

## GENERAL NOTES

- 1. APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY
- TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE. 2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- 3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- 4. ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- 5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
- 6. 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 (1991 AMENDMENTS) THE CONTRACTOR SHALL
- 7. 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 IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 6. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

STATE HIGHWAY ADMINISTRATION - 531-5533 BALTIMORE GAS & ELECTRIC CO.. - CONTRACTOR SERVICES - 050-4620 BALTIMORE GAS & ELECTRIC CO.. - UNDER GROUND DAMAGE CONTROL - 707-9060

MISS UTILITY - 1-800-257-7777 COLONIAL PIPELINE CO. - 795-1390

- BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 313-4900 9. Trees and shrubs are to be protected from damage to maximum extent, trees and shrubs located within the CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR
- 10. 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.
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- 12. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 13. T.B. DENOTES TEST BORING.
- 14. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- 15. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
- 16. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- 17. HOUSE(5) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- 18. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN
- 19. MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS,
- 20. WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT I
- 21. ALL WATER MAINS SHALL BE D.I.P., CLASS 52 UNLESS OTHERWISE NOTED.
- 22. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2' COVER UNLESS OTHERWISE NOTED.
- 23. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 24. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W1.11 AND W2.13). 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
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH
- 20. The contractor shall notify the bureau of Highways, Howard County, 🛭 (410) 313–2450 at least five working days before ANY 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 19.114(a) OF THE HOWARD COUNTY CODE.
- 29. THE USE OF MATS SHALL BE REQUIRED FOR CONSTRUCTION EQUIPMENT OPERATED WITHIN THE WETLANDS FROM EX. MANHOLE NO. 21 TO MANHOLE NO. 650.
- 30. ALL TEMPORARY EQUIPMENT CROSSINGS SHALL BE REMOVED IMMEDIATELY UPON COMPLETION OF THE SEWER MAIN CONSTRUCTION.

### INTERCEPTOR CAPACITIES MANHOLE - MANHOLE CAPACITY

	EX.MH #21	TO MH # GOO	2.75 MG1
	MH#600	TO MH# 610	2.75 MG
	M #610	TO MH # 620	3.28 MG
4	MH # 620	TO MH # 630	3.00 MG
	MH # 630	TO MH # 640	3.00 MG
	M # 640	TO MH # 650	3.50 MG
	MH # 650	TO MH #660	1.95 MG
	M # 660	TO MH # 670	1.95 MG
		To 1611 10.16	

BASED ON ROUGHNESS COEFFICIENT

# CONTRACT NO. 20-3601-D G.T.W.'S LITTLE PATUXENT INTERCEPTOR AND SEWER MAIN EXTENSION

HOWARD COUNTY, MARYLAND

CONTRACT NO. 20-3601-D GTW'S LITTLE PATUXENT INTERCEPTOR AND SEWER MAIN EXTENSION

IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE

-NO 'F' NUMBER-

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION

IN DEVELOPING AREAS AS SHOWN ON THESE PLANS. Vonal Klay SIGNATURE OF DEVELOPER

DEPARTMENT OF PLANNING AND ZONING DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND HOWARD COUNTY, MARYLAND

Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENNIAL SQUARE OFFICE PARK 10272 Baltimore National Pike



DAIL	*	ВY	NO.	REVISION	DATE
DATE:					
CHK:	P.W.K.				
DEWIN.	M.J.M./ J.M.M.			·	
DOMAN-	M.TM./				
020.	M.J.M./ P.W.K.				

SHEET

G.T.W.'S LITTLE PATUXENT INTERCEPTOR AND SEWER MAIN EXTENSION CONTRACT NO. 20 - 3601 - D THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

INDEX OF DRAKINGS

SHEET 1: TITLE SHEET / VICILITY MAP

SHEET Z: PLAL) - IL) TERCEPTOR CEK/ER MAIL)

