OLD FREDERICK ROAD SEWER EXTENSION

CAPITAL PROJECT S-6277
CONTRACT NO. 10-4856

HOWARD COUNTY, MARYSLAND

GENERAL NOTES:

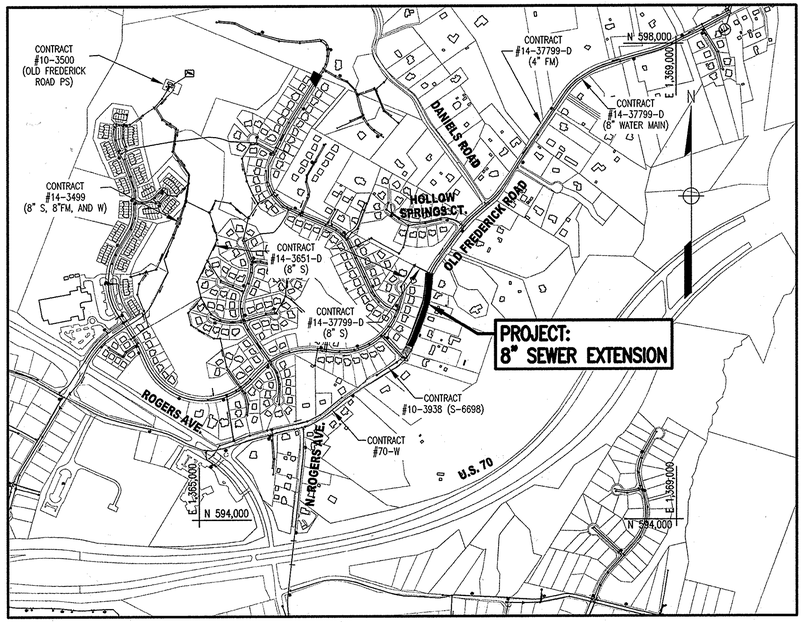
1. APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN SEPTEMBER 2013 BY WHITMAN, REQUARDT & ASSOCIATES LLP.
3. HORIZONTAL AND VERTICAL SURVEY CONTROLS:
   THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE COORDINATE SYSTEM NAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 18GA AND NO. 17ED. SEE SURVEY INFORMATION THIS DRAWING.
4. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88 AND WERE DERIVED FROM SURVEY CONTROL STATION NO. 18GA AND NO. 17ED. SEE SURVEY INFORMATION TABLE ON THIS DRAWING.
5. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
6. CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM, OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF THE 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.
7. 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.
8. 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 BY TEST PIT TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
9. 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 CO.	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033/410-224-9210

10. 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.
11. 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 SEWER.
12. 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.

SANITARY SEWER NOTES:

1. ALL SEWER MAINS SHALL BE PVC UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'-0" UNLESS OTHERWISE NOTED.
3. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
4. MANHOLES DESIGNATED "WT" IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAILS 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.
5. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATED THAT THE CELLAR CANNOT BE SERVED.



LOCATION MAP
1"= 600'

0 600' 1200'
SCALE: 1" = 600'

TYPE OF BUILDING: RESIDENTIAL
NUMBER OF PARCELS: 8
SEWER HOUSE CONNECTIONS: 8
DRAINAGE AREA: PATAPSCO

ABBREVIATIONS

C.E.	CELLAR ELEVATION	NIC	NOT IN CONTRACT
C.N.S.	CELLAR NOT SERVED	PROP	PROPOSED
DIA.	DIAMETER	PVC	POLYVINYL CHLORIDE
ELEV.	ELEVATION	R&C	REBAR AND CAP
EX.	EXISTING	R/W	RIGHT OF WAY
HORIZ.	HORIZONTAL	S	GRAVITY SANITARY SEWER
INV.	INVERT	SAN	SANITARY
LF	LINEAR FOOT	SF	SILT FENCE
LOD	LIMIT OF DISTURBANCE	SSF	SUPER SILT FENCE
MIN.	MINIMUM	TYP.	TYPICAL
N/A	NOT APPLICABLE		

SHEET INDEX

BILL OF MATERIALS

ITEM	QUANTITY	MATERIALS	AS-BUILT QUANTITY	MANUFACTURER
48" I.D. PRECAST CONCRETE MANHOLE < 6'	4 EACH			Bigge River Pre-Cast, LLC
48" I.D. PRECAST MANHOLE ADDITIONAL DEPTH > 6'	19 VF			Bigge River Pre-Cast, LLC
8" DIA. SDR 35 PVC SANITARY SEWER	572 LF			NORTH AMERICAN
4" SHC	206 LF			NORTH AMERICAN
NO. OF SHC	8 EACH			NORTH AMERICAN

