

SUBGRADE

BE SEALED WITH A POLYURETHANE SEALANT.

(5) CONCRETE SIDEWALK

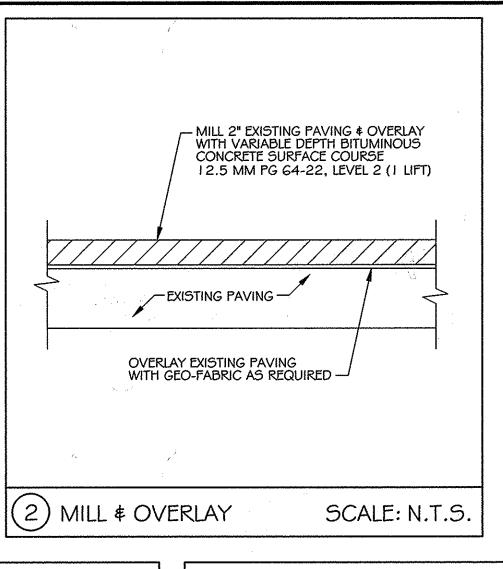
NOTE: PROVIDE 2% CROSS-SLOPE FOR POSITIVE DRAINAGE AS REQUIRED

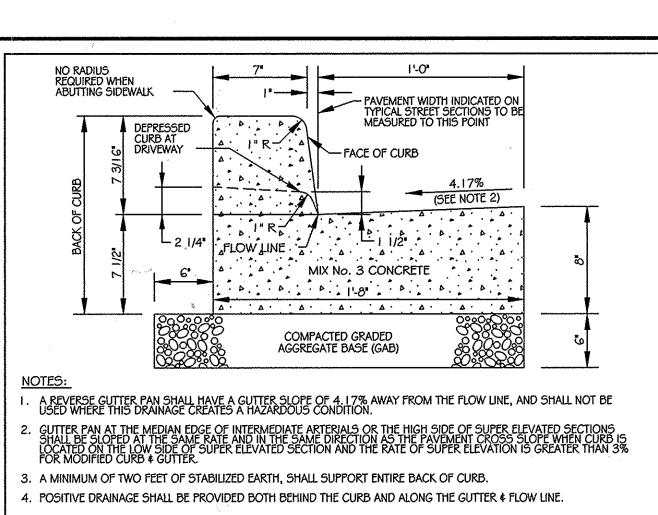
1. PROVIDE EXPANSION JOINTS 20' C.C. MAX. AND SCORE JOINTS 5' C.C. (UNLESS

WITH 1/2 PREMOLDED BITUMINOUS JOINT MATERIAL. ALL CONTROL JOINTS SHALL

OTHERWISE NOTED). EXPANSION JOINTS SHALL BE ZIP STRIP CONTROL JOINTS MANUFACTURED BY SUPERIOR FEATHERWEIGHT TOOLS (OR APPROVED EQUIVALENT)

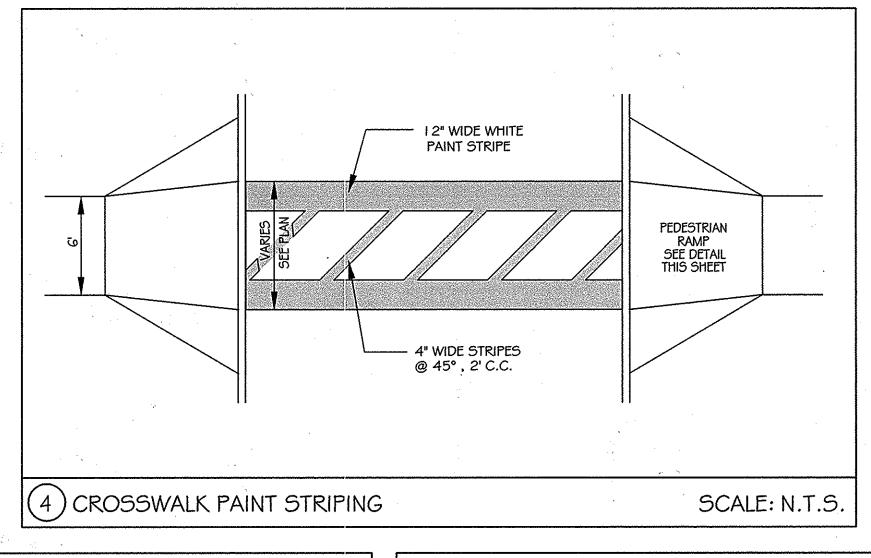
2. WHEN SIDEWALK ABUTS CURB, SIDEWALK SHALL BE 1/4 " ABOVE CURB WITH ROOFING FELT SATURATED ON BOTH SIDES WITH ASPHALTIC MATERIAL BETWEEN THEM. ROOFING PAPER SHALL NOT WEIGH LESS THAN 39.8 LBS. PER S.F.

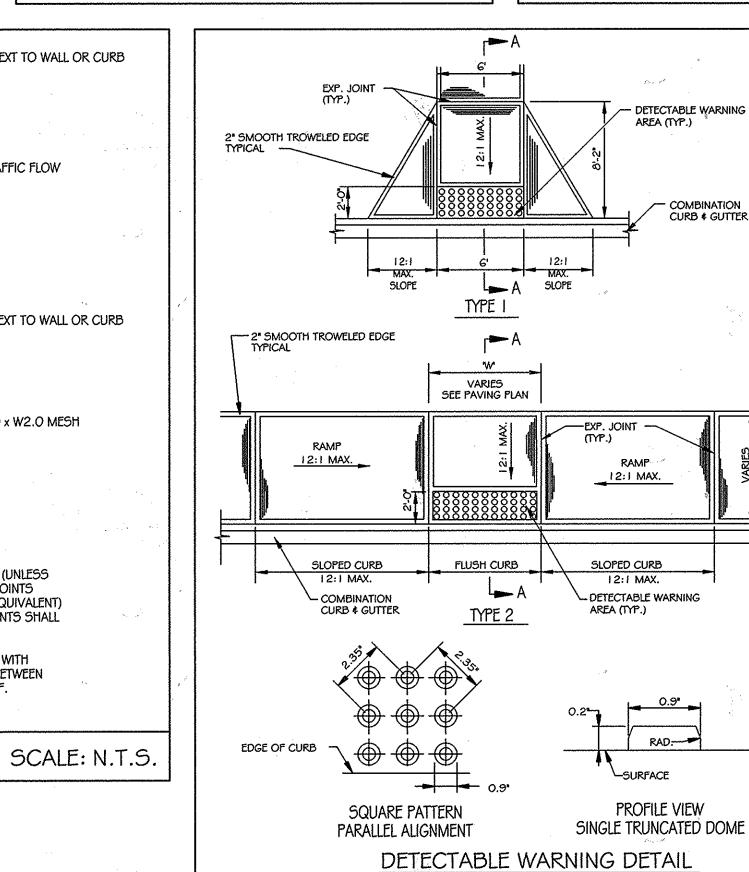




(3) COMBINATION CURB AND GUTTER

SCALE: N.T.S.





1. SURFACE TEXTURE OF RAMPS SHALL BE COARSE BROOMING OR NON SKID SURFACE.

3. SEE DEPRESSED CURB AND GUTTER AT PEDESTRIAN RAMP DETAIL 9 FOR SECTION A-A. 4. SEE PAVING PLAN, SHEET C-14 & C-15, FOR TYPE 1 RAMP TAPERED CURB LENGTHS.

A DETECTABLE WARNING IS A STANDARDIZED SURFACE FEATURE BUILT IN OR APPLIED TO WALKING SURFACES (OR OTHER ELEMENTS) TO WARN VISUALLY IMPAIRED PEOPLE OF HAZARDS ON A CIRCULATION PATH.

2. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH NOMINAL DIMENSIONS AS SHOWN AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-DARK OR DARK-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE INTEGRAL WITH THE WALKING SURFACE.

4. DETECTABLE WARNINGS MAY BE APPLIED USING BRICK OR BLOCK PAVERS OR EXTRUDED TINTED CONCRETE.

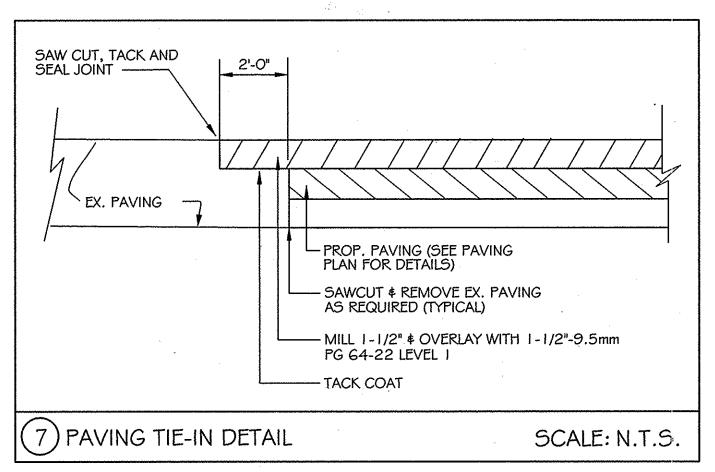
7. MANUFACTURED PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

S. COMMERCIAL PRODUCTS MAY VARY IN SPACING, DIMENSION AND CONFIGURATION OF DOMES. CERTIFICATION OF COMPLIANCE WITH CURRENT A.D.A.A.G. (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINE REQUIREMENTS) SHALL BE REQUIRED OF ALL PRODUCTS BEFORE

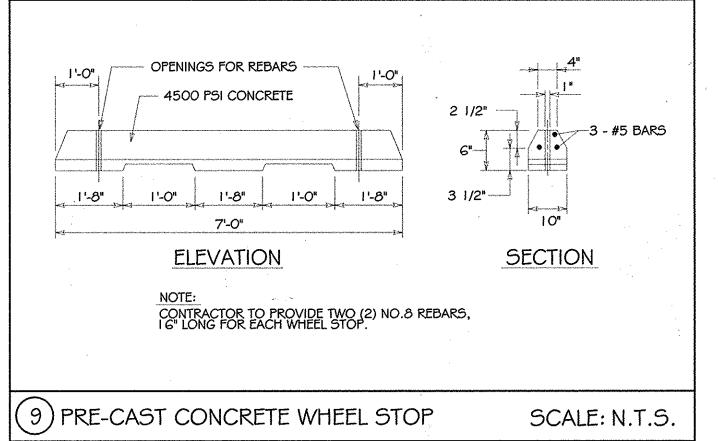
5. PAVERS MAY BE SPLAYED AS REQUIRED TO MATCH A CURVED CURB RADIUS.

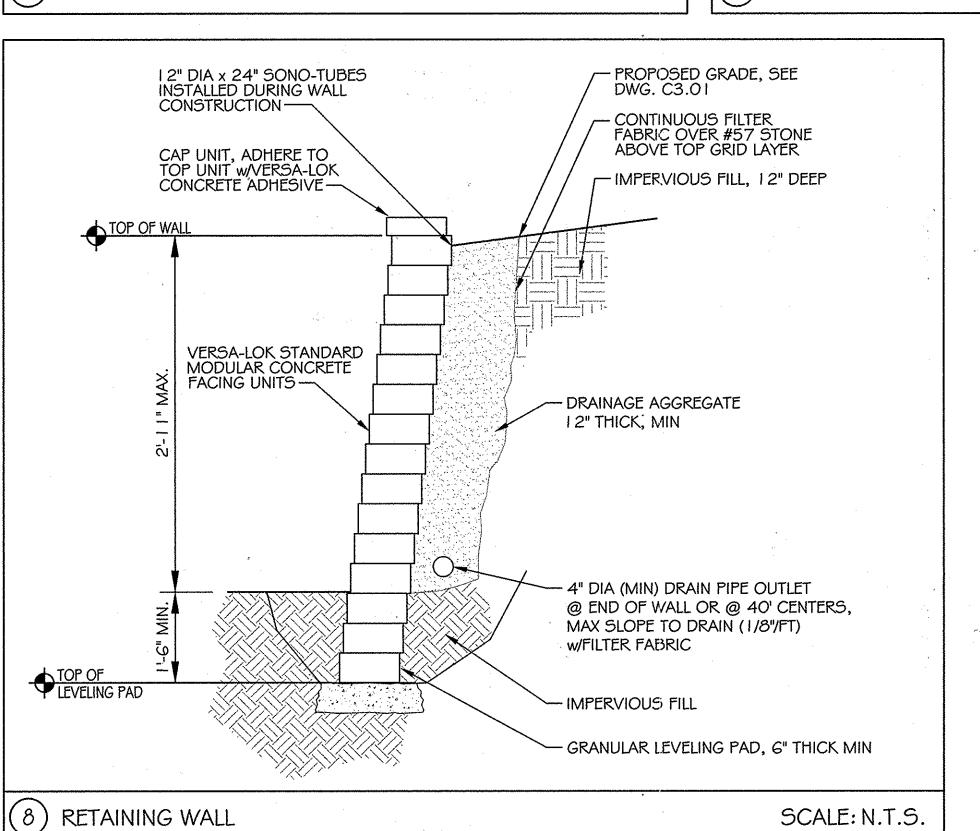
PEDESTRIAN RAMPS

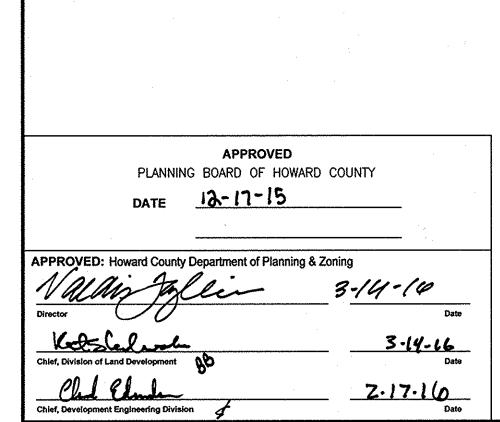
2. DETECTABLE WARNINGS SHALL BE SQUARE PATTERN. PARALLEL ALIGNMENT.

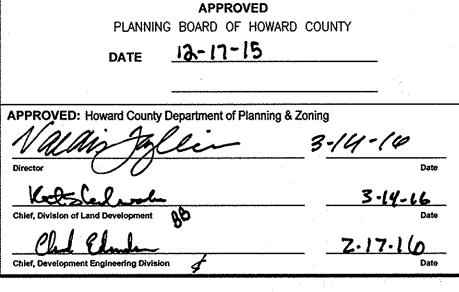


SCALE: N.T.S.









Prepared For and Owner: George C. Peverly III Daniel H. Redding 10735 Little Patuxent Parkway Columbia, Maryland 21044 443-744-1547

DRAWING NO. C5.00 SHEET: 8 OF 13 SCALE: DATE: JANUARY 15, 2016

C.T.B. R.L.B.

CENTER MD LITLLE PATUXENT

SZRINE AUTO

COLUMBIA, N

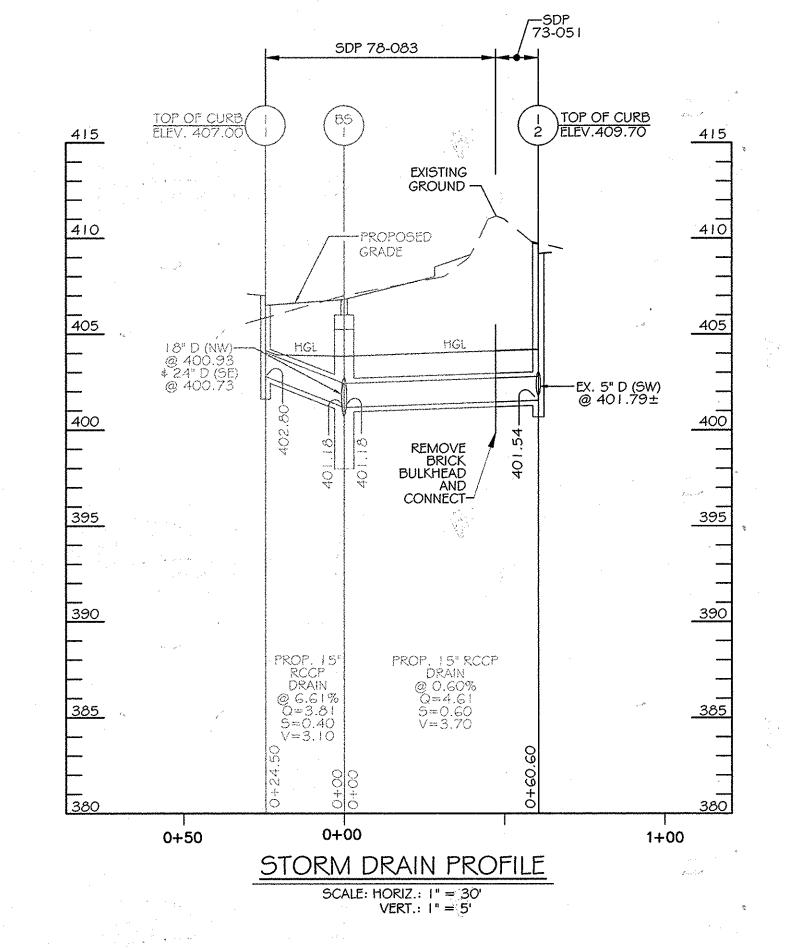
PARCEL: 275, TAX MAP: 35,
PLAT: PLAT BOOK 26/FOL
TOWN CENTER, 6/2, LOT
FLECTION DISTRICT: 5 PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED E ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 31089 EXPIRATION DATE: 11/21/16 I S S U E

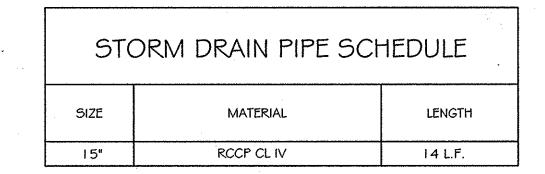
NO. DESCRIPTION DAT DRAWING TITLE:

SITE DETAILS

R.L.B.

PROJECT NO: 27146550 Copyright © 2014 Deamon, Inc. All rights reserved. No part of these documents may be reproduced in any form or by any means without permission from Desman Inc. DES. DRWN, CK'D.





STORM DRAIN STRUCTURE SCHEDULE													
NO.	TYPE	SIZE IN.	ELEV. IN	SIZE OUT	ELEV. OUT	TOP ELEV.	REFERENCES / HOWARD COUNTY STD. DETAIL	NORTHING	EASTING				
I-2	DBL. WR PRECAST INLET	EX 15"	401.79	15"	401.54	409.70 TC	D-4.35	N 563,552.74	E1,347,728.41				

PLANNING BOARD OF HOWARD COUNTY Chief, Development Engineering Division

CONTRACTOR NOTE:

CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO DAMAGE ANY EXISTING PAVING, CURB & GUTTER, SIDEWALK OR OTHER SITE FEATURES WHICH ARE TO REMAIN. SHOULD DAMAGE OCCUR, CONTRACTOR SHALL REPAIR TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

Prepared For and Owner: George C. Peverly III
Daniel H. Redding
10735 Little Patuxent Parkway
Columbia, Maryland 21044
443-744-1547

SCALE: DES. DRWN. CK'D. R.L.B. C.T.B. R.L.B.

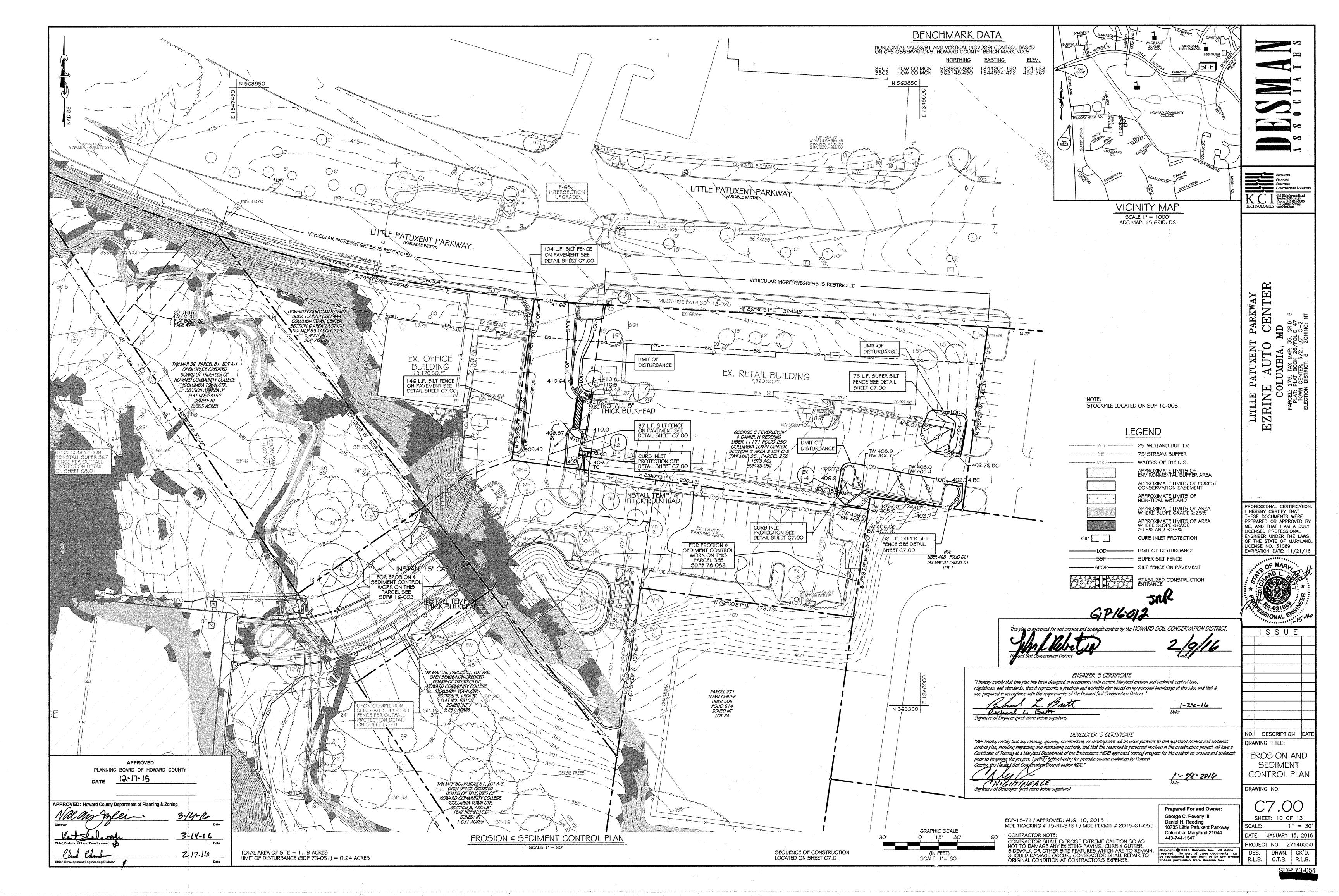
PROFESSIONAL CERTIFICATION.
I HEREBY CERTIFY THAT
THESE DOCUMENTS WERE
PREPARED OR APPROVED BY
ME, AND THAT I AM A DULY
LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS
OF THE STATE OF MARYLAND,
LICENSE NO. 31089
EXPIRATION DATE: 11/21/16

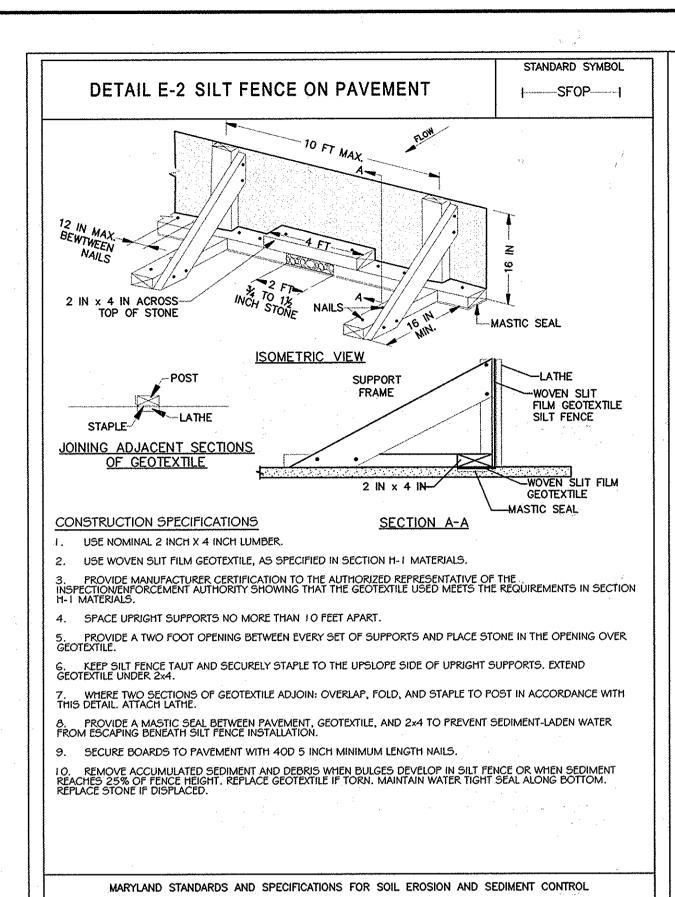
NO. DESCRIPTION DATE DRAWING TITLE:

> UTILITY PROFILES

DRAWING NO.

SHEET: 9 OF 13 DATE: JANUARY 15, 2016 PROJECT NO: 27146550





U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

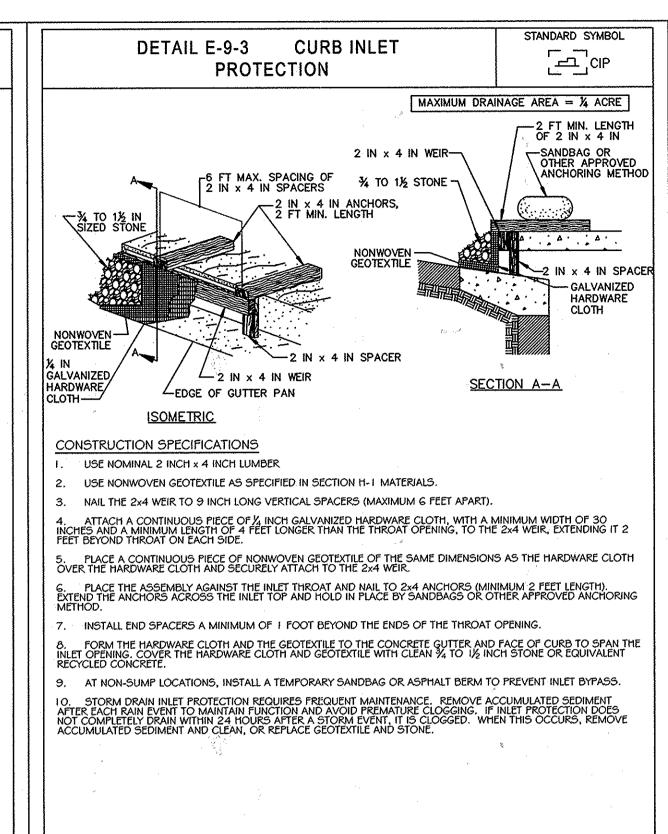
**APPROVED** 

PLANNING BOARD OF HOWARD COUNTY

3-14-16

2.17.16

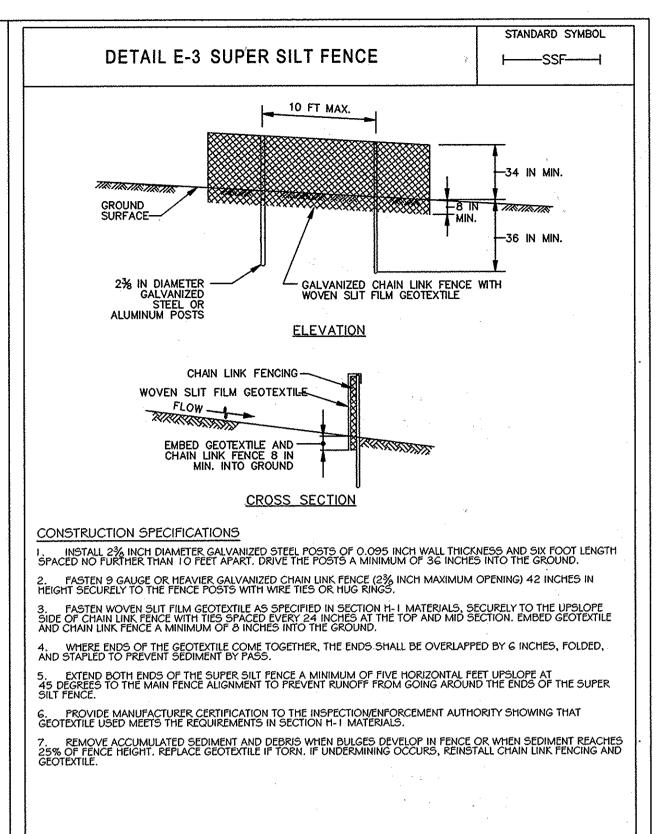
APPROVED: Howard County Department of Planning & Zoning



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE

MARYLAND DEPARTMENT OF ENVIRONMENT



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

MARYLAND DEPARTMENT OF ENVIRONMENT

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

## SEQUENCE OF CONSTRUCTION

OBTAIN GRADING PERMIT. CONTACT THE HOWARD COUNTY CID INSPECTOR AT 410-313-2433 A MINIMUM OF 2 WEEKS PRIOR TO THE START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING. THE CONTRACTOR IS TO SUBMIT A SCHEDULE OF WORK ACTIVITIES TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO INITIATION OF ANY GRADING ACTIVITIES.

2 DAYS
2. INSTALL STABILIZED CONSTRUCTION ENTRANCES AT LOCATIONS SHOWN AND INSTALL INLET PROTECTION AND BLOCKING WHERE SPECIFIED FOR INLET EX 1-4.

2 DAYS 3. INSTALL THE PERIMETER SEDIMENT CONTROL DEVICES (SUPER SILT FENCE) AT LOCATIONS SHOWN ON SHEET C1.01. MAKE SURE ALL NECESSARY SEDIMENT CONTROLS ARE IN PLACE PRIOR TO STRIPPING THE TOPSOIL.

4. INSTALL STORM DRAIN FROM EX TEMP. 4" BRICK BULKHEAD (INSTALLED PER SHEET C8.00 SDP 78-83) THROUGH I-2. PROVIDE INLET PROTECTION AS SHOWN ON PLAN.

I DAY 5. CONCURRENTLY INSTALL PERMANENT 8" BRICK BULKHEAD SHOWN ON SHEET C7.00.

WITH TOPSOIL, SEED \$ MULCH.

6. STRIP THE TOPSOIL, REMOVE EXISTING PAVING, CURB & GUTTER AND OTHER EXISTING SURFACE FEATURES NEEDED TO INSTALL PROPOSED PARKING CURB AND GUTTER, AND RETAINING WALL AS SPECIFIED ON SHEET C8.00 OR AS DIRECTED BY OWNER. 2 DAYS

5 DAYS 7. STRIP THE REMAINING TOPSOIL AND ROUGH GRADE SITE AS SHOWN ON EROSION & SEDIMENT CONTROL PLAN (C8.00) TO BRING SITE TO SUBGRADE WITHIN LIMITS OF DISTURBANCE.

10 DAYS 8. INSTALL CURB AND GUTTER, SIDEWALKS, RETAINING WALL, AND BASE COURSE FOR PAVED AREAS.

9. UPON COMPLETION OF PARKING CURB AND GUTTER AND RETAINING WALL INSTALLATION AND REPAIRS PERMANENTLY STABILIZE

ALL DISTURBED AREAS WITH SEED \$ MULCH. 3 DAYS IO. INSTALL SITE LANDSCAPING, REMOVE ANY REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE ALL DISTURBED AREAS

14 DAYS 11.UPON APPROVAL FROM THE HOWARD COUNTY CID INSPECTOR, REMOVE ALL TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES. REPAIR CURB & GUTTER AND PAVING AS REQUIRED AFTER REMOVAL OF SEDIMENT CONTROL MEASURES. STABILIZE ALL AREAS DISTURED DURING REMOVAL OF SEDIMENT CONTROL DEVICES. PROVIDE COPY OF HSCD LETTER OF APPROVAL



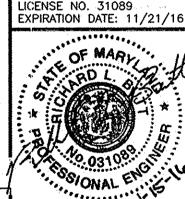
PARKWAY CENTEI MD

PATUXENT

TE AUTO

COLUMBIA, N LITLLE

PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED E ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 31089



ISSUE

ENGINEER 'S CERTIFICATE "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

Signature of Engineer (print name below signature)

CONTRACTOR NOTE:

1-28-16

DEVELOPER 'S CERTIFICATE

"We certify that all development and construction will be done according to these plans for sediment and erosion 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."

1-28-2016

CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO DAMAGE ANY EXISTING PAVING, CURB & GUTTER, SIDEWALK OR OTHER SITE FEATURES WHICH ARE TO REMAIN. SHOULD DAMAGE OCCUR, CONTRACTOR SHALL REPAIR TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

DRAWING TITLE: **EROSION** 4 SEDIMENT CONTROL DETAILS

DESCRIPTION

DRAWING NO.

Prepared For and Owner: George C. Peverly III Daniel H. Redding SHEET: 11 OF 13 10735 Little Patuxent Parkway DATE: JANUARY 15, 2016

Columbia, Maryland 21044 443-744-1547 Copyright © 2014 Desman, Inc. All rights reserved. No part of these documents may be reproduced in any form or by any mean without permission from Desman Inc. R.L.B.

PROJECT NO: 27146550 DRWN. CK'D C.T.B.

N.T.S

2.17.16

## B-4-2 STANDARDS AND SPECIFICATIONS SOIL PREPERATION, TOPSOILING, AND SOIL AMENDMENTS (CONTINUED 6. TOPSOIL APPLICATION a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL. . 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 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 SEEDING AND MULCHING THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER. 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 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. 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 FEFFCTIVE 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. a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS III 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. 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 NEXCEED THE FOLLOWING: NITROGEN, I OO POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2Os (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (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.

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 I MILLIMETERS, DIAMETER APPROXIMATELY I MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF I.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90

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.

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.

a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

2. APPLICATION

II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE A. SEED MIXTURES 1. GENERAL USE ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING. c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED B THE SOIL TESTING AGENCY. d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY. 2. TURFGRASS MIXTURES a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, FARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE. NOTES: SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND"

B-4-4 STANDARDS AND SPECIFICATIONS

TEMPORARY STABILIZATION

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.

. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B. I 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. I PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE

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. I .B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

B. I TEMPORARY SEEDING RATES, DEPTHS, AND DATES

UAL RYEGRASS (LOUUM 40 1.0 0.5 MAR I TO MAY 15; AUG I TO OCT 15

30 0.7 0.5

3/ THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENTS TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

**B-4-5 STANDARDS AND SPECIFICATIONS** 

PERMANENT STABILIZATION

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

MAY 16 TO JUL 31

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS

OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES MESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A) CENTRAL MD: MARCH | TO MAY | 5, AUGUST | 5 TO OCTOBER | 15 (HARDINESS ZONE: 6B) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

		HARDINESS ZONE (from SEED MIXTURE (from tabl		F	UME					
NO.		SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	N	P <sub>2</sub> O	K <sub>2</sub> O	RATE	
		KENTUCKY BLUEGRASS 10% TURF-TYPE TALL FESCUE 40% GRADE TALL FESCUE 30% PERENNIAL RYEGRASS 20%	250	3/15 - 5/15 OR 8/15 - 11/15	1/4 - 1/2 m.	45 POUNDS PER ACRE	90 lb/ac (2 lb/	90 lb/ac (2 lb/	2 tons/ac	
		Kentucky Bluegrass 10% Turf-type tall fescue 40% Grade tall fescue 30% Perennial Ryegrass 20%	350	3/15 + 5/15 OR 8/15 - 11/15	1/4 - 1/2 m. ·	(le 0001	1000 st)	1 0000 st)	(fe 000 l\dl 0e)	
			•	<del></del>	<u> </u>		<del> </del>	· · · · · · · · · · · · · · · · · · ·		

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

1. GENERAL SPECIFICATIONS a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.

b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 34 INCH, PLUS OR MINUS 14 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH, BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.

E. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER TO PERCENT OF THE SECTION.

9. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.

B-4-4 STANDARDS AND SPECIFICATIONS

TEMPORARY STABILIZATION (CONTINUED) 2. SOD INSTALLATION

a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

3. SOD MAINTENANCE

IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.

b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.

c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

B-4-6 STANDARDS AND SPECIFICATIONS

SOIL STABILIZATION MATTING

MATERIAL USED TO TEMPORARILY OR PERMANENTLY STABILIZE CHANNELS OR STEEP SLOPES UNTIL GROUNDCOVER IS ESTABLISHED.

TO PROTECT THE SOILS UNTIL VEGETATION IS ESTABLISHED. CONDITIONS WHERE PRACTICE APPLIES

5. CALCULATE CHANNEL VELOCITY AND SHEAR STRESS USING THE FOLLOWING PROCEDURE: T=(y)(R)(Sw) WHERE:

V=WEIGHT DENSITY OF WATER (62.4 lb/ft²) R=AVERAGE WATER DEPTH (HYDRAULIC RADIUS)(ft) Sw=WATER SURFACE SLOPE (ft/ft)

VELOCITY (v) MEASURES THE RATE OF FLOW THROUGH A DEFINED AREA AND IS CALCULATED AS:

6. USE TABLE B.7 TO ASSIST IN SELECTING THE APPROPRIATE SOIL STABILIZATION MATTING FOR SLOPE APPLICATIONS BASED ON THE SLOPE, THE SLOPE LENGTH, AND THE SOIL-ERODIBILITY K FACTOR. TABLE B 7. SOIL STABILIZATION ON SLOPES

			IADLE	D./:	SOIL S	HADILI	ZATIO	N ON S	DLOPES	ļ					
SLOPE	20:1 OR FLATTER (<5%)			<20:1 TO 4:1 (>5-25%)			<4:1 TO 3:1 (>25-33%)			<3:1 TO 2.5:1 (>33-40%)			<2.5:1 TO 2:1** (>40-50%)		
SLOPE LENGTH (FEET*)	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60	60-120	0-30	30-60	60-120
STRAW MULCHWOOD CELLULOSE FIBER				1.0% 10/1	FOR	K <u>&lt;</u> 0.9	35***								
TEMPORARY MATTING WITH DESIGN SHEAR STRESS > 1.5 lb/sf					100 (EV) 100 (AV)										
TEMPORARY MATTING WITH DESIGN SHEAR STRESS > 1.75 lb/sf					5, 5, 8, 5, 8, 5,		75 E							* * * * * * * * * * * * * * * * * * *	
TEMPORARY MATTING WITH DESIGN SHEAR STRESS > 2.0 lb/sf														: :	
TEMPORARY MATTING WITH DESIGN SHEAR STRESS > 2.25 lb/sf			4,000,00 17,000,00 17,000,00			# 15 (8) (8) (8) (8) (8) (8) (8) (8) (8) (8)								3 A 3	

EFFECTIVE RANGE FOR ALL K VALUES UNLESS OTHERWISE SPECIFIED

VEGETATION MUST BE ESTABLISHED AND MAINTAINED SO THAT THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

ENGINEER 'S CERTIFICATE "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.

1-28-16 Robert L. Butt Signature of Engineer (print name below signature)

DEVELOPER 'S CERTIFICATE "We certify that all development and construction will be done according to these plans for sediment and erosion 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 to the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

HICHTINGSLE

1-28-2016

Prepared For and Owner: George C. Peverly III Daniel H. Redding Columbia, Maryland 21044 443-744-1547 CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO DAMAGE ANY EXISTING PAVING, CURB & GUTTER, SIDEWALK OR OTHER SITE FEATURES WHICH ARE TO REMAIN. SHOULD DAMAGE OCCUR, CONTRACTOR SHALL REPAIR TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE.

10735 Little Patuxent Parkway

SCALE:

DES. DRWN. CK'D. R.L.B. C.T.B. R.L.B.

CENTER MD LITLLE PATUXENT

ZRINE AUTO

COLUMBIA, M

PARCEL: 275, TAX MAP: 35, PLAT: PLAT BOOK 26/FOLL
TOWN CENTER, 6/2, LOT
ELECTION DISTRICT: 5 ZON

SCIENTISTS Construction Management

936 Ridgebrook Road Sparks, MD 21152 Phone (410)316-7800 Fax (410)316-7853 Fax (410)316-7853

ROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED I ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 31089 EXPIRATION DATE: 11/21/16

H

OF MARY 0.03108 OS/ONAL EN

ISSUE

DESCRIPTION DRAWING TITLE: **EROSION** \$

SEDIMENT CONTROL NOTES

DRAWING NO.

SHEET: 12 OF 13

N.T.S. DATE: JANUARY 15, 2016 PROJECT NO: 27146550 Copyright © 2014 Desman, inc. All rights reserved. No part of these documents may be reproduced in any form or by any means without permission from Desman Inc.

SDP 73-051

### STOCKPILE AREA

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

#### CONDITIONS WHERE PRACTICE APPLIES STOCKPILE AREAS ÁRE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

- I. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
- 2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
- 3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
- 4. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
- 5. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
- 6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
- 7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
- 8. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

#### MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.

## H-4 STANDARDS AND SPECIFICATIONS

### TEMPORARY ACCESS WATERWAY CROSSINGS

A STRUCTURE PLACED ACROSS A WATERWAY TO PROVIDE ACCESS FOR CONSTRUCTION PURPOSES FOR A PERIOD OF LESS THAN ONE YEAR. TEMPORARY ACCESS CROSSINGS ARE NOT TO BE UTILIZED TO MAINTAIN TRAFFIC FOR THE

TO PROVIDE SAFE, POLLUTION FREE ACCESS ACROSS A WATERWAY FOR CONSTRUCTION EQUIPMENT BY ESTABLISHING MINIMUM STANDARDS AND SPECIFICATIONS FOR THE DESIGN, CONSTRUCTION, MAINTENANCE, AND REMOVAL OF THE STRUCTURE. A TEMPORARY ACCESS WATERWAY CROSSING IS NECESSARY TO PREVENT CONSTRUCTION EQUIPMENT FROM DAMAGING THE WATERWAY, BLOCKING FISH MIGRATION, AND TRACKING SEDIMENT AND OTHER POLLUTANTS INTO THE WATERWAY. A WATERWAY CROSSING MAY CREATE A CHANNEL CONSTRICTION, THUS THE TEMPORARY NATURE OF WATERWAY ACCESS CROSSINGS MUST BE STRESSED. THE CROSSING SHOULD BE IN PLACE FOR THE SHORTEST PRACTICAL PERIOD OF TIME AND REMOVED AS SOON AS ITS FUNCTION IS COMPLETED.

### CONDITIONS WHERE PRACTICE APPLIES

TEMPORARY WATERWAY CROSSINGS MUST CONFORM TO THE TECHNICAL REQUIREMENTS OF THESE STANDARDS AND SPECIFICATIONS AS WELL AS ANY SPECIFIC REQUIREMENTS IMPOSED BY THE MDE WETLANDS AND WATERWAYS PROGRAM. THE DESIGNS ARE BASED ON WATERWAY GEOMETRY RATHER THAN THE DRAINAGE AREA CONTRIBUTING TO THE POINT OF CROSSING. THE PRINCIPAL CONSIDERATION OF THESE STANDARDS AND SPECIFICATIONS IS EROSION AND SEDIMENT CONTROL. STRUCTURAL INTEGRITY AND SAFETY FOR EXPECTED LOADING MUST ALSO BE CONSIDERED WHEN DESIGNING TEMPORARY ACCESS WATERWAY CROSSINGS. THE TWO TYPES OF STANDARD TEMPORARY WATERWAY CROSSINGS ARE BRIDGES AND CULVERTS. BRIDGES ARE PREFERABLE.

#### DESIGN CRITERIA I . STREAM CLOSURES: THE STREAM CHANNEL MUST NOT BE DÍSTURBED DURING RESTRICTED TIME PERIODS. STREAM CLOSURE DATES FOR FISH SPAWNING OR MIGRATION WITHIN WATERWAYS ARE AS FOLLOWS:

USE III AND IIIP

MARCH I - JUNE 15
JUNE I - SEPTEMBER 30 AND DECEMBER 16 - MARCH 14
OCTOBER I - APRIL 30
MARCH I - MAY 31
APRIL I - OCTOBER 15

#### \*SUBMERGED AQUATIC VEGETATION (SAV)

FOR MORE INFORMATION ABOUT THE CLOSURES BASED ON STREAM USES AND SAVS CONTACT MDE WETLANDS AND WATERWAYS PROGRAM.

- 2. AQUATIC MIGRATION: FISH PASSAGE MUST NOT BE OBSTRUCTED BY THE INSTALLATION OF A WATERWAY CROSSING. BRIDGES POSE THE LEAST POTENTIAL FOR CREATING BARRIERS TO AQUATIC MIGRATION. THE CONSTRUCTION OF A WATERWAY CROSSING MUST NOT CAUSE A SIGNIFICANT WATER LEVEL DIFFERENCE
- 3. SITE LOCATION: LOCATE THE TEMPORARY CROSSING WHERE THERE WILL BE THE LEAST DISTURBANCE TO THE EXISTING WATERWAY BANKS AND APPROACHES. WHEN POSSIBLE, LOCATE THE CROSSING AT A POINT RECEIVING MINIMAL SURFACE RUNOFF. CONSIDER THE EFFORT THAT WILL BE REQUIRED TO RESTORE THE AREA AFTER THE TEMPORARY CROSSING IS REMOVED.
- 4. CROSSING ALIGNMENT: THE TEMPORARY WATERWAY CROSSING SHOULD BE AT RIGHT ANGLES TO THE STREAM, UNLESS THE APPROACH CONDITIONS DICTATE OTHERWISE.
- 5. APPROACHES: THE CENTERLINE OF BOTH APPROACHES NEEDS TO COINCIDE WITH THE CENTERLINE OF THE CROSSING FOR A MINIMUM DISTANCE OF 50 FEET FROM THE TOP OF EACH STREAM BANK, UNLESS PRECLUDED BY PHYSICAL OR RIGHT-OF-WAY CONSTRAINTS. THE APPROACHES SHOULD BE KEPT AS CLOSE TO THE EXISTING GRADE AS POSSIBLE. APPROACHES SHOULD HAVE A MINIMUM WIDTH OF 12 FEET AND A MAXIMUM WIDTH OF 20 FEET DEPENDING ON THE SIZE OF THE VEHICLES THAT WILL USE THE CROSSING.
- 6. SURFACE RUNOFF: RUNOFF ON THE APPROACHES MUST BE AT A NON-EROSIVE VELOCITY. THIS CAN BE ATTAINED THROUGH SURFACE STABILIZATION OR SURFACE RUNOFF DIVERSION. SURFACE RUNOFF FROM UNSTABILIZED APPROACHES MUST DISCHARGE TO AN APPROVED SEDIMENT CONTROL DEVICE.
- 7. REMOVAL: AFTER THE TEMPORARY CROSSING IS NO LONGER NEEDED, REMOVE IT WITHIN 14 CALENDAR DAYS UNLESS WITHIN THE USE DESIGNATION STREAM CLOSURE PERIOD.

THE STONE CHECK DAM IS NOT A SEDIMENT TRAPPING PRACTICE; HOWEVER, SOME SEDIMENT MAY ACCUMULATE BEHIND THE CHECK DAM. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN IT REACHES ONE-HALF OF THE HEIGHT OF THE WEIR CREST. LINE, GRADE, AND CROSS SECTION MUST BE MAINTAINED.

# IN TEMPORARY SWALES AND CHANNELS, REMOVE CHECK DAM(S) WHEN NO LONGER NEEDED. IN PERMANENT CHANNELS, CHECK DAMS MAY BE REMOVED WHEN PERMANENT LINING IS INSTALLED. IN THE CASE OF GRASS-LINED CHANNELS, CHECK DAM MAY BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE SWALE OR CHANNEL. SEED AND INSTALL SOIL STABILIZATION MATTING OR SOD IN THE AREAS DISTURBED BY THE REMOVAL OF THE CHECK DAM.

### H-4-I STANDARDS AND SPECIFICATIONS

## TEMPORARY ACCESS BRIDGE

### DEFINITION

A TEMPORARY WATERWAY CROSSING THAT SPANS THE STREAM CHANNEL

GENERALLY, A TEMPORARY ACCESS BRIDGE CAUSES LESS DISTURBANCE TO THE WATERWAY BED AND BANKS AND POSES LESS INTERFERENCE WITH FISH MIGRATION THAN A CULVERT ACCESS CROSSING TIME-OF-YEAR RESTRICTIONS DO NOT APPLY TO THE CONSTRUCTION OR REMOVAL OF A TEMPORARY ACCESS BRIDGE UNLESS THERE IS DISTURBANCE TO THE STREAM CHANNEL.

THE APPROACH TO THE BRIDGE MUST BE STABILIZED AND KEPT FREE OF EROSION. THE DECKING AND CURBS MUST BE CLEANED OF SEDIMENT DAILY BY SCRAPING, SWEEPING, AND/OR VACUUMING. THE DECKING AND CURBS MUST REMAIN TIGHTLY BUTTED WITHOUT GAPS. DEBRIS TRAPPED BY THE BRIDGE MUST BE REMOVED. THE AREAS ADJACENT TO THE CROSSING MUST BE MAINTAINED TO CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

## MARYLAND DEPARTMENT OF THE ENVIRONMENT BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, THE NONTIDAL WETLAND BUFFER, WATERS OF THE STATE AND THE 100-YEAR FLOODPLAIN

- I. NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.

## HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES 1. A MINIMUM OF 48 HOURS MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1850).

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 MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL" AND REVISIONS THERETO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETE WITHIN: A) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 20 I I MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (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 THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

6. SITE ANALYSIS: TOTAL AREA OF SITE AREA DISTURBED AREA TO BE ROOFED OR PAVED

AREA TO BE VEGETATIVELY STABILIZED OFFSITE WASTE AREA LOCATION

ACRES ACRES ACRES ACRES SITE WITH APPROVED SED. CONTROL PLAN

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 HOWARD COUNTY SEDIMENT 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 THE INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

10. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK FILLED AND STABILIZED BY THE END OF EACH WORKDAY,

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

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 PRECEDING GRADING UNIT HAS BE 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.

13. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GNEN AT THE FOLLOWING STAGES:

A. PRIOR TO THE START OF EARTH DISTURBANCE.
B. UPON COMPLETION OF THE INSTALLATION OF FERIMETER FROSION A NOD SEDIMENT CONTROLS QUIT BEFORE PROCEEDING WITH ANY OTHER FARTH DISTURBANCE OR BENDING.
C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR CPENING OF ANOTHER GRADING UNIT.
D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES OTHER BULDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTE THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL ISE REPERENCED TO ENSURE COORDINATION AND TO AVOID CONFLICTS VIRA THIS PLAN.

# ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED. IF DEFNED NECESSARY BY THE CD. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY APTER EACH RAN EVENT A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:

· INSPECTION DATE

· INSPECTION TYPE (POLITIME PRESTORM EVENT, DURING RAIN EVENT)

· INSPECTION TYPE (POLITIME PRESTORM EVENT, DURING RAIN EVENT)

· WEATHER INFORMATION (CULREUT CONDITIONS AS WELL AS TIME/IND AMOUNT OF UST RECORDED

· WEATHER INFORMATION (CULREUT CONDITIONS AS WELL AS TIME/IND AMOUNT OF UST RECORDED BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT CO MPUETE) AND/OR CURRENT ACTIVITIES
EVIDENCE OF SEDIMENT DISCHARCES

IN OF SEDIMENT CONTROLS THAT REQUIRE MAINTENING.

N OF MISSING OR IMPROVERLY INSTALLED SEDIMENT CONTROLS.

STATUS REGARDING THESEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS.

MONITORING/SMAMPLING
 MANNTENNING/SMAMPLING
 MANNTENNING-AND/OR CORRECTIVE ACTION PERFORMED
 CITHER INSTECTION ITEMS AS REQUIDED BY THE GENERAL PERMITTER STORMINATER ASSOCIATED WITH
CONSTRUCTION ACTIVITIES (NPDES, MIDE).
 DISTURBAINE SHALL NOT OCCURRENT SIDE THE L.O.D. A PROJECT KI TO BE SEGRENCED SO THAT GRADING
ACTIVITIES BEGINON ONE-GRADING UNIT WHEN ALREAGE OF 2D AC. PER GRADING UNIT) AT A TIME WORK
MAY PROJECT TO A SURSEQUENT GRADING UNIT WHEN AT LEAST SO PERCENT OF THE DISTURBED AREA INTHE
PRECEDING GRADING UNIT HAS BEEN STARVIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SECUFIED AND
APPROVED BY THE CID. NO MORE THAN 30 ACRES CUMINATIVELY MAY BE DISTURBED AT A GNEWTIME.
ASEDMANT FROM ANY EQUIPMENT, VEHICLES, WHEELS PROVIDENT, AND OTHER SOURCES MUST BETREATED IN
A SEDMANT BASIN OR OTHER APPROVED MACHOLITISTRUCTURE.
 A SEDMANT BASIN OR OTHER APPROVED MACHOLITISTRUCTURE.
 ALL SILT FEME AND SUPER SILT FEME ESTANDED ON SITE FOR REDISTRIBUTION ONTO AMAL GRADE.
ALL SILT FEME AND SUPER SILT FEME ESTANDED ON SITE FOR REDISTRIBUTION ONTO AMAL GRADE.
ALL SILT FEME AND SUPER SILT FEME ESTANDED ON SITE FOR REDISTRIBUTION.
 MINIMUM INTERVALS, WITH LOWER ENDS CLIRIED UPHILLESY Z' IN ELEVATION.
 MINIMUM INTERVALS, WITH LOWER ENDS CLIRIED UPHILLESY Z' IN ELEVATION.
 \* USE I AND IP MARCH I - JUNE IS

I. DEVELOPER'S CERTIFICATION:

I (WE) CERTIFY THAT: A) ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS. B) ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENTS APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

RESPONSIBLE PERSON ON THE SITE: Chuck Bruce 2. THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, AND/OR RIGHTS OF WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES. STORMWATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORMWATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS OF WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS FOR THE SURFACE OF PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAT 3 HORIZONTAL TO 1 VERTICAL (3:1) AND FOURTEEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. THE SEDIMENT CONTROL APPROVALS ON THE PLAN EXTEND ONLY TO AREAS AND PRACTICES IDENTIFIED AS PROPOSED WORK. 5. THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH ANY FEDERAL/STATE/COUNTY REQUIREMENTS APPERTAINING TO ENVIRONMENTAL ISSUES.

6. THE DEVELOPER MUST REQUEST THAT THE DEPARTMENT OF INSPECTIONS AND PERMITS APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN. THE GRADING OR BUILDING PERMIT AND THE ORDINANCE. 7. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE DEPARTMENT OF INSPECTIONS AND PERMITS SHALL BE REQUIRED ON 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 THE INITIAL APPROVAL BY THE DEPARTMENT OF INSPECTIONS AND PERMITS IS GIVEN.

8. APPROVAL SHALL BE REQUESTED ON FINAL STABILIZATION OF ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES BEFORE REMOVAL OF CONTROLS

1-28-2016 10901 Little Paturent Pruy., Columbia MD 21044 410-722-4296

THE DEVELOPER'S PLAN TO CONTROL SILT AND EROSION IS ADEQUATE TO CONTAIN THE SILT AND EROSION PROPERTY COVERED BY THE PLAN. I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THIS SITE, AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT PLAN SUBMITTAL GUIDELINES AND THE CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SEDIMENT AND EROSION CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

1-28-16 MD. LICENSE NO. RICHARD L. BUTT KCI TECHNOLOGIES INC. PRINT NAME: FIRM NAME: 936 RIDGEBROOK ROAD SPARKS, MD 21152 ADDRESS: TELEPHONE: (410) 316-7931

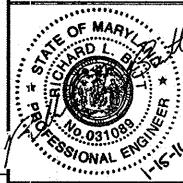
ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO

PARKWAY CENTEI MD I PATUXENT
IE AUTO
COLUMBIA, I
EL 275, TAX MAP: 35,
AT: PLAT BOOK 26/FOI
AT: PLAT BOOK 26/FOI
ZOO 101 LITELE ZRIN]

Pianners Scientists

ONSTRUCTION MANAG

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED E ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 31089 EXPIRATION DATE: 11/21/16



ISSUE

his development plan is approved for soil erosion and sediment control by the HOWARD SOIL

ENGINEER 'S CERTIFICATE "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 1-28-16

Conservation District."

Signature of Engineer (print name below signature)

DEVELOPER 'S CERTIFICATE "IWe certify that all development and construction will be done according to these plans for sediment and erosion 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 to the Control of Sediment and Erosion before beginning the project. I also authorize periodic on site inspection by the project. Onservation District." 1-28-2016 of Developer (print name below signature)

> Prepared For and Owner: George C. Peverly III Daniel H. Redding 10735 Little Patuxent Parkway

Columbia, Maryland 21044 443-744-1547 CONTRACTOR SHALL EXERCISE EXTREME CAUTION SO AS NOT TO DAMAGE ANY EXISTING PAVING, CURB & GUTTER, SIDEWALK OR OTHER SITE FEATURES WHICH ARE TO REMAIN. SHOULD DAMAGE OCCUR, CONTRACTOR SHALL REPAIR TO ORIGINAL CONDITION AT CONTRACTOR'S EXPENSE. Copyright © 2014 Deamen, Inc. All rights reserved. No port of these documents may be reproduced in any form or by any means without permission from Deamen inc.

SHEET: 130F 13 SCALE: N.T.S DATE: JANUARY 15, 2016 PROJECT NO: 27146550

DESCRIPTION

**EROSION** \$

SEDIMENT

CONTROL NOTES

DRAWING TITLE:

DRAWING NO.

DES. DRWN. CK'D. C.T.B. R.L.B. R.L.B.

**APPROVED** PLANNING BOARD OF HOWARD COUNTY

Chief, Division of Land Development

3-14-16 2.17.16

9.TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF

ATION HAS BEEN COMPLETED. MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.

A LOCATION AND MANNER THAT DOES NOT ADVERSELY IMPACT SURFACE OF PLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS OF YEAR FLOODPLAIN.