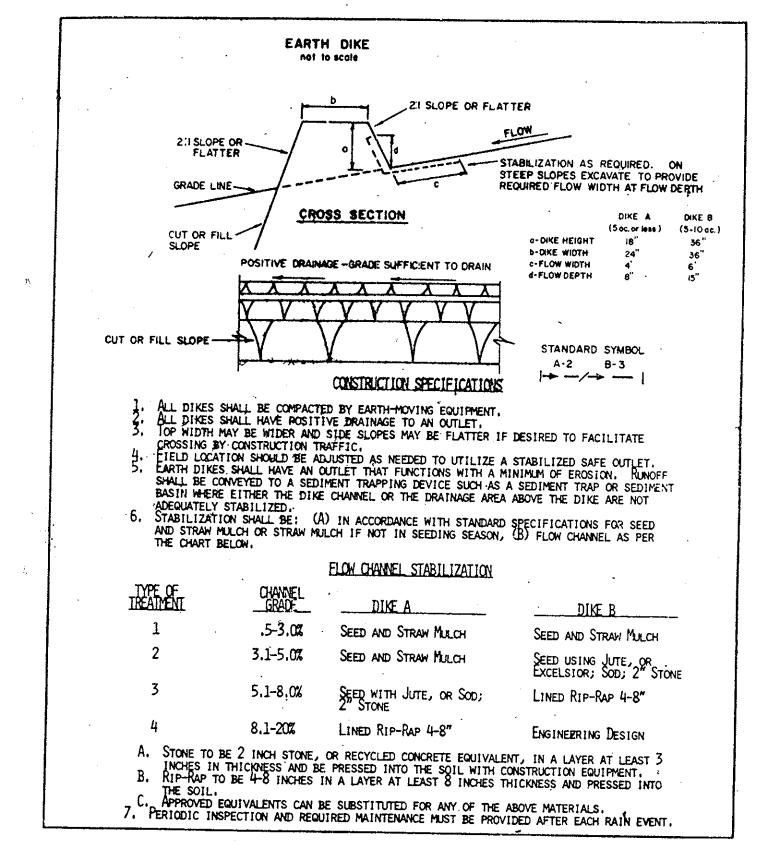
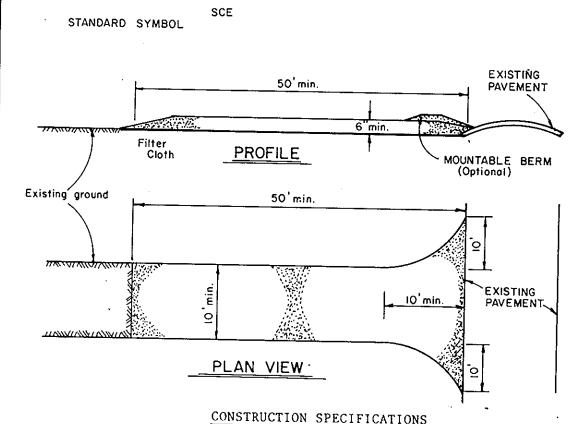


FENCE: Woven wire, 14 Ga. woven wire fence with ties spaced 6" Max. Mesh Opening every 24" at top and mid-section. 3. When two sections of filter cloth FILTER Filter X, Mirafi 100X adjoin each other, they shall be over-CLOTH: Štabilinka T140N, or lapped by six inches and folded. approved equal . 4. Maintenance shall be performed as PREFABRICATED Geofab, needed and material removed when · UNIT: Envirofence, "bulges" develop in the silt fence. or approved equal



This development plan is approved for Reviewed for Howard Soil Conservation soil erosion and sediment control by District and meets technical requirements the Howard Soil Conservation District. M.S. Soil Conservation Dist

### STABILIZED CONSTRUCTION ENTRANCE not to scale



1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.

2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30-foot minimum length would apply). Thickness - Not less than six (6) inches.

4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.

6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.

7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may required periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed, or tracked onto public rights-of-way must be removed immediately.

8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.