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		CURB
		SIGN
		TREE
S	S	SANITARY SEWER & MH
		REDUCER, TEE, VALVE & FIRE HYDRANT
	LOD	LIMIT OF DISTURBANCE
W		WATER MAIN
G		GAS (UNDERGROUND)
E		ELECTRIC (UNDERGROUND)
WM		WATER METER
WAR		WATER AIR RELEASE OR VALVE MANHOLE
W		WELL
D D		STORM DRAIN INLET W/ STORM DRAIN PIPE
X		FENCE WIRE
// //		FENCE WOOD
		PAVED ROADWAY
		TRAVERSE POINT
		BENCHMARK/SURVEY CONTROL POINT
		PROPERTY LINE
MB		MAILBOX
		POWER/UTILITY POLE WITH GUY WIRE
		STREET LIGHT
EM		ELECTRIC METER
		SIGN
		GUARDRAIL
		IRON PIPE FOUND

NOTE: OVERHEAD UTILITYS GENERALLY TRAVERSE FROM POLE TO POLE. OVERHEAD UTILITIES ARE NOT INDICATED FOR CLARITY.

As-Built 09/24/2015

SURVEY INFORMATION TABLE

GEODETIC CONTROL STA.	NORTHING	EASTING	ELEV.
18GA	591,872.01	1,370,380.43	445.77
17ED	594,315.14	1,357,380.58	478.28

NOTE: GEODETIC CONTROLS INDICATED IN TABLE ABOVE ARE NOT WITHIN THE LIMITS OF THE PROJECT LOCATION MAP ABOVE. THESE GEODETIC CONTROLS WERE USED TO ESTABLISH THE GPS CONTROLS INDICATED ON THE CONTRACT DOCUMENTS.

EP-14-032

NAME OF UTILITY CONTRACTOR:

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.

HOWARD SOIL CONSERVATION DISTRICT CERTIFICATION

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

John R Robertson — HOWARD SOIL CONSERVATION DISTRICT — 1/22/15 DATE

"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. 27029, EXPIRATION DATE: 01-25-2016."

ENGINEERS/ARCHITECT DESIGN CERTIFICATION

"I 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 — 27029 REGISTRATION NUMBER — 10/30/14 DATE

OWNERS/DEVELOPERS CERTIFICATION:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A 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."

Kim Sieve — 11/14/2014 DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD, COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS	11/19/14 DATE	CHIEF, BUREAU OF ENGINEERING	11/18/14 DATE
CHIEF, BUREAU OF UTILITIES	11/19/14 DATE	CHIEF, UTILITY DESIGN DIVISION	11/18/14 DATE

RKS

WR&A
WHITMAN, REQUARDT AND ASSOCIATES, LLP
801 SOUTH CAROLINE STREET
BALTIMORE, MARYLAND
410 - 235 - 3450

STATE OF MARYLAND — WILFRED FRANK WHITE — No. 27029 — REGISTERED PROFESSIONAL ENGINEER

DES:	F.B.
DRN:	F.B.
CHK:	W.H.
OCT. 2014	

BY	NO.	REVISION	DATE
RKS	1	AS-Builts	09/24/15

TITLE SHEET, GENERAL NOTES, LEGEND, AND ABBREVIATIONS

600 SCALE MAP NO. 32 | BLOCK NO. 21.

OLD FREDERICK ROAD SEWER EXTENSION
CAPITAL PROJECT NO. S-6277
CONTRACT NO. 10-4856
ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND

G-1

SCALE AS SHOWN

SHEET 1 OF 4

FINAL

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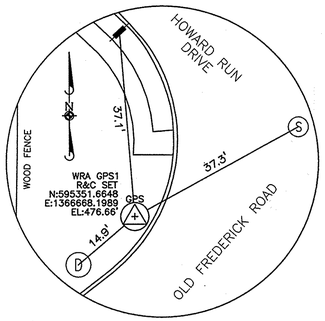
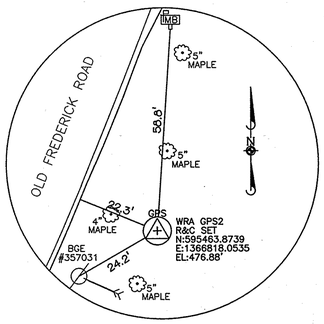
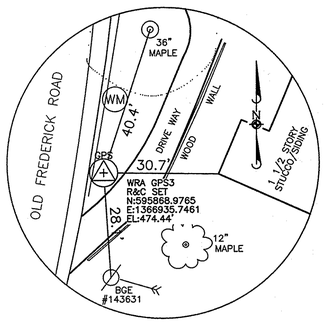