SHEET 3: PLAL) PROPILE-INTERCEPTOR SEWER MAIN

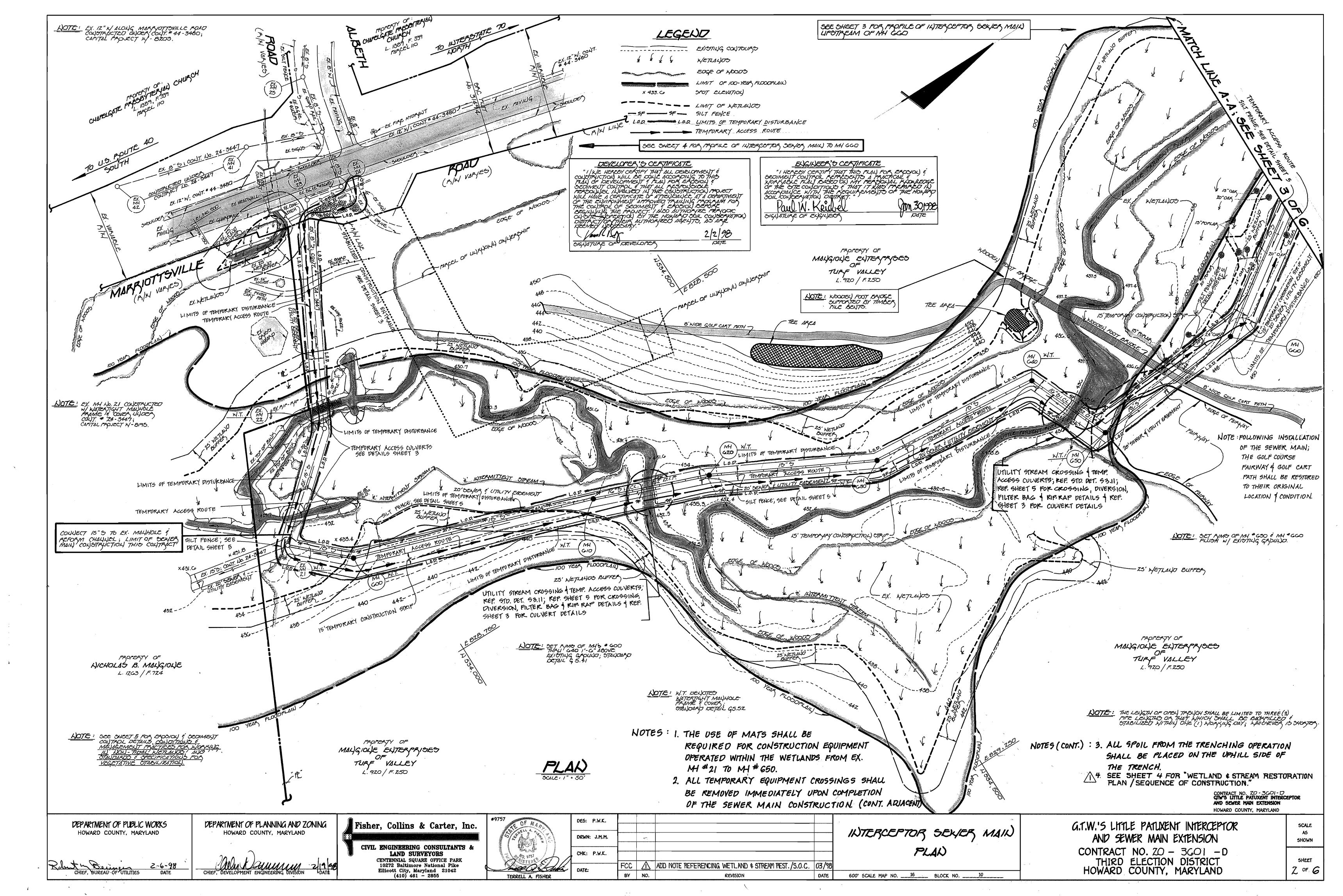
SHEET 4: PROFILE-INTERCEPTOR SEWER MAIN

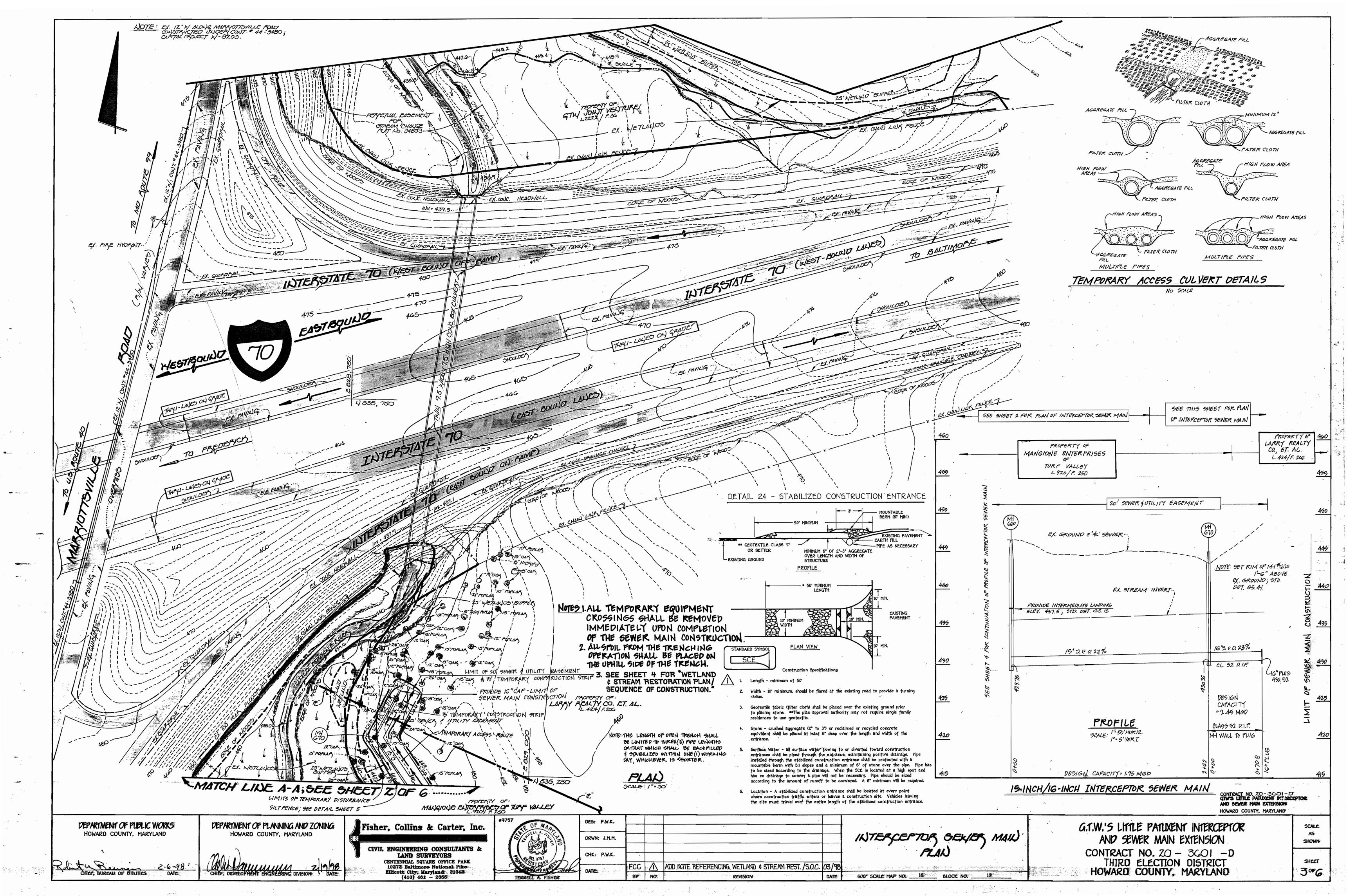
SHEET G: DRAINAGE AREA MAP

SHEET 5: SEDIMENT CONTROL - NOTES & DETAILS

**SHOWN** 

Ellicott City, Maryland 21042 (410) 461 - 2855 600' SCALE MAP NO. \_\_\_\_16\_\_\_\_\_ BLOCK NO. \_\_\_





- I. INSTALL TEMPORARY STREAM CROSSING AS PER THE DETAIL PROVIDED. (SEE SHEET 3 OF 6). 2. INSTALL CONSTRUCTION MATS TO PROTECT THE WETLAND AREAS DURRING CONSTRUCTION. THE MATS
- 3. REMOVE THE TOP 6" OF MATERIAL (COMPLETE WITH POOTMATS IN THE EMERGENT AREAS) AND STOCKPILE SEPARATELY FOR RE-INSTALLATION. 4. INSTALL THE SEWER LINE AS PER CONTRACT DRAWING # 20-3601-D. 5. BACKFILL TO EXISTING GRADE UTILIZING THE STOCKPILED MATERIAL EXCAVATED FROM THE WETLAND
- AREAS; REPLACING THE ROOT MATE WHERE POSSIBLE. G. UPON COMPLETION OF THE RIP-RAP INSTALLATION FOR THE STREAM CROSSING, 2' DORMANT BLACK WILLOW STAKES ARE TO BE POUNDED INTO THE BANKS WITH THE RIP-RAP COVER 2' ON CENTER. THESE STAKES ARE TO BE HARVESTED AND INSTALLED BETWEEN NOVEMBER 1 TO FEBRUARY 28 OR WILL BE REFRIGERATED TO MAINTAIN A DORMANT STATE. 7. TEMPORARY STREAM CROSSING WILL BE REMOVED.
- NOTE: 1) ALL CONSTRUCTION AND POST-CONSTRUCTION ACTIVITES SHALL CONFORM TO THE BEST MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS. (SEE SHEET 5 OF 6).
  - 2) THE STREAM CLOSURE PERIOD FOR A CLASS I STREAM IS MARCH I TO JUNE 15.

