

GENERAL NOTES

PART I

- APPROXIMATE LOCATION 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.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES [NORTH AMERICAN DATUM OF 1983 (NAD'83)].
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITIES COMPANIES AND HAS MADE ARRANGEMENT FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED TO 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.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS ARE 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 OPERATION AT HIS OWN EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

STATE HIGHWAY ADMINISTRATION	410-531-5533
BGE (CONTRACTOR SERVICES)	410-850-4620
BGE UNDER GROUND DAMAGE CONTROL	410-291-4607
MISS UTILITY	1-800-257-7777
COLONIAL PIPELINE CO.	410-549-4120
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES	410-313-4900
BELL ATLANTIC	1-800-446-5266
- 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) 313-2450 AT LEAST FIVE (5) WORKING DAYS BEFORE OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(d) OF THE HOWARD COUNTY CODE.
- BOUNDARY AND TOPOGRAPHIC FIELD SURVEY WAS PERFORMED ON JANUARY 25, 2006 BY KCE ENGINEERING, INC. BOUNDARY & FIELD RUN TOPOGRAPHIC SURVEY FOR FEAGA PROPERTY & GOOD SHEPARD CEMETERY WAS PERFORMED BY KCE ENGINEERING, INC. IN JULY, 2007.
- JOINT FEDERAL/STATE APPLICATION FOR THE ALTRATION OF ANY FLOODPLAIN, WATERWAY, TIDAL OR NON-TIDAL WETLAND FILED ON APRIL 25, 2006 (TRACKING #200663645) FOR PROPOSED SEWER WORK IN WETLAND BUFFER. APPROVED ON 22 JUNE, 2006.

PART II - WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO 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 RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ANY WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- FOR SPRINKLER SYSTEM FOR ALL TOWN HOMES OR MULTI-FAMILY DWELLING SHOULD HAVE A MINIMUM OF 1' CONNECTION WITH A 3/4" METER.

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 CELLAR CANNOT BE SERVED.

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

John R. Plutner 6/12/08
SOIL CONSERVATION DISTRICT DATE

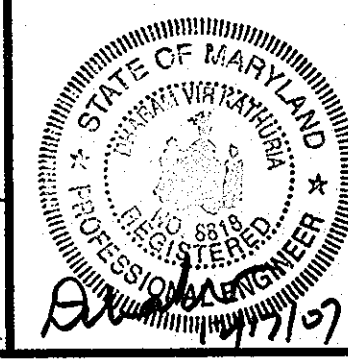
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Sheila C. Coen sheila
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
Sheila C. Coen sheila
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

K.C.I.	2	AS-BUILT REVISIONS	06/17/2011
KCE	1	Revised location of SH-105, SH-106	09/12/2010
BY	NO.	REVISION	DATE

COVER SHEET
600' SCALE MAP NO. 12
BLOCK NO. 4 ZONE R-ED



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: 10/17/08.

CONTRACT # 14-4432-D
RYMAC SUBDIVISION
LOTS 1-3
A SUBDIVISION OF PARCEL 206
GRID 13, L. 10591, F. 306, TAX MAP 18
F-07-021
HOWARD COUNTY, MARYLAND

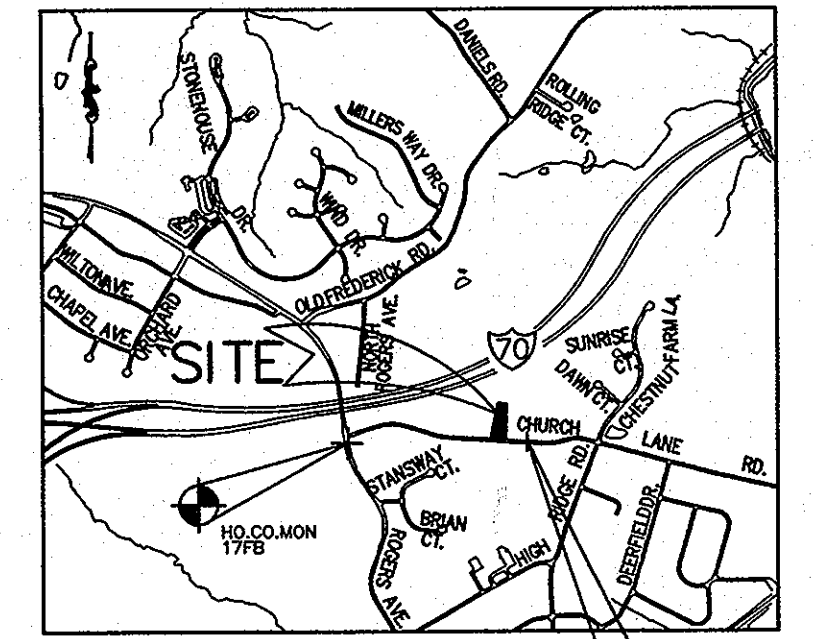
SCALE AS SHOWN
KCE JOB NO. 06100.00
DATE 12/17/2007
SHEET 1 OF 6