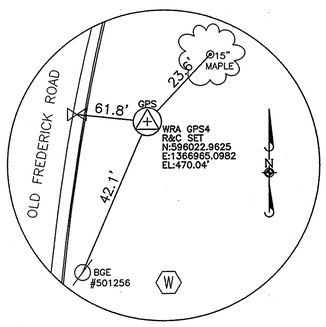
WRA GPS1



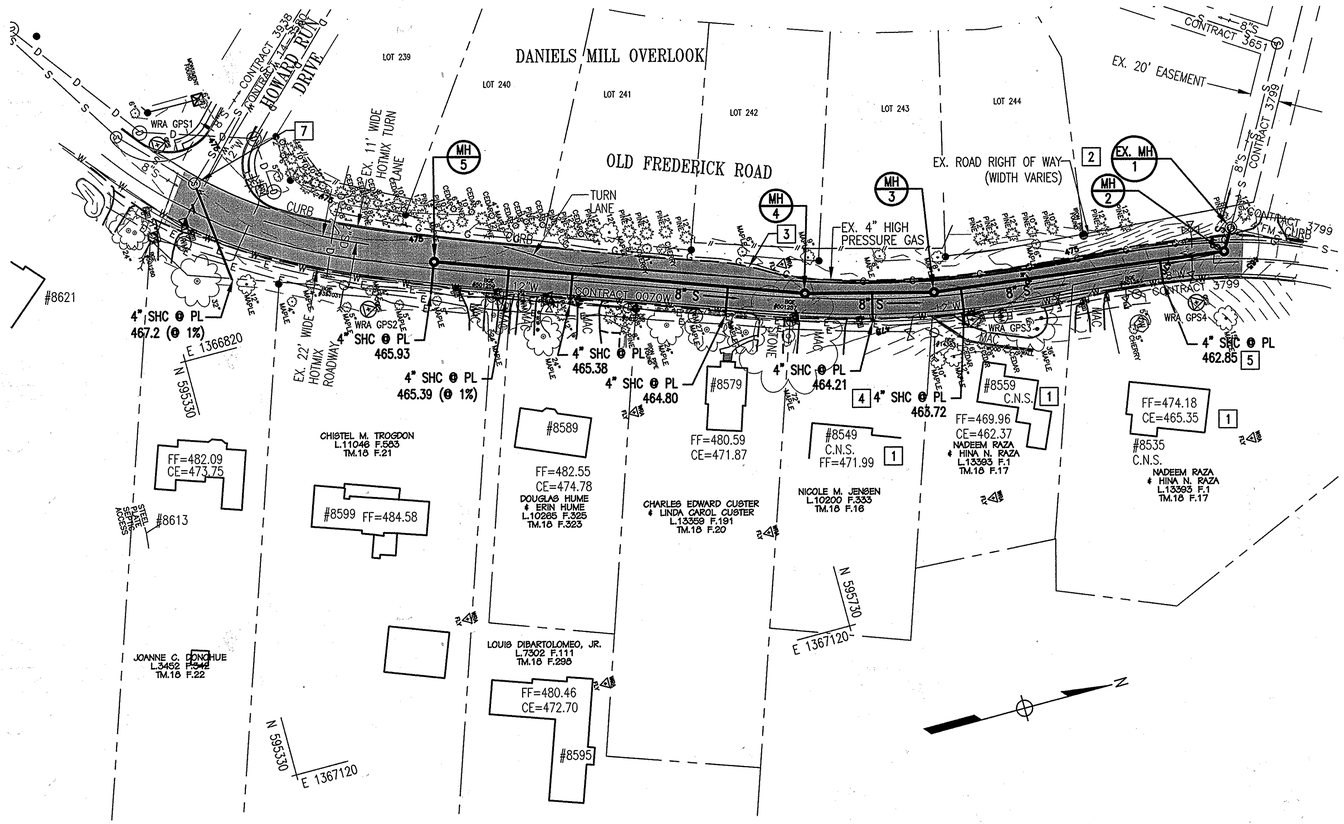
WRA GPS2

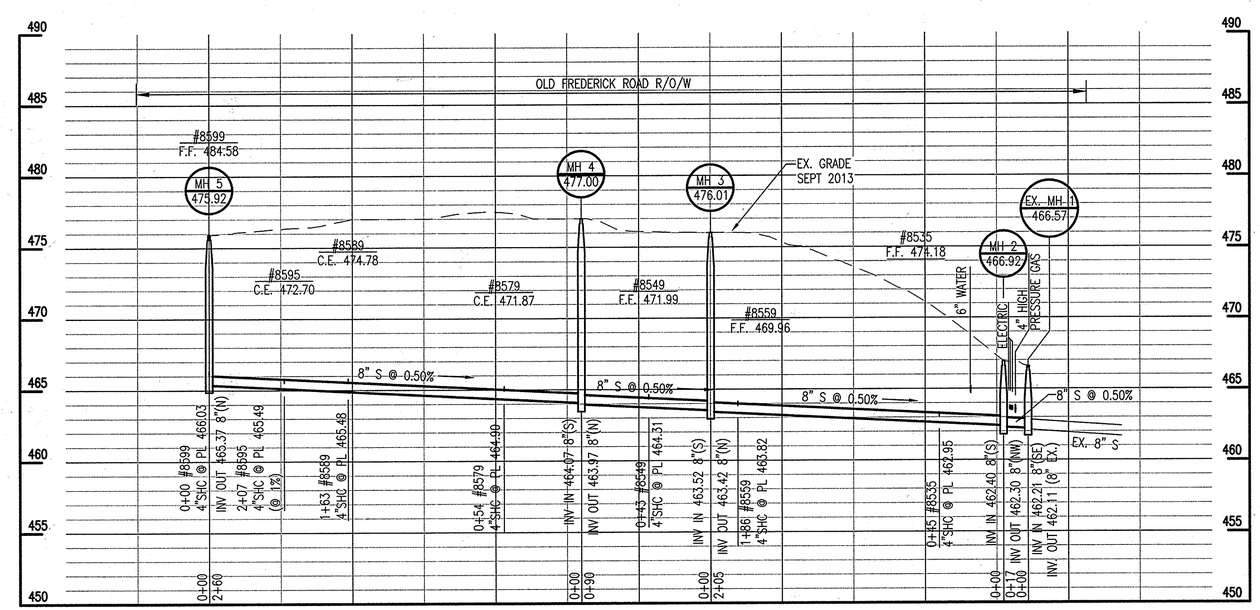


WRA GPS3



WRA GPS4





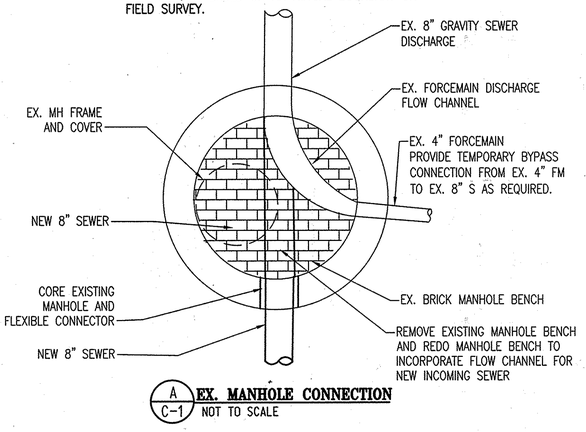
CONSTRUCTION NOTES

1. C.N.S– CELLAR NOT SERVED.
2. CORE INTO EXISTING MANHOLE. SEE DETAIL A THIS DRAWING.
3. MILL AND OVERLAY EXISTING TRAVEL LANES AND PAVED SHOULDER. SEE DETAIL B THIS DRAWING.
4. REMOVE AND REINSTALL EXISTING GUARDRAIL AS REQUIRED FOR LATERAL INSTALLATION.
5. EXISTING BITUMINOUS CURB TO BE REMOVED AND REPLACED AS REQUIRED FOR LATERAL INSTALLATION.
6. ROADWAY IS COUNTY MAINTAINED. PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH SHA STANDARD DETAIL MD–1.04.02–09.
7. CORE INTO EXISTING MANHOLE AT INVERT 466.5 +/–, WITH LATERAL CONNECTION DISCHARGING ONTO THE TOP OF THE EXISTING MANHOLE BENCH. (EX. MH BOTTOM INVERT = 465.5 +/–).

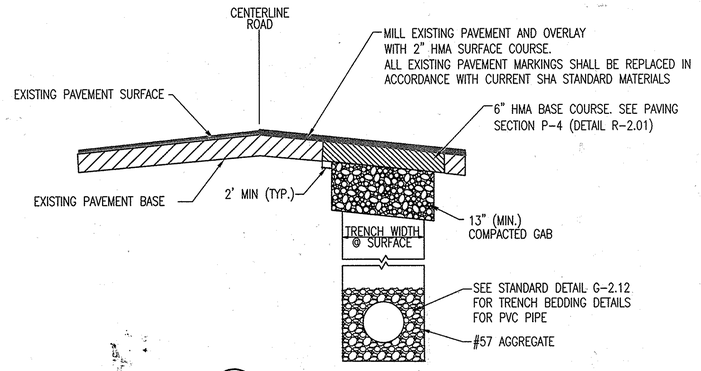
MANHOLE COORDINATES		
MANHOLE	NORTH	EAST
2	596,050.99	1,366,935.64
3	595,848.02	1,366,910.43
4	595,760.65	1,366,887.57
5	595,516.68	1,366,798.03

GENERAL NOTES

1. THE PROPERTY LINES SHOWN HEREON ARE BASED ON DEEDS, TAX MAPS AND THE BEST AVAILABLE INFORMATION AND ARE NOT BASED ON AN ACTUAL BOUNDARY OR FIELD SURVEY.



A / C-1 **EX. MANHOLE CONNECTION**
NOT TO SCALE



B / C-1 **PAVEMENT RESTORATION**
NOT TO SCALE

HORIZONTAL SCALE: 1" = 50' (0, 25', 50', 100')
VERTICAL SCALE: 1" = 5' (0, 5', 10')

As-Built
09/24/2015

"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. 27029, EXPIRATION DATE: 01–25–2016."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/12/14
CHIEF, BUREAU OF ENGINEERING — DATE 11/6/14
CHIEF, BUREAU OF UTILITIES — DATE 11/9/14
CHIEF, UTILITY DESIGN DIVISION — DATE 11/12/14

WHITMAN, REQUARDT AND ASSOCIATES, LLP
801 SOUTH CAROLINE STREET
BALTIMORE, MARYLAND
410 – 235 – 3450

STATE OF MARYLAND — WILFRIED FRANZ HUTH — No. 27029 — REGISTERED PROFESSIONAL ENGINEER — 10/30/14

DES:	F.B.
DRN:	F.B.
CHK:	W.H.
OCT. 2014	

BY	NO.	REVISION	DATE

600 SCALE MAP NO. 32 | BLOCK NO. 21.

OLD FREDERICK ROAD SEWER EXTENSION

CAPITAL PROJECT NO. S–6277
CONTRACT NO. 10–4856

ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 2 OF 4

C-1

FINAL

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GENERAL SEDIMENT CONTROL NOTES

1. FOR UTILITY INSTALLATIONS, ALL DISTURBED AREAS SHALL BE STABILIZED THE SAME DAY. IF UNFORESEEN CONDITIONS REQUIRE THAT AN EXCAVATION MUST REMAIN OPEN BEYOND THE WORK DAY, THE FOLLOWING PROVISIONS MUST BE FOLLOWED:

A) TEMPORARY SILT FENCE SHALL BE PLACED IMMEDIATELY DOWNSTREAM OF ANY AREA INTENDED TO REMAIN DISTURBED FOR MORE THAN ONE DAY; AND
B) ANY PILES OF EXCAVATION SPOILS MATERIALS MUST BE SECURELY COVERED TO ENSURE THAT SEDIMENTS ARE NOT TRANSPORTED FROM THE PILE.

2. PAVEMENTS ADJACENT TO THE EXCAVATION MUST REMAIN SEDIMENT FREE. CONTRACTOR SHALL PLACE PLASTIC SHEETING BENEATH THE EXCAVATED MATERIAL PILES, AND SWEEP PAVEMENTS CLEAN OF SEDIMENTS AS REQUIRED.

3. A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROVIDED AT THE DIRECTION OF THE SEDIMENT AND EROSION CONTROL INSPECTOR.

4. ALL SPOILS FROM THE EXCAVATION ARE TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

STANDARD SEDIMENT CONTROL NOTES

1. 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 (410-313-1855).

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISION OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND ALL REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A) THREE (3) CALENDAR DAYS FOR ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND B) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

6. SITE ANALYSIS
TOTAL AREA OF SITE 0.50 ACRES
AREA DISTURBED 0.50 ACRES
AREA TO BE ROOFED OR PAVED 0.00 ACRES
TOTAL CUT 1200 CU. YDS.
TOTAL FILL 1200 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION (IF KNOWN) ACRES

7. ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE SEDIMENT AND EROSION CONTROL INSPECTOR.

9. 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.

10. TRENCHES FOR THE CONSTRUCTION OF UTILITIES SHALL BE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED AT THE END OF EACH WORKING DAY, WHICHEVER IS SHORTER.

11. ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

12. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PROCEEDING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

OVERALL PROJECT SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT FROM HOWARD COUNTY.

2. CALL 'MISS UTILITY' AT 1-800-257-7777 48 HOURS BEFORE ANY CONSTRUCTION IS TO BEGIN.

3. NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION AT LEAST 2 DAYS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE A PRE CONSTRUCTION MEETING.

4. INSTALL AND STABILIZE SEDIMENT CONTROL MEASURES AS REQUIRED BY SEDIMENT AND EROSION CONTROL INSPECTOR.

5. BEFORE PROCEEDING WITH ANY EARTH DISTURBANCE OR GRADING, NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION UPON INSTALLATION OF SEDIMENT CONTROL MEASURES.

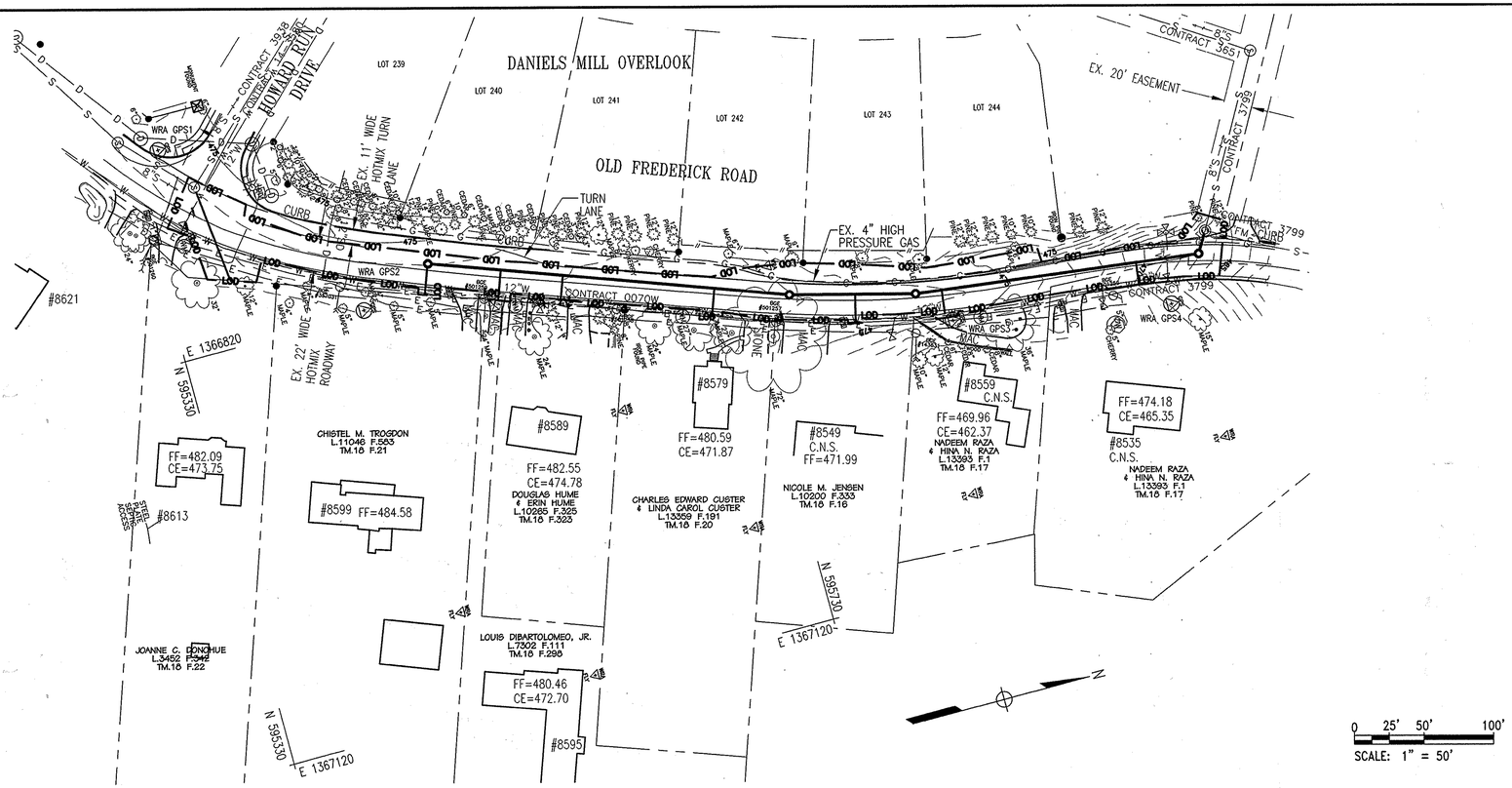
6. EXCAVATE FOR AND INSTALL SEWER MAINS. EXCAVATION FROM TRENCHING OPERATIONS SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