WILL BE UTILIZED BETWEEN MANHOLE # 21 TO MANHOLE # 650.

NOTES: I. THE USE OF MATS SHALL BE REQUIRED FOR CONSTRUCTION EQUIPMENT OPERATED WITHIN THE WETLANDS FROM EX. MH #21 TO MH #650.

> 1. ALL TEMPORARY EQUIPMENT CROSSINGS SHALL BE REMOVED IMMEDIATELY UPON COMPLETION OF THE SEWER MAIN CONSTRUCTION.

NOTE: THE LENGTH OF OPEN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED & STABILIZED WITHIN ONE (1) WORKING DAY; WHICHEVER IS SHORTER.

SEE SHEET I FOR PLAK OF INTERCEPTOR SECKER MAIL 20' SEXIER & UTILITY EASEMENT NOTE: FOLLOWING INSTALLATION OF THE SEWER MAIN; THE GOLF COURSE FAIRWAY & THE GOLF CART EX. SCK/ER & UTILITY EACHMENT PATH SHALL BE RESTORED TO THEIR ORIGINAL LOCATION & CONDITION. PROPERTY OF:

MALIGIOLIE ELITERYPRISES

OF

MALLEY 465 TURF VALLEY L.920 / F. 250 (MH) (GGO) 460 PROMERTY OF: NOTE: SET RIMS OF MH \* G50 \$
MH \* GGO FLUSH W/ EX. GROUND LYOTE: SET RIMD OF MH'S #GOO THRU #G40
1'-6" ABOVE EXISTING GROUND; SEE
STANDARD DETAIL G. 5.4". NICHOLAS B. MANGIONE L.12G3/F.724 W.T. MH MH 620 W.T. XI.T. MH NOTE: W.T. DENOTES WATERTIGHT MANHOLE FRAME & COVER; STANDARD DETAIL GS.52 EX. GROUND @ 'E' SEWER BUILT UNDER (EX.) KJ.T.
CONT. \* 21-3447 21
COP. PROJ. KJ-8195 RIP-RAP; SEE \_ DETAIL SHEET EX.GROUND@ É SENER PROVIDE INTERMEDIATE LAWDING PETAIL SHEET 5 EX. STREAM IL) VEPST. *4*35 EX. GROUND @ & SEK/ER ... MEX. STREAM INVERT 15"5 @ O.ZZ 7 16"5; CL.5217.1.P.@0.52% EX. STREAM IL) VERT 430 15"5@0.52% 15"5@ 0.5Z 7. 16"5; CL. 52 D.I.P. @ 0.45% 15"5 @ 0.44% 15"5@0.44% 425 - 428.GZ *4*29.78 -429.32 429.24 -427.41 UTILITY STREAM CROSSING -42G.Z4 42G.1G 425.45 420 424.00 I TEMPORARY ACCESS CULVERTS, REF. STD. DET. EX. 15"9 (AHE'S) 423.61 CONT. # 24 - 3447 - COLLIECT TO EX. MH & REFORM CHALLIVEL 423.GI 53.11; REF. SHEET 5 FOR UTILITY STREAM CROSSING & CROSSING, DIVERSION 4 TEMPORARY ACCESS CULVERTS; REF. STD. DET. S3.11; REP. SHEET 5 FOR FILTER BAG DETAILS & LIMIT OF SELLER MAILY COLISTRUCTION CROSSING, DIVERSION & FILTER BAG REF. SHEET 3 FOR ACCESS DETAILS & REF. SHEET 3 FOR CULVERT DETAILS PROFILE ACCESS COWERT DETAILS. CALE: HORYZ: 1"=50" 410 CLASS 52 DI.P. ONLY CLASS 5% DI.P. QULY MY K/ALL TO MY K/ALL MH WALL TO MH WALL *40*5 DESIGN CAPACITY - 2.75 MGD 400 DESIGN CAPACITY = 2.75 MGD DESIGN CAPACITY = 3.00 MGD IN O DESIGN CAPACITY = 3.28 MGD DESIGN CAPACITY = 3.00 MGD NO DESIGN CAPACITY - 3.50 MGD = 0 DESIGN CAPACITY = 1.95 MGD 15-INCH / IG-INCH INTERCEPTOR SEXJER MAIN

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

CHIEF , BUREAU ON UTILITIES

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND

NOTE: SEE THIS SHEET FOR "WETLAND # STREAM RESTORATION PLAN/

SEQUENCE OF CONSTRUCTION.

