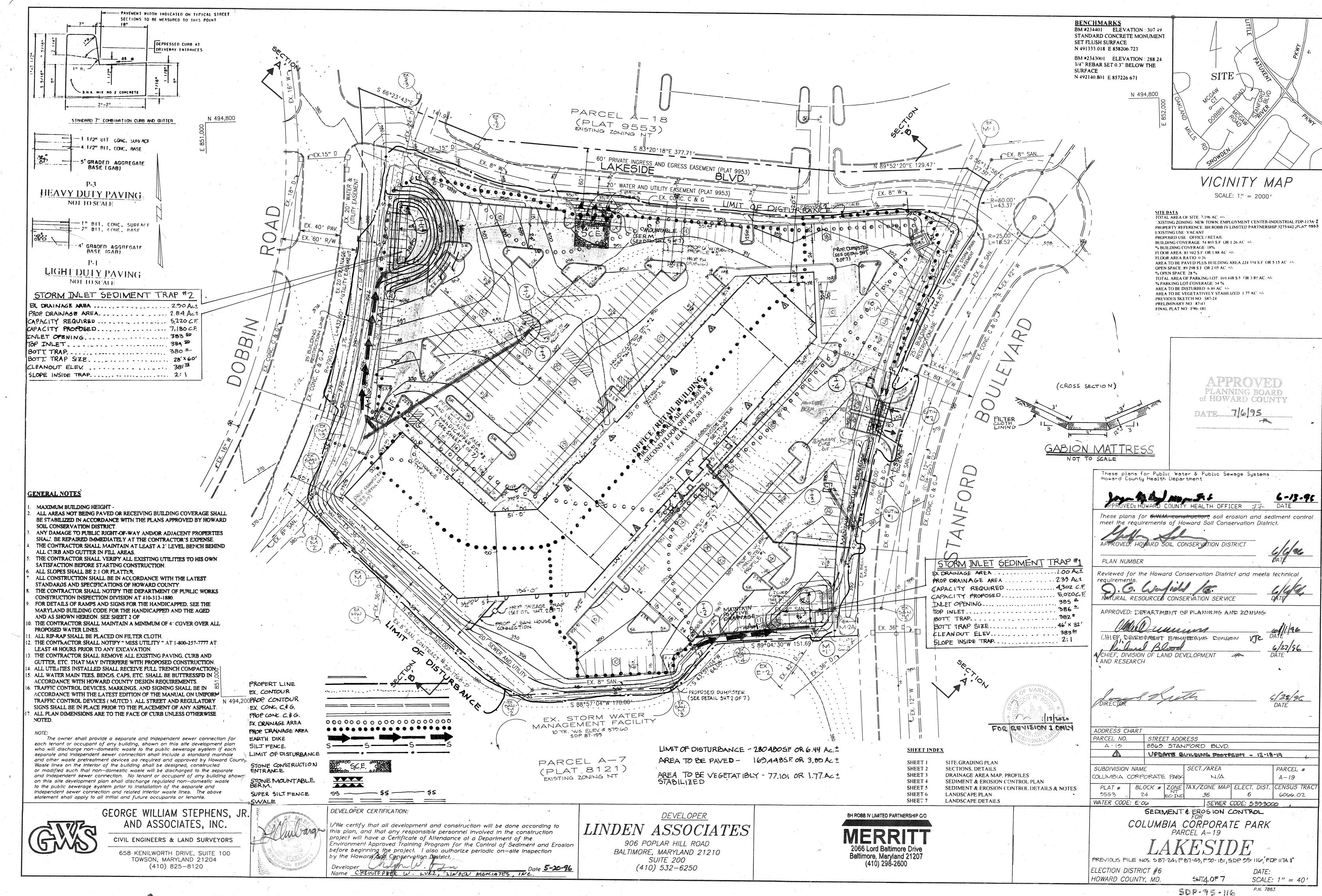
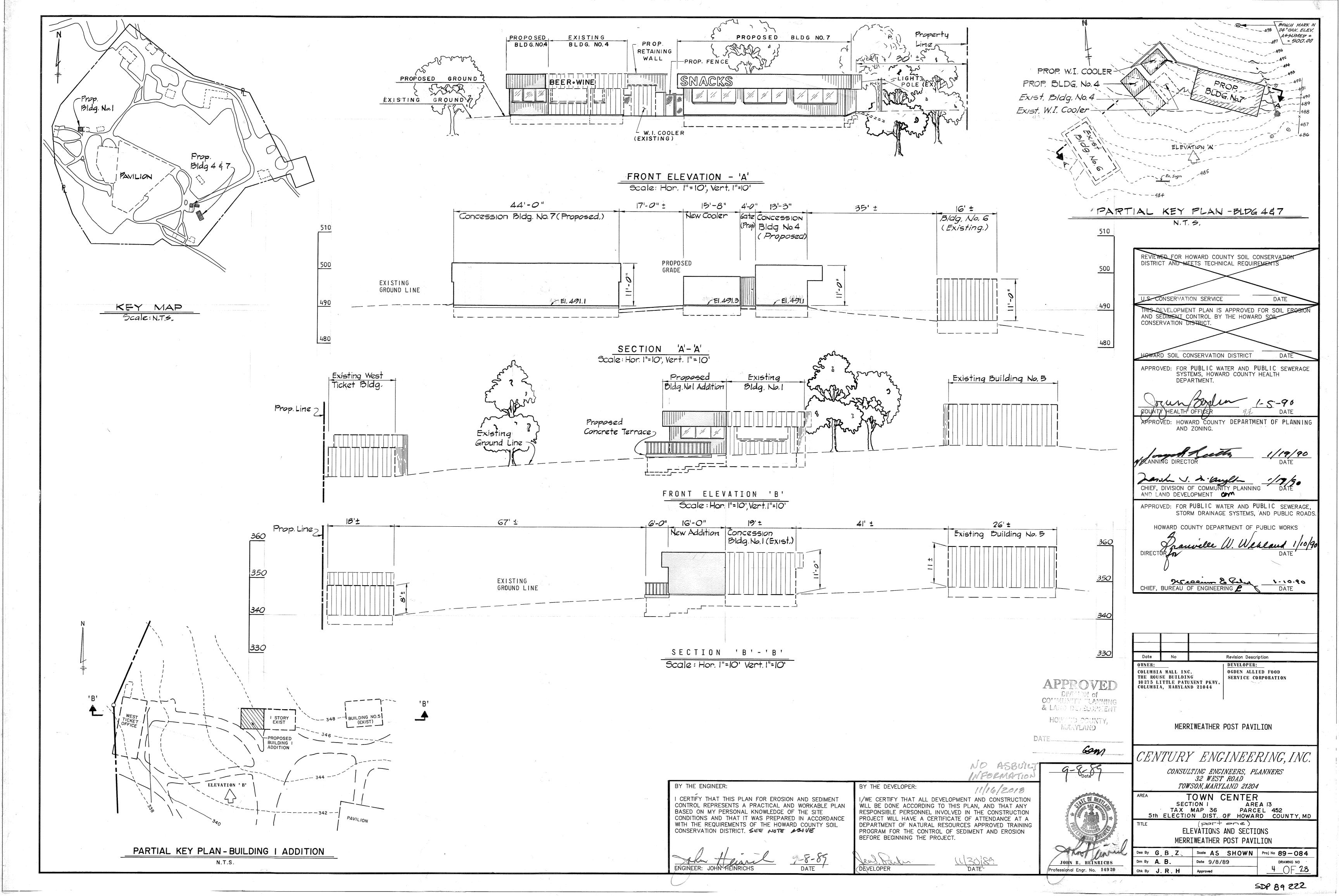
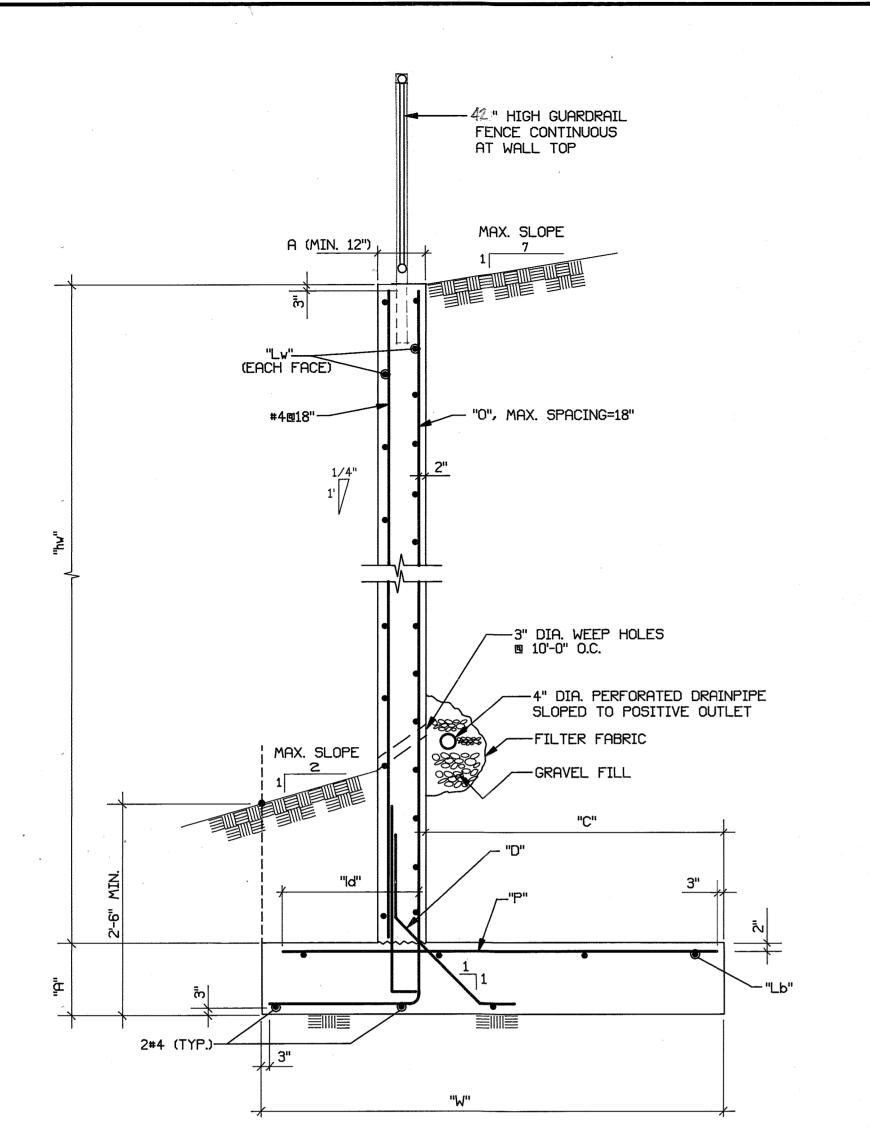


SDP 89 222

OF 28





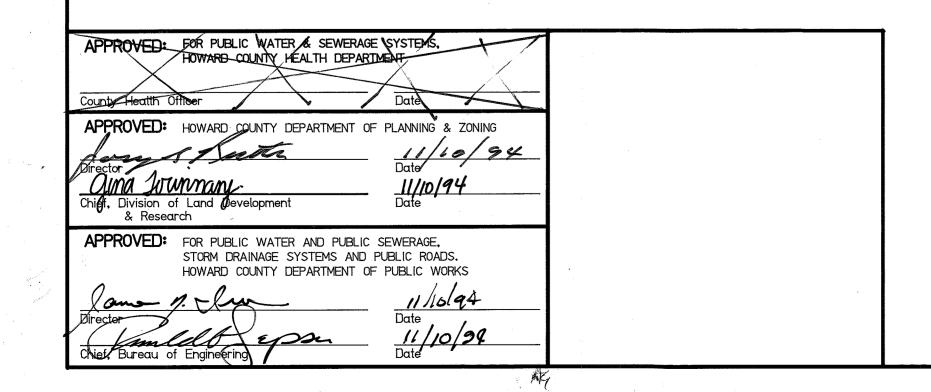


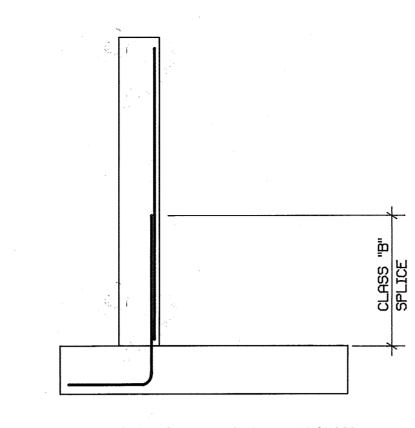
TYPICAL CANTILEVER RETAINING WALL DETAIL

hw < 8'-0"

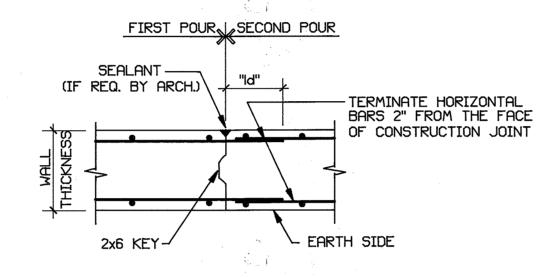
	,										
				CANTI	LEVER	RETA	AINING	WALLS			
c	ONCRETE D	DIMENSION	S	BASE DEPTH		· B	ASE REINF	FORCEMENT			STEM
HEIGHT ABOVE BASE "hw"	WIDTH OF WALL "A"	HEEL "C".:	WIDTH OF BASE **"W"	"A" ≥ 12"	"O" BARS INTO S	DOWELS	"D" BARS DIAGONAL CORNER BARS	"Lb" BARS LONGITUDINAL	"P" BARS TOP BARS	"M" BARS SRTAIGHT LENGTHS	"Lw" BARS LONGITUDINA
ft.	in.	fţin.	ftin.	(in.)	SIZE- SPACING	SHORT DOWEL	SIZE- SPACING	NUMBER- SIZE	SIZE- SPACING	SIZE- SPACING	SIZE- SPACING
4	12	1'-0"	2'-10"	12	#4@18	NONE	#4@18	4-#4	#4回18	NONE	#4@12
5	12	1'-10"	4'-2"	12	#4@18	NONE	#4@18	4-#5	#4@18	NONE	#4@12
6	12	3'-10"	5'-2"	12	#4@18	NONE	#4@18	4-#5	#4@18	NONE	#4回12
7	12	4'-0"	6'-4"	12	#4@18	NONE	#4回18	5-#5	#4@18	NONE	#4@12
8	12	5'-0"	7'-4"	12	#4回12	NONE	#4@12	6-#5	#4@12	NONE	#4回12
9	12	6'-0"	8'-4"	12	#5 @ 12	NONE	#5@12	7-#5	#5回12	NONE	#4@12

*Retaining Wall Base Dimensions (C&W) Shall Remain Constant
Through out the Entire Wall Length.

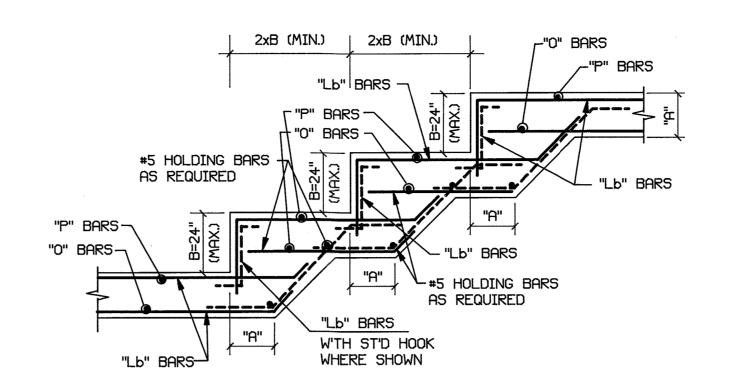




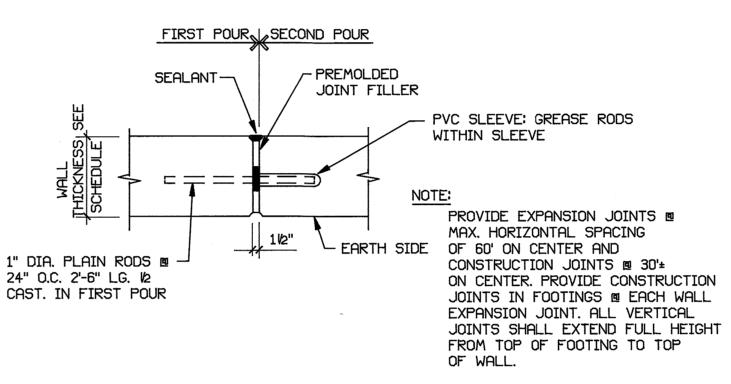
OPTIONAL SPLICE



CONSTRUCTION DETAIL IN WALL



CANTILEVER RETAINING WALL



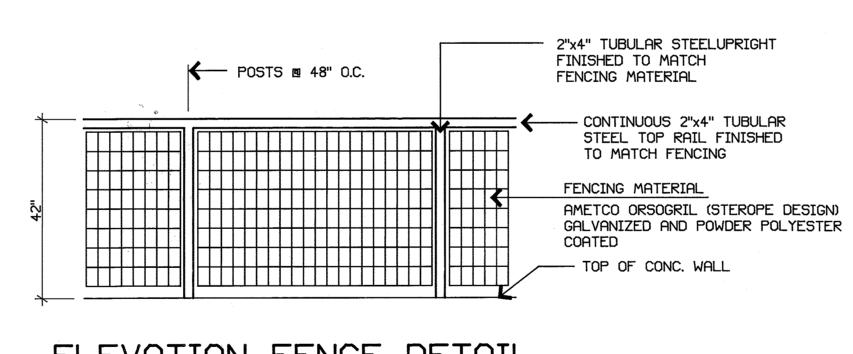
DETAIL

STEP FOOTING DETAIL

(VERTICAL STEP)

SHEET) - CHAMFER TOP EDGE - SMOOTH FINISH CONC. ____1" REVEAL IN CONC. "WEATHERED BOARD" FINISH CONCRETE GREENSTREAK NO. 346 (NOTE: EXACT TEXTURE TO BE DETERMINED.) Regiment PLANTING & GROUNDCOVER

TYPICAL EXPANSION



ELEVATION FENCE DETAIL



OPTIONAL FENCE DESIGN: CHAIN LINK "ANCHOR PERMAFUSED VINYL COATED FENCE - MESH SHALL BE 11 GAUGE 1 3/4" WITH TOP RAIL AND POSTS GALVANIZED AND VINYL COATED. SPACING AS SHOWN IN DETAIL ABOVE

ASBUILT SK&A 11/16/2018

Smislova, Kehnemui & Associates, P.A. Consulting Structural Engineers 6101 Executive Boulevard Rockville, Maryland 20852 Telephone (301) 881-1441

S-1 SHT. 50F28

5DP-89-222

CONCRETE WALL ELEVATION

STRUCTURAL NOTES

A GEOTECHNICAL ENGINEERING REPORT HAS BEEN PREPARED BY ROBERT B. BALTER COMPANY, DATED SEPT. 21, 1994. ALLOWABLE SOIL BEARING CAPACITY UTILIZED FOR SPREAD FOOTINGS IS 2000 PSF, ON COMPACTED FILL UTILIZING APPROVED ON SITE SOILS.

