

**INDEX OF SHEETS**

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

**QUANTITY TABLE**

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STD MH (HO.CO. STD. G-5.01)	6			
CLEAN-OUTS	5			
8" SEWER MAIN: (PVC)	575 L.F.			
8" SEWER MAIN: (DIP)	280 L.F.			
4" SEWER HOUSE CONNECTION	180 L.F.			
# SEWER HOUSE CONNECTIONS	1 EACH			
# MANHOLE SEWER HOUSE CONNECTIONS	4 EACH			
8" C900 PVC WATER MAIN	590 L.F.			
6" C900 PVC WATER MAIN	60 L.F.			
1 1/2" WATER HOUSE CONNECTIONS	80 L.F.			
# 1 1/2" WATER HOUSE CONNECTIONS	5 EACH			
12" X 8" TAPPING SLEEVE	1 EACH			
8" TAPPING VALVE	1 EACH			
8" CAP & BUTTRISS	1 EACH			
1/8 H.B. (8")	2 EACH			
1/16 H.B. (8")	1 EACH			
1/32 H.B. (8")	1 EACH			
FIRE HYDRANT	2 EACH			
8" X 6" F.H. TEE & VALVE	2 EACH			
8" V	2 EACH			
HIGH DEFLECTION COUPLINGS	5 EACH			
OUTSIDE METER SETTING	5 EACH			

NAME OF UTILITY CONTRACTOR:  
SURVEY & DRAFTING DIVISION AS-BUILT DATE:

PROP LOT 1 (#8219 CHURCH LANE ROAD)

EX UTILITY	QTY.	ABANDON/REMAIN
EX WELL	1	TO BE ABANDONED
EX SEPTIC TANK	1	TO BE REMOVED

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

**DEVELOPER'S CERTIFICATION**

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

*[Signature]* 08/01/22  
DEVELOPER'S SIGNATURE DATE  
MR. OLEGARIO RAMIREZ  
DEVELOPER'S NAME

**ENGINEER'S CERTIFICATION**

"I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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."

*[Signature]* 08/03/22  
ENGINEER'S SIGNATURE DATE  
MOSTAFA IZADI, PE  
ENGINEER'S NAME

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

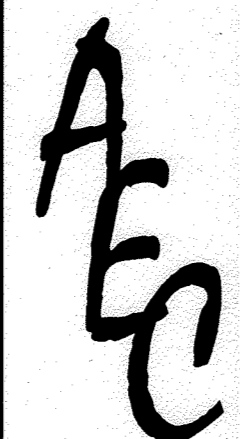
*[Signature]* 08/22/22  
HOWARD SCD DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

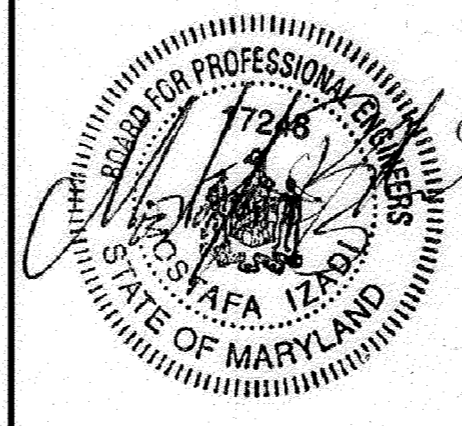
DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*[Signature]* 8/15/2022  
CHIEF, BUREAU OF UTILITIES DATE

*[Signature]* 9.15.22  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
M.A.



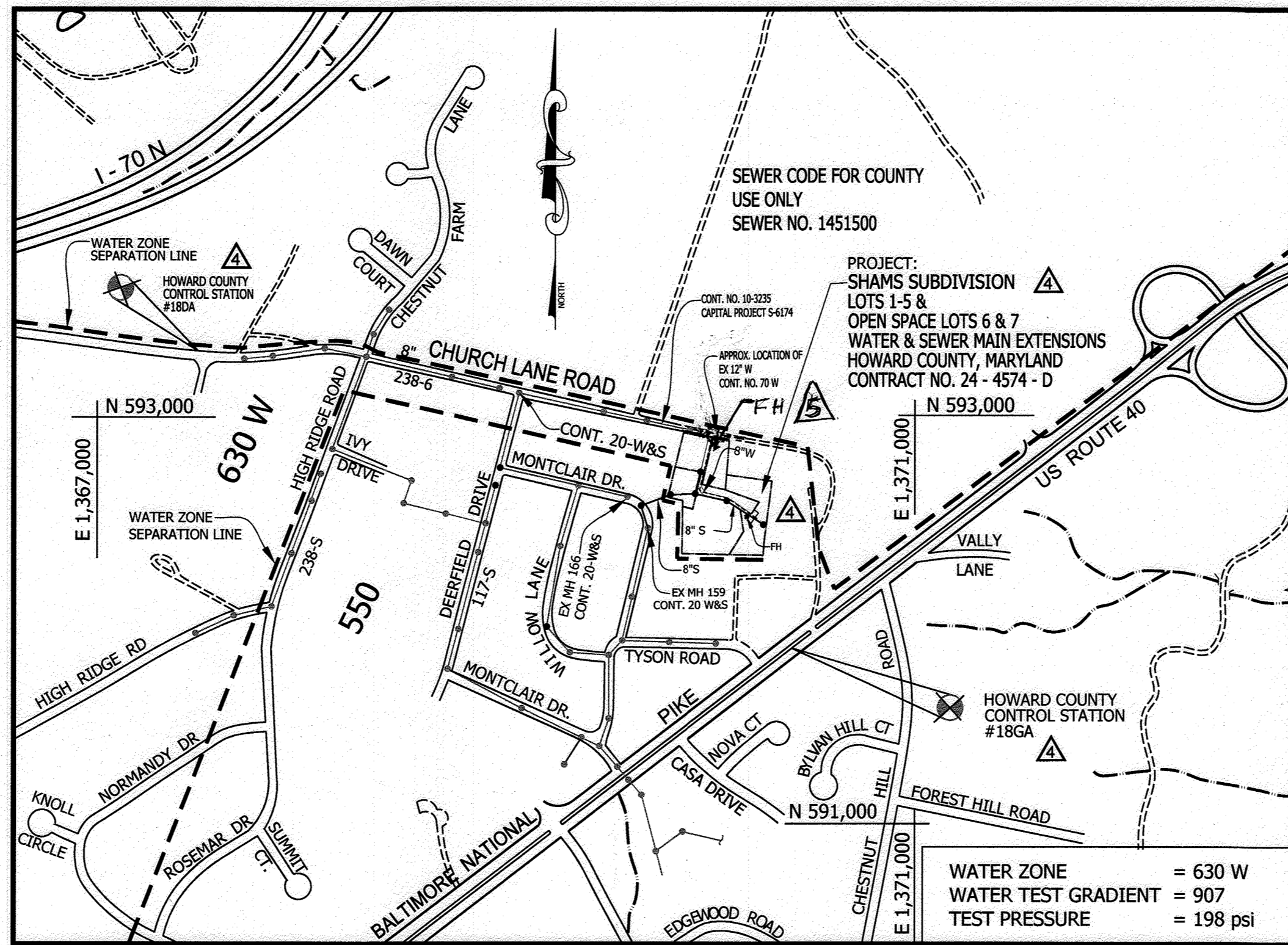
Advanced Engineering Consultants, PC.  
Engineers & Planners  
P.O. BOX 129 RIDERWOOD, MD 21139  
TEL: 410-382-9180 FAX: 410-296-0505  
mizadi@acc-engineers.biz