21990 DATE

Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Ellicott City, Maryland 21042
(410) 481 - 2855



DESIGNED BY P.W.K. INTERCEPTOR SEXIES MAIN DRAWN BY CHECKED BY FCC ADD WETLAND & STREAM RESTORATION PLAN /SEQ. OF CONST. 03/98 P.W.K. 600' SCALE MAP NO. 16 BLOCK NO. FCC ADD NOTE REFERENCING WETLAND & STREAM REST. / S.O.C. 03/98 F.C.C. WORK ORDER NO. \_\_\_\_\_527 DATE FILE NAME : G:/DRAWINGS/527/

G.T.W.'S LITTLE PATUXENT INTERCEPTOR AND SEWER MAIN EXTENSION

CONTRACT NO. ZO-3COI-D THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHOWN

CONTRACT NO. ZO - 3COI - D GTWS LITTLE PATUXENT INTERCEPTOR AND SEWER MAIN EXTENSION

HOWARD COUNTY, MARYLAND

### SECTION 20: STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

Vegetative stabilization specifications are used to promote the estabilishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc. EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters. SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

i. Install erosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
 ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually

necessary for temporary seeding.

iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

5. Soil Amendments (Fertilizer and Lime Specifications)

i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee

of the producer. III. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a \*100 mesh sieve and 90-100% will pass through a \*20

mesh sieve.
Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

iv. Incorporate lime and fertilizer into the top 3-5° of soil by disking or other suitable means.

Seedbed Preparation

I. Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of 3° to 5° 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 should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 31 should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. In corporate lime and fertilizer into the top 3-5° of soil by disking or other suitable means.

II. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:

1. Soil pit shall be between 6.0 and 7.0.

2. Soluble salts shall be less than 500 parts per million (opm).

3. The soil shall contain less than 40% clay, but enough fine grained material 030% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedezas is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.

serecia lespedezas is to be planted, then a sandy soil (30% silt plus clay) would be acceptable.

4. Soil shall contain 1.5% minimum organic matter by weight.

5. Soil must contain sufficient pore space to permit adequate root penetration.

6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.

b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

sliding down a slope.

Apply soil amendments as per soil test or as included on the plans.

Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on

D. Seed Specifications

Seed Specifications
 i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
 Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
 ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on 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°-80° f. can weaken bacteria and make the inoculant less effective.
 Methods of Seeding
 i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker seeder.
 a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogens maximum of 100 lbs. per acre total of soluble nitrogens

exceed the following: nitrogens maximum of 100 lbs. per acre total of soluble nitrogens P205 (phosphorous): 200 lbs/ac; K20 (potassium): 200 lbs/ac.

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.

Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 266. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

a. 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.

b. Where practical, seed should be applied in two directions perpendicular to each other.

Apply half the seeding rate in each direction.

Mulch Specifications (In order of preference) Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 Wood Cellulose Fiber Mulch (WCFM)

 WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

WCFM shall 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 sturry. WCFM, including dye, shall contain no germination or growth inhibiting factors. WCFM materials shall be manufactured and processed in such a manner that the

and will blend with seed, fertilizer and other additives to form a homogeneous slurry.

The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.

wood cellulose fiber mulch will remain in uniform suspension in water under agitation

will be phytol-toxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed accordance with these specifications.

accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1° and 2°. Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

Securing Straw Mulch Mulch Anchoring: Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:

preference), depending upon size of 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 two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safety. If used on sloping land, this practice should be used on the contour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber, binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

of water.

Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders – such as Acrylle DLR (Agro-Tack), DCA-70 Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long. SEDIMENT CONTROL NOTES

1) A MINIMUM OF 40 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).

2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED

DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (3)3-1855).

2) ALL YEGETATIVE 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.

3) 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 STEEPER THAN 31, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4) 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.

5) 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), 50D (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 GERNINATION AND ESTABLISHMENT OF GRASSES.

6) 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.

7) SITE ANALYSIS:

TOTAL AREA OF SITE

AREA DISTURBED

AREA TO BE VECETATIVELY STABILIZED/RECEMED LOG ACRES

AREA TO BE VECETATIVELY STABILIZED/RECEMED LOG ACRES

AREA TO BE VECETATIVELY STABILIZED/RECEMED LOG ACRES

-0-AREA TO BE ROOFED OR PAVED - O- ACKES
AREA TO BE VEGETATIVELY STABILIZED/RESTORED 1.612 ACRES AREA TO BE ROOFED OR PAVED

OFFSITE WASTE/BORROW AREA LOCATION N/A

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

9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED

9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10) 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 ACENCY IS MADE. BY THE INSPECTION AGENCY IS MADE.

11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PERMANENT SEEDING NOTES ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDBED PREPARATION:

LOCSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS:
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/ 1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER U4 LBS./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC. INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 38-0-0 UREAFORM FERTILIZER (9 LBS./1,000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./1,000 SQ.FT.) OF 10-20-20 FERTILIZER.

FEDING:

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS/ACRE (1.4 LBS./1,000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 SQ.FT.) OF WEEPING LOVEGRASS, DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 22 PROJECT SITE BY OPTION (1) - TWO TONS DEC FEBRUARY 20. PROJECT SITE BY: OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING OPTION (2) - USE SOD, OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD

APPLY 1 TO 2 TONS PER ACRE (10 TO 90 LBS./1,000 SQ.FT.)
OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING.
ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GAL/1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES. ON SLOPES 0 FEET OR HIGHER USE 340 GALLONS PER ACRE (0 GAL/1,000 SQ.FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SPEDED AREAS AND MAKE NEEDED REPAIRS,

TEMPORARY SEEDING NOTES

apply to graded or cleared areas likely to be redisturbed WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY

APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./ 1,000 SQ.FT.)

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1.5 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS./ACRE OF WEEPING LOVEGRASS (07 LBS./ 1,000 SO.FT. FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 20, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

APPLY 15 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 210 GALLONS PER ACRE (5 GALL,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES ON SLOPES & FEET OR HIGHER, USE 340 GALLONS PER ACRE (0 GAL./1,000 SQ.FT.) FOR

REFER TO THE 1988 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT

### SEQUENCE OF CONSTRUCTION

1. OBTAIN THE REQUIRED GRADING PERMIT.

2. NOTIFY MISS UTILITY (1-800-257-7777) FORTY EIGHT (40) HOURS BEFORE BEGINNING ANY WORK. 3. NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410-313-1870) TWENTY FOUR (24) HOURS BEFORE STARTING ANY WORK.

4. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE. (IDAY) 5. INSTALL THE REQUIRED SEDIMENT & EROSION CONTROL DEVICES AS INDICATED ON SHEETS 2 & 3. (3 DAYS) 6. CLEAR & GRUB AS NECESSARY; ONLY AS REQUIRED FOR EXCAVATION & INSTALLATION OF THE SEWER MAIN & ONLY WITHIN THE DESIGNATED SEWER & UTILITY EASEMENTS. (3 DAYS)

7. INSTALL THE SEWER MAIN & APPURTENANCES IN ACCORDANCE WITH THE CONSTRUCTION PLANS, NOTES & DETAILS. REFERENCE "BEST MANAGEMENT PRACTICES" (SHEET 5) FOR WORK WITHIN THE NON-TIDAL WETLANDS & BUFFERS. THE LENGTH OF OPEN SEWER MAIN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED & STABILIZED WITHIN ONE (1) WORKING DAY. START OF SEWER MAIN INSTALLATION AT THE STREAM CROSSINGS SHALL BE CONTINGENT UPON A 5-DAY CLEAR WEATHER FORECAST FROM THE N.W.S. & CONSTRUCTION WITHIN THESE LIMITS MUST BE COMPLETED

WITHIN THE 5 DAYS. (30 DAYS) 8. RESTORE WETLANDS, WETLAND BUFFERS & STREAM AREAS IMPACTED BY CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH THE PLAN INCLUDED ON THE

CONTRACT DRAWINGS. (5 DAYS) 9. FINE GRADE, SEED & MULCH ALL OTHER DISTURBED AREAS IN ACCORDANCE WITH THE SEEDING & OTHER NOTES INCLUDED ON THE CONTRACT PLANS. (\$ DA(S) 10. FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS, AND WITH PERMISSION OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION & SEDIMENT CONTROL DEVICES. (2 DAYS)

SECTION 21:

STANDARD AND SPECIFICATIONS FOR TOPSOIL

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

2) PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. 3) SPECIFICATIONS: A.TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND.

B.TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING SUBSOILS.

C.TOPSOIL SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1.5° IN DIAMETER.

A.TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"- 0" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4"; AVOID SURFACE IRREGULARITIES.

B.PLACE TOPSOIL AND APPLY SOIL AMENDMENTS AS SPECIFIED IN "STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION". C.TOPSOIL SHALL NOT BE PLACED DURING FROZEN, MUDDY, OR EXCESSIVELY WET

DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROGION AND SEDIMENT CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEFINED INCOSSARY.