PLACE COMPACTED FILL REQUIRED TO BRING SUBGRADE TO PROPER ELEVATION PRIOR TO FOUNDATION WORK. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-6" BELOW FINISHED EXTERIOR GRADE, UNLESS A LOWER ELEVATION IS NOTED. FOOTING ELEVATIONS NOTED ARE ESTIMATED BASED ON AVAILABLE GEOTECHNICAL AND GRADING INFORMATION. (SEE SITE PLAN FOR SINGLE TIER SITE RETAINING WALL).

ALL FOUNDATION SUBGRADES SHALL BE INSPECTED AND APPROVED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER PRIOR TO BEING CONCRETED. FOOTINGS MAY BE LOWERED TO ACHIEVE BEARING CAPACITY, IF REQUIRED, SUBJECT TO REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER.

CONCRETE DESIGN AND DETAILING SHALL CONFORM TO THE REQUIREMENTS OF ACI 318-89. CONTRACTOR SHALL SUBMIT MIX DESIGNS ACCOMPANIED BY APPROPRIATE GRAPHS AND BACKGROUND DATA FOR APPROVAL. MIX DESIGN SHALL INDICATE 7 AND 28 DAY STRENGTHS, CEMENT CONTENT, AIR CONTENT, WATER-CEMENT RATIO, AMOUNT OF FINE AND COARSE AGGREGATES, AND ADMIXTURES.

MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE.

ALL EXTERIOR CONCRETE AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED.

ALL CONCRETE WORK, REINFORCING PLACEMENT, FORMWORK AND SHORING SHALL BE INSPECTED UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER. CONCRETE QUALITY CONTROL, INSPECTION AND TESTING SHALL BE IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATIONS, AS WELL AS LOCAL BUILDING CODE REQUIREMENTS.

USE OF ADDITIVES SHALL NOT BE PERMITTED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER. USE OF ADDITIVES CONTAINING CALCIUM CHLORIDE SHALL NOT BE

REINFORCING BARS SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. BARS SHALL BE BRANDED BY THE MANUFACTURER WITH BAR SIZE AND GRADE OF STEEL AND CERTIFIED MILL REPORTS SHALL BE SUBMITTED FOR RECORD. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE ACI "MANUAL OF STANDARD PRACTICE FOR

PROVIDE CORNER BARS AT JUNCTIONS OF CONCRETE WALLS AND WALL FOOTINGS AND LAP WITH WALL REINFORCING AS SHOWN IN TYPICAL DETAILS. SIZE AND SPACING OF CORNER BARS TO BE SAME AS HORIZONTAL WALL REINFORCING, UNLESS SHOWN OTHERWISE. WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AS NECESSARY. PROVIDE STANDARD HOOKS AT DISCONTINUOUS ENDS. TENSION AND COMPRESSION LAP SPLICES SHALL NOT BE LESS THAN THE SPLICE LENGTHS AS GIVEN IN ACCORDANCE WITH ACT RECOMMENDATIONS

ACI-318. PROVIDE PLACING ACCESSORIES IN ACCORDANCE WITH ACI RECOMMENDATIONS.

CONCRETE PROTECTION FOR REINFORCEMENT (CAST-IN-PLACE CONCRETE)

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH

FORMED CONCRETE EXPOSED TO EARTH OR WEATHER (WALLS AND FOOTINGS).....2"

(FOOTINGS)..

PROVIDE THE FOLLOWING MINIMUM CONCRETE COVER FOR REINFORCEMENT:

EXPOSED CONCRETE WALLS SHALL HAVE CHAMFERED EDGES.

CONCRETE (CAST-IN-PLACE)

SK&A PROJECT NUMBER 94-110

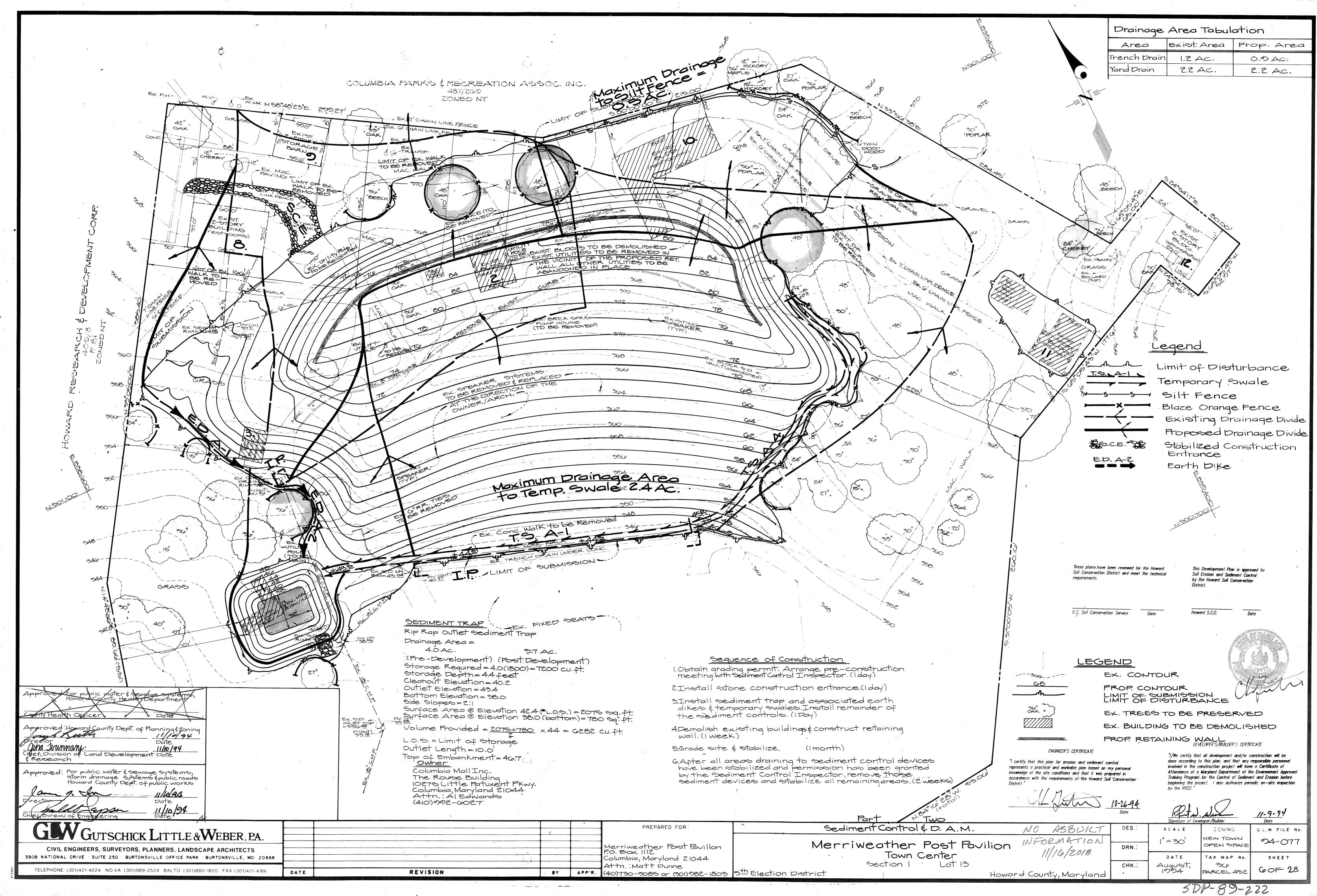
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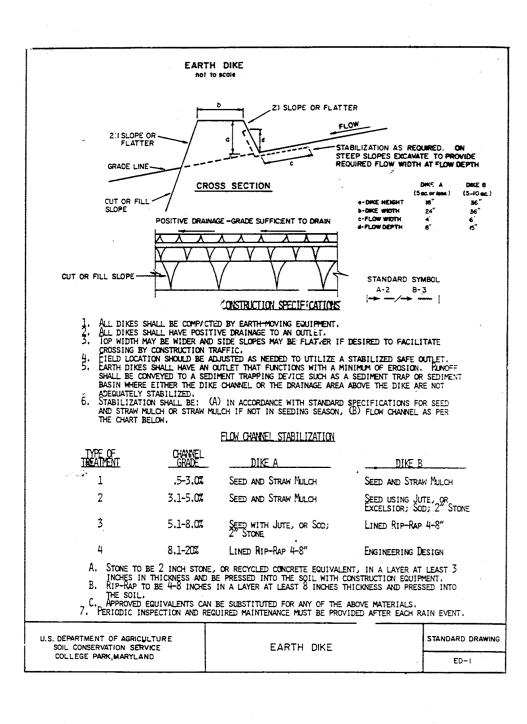
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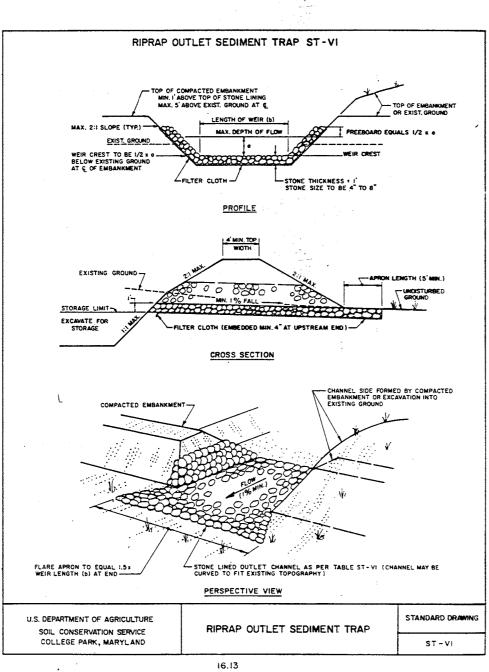
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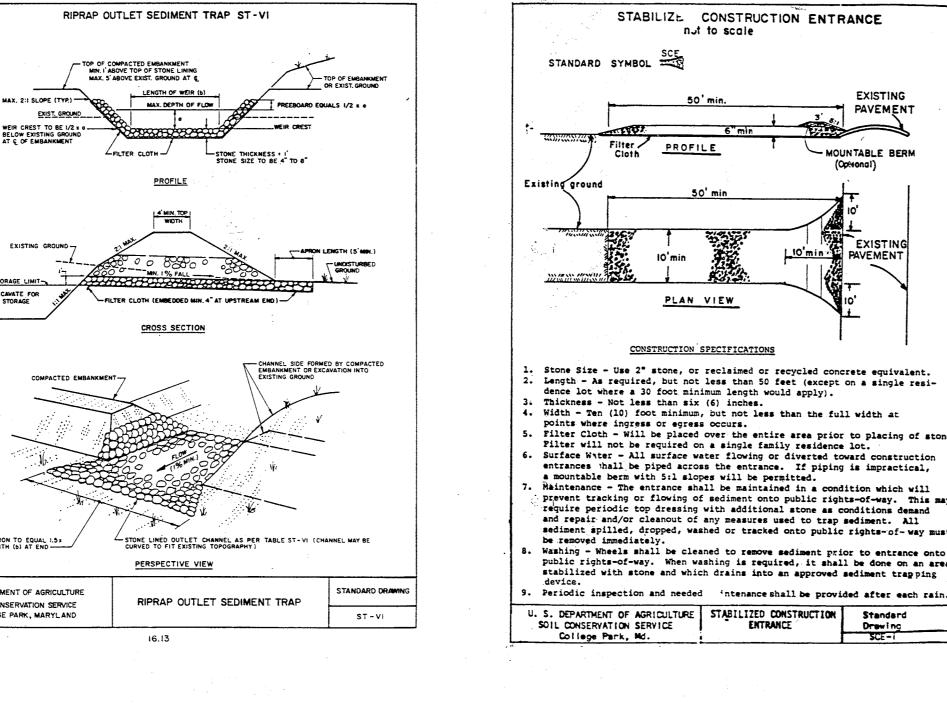
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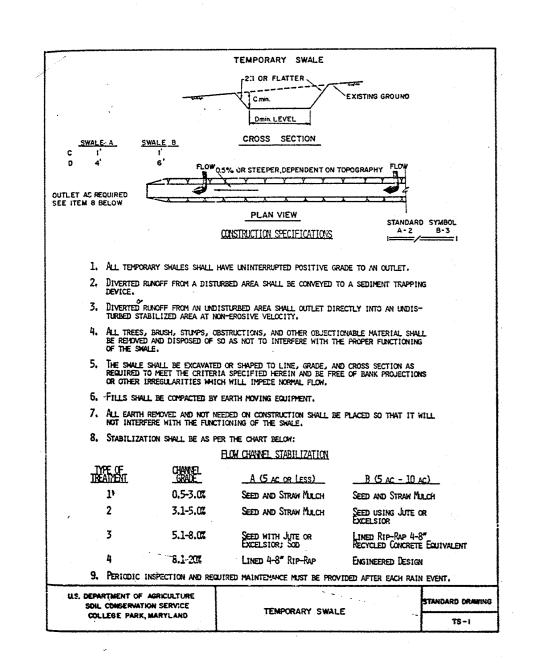
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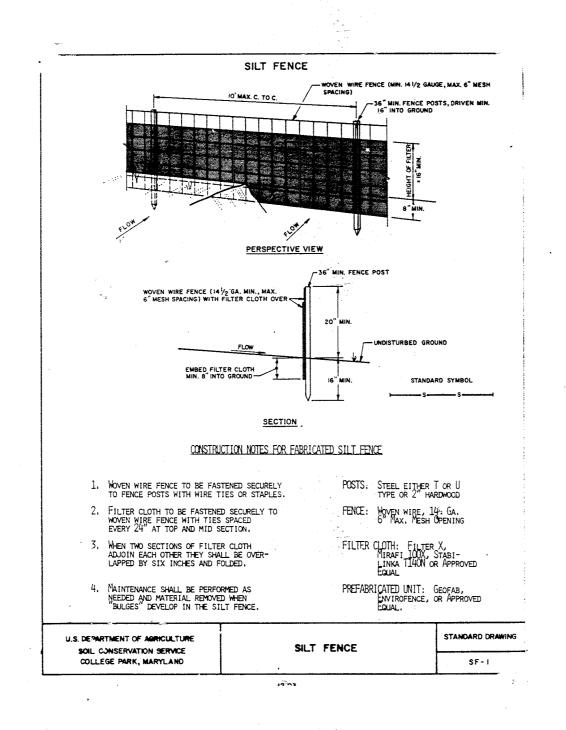


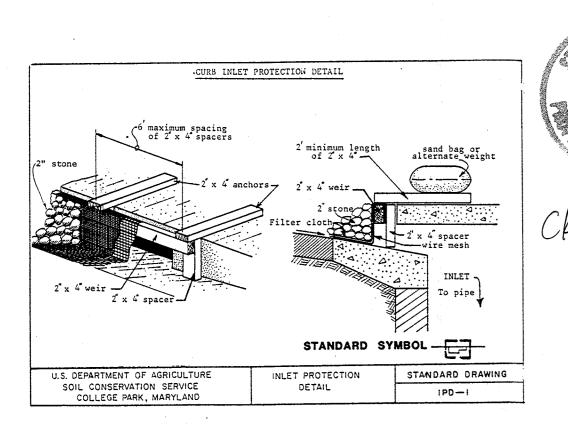


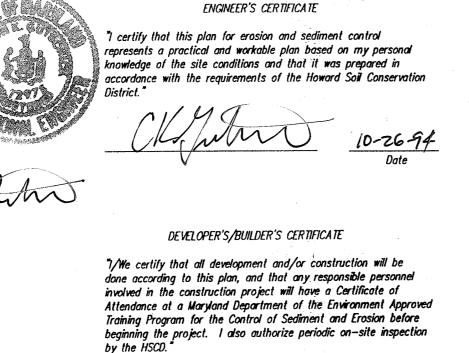




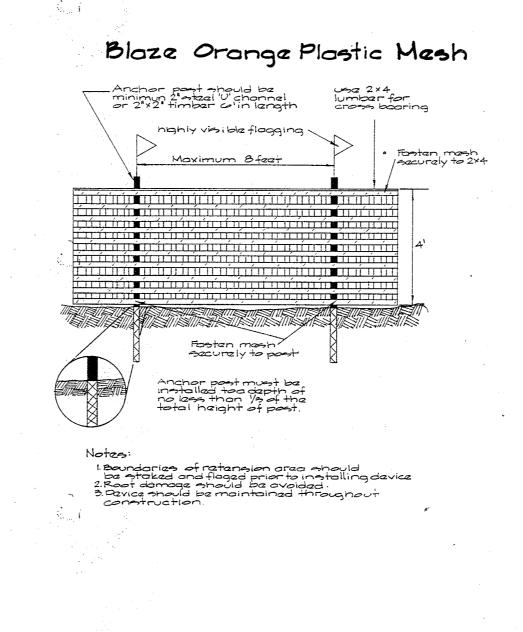








11-9-94



These plans have been reviewed for the Howard This Development Plan is approved for Soil Erosion and Sediment Control Soil Conservation District and meet the technical by the Howard Soil Conservation

Owner

Columbia Mall Inc. The Rouse Building

Attn.: Al Edwards

10275 Little Patuxent PKWY.

Columbia, Maryland 21044

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)

SEDIMENT CONTROL NATES

- 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 and perimeter slopes and all slopes areater than 3:1. b) 14 days as to all other disturbed or araded 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
- 5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSIONS AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seedings (Sec. 50) and mulching (Sec. 52). Temporary stabilization, with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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: 10.2 Acres Area Disturbed: 3.4 Acres Area to be roofed or paved: 1.0 Acres Area to be vegetatively stabilized: 3.4 Acres Total Cut 180 Cu. Yds. Total Fill 23,300 CU.Yds. Off-Site waste/borrow area location

- 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 control must be provided, if deemed necessary by the Howard County DPW Sediment Control
- 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.