ENGINEERING	M I	REVISION	DATE
REVISION	1	REVISE SITE LAYOUT PER F-PLAN UPDATE TO MEET CURRENT STORMWATER MANAGEMENT REQUIREMENTS.	03/23/22
REVISION	2	FIRE HYDRANT RELOCATION	11/30/23
ILLUSTRATION			
APPROVAL	M I		
PROJECT			
DATE			
BY	NO.	REVISION	DATE

FILE REFERENCE NUMBER: SP-08-007  
FILE REFERENCE NUMBER: F-10-081  
**REPLACEMENT SHEET 01 OF 03**  
600' SCALE MAP NO. 18 BLOCK NO. 14  
**TITLE SHEET**

**SHAMS SUBDIVISION**  
LOTS 1-5, OPEN SPACE LOTS 6 & 7  
PARCEL NO. 237  
ELECTION DISTRICT 02  
TAX MAP #18, GRID 14  
HOWARD COUNTY, MARYLAND.  
CONTRACT NO.: 24-4574-D  
DATE: 08/03/22  
SCALE: AS SHOWN  
1 OF 3



ADC MAP: 21 BLOCK: C5  
**LOCATION MAP**  
SCALE: 1"=600'

**BENCHMARK INFORMATION**

B.M.#1 - HOWARD COUNTY CONTROL STATION #18DA - HORIZONTAL - NAD '83  
(LOCATED ALONG CHURCH LANE ROAD, NEAR HOUSE #8432, APPROX. 4' OFF EDGE OF PAVING)  
N 593,334.422  
E 1,367,562.226  
ELEVATION = 483.162 - VERTICAL - (NAVD '88)

B.M.#2 - HOWARD COUNTY CONTROL STATION #18GA - HORIZONTAL - (NAD '83)  
(LOCATED IN THE CENTER MEDIAN OF BALTIMORE NATIONAL PIKE NEAR ADDRESS #8200)  
N 591,872.009  
E 1,370,300.432  
ELEVATION = 445.770 - VERTICAL - (NAVD '88)

TYPE OF BUILDING	RESIDENTIAL: SINGLE FAMILY DETACHED
NO. OF UNITS	5
NO. OF WATER HOUSE CONNECTIONS	5
NO. OF SEWER HOUSE CONNECTIONS	5
DRAINAGE AREA	PATAPSCO
TREATMENT PLANT	PATAPSCO WASTEWATER TREATMENT PLANT CITY OF BALTIMORE

**CONTRACT NO.: 24-4574-D**  
**SHAMS SUBDIVISION**  
**LOTS 1 - 5, OPEN SPACE LOTS 6 & 7**  
**WATER AND SEWER MAIN EXTENSIONS**  
**HOWARD COUNTY, MARYLAND**  
**DEPARTMENT OF PUBLIC WORKS**

**CNS WAVIER (LOTS 4&5) NOTE:**  
DESIGN MANUAL WAIVER #DMV2-22-018 WAS APPROVED BY DPW-BUREAU OF ENGINEERING/UTILITY DESIGN DIVISION ON MARCH 25, 2022. (LOTS 4&5 BASEMENTS WILL NOT BE SERVED BY GRAVITY).

