

QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
8" S; PVC; SDR-35	347 L.F.			
4" SHC	82 L.F.			
CLEAN-OUTS	5 EACH			
MANHOLES	3 EACH			
8" W; C900 PVC; DR-18	284 L.F.			
1-1/2" WHC	60 L.F.			
1/16 H.B.	1 EACH			
1/32 H.B.	2 EACH			
12" X6" TAPPING SLEEVE	1 EACH			
6" TAPPING VALVE	1 EACH			
6" PLUG & BUTTRESS	1 EACH			
6" X8" F.H. TEE	1 EACH			
FIRE HYDRANT	1 EACH			
CONTINUITY TEST STATION	1 EACH			
OUTSIDE METER SETTING	5 EACH			
NAME OF UTILITY CONTRACTOR:				
SURVEY & DRAFTING DIVISION AS-BUILT DATE:				

BENCHMARK INFORMATION
B.M.#1 - HOWARD COUNTY CONTROL STATION #34FB - HORIZONTAL - NA'83
(LOCATED EAST OF ERIN DRIVE, ALONG GUILFORD ROAD, APPROX. 21' BEHIND EDGE OF PAVING)
N 557,439.90
E 1,330,191.30
ELEVATION = 406.15 - VERTICAL - (NAVD '88)
B.M.#2 - HOWARD COUNTY CONTROL STATION #34FE - HORIZONTAL - (NAD '83)
(LOCATED WEST OF GALWAY DRIVE, ALONG GUILFORD ROAD EAST OF DRIVEWAY #221 SET BEHIND THE EXISTING FIRE HYDRANT)
N 558,339.58
E 1,329,709.08
ELEVATION = 431.11 - VERTICAL - (NAVD '88)

PRIVATE WELL & PRIVATE SEPTIC SYSTEM CHART				
PARCEL NO.	ADDRESS	OWNER	ABANDON WELL	ABANDON SEPTIC
56	6301 ROUTE 32	MR. LUTFI & MR. LEVENT MUSLU	NO	YES

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.

DEVELOPER'S CERTIFICATION

I 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 OF DEVELOPER _____ DATE _____

ENGINEER'S CERTIFICATION

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.

SIGNATURE OF ENGINEER _____ DATE _____

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 508 OF THE HOWARD COUNTY DESIGN MANUAL - VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND AS SHOWN ON THESE PLANS.

SIGNATURE OF DEVELOPER _____ DATE _____

GP-21-

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

APPROVED:

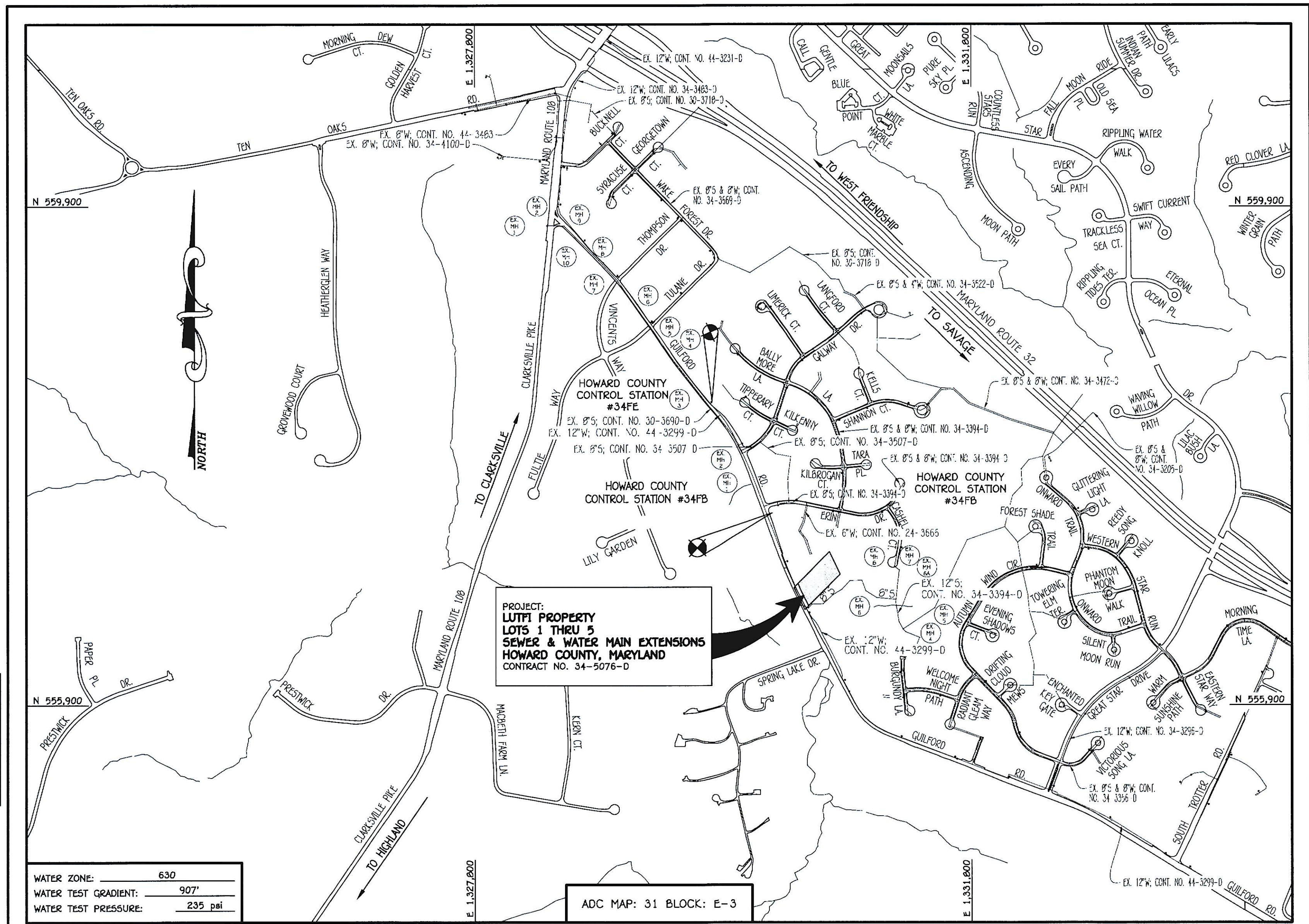
HOWARD SOIL CONSERVATION DISTRICT _____ DATE _____