9. Periodic inspections and needed maintenance shall be provided after each rain.

# n grading permit.

2. Designate contractor's staging and stockpile areas. 3. Clear and grub for the installation of perimeter. controls a

4. Install silt fince, and construct 18" CMP E-1 to

5. Excavate basin to elevation 207.

6. Construct all drainage pipes and structure repairing stabilized construction entrance were crossed by

7. Construct earth dike.

8. Complete site clearing and

9. Begin site grading and bui undation excavation.

10. Begin building construct

11. Construct curb and autter.

12. Construct asphart paving and curbs.

13. Backfill all curbs and fine grade site.

14. Plant Ite in accordance with landscaping plan.

n stabilization is evident on site, clean all sediment from and the 15" CMP. Excavate the basin to elevation 206, and

Remove all remaining silt fence and dikes, and stablize \* SEE SHEET 5 OF 5 FOR ADDITIONAL NOTES AND DETAILS

# 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 3. inches of soil by raking, discing, or other acceptable means before seeding.

Soil Amendments: Use on the the following schedules:

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

20 Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30 and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. of Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option 1 - 2 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 60 lbs. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well-anchored

Mulching: Apply 1½ 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 slopes 8 feet or higher, use 348 gallons per acre (8 gal./1000 sq.ft.) for anchoring.

Maintenance: Inspect all seeded areas, and make needed repairs, replacements, and reseedings.

### TEMPORARY SEEDING NOTES

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

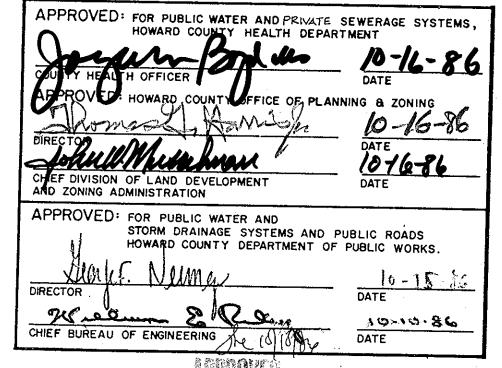
Seedbed Preparation: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding.

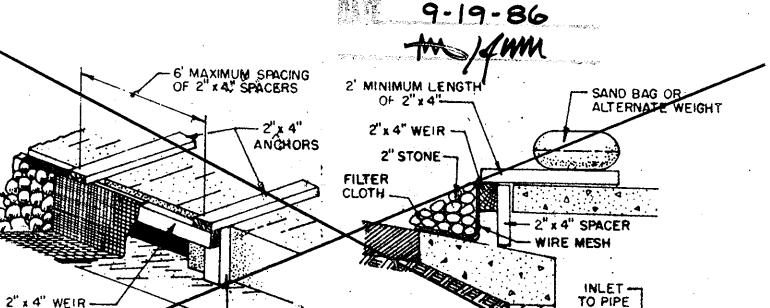
Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs/1000 sq.ft.)

Seeding: For periods March I thru April 30 and from August 15 thru November 15, seed with 2½ bushel per area of annual rye (3.2 lbs/1000 sq.ft.). For the period May I thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs/1000 sq.ft.). For the period November 16 thru February 28, 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.

Mulching: Apply 12 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 gal per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal. per acre (8 gal/1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.





OWNER / DEVELOPER

C-W & COMPANY 10901 Pump House Rd. ANNA POLIS JUNCTION, MD. 20701 410-880-0850

CURB INLET PROTECTION DETAIL

ENGINEER'S CERTIFICATION

Howard Soil Conservation District.

# FOR REVISION I ONLY

### SEDIMENT CONTROL NOTES

- 1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction (992-2437).
- 2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3. Following initial soil disturbance or redisturbance, 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.
- 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 1983 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 along can only be done when recommended seeding dates do not allow proper germination 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 ' \_ <u>2.80</u> acres Area disturbed <u> 1.85</u> acres Area to be roofed or paved <u>0.95</u> acres Area to be vegetatively stabilized Total cut Total fill Off-site

0.90 acres <u>3660</u> cu.yds. 2100 cu.yds. MOT BHOWN

- 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 necessary by the Howard County DPW 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 agency is made.
- 11. On all site 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.