PERMANENT SEEDING NOTES

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

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

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

- 1) Preferred Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) 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 unreaform fertilizer (9 lbs/1000 sq ft).
- 2) 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 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/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

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

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

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.). For the period May 1 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 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft 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.

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Diracto Juna S Chief. D	Wad: Howard County Dape Williamy; Div. of Land Davalopment Research	t. of Planning & Zoning 11/10/94 Data Data
Approv Jan Direction	rad: for public Water & pul	stems & public roads.
	. 4	Sadimar

5th Election District

(410)992-6027 GEV GUTSCHICK LITTLE & WEBER, P.A. ENGINEERS, PLANNERS, SURVEYORS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20866 TELEPHONE: (301) 421-4024 REVISION APP'R. DATE

Merriweather Post Bvillon P.O. Box 1112 Columbia, Maryland 21044 (410)730-9085 or (301)982-1803

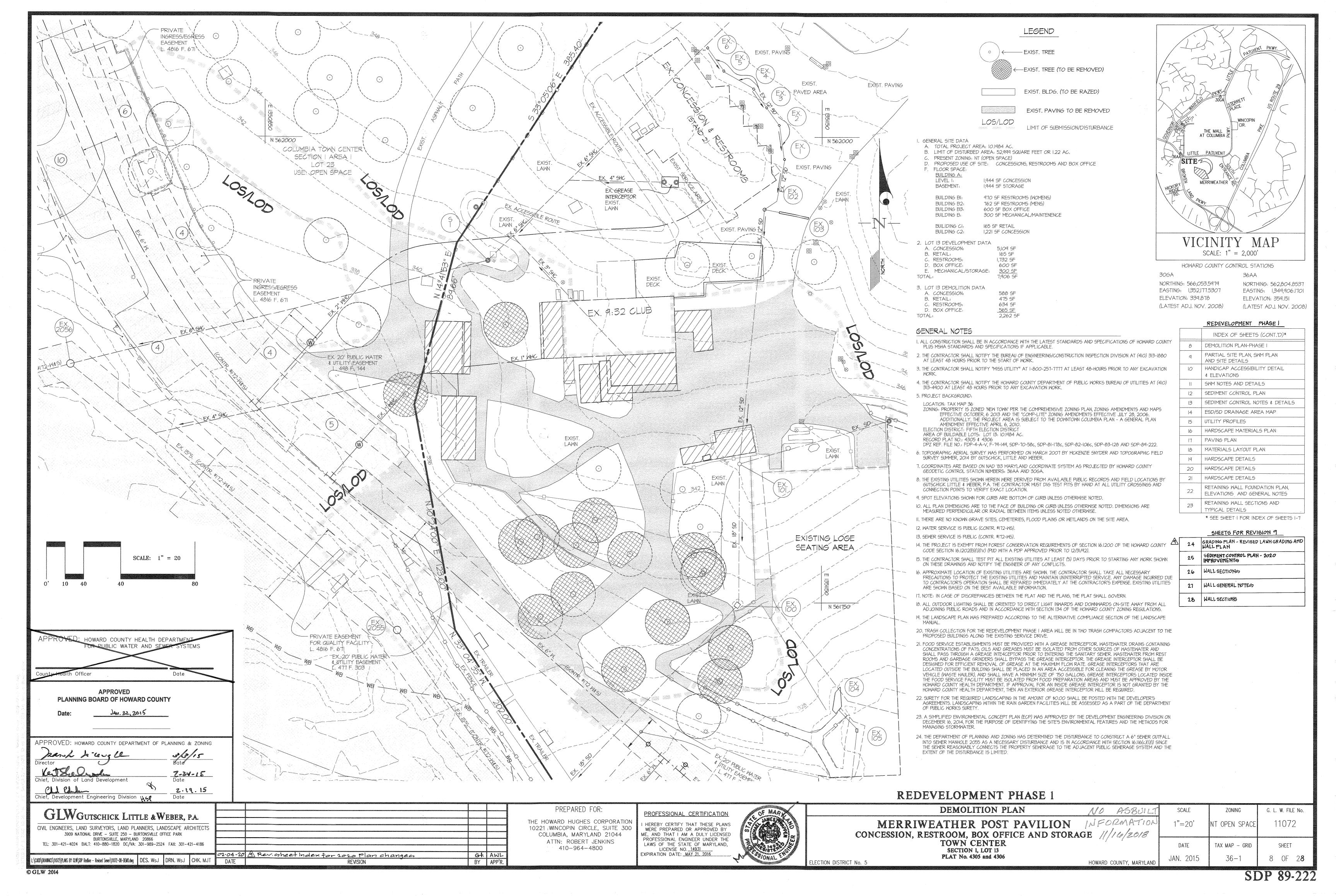
Sediment Control Details Merriweather Post Pavilion Town Center section 1

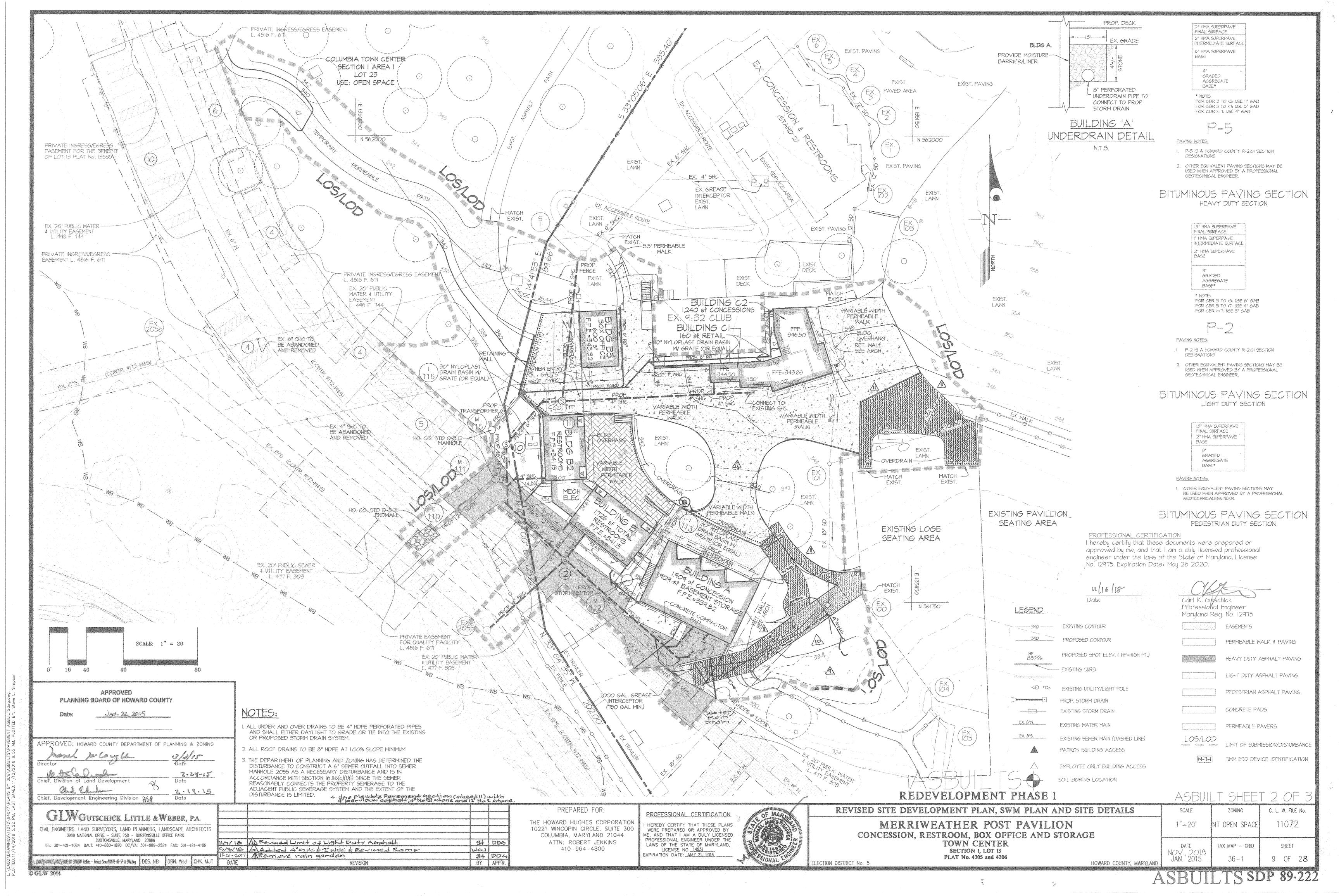
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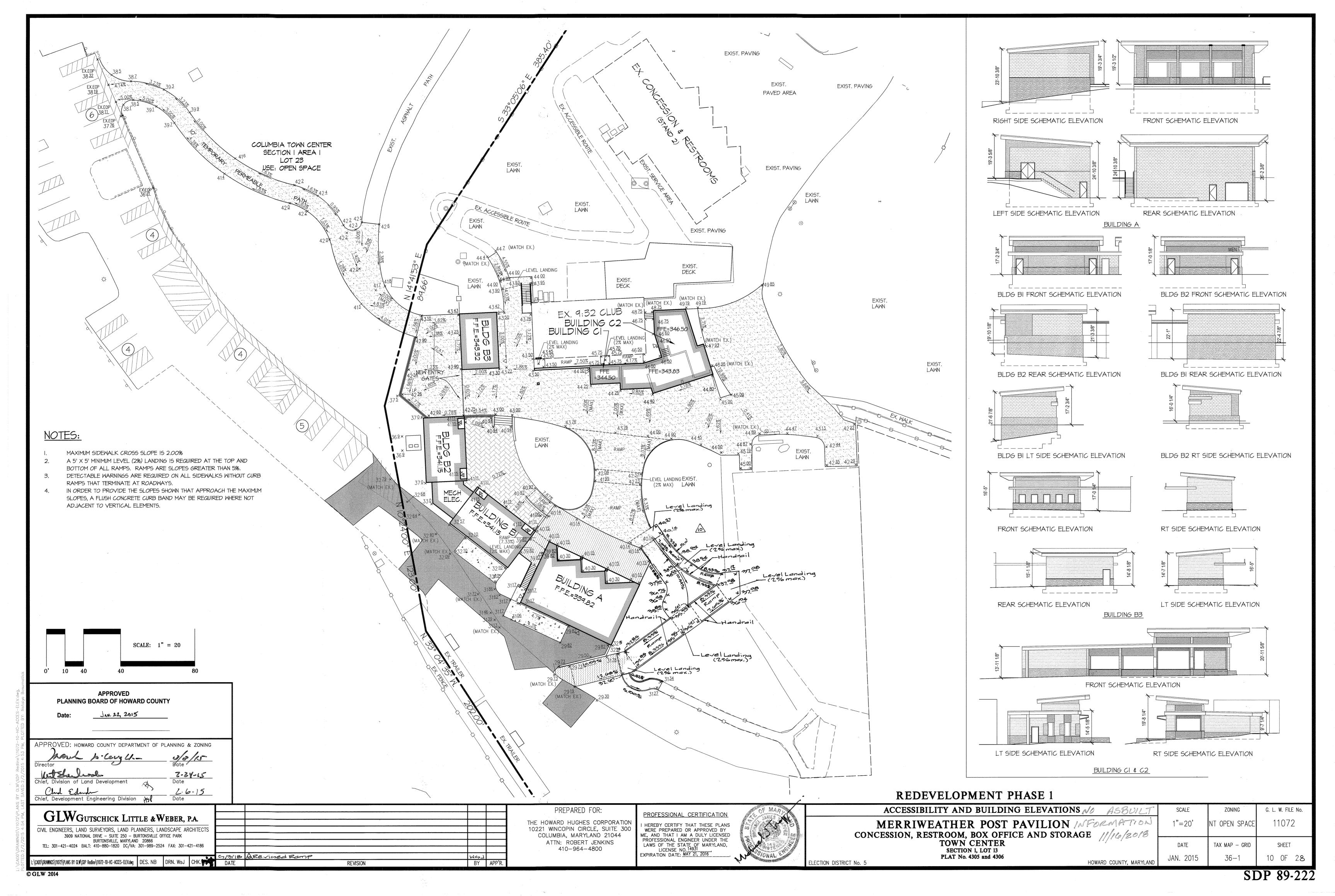
G.L.W. FILE No SCALE ZONING ショクト ちゅう 24-077 OPEN SPACE DATE TAX MAP No. SHEET August, 7 of 28 Parcel 452 Howard County, Maryland

PREPARED FOR:

Attn.: Matt bunne







B.4.B Specifications for Permeable Pavements

These specifications include information on acceptable materials for typical applications and are not exclusive or limiting. The designer is responsible for déveloping detailed specifications for individual projects and spécific conditions.

. Pervious Concrete Specifications

Design Thickness - Pervious concrete applications shall be designed so that the thickness of the concrete slab shall support the traffic and vehicle types that will be carried. Applications may be designed using either standard povement procedures (e.g., AASHTO, ACI 325.9R, ACI 330R) or using structural values derived from flexible pavement design procedures.

Mix & Installation - Traditional Portland cements (ASTM C 150, C 1157) may be used in pervious concrete applications. Phosphorus admixtures may also be uséd. Materials should be tested (e.g., trial batching) prior to construction so that critical properties (e.g., settling time, rate of strength development, porosity, permeability) Soil Component - Loamy Sand or Sandy Loam (VSDA Soil Textural Classification) can be determined.

Aggregate - Pervious concrete contains a limited fine aggregate content. Commonly used aradations include ASTM C 33 No. 67 (% in. to No. 4), No. 8 (% in. to or sandy loam (No. 16) and No. 89 (% in. to No. 50) sieves. Single-sized aggregate (up to I inch) may also be used.

Water Content - Water-to-cement ratios between 0.27 and 0.30 are used routinely with proper inclusion of chemical admixtures. Water quality should meet ACI 30a. As a general rule, potable water should be used although recycled concrete production water meetingASTM C 94 or AASHTO M 157 may also be used.

Admixtures - Chemical admixtures (e.g., retarders or hydration-stabilizers) are used to obtain special properties in pervious concrete. Use of admixtures should meet ASTM C 494 (chemical admixtures) and ASTM C 260 (air entraining admixtures) and closely follow manufacturer's recommendations.

Base Course - The base course shall be AASHTO No. 3 or 4 course agaregate with an assumed open pore space of 30% (n = 0.30).

2. Permeable Interlocking Concrete Pavements (PICP)

with an assumed open pore space of 30% (n = 0.30).

Reinforced Turf

Paver Blocks - Blocks should be either 3 % in. or 4 in. thick, and meet ASTM C 936 or CSA A231.2 requirements. Applications should have 20% or more (40% preferred) of the surface area open. Installation should follow manufacturer's instructions, except that infill and base course materials and dimensions specified in this Appendix shall be followed. Infill Materials and Leveling Course - Openings shall be filled with ASTM C-33

graded sand or sandy loam. PICP blocks shall be placed on a one-inch thick leveling course of ASTM C-33 sand.

