

**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.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON MARCH 2011 BY KCE ENGINEERING 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. 24EM1 AND NO. 24IM6. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE CONCRETE MONUMENT.
- 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 ON 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 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:  
AT&T.....1-800-252-1133  
BGE (CONTRACTOR SERVICES).....410-850-4620  
BGE (EMERGENCY).....410-685-1400  
BUREAU OF UTILITIES.....410-313-4900  
COLONIAL PIPELINE CO.....410-795-1390  
MISS UTILITY.....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 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 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.
- FIRE SPRINKLER SYSTEMS FOR ALL SINGLE FAMILY DWELLING UNITS SHALL HAVE A MINIMUM OF A 1-1/2" CONNECTION WITH A 1" OUTSIDE METER SETTINGS. REFER TO DETAIL W-3.28 FOR 1" OUTSIDE METER SETTING, AND W-3.32 FOR 1" TWIN OUTSIDE METER SETTINGS.

**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 16" 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 THE CELLAR CANNOT BE SERVED.

**CONSTRUCTION NOTES:**

- THE EXISTING WATER AND SEWER HOUSE CONNECTIONS TO EXISTING HOUSE ON LOT 1 TO REMAIN.
- EXISTING UTILITIES ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR AND THE COMPLETENESS OR ACCURACY OF THE SAME IS NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES BEFORE TRENCH EXCAVATION BEGINS. HE SHALL PROTECT SERVICE CONNECTIONS AND MAINTAIN THEIR UNINTERRUPTED SERVICE. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED IMMEDIATELY. THE COST OF SUCH REPAIR SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL AT MINIMUM, TEST PIT WATER AND SEWER FACILITIES AT THE FOLLOWING LOCATIONS TO DETERMINE THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING UTILITIES (TEST PIT SHALL EXTEND A MINIMUM ONE (1) FOOT BELOW PROPOSED UTILITY INVERT ELEVATION. UTILITIES (EXCLUDING SERVICES) CROSSING WATER MAINS AND SEWERS WITHIN PAVED SECTIONS OF ROADWAYS, UTILITIES (INCLUDING SERVICES) CROSSING ALL WATER AND SEWER FACILITIES OUTSIDE OF THE PAVED SECTION OF ROADWAY.
- ALL STAKING, RESTAKING, AND CUT SHEETS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR OR PROFESSIONAL ENGINEER AT THE CONTRACTORS EXPENSE, INCLUDING HOUSE SERVICES.
- A TRAFFIC CONTROL PLAN MAY BE REQUIRED. CONTRACTOR TO COORDINATE WITH DPW.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH FEDERAL AND STATE OCCUPATIONAL SAFETY LAWS.

**EROSION AND SEDIMENT CONTROL NOTES:**

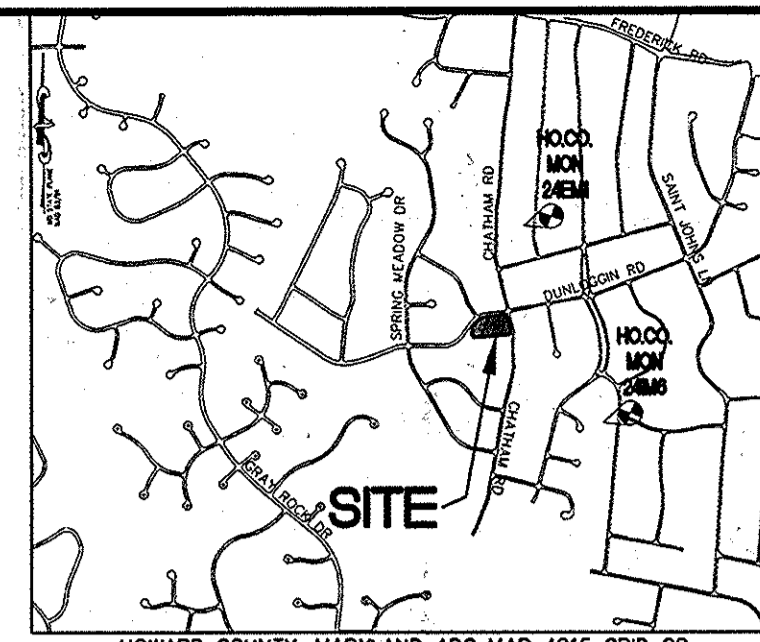
SEDIMENT CONTROL FOR OFFSITE WORK ON WATER AND SEWER MAINS IS INCLUDED WITHIN THE LIMITS OF GRADING SHOWN ON EROSION AND SEDIMENT CONTROL DRAWINGS (F-12-017) AND SUBMITTED FOR APPROVAL TO HOWARD SOIL CONSERVATION DISTRICT.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF VOLUME IV STANDARDS AND SPECIFICATIONS AND WITH APPROVED CONSTRUCTION PLANS F-12-017.