**GENERAL NOTES:**

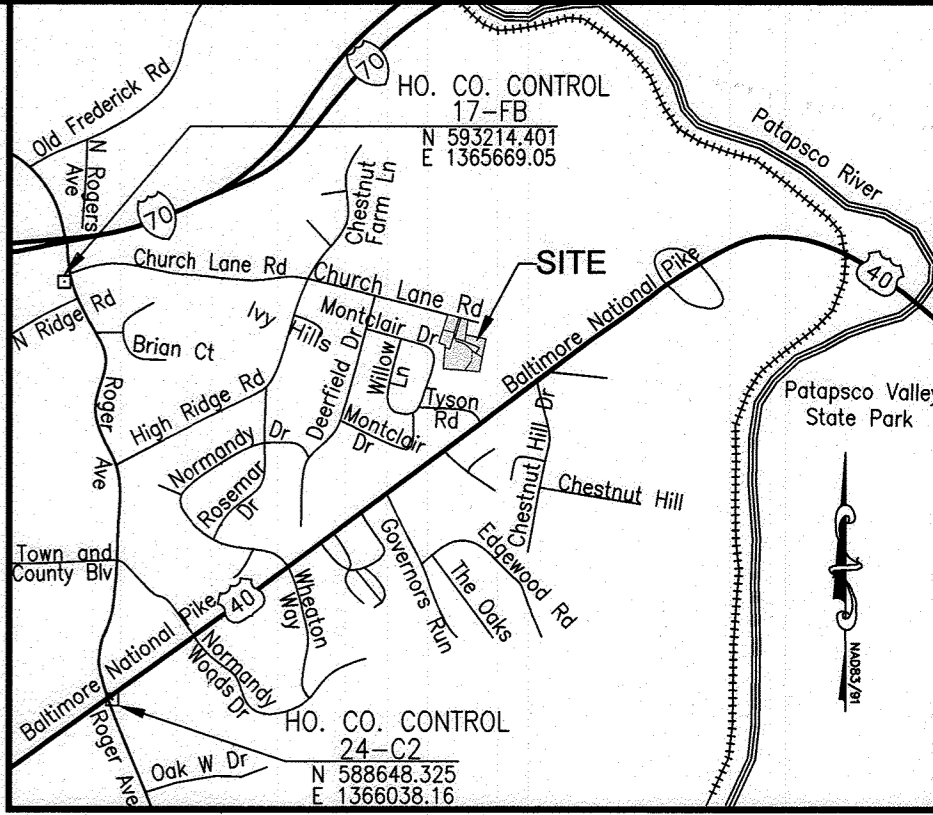
- PART A**
- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
  - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON MAY 10, 2005 BY AB CONSULTANTS. HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD'83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 18DA & 18G2. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWING.
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS. CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-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 EVENTS OF THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
  - FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION. 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 LOCATION OF 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 TESTS PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT THE CONTRACTOR'S EXPENSE.
  - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS PRIOR TO STARTING WORK SHOWN ON THESE PLANS:  
AT&T ..... 1-800-252-1133  
BGE (CONTRACTOR SERVICES)..... 410-637-8713  
BGE (EMERGENCY)..... 410-685-0123  
BUREAU OF UTILITIES..... 410-313-4900  
COLONIAL PIPELINE CO..... 410-795-1390  
MISS UTILITY..... 1-800-257-7777  
STATE HIGHWAY ADMINISTRATION..... 410-531-5533  
VERIZON ..... 1-800-743-0033/410-224-9210
  - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
  - 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 B: WATER MAIN GENERAL NOTES**

- ALL WATER MAIN SHALL BE AWWA C900 PVC: DR-18, 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 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.
- TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL D.I.P. AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATIONS TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPES SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. 17 POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. 12 POUND ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
- PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF THE PVC PIPE.
- ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ON FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING. PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2-DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTYPE PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL. FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR 18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5- DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATES AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVAL EQUAL.
- TO ACCOMMODATE A SPRINKLER SYSTEM, ALL RESIDENTIAL DWELLING UNIT SHALL HAVE A 1-1/2" WATER HOUSE CONNECTION WITH 1" OUTSIDE METER SETTING STD. DET. W-3.28.

**PART C: SEWER MAIN GENERAL NOTES**

- 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.
- FORCED 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 WATER TIGHT FRAME AND COVER, STANDARD DETL. G.5.2. WHERE WATER TIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.



**VICINITY MAP**  
ADC MAP NO.21 - C5  
SCALE: 1" = 2000'

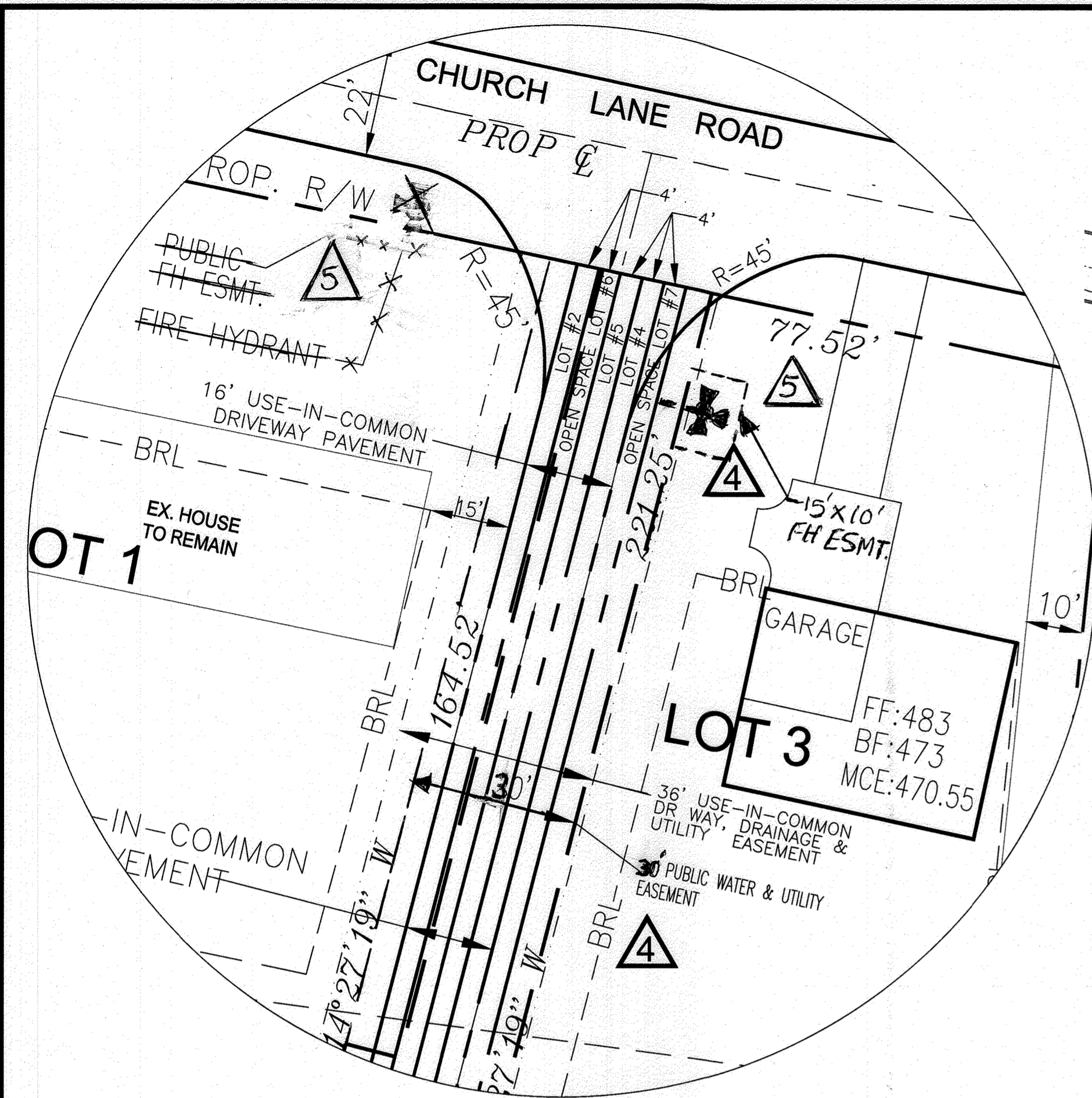
**SEQUENCE OF CONSTRUCTION**

- CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION (410-792-7272) PRIOR TO STARTING DATE.
- INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV.
- EXCAVATE AND INSTALL PROP. 8" SEWER MAIN AND 4" S.H.C.
- RESTORE PAVING AND EARTH TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS.
- UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES.
- FINE GRADE ALL DISTURBED AREAS AND STABILIZE WITH PERMANENT SEEDING.

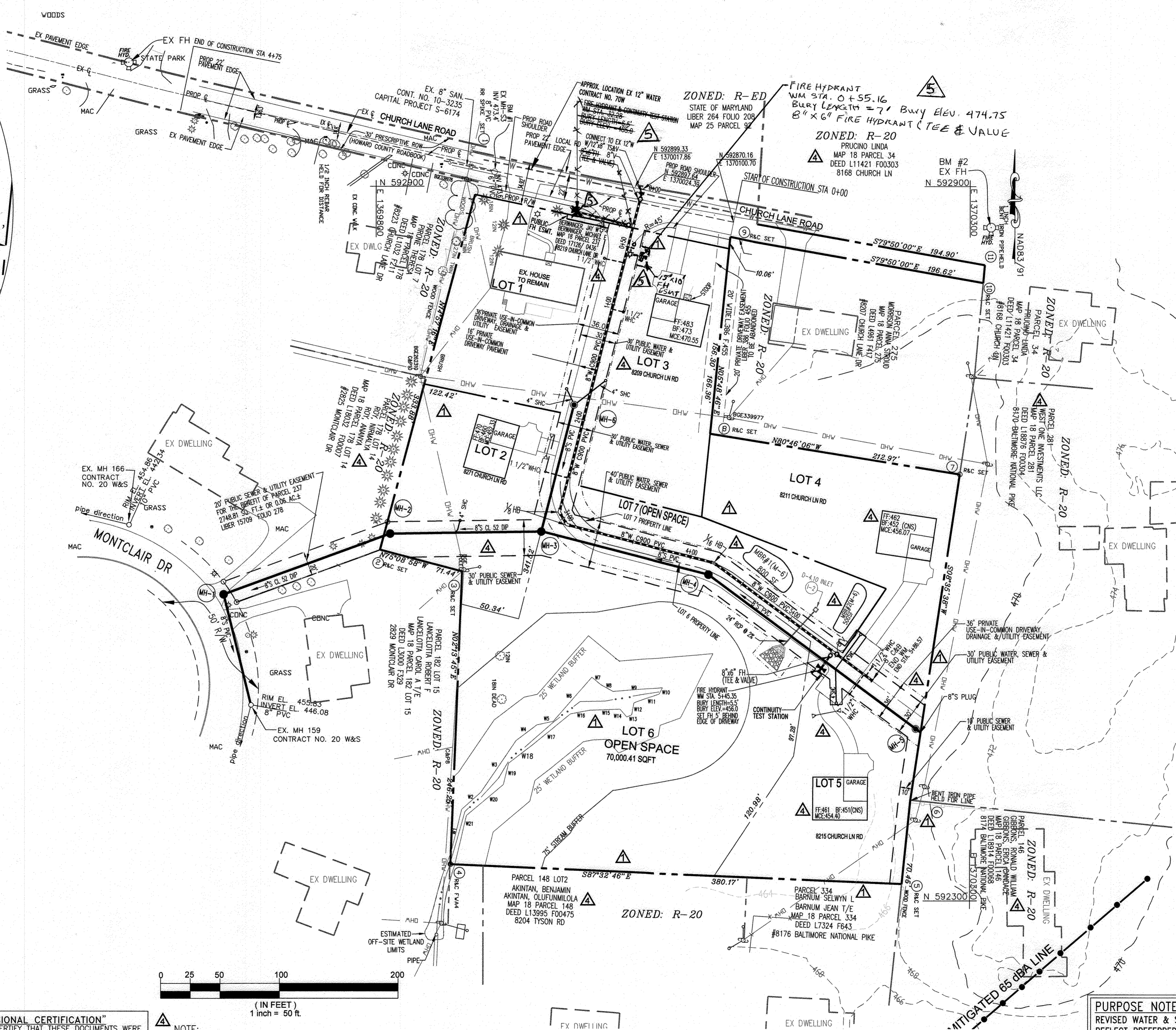
**OWNER/DEVELOPER**  
MR. OLEGARIO RAMIREZ, PRESIDENT  
WEST ONE INVESTMENTS LLC  
8170 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MD 21043  
EMAIL: OLE@RCFRAMING.COM  
TELEPHONE: 301-748-1010

**PURPOSE NOTE:**  
REVISED WATER & SEWER LOCATIONS TO REFLECT PREFERRED ALIGNMENT THAT MEETS HOWARD COUNTY DESIGN REQUIREMENTS.  
REVISED SWM FACILITIES & GRADING.