### SODDING NOTES

## Bed Preparation and Soil Amendments

- A. Prior to sodding, the surface shall be cleared of all trash, debris, and of all roots, brush, wire, grade stakes, and other objects that would interfere with planting, fertilizing, or maintenance operations.
- B. Ground limestone shall be spread at the rate of 2 tons per acre or 100 pounds per 1,000 square feet. In all soils, 1,000 pounds per acre or 25 pounds per 1,000 square feet of 10-10-10 fertilizer or equivalent shall be uniformly applied and mixed into the top 3 inches of soil with the required lime.
- C. All areas receiving sod shall be uniformly fine graded. Hardpacked earth shall be scarified prior to placement of sod.

### II. Sod Installation

- A. During periods of excessively high temperature, the soil shall be lightly irrigated immediately prior to laying the sod.
- B. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Insure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
- C. Sod shall be laid with the long edges parallel to the contour and with staggered joints. Secure the sod by tamping and pegging.
- As sodding is completed in any one section, the entire area shall be rolled or tamped to insure solid contact of roots with the soil surface. Sod shall be watered immediately after rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping, and irrigating for any piece of sod shall be completed within eight hours.

### Sod Maintenance

- In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Waterings should be done during the heat of the day to prevent wilting.
- B. After the first week sod shall be watered as necessary to maintain adequate moisture and insure establishment.
- C. First mowing should not be attempted until sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 and 3 inches unless otherwise specified. 1 19000 SE ADDITION ; 2500 SE OFFICE EXPANSION; STORM DRAIN REALIENMENT 12.10.00

JAMES A. RUFF, PE No. 21774

No REVISION SEDÍMENT CONTROL DETAILS

C-W & COMPANY LOT 'A-1'

BUILDING ADDITION TO SDP-77-74 DATE: SEPT. 25-1986

# PURDUM & JESCHKE CONSULTING ENGINEERS LAND SURVEYORS

1029 North Calvert, Street Baltimore, Maryland 21202

A&E BALT

301/837-0194

done according to this plan, and that any responsible personnel involved in the construction project will have a certificate of attendance at the Dept. of Natural Resources approved training program for the control of any sediment and erosion before beginning the project.

I certify that all development and construction will be

DEVELOPER'S CERTIFICATION

CHARLES A CUMMINS I

Kribard H. Beril RICHARD H. BERICH

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

6TH ELECTION DISTRICT ZONED M-2

HOWARD COUNTY MD. SCALE! AS SHOWN

DATE

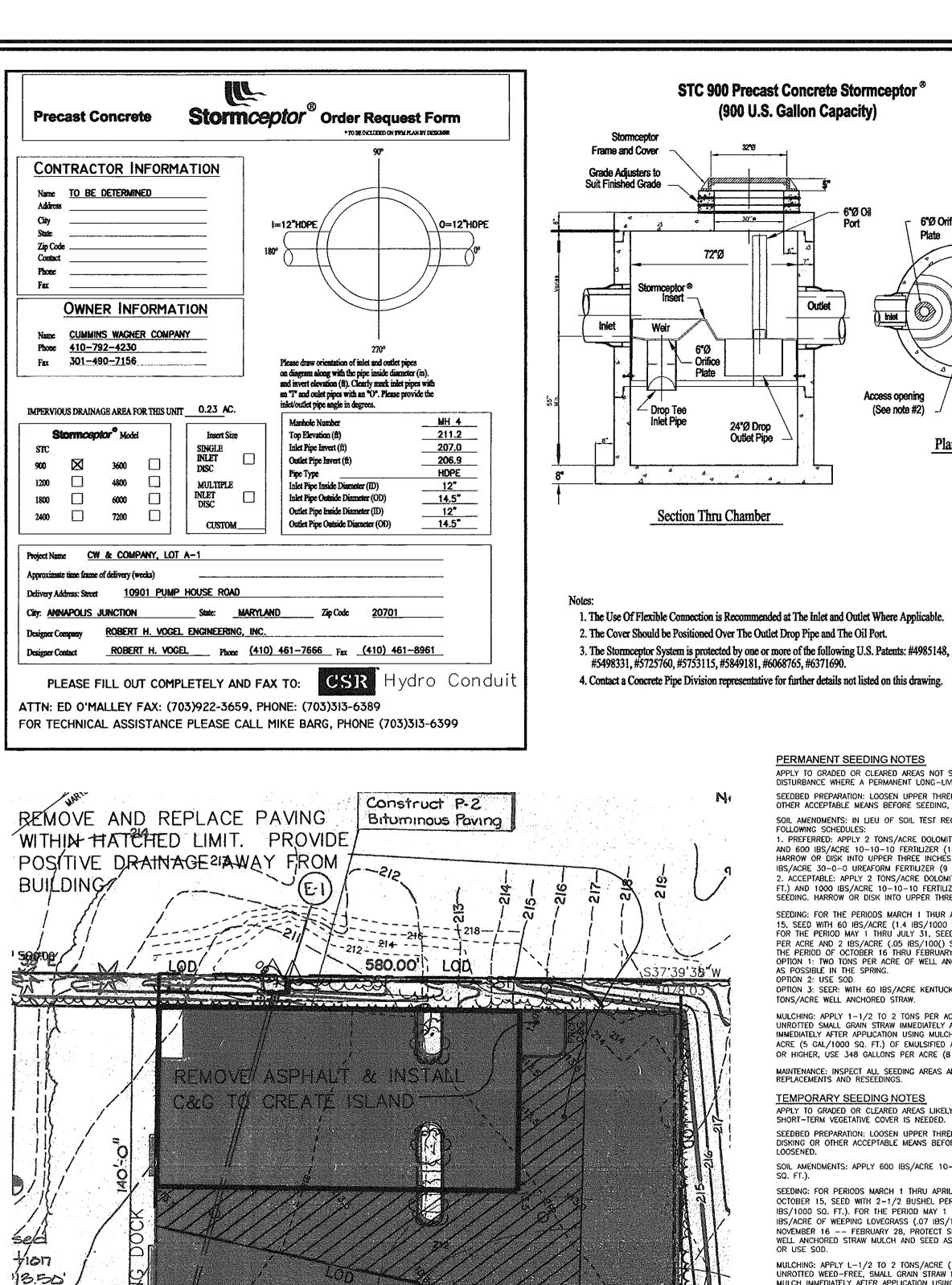
L.B.B.

C.N.W

R.H.B

SHEET <u>4</u> OF 5

DRWN.



R-25-5/

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

PAVING PLAN

SCALE=1"=30"

NO.

TYPE

HW-1 TYPE 'E' HEADWALL MSHA

MH-1 PRECAST 48" MANHOLE

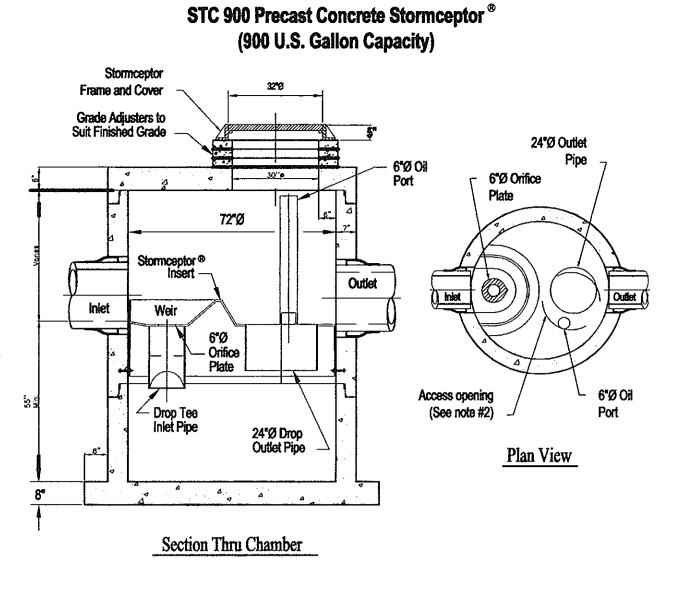
MH-2 PRECAST 48" MANHOLE

MH-3 PRECAST 48" MANHOLE

MH-4 STORMCEPTOR

HW-2 TYPE 'A' HEADWALL

7.5F



PERMANENT SEEDING NOTES

FOLLOWING SCHEDULES:

AS POSSIBLE IN THE SPRING.

TONS/ACRE WELL ANCHORED STRAW.

TEMPORARY SEEDING NOTES

SHORT-TERM VEGETATIVE COVER IS NEEDED.

OPTION 2: USE SOD.

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER

DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

IBS/ACRE 30-0-0 UREAFORM FERTILIZER (9 IBS/1000 SQ. FT.)

SEÉDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY:

UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING, ANCHOR MULCH

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS,

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING.

OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2

IBS/1000 SQ, FT.), FOR THE PERIOD MAY 1 -- AUGUST 14, SEED WITH 3

IBS/ACRE OF WEEPING LOVEGRASS (.07 IBS/1000 SO, FT.), FOR THE PERIOD

NOVEMBER 16 -- FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS/ACRE OF

MULCHING: APPLY L-1/2 TO 2 TONS/ACRE (70 TO 90 IBS/1000 SQ. FT.) OF UNROTTED WEED-FREE, SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR

MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218

ON SLOPE 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL/1000 SQ. FT.) FOR

REMARKS

GAL. PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT

PIPE SCHEDULE

ELEV. IN OUT

211.75 209.50 --- MD 365.01

212.8 206.42 206.32 G-5.12

213.0 207.98 207.88 G 5.12

215.0 208.75 208.65 G 5.12

211.2 | 207.00 | 206.90 | STC 900

208.37 — 206.7 SD 5.21

TRENCH DRAIN

HDPE

PVC

SIZE

12"

18"

12"

LOCATION

STRUCTURE SCHEDULE

NOTE: 1. TOP ELEVATIONS ARE TO CENTER OF THE MANHOLE TOP, AND TOP OF HEADWALL

WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING,

DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE

2. ACCEPTABLE: APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 IBS/1000 SQ.

1. PREFERRED: APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 IBS/1000 SQ. FT.)

AND 600 IBS/ACRE 10-10-10 FERTILIZER (14 IBS/1000 SQ. FT.) BEFORE SEEDING

HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400

MH\\_TOP=211.20 TOP=208.37 (HW) FF=213.50 TRENCH DRAIN Q = 1.7 CFSV = 7.43 FPS12" HDPE @1.00% Q = 1.7 CFSHDPE @1.00%  $V_{x} = 2.17 \text{ FPS}$ Q = 1.7 CFS $S_{MN} = 0.28\%$  $V_{0} = 2.17 \text{ FPS}$  $V_{ACT} = 4.02$  FPS  $S_{MN} = 0.28\%$  $V_{ACT} = 4.02$  FPS STORM DRAIN PROFILE SCALE : HORIZONTAL - 1"=50"

TOP=217.75 (HW) TOP=215.0 MH TOP=213.0 MH TOP=212.8 MH - PROP GRD BUILDING FF = 213.50- EX GRD HGL=TOP OF PIPE HGL=TOP OF PIPE 18' RCP@ 0.75% 18" RCP @ 0.75% 18" RCP @ 1.14% Q = 5.81 CFSQ = 5.81 CFSQ = 5.81 CFS $V_{10} = 3.29 \text{ FPS}$  $V_{10} = 3.29 \text{ FPS}$  $V_{10} = 3.29 \text{ FPS}$  $S_{MIN} = 0.31\%$  $S_{min} = 0.31\%$  $S_{MIN} = 0.31\%$  $V_{ACT} = 5.46$  FPS  $V_{ACT} = 5.46$  FPS  $V_{ACT} = 6.40 \text{ FPS}$ 

STORM DRAIN PROFILE SCALE: HORIZONTAL - 1"=50" VERTICAL - 1"=5"

A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSE AND PERMITS SEDIMENT CONTROL DIVISION

STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. AND REVISIONS THERETO.

ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE

. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (A) 7 CALENDAR DAYS FOR ALL PERIMETER

THAN 3:1, (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

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE

SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY

IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR

ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE

OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

AREA TO BE ROOFED OR PAVED PARKING+BUILDING 0.50 ACE

ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR

PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF

PERIMETER EROSION AND SEDIMENT CONTROLS. BUT BEFORE PROCEEDING WITH ANY OTHER

NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL 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

\* TO BE DETERMINED BY CONTRACTOR, WITH PRE-APPROVAL OF THE SEDIMENT CONTROL INSPECTOR WITH AN APPROVED AND ACTIVE GRADING PERMIT

EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE

ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE

SEDIMENT CONTROL STRUCTURES, DIKES, PERIMÉTER SLOPES, AND ALL SLOPES GREATER

AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, HOWARD COUNTY

SEEDING, AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL

BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION

MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN

PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND

PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).

SEDIMENT CONTROL NOTES

DESIGN MANUAL, STORM DRAINAGE

AND ESTABLISHMENT OF GRASSES.

AREA TO BE VEGETATIVELY STABILIZE<u>O</u>

HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

WASTE/BORROW LOCATION \_\_\_\_\_

BY THE ENGINEER:

SITE ANALYSIS :

TOTAL AREA

-BOLLARD

DETAIL 33 - SUPER SILT FENCE

. FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE

LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 8' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6' LENGTH

2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS ROOS, DRIVE ANCHORS AND POST CAPS ARE NOT

3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY  $24^{\circ}$  AT THE TOP AND MIO SECTION.

5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED

6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BUILGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT

7. FILTER CLOTH SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR

20 LBS/IN (MIN.)

0.3 GAL/FT /MINUTE (MAX.)
75% (MIN.)

4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE CROUND.

---- SSF —

TEST: MSMT 509

~1/2" EXP. JOINT MATERIAL

HOTE: FENCE POST SPACING SHALL NOT EXCEED 1 CENTER TO CENTER

FLOW \_\_\_\_\_ FILTER CLOTH \_\_\_

REQUIRED EXCEPT ON THE ENDS OF THE FENCE.

TENSILE MODULUS

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVACE

\* IF MULTIPLE LAYERS ARE REQUIRED TO ATTAIN 42\*

SOLID WASTE SERVICE PAD HOWARD COUNTY STD. R 8.03 NOT TO SCALE

-6X6/6-6 WELDED WIRE MESH

S.H.A. MIX NO. 3 CONCRETE

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED STORMCEPTOR WATER QUALITY DEVICE

2"- NO. 6 REBAR

- a. The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection/Monitoring Form. Inspections shall be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When the sediment depths exceed the level specified in Table 6 of the Stormceptor Technical Manual, the unit must be cleaned.
- b. The Stormceptor water quality structure shall be checked and cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies.
- c. The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- d. The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
- e. The owner shall retain and make the Stormceptor Inspection/Monitoring Forms available the Howard County officials upon their request.

REVISED SITE DEVELOPMENT PLAN

REV 10-10-08 - 10,000 SQFT ADDITION 2500 SQFT OFFICE EXPANSION SD REALIGNMENT

C-W & COMPANY

TAX MAP 48 GRID 14

LOT A-1

6TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

PARCEL 68

ROBERT H. VOGEL Engineering, Inc. ENGINEERS • SURVEYORS • PLANNERS 8407 MAIN STREET TEL: 410.461.7666 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



JAMES A. RUFF, PE No.21774

DESIGN BY: DRAWN BY: CHECKED BY: \_\_\_\_\_RHV\_ DATE: Feb 27, 2009 SCALE: \_\_\_\_ AS SHOWN W.O. NO.:

 $_{\circ}$  SHEET  $_{\circ}$ 

21.0 STANDARDS AND SPECIFICATIONS
FOR TOPSOIL IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES: PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:

A. pH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF
THE TESTED SOIL DEMONSTRATES A pH OF LESS THAN
6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE

VERTICAL - 1"=5'

ESTABLISHMENT OF PERMANENT VEGETATION. 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:

A. THE TEXTURE OF THE EXPOSED SUBSOIL PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS. II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4"-8" HIGHER IN ELEVATION. III. 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 A MINIMUM OF
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.

IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS
IN A EPOZEN OR MINDLY CONDITION WHEN THE 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.

THE pH TO 6.5 OR HIGHER.

B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN

1.5 PERCENT BY WEIGHT.

TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN

ALTERNATIVE TO PERMANENT SEEDING — INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW: COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

FOLLOWING REQUIREMENTS:

A. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THI TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.

B. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST I PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.

C. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET,

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL WITH 3 SHADE TREES PROVIDED WITH LANDSCAPE SURETY IN THE AMOUNT OF \$900.00 WITH THE BUILDER'S GRADING

NOTES;

1. DURING GRADING AND AFTER EACH RAINFALL, CONTRACTOR WILL INSPECT AND PROVIDE NECESSARY MAINTENANCE TO THE SEDIMENT CONTROL MEASURES ON THIS PLAN.

OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A. 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL

### 500 PARTS PER MILLION SHALL NOT BE USED. D. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS 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. FT.) AND 1000 IBS/ACRE 10-10-10 FERTILIZER (23 IBS/1000 SQ. FT.) BEFORE USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. SEEDING: FOR THE PERIODS MARCH 1 THUR APRIL 30, AND AUGUST 1 THRU OCTOBER D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE. NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED B' 15, SEED WITH 60 IBS/ACRE (1.4 IBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 IBS KENTUCKY 31 TALL FESCUE 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 HE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF PER ACRE AND 2 IBS/ACRE (.05 IBS/100() SQ. FT.) OF WEEPING LOVEGRASS. DURING NATURAL TOPSOIL. II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS OPTION 1: TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SPECIFIED IN <u>20.0 VEGETATIVE STABILIZATION</u> - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS. APPROPRIATE STABILIZATION SHOWN ON THE PLANS. CONSTRUCTION AND MATERIAL SPECIFICATIONS TOPSOIL APPLICATION OPTION 3: SEER: WITH 60 IBS/ACRE KENTUCKY 30 TALL FESCUE AND MULCH WITH 2 TOPSOIL SALVACED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 IBS/1000 SQ. FT.) OF SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION. 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 FEET II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING. MUST MEET THE FOLLOWING: I. 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 THAT 1 AND 1/2" IN DIAMETER. II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RE-DISTURBED WHERE A . TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED. 1. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND IMMESTONE 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 SOIL AMENDMENTS: APPLY 600 IBS/ACRE 10-10-10 FERTILIZER (14 IBS/1000 SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU

AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS

AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION—SECTION I—

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

II. PLACE TOPSOIL (IF REQURED) AND APPLY SOIL AMENDMENTS

AS SPECIFIED IN AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

PERMIT 9OR WITH THE DPW DEVELOPER'S AGREEMENT, WHICHEVER ONE IS APPLICABLE).

14. REMOVE ALL REMAINING SEDIMENT CONTROL MEASURES AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR. (1 WEEKS) 15. INSTALL SITE LANDSCAPING. (2 WEEKS)

2. FOLLOWING INITIAL SOIL DISTURBANCES OR REDISTURBANCE PERMANENT

SEQUENCE OF CONSTRUCTION OBTAIN HOWARD COUNTY GRADING PERMIT CONSTRUCTION. (2 DAYS)

2. NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (1 WEEK)

B. 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.

C-W & COMPANY 10901 PUMP HOUSE ROAD ANNAPOLIS JUNCTION MD 20701 410-880-0850

"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." 4. INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (1 DAY) 5. INSTALL ALL, SUPER SILT FENCE. 6. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVE LENGTH EXISTING ASPHALT AND C&G. (2 DAYS) BEGIN STORM DRAIN CONSTRUCTION. (1 WEEK) 40 LF 8. BEGIN BUILDING CONSTRUCTION. (8 WEEKS) 416 LF INSTALL ALL ON-SITE CURB AND GUTTER. (1 WEEK) 10. INSTALL ON-SITE PAVING BASE COURSE (1 WEEK) 28 LF 11. COMPLETE BUILDING CONSTRUCTION. (4 WEEKS) 12. INSTALL ALL PAVING. (2 WEEKS) 13. FINE GRADE AND STABILIZE ALL AREAS OF PARCEL INCLUDING ANY EXPOSED EARTH AREAS OUTSIDE THE LOD. REMOVE ALL TRASH JUNK AND DEBRIS FROM ENTIRE PARCEL. (2WEEKS)

"I/WE CERTIFY THAT ALL DEVELOPEMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN E 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." DEVELOPER/OWNER

\_\_\_\_\_08-26

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DOCTORNITY WERE PROPOSED OR
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DULY LICENSED PROFOSEMMENT, EXCHANGE
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EXPENSION DATE 11-10-0000

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