7. VEGETATIVELY STABILIZE BACKFILLED TRENCH OR TEMPORARY STABILIZE ANY PAVED AREAS DISTURBED AS WORK PROGRESSES.

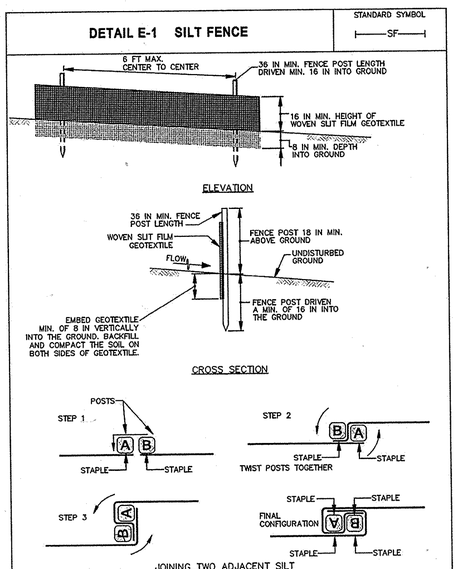
8. NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (CID, 410-313-1880) AND OBTAIN APPROVAL TO REMOVE EROSION AND SEDIMENT CONTROL MEASURES

9. REMOVE CONTROLS AND PERMANENTLY STABILIZE ANY AREAS DISTURBED DURING REMOVAL OF CONTROLS.

SOIL INFORMATION
1. PER NRCS SOIL MAPS, ALL SOILS WITHIN THE PROJECT AREA ARE CLASSIFIED AS GbB - GLADSTONE LOAM 3 TO 8% SLOPES.



DETAIL E-1 SILT FENCE — STANDARD SYMBOL SF



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.2

DETAIL E-1 SILT FENCE — STANDARD SYMBOL SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅛ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

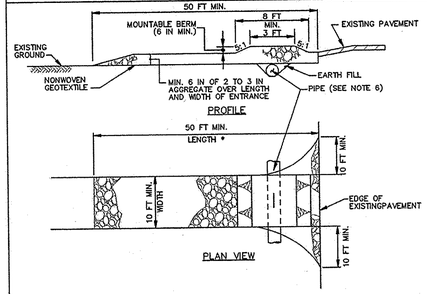
2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

E.3

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE — STANDARD SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

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B.2

"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. 27029, EXPIRATION DATE: 01-25-2016."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS — DATE 11/19/14
CHIEF, BUREAU OF ENGINEERING — DATE 11/18/14
CHIEF, BUREAU OF UTILITIES — DATE 11/19/14
CHIEF, UTILITY DESIGN DIVISION — DATE 11/18/14

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BALTIMORE, MARYLAND
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STATE OF MARYLAND — WILFRIED FRANZ FEIL — No. 27029 — PROFESSIONAL ENGINEER
10/31/14

DES: F.B.				
DRN: F.B.				
CHK: W.H.				
OCT. 2014	BY	NO.	REVISION	DATE

600 SCALE MAP NO. 32 | BLOCK NO. 21.

As-Built 01/14/2015

OLD FREDERICK ROAD SEWER EXTENSION

CAPITAL PROJECT NO. S-6277
CONTRACT NO. 10-4856

ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND

SC-1

SCALE AS SHOWN

SHEET 3 OF 4

FINAL

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B-4-2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

1. Temporary Stabilization
   a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
   b. Apply fertilizer and lime as prescribed on the plans.
   c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
   a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
      i. Soil pH between 6.0 and 7.0.
      ii. Soluble salts less than 500 parts per million (ppm).
      iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
      iv. Soil contains 1.5 percent minimum organic matter by weight.
      v. Soil contains sufficient pore space to permit adequate root penetration.
   b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
   c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

   d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
   e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is 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.
2. Topsoil salvaged from an existing site may be used provided 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-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. 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.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
   c. 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.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if 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.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS

FOR

SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding

1. Specifications
   a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
   b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
   c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
   d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
2. Application
   a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.

   b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
   c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P_2O_5 (phosphorous), 200 pounds per acre; K_2O (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching

1. Mulch Materials (in order of preference)
   a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. **Note: Use only sterile straw mulch in areas where one species of grass is desired.**
   b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

2. Application
   a. Apply mulch to all seeded areas immediately after seeding.
   b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
   c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
   a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. **Use of asphalt binders is strictly prohibited.**
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4-4 STANDARDS AND SPECIFICATIONS

FOR

TEMPORARY STABILIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

	Hardiness Zone (from Figure B.3): 7a **Seed Mixture** (from Table B.1):				**Fertilizer Rate (10-20-20)**	**Lime Rate**
No.	**Species**	**Application Rate (lb/ac)**	**Seeding Dates**	**Seeding Depths**		
1 (COOL)	ANNUAL RYEGRASS (Lolium perenne ssp. multif)	40	FEB 15 – APR 30 AUG 15 – NOV 30	0.5	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)
	OATS (Avena sativa)	72	FEB 15 – APR 30 AUG 15 – NOV 30	1.0		
2 (WARM)	FOXTAIL MILLET (Setaria italica)	30	MAY 1 – AUG 14	0.5		
	PEARL MILLET (Pennisetum glaucum)	20	MAY 1 – AUG 14	0.5		

PERMANANT STABILIZATION

Hardiness Zone (from Figure B.3): 7A Seed Mixture: SWITCH GRASS					Fertilizer Rate (10–20–20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
1	SWITHGRASS	10	FEB 15 TO APRIL 30 AND MAY 1 TO MAY 31	1/4-1/2 in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
	CREEPING RED FESCUE	15		1/4-1/2 in				
	BUSH CLOVER	2		1/4-1/2 in				
				1/4-1/2 in				

Hardiness Zone (from Figure B.3): 6b Seed Mixture: CREEPING RED FESCUE					Fertilizer Rate (10–20–20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
11	CREEPING RED FESCUE	30	MAR 1 TO MAY 15 AND AUG 1 TO OCT 15	1/4-1/2 in	45 pounds per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
	BLUE RYEGRASS	15		1/4-1/2 in				
				1/4-1/2 in				
				1/4-1/2 in				

MAINTENANCE FERTILIZATION FOR PERMANENT SEEDINGS

USE SOIL TEST RESULTS OR RATES SHOWN BELOW

SEEDING MIXTURE	TYPE	LB/AC	LB/1000 SF	TIME	MOWING
TALL FESCUE MAKES UP 70% OR MORE OF COVER	10–10–10 OR 30–10–10	500 400	11.5 9.2	YEARLY OR AS NEEDED. FALL	NOT CLOSER THAN 3" IF OCCASIONAL MOWING IS DESIRED
CROWNVETCH SERICEA LESPEDEZA BIRDSFOOT TREFOIL	0–20–0	400	9.2	SPRING, THE YEAR FOLLOWING ESTABLISHMENT AND EVERY 4–5 YEARS THEREAFTER	DO NOT MOW CROWNVETCH
FAIRLY UNIFORM STAND OF TALL FESCUE AND SERICEA LESPEDEZA, OR BIRDSFOOT TREFOIL	5–10–10	500	11.5	FALL THE YEAR FOLLOWING ESTABLISHMENT AND EVERY 4–5 YEARS THEREAFTER	NOT REQUIRED, NO CLOSER THAN 4" IN THE FALL AFTER SEED HAS MATURED.
WEEPING LOVEGRASS & SERICEA LESPEDEZA FAIRLY UNIFORM PLANT DISTRIBUTION.	5–10–10	500	11.5	SPRING, THE YEAR FOLLOWING ESTABLISHMENT AND EVERY 4–5 YEARS THEREAFTER.	NOT REQUIRED, NO CLOSER THAN 4" IN THE FALL AFTER SEED HAS MATURED.
RED & CHEWING FESCUE, KENTUCKY BLUEGRASS, HARD FESCUE MIXTURES	20–10–10	250 100	5.8 2.3	SEPTEMBER, 30 DAYS LATER, DECEMBER, MAY 20, JUNE 30, IF NEEDED.	MOW NO CLOSER THAN 2" FOR RED FESCUE AND KENTUCKY BLUEGRASS, 3" FOR FESCUE.

September 24, 2015
As-Built
09/24/2015

SC-2

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HOWARD COUNTY, MARYLAND

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STATE OF MARYLAND — WILFRIED FRANZ HINZ — No. 27029 — PROFESSIONAL ENGINEER — 10/30/14

DES:
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BY	NO.	REVISION	DATE

EROSION AND SEDIMENT CONTROL NOTES

600 SCALE MAP NO. 32 | BLOCK NO. 21.

OLD FREDERICK ROAD SEWER EXTENSION

CAPITAL PROJECT NO. S-6277
CONTRACT NO. 10-4856

ELECTION DISTRICT NO. 1 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

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