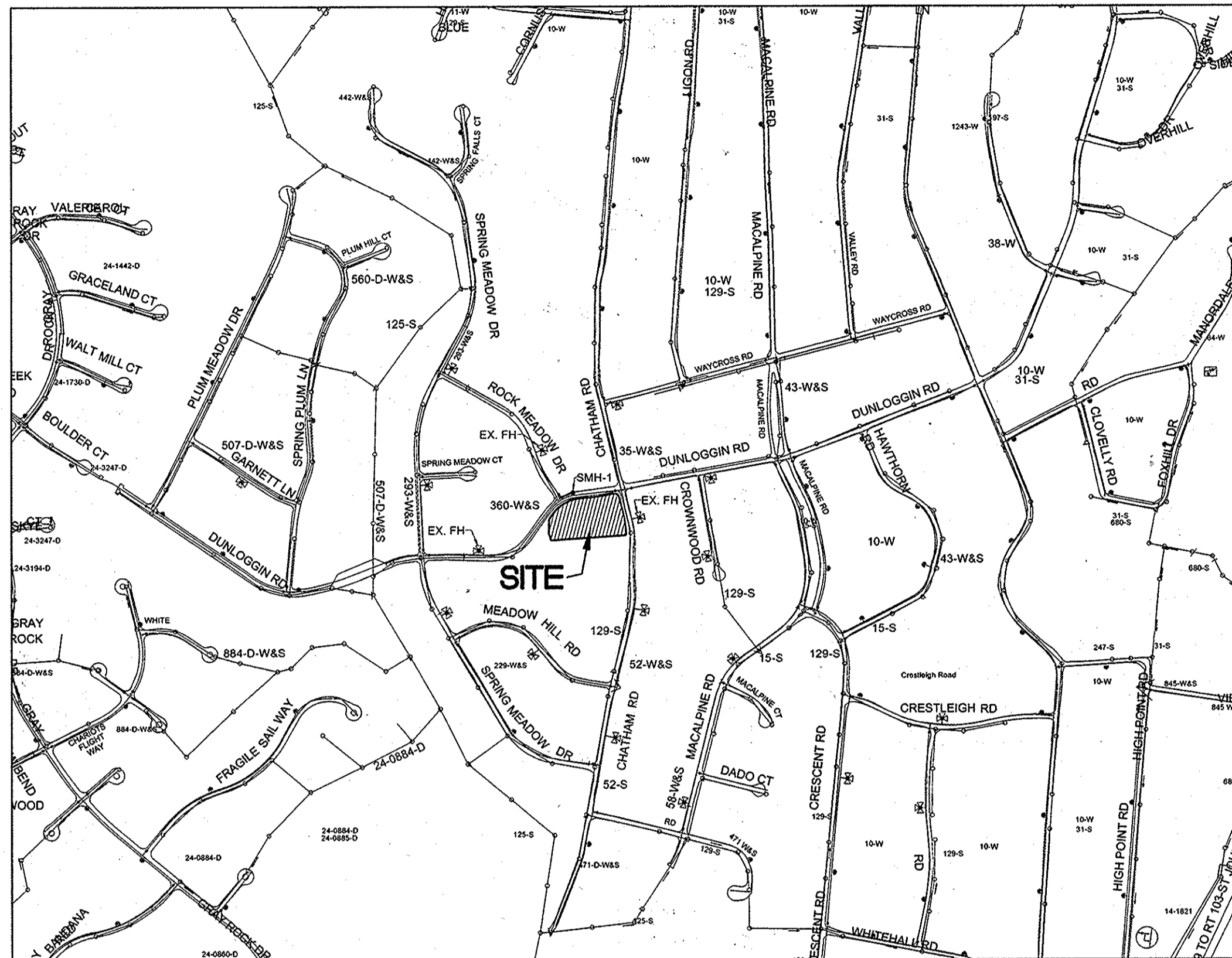
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

*Shawn Selig* 10/5/15  
HOWARD SOIL CONSERVATION DISTRICT DATE

# WATER AND SEWER EXTENSION GEIER SUBDIVISION LOTS 1, 2 & 3 HOWARD COUNTY, MARYLAND



VICINITY MAP  
SCALE: 1" = 2000'



LOCATION MAP  
SCALE 1"=600'