WATER & SEWER PLAN

RYMAC SUBDIVISION

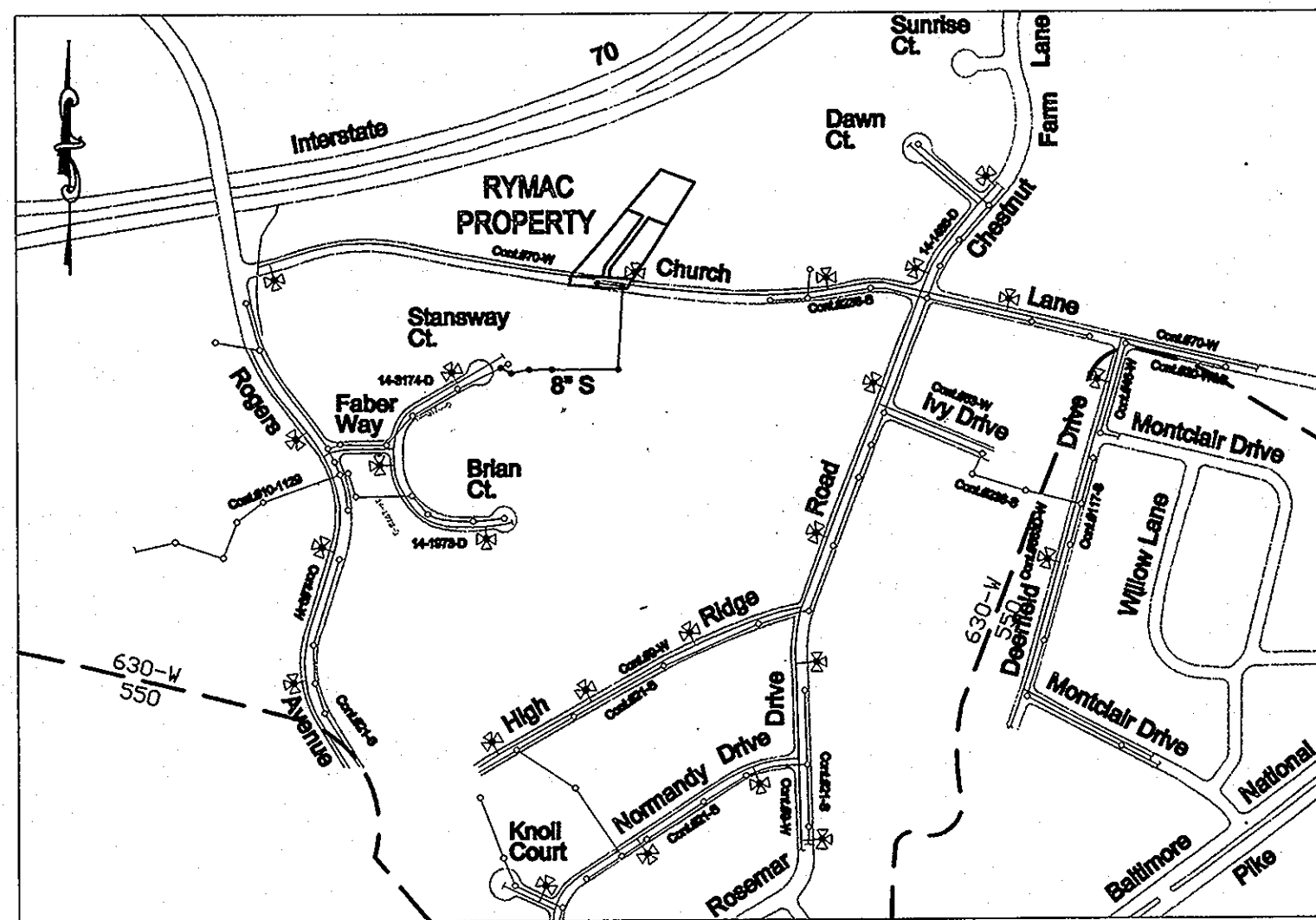
LOTS 1-3

HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1" = 2000'
ADC MAP NO. 12 GRID E4

BENCHMARKS			
#	ELEVATION	NORTHING	EASTING
17FB	456.316'	N 593214.401	E 1365669.05
18DA	483.241'	N 593334.37	E 1367562.23



LOCATION MAP
SCALE 1"=600'

PART IV

- THE DEPARTMENT OF RECREATION AND PARKS IS TO BE CONTACTED IN WRITING NOT LESS THAN TEN (10) DAYS PRIOR TO A CONTRACTOR ENTERING THE PREMISES TO COMMENCE ANY ACTIVITY OTHER THAN SURVEY AND FOREST DELINEATION WORK.
- Prior to commencement of construction activities, there shall be an on-site, pre-construction inspection meeting between the Developer, Howard County Bureau of Construction Inspection, and Bureau of Parks. Prior to this meeting, the Developer shall CLEARLY STAKE THE PROPOSED RIGHT-OF-WAY INCLUDING THE CENTER LINE.
- The Department of Recreation and Parks shall decide the ultimate disposition of all trees removed.
- Both sides of the construction strip must be fenced prior to the start of construction by an orange-plastic-mesh fence 4 feet high. This fence is to be secured to metal posts at 10-foot intervals and is not to be attached to any trees or other vegetation. The fence is to be removed after completion of construction.
- During construction, if the developer needs to construct outside of the area shown on the executed Right-of-Entry Agreement, the developer must perform the following:
 - Must contact the Department of Recreation and Parks for approval.
 - A redline drawing must be submitted to the Department of Recreation and Parks and the Development Engineering Division in the Department of Planning and Zoning for review and approval.
 - If construction proceeds outside of the limits of disturbance shown on the plan within the executed Right-of-Entry Agreement without approval from the Department of Recreation and Parks, the Developer will be responsible for ALL TREES DESTROYED, WHICH WERE NOT SPECIFICALLY DESIGNATED TO BE LOST IN THE APPROVED TREE DELINEATION DRAWINGS, SHALL BE REPLACED AT A COST OF 100% OF THE DIAMETER AT BREAST HEIGHT (DBH) IN INCHES LOST.
 - There shall be a penalty of \$1.20 per square foot for any and all areas disturbed outside of the limits of disturbance shown on the plan within the executed Right-of-Entry Agreement. This is in addition to #5c above.
 - The developer shall exercise its best efforts to save trees immediately adjacent to the construction area. Where necessary, protective padding will be wrapped around tree trunks to prevent damage by machinery.
 - NO EQUIPMENT OR MATERIALS SHALL BE PARKED OR STORED ON ANY PARK PROPERTY.
 - Any and all trees damaged or scarred shall be treated within forty-eight hours by a qualified expert and in accordance with American Arborists Society standards. This includes the corrective pruning of broken limbs as well as the proper "dressing" of trunk wounds. UNDER NO CONDITION SHALL PRUNING PAINT OR OTHER TYPE OF PAINT BE USED ON ANY WOUNDS OR CUTS. ANY AND ALL TREES WHICH ARE DAMAGED AND NOT TREATED WITHIN 48 HOURS SHALL BE DEEMED "DESTROYED" AND WILL AUTOMATICALLY BE ADDED TO THE MITIGATION REQUIREMENTS OF THE PROJECT AT A 100% REPLACEMENT.