Base Course - The base course shall be AASHTO No. 3 or 4 course aggregate

Reinforced Grass Pavement (RGP) - Whether used with grass or gravel, the RGP thickness shall be at least 1 3/4" thick with a load capacity capable of supporting the traffic and vehicle types that will be carried.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

- a. The Owner shall periodically sweep (or vacuum porous concrete pavement) the pavement surfaces to reduce sediment accumulation and ensure continued surface porosity. Sweeping should be performed at least twice annually with a commercial cleaning unit. Washing or compressed air units should not be used to perform surface cleaning.
- b. The Owner shall periodically clean drainage pipes, inlets, stone edge drains 5. Plant Installation and other structures within or draining to the subbase.
- . The Owner shall use deicers in moderation. Deicers should be non-toxic and be applied either as calcium magnesium acetate or as pretreated salt.
- d. The Owner shall ensure snow plowing is performed carefully with blades set one inch above the surface. Plowed snow piles and snowmelt should not be directed to permeable pavement.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

a. Maintenance of areas receiving disconnected rupoff is generally no different than that required for other lawn or landscapes areas. The Owner shall ensure the area receiving runoff are protected from future compaction or development of intervious area. In commercial areas, foot traffic should be an inch. Grasses and legume seed find the soil to a depth of at least one inch. Grasses and legume plugs shall be planted following the non-grass ground cover planting specifications.

OPERATION AND MAINTENANCE SCHEDUL RAIN GARDENS (M-7)

- a. The Owner shall maintain the pil material, mulch layer and soil layer soil is limited to correcting areas of annually. Maintenance of mulch ement shall be done in the spring. Plant 6. Underdrains erosion or wash out. Any mult material shall be checked for diseas, and insect infestation and maintenance will address dead materia and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland Stormwater Design M Rual Volume II, Table
- form a plant in the spring and in the fall of each year. . The Owner shall pa During the inspection, the Owner shall remove dead and diseased vegetation considered beyond treatment, replace 8 and plant material with acceptable eplacement plant material, treat diseased trees and shrubs, and replace all deficient stakes and wires.
- ir shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous multiplication layer shall be it moved before the new layer is applied.
- he Owner shall correct soil erosion on an as needed basis, with a For once per month and after each heavy storm.

APPROVED PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

2,3445

2.24.15 hief, Development Engineering Division 🎉

GLWGUTSCHICK LITTLE & WEBER, P.A

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK BURTONSVILLE, MARYLAND 20866

TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

B.4. Specifications for Rain Gardens

I. Malerial Specifications

The downlie materials to be used in these practices are detailed in Table #4.1. 2. Filtering Media or Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similal objects larger than two inches. No other materials or substances shall be lixed or dumped within the micro-bioretention practice that may be harmful to plant growth, or prove hindrance to the planting or maintenance operations. The planting soil shall be time of Bermuda grass, Quackgrass, Johnson grass, or other no lous weeds as specified under COMAR 15.08.01.05.

The planting oil shall be tested and shall meet the following criteria:

Organic Contest - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%)

coarse sand (

and compost (4

Clay Content - Media shall have a clay content of less than 5%. pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, on sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional Tests of organic tatter, and soluble salts. A textural analysis is required from the site stockpiled opsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated

3. Compaction

It is very important to mir nize compaction of both the base of bioretention practices and the require backfill. When possible, use expavation hoes to remove original soil. If practices de excavated using a loader, the contractor should use wide track or marsh track auipment, or light equipment lith turf tupe tires. Use of equipment with narrow track or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction realiting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design

Compaction can be alleviated at the base of the biogetention facility by using a primary tilling operation such as a chisel plow, ripper or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the elects of compact on from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Tump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the and layer first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the Loosoil to final dade

When backfilling the bioretention facility place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact to der or a dozer/loader with marsh

4. Plant Material

Recommended plant material for micro-bore ention practices can be found in Appendix A, Section A.2.3.

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shrelided or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.

Rootstock of the plant material giall be kept moist during transport and on-site storage. The plant root ball s ve planted so 1/8%th of the ball is above find grade surface. The diameter of the planting pit shall be at least six inches large than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. The roughly water ground bad cover after installation.

Trees shall be braced using 2 by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree

The topsoil specification provide enough organic material to adequately supply nutrients from natural cueling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a ranimum, impedes this goal. Only add fertilize if wood chips or mulch are used to amend the soil. Rotatill urea fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains should leet the following criteria:

Pipe-Should be 4 to 6" diameter, slotted or perforated rigid blastic pipe (ASTMF 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE). Perforations - Il perforated pipe is used, perforations should be "diameter located 6" on conter with a minimum of four holes per row. Pipe shall be wrapped with a " (No. 4 or 4x4) galvanized hardware clath." Gravel - The davel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.

The main collector pipe shall be at a minimum 0.5% slope.

A rigid, non-perforated observation well must be provided (one per every 1,0000 square feet) to provide a clean-out port and monitor performance of

A 4" layer of pea gravel (+" to +" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. The layer may be considered part of the filter bed when bed thickness exceeds 24".

collector pipe for underdrain systems shall be constructed at a slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

1-06-2018 🗥 REVISED STORMWATER MANAGEMENT DATA, UPDATED DETAIL

7. Micellaneous

5.2-18 10 Update own Table

9.2011 A Remove rain garden

practices may not be constructed until all contributing drainage area ho

REVISION

	graduation and the second of the second		Rain Gardens & Landscape Infiltration-
Material	Specification	IS178	Notes
Plantings	see Appendix A, Table A.4	l n/a	plantings are site-specific
Planting soil [2" to 4" deep]	loamy sand (60 - 65%) & compost (35 - 40%) o sandy loam (30%), coarse and (30%) & compost (40%)		USDA soil types loamy sand or sandy loan; clay content < 5%
Organic content	Min. 10% by dry veight (ASTM D 2974)	\$	
Mulch	shredded hardwood		aged 6 months, mi num; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8 TO	
Curtain drain	ornamental stone: washed co. Nes	stone: 2" to 5"	
Geotextile		n/a	PET de 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	0.570R-NO.6 AGG: GATE (3/8to 3) "1"	
Underdrain piping	F 758, Typ∈ PS 28 or AASHTO N-272	to 6" rigid schedule	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary aderneath pipes. Perforated pipe shall be wrapped with ½-inch galva ized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; #= 3500 psi @ 28 days, normal eight, air-entrained; reinforcia to meet ASTM-615-60	n/a	on-site witing of poured-in-place concrete required: 28 day strength and samp test; all concrete design (cast-in-place or precast) not using prevalually approved State or local standards requires design drawing, scaled and approved by a professional structural engineer licenseo. The State of Maryland - design to include meeting ACI Code 350.R/x Vertical loading (H-10 or H-20); allowable horizontal loading (base on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone ASHTO) #10 are not acceptable. No calcium carbonated or dolomitic and substitutions are acceptable. No "rock dust" can be used for and

AMENDIX B.1.1. - SUPPLEMENTAL POND SPECIFICATIONS (NON-378)

STORMWATER PONDS AND WETLAND SPECIFICATIONS (NON-378)

SPECIFICATIONS ARE IN ADDITION TO THE MD-378 SPECIFICATIONS. IF THERE IS ANY QUESTIONS AS TO THE APPLICABILITY, THE 🛦

THE SAME MATERIAL IN THE EMBANKMENT AS IS BEING INSTALLED FOR THE CORE TRENCH. IF THIS IS NOT P S-NOT AVAILABLE, A DAM CORE WITH A SHALL MAY BE USED. THE CROSS—SECTION OF THE STORMWATER APPROPRIATE M IP TO 10-YEAR WATER SURFACE ELEVATION) AS WELL AS THE ACCEPTABLE MATERIALS FOR THE SHE SE USED IN THE SHELL SHOULD BE PROVIDED BY THE GEOTECHNICAL ENGINEER. THE SHAPE OF THE DAM

SITE IMPROVEMENTS IS USING MODIFIED PROCTOR (AASHTO T-180), THEN TO MAIN 2. IF THE COMPACTION TESTS FOR AIN ON-SITE CONSISTENCY. THE OF A STANDARD PROCTOR (AASHTO T-99). THE MINIMUM DENSITY USING DRY DENSITY WITH A MOISTURE CONTENT OF $\pm 2\%$ OF THE OPTIMUM. MODIFIED PROCTOR MAY BE USED TE MODIFIED PROCTOR TEST METHOD STANDARD PROCTOR TEST METHOD SHA LEAST 95% OF THE WAXIMUM DRY DENSITY WITH A MOISTUF ONTENT OF ±2% OF THE OPTIMUM.

BE PRESENT TO VERIFY COMPACTION IN 3. FOR ALL STORMWATER MANAGEMENT FACILITIES OTECHNICAL ENGINEER OR THEIR REPRESENTATIVE NEORMATION NEEDS TO BE PROVIDED IN A ACCORDANCE WITH THE SELECTED TEST METHOD TO THE DESIGN ENGINEER. SO THAT CERTIFICATION OF THE CONSTRUCTION OF THE FACILITY, IN ACCORDAN WITH MD-378 SPECIFICATIONS, CAN-

4. A 4-INCH LAYER OF TOPSOIL SHALL BE PLACED ON ALL C IKMENT. SEEDING, LIMING, FERTILIZING, MULCHING, ETC. SHALL BE IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SER IND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PERMANENT SEEDING, SECTION IN CHAPTE OPSOIL IS TO ESTABLISH A GOOD GROWTH OF GRASS, WHICH IS NOT ALWAYS POSSIBLE WITH SOME OF THE MATERIALS THAT MAY BE P

5. GEOTEXTILE PLACED BENEATH RIP-RAP SHALL BE CLASS "C" GEOTEX R (SEE SECTION 24.0, MATERIAL SPECIFICATIONS, 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (MDI TABLE GEOTEXTILES THAT MEET THE CLASS "C" CRITERIA INCLUDE. CARTHAGE FX-70S GEOLON N70 MIRAFI 180-N

LFS RASFO ON INFORMATION PROVIDED BY MANUFACTURES OF THE 1997 SPECIFIER'S GUIDE DATED THIS IS ONLY A PARTIAL USTING OF AVAILABLE ENGINEER TO VERIFY THE ADEQUACY OF THE MA AS THERE ARE CHANGES IN THE MANUFACTURING MAY AFFECT THE CONTINUED ACCEPTANCE. PROCESS AND THE TYPE OF FABRIC L

K EXCAVATED POND MAY NEED TO BE CONSIDERED AN EMBANKMEN 6. A RULE OF THUMB TO DETERMINE PROVIDE CALCULATION OF L, WHERE H HEIGHT FROM POND BOTTOM TO TOP OF DAM. IF TH CTION OF L. DOWNSTREAM IS A JE OF SLOPE IS BELOW EXISTING GROUND, THE POND CAN BE CONSIDERED AN EXCAVATED POND. IN ADDITION, THE STREAM OF THE TOE, MUST BE LESS THAN 10%.

OTECHINCAL ENGINEER SHOULD MAKE THE DETERMINATION THAT THE SETTLEMENT OF THE POND WILL NOT CAUSE EXCESSIVE JOINT THE DESIGN ENGINEES

8. FILL PLACE INT SHALL NOT EXCEED A MAXIMUM 8-INCH. EACH LIFT SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE EMBANI ANKMENT FILL SHALL NOT BE PLACED HIGHER THAN THE CENTERLINE OF THE PRINCIPAL SPILLWAY UNTIL AFTER THE PRINCIPAL SPI D. IF THE EMBANKMENT NEEDS TO BE EXCAVATED TO INSTALL THE PRINCIPAL SPILLWAY, THE SIDE SLOPE SHALL BE NO LESS THAN THE SIDE SLOPES OF A CUT. TO REPAIR A DAM, INSTALL A PRINCIPAL SPILLWAY FOR AN EXCAVATED POND, OR OTHER REPAIR WORK, SHALL BE NO

STORMCEPTOR OPERATION AND MAINTENANCE SCHEDULE

NOTE: COMPONENTS ARE TO BE INSPECTED QUARTERLY

FACILITY COMPONENT REQUIRING MAINTENANCE	MAINENANCE ACTIVITY	WHEN MAINTENANCE ACTIVITY IS REQUIRED	EXPECTED FACILITY PERFORMANCE AFTER MAINTENANCE
STORAGE MANIFOLD	TRASH AND DEBRIS REMOVAL, & SEDIMENT REMOVAL.	FLOATABLE OBJECTS OR OTHER DEBRIS IS PRESENT IN THE FILTER OR MANIFOLD SYSTEM.	FILTRATION CAPACITY IS MAXIMIZED.
PIPING FITTINGS AND CONTROL DEVICES.	ENSURE ALL FITTINGS ARE SECURE AND THAT ALL CONTROLS ARE UNCLOGGED. FLUSH WITH WATER.	DRAINAGE SYSTEM IS OBSTRUCTED BY DEBRIS OR SEDIMENT.	SYSTEM FLOWS FREELY,
STORMCEPTOR	REMOVE ALL WATER AND POLLUTANTS FROM STRUCTURE.	SEDIMENT ACCUMULATES TO A DEPTH OF THREE FEET IN THE TREATMETN SUMP OR AFTER A SPILL	STRUCTURE IS EMPTY.
and the second			7

Date

A A STORMWATER MANAGEMENT REQUIREMENTS A STUDY AREA

15,900 GF EX. IMPERVIOUS AREA. (SITE IS GREATER THAN 40% IMPERVIOUS, RE-DEVELOPMENT CRITERIA APPLIES)

PROPOSED IMPERVIOUS AREA: 21,981 SF NET IMPERVIOUS: + 9.9816F

94. 000

94 000

BY APP'R

SITE IS 100% B SOILS, TARGET PE FOR NEW IMPERVIOUS IS 2.6"

ESD. REQUIREMENT = 50% * 15,900 SF = 7,950 SF (1" TREATMENT) + 5,981 SF (2.6" TREATMENT) =1,860 CF.

STORMWATER MANAGEMENT PROVIDED ESD TREATMENT BY DEVICE (A-2) POROUS PAVEMENT (11,981 SF): 2,349 CU-FT (1) TOTAL: 2,349 CU-FT EXCESS ESDV AVAILABLE FOR OTHER PHAGES 2349 CF-1,860 CF = 489 CF.

ROFESSIONAL CERTIFICATION hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional [

PROFESSIONAL CERTIFICATION

HEREBY CERTIFY THAT THESE PLANS

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. 14931

EXPIRATION DATE: MAY 21, 2016

NOTE: ALL OF THE POROUS PAVEMENT HAS A 12" STONE BASE. No. 12975, Expiration Date: May 26 2020.

PREPARED FOR:

THE HOWARD HUGHES CORPORATION

10221 WINCOPIN CIRCLE, SUITE 300

COLUMBIA, MARYLAND 21044

ATTN: ROBERT JENKINS

410-964-4800

engineer under the laws of the State of Maryland, License 🖣

LECTION DISTRICT No. 5

TYPICAL CROSS SECTION Professional Engineer

PERMEABLE ASPHAL

(TEMPORARY PATH)

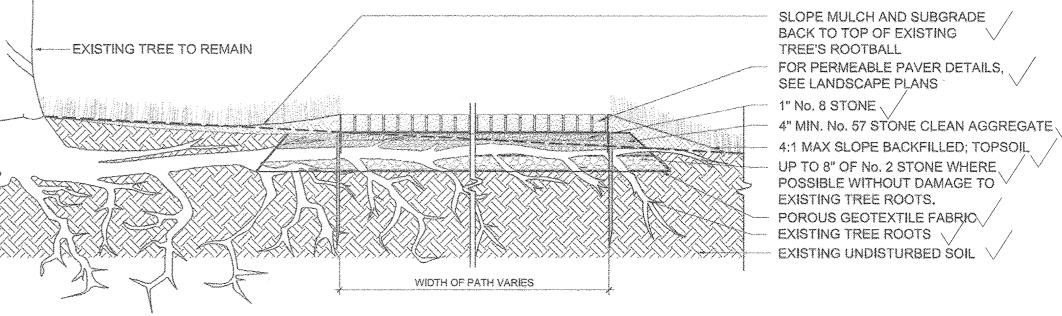
MERRIWEATHER POST PAVILION CONCESSION, RESTROOM, BOX OFFICE AND STORAGE TOWN CENTER

SECTION I, LOT 19 PLAT No. 4305 and 4306 HOWARD COUNTY, MARYLAND

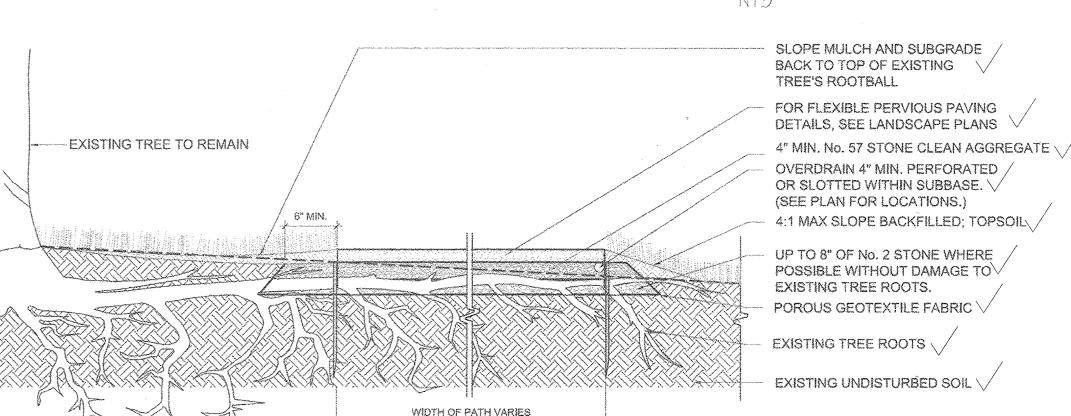
ASPHALT 4" MIN. No. 57 STONE CLEAN AGGREGATE 12" No. 2 STONE OVERDRAIN 4" MIN. PERFORATED OR SLOTTED WITHIN SUBBASE. (SEE PLAN FOR LOCATIONS.) 4:1 MAX SLOPE 4:1 MAX SLOPE BACKFILLED; TOPSOIL \ BACKFILLE TOPSOIL (SEE DETAILS BELOW FOR AREAS / OF TREE ROOTS) POROUS\ POROUS GEOTEXTILE FABRIC . GEOTEXTILE FABRIC EXISTING UNDISTURBED SOIL \ **EXISTING** WIDTH OF PATH VARIES UNDISTURBED FLEXIBLE PAVING SOIL / FOR PERMEABLE PAVER DETAILS. SEE LANDSCAPE PLANS 1" No. 8 STÓNE 4" MIN. No. 57 STONE CLEAN AGGREGAT 4:1 MAX SLOPE BACKFILLED; TOPSOIL 8" No. 2 STONE (SEE DETAIL'S BELOW FOR AREAS OF TREE ROOTS) POROUS GEOTEXTILE FABRIC . EXISTING UNDISTURBED SOIL WIDTH OF PATH VARIES (A-2) PAVER

4" PERMEABLE AGPHALT M.