WATER & SEWER INFORMATION	
WATER ZONE:	550
WATER TEST GRADIENT:	700
TYPE OF BUILDING	RESIDENTIAL
NO. OF LOTS/PARCELS:	3
NO. OF WATER HOUSE CONNECTIONS:	2
NO. OF SEWER HOUSE CONNECTIONS:	2
SEWER SHED:	PS 108
TREATMENT PLANT:	PS 108 TREATMENT PLANT

BENCHMARKS			
#	ELEVATION	NORTHING	EASTING
24EM1	128.021'	N 582,752.1754	E 1,359,883.3381
24IM6	381.632'	N 580,649.0916	E 1,360,728.8445

Sheet Legend	
Sheet No.	Title
1	Cover Sheet
2	Water & Sewer Plan and Profile

QUANTITIES				
NAME OF UTILITY CONTRACTOR:				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
4" SHC (PVC)	67 LF			
CLEANOUT	2 EACH			
8" S (PVC)	96' LF			
SEWER MANHOLE (STD. PRECAST)	1 EACH			
1.5" WHC (COPPER)	45 LF			
1" WATER METER	2 EACH			

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 2			
LOT 3			

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 2			
LOT 3			

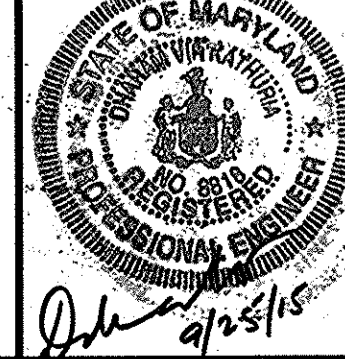
3902 CHATHAM ROAD (LOT. 1)	EX. SHC (TO REMAIN)	EX. WHC (TO REMAIN)
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OWNER/DEVELOPER  
KEVIN J. GEIER  
3902 CHATHAM ROAD  
ELLCOTT CITY, MD 21042  
PHONE: 443 604 5791

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*John W. Kelly* 10/2/15  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*Chad Edwards* 10-9-15  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**KCE ENGINEERING, INC.**  
EXECUTIVE CENTER  
3300 NORTH RIDGE ROAD, SUITE 315  
ELLCOTT CITY, MARYLAND 21043  
PHONE (410) 203-9800 FAX (410) 203-9228



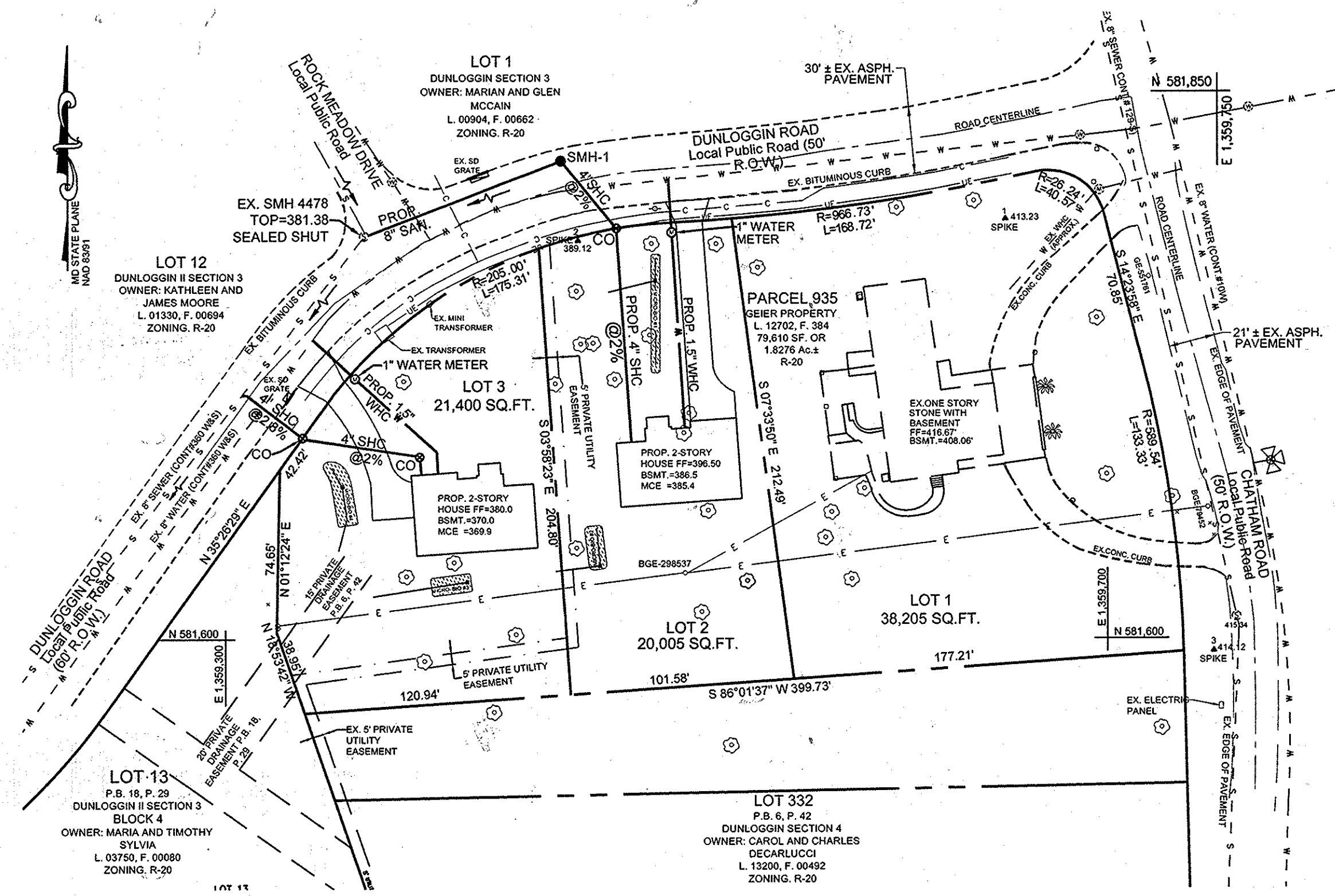
PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 8518, EXPIRATION DATE: 10/17/16

BY NO. REVISION DATE

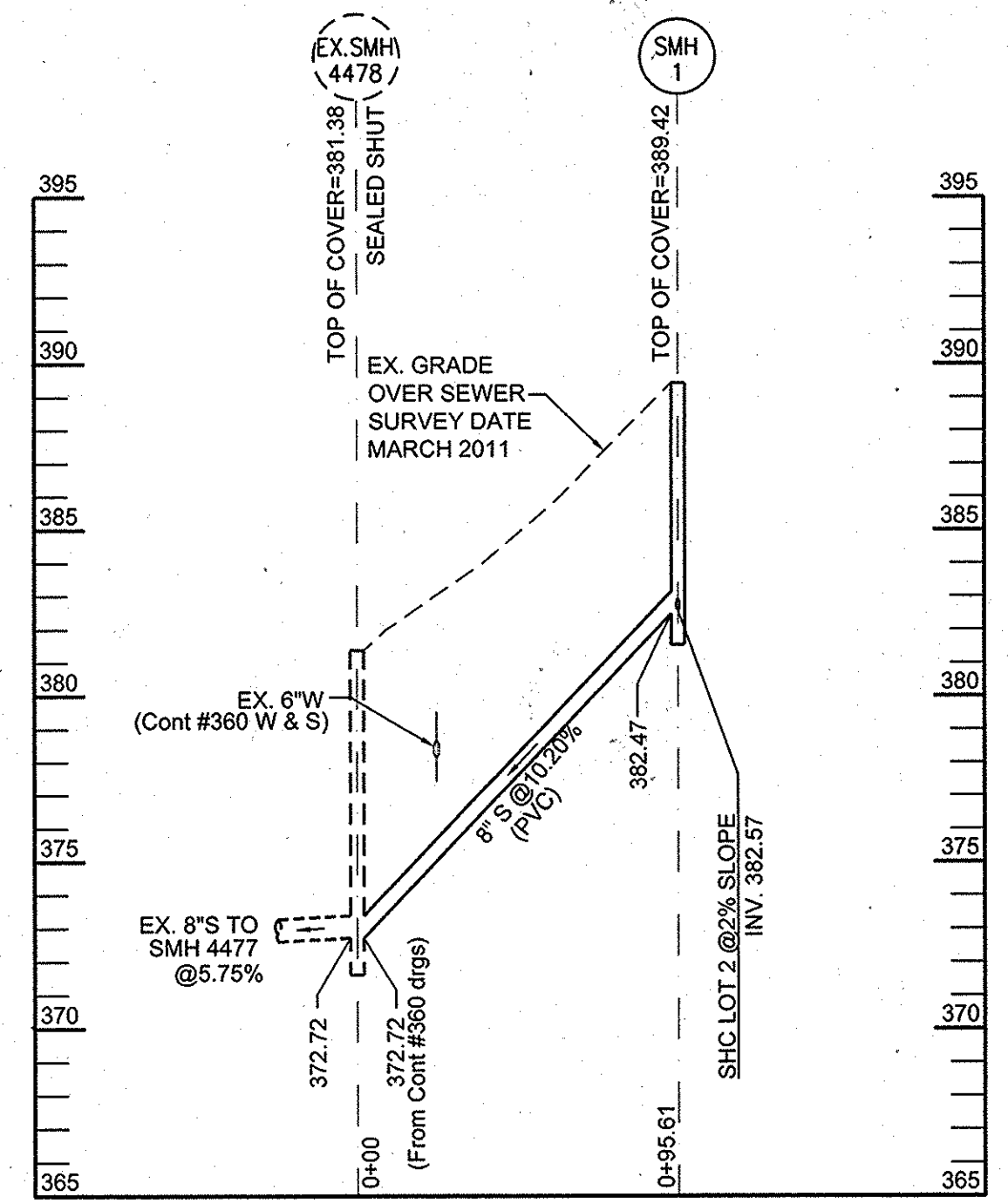
COVER SHEET  
600' SCALE MAP NO. 12 BLOCK NO. 10