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT

PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL

WITHIN THE WETLANDS FROM EX. MI #21

SHALL BE REMOVED IMMEDIATELY UPON

2. ALL TEMPORARY EQUIPMENT CROSSINGS

COMPLETION OF THE SEWER MAIN

CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY

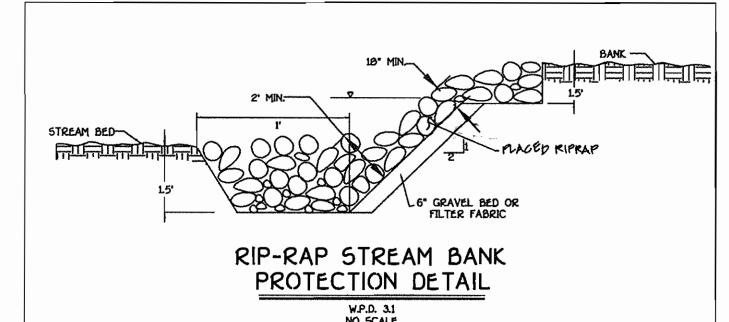
PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS

NOTES: 1. THE USE OF MATS SHALL BE REQUIRED

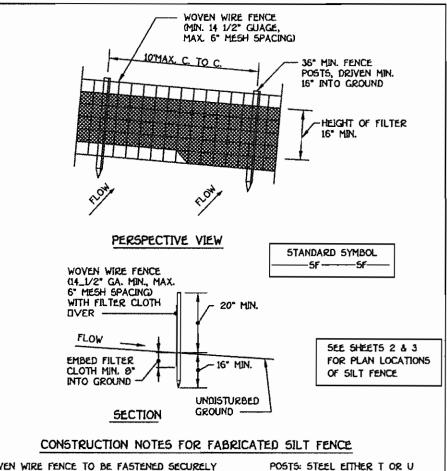
TO MH # 650.

CONSTRUCTION.

(CONTINUED BELOW)



SEWER MAIN STREAM BED ---√3 FT. MINIMUM BASIN (WPD 1.1) OR FILTER BAG - PROPOSED SEWER MAIN SECTION BB FLOW BARRIER STREAM CROSSING NOTE FLOW WORK FOR EACH STREAM CROSSING SHALL START ONLY WITH A FIVE (S) DAY LIMITS OF-STREAM BANK CLEAR WEATHER FORECAST & MUST BE COMPLETED WITHIN FIVE (5) DAYS. \_\_PROPOSED WATER/ SEWER MAIN EX. GROUND PLAN VIEW RIP-RAP-FOR CONSTRUCTION EQUIPMENT OPERATED --Proposed Water/ Sewer Main SECTION AA UTILITY CROSSING DETAIL



1. WOVEN WIRE FENCE TO BE EASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OF STAPLES.

2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.

EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.

3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN

4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

OR APPROVED EQUAL PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL

TYPE OR 2" HARDWOOD

6" MAX. MESH OPENING

100X, STABILINKA TI4 ON

FENCE: WOVEN WIRE, 14. GA.

FILTER CLOTH: FILTER X, MIRAFI

SILT FENCE

STREAM CROSSING NOTE WORK FOR EACH STREAM CROSSING SHALL START ONLY WITH A FIVE (5) DAY CLEAR STREAM WIDTH WEATHER FORECAST & MUST BE COMPLETED SANDBAG/STONE STREAM WITHIN FIVE (5) DAYS. FLOW DIVERSION \_IMPERVIOUS SHEETING EXISTING GRADE (2 FT MIN) H/2+1FT DISTURBED AREA MINIMUM CHANNEL CROSSECTIONAL AREA SHALL BE 60% OF EXISTING UNLESS SECTION AA OTHERWISE SPECIFICALLY APPROVED. SANDBAG/STONE STREAM FLOW DIVERSION DETAIL

### BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS

A) REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UPLAND DISPOSAL AREA;

B) PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NONTIDAL WETLAND; C) MAINTAIN THE HYDROLOGIC REGIME OF THE NONTIDAL WETLANDS UPSTREAM, DOWNSTREAM, OR ADJACENT TO THE REGULATED ACTIVITY:

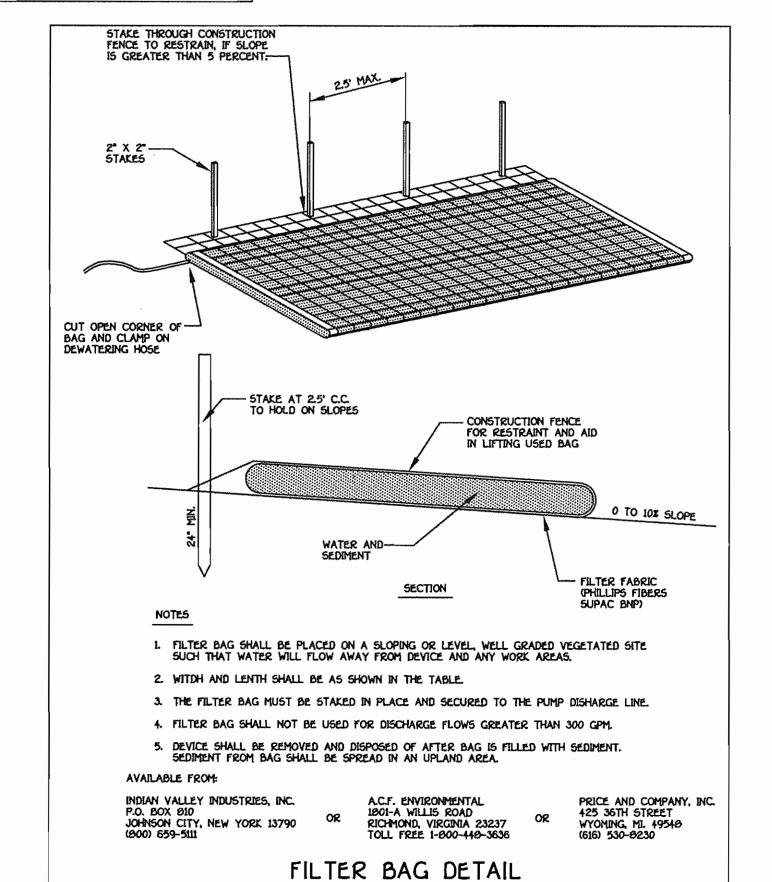
D) STORE HEAVY EQUIPMENT IN UPLAND AREAS AND SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO THE REMAINING NON-TIDAL WETLANDS: E) ALL STABILIZATION PLANTINGS IN THE REMAINING WETLAND SHALL BE OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET SETARIA ITALICA), BARLEY (HOREDUM SP.), OATS (UNIOLA SP.), AND/OR RYE (SECALE CEREALE). THESE SPECIES ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLANDS SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE BUT MUST BE APPROVED BY THE DIVISION. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION

ACTIVITIES HAVE BEEN COMPLETED. F) FOR UTILITY LINE INSTALLATION, STOCKPILE AND MAINTAIN SEPARATELY THE TOP 6"- 12" OF TOPSOIL MATERIAL, TO BE REPLACED AS THE TOP LAYER OF THE BACKFILLED MATERIAL, UNLESS IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. USE CLEAN BORROW MATERIAL WHEN EXCAVATED MATERIAL IS NOT SUITABLE FOR USE AS BACKFILL;

UPON COMPLETION OF THE PROJECT NONTIDAL WETLANDS AND THE 25-FOOT NONTIDAL WETLAND BUFFER WILL NOT BE MOWED OR OTHERWISE MANAGED TO PREVENT THE RE-ESTABLISHMENT OF THE PRE-EXISTING TYPE OF VEGETATIVE COVER; H) AFTER THE UTILITY LINE INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS OF NON-TIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS.

(NOTES: CONTINUED)

3. SEE SHEET 4 FOR "WETLAND & STREAM RESTORATION PLAN / SEQUENCE OF CONSTRUCTION'



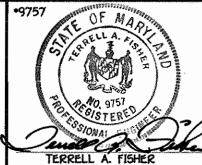
NOT TO SCALE CONTRACT NO. 20-3601-D GTWS LITTLE PATUXENT INTERCEPTOR

> AND SEWER MAIN EXTENSION HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND

> FISHER, COLLINS & CARTER, INC. IVIL ENGINEERING CONSULTANTS & LAND SURVEYORS FILICOTT CITY, MARYLAND 21042



DESIGNED BY M.J.M. DRAWN BY M.J.M. CHECKED BY P.W.K. DATE : JANUARY, 1998

CC | ⚠ | ADD NOTE REFERENCING, WETLAND & STREAM REST. /S.O.C. | 03/9 DATE REVISION

DETAILS

600' SCALE MAP NO. \_\_\_16 \_\_\_ BLOCK NO. \_\_\_10 F.C.C. WORK ORDER NO. . G:/Drawings/527/Detailsheet.dwg

G.T.W.'S LITTLE PATUXENT INTERCEPTOR AND SEWER MAIN EXTENSION

> CONTRACT NO. 20-3601-D THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHOWN SHEET

**SCALE** 

2.56× 98

FILE NAME :

5 of 6