TYPICAL 12" PERMEABLE PAVEMENT SECTIONS (FOR ROOT AREAS, SEE DETAILS THIS SHEET)



PERMEABLE PAVEMENT (A-2)-PAVER IN ROOT AREAS DETAIL



PERMEABLE PAVEMENT-FLEXIBLE PAVING IN ROOT AREAS DETAIL

INFLOW -10' OVERFLOW SECTION LAYER AT ESDV ELEVATION TOP OF BERM RAIN GARDEN OVERFLOW DETA RAIN GARDEN

REDEVELOPMENT PHASE

SWM NOTES, DETAILS AND MAINTENANCE SCHEDULES

NT OPEN SPACI AS SHOWN TAX MAP - GRID NOV., 2018 JAN. 2015

G. L. W. FILE No.

11072

SHEET,

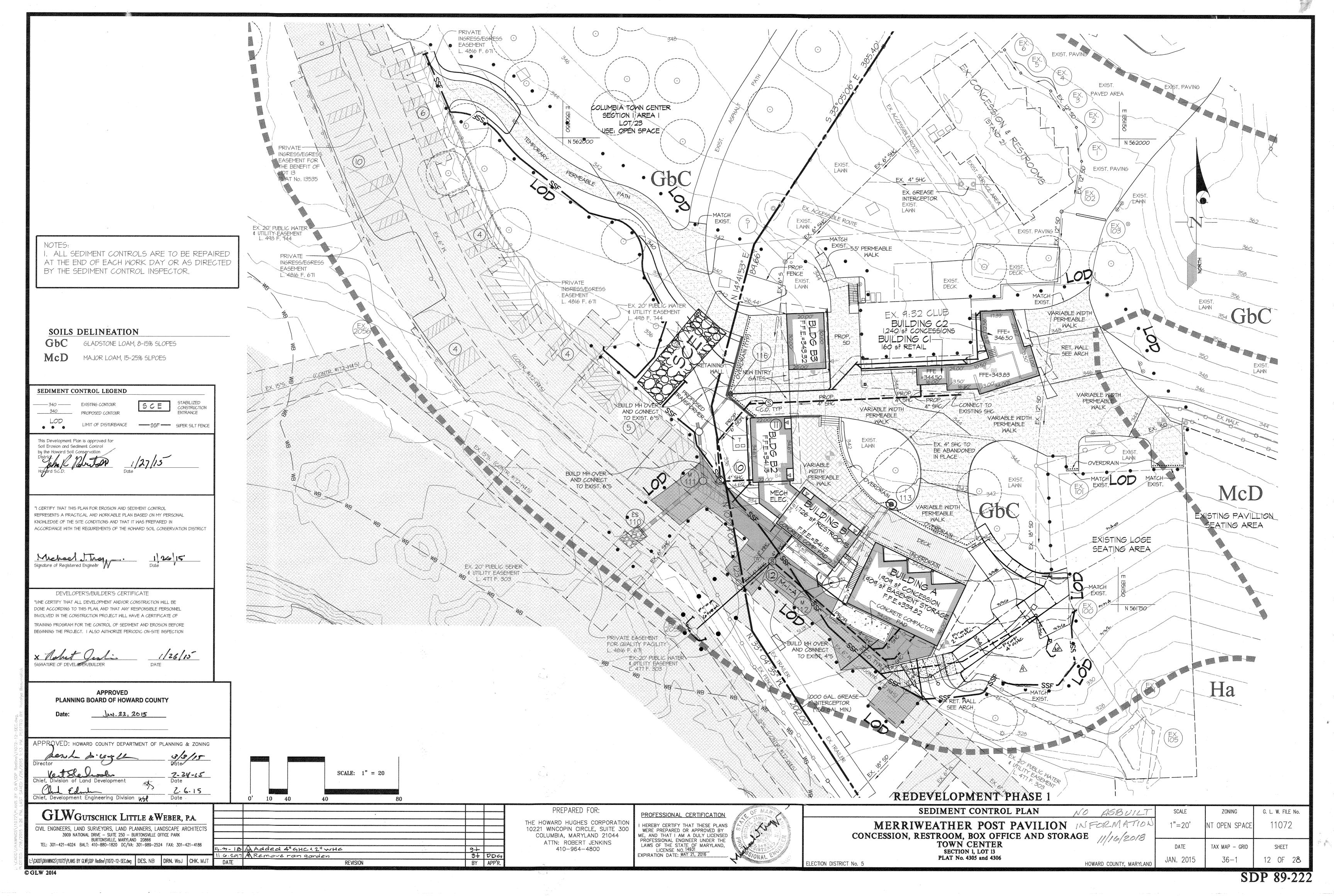
11 OF 2**8**

ZONING

GUSTERNIKO (1870) PUNIS TH CAPOR NASAR - Nasard Savel (1987-11-SAN Valdan | DES, West | DRN. West | © GLW 2012

Carl K. Gutschick

Maryland Reg. No. 12975



SITE ANALYSIS

TOTAL AREA OF SITE 10.2 ac. AREA DISTURBED 1.2± ac. AREA TO BE ROOFED OR PAVED 0.72± ac. AREA TO BE VEGETATIVELY STABILIZED : 0.4± ac. TOTAL CUT 1,450 c.y. 1 1,450 c.y. OFF-SITE WASTE/BORROW-AREA LOCATION: N/A

* FOR ESTIMATING PURPOSES ONLY. CONTRACTOR TO VERIFY ACTUAL VALUES.

SEQUENCE OF CONSTRUCTION

- Arrange pre-construction meeting with the Sediment Control Inspector and obtain the Grading Permit. I DAY
- 2. Install stabilized construction entrance and super silt fence. I DAY
- 3. Fine grade site. I WEEKS
- 4. Begin building construction. I WEEK
- 5. Stabilize the building area with the finished floor slab. 2 MONTHS
- 6. Install utilties and sidewalks.
- Stabilize areas with grass seed and mulch. I MONTH. 7. When all areas draining to the sediment controls have been stabilized

and permission has been granted by the Sediment Control

Inspector, those sediment control devices may be removed.

Stabilize the remaining areas, install landscaping, seed and mulch. I WEEK

8. Finish building construction. Remove any remaining sediment controls and stabilize. I WEEK

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soll Conservation John RRobertson

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL

ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT

1/27/15

DEVELOPER'S/BUILDER'S CERTIFICATE

KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE

BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION

PLANNING BOARD OF HOWARD COUNTY

Chief, Development Engineering Division 🔏 🌶

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 2-24-15

GLWGUTSCHICK LITTLE &WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS

BURTONSVILLE, MARYLAND 20866

TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

:\CADD\DRAWINGS\11072\PLANS BY GLW\SDP Redline\11072-13-SEC DET.dwg | DES. WsJ | DRN. WsJ | CHK. NB

3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

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

<u>PURPOSE</u>

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

- 1. 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 PLAN
- 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
- 3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.I.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING SUMMARY

	HARDINESS Z SEED MIXTUR	ZONE: 6b E : A <i>PPLICATION</i>	V		FERTILIZER RATE	LIME RAT
No.	SPECIES	RATE (lb/ac.)	SEEDING DATES	SEEDING (DEPTHS	1.0-10-1.0) KAI
1	ANNUAL RYEGRASS	40 lb/ac	Mar. 1 to May 15, Aug. 1 to Oct. 15	0.5 INCHES	436 b./ac. (10 b./	2 tons/a (90 lb./
2	PEARL MILLET	20 lb/ac	May 16 to July 31	0.5 INCHES	1,000 sf)	

SEDIMENT CONTROL NOTES

- I. 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: (410) 313-1855
- 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 "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND REVISIONS THERETO.
- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A. 3 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3
- HORIZONTAL TO I VERTICAL (3:1); AND B. 7 CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- 4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. I, CHAPTER 1, 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 "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDINGS AND MULCHING (SEC. B). TEMPORARY STABILIZATION, WITH MULCH ALONE, CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR 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
- 7. NY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF
- 8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW 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 THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- IO. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO 3 PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN I WORKING DAY, WHICHEVER IS SHORTER.

REVISION

B-4-2 STANDARD AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. CONDITIONS WHERE PRACTICE APPLIES WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

A. SOIL PREPARATION I. TEMPORARY STABILIZATION

- a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION, SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

 INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY
- DISKING OR OTHER SUITABLE MEANS.
- a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT

1. SOIL PH BETWEEN 6.0 AND 7.0.

- II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
- III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
- IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT. . SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT
- APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
- . GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3
- d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
- e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE TS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION, LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION, TRACK SLOPES 3:1 OR FLATTER WITH TRACKED QUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE, LEAVE THE TOP I TO 3 INCHES OF SOIL LOOSE AND FRIABLE, SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY

B. TOPSOILING

- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE 15 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
- TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE TANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY
- 3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
- b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT
- d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE. 4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND
- TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING
- TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY OAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1.5 INCHES IN DIAMETER.
- b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA RASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS
- TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
- 6. TOPSOIL APPLICATION

BY APP'R

a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONA 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

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR CURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTE

MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED

- 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 RADEMARK AND WARRANTY OF THE PRODUCER. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCEN TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIÚM 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.
- 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. WHERE TH SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS SPREAD GROUND LIMESTONE AT THE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

PREPARED FOR:

THE HOWARD HUGHES CORPORATION

10221 WINCOPIN CIRCLE, SUITE 300

COLUMBIA, MARYLAND 21044

ATTN: ROBERT JENKINS

410-964-4800

B-4-3 STANDARDS AND SPECIFICATIONS FOR 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

I. 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. SE TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY
- TYPE OF SEED AND SEEDING RATE. b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE
- MUST BE APPLIED WHEN THE GROUND THAWS. 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 KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 15 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE
- I. 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

2. APPLICATION

- a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON
- TEMPORARY SEEDING TABLE B.I, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL
- b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL 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 I. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY

INCLUDES SEED AND FERTILIZER). IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, IOC POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (POTASSIUM), 200 POUNDS PER ACRE. II. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEFDING), NORMALLY, NOT MORE THAN 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

B. MULCHING

I. MULCH MATERIALS (IN ORDER OF PREFERENCE)

a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLE AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY 10LDY, 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

iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

- PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS 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
- WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER. ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED II
- WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY IO MILLIMETERS, DIAMETER APPROXIMATELY I MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90

CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS

2. APPLICATION

APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING 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 T SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE. 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

CELLULOSE FIBER PER 100 GALLONS OF WATER.

PROFESSIONAL CERTIFICATION

HEREBY CERTIFY THAT THESE PLANS

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. 14931 EXPIRATION DATE: MAY 26, 2016

3. ANCHORING

a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE (THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND FROSION HAZARD A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED FO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 3 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY.

WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD

- USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW, APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MI) THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS
- OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER. i. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-TO, PETROSET, TERRA TAX II, TERRA MANUFACTURER. APPLICATION OF LIQUI BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHAL BINDERS IS STRICTLY PROHIBITED. /. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH

ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND

COVER ON DISTURBED SOILS.

A. SEED MIXTURES

2. TURFGRASS MIXTURES

CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE

APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE

WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD

FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES

FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0)

AT 3 1/2 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

AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS,

SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE

SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE

SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND

KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE

MARYLAND AND EASTERN SHORE, RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE

II. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL

RECEIVE MEDIUM TO INTENSIVE MANAGEMENT, CERTIFIED PERENNIAL RYEGRASS

PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS

III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT

CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE

CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE

PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN

RECOMMENDED MIXTURE INCLUDES, CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY

KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH

MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS

CIII TIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO TO

SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS

CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF

OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF

WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B,

GENTRAL MD: MARCH I TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE:

SOUTHERN MD, EASTERN SHORE: MARCH I TO MAY 15, AUGUST 15 TO OCTOBER 15

TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A

DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER

RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES

IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR

LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON

PERMANENT SEEDING SUMMARY

PLANT GROWTH (1/2 TO I INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL

THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE

DATES

ERTILIZER

RATE

RATE

1000 s.f.

(45

lb/acre) s.f.

DEPTHS (10-20-20)

BEEDBED, REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER.

CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT

PERCENT. SEEDING RATE: 11/2 TO 3 POUNDS PER 1000 SQUARE FEET.

CULTIVAR RECOMMENDATIONS FOR MARYLAND".

IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

1000

* Other cultivars listed as "proven" in the most current UMD TT-77 may also be used

a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST

GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE

SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT

(EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL

SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS

1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP

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

SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN

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

BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR

FIRM GRASP ON THE UPPER IO PERCENT OF THE SECTION.

AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.

(HARDINESS ZONES: 7A, 7B)

WILL POSE NO DIFFICULTY.

SEED MIXTURE: #8 (Tall Fescue)

*Certified Tall Fescue | 6-8

HARDINESS ZONE: 6b

Equal amounts of

& Rebel Exeda

GENERAL SPECIFICATIONS

Falcon IV. Penn 1901

CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY

EET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH

INTENSIVE MANAGEMENT IRRIGATION REQUIRED IN THE AREAS OF CENTRAL

RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.

AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF

CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S)

ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS

SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS

SUMMARY IS TO BE PLACED ON THE PLAN.

RECOMMENDED BY THE SOIL TESTING AGENCY.

OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING

CRITERIA

AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE

FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

2. SOD INSTALLATION

a. 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.

DEFINITION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY

O PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.

SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED

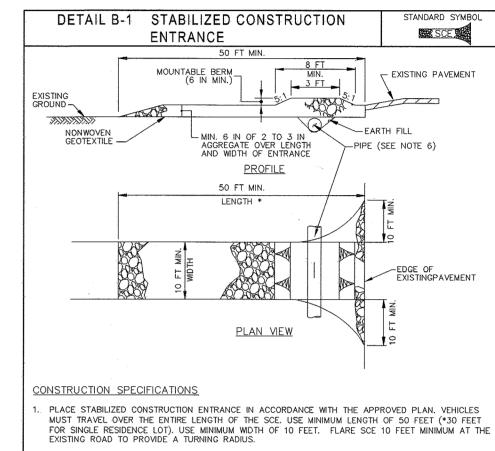
PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER, STAGGER LATERAL

WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR

JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER

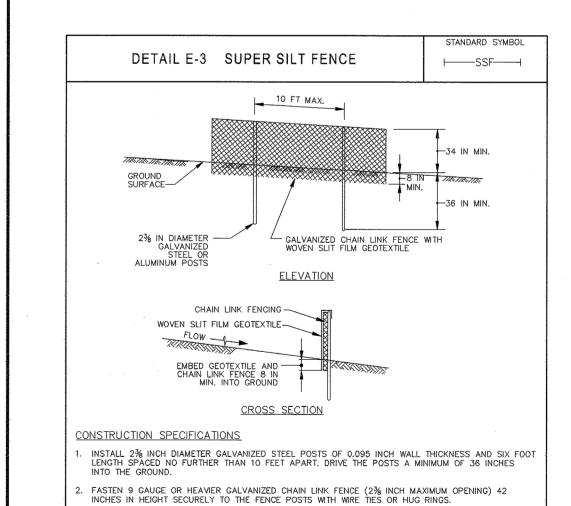
THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING

- AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
- DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 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.