CONTRACT # 24-4719-D  
GEIER SUBDIVISION  
LOTS 1, 2 AND 3  
RESUBDIVISION OF PARCEL 935, LOT 330, PART OF LOT 331, AND RESIDUE OF PARCEL 3 OF L. 12702 F. 384  
2nd ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
DUNLOGGIN SECTION 4 P.B. 6, P.42 L. 12702, F. 384 TAX MAP 24 GRID 16 ZONING R-20

SCALE AS SHOWN  
DATE 9/30/2015  
SHEET 1 OF 2



PLAN  
SCALE 1"=50'



SEWER MAIN PROFILE  
SCALE 1"=50' H, 1"=5' V

**LEGEND**

⊙	EX. ROAD SIGN	⊙	EX. TREE
⊙	EX. SANITARY SEWER MANHOLE	---	EX. WATER LINE
⊙	EX. POWER POLE	---	PROPOSED WATER
⊙	EX. WATER VALVE	---	PROPOSED SEWER
⊙	EX. WATER METER	---	EX. SEWER LINE
⊙	PROPOSED CLEANOUT	---	EX. SEWER LINE
---	EX. OVERHEAD ELECTRICAL	---	PROPOSED TREE LINE
---	EX. UNDERGROUND ELECTRICAL	---	EX. COMCAST CABLE LINE
IPF, IPM	DENOTES IRON PIPE FOUND	⊙	PROPOSED WATER METER
		⊙	PROP. SANITARY SEWER MANHOLE
		⊙	PROP. SWM FACILITIES

**SEWER MANHOLES SCHEDULE**

SYMBOL	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
SMH-1	PRECAST MH HO. CO. STD DET G 5.12	N 581,818 E 1,359,452	489.42	382.57	382.47
EX. SMH-4478	EXISTING MANHOLE (SEALED SHUT)	N 581,784 E 1,359,362	381.38	372.72	372.72

**SEWER HOUSE CONNECTION SCHEDULE**

LOT NO.	INVERT @ MAIN	INVERT @ PROPERTY LINE	MIN. CELLAR ELEV.	FIRST FLOOR ELEV.	SLOPE
2	382.57	383.46	385.40	396.50	2%
3	367.55	368.62	369.90	380.00	2%-MCE TO C.O. 2.8%-C.O. TO MAIN

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND [Signature] 10/9/15 CHIEF BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND [Signature] 10-9-15 CHIEF, DEVELOPMENT ENGINEERING DIVISION M.G. DATE	<b>KCE ENGINEERING, INC.</b> EXECUTIVE CENTER 3300 NORTH RIDGE ROAD, SUITE 315 ELLICOTT CITY, MARYLAND 21043 PHONE (410) 203-9800 FAX (410) 203-9228	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, LICENSE NO. 8818, EXPIRATION DATE: 10/17/16 [Signature] 9/25/15	WATER AND SEWER PLAN AND PROFILE 600' SCALE MAP NO. 12 BLOCK NO. 10	<b>CONTRACT # 24-4719-D</b> <b>GEIER SUBDIVISION</b> LOTS 1, 2 AND 3 RESUBDIVISION OF PARCEL 935, LOT 330, PART OF LOT 331, AND RESIDUE OF PARCEL 3 OF L. 12702 F. 384 2nd ELECTION DISTRICT- HOWARD COUNTY, MARYLAND DUNLOGGIN SECTION 4 P.B. 6, P.42 L. 12702, F. 384 TAX MAP 24 GRID 16 ZONING R-20	SCALE AS SHOWN
						DATE 9/30/2015
SHEET 2 OF 2						