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF UTILITIES _____ DATE _____

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE _____



TYPE OF BUILDING:	RESIDENTIAL: SINGLE FAMILY DETACHED
NUMBER OF LOTS:	5
NO. OF WATER HOUSE CONNECTIONS:	5
NO. OF SEWER HOUSE CONNECTIONS:	5
SEWER SHED:	MIDDLE PATUXENT
TREATMENT PLANT:	LITTLE PATUXENT WATER RECLAMATION PLANT SAVAGE, MARYLAND

LOCATION MAP

SCALE: 1" = 600'

PLAN REFERENCE NUMBERS:
F-21- (RECORD PLAT)
SDP-20-075
ECP-17-038
SP-18-002

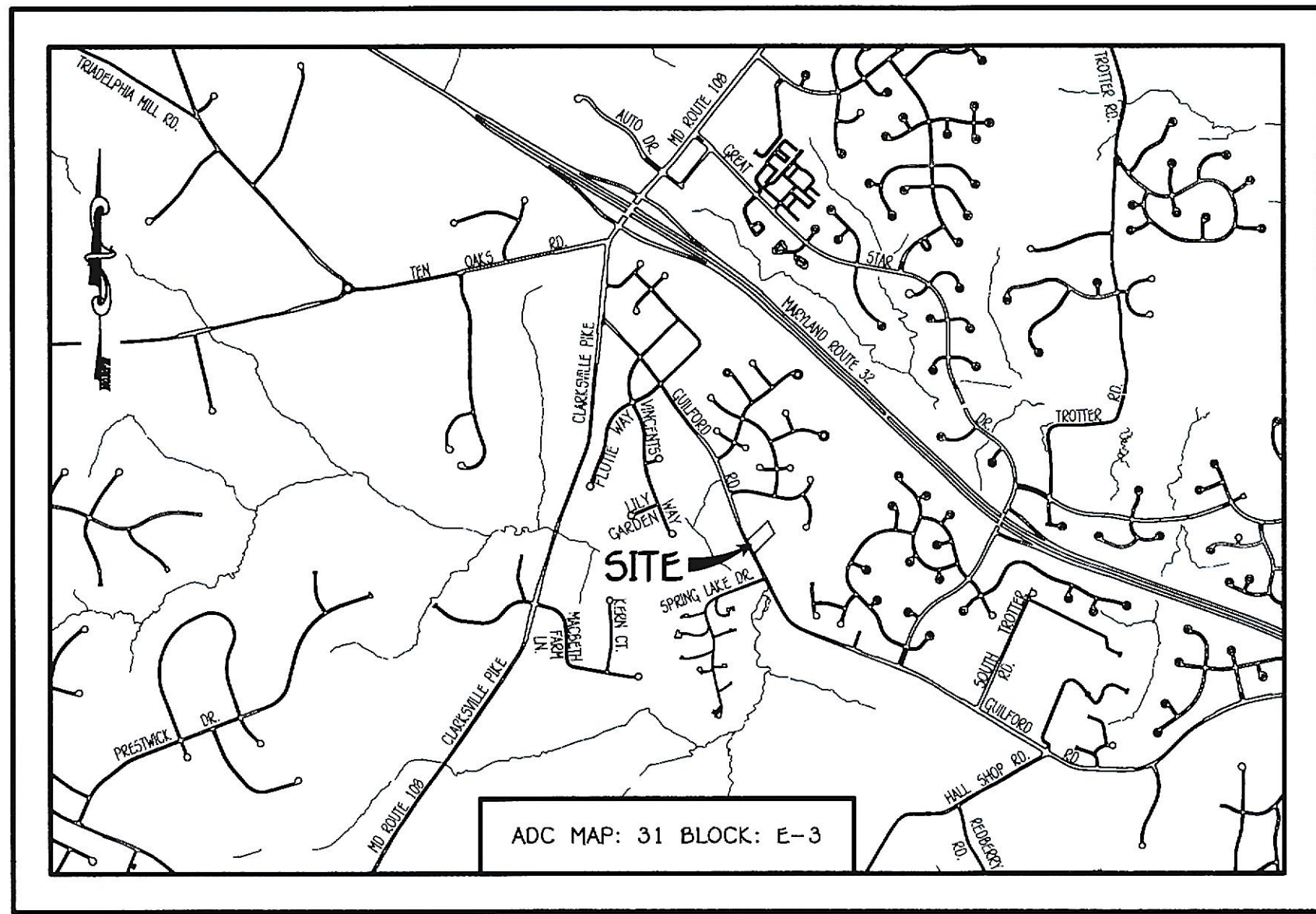
CONTRACT NO. 34-5076-D LUTFI PROPERTY LOTS 1 THRU 5 SEWER & WATER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

Owner/Developer

Lutfi On, Levent Muslu And
Unal Tuluoglu
8434 High Ridge Road
Ellicott City, Maryland 21043
Ph# 410-531-3300

SEWER & WATER MAIN EXTENSIONS TITLE SHEET

600' SCALE MAP NO. 35 BLOCK NO. 13
F.C.C. WORK ORDER NO. 11059-3002
FILE NAME : SEWER & WATER MAIN EXTENSION PLAN



VICINITY MAP

SCALE: 1" = 200'

GENERAL NOTES

- PART A**
- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON OR ABOUT JULY, 2017 BY FISHER, COLLINS & CARTER, INC.
 - 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. 34FB & NO. 34FE.
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
 - ALL UTILITIES SHALL BE A MINIMUM OF 12 INCHES CLEAR OF THE MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF THE 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 SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
 - WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL. AT THE LOCATIONS OF THE TEST PITS, A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
 - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
ATA&T
BCE (CONTRACTOR SERVICES) : 1-800-252-1133
BCE (EMERGENCY) : 410-537-8713
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 THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE 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/ANALYSING 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.

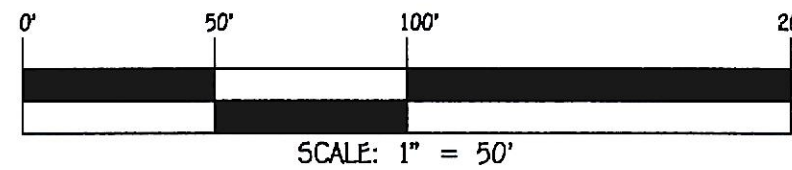
- PART B: WATER MAIN GENERAL NOTES**
- ALL WATER MAINS SHALL BE AWWA C900 PVC; DR-14.
 - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE 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 HOWARD COUNTY DESIGN MANUAL.
 - FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE 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, SEVENTEEN (17) POUND 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. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEST" 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 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 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 ONE FULL PIPE LENGTH (20 FOOT LONG) ON EITHER SIDE 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 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 CERTANTEED 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 (PEX) BLUE BRUTE DR-18 OR EQUAL.

- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSERT DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE INTO THE BELL OR RUN ENDS INTO THE PIPS 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 INCORPORATE AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOP SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBA IRON, INC. OR APPROVED EQUAL.
- TO ACCOMMODATE A SPRINKLER SYSTEM, ALL RESIDENTIAL DWELLING UNITS SHALL HAVE A 1-1/2" WATER HOUSE CONNECTION WITH A 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.
 - 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 WATERIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERIGHT 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.



CONTRACT NO. 34-5076-D
LUTFI PROPERTY
LOTS 1 THRU 5
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

LUTFI PROPERTY
LOTS 1 THRU 5
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 34-5076-D
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS
SHOWN

SHEET
1 OF 4

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. 12043 EXPIRATION DATE IS 7/16/22.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2899

#12043
PAUL W. KRIEBEL
STATE OF MARYLAND
DIVISION OF PROFESSIONAL ENGINEERING
REGISTERED PROFESSIONAL ENGINEER
No. 12043

DESIGNED BY :	J.C.L.				
DRAWN BY :	J.C.L.				
CHECKED BY :	P.W.K.				
DATE :	SEPTEMBER, 2020	BY	NO.	REVISION	DATE