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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL



SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.

EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS

CHAIN LINK FENCING AND GEOTEXTILE.

PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT

SEDIMENT CONTROL NOTES AND DETAILS MERRIWEATHER POST PAVILION INFORMATION CONCESSION, RESTROOM, BOX OFFICE AND STORAGE 11/16/2018

SECTION 1, LOT 13 PLAT No. 4305 and 4306

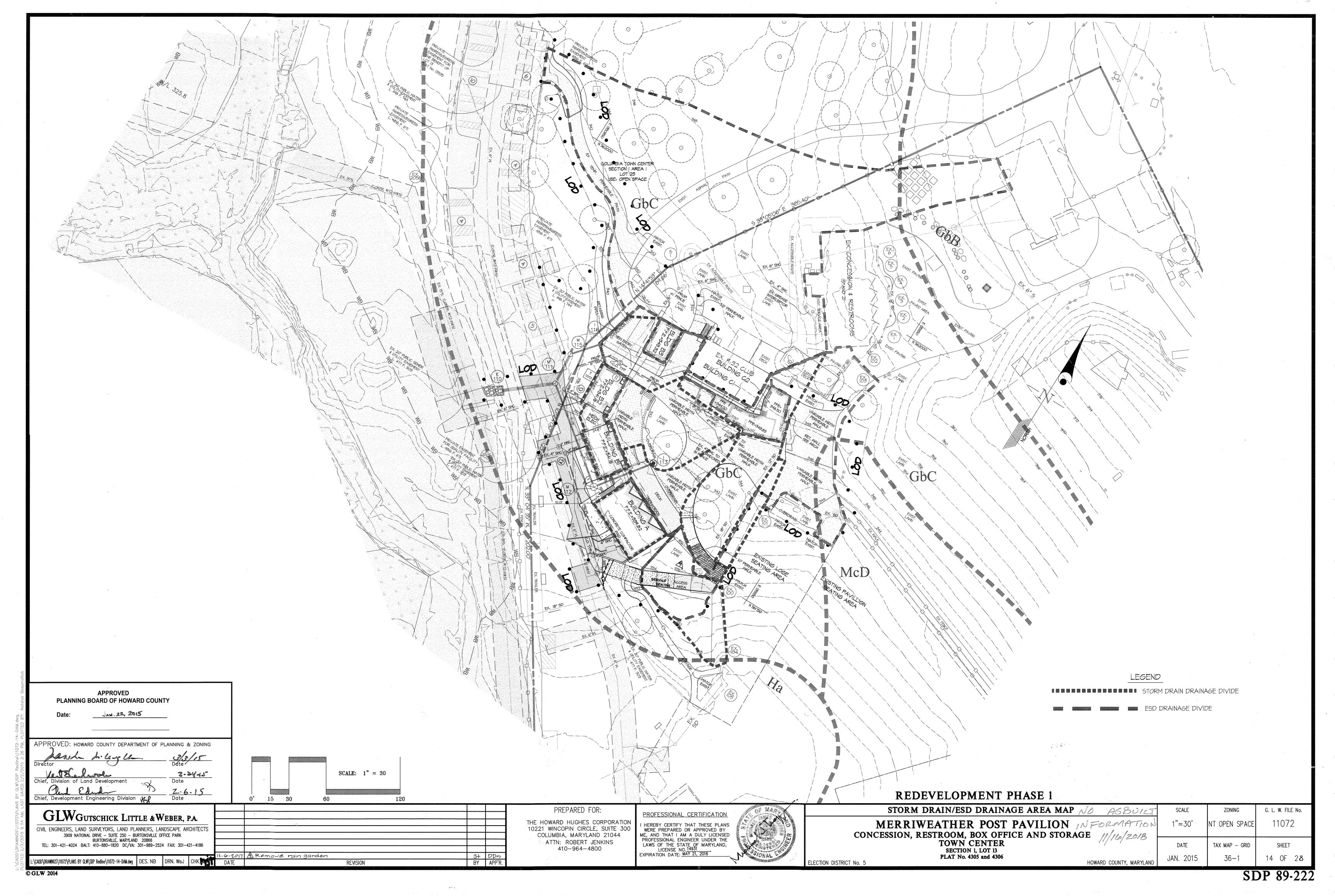
NT OPEN SPACI AS SHOWN TAX MAP - GRID JAN. 2015 13 OF 28 HOWARD COUNTY, MARYLAND

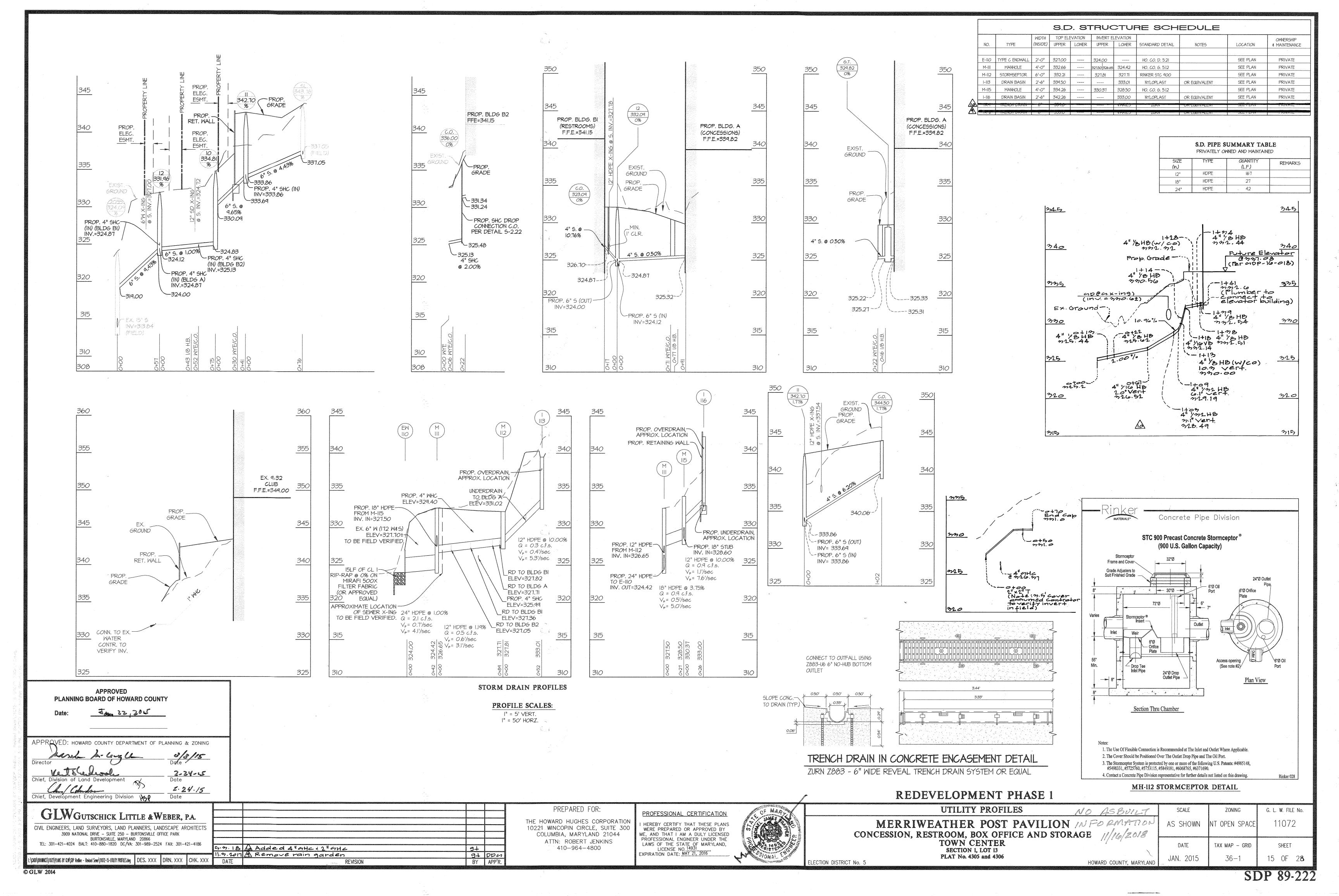
REDEVELOPMENT PHASE 1

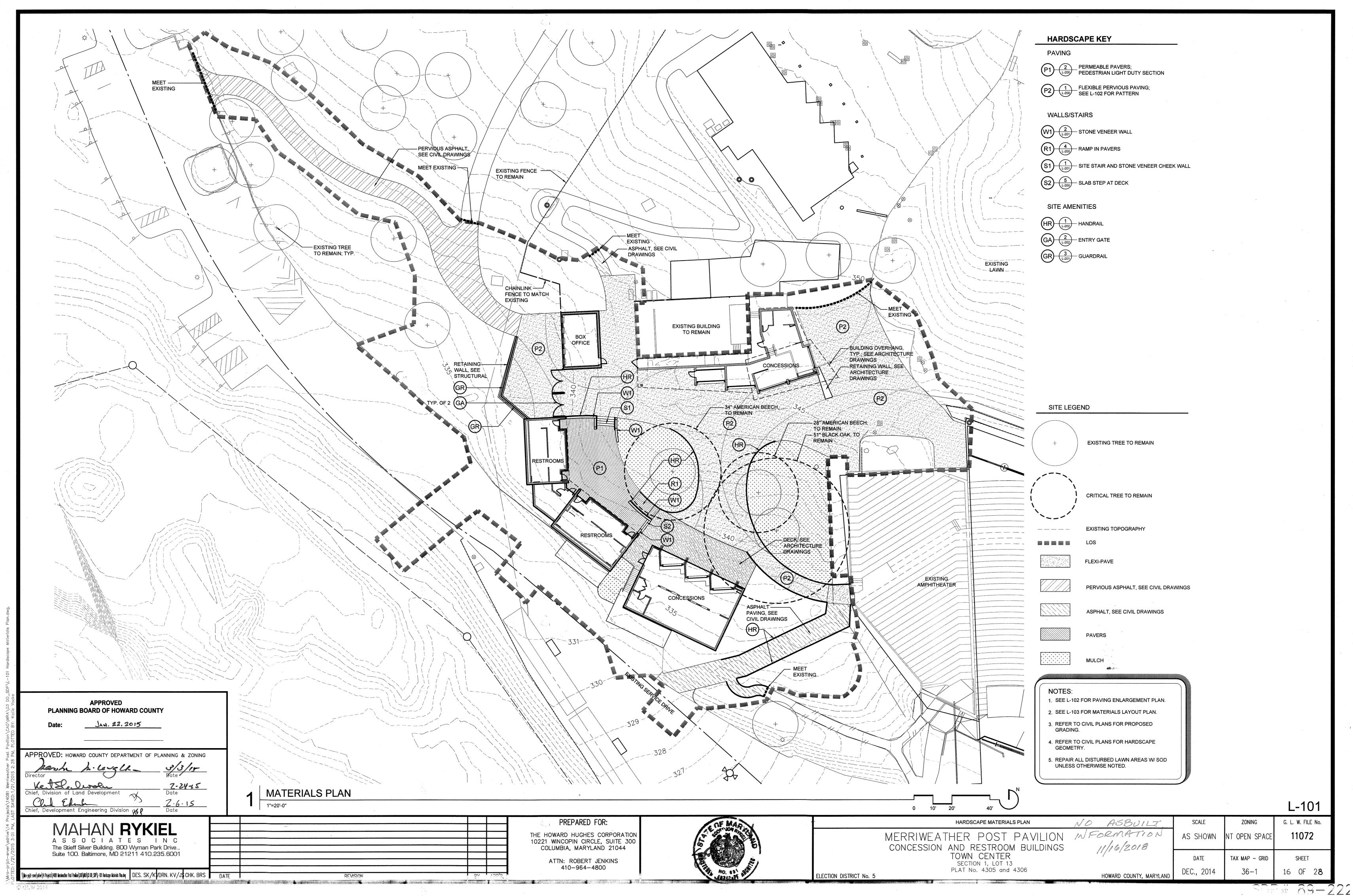
ECTION DISTRICT No. 5

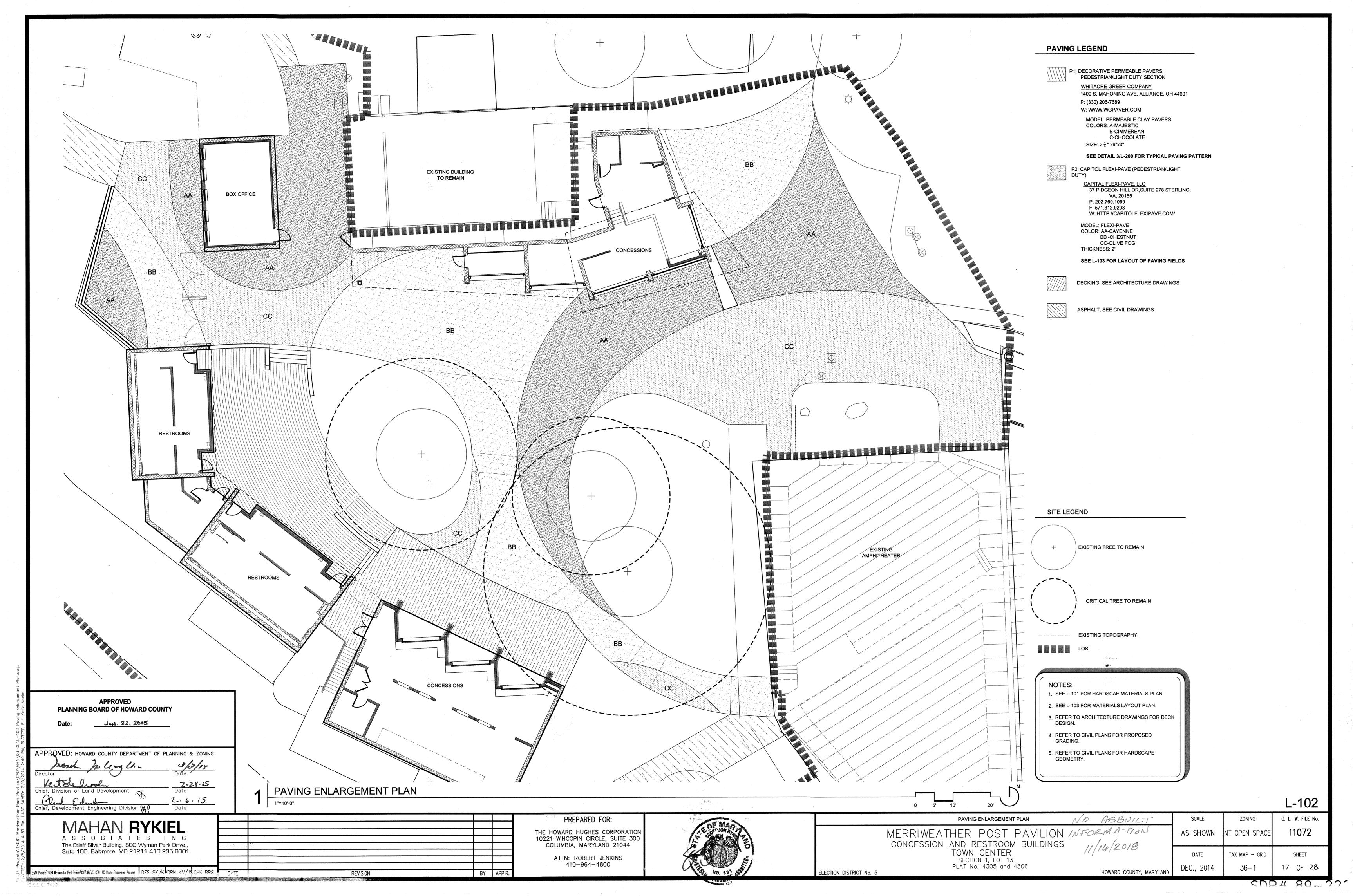
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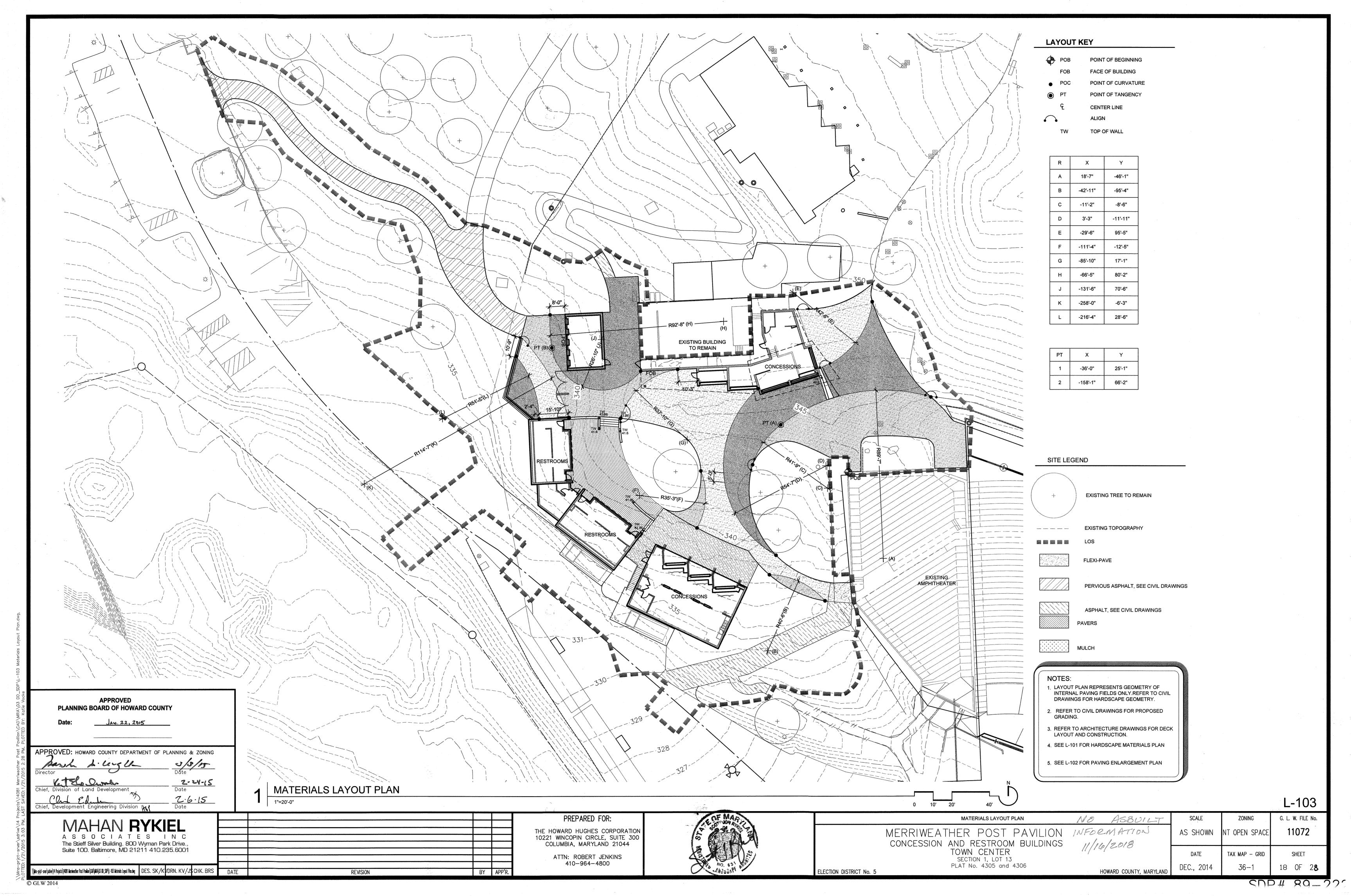
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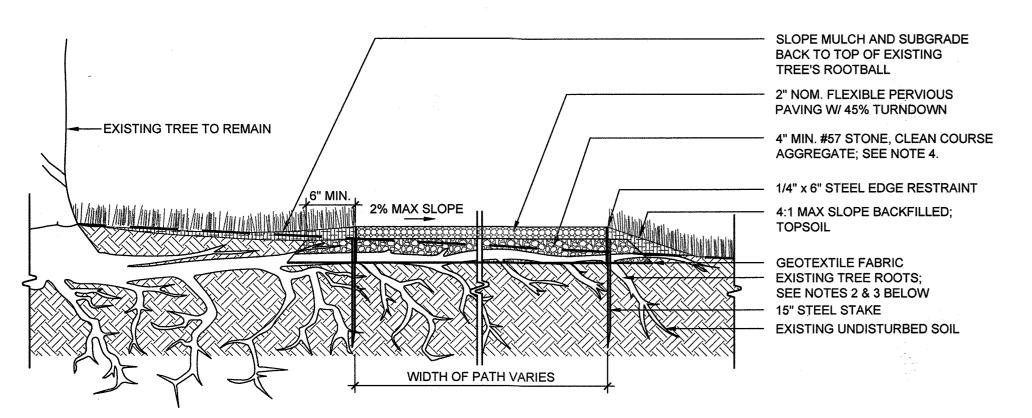








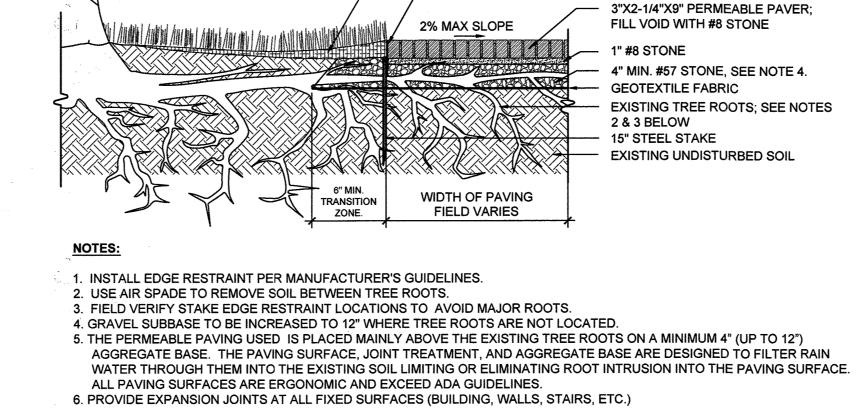




- 1. INSTALL EDGE RESTRAINT PER MANUFACTURER'S GUIDELINES.
- 2. USE AIR SPADE TO REMOVE SOIL BETWEEN TREE ROOTS.
- 3. FIELD VERIFY STAKE LOCATIONS TO AVOID MAJOR ROOTS. 4. GRAVEL SUBBASE TO BE INCREASED TO 12" WHERE TREE ROOTS ARE NOT LOCATED.
- 5. SINCE FLEXI-PROCESS PRODUCTS ARE NON-CRACKING, TRIP AND FALL LIABILITIES THAT ARE NORMALLY CAUSED BY SHEERING OR ROOT
- INTRUSION ARE VASTLY REDUCED, IF NOT COMPLETELY ELIMINATED. FLEXI-PAVE SURFACES ARE ERGONOMIC AND EXCEED ADA GUIDELINES 6. PROVIDE EXPANSION JOINTS AT ALL FIXED SURFACES (BUILDING, WALLS, STAIRS, ETC.)

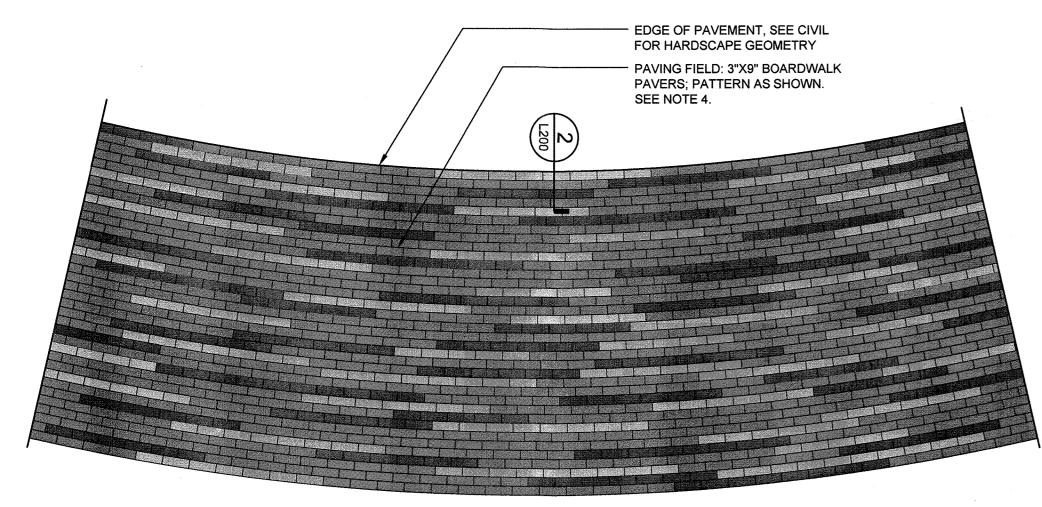
FLEXIBLE PERVIOUS PAVING

3/4"=1'-0"



PERMEABLE PAVERS

----EXISTING TREE TO REMAIN



PAVING LEGEND

- ACCENT PAVER: COLOR #50, 27%
- COLOR #52, 52%
- ACCENT PAVER: COLOR #53, 21%

- SEE 1/L-102 FOR MATERIALS PLAN. GROUP ACCENT BAND PAVERS IN ROWS
- THROUGHOUT PAVING FIELD TO CREATE "PLANK" EFFECT. (MIN. 5 & MAX 10 ACCENT COLOR PAVER PER ROW FOR EACH GROUPING) QUANTITY OF ACCENT BANDS THROUGHOUT
- PAVING FIELD BASED ON PERCENTAGES DEFINED IN PAVING LEGEND PAVING PATTERN TO EXTEND THROUGHOUT
- ENTIRE EXTENT OF PAVER FIELD. PAVING PATTERN SHOWN FOR PRECEDENT ONLY AND DOES NOT DIRECTLY REPRESENT THE EXACT PATTERN TO BE REPEATED IN FIELD.

RAMP IN PAVERS

44

- HANDRAIL FOOTING, SEE

HANDRAIL DETAIL 1/L-202

ADJACENT DECKING, SEE ARCHITECTURE DRAWINGS

SLOPE MULCH AND SUBGRADE BACK TO TOP OF EXISTING TREE'S ROOTBALL

1/4" x 6" STEEL EDGE RESTRAINT

STONE VENEER CHEEK WALL BEYOND, SEE DETAIL 2/L-201 PRECAST SLAB STEP; SEE NOTE 4 SEE NOTE 3. 3" MORTAR SETTING BED REINFORCED CONCRETE ADJACENT PAVERS, SEE ½" RADIUS, — DETAIL 2/L-200 1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR STAIRS. 2. BOTTOM SLAB STEP SHALL BE 1" THICKER THAN TOP STEPS. 3. THICKNESS OF WALL TO TIE INTO ADJACENT ARCHITECTURE, CONTRACTOR TO FIELD VERIFY WIDTH DURING CONSTURCTION. 4. COLOR OF PRECAST SLAB STEP TO MATCH BUILDING PRECAST. - 5X1/2" STAINLESS STEEL DOWEL (TYP.), 2 PER SLAB - TOP OF COMPACTED OR UNDISTURBED SUBGRADE - ADJACENT DECKING, SEE ARCHITECTURE DRAWINGS

1

NOTES:

BEFORE FABRICATION

SLAB STEP @ DECK

TYPICAL PAVING PATTERN (PERMEABLE BOARDWALK PAVERS) 3/8"=1'-0"

APPROVED PLANNING BOARD OF HOWARD COUNTY

JAN. 22, 2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 2.24.12

ivision of Land Development ilef, Development Engineering Division 🔀 🛭

MAHAN RYKIEL

The Stieff Silver Building. 800 Wyman Park Drive. Suite 100. Baltimore, MD 21211 410.235.6001 Draintol 14091 Harringother Dad Doutlon 1/40/401403 MIL MY Hardonna Dalaile dan DEC CK/KUDDN KV/10 MUK DDC BY APP'R

PREPARED FOR:

THE HOWARD HUGHES CORPORATION 10221 WINCOPIN CIRCLE, SUITE 300 COLUMBIA, MARYLAND 21044

> ATTN: ROBERT JENKINS 410-964-4800



L-200 G. L. W. FILE No. HARDSCAPE DETAILS SCALE NO ASBUILT MERRIWEATHER POST PAVILION CONCESSION AND RESTROOM BUILDINGS TOWN CENTER AS SHOWN NT OPEN SPACE DATE SHEET TAX MAP - GRID SECTION 1, LOT 13 PLAT No. 4305 and 4306 DEC., 2014 19 OF 28 ELECTION DISTRICT No. 5 HOWARD COUNTY, MARYLAND

HANDRAIL, SEE DETAIL 1/L-202

STONE VENEER CHEEK WALL BEYOND, SEE DETAIL 2/L-201

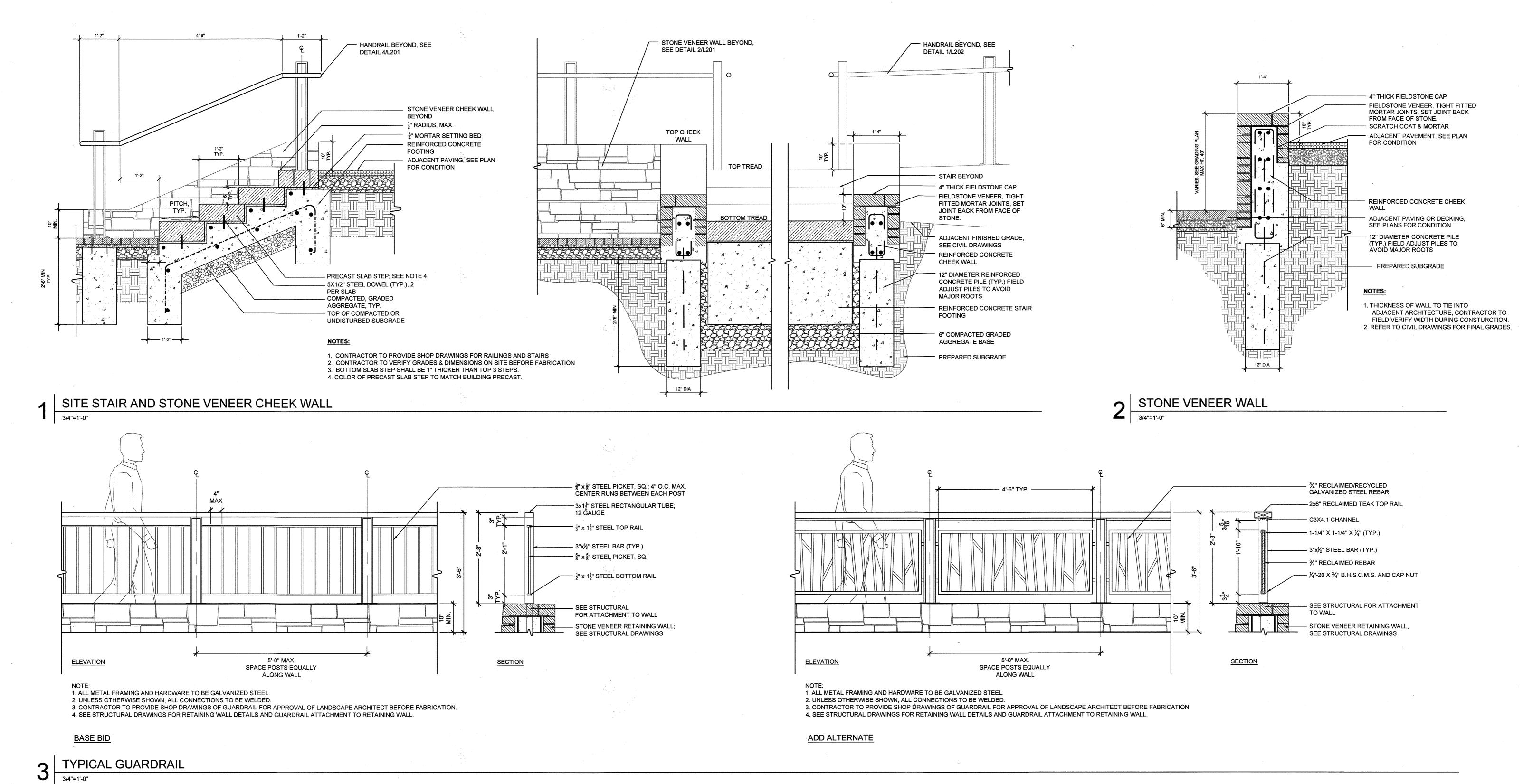
PAVERS, SEE DETAIL

2/L-200

1. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR RAILINGS.

2. CONTRACTOR TO VERIFY GRADES & DIMENSIONS ON SITE

SDD# 80-22



APPROVED
PLANNING BOARD OF HOWARD COUNTY

Date:

JAN. 22, 2015

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director

Director

Chief, Division of Land Development

Chief, Development Engineering Division

WA TANA TO THE TOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

TO THE TOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director

Date

To The Toward County Department of Planning & Zoning

To The Toward County Department of Planning & Zoning

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ASSOCIATES INC

The Stieff Silver Building. 800 Wyman Park Drive.,

Suite 100. Baltimore, MD 21211 410.235.6001

14 Projects/14081 Merrimenther Post Ponition/CAD/MRA/QJ CD/L-201 Hardscape Details.dwg | DES. SK/KVDRN. KV/J\$ CHK. BRS

PREPARED FOR:

THE HOWARD HUGHES CORPORATION
10221 WINCOPIN CIRCLE, SUITE 300
COLUMBIA, MARYLAND 21044

ATTN: ROBERT JENKINS
410-964-4800

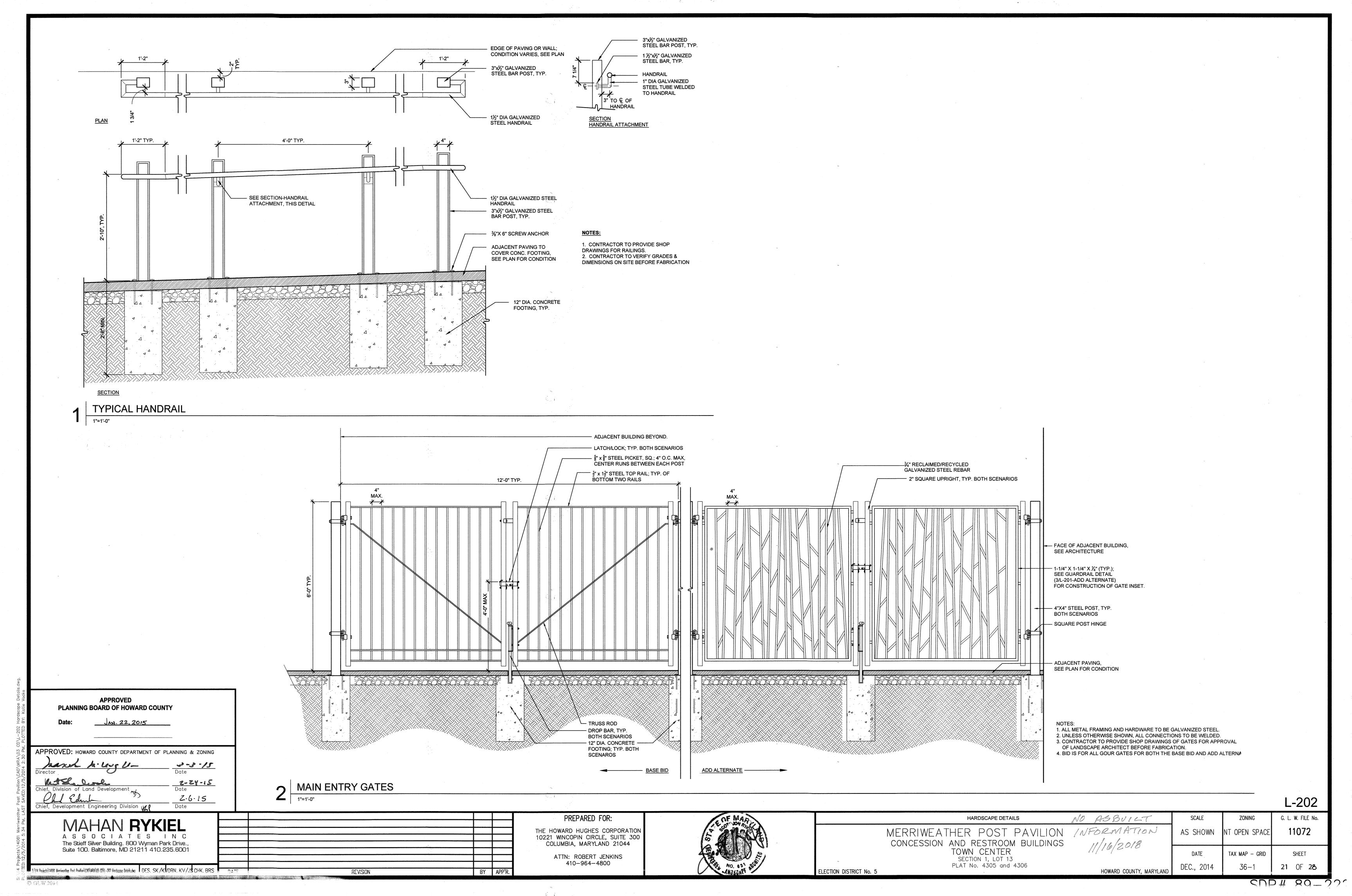
BY APP'R.

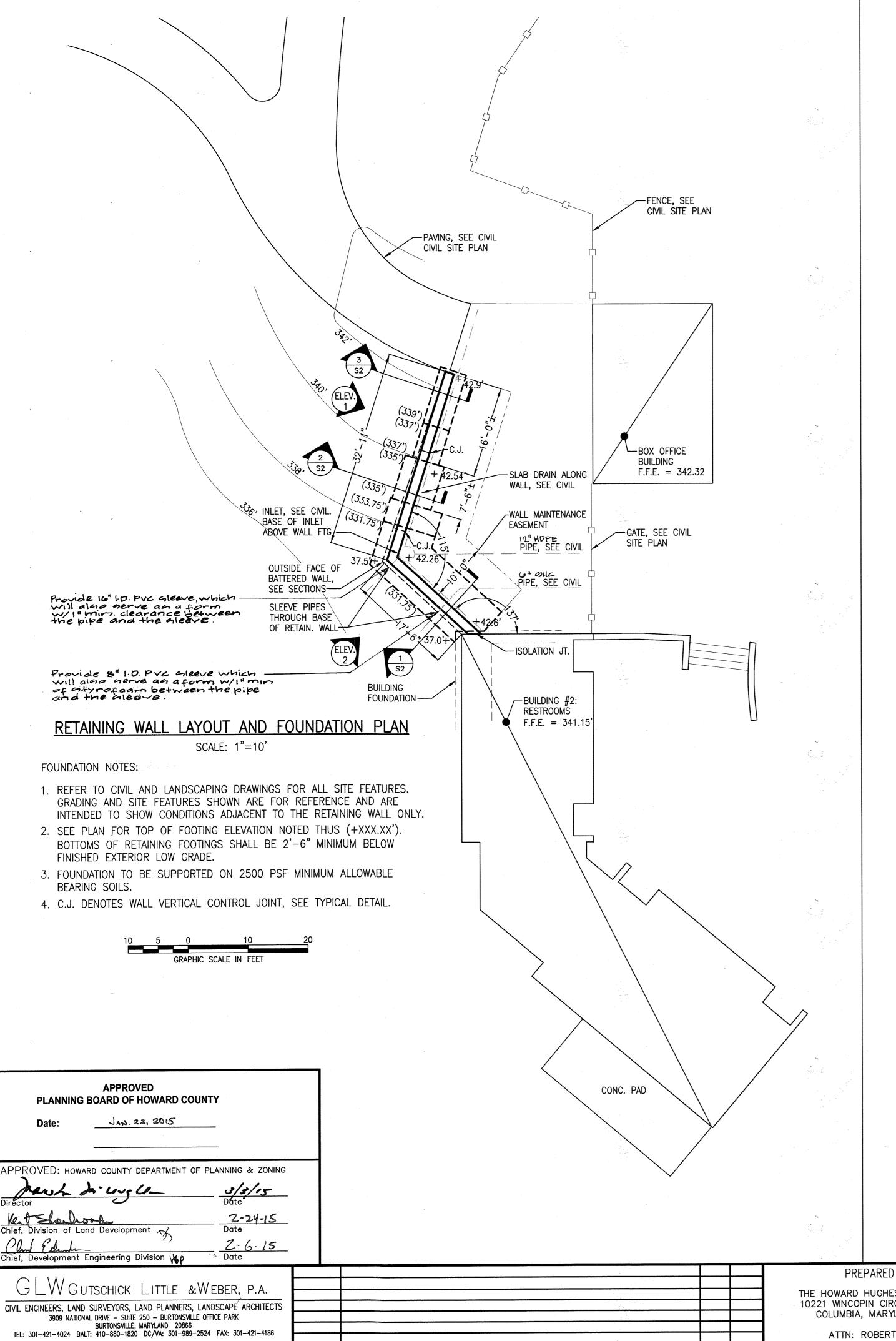
REVISION



ELECTION DISTRICT

					L-201
	HARDSCAPE DETAILS	NO ASBUILT	SCALE	ZONING	G. L. W. FILE No.
	MERRIWEATHER POST PAVILION CONCESSION AND RESTROOM BUILDINGS	INFORMATION 11/16/2018	AS SHOWN	NT OPEN SPACE	11072
	TOWN CENTER SECTION 1, LOT 13	11/10/20.0	DATE	TAX MAP — GRID	SHEET
T No. 5	PLAT No. 4305 and 4306	HOWARD COUNTY, MARYLAND	DEC., 2014	36–1	20 OF 28

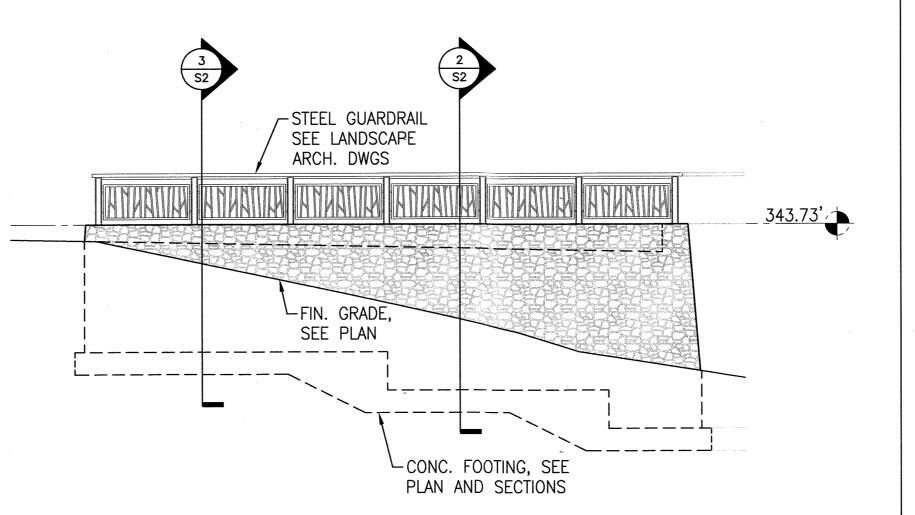




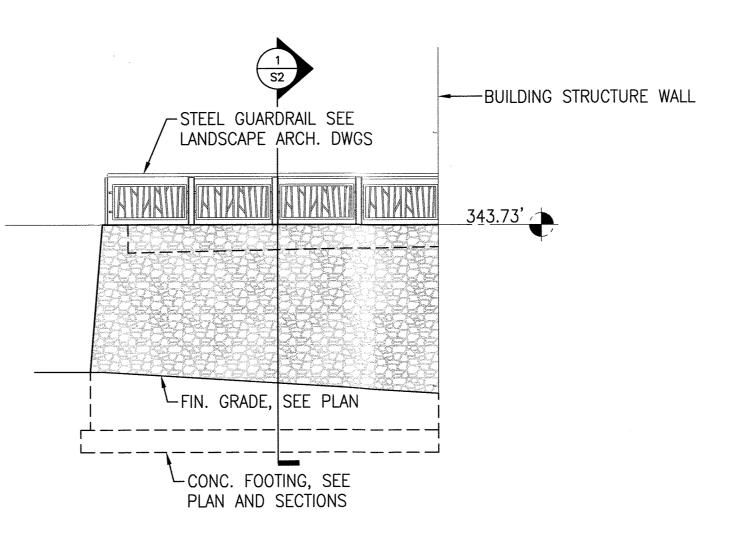
REVISION

P. \2014\1409.18.00 Nerrineather - Phase 1\Dranings\Struct\1409.18.01 Merrineather Relaining Mat\St.dag DES. BJB DRN. BJB CHK. KMM DATE

© GLW 2014



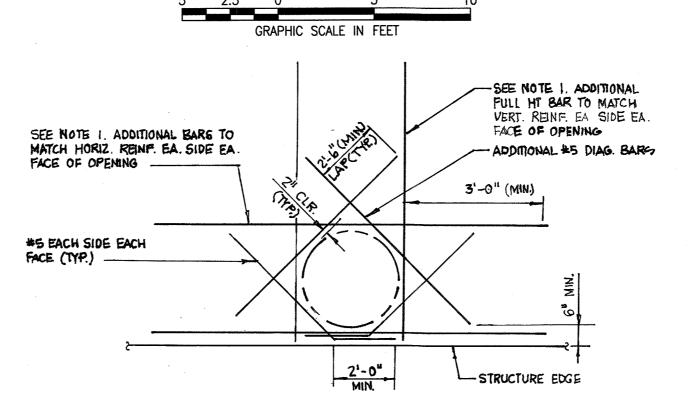
ELEVATION 1



ELEVATION 2

RETAINING WALL ELEVATIONS

SCALE: 1"=5'



TYPICAL ADDITIONAL REINFORCEMENT AT CIRCULAR WALL OPENINGS

BY APP'R.

1. PROVIDE ADDITIONAL VERTICAL AND HORIZONTAL REINFORCEMENT OF

3/8'' = 1' - 0''

FOUNDATIONS

- 1. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR CONTROLLED STRUCTURAL FILL, HAVING A MINIMUM SAFE BEARING CAPACITY OF 2,500 PSF. ALL SPREAD FOOTINGS SHALL PROJECT AT LEAST 1'-0" INTO SOIL HAVING SUCH MINIMUM BEARING VALUE.
- 2. RETAIN THE SERVICES OF A REGISTERED GEOTECHNICAL ENGINEER, APPROVED BY THE ARCHITECT AND PAID FOR BY THE OWNER, TO VERIFY SOIL BEARING CAPACITY AT EACH FOOTING PRIOR TO INSTALLATION. TESTING DOCUMENTATION MUST BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399. NOTIFY ARCHITECT/ENGINEER OF ANY VARIATION FROM ANTICIPATED BEARING CAPACITY FOR APPROPRIATE REDESIGN OR LOWERING OF FOOTINGS.
- 3. EXCAVATION, PREPARATION OF SUBGRADE, AND FOOTING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER. RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A CERTIFIED SOILS TECHNICIAN.
- 4. COMPACT FILL AND BACKFILL TO 95% MINIMUM STANDARD PROCTOR DENSITY. THE REPORTS SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN. ALL FILL AND BACKFILL OPERATIONS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER.
- 5. ALL ORGANIC MATERIALS AND CONSTRUCTION DEBRIS SHALL BE REMOVED IN REGIONS OF ALL
- 6. THE BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE 2'-6" MINIMUM BELOW FINISHED GRADE. 7. EDGES OF FOOTINGS SHALL NOT BE PLACED AT A GREATER THAN 1 (VERTICAL) TO 2 (HORIZONTAL) SLOPE WITH RESPECT TO ANY ADJACENT FOOTING OR EXCAVATION.
- 8. THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS, AND ALL EXCAVATIONS SHALL BE KEPT FREE OF WATER.
- 9. NO HORIZONTAL JOINTS SHALL BE PLACED IN WALLS EXCEPT AS SHOWN ON THE DRAWINGS
- WITHOUT APPROVAL OF THE ARCHITECT/ENGINEER. 10. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL LOCATIONS OF TRENCHES, PITS, CONDUITS, ETC. NOT SHOWN
- ON THE STRUCTURAL DRAWINGS. 11. BACKFILLING AGAINST WALLS SHALL NOT BE DONE UNTIL CONCRETE HAS BEEN CURED TO ATTAIN SUFFICIENT STRENGTH (7 DAYS MINIMUM) AND WALLS ARE PROPERLY SHORED AND/OR BRACED. BACKFILLING AGAINST BASEMENT WALLS SHALL NOT BE DONE UNTIL THE FLOOR SLABS AT TOP AND BOTTOM OF WALLS HAVE BEEN PLACED AND HAVE CURED. BACKFILL FOUNDATION WALLS WITH EARTH ON BOTH SIDES OF THE WALL BY ALTERNATELY PLACING BACKFILL ON EACH SIDE SO THAT HEIGHT OF BACKFILL DOES NOT DIFFER BY MORE THAN
- 1'-6" FROM OTHER SIDE. 12. ALL ADJACENT COLUMN FOOTINGS THAT ABUT SHALL BE SEPARATED BY A PAPER JOINT.

FOUNDATION CONCRETE

- 1. ALL CONCRETE SHALL CONFORM TO THE PROVISIONS OF ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-LATEST EDITION) AND ACI SPECIFICATIONS FOR STRUCTURAL CONCRETE IN BUILDINGS (ACI 301-LATEST EDITION).
- 2. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE HAVING A DESIGN COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS: A. WALLS AND FOOTINGS
- 3. NO CONCRETE SHALL BE PLACED UNTIL CONCRETE DESIGN MIXES HAVE BEEN SUBMITTED FOR EACH CLASS OF CONCRETE NOTED ABOVE AND HAVE BEEN REVIEWED BY THE ARCHITECT/ENGINEER.
- USE A WATER REDUCING ADMIXTURE IN ALL CONCRETE PROVIDE MIX DESIGNS WITH A WATER-CEMENT RATIO FROM 0.40 TO 0.45.
- SLUMP SHALL BE AS REQUIRED BY ACI 302 LATEST EDITION
- AIR ENTRAIN ALL CONCRETE EXPOSED TO WEATHER TO 5%±1% UNO. 8. NO CALCIUM CHLORIDE IN ANY FORM WILL BE PERMITTED IN CONCRETE.
- 9. ALL STRUCTURAL MEMBERS SHALL BE POURED FOR THEIR FULL DEPTHS IN ONE OPERATION 10. EXCAVATIONS SHALL BE KEPT FREE OF WATER. NO CONCRETE SHALL BE PLACED IN WATER.
- 11. ALL SLABS ON GRADE SHALL HAVE THICKENINGS, DEPRESSIONS, OPENINGS, ETC. AS SHOWN OR AS REQUIRED BY VARIOUS TRADES.
- 12. REFER TO ARCHITECTURAL DRAWINGS AND/OR SPECIFICATION SECTIONS FOR CONCRETE FINISHES.
- 13. RETAIN THE SERVICES OF AN INDEPENDENT TESTING AGENCY APPROVED BY THE ARCHITECT TO PERFORM TESTS OF CONCRETE. TAKE A MINIMUM OF 4 CYLINDERS FOR EACH CLASS OF CONCRETE POURED IN ANY ONE DAY. PERFORM 1 SLUMP TEST PER TