACENT PROPERTY LINE		PROP. SIDEWALK
	EXISTING CURB AND GUTTER		EXISTING FENCE
	EXISTING UTILITY POLE		PROPOSED WATER MAIN
	EXISTING LIGHT POLE		FIRE HYDRANT
	EXISTING MAILBOX		PROPOSED VALVE
	EXISTING SIGN		PROPOSED TEE
	EXISTING SANITARY MANHOLE		PROPOSED SEWER
	EXISTING SANITARY LINE		WATER HOUSE CONNECTION
	EXISTING CLEANOUT		SEWER HOUSE CONNECTION

MATCH LINE - SEE SHEET 4

ASBUILT DETAIL #9
FH STA. 5+68.71
STAUFFER AVENUE.

ITEM	TO	DISTANCE
FH STA 5+68.71	CONDUCTIVITY VAULT	1.6'
FH STA 5+68.71	6" FH V	7.7'
FH STA 5+68.71	I-P1-A	13.3'
6" FH V	I-P1-A	13.3'

ASBUILT DETAIL #10
FH STA. 17+55.32
EUGENEAVE & STAUFFER AVENUE.

ITEM	TO	DISTANCE
FH STA. 17+55.32	CONDUCTIVITY VAULT	1.6'
FH STA. 17+55.32	6" FH V	6.8'
FH STA. 17+55.32	8" V-1	33.5'
FH STA. 17+55.32	8" V-2	35.6'
8" V-1	8" V-2	3.7'
6" FH V	SMH 62	21.7'
8" V-1	SMH 62	23.2'
FH STA. 17+55.32	I-152	35.0'
FH STA. 17+55.32	SMH 62	27.5'
8" V-2	SMH 62	27.0'

ASBUILT DETAIL #11
FH STA. 20+89.02
EUGENEAVE

ITEM	TO	DISTANCE
FH STA. 20+89.02	CONDUCTIVITY VAULT	2.0'
FH STA. 20+89.02	6" FH V	26.0'
FH STA. 20+89.02	I-141	22.0'
FH STA. 20+89.02	SMH 4	18.5'
6" FH V	SMH 4	23.9'

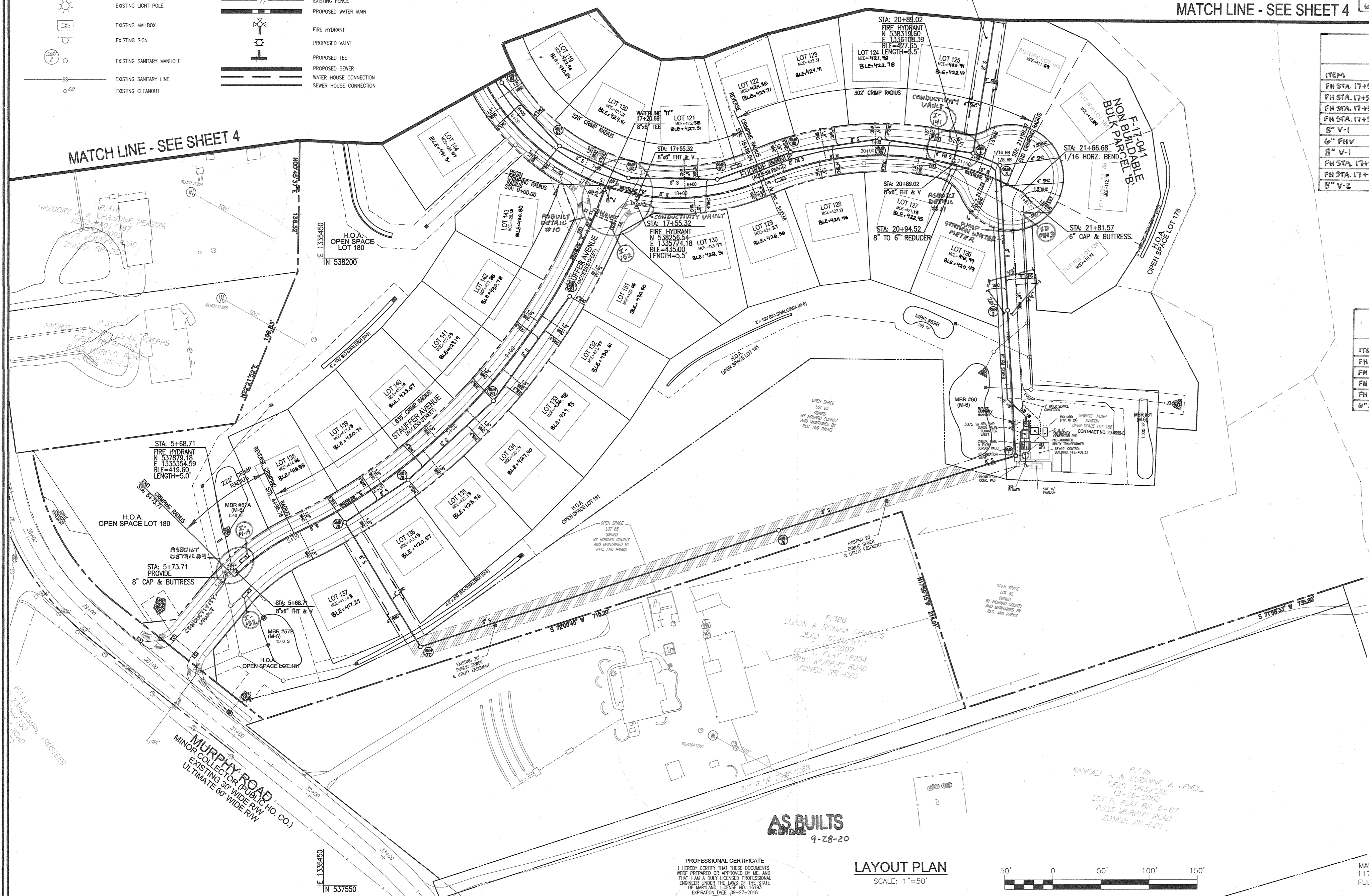
WATER MAIN LOCATION CHART

PROP. WATER MAIN 'B'	
WL STA.	APPURTENANCE
WL STA. 17+20.69	8" x 8" TEE
WL STA. 17+24.69	8" VALVE
WL STA. 17+55.32	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 18+89.04	P.R.C. 226" R/302" R
WL STA. 20+89.02	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 20+94.52	8" TO 6" REDUCER
WL STA. 21+49.27	P.T. 302" R
WL STA. 21+46.68	1/16" HORZ. BEND
WL STA. 21+81.57	6" CAP AND BUTTRESS

PROP. WATER MAIN 'G'	
WL STA.	APPURTENANCE
WL STA. 0+00.00	8" x 8" TEE
WL STA. 0+00.00	P.C. 635" R
WL STA. 0+03.00	8" VALVE
WL STA. 4+96.76	P.R.C. 635" R/222" R
WL STA. 5+68.71	8" x 6" TEE (6" VALVE AND FIRE HYDRANT)
WL STA. 5+73.71	P.T. 222" R
WL STA. 5+73.71	8" CAP AND BUTTRESS

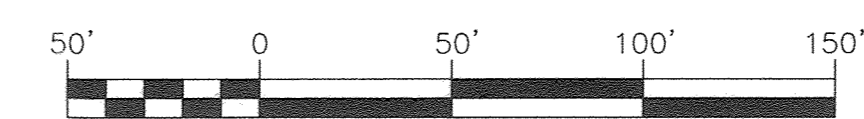
FORCE MAIN LOCATION CHART	
FM STA.	APPURTENANCE
FM STA. 0+09.05	1/8" HORZ. BEND
FM STA. 0+34.42	1/8" HORZ. BEND
FM STA. 2+71.46	1/8" HORZ. BEND
FM STA. 2+77.29	1/16" HORZ. BEND
FM STA. 2+77.29	P.C. 312" CRIMP R
FM STA. 5+23.58	P.R.C. 312" R/216" R

MATCH LINE - SEE SHEET 4



ASBUILTS
DATE: 9-28-20

LAYOUT PLAN
SCALE: 1"=50'



OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Clayton H. Hester
CHIEF, BUREAU OF UTILITIES
DATE: 11/27/17

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Clayton H. Hester
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 11/27/17

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961



DES:	GAH/ML				
DRN:	GAH/ML				
CHK:	RHV				
DATE:	MARCH 2017	BY:	NO.	REVISION	DATE
				REVISE WATER & SEWER MAIN DESIGN, CORRECT MIN. CURVE ELEVATIONS AND CHART	9/7/18

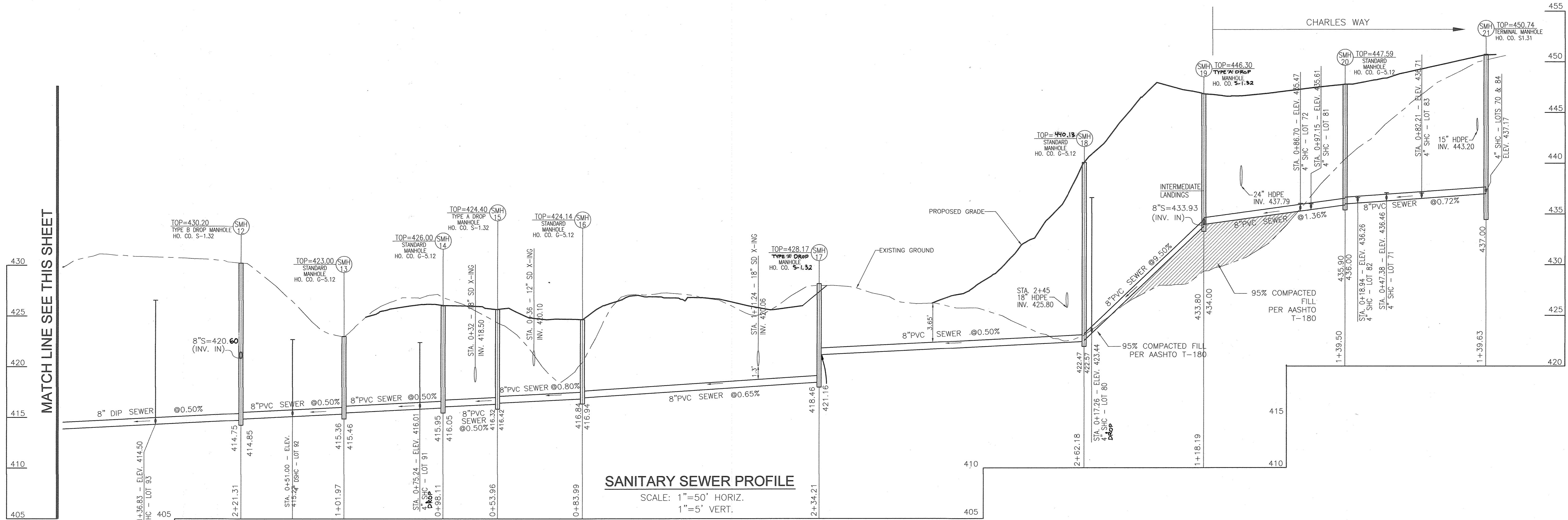
FINAL WATER & SEWER PLAN
CONT. 24-4989-D
LAYOUT SHEET

MAPLE LAWN SOUTH PHASE 1 - SECTION 2
LOTS 70-177 AND OPEN SPACE LOTS 178-182

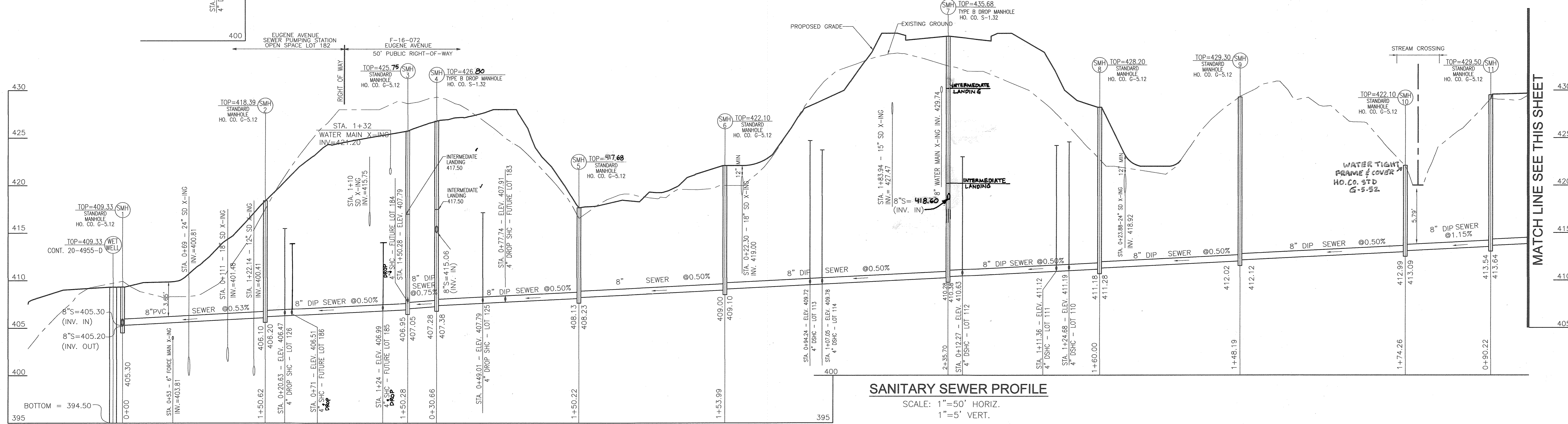
TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND
ZONED: R-ED-MXD-3

SCALE AS SHOWN
SHEET 5 OF 11



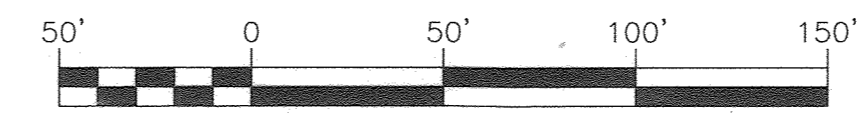
SANITARY SEWER PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



SANITARY SEWER PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.

AS BUILTS
9-28-20

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS
WERE PREPARED OR APPROVED BY ME, AND
THAT I AM A FULLY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE
OF MARYLAND, LICENSE NO. 16193
EXPIRATION DATE: 09-27-2018



OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Chen
CHIEF, BUREAU OF UTILITIES
DATE: 4/15/17

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Mc
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5.16.17

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
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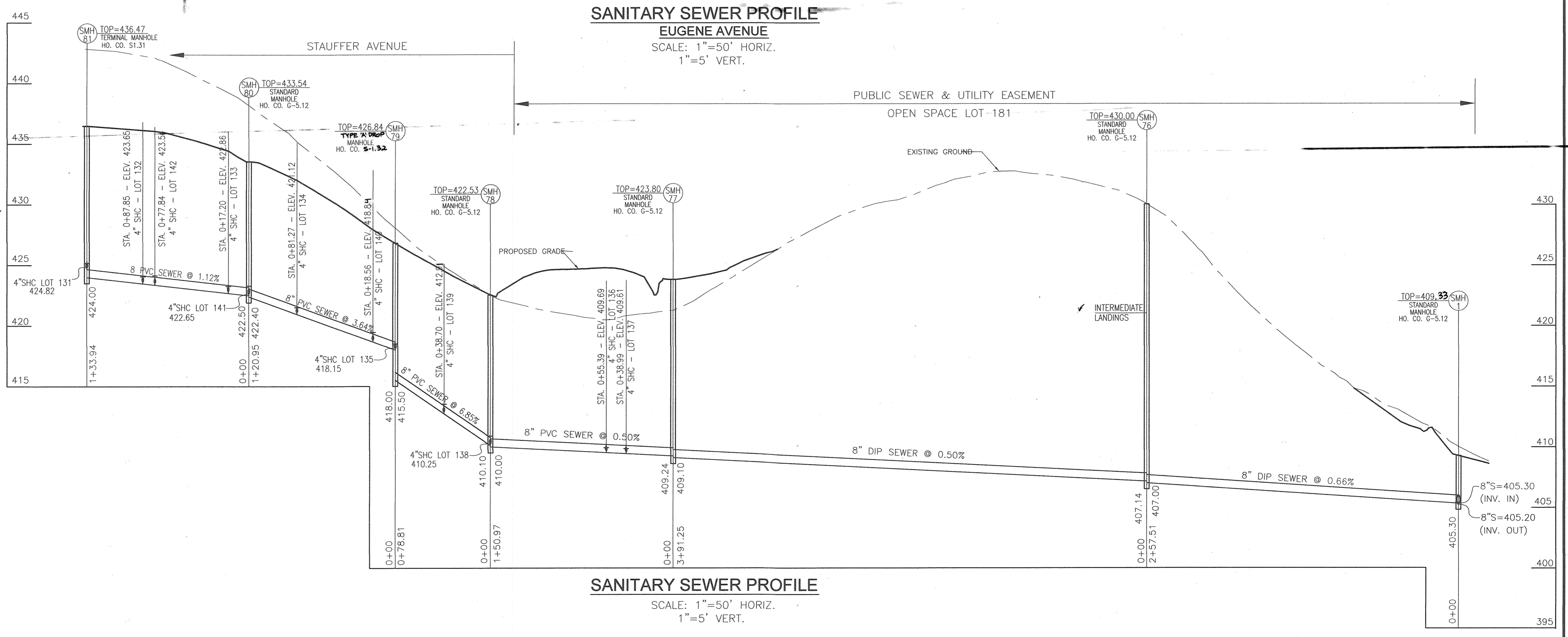
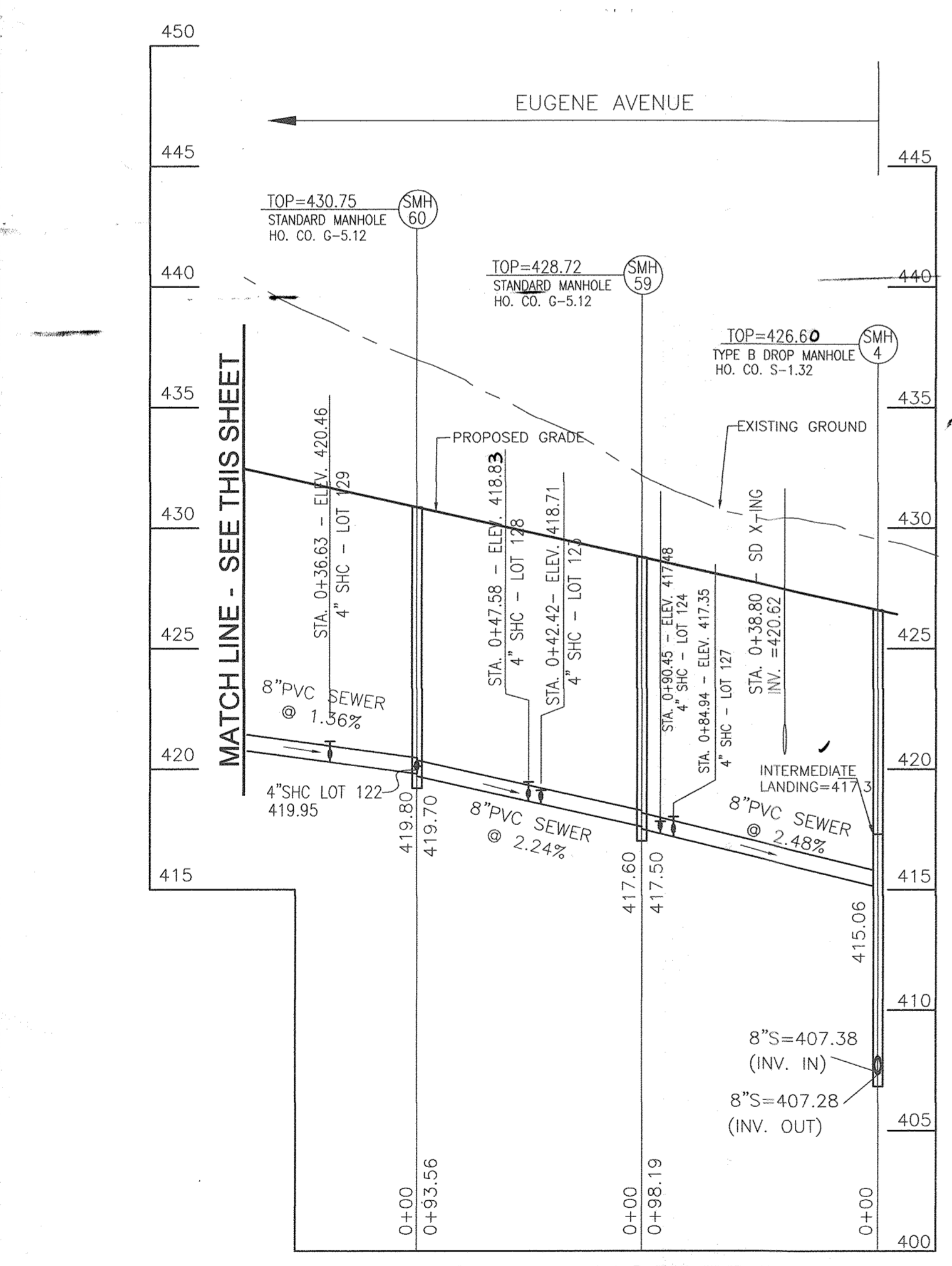
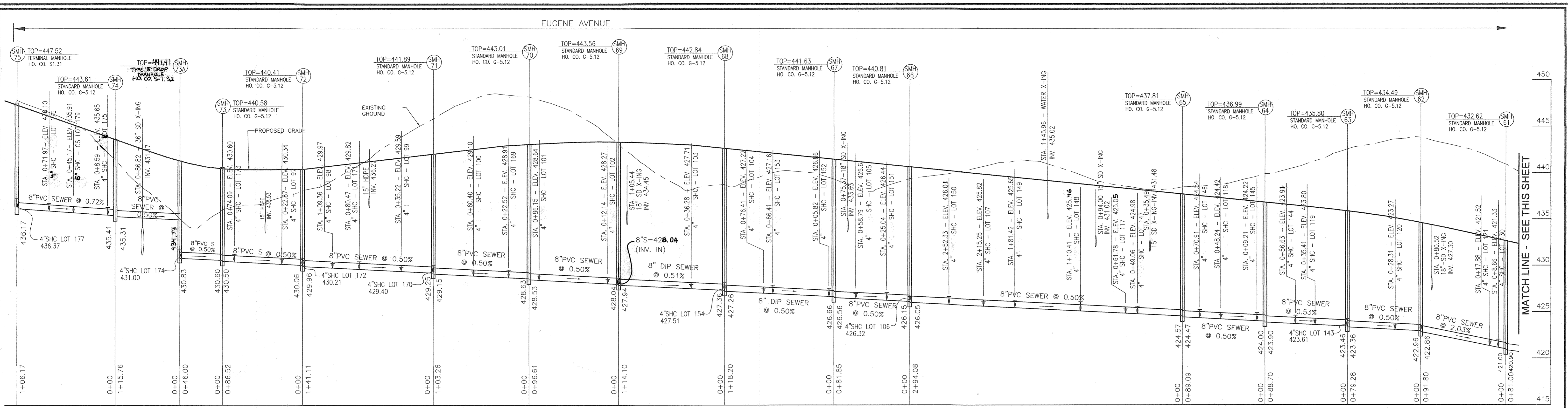


DES:	GAH/ML		
DRN:	GAH/ML		
CHK:	RHV	RVE 2	REUSE SMH 7 AND SEWER MANHOLE SCHEDULE 11-29-18
DATE:	MARCH 2017	RVE 1	REVISE WATER & SEWER MAIN DESIGN, CORRECT MAIN CELLAR ELEVATIONS AND CHART 8/7/18
BY:	NO.	REVISION	DATE

FINAL WATER & SEWER PLAN
CONT. 24-4989-D
SEWER PROFILES
600' SCALE MAP NO. 46
BLOCK NO. 02

MAPLE LAWN SOUTH PHASE 1 - SECTION 2
LOTS 70-177 AND OPEN SPACE LOTS 178-182
TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
ZONED: R-ED-MD-3

SCALE AS SHOWN
SHEET 6 OF 11



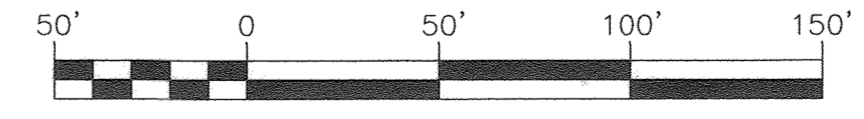
SANITARY SEWER PROFILE
EUGENE AVENUE
SCALE: 1"=50' HORIZ.
1"=5' VERT.

SANITARY SEWER PROFILE
EUGENE AVENUE
SCALE: 1"=50' HORIZ.
1"=5' VERT.

SANITARY SEWER PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS
WERE PREPARED OR APPROVED BY ME, AND
THAT I AM A FULLY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE
OF MARYLAND, LICENSE NO. 16193
EXPIRATION DATE: 09-27-2018

AS BUILTS
DATE 9-28-20



OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[Signature]
CHIEF, BUREAU OF UTILITIES
DATE 5-18-17

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE 5-18-17

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
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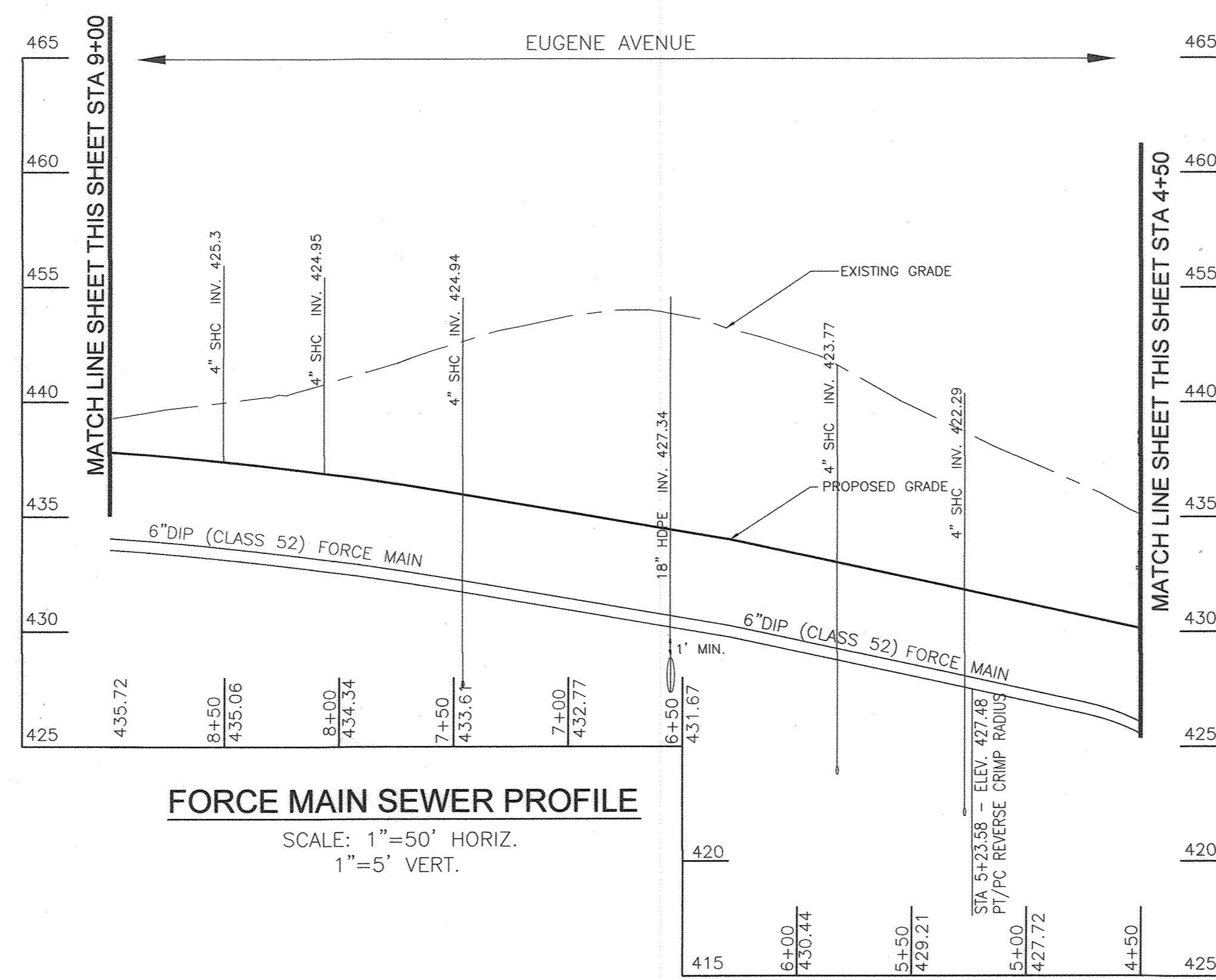
DES:	GAH/ML			
DRN:	GAH/ML			
CHK:	RHV	REV 3	REVISE TO REFLECT LARGER WATER AND SEWER HOUSE CONNECTIONS FOR OPEN SPACE	12-19-19
DATE:	MARCH 2017	REV 1	REVISE WATER & SEWER MAIN DESIGN, CORRECT MIN. CELLAR ELEVATIONS AND OTHER	9/7/18
BY:		NO.	REVISION	DATE

FINAL WATER & SEWER PLAN
CONT. 24-4989-D
SEWER PROFILES

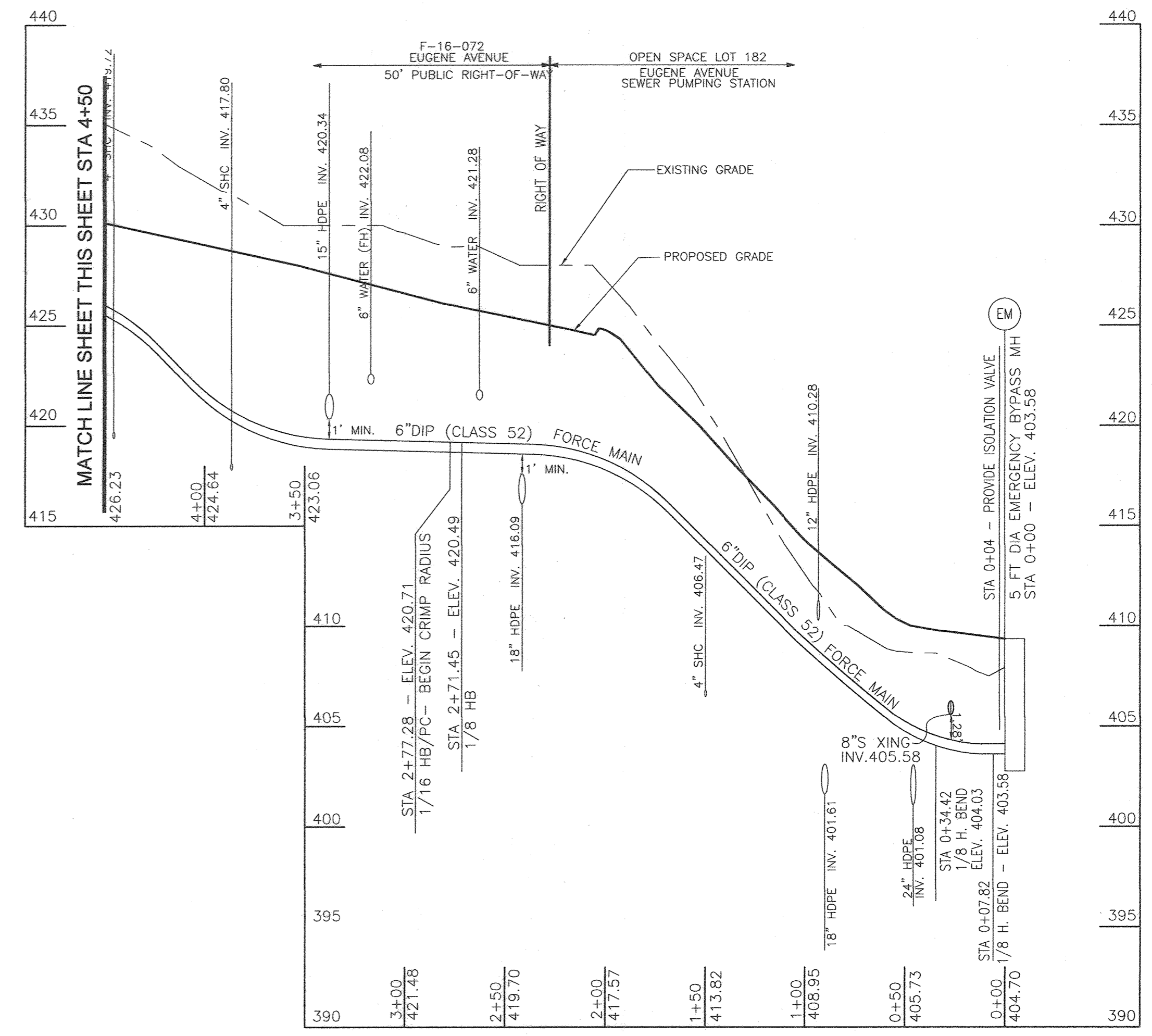
MAPLE LAWN SOUTH PHASE 1 - SECTION 2
LOTS 70-177 AND OPEN SPACE LOTS 178-182
TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
ZONED: R-ED-MXD-3

SCALE AS SHOWN
SHEET 8 OF 11

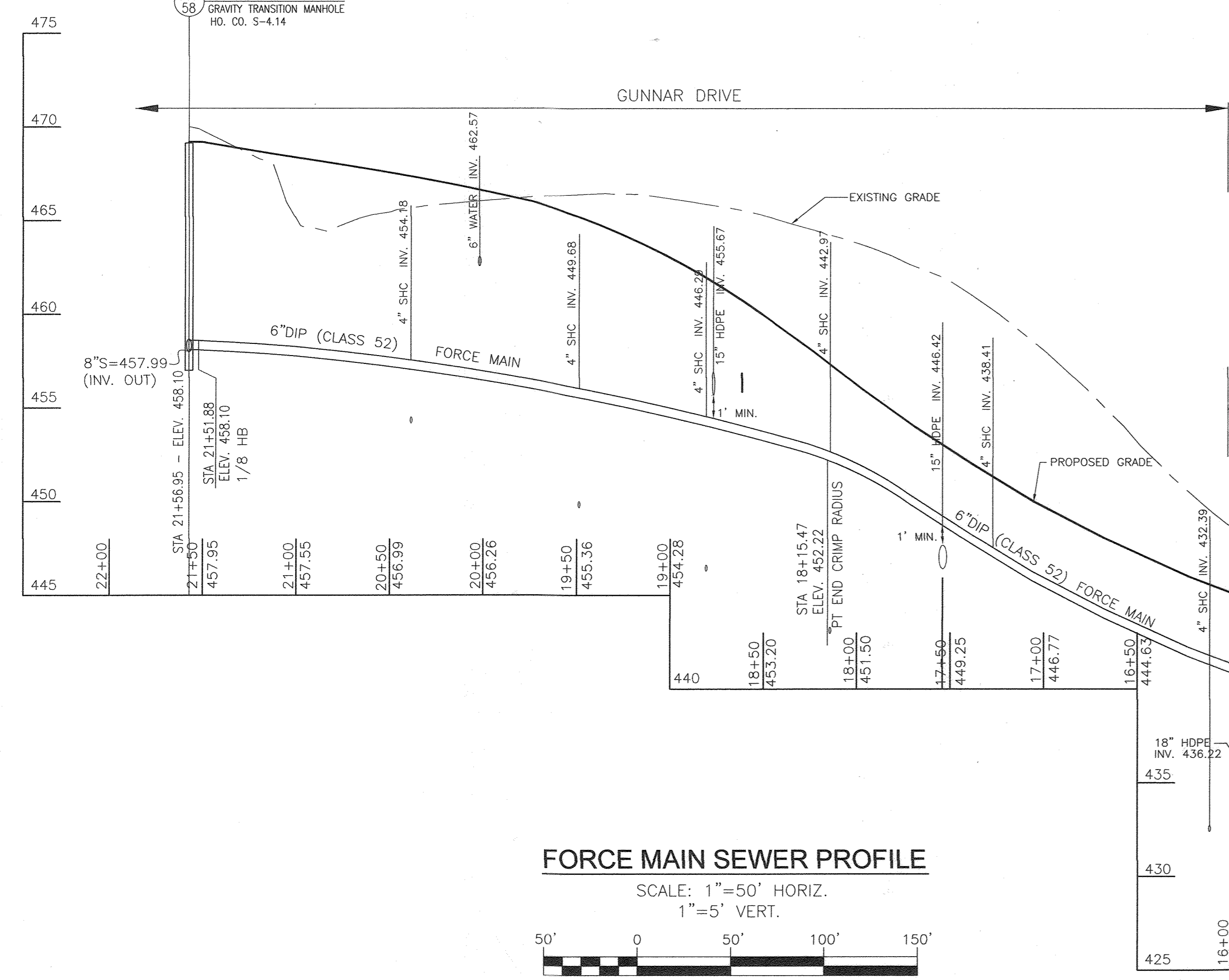
SEWER MANHOLE SCHEDULE					
SMH	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
1	STD MANHOLE HO CO. G-5.12	N 537965 2841 E 1336168.1292	409.33	405.30	405.20
2	STD MANHOLE HO CO. G-5.12	N 531455 6663 E 1336159.6705	418.39	408.20	406.10
3	STD MANHOLE HO CO. G-5.12	N 538295 7332 E 1336151.7077	425.75	407.05	406.95
4	TYPE "B" DROP MH HO CO. S-1.32	N 538309 2501 E 1336123.7232	428.80	407.38(415.06)	407.28
5	STD MANHOLE HO CO. G-5.12	N 538456 5951 E 1336147.3962	417.68	408.23	408.13
6	STD MANHOLE HO CO. G-5.12	N 538480 8592 E 1335995.3258	422.10	409.10	408.00
7	TYPE "B" DROP MH HO CO. S-1.32	N 538686 6057 E 1335880.3284	435.68	410.38(418.40)	410.28
8	STD MANHOLE HO CO. G-5.12	N 538841 2516 E 1335821.3726	428.20	411.28	411.18
9	STD MANHOLE HO CO. G-5.12	N 538865 8558 E 1335853.7885	428.30	412.12	412.02
10	STD MANHOLE HO CO. G-5.12	N 539150 6352 E 1336010.4647	422.10	413.09	412.99
11	STD MANHOLE HO CO. G-5.12	N 539149 8705 E 1336100.6767	429.50	413.64	413.54
12	TYPE "B" DROP MH HO CO. S-1.32	N 538951 0235 E 1336197.8165	430.20	420.60(414.85)	414.75
13	STD MANHOLE HO CO. G-5.12	N 538865 5119 E 1336293.3559	423.00	415.46	415.36
14	STD MANHOLE HO CO. G-5.12	N 538839 9872 E 1336347.8803	428.00	416.05	415.95
15	TYPE "A" DROP MH HO CO. S-1.32	N 538853 1024 E 1336400.2187	424.40	416.42	416.32
16	STD MANHOLE HO CO. G-5.12	N 538895 5170 E 1336472.7102	424.14	416.94	416.84
17	TYPE "A" DROP MH HO CO. S-1.32	N 539077 0093 E 1336620.7544	428.17	421.16	418.46
18	STD MANHOLE HO CO. G-5.12	N 539312 0693 E 1336736.8786	440.13	422.57	422.47
19	STD MANHOLE HO CO. G-5.12	N 539425 7018 E 1336704.2975	445.30	433.93(434.00)	433.80
20	STD MANHOLE HO CO. G-5.12	N 539406 4871 E 1336596.1352	447.59	435.00	435.00
21	TERMINAL MANHOLE HO CO. S-1.31	N 539423 1356 E 1336427.5019	450.74	437.00	437.00
22	TERMINAL MANHOLE HO CO. S-1.31	N 538845 1304 E 1335759.7619	433.65	422.00	422.00
23	STD MANHOLE HO CO. G-5.12	N 539018 2901 E 1336335.5124	434.60	421.50	421.40
24	STD MANHOLE HO CO. G-5.12	N 539121 2253 E 1336297.8750	439.88	428.50	428.40
25	TERMINAL MANHOLE HO CO. S-1.31	N 539298 3275 E 1336267.9311	447.16	435.00	435.00
26	TERMINAL MANHOLE HO CO. S-1.31	N 539468 4269 E 1336805.6151	448.20	434.71	434.71
27	STD MANHOLE HO CO. G-5.12	N 538323 1950 E 1336026.6747	428.72	417.60	417.50
28	STD MANHOLE HO CO. G-5.12	N 538309 2543 E 1335934.1624	430.75	419.80	419.70
29	STD MANHOLE HO CO. G-5.12	N 538281 3736 E 1335858.1123	432.62	421.00	420.90
30	STD MANHOLE HO CO. G-5.12	N 538283 1319 E 1335768.3288	434.49	422.98	422.88
31	STD MANHOLE HO CO. G-5.12	N 538316 2238 E 1335694.2893	435.80	423.46	423.36
32	STD MANHOLE HO CO. G-5.12	N 538381 6442 E 1335634.3980	436.99	424.00	423.90
33	STD MANHOLE HO CO. G-5.12	N 538466 2986 E 1335606.6413	437.81	424.57	424.47
34	STD MANHOLE HO CO. G-5.12	N 538758 7838 E 1335576.0753	440.81	426.15	426.05
35	STD MANHOLE HO CO. G-5.12	N 538840 1858 E 1335567.5884	441.63	426.68	426.58
36	STD MANHOLE HO CO. G-5.12	N 538958 1045 E 1335575.7226	442.84	427.36	427.26
37	STD MANHOLE HO CO. G-5.12	N 539134 2144 E 1335686.1753	443.01	428.63	428.53
38	STD MANHOLE HO CO. G-5.12	N 539204 8069 E 1335761.5353	441.89	429.25	429.15
39	STD MANHOLE HO CO. G-5.12	N 539386 8860 E 1335896.1952	440.41	430.06	429.96
40	STD MANHOLE HO CO. G-5.12	N 539386 8860 E 1335896.1952	440.58	430.50	430.50
41	STD MANHOLE HO CO. G-5.12	N 539412 7779 E 1335934.1713	441.41	434.73	434.63
42	STD MANHOLE HO CO. G-5.12	N 539442 1482 E 1335997.8030	443.61	435.41	435.31
43	TERMINAL MANHOLE HO CO. S-1.31	N 539464 5869 E 1336101.5793	447.52	436.17	436.17
44	STD MANHOLE HO CO. G-5.12	N 537917 8648 E 1335622.3873	430.00	407.14	407.00
45	STD MANHOLE HO CO. G-5.12	N 537797 1529 E 1335550.1592	423.80	409.24	409.10
46	STD MANHOLE HO CO. G-5.12	N 537926 2075 E 1335471.8253	422.53	410.10	410.00
47	TYPE "B" DROP MH HO CO. S-1.32	N 537970 1113 E 1335637.2720	426.84	418.00	415.50
48	STD MANHOLE HO CO. G-5.12	N 538052 1106 E 1335626.1875	433.54	422.50	422.40
49	TERMINAL MANHOLE HO CO. S-1.31	N 538160 4054 E 1335705.0055	436.47	424.00	424.00
50	STD MANHOLE HO CO. G-5.12	N 539113 7387 E 1335551.6561	445.81	432.98	432.88
51	STD MANHOLE HO CO. G-5.12	N 539162 4872 E 1335509.9028	448.77	436.27	436.17
52	STD MANHOLE HO CO. G-5.12	N 539241 6765 E 1335468.5736	454.06	440.84	440.74
53	TERMINAL MANHOLE HO CO. S-1.31	N 539554 0507 E 1335413.4675	467.68	456.70	456.70



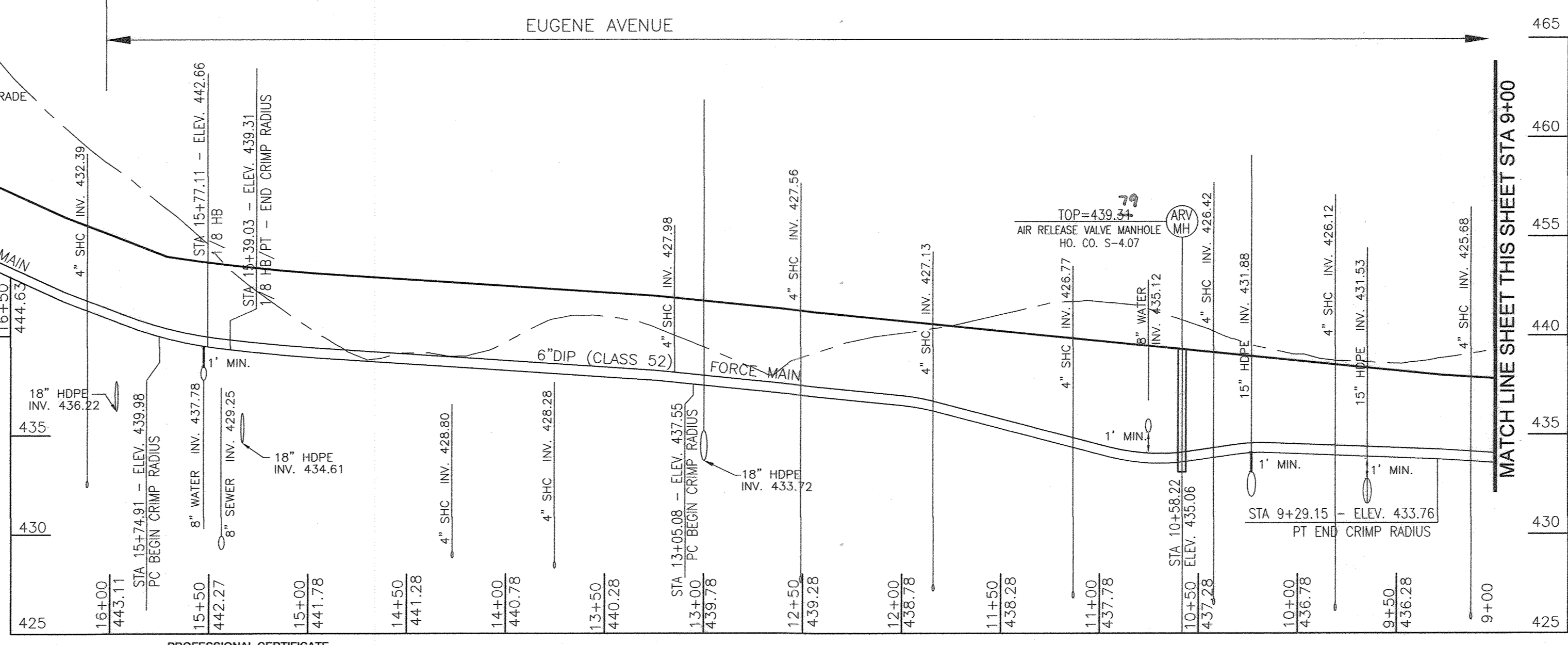
FORCE MAIN SEWER PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



FORCE MAIN SEWER PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



FORCE MAIN SEWER PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



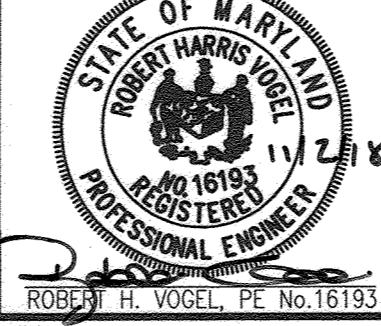
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS
WERE PREPARED OR APPROVED BY ME, AND
THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE
OF MARYLAND, LICENSE NO. 16193
EXPIRATION DATE: 09-27-2018

AS BUILTS
9-28-20

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES
DATE: 11-2-18

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 11-2-18

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIGOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961



DES:	GAH/ML		
DRN:	GAH/ML		
CHK:	RHV	RVE 2	11-29-18
DATE:	MARCH 2017	RVE 1	7/18
		BY NO.	REVISION

FINAL WATER & SEWER PLAN
CONT. 24-4989-D
FORCE MAIN SEWER PROFILES

OWNER
MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD
FULTON, MD 20759-0562
301-725-2074

DEVELOPER
MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220
ANNAPOLIS, MARYLAND 21401
443-472-2846

TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND
ZONED: R-ED-MXD-3

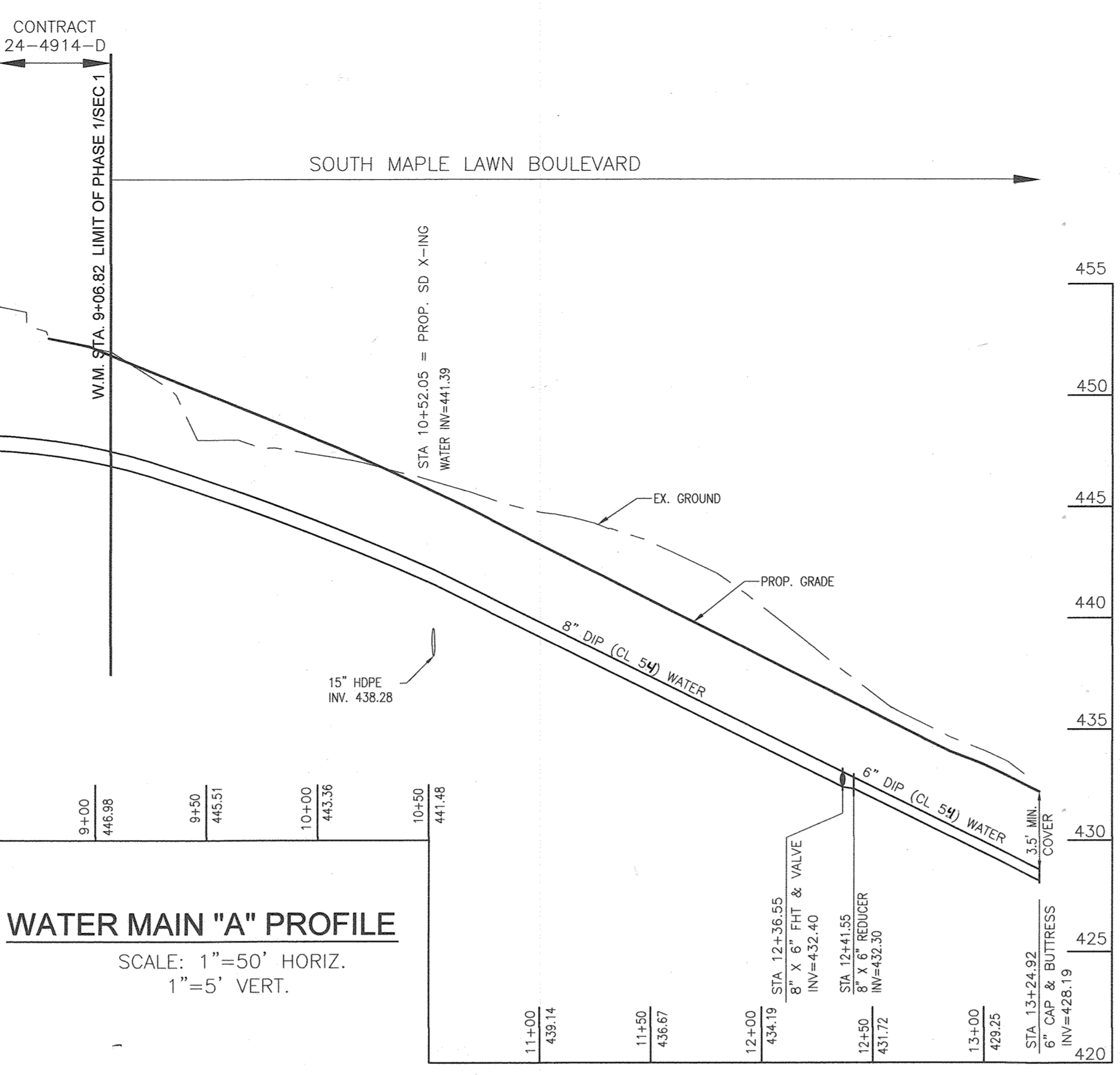
SCALE AS SHOWN
SHEET 9 OF 11

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

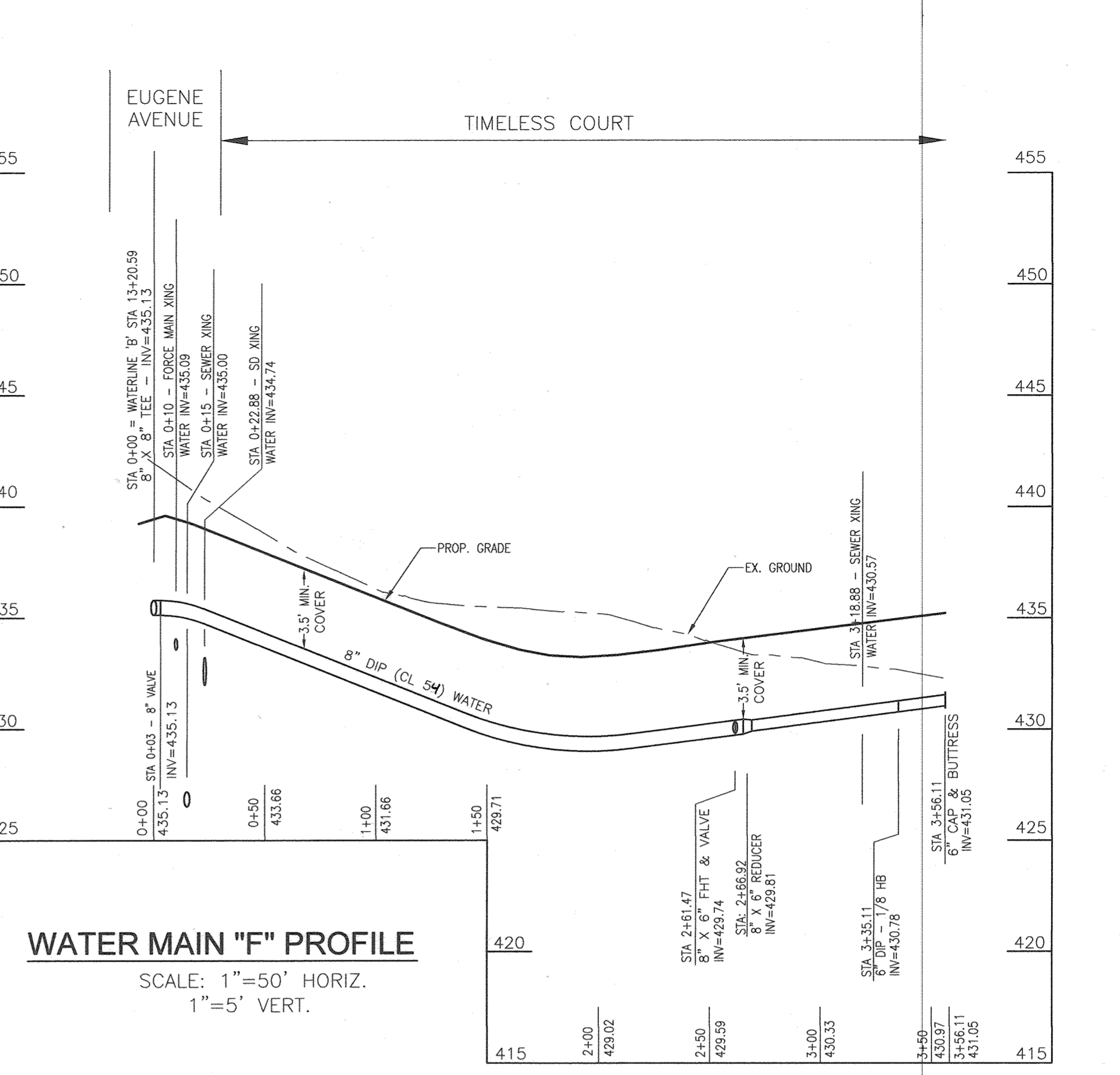
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2	LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 70		TO I-109 MH - 28.5'	TO SMH 21 - 40.4'	LOT 131		TO SMH 81 - 41.5'	TO I-152 MH - 49.9'
LOT 71		TO I-109 MH - 73'	TO SMH 20 - 68'	LOT 132		TO SMH 81 - 39'	TO WHCL 142 - 52.3'
LOT 72		TO SMH 20 - 49.9'	TO SMH 4 - 20'	LOT 133		TO SMH 80 - 38'	TO WHCL 141 - 52'
LOT 73		TO SMH 20 - 49.9'	TO SMH 4 - 20'	LOT 134		TO SMH 80 - 32.6'	TO SHC - 11'
LOT 74		TO SMH 26 - 67.8'	TO WHCL 176 - 36'	LOT 135		TO SMH 80 - 32.6'	TO SHC - 11'
LOT 75		TO SMH 26 - 38.4'	TO WHCL 76 - 40.2'	LOT 136		TO SMH 78 - 28.5'	TO SMH 80 - 91.7'
LOT 76		TO SMH 26 - 42.9'	TO WHCL 72 - 54.6'	LOT 137		TO SMH 78 - 47.7'	TO WHCL 137 - 66.5'
LOT 77		TO SHC - 8.0'	TO SMH 26 - 34.2'	LOT 138		TO SMH 78 - 46.5'	
LOT 78		TO SMH 26 - 44.2'	TO WHCL 77 - 55'	LOT 139		TO SMH 78 - 38.6'	
LOT 79		TO SMH 26 - 61'	TO FH - 37.5'	LOT 140		TO SMH 80 - 75.4'	
LOT 80		TO I-109 MH - 28.3'	TO SHCL 81 - 49.6'	LOT 141		TO SMH 80 - 36.6'	
LOT 81		TO SMH 20 - 30.5'	TO WHCL 72 - 41'	LOT 142		TO SMH 81 - 20.6'	TO WHCL 132 - 52.3'
LOT 82		TO SMH 20 - 41'	TO WHCL 71 - 57'	LOT 143		TO SMH 82 - 37.2'	TO SMH 47 - 22.4'
LOT 83		TO SMH 31 - 98'	TO I-109 MH - 37'	LOT 144		TO SMH 82 - 37.4'	TO SHC - 13.7'
LOT 84		TO I-109 MH - 48.5'	TO SMH 21 - 38'	LOT 145		TO SMH 82 - 45.4'	
LOT 85		TO SMH 22 - 38.5'	TO I-144 MH - 38'	LOT 146		TO SMH 85 - 39'	
LOT 86		TO I-144 MH - 40'	TO I-144 MH - 29.4'	LOT 147			
LOT 87		TO WHCL 86 - 45.4'	TO WHCL 94 - 54'	LOT 148		TO FH - 13.4'	TO 8" V - 21.6'
LOT 88		TO FH - 15.6'	TO I-344 MH - 38'	LOT 149		TO FH - 38.8'	TO I-145 MH - 40'
LOT 89		TO SMH 23 - 69'	TO I-344 MH - 54'	LOT 150		TO SMH 86 - 41'	TO SHC - 13.7'
LOT 90		TO I-344 MH - 20'	TO SMH 66 - 6.9'	LOT 151		TO SMH 86 - 50'	TO SMH 56 - 52.1'
LOT 91		TO SMH 23 - 68'	TO I-344 MH - 27'	LOT 152		TO SMH 87 - 40.2'	TO I-166 MH - 31.1'
LOT 92		TO SMH 23 - 55.8'	TO WHCL 91 - 45'	LOT 153		TO SMH 87 - 97'	TO WHCL 104 - 52.3'
LOT 93		TO FH - 44.8'	TO SMH 23 - 53'	LOT 154		TO SMH 88 - 36'	TO SMH 68 - 40.5'
LOT 94			TO SMH 24 - 28.5'	LOT 155		TO SMH 88 - 36'	TO SMH 82 - 57.2'
LOT 95		TO SMH 24 - 48'	TO I-2 MH - 34'	LOT 156		TO SMH 83 - 36.4'	TO I-164 MH - 31.6'
LOT 96		TO SMH 25 - 30'	TO I-2 MH - 36.5'	LOT 157		TO SMH 84 - 16'	
LOT 97		TO SMH 73 - 39'	TO SMH 72 - 54.5'	LOT 158		TO I-171 MH - 38'	TO SMH 84 - 6.8'
LOT 98		TO SMH 72 - 25'	TO I-122 MH - 51'	LOT 159		TO I-171 MH - 31.9'	
LOT 99		TO I-122 MH - 25'	TO SMH 71 - 38.6'	LOT 160		TO FH - 31'	TO FH V - 43'
LOT 100		TO SMH 71 - 31'	TO SMH 70 - 91'	LOT 161		TO SMH 18 - 12.6'	TO I-244 MH - 40'
LOT 101		TO SMH 70 - 41.3'	TO SHC - 42'	LOT 162		TO SMH 86 - 27'	TO EX. MH 58 - 56.6'
LOT 102		TO SMH 70 - 47'	TO SMH 69 - 53.5'	LOT 163		TO SMH 85 - 34'	TO I-23 MH - 17.2'
LOT 103		TO SMH 69 - 68'	TO FH V - 43.3'	LOT 164		TO 6" FH V - 26.4'	TO I-23 MH - 44'
LOT 104		TO SMH 67 - 92'	TO SMH 68 - 34'	LOT 165		TO SHC - 13.3'	TO I-170 MH - 38'
LOT 105		TO SMH 67 - 57.5'	TO I-152 MH - 54.5'	LOT 166		TO I-170 MH - 34'	TO I-163 MH - 86.2'
LOT 106		TO SMH 68 - 25'	TO WHCL 151 - 54.3'	LOT 167		TO I-163 MH - 18.7'	TO SMH 62 - 52.5'
LOT 107		TO WHCL 117 - 50'	TO WHCL 108 - 43'	LOT 168		TO SMH 70 - 40'	TO SMH 71 - 125'
LOT 108		TO SMH 22 - 44.2'	TO WHCL 107 - 42'	LOT 169		TO SMH 71 - 54.5'	TO WHCL 70 - 71.8'
LOT 109		TO FH - 26.5'	TO SMH 22 - 42.3'	LOT 170		TO SMH 71 - 55'	TO SMH 11 - 59.5'
LOT 110		TO SMH 7 - 46.5'	TO FH - 84'	LOT 171		TO FH - 24'	TO I-119 MH - 40.5'
LOT 111		TO SMH 7 - 46.5'	TO SMH 60 - 24.7'	LOT 172		TO I-121 MH - 19.7'	TO SMH 22 - 40.4'
LOT 112		TO SHC - 25.5'	TO SMH 7 - 54'	LOT 173		TO SMH 73 - 31.5'	TO SMH 73A - 58.5'
LOT 113		TO SMH 7 - 62'	TO SMH 7 - 54'	LOT 174		TO SMH 11 - 34.2'	TO SMH 73A - 33.5'
LOT 114		TO SMH 7 - 67'	TO SMH 7 - 54'	LOT 175		TO SMH 74 - 40'	TO SMH 11 - 59.5'
LOT 115		TO I-144 MH - 13'	TO SMH 22 - 35.4'	LOT 176		TO SMH 75 - 36'	TO I-110 - 52'
LOT 116		TO SMH 22 - 39'	TO I-144 MH - 46'	LOT 177		TO SMH 75 - 27'	TO FH - 78'
LOT 117		TO WHCL 108 - 50'	TO WHCL 116 - 55'	LOT 178	CLUB HOUSE	TO SMH 75 - 39'	TO SMH 72 - 28.6'
LOT 118		TO SMH 62 - 42'	TO I-144 MH - 46.7'	LOT 179	PUMP STATION	TO WHCL 126 - 41.5'	TO SMH 2 - 18'
LOT 119		TO SMH 62 - 58.5'	TO SMH 62 - 21.5'				
LOT 120		TO SMH 62 - 36.2'	TO SMH 62 - 34.2'				
LOT 121		TO SMH 62 - 59.8'	TO SMH 61 - 42.2'				
LOT 122		TO SMH 61 - 70'	TO SMH 60 - 21'				
LOT 123		TO SMH 60 - 38'	TO SMH 59 - 63.5'				
LOT 124		TO SMH 59 - 18.3'	TO SMH 60 - 10.6'				
LOT 125		TO FH - 33.6'	TO SMH 59 - 57.6'				
LOT 126		TO SMH 3 - 41.5'					
LOT 127		TO SMH 59 - 51.7'	TO INLET MH - 19.7'				
LOT 128		TO SMH 60 - 42'	TO SMH 59 - 11.3'				
LOT 129		TO SMH 61 - 45.7'	TO SMH 60 - 10.6'				
LOT 130		TO SMH 61 - 41'	TO SMH 62 - 78'				

NOTE: ALL MEASUREMENTS TO MANHOLES OR INLET MANHOLES ARE TO CENTERLINE.

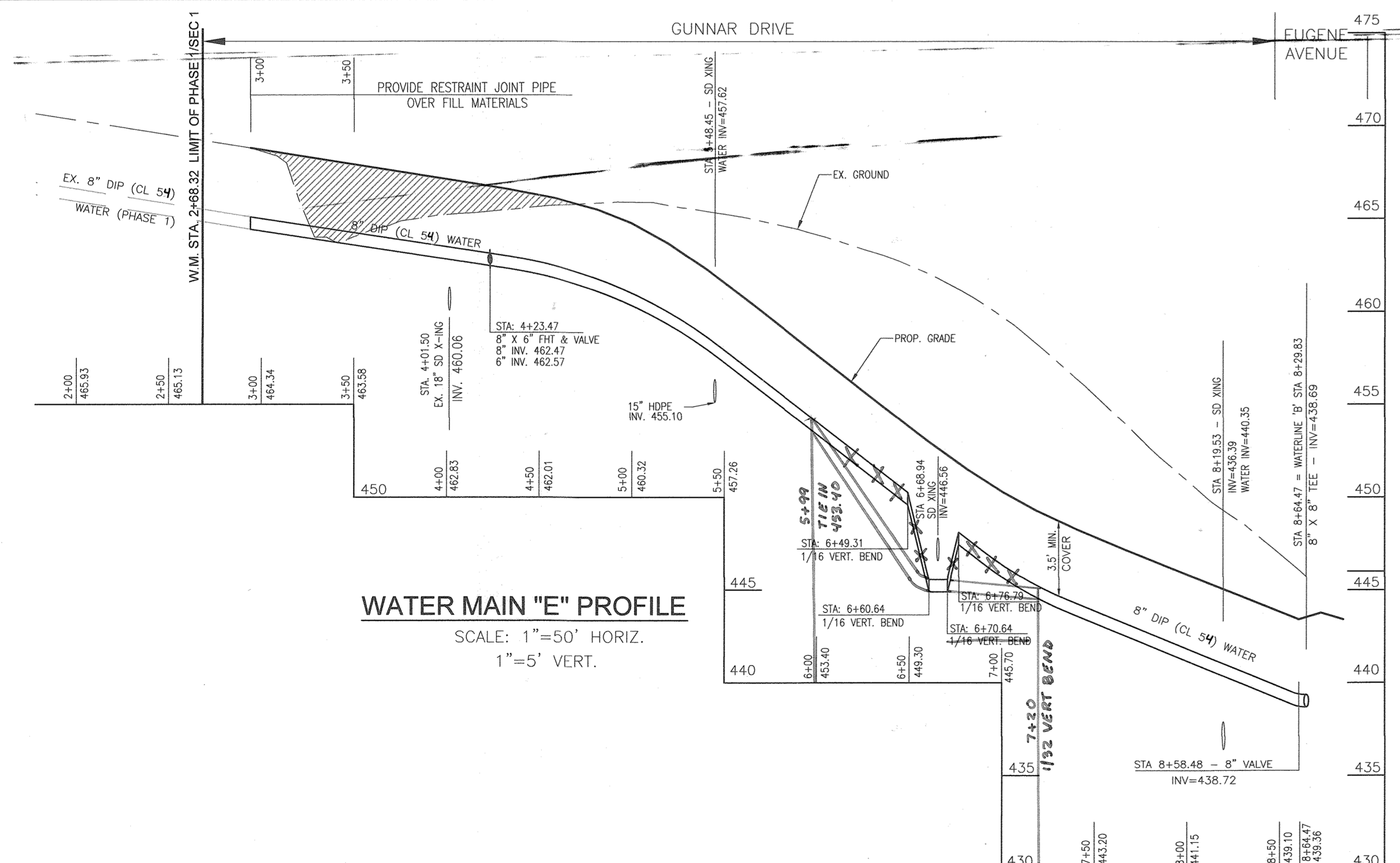
WATER MAIN "A" PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



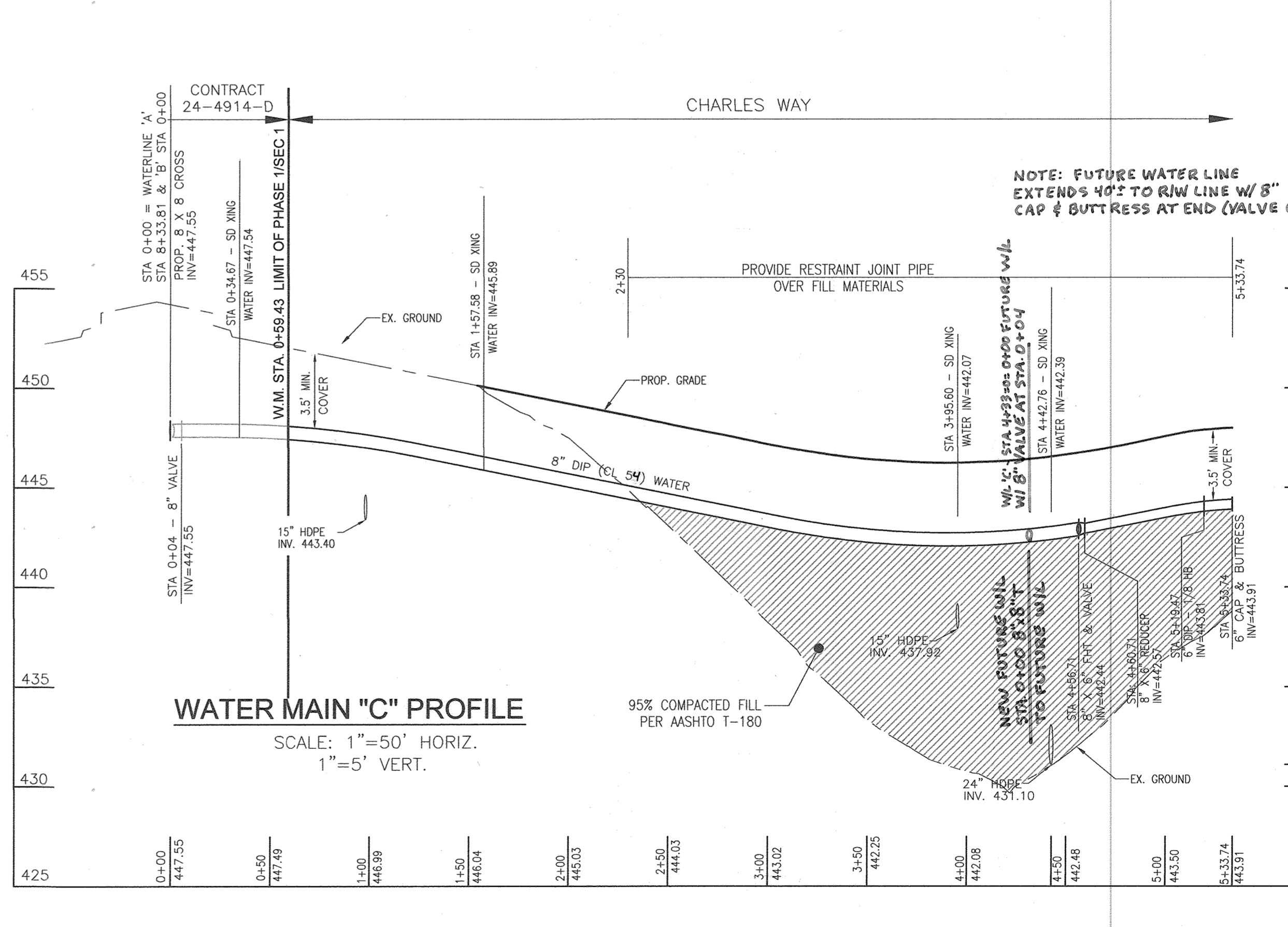
WATER MAIN "F" PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



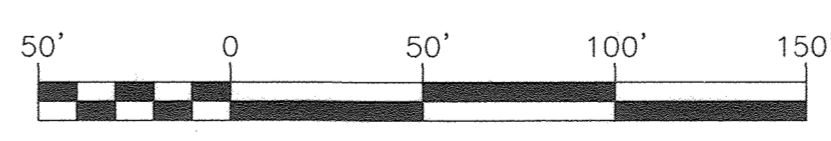
WATER MAIN "E" PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



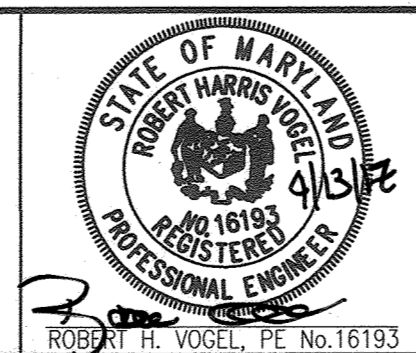
WATER MAIN "C" PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



AS BUILTS
9-28-20



PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018



ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043
TEL: 410.461.7666 FAX: 410.461.8961

DES:	GAH/ML				
DRN:	GAH/ML				
CHK:	RHV				
DATE:	MARCH 2017				
BY:		NO.		REVISION	DATE

FINAL WATER & SEWER PLAN
CONT. 24-4989-D

WATER PROFILES

OWNER: MAPLE LAWN FARMS, INC.
11788 SCAGGSVILLE ROAD FULTON, MD 20759-0562
301-725-2074

DEVELOPER: MAPLE LAWN PARTNERS, LLC
2661 RIVA ROAD, SUITE 220 ANNAPOLIS, MARYLAND 21401
443-472-2846

MAPLE LAWN SOUTH PHASE 1 - SECTION 2
LOTS 70-177 AND OPEN SPACE LOTS 178-182

TAX MAP 46, GRID 2, PARCEL 113
5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND
ZONED: R-ED-MXD-3

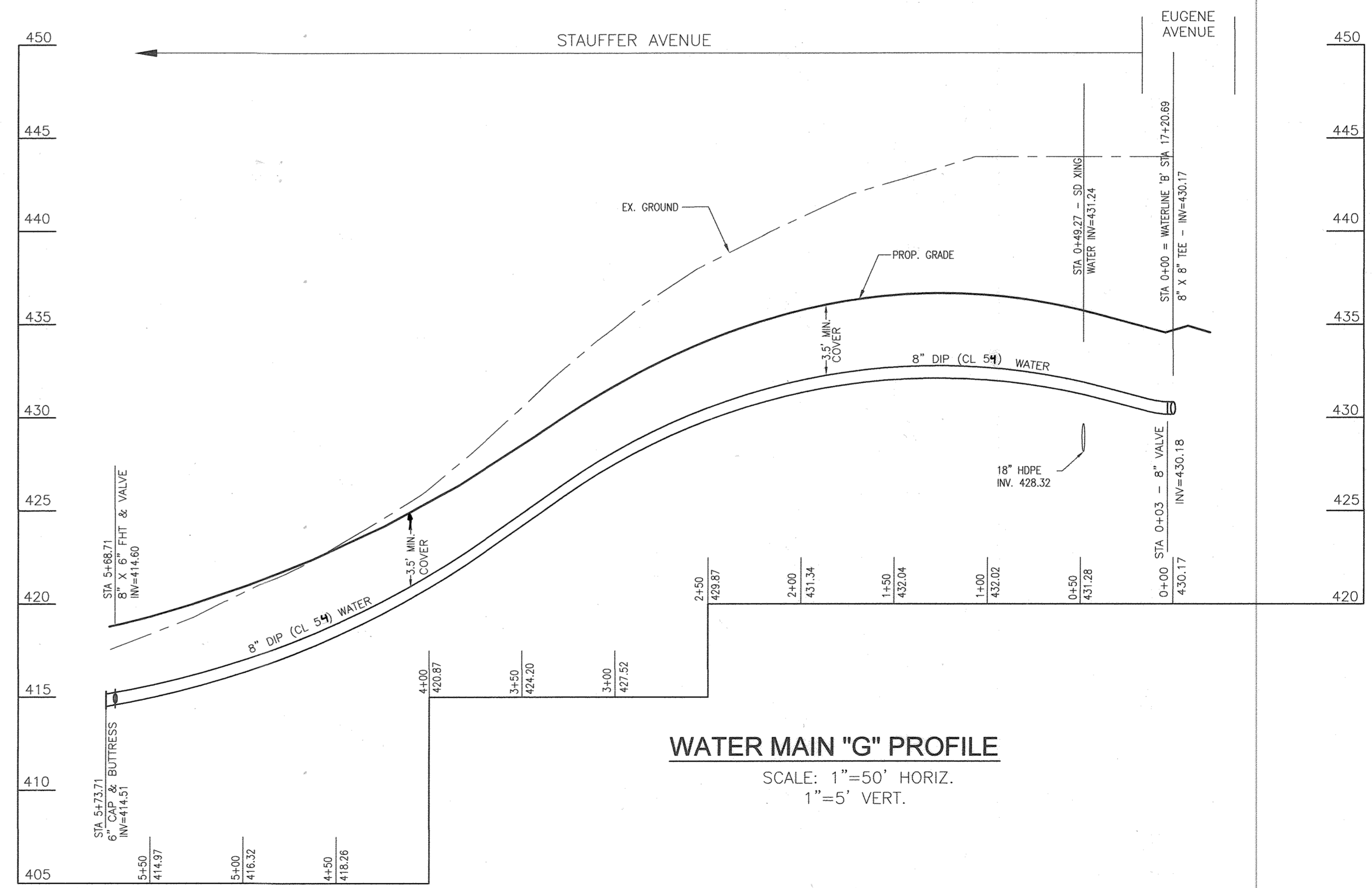
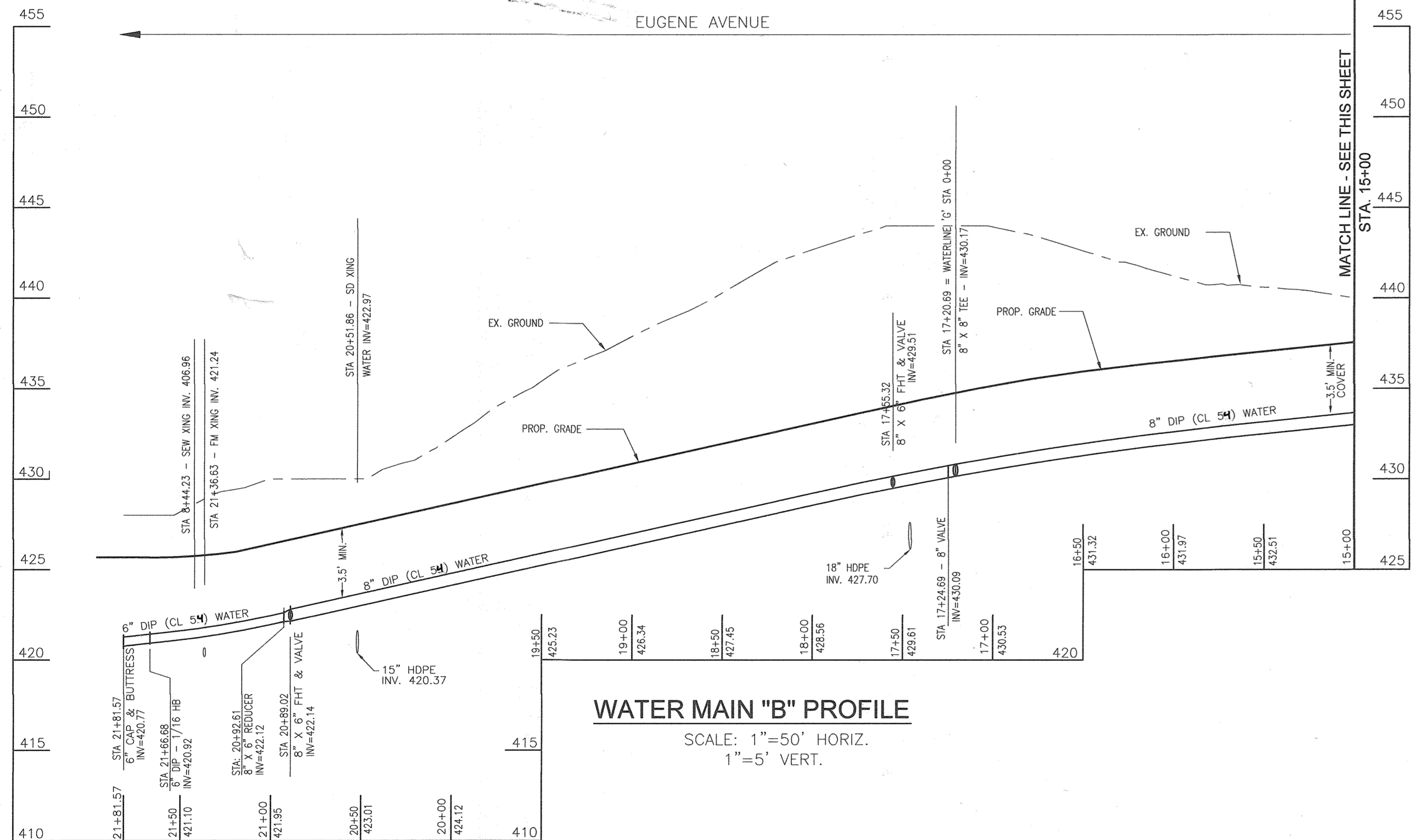
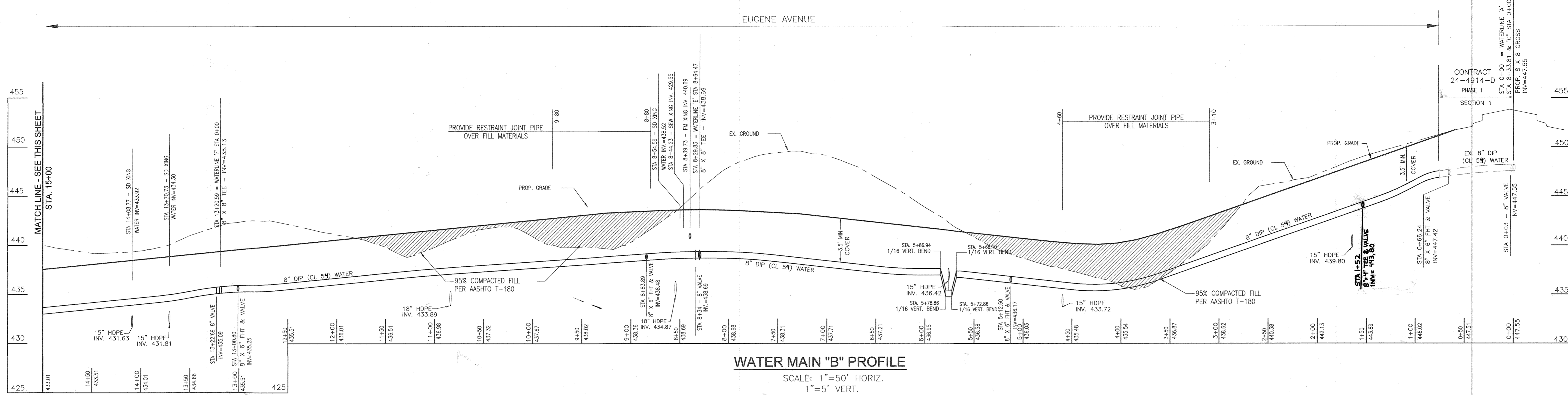
SCALE AS SHOWN
SHEET 10 OF 11

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

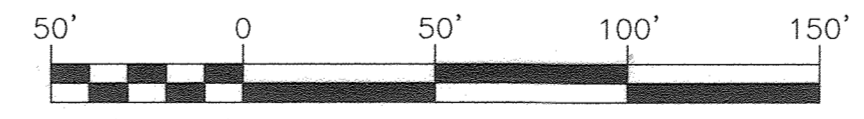
DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF UTILITIES
DATE: 4/24/17

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5-29-17

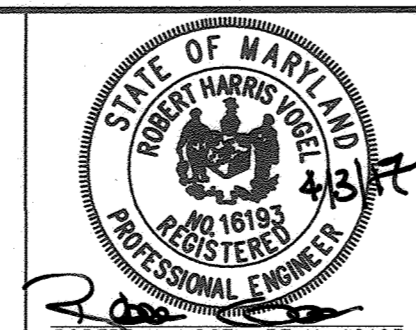


AS BUILTS
 9-28-20



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 ENGINEER UNDER THE LAWS OF THE STATE
 OF MARYLAND, LICENSE NO. 16193
 EXPIRATION DATE: 09-27-2018

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



DES:	GAH/ML			
DRN:	GAH/ML			
CHK:	RHV			
DATE:	MARCH 2017			
RVE	3	REVISION TO REFLECT LARGER WATER AND SEWER MAIN CONDITIONS FOR OPEN SPACE	12-19-19	
RVE	1	FOR THE 18" VALVE AND 8" DIA. FOR MAPLE LAWN SOUTH COMMUNITY BUILDING.		
		REVISE WATER AND SEWER MAIN DESIGN, CORRECT MAIN CELLAR ELEVATIONS AND SLOPE	09-11-19	
BY	NO.	REVISION	DATE	

FINAL WATER & SEWER PLAN
 CONT. 24-4989-D

WATER PROFILES

600' SCALE MAP NO. 46 BLOCK NO. 02

OWNER
 MAPLE LAWN FARMS, INC.
 11788 SCAGGSVILLE ROAD
 FULTON, MD 20759-0562
 301-725-2074

DEVELOPER
 MAPLE LAWN PARTNERS, LLC
 2661 RIVA ROAD, SUITE 220
 ANNAPOLIS, MARYLAND 21401
 443-472-2846

MAPLE LAWN SOUTH PHASE 1 - SECTION 2
 LOTS 70-177 AND OPEN SPACE LOTS 178-182

TAX MAP 46, GRID 2, PARCEL 113
 5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND
 ZONED: R-ED-MXD-3

SCALE AS SHOWN
 SHEET 11 OF 11

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE: 1/24/17

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 DATE: 5-18-17

CHIEF, BUREAU OF UTILITIES
 CHIEF, DEVELOPMENT ENGINEERING DIVISION