- All areas with exposed soil, (whether disturbed by developer or pre-existing) or areas with excessive annual vegetation shall be stabilized in accordance with SCS/WRA Maryland Standards and Specifications for Soil Erosion and Sediment Control Section 51.01 using mixture #1 from table S1-1 of that section. Stabilization shall be defined as having a minimum of a two (2) inch stand of grass covering 95% of the soil surface in unit increments of one (1) square yard.
- Any manholes on park property are to be 0.5 feet above finished grade, except in the 100-year floodplain, where they are to be 1.5 feet above grade.
- It is understood and agreed that the Developer shall complete its construction within County's property within one hundred (100) days after written notice to County of its intent to commence activity. Within thirty (30) days after completion of construction, the Developer agrees to restore the area in accordance with the approved soil stabilization plan described above.
- These conditions and the corresponding letter dated _____ will only be valid until _____. After that date, the owner/developer must initiate a new request and any new or revised conditions will be applicable.

10. THE SCOPE OF THE PERMISSION GRANTED BY THE COUNTY TO ACT ON PARKLAND PROPERTY IS EXPRESSLY LIMITED TO THE TERMS OF THIS AGREEMENT AND ANY PLANS APPROVED BY THE DEPARTMENT. IN THE EVENT THAT GRANTEE, ITS EMPLOYEES, AGENTS, OR CONTRACTORS DEVIATES FROM THIS AGREEMENT OR THE APPROVED PLANS, THE COUNTY, IN ADDITION TO OTHER REMEDIES SET FORTH IN THIS AGREEMENT, MAY TAKE ANY ENFORCEMENT ACTION AVAILABLE TO IT BY LAW, INCLUDING THE IMPOSITION OF CIVIL PENALTIES UNDER THE PARKLANDS, OPEN SPACE, AND NATURAL REGULATIONS OF THE HOWARD COUNTY CODE. CERTAIN VIOLATIONS OF THESE REGULATIONS ARE SUBJECT TO A \$1,000 FINE ON A PER DAY BASIS. IN ADDITION, ANY PERSON VIOLATING PARKLAND REGULATIONS MAY BE ORDERED TO LEAVE PARKLAND PROPERTY IMMEDIATELY PURSUANT TO SECTION 19.210(c) OF THE HOWARD COUNTY CODE. IN ACCORDANCE WITH SECTION 19.211, THE COUNTY ALSO MAY SEEK AND OBTAIN RESTITUTIONS FROM GRANTEE, ITS EMPLOYEES, AGENTS, OR CONTRACTORS FOR ALL COSTS INCURRED IN RESTORING, REPAIRING, REPLACING OR OTHERWISE MITIGATING THE LOSS OR DAMAGE TO ANY NATURAL RESOURCES OR OTHER PARKLAND PROPERTY DESTROYED, DAMAGED, ALTERED, OR REMOVED.

QUANTITIES

NAME OF UTILITY CONTRACTOR: W.F. WILSON				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
4" SHC	62 LF±	70'	PVC	JM EAGLE
6" SHC	32 LF±	35'	PVC	JM EAGLE
8" S (PVC)	830' LF±	830'	PVC	JM EAGLE
MANHOLES	7 EACH	7 EA.	PRE CAST	CONTRACTORS PRECAST
1" WHC	29 LF±	29 LF	SOFT K	BEAIRD ROAD SUPPLY

8458 CHURCH LANE	EX. SEPTIC (TO BE ABANDONED)	EX. WHC (TO BE REMOVED)
8454 CHURCH LANE	EX. SEPTIC (TO BE ABANDONED)	EX. WHC (TO REMAIN)

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT NUMBER	ADDRESS	THROW 1	THROW 2
LOT 1			
LOT 2			
LOT 3			

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT NUMBER	ADDRESS	THROW 1	THROW 2
LOT 1			
LOT 2			
LOT 3			

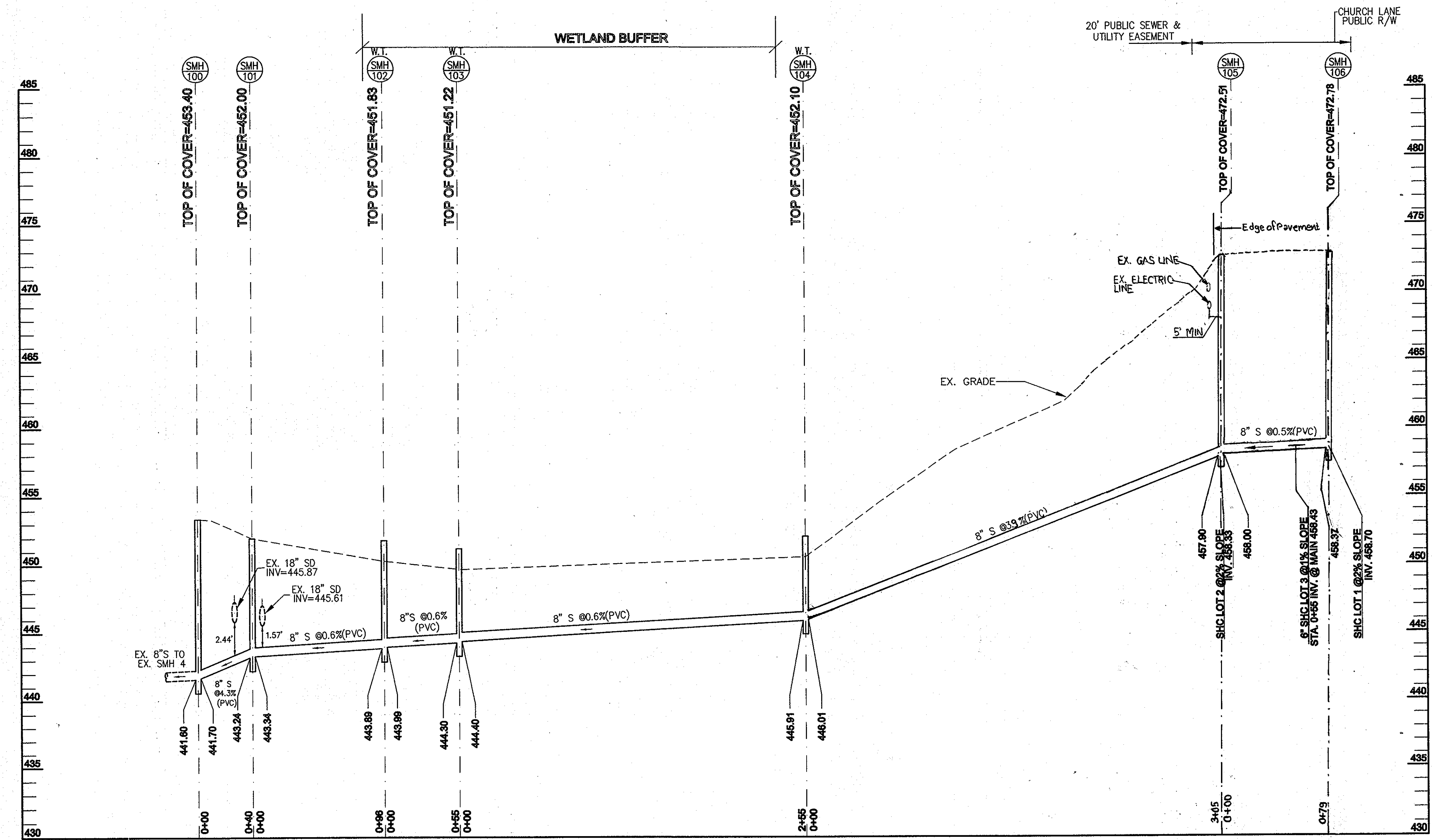
WATER & SEWER CODE
WATER CODE: H02
SEWER CODE: 1454200
WATER TEST GRADIENT: 780

OWNER/DEVELOPER
JASON SMITH
7660 HARMAN DRIVE
SYKESVILLE, MD 21784
PHONE: 443-250-4781

SEWER CONNECTION TABULATION					
LOT NO.	TYPE	ELEV. @ DROP	ELEV. @ MAN	ELEVATION @ R/W	M.C.E.
1	4" SHC	-	458.70	459.30	462.50
2	4" SHC	-	458.33	458.93	461.73
3*	6" SHC	-	458.43	458.74	465.64

* SHC AT 1% SLOPE

SEWER MANHOLES SCHEDULE					
SYMBOL	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
SMH-100	PRECAST MH HO. CO. STD DET G 5.14	N 593,037 E 1,366,658	453.40	441.70	441.60
SMH-101	PRECAST MH HO. CO. STD DET G 5.12	N 593,026 E 1,366,697	452.00	443.34	443.24
SMH-102	PRECAST MH HO. CO. STD DET G 5.12 & DET G 5.52	N 593,048 E 1,366,790	451.83	443.99	443.89
SMH-103	PRECAST MH HO. CO. STD DET G 5.12 & DET G 5.52	N 593,043 E 1,366,845	451.22	444.0	444.30
SMH-104	PRECAST MH HO. CO. STD DET G 5.12 & DET G 5.52	N 593,044 E 1,367,100	452.10	446.01	445.91
SMH-105	PRECAST MH HO. CO. STD DET G 5.12	N 593,346 E 1,367,117	472.51	458.00	457.90
SMH-106	PRECAST MH HO. CO. STD DET G 5.12	N 593,352 E 1,367,039	472.76	458.70	458.37



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

S. C. O'NEILL
CHIEF, BUREAU OF UTILITIES
DATE 5/16/08

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE 5/16/08

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

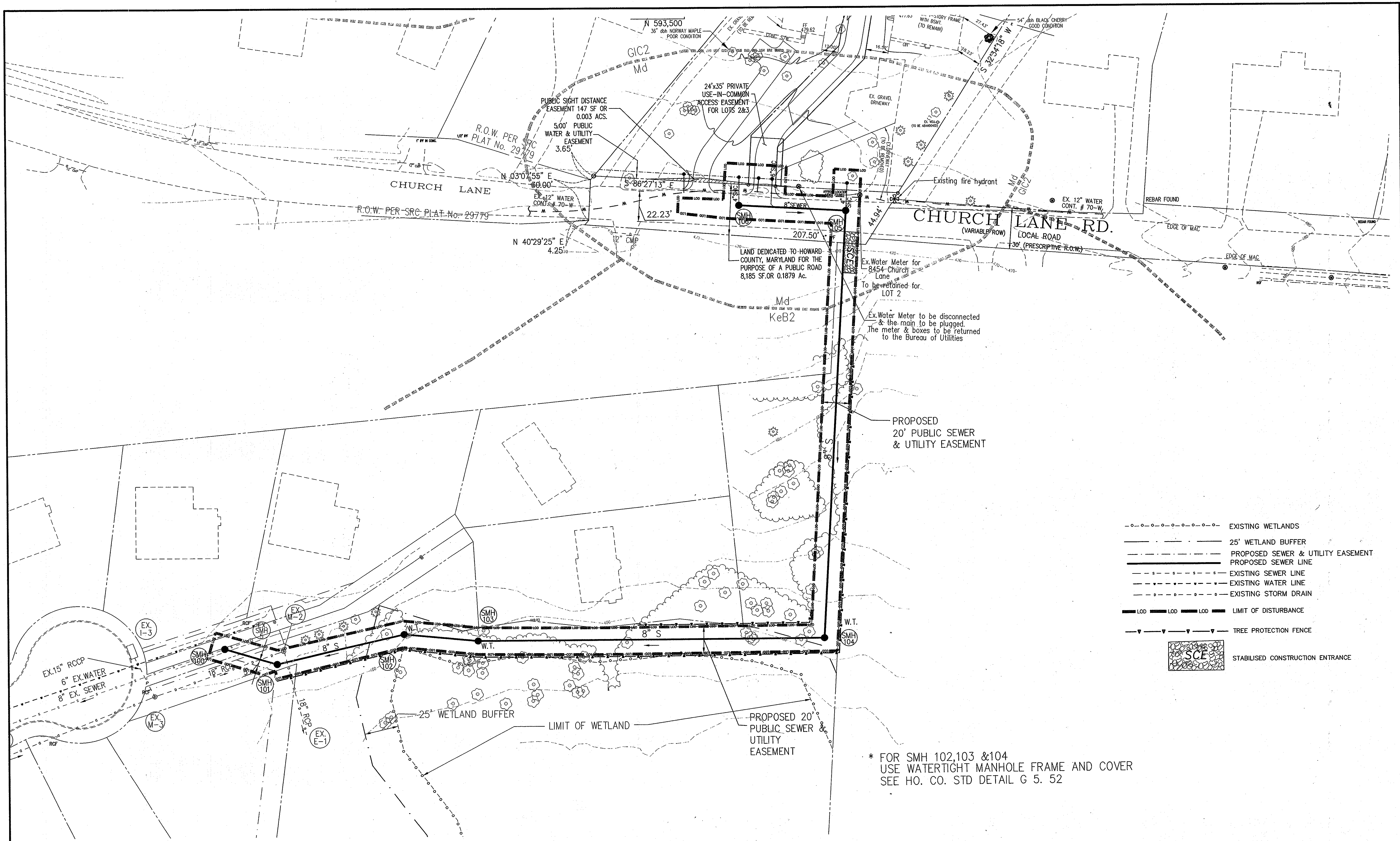
BY	NO.	REVISION	DATE
KCI	2	AS-BUILT REVISIONS	06/17/2011
KCE	1	Revised location of SMH 105 and SMH 106	08/12/2010

PROFILES
600' SCALE MAP NO. 12
BLOCK NO. 4 ZONE R-ED

PROFESSIONAL CERTIFICATION
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CONTRACT # 14-4432-D
RYMAC SUBDIVISION
LOTS 1-3
A SUBDIVISION OF PARCEL 206
GRID 13, L. 10591, F. 306, TAX MAP 18
F-07-021
HOWARD COUNTY, MARYLAND

SCALE 1"=50'
KCE JOB NO. 06100.00
DATE 12/17/2007
SHEET 3 OF 6



* FOR SMH 102,103 &104
 USE WATERTIGHT MANHOLE FRAME AND COVER
 SEE HO. CO. STD DETAIL G 5. 52

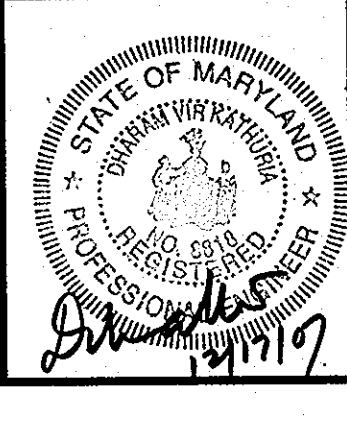
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
Stella C. C...
 CHIEF, BUREAU OF UTILITIES

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

KCE ENGINEERING, INC.
 EXECUTIVE CENTER
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KC1	2	AS-BUILT REVISIONS	06/17/2011
BY	NO.	REVISION	DATE

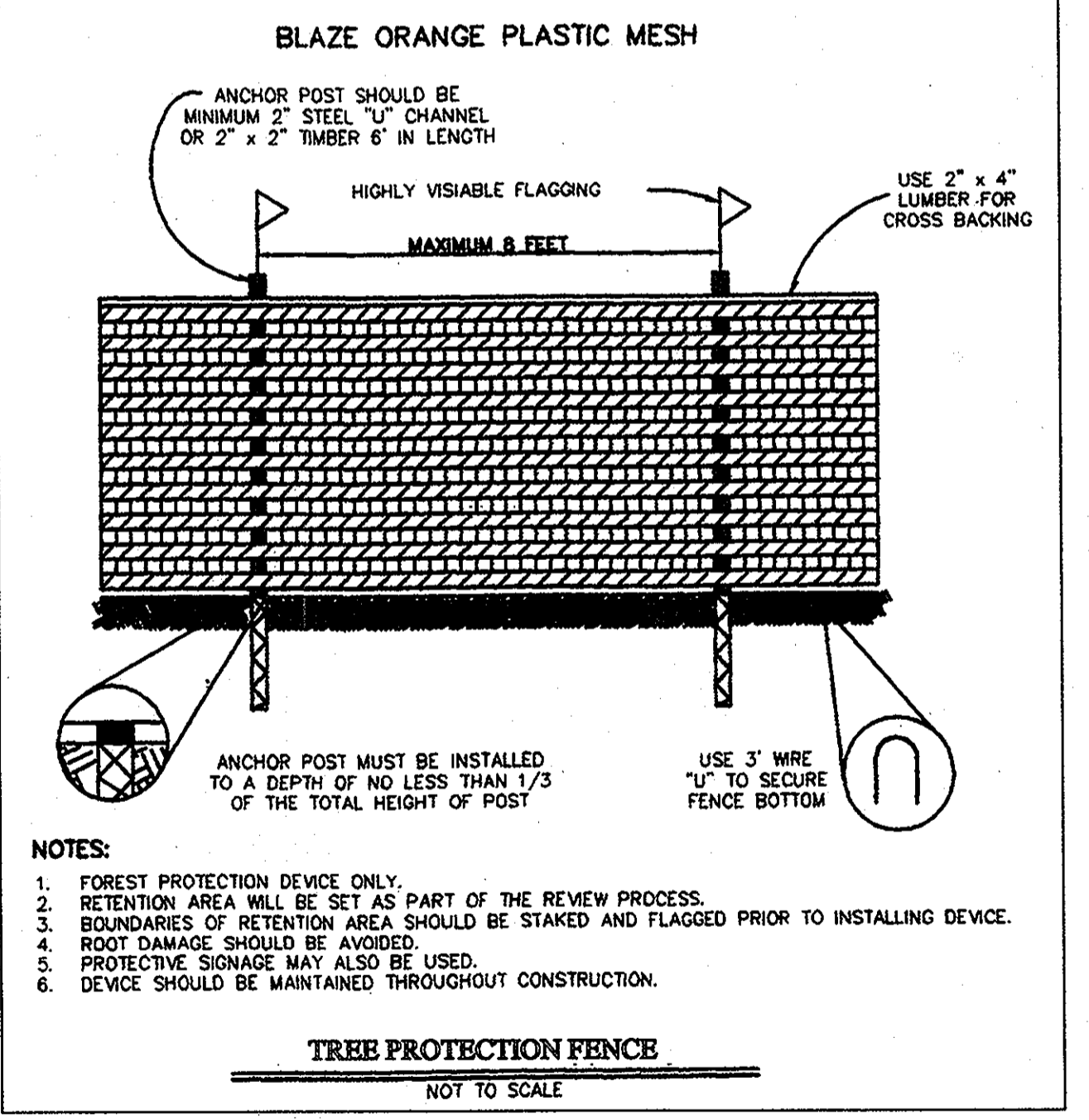
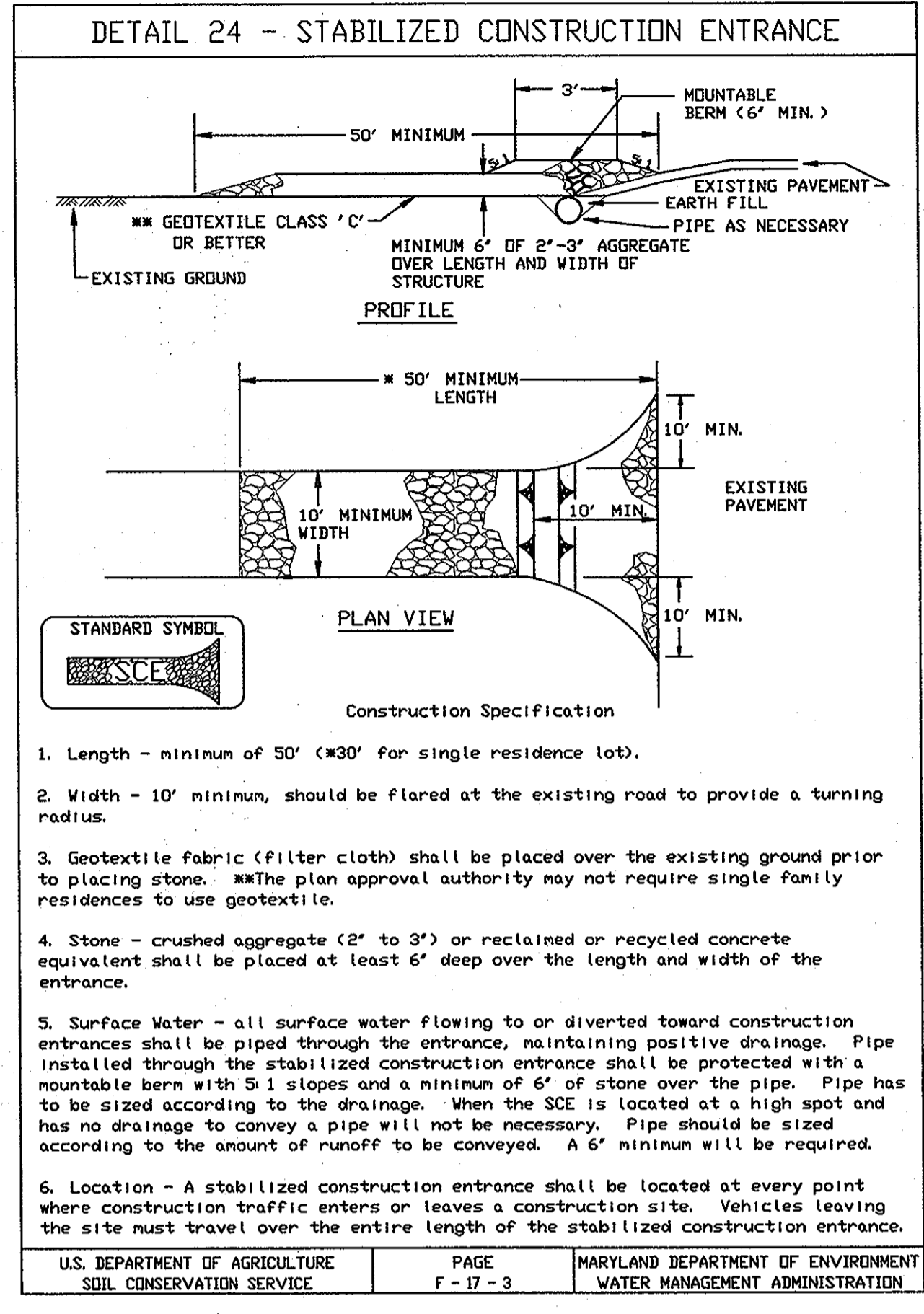
SEDIMENT & EROSION CONTROL PLAN
 600' SCALE MAP NO. 12
 BLOCK NO. 4 ZONE R-ED



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CONTRACT # 14-4432-D RYMAC SUBDIVISION
 LOTS 1-3
 A SUBDIVISION OF PARCEL 206
 GRID 13, L. 10591, F. 306, TAX MAP 18
 F-07-021
 HOWARD COUNTY, MARYLAND

SCALE
 1"=30'
 KCE JOB NO.
 06100.00
 DATE
 12/17/2007
 SHEET
 4 OF 6



STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

- CONDITIONS WHERE PRACTICE APPLIES**
- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
 - FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR A SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1.5-INCH IN DIAMETER.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
- FOR THIS SITE, WHICH HAS A DISTURBED AREA UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
 - FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH PF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION-SECTION 1-VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- TOPSOIL APPLICATION
 - WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, SILT FENCE, SEDIMENT TRAPS AND BASINS.
 - GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
 - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH MINIMUM ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Preferred - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
- Acceptable - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 - April 20, and August 1 - October 20, inclusive, seed the appropriate seed mixtures:

Seed Mixture No. 1 - (relatively flat areas regularly mowed and exposed to normal conditions) with 192 lbs PLS/acre of 85% certified turf-type Tall Fescue, 28 lbs PLS/acre of 100% certified Kentucky Bluegrass and 14 lbs PLS/acre of 5% Perennial Ryegrass. Supplemental seed - Annual Ryegrass 25 lbs PLS/acre.

Seed Mixture No. 2 - (sloped areas not subject to regular mowing) with 85 lbs PLS/acre of 75% Hard Fescue, 23 lbs PLS/acre of 20% Chewings Fescue and 7 lbs PLS/acre of 5% Kentucky Bluegrass. Supplemental seed - Redtop 3 lbs PLS/acre.

Seed Mixture No. 3 - (wetland areas and their associated buffer zones) with 83 lbs PLS/acre of 60% Fowl Meadow Grass, 34 lbs PLS/acre of 30% Chewings Fescue and 14 lbs PLS/acre of 10% Perennial Ryegrass. Supplemental seed - Redtop 3 lbs PLS/acre.

Seeding performed after October 20 should be a temporary cover of annual ryegrass and followed by overseeding of the appropriate seed mixture during the spring seeding season.

Mulching - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slope 8 ft. or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed preparation: - Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: - Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)

Seeding: - For periods March 1 - April 30 and from August 1 - November 30, inclusive, seed with 2-1/2 bushel per acre of Annual Rye/ Redtop (3.2 lbs/1000 sq. ft.). For the period May 1 - July 31, inclusive, seed with 13.6 lbs PLS/acre of Little Bluestem. For the period November 16 - February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: - Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 ft. or higher, use 348 gal. per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 12 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:
Total Area of Site N/A
Area to be roofed or paved: 0.06 Acres
Area to be vegetatively stabilized: 0.37 Acres
Total Cut: 0 Cu. Yds.
Total Fill: 0 Cu. Yds.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

SEQUENCE OF CONSTRUCTION

SEQUENCE OF CONSTRUCTION	DURATION
1. Contact the Department of Recreation and Parks in writing, not less than ten (10) days prior to entering the site to commence any activity other than survey and forest delineation work.	1 DAY
2. Notify Howard County Bureau of Inspections and Permits (313-1880) at least 24 hours before starting any work.	1 DAY
3. Field mark the limits of disturbance.	2 DAYS
4. Construct stabilized construction entrance and install tree protection fencing. Provide additional protection fencing if necessary, as directed by the Inspector.	1 WEEK
5. With Inspector's approval, clear and grub site as necessary, only as required for excavation and installation of the sewer main.	1 WEEK
6. Excavate trench and stockpile the excavated material on the higher side of the trench. The lengths of open trench shall be limited to pipe lengths which can be backfilled and stabilized within one (1) working day.	30 DAYS
7. Contractor shall install silt fence and/or super silt fence if require by the Sediment Control Inspector as directed.	1 WEEK
8. Construct and install the sewer main, sewer manholes, house connections, cleanouts and water meters.	1 DAY
9. Stabilize all disturbed areas with seed and mulch.	1 DAY
10. With approval of Inspector, remove sediment control devices.	1 DAY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John C. Coan
5/16/08
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

[Signature]
5/24/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION

KCE ENGINEERING, INC.