CONTRACT NO. 24-4574-D  
SHAMS SUBDIVISION  
LOTS 1 THRU 5 &  
OPEN SPACE LOTS 6 & 7  
PARCEL NO. 237  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

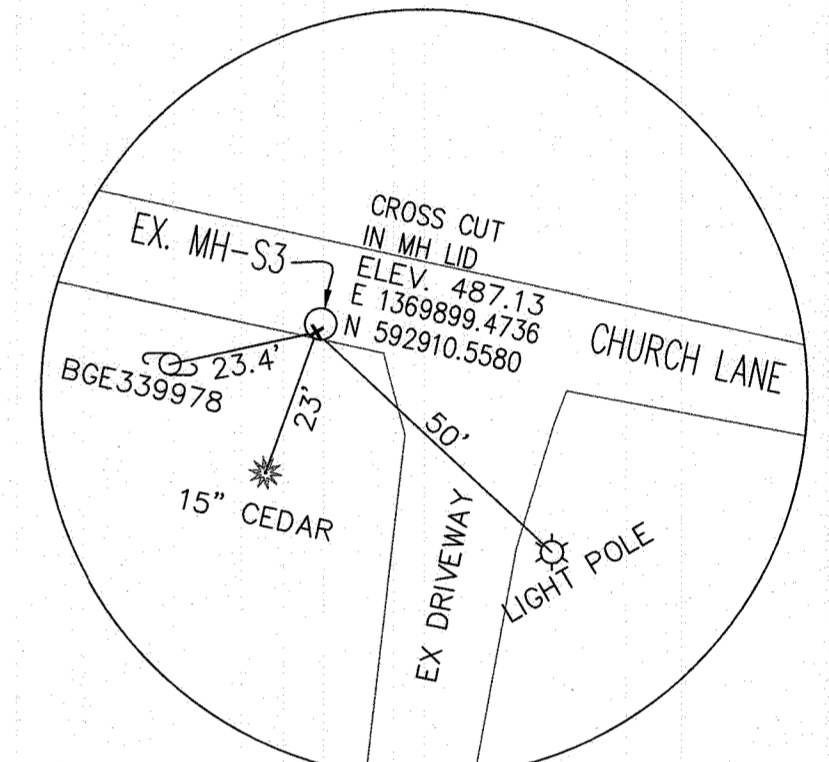


**FRONTAGE DETAIL**  
SCALE: 1"=20'

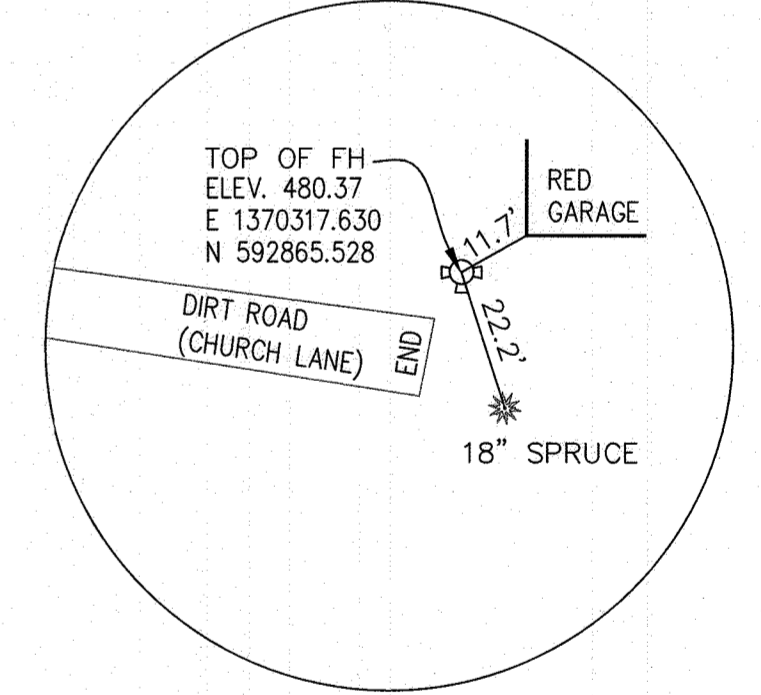


**WATER & SEWER PLAN**  
SCALE: 1"=50'

REPLACEMENT SHEET 02 OF 03



**BM #1**  
SCALE: N.T.S.



**BM #2**  
SCALE: N.T.S.

**"PROFESSIONAL CERTIFICATION"**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
MOSTAFA IZADI, PE  
LICENSE NO. 17248, EXPIRATION DATE: 02/11/2025

**NOTE:**  
THIS ORIGINAL CONSTRUCTION PLAN, SHEET 2 OF 3, SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON NOVEMBER 25, 2014.

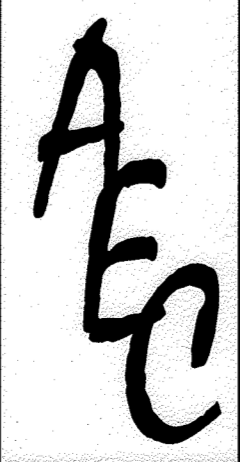
**PURPOSE NOTE:**  
REVISED WATER & SEWER LOCATIONS TO REFLECT PREFERRED ALIGNMENT THAT MEETS HOWARD COUNTY DESIGN REQUIREMENTS.  
REVISED SWM FACILITIES & GRADING.

**OWNER/DEVELOPER**  
MR. OLEGARIO RAMIREZ, PRESIDENT  
WEST ONE INVESTMENTS LLC  
8170 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MD 21043  
EMAIL: OLE@R1CFRAMING.COM  
TELEPHONE: 301-748-1010

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SHAMS SUBDIVISION  
LOTS 1 THRU 5 &  
OPEN SPACE LOTS 6 & 7  
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WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*[Signature]*  
CHIEF, BUREAU OF UTILITIES  
DATE: 8/15/2024

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 9/15/22



**Advanced Engineering Consultants, PC.**  
Engineers & Planners  
P.O. BOX 129 RIDERWOOD, MD 21139  
TEL: 410-382-9180 FAX: 410-296-0505  
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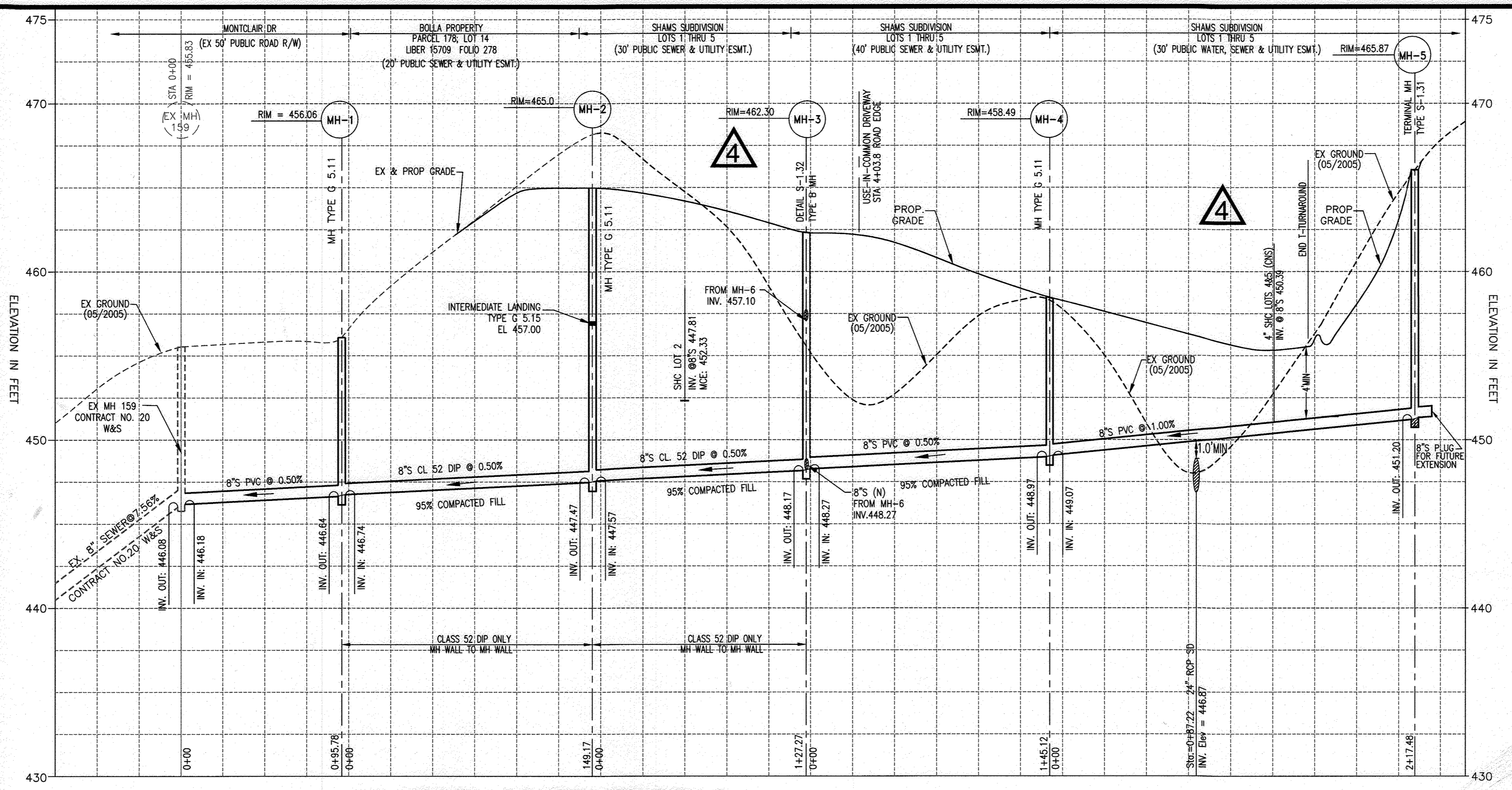
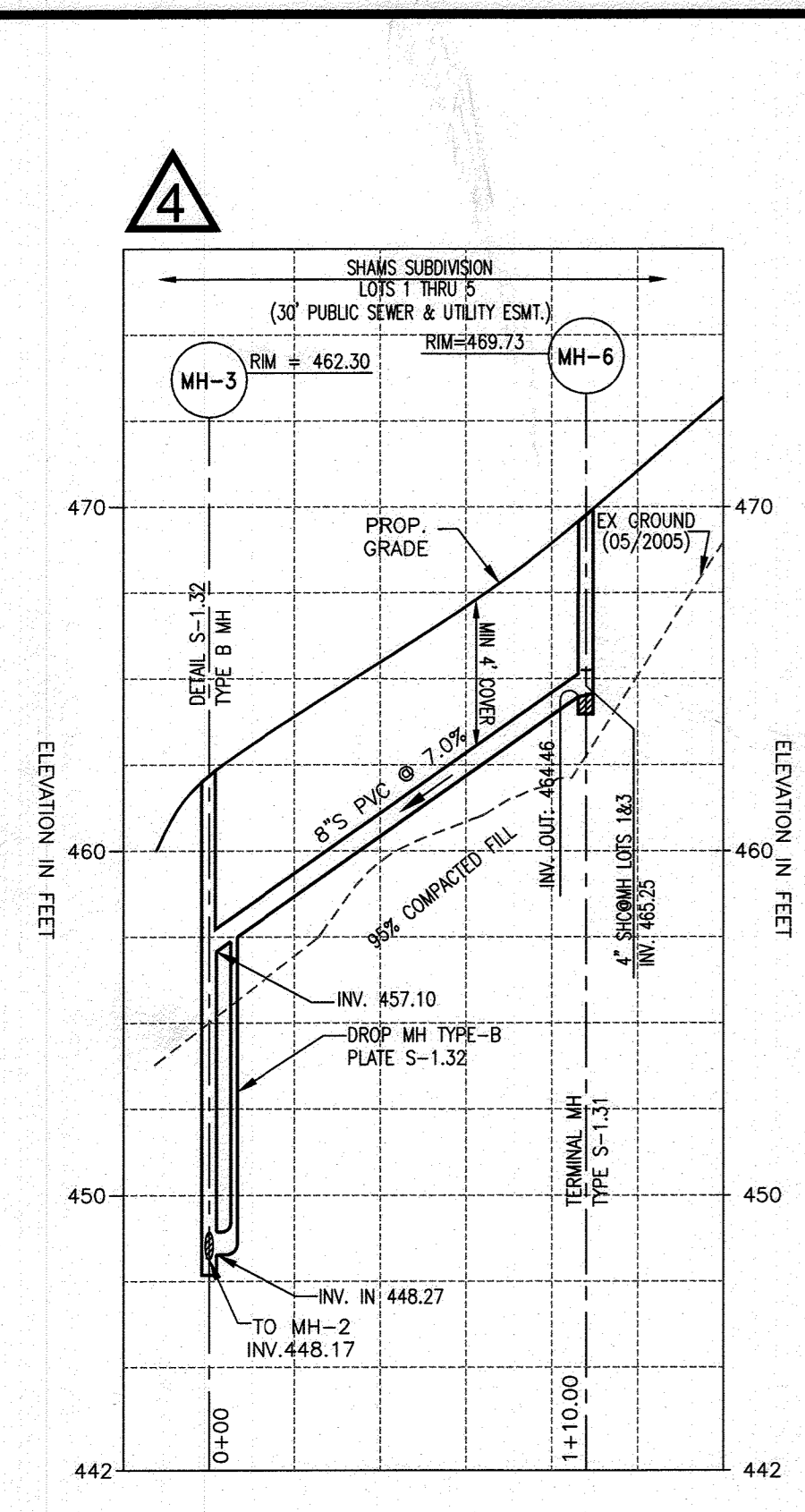


ENGINEERING	MI	NO.	REVISION	DATE
ILLUSTRATION	MI	5	RED-LINE REVISION	12/11/13
APPROVAL	MI	5	REVISE SITE LAYOUT PER F-PLAN UPDATE TO MEET CURRENT STORMWATER MANAGEMENT REQUIREMENTS.	03/23/22
PROJECT	MI	5	FIRE HYDRANT RELOCATION	11/30/23
DATE	BY	NO.	REVISION	DATE

**WATER & SEWER PLAN**  
600' SCALE MAP NO. 18, BLOCK NO. 14

**SHAMS SUBDIVISION**  
LOTS 1-5, OPEN SPACE LOTS 6 & 7  
PARCEL NO. 237  
ELECTION DISTRICT 02  
TAX MAP #18, GRID 14  
HOWARD COUNTY, MARYLAND.  
CONTRACT NO.: 24-4574-D

DATE: 08/03/22  
SCALE: AS SHOWN  
SHEET 2 OF 3



**8" WATER MAIN TABULATION CHART**

APPURTENANCE	WATER MAIN STATION	NORTHING	EASTING
12"X8" T&V	0+3.61	E 592894.10	N 1370023.48
1/32 VB	0+21.60	E 592876.73	N 1370018.99
8"X6" FH T&V	0+32.28	E 592841.68	N 1370016.38
3" H.D.C.	0+57.44	E 592842.02	N 1370010.04
1.25" H.D.C.	2+27.09	E 592677.75	N 1369967.66
1/8" HB	2+80.20	E 592626.39	N 1369954.40
1/8" HB	2+92.52	E 592615.73	N 1369960.70
1" H.D.C.	3+82.06	E 592593.35	N 1370047.42
1/16" HB	4+20.35	E 592583.79	N 1370084.49
8"X6" FH T&V	5+45.35	E 592509.37	N 1370184.98
1.50" H.D.C.	5+40	E 592512.52	N 1370180.64
1.00" H.D.C.	5+53.32	E 592504.64	N 1370191.39
8" C&B	5+86.57	E 592484.86	N 1370218.07

- WATER MAIN NOTES:**
- ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE: DR-18
  - ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV - WATER AND SEWER STANDARDS FOR C900 PVC WATER PIPE INSTALLATION.
  - DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
  - ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

**WATER HOUSE CONNECTION AS-BUILT TABLE**

LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1			
2			
3			
4			
5			

**NOTE:**  
THIS ORIGINAL CONSTRUCTION PLAN, SHEET 3 OF 3, SUPERSEDES THE WATER & SEWER MAIN CONSTRUCTION PLAN PREVIOUSLY APPROVED AND SIGNED BY THE DEPARTMENT OF PLANNING AND ZONING ON NOVEMBER 25, 2014.

**MANHOLES LOCATION CHART**

MH #	RIM ELEVATION	NORTHING	EASTING
1	456.06	N 592557.20	E 1369671.75
2	465.00	N 592608.19	E 1369811.95
3	462.30	N 592609.91	E 1369939.20
4	458.49	N 592573.97	E 1370079.30
5	465.87	N 592444.43	E 1370254.49
6	469.73	N 592716.38	E 1369966.68

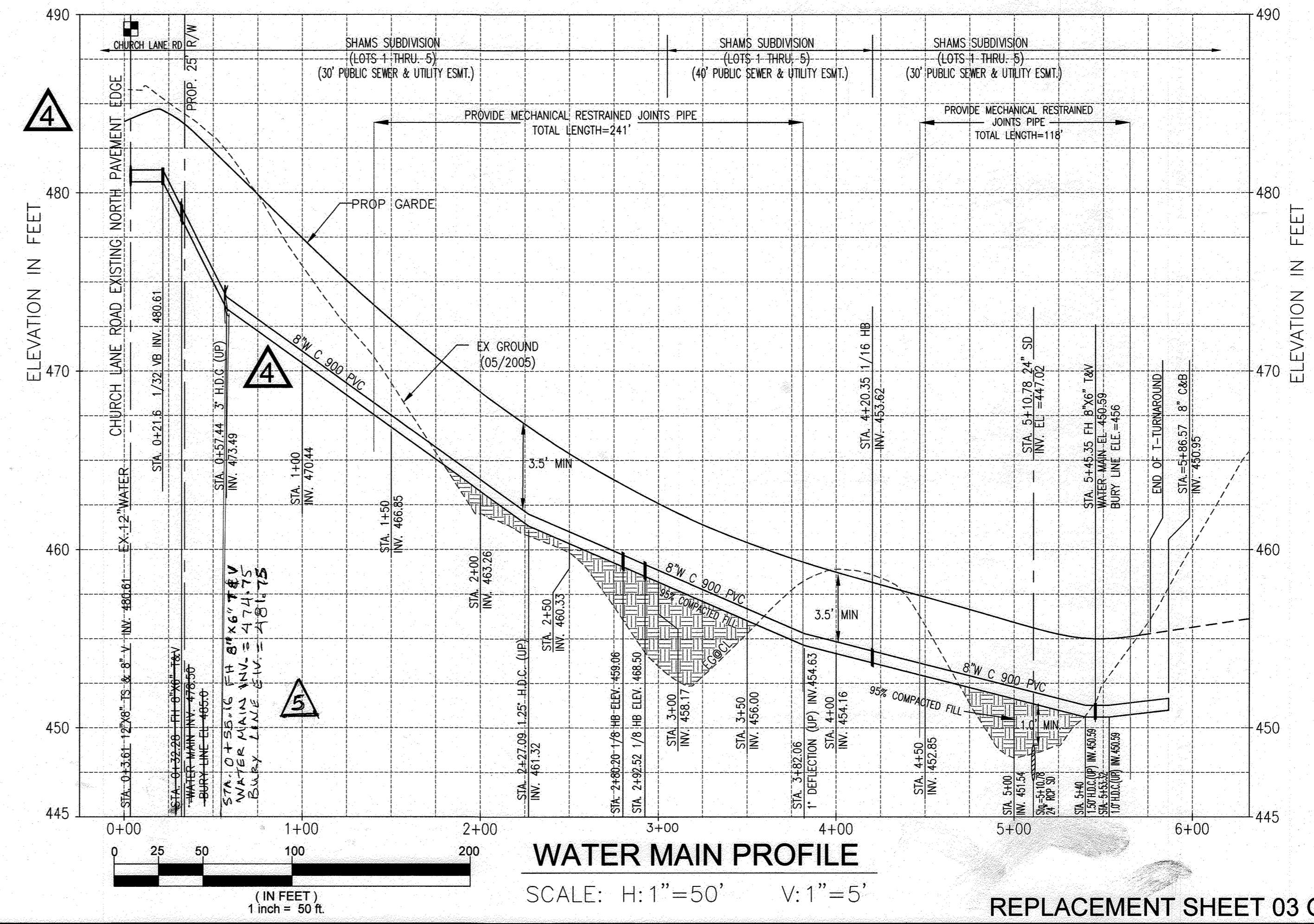
**NOTE:** SET MANHOLE RIMS FLUSH WITH EXISTING GROUND OR PROPOSED GRADE AS APPLICABLE.

**SEWER HOUSE CONNECTION TABLE**

LOT #	% SLOPE	STATION	INV. @ MAIN	INV. @ R/W	FIRST FLR EL.	BASEMENT FLR EL.	MCE
1	2	@ MH 6 RT.	465.25	465.55	486.40	-	-
2	2	0+55:12 LT.	447.81	448.03	470.00	460.00	452.33
3	2	@ MH 6 LT.	465.25	465.91	483.00	473.00	470.55
4	1	@ MH 5 LT.	450.39	451.00	462.00	452.00	454.60(CNS)
5	1	@ MH 5 RT.	450.39	450.93	461.00	451.00	454.40(CNS)

**SEWER HOUSE CONNECTION AS-BUILT TABLE**

LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1			
2			
3			
4			
5			



**PURPOSE NOTE:**  
REVISED WATER & SEWER LOCATIONS TO REFLECT PREFERRED ALIGNMENT THAT MEETS HOWARD COUNTY DESIGN REQUIREMENTS.  
REVISED SWM FACILITIES & GRADING.

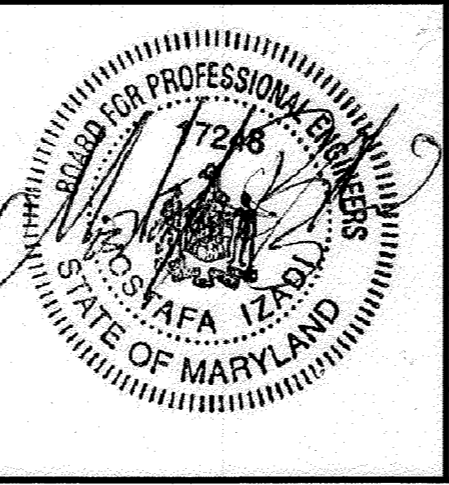
**OWNER/DEVELOPER**  
MR. OLEGARIO RAMIREZ, PRESIDENT  
WEST ONE INVESTMENTS LLC  
8170 BALTIMORE NATIONAL PIKE  
ELlicott CITY, MD 21043  
EMAIL: OLE@RFCEFRAMING.COM  
TELEPHONE: 301-748-1010

CONTRACT NO. 24-4574-D  
SHAMS SUBDIVISION  
LOTS 1 THRU 5 &  
OPEN SPACE LOTS 6 & 7  
PARCEL NO. 237  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
[Signature]  
CHIEF, BUREAU OF UTILITIES  
DATE: 8/15/2022

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
[Signature]  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 9-15-22

**Advanced Engineering Consultants, DC.**  
Engineers & Planners  
P.O. BOX 129 RIDERWOOD, MD 21139  
TEL: 410-382-9180 FAX: 410-296-0505  
mizad@acc-engineers.biz



ENGINEERING	MI	REVISION	DATE
ILLUSTRATION	MI	REVISE SITE LAYOUT PER F-PLAN UPDATE TO MEET CURRENT STORMWATER MANAGEMENT REQUIREMENTS.	03/23/22
APPROVAL	MI	FIRE HYDRANT RELOCATION	11/30/23
PROJECT			
DATE			

**WATER & SEWER PROFILES**  
600' SCALE MAP NO. 18 BLOCK NO. 14

**SHAMS SUBDIVISION**  
LOTS 1-5, OPEN SPACE LOTS 6 & 7  
PARCEL NO. 237  
ELECTION DISTRICT 02  
TAX MAP #18, GRID 14  
HOWARD COUNTY, MARYLAND.  
CONTRACT NO.: 24-4574-D  
DATE: 08/03/22  
SCALE: AS SHOWN  
3 OF 3