EXECUTIVE CENTER
3300 NORTH RIDGE ROAD, SUITE 315
ELLICOTT CITY, MARYLAND 21043
PHONE (410) 203-9800 FAX (410) 203-9228

KCI	2	AS-BUILT REVISIONS	06/17/2011
BY	NO.	REVISION	DATE

SEDIMENT & EROSION CONTROL DETAILS & NOTES

600' SCALE MAP NO. 12
BLOCK NO. 4 ZONE R-ED

PROFESSIONAL CERTIFICATION

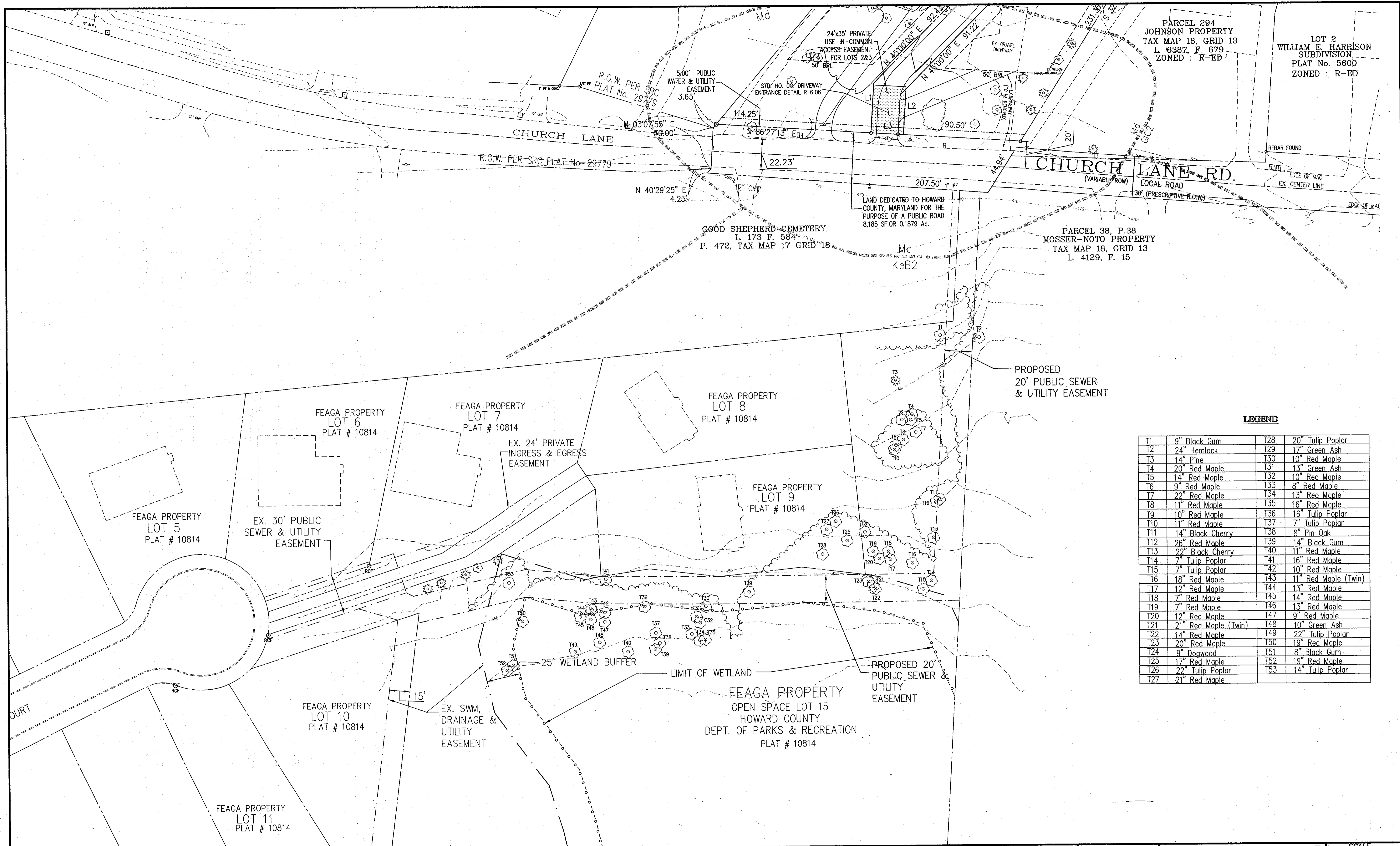
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 8818, EXPIRATION DATE: 10/17/08.

[Signature]
12/17/07

CONTRACT # 14-4432-D
RYMAC SUBDIVISION

LOTS 1-3
A SUBDIVISION OF PARCEL 206
GRID 13, L. 10591, F. 306, TAX MAP 18
F-07-021
HOWARD COUNTY, MARYLAND

SCALE
As shown
KCE JOB NO.
06100.00
DATE
12/17/2007
SHEET
5 OF 6



LEGEND

T1	9" Black Gum	T28	20" Tulip Poplar
T2	24" Hemlock	T29	17" Green Ash
T3	14" Pine	T30	10" Red Maple
T4	20" Red Maple	T31	13" Green Ash
T5	14" Red Maple	T32	10" Red Maple
T6	9" Red Maple	T33	8" Red Maple
T7	22" Red Maple	T34	13" Red Maple
T8	11" Red Maple	T35	16" Red Maple
T9	10" Red Maple	T36	16" Tulip Poplar
T10	11" Red Maple	T37	7" Tulip Poplar
T11	14" Black Cherry	T38	8" Pin Oak
T12	26" Red Maple	T39	14" Black Gum
T13	22" Black Cherry	T40	11" Red Maple
T14	7" Tulip Poplar	T41	16" Red Maple
T15	7" Tulip Poplar	T42	10" Red Maple
T16	18" Red Maple	T43	11" Red Maple (Twin)
T17	12" Red Maple	T44	13" Red Maple
T18	7" Red Maple	T45	14" Red Maple
T19	7" Red Maple	T46	13" Red Maple
T20	12" Red Maple	T47	9" Red Maple
T21	21" Red Maple (Twin)	T48	10" Green Ash
T22	14" Red Maple	T49	22" Tulip Poplar
T23	20" Red Maple	T50	19" Red Maple
T24	9" Dogwood	T51	8" Black Gum
T25	17" Red Maple	T52	19" Red Maple
T26	22" Tulip Poplar	T53	14" Tulip Poplar
T27	21" Red Maple		

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Stalin C. Coen
CHIEF, BUREAU OF UTILITIES

DATE: 5/16/08

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 5/16/08

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KC 1	NO.	REVISION	DATE
2	AS-BUILT REVISIONS	06/17/2011	

TREE DELINEATION PLAN

600' SCALE MAP NO. 12
BLOCK NO. 4 ZONE R-ED



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: 10/17/08.

CONTRACT # 14-4432-D RYMAC SUBDIVISION

LOTS 1-3
A SUBDIVISION OF PARCEL 206
GRID 13, L. 10591, F. 306, TAX MAP 18
F-07-021
HOWARD COUNTY, MARYLAND

SCALE
1"=30'
KCE JOB NO.
06100.00
DATE
12/17/2007
SHEET
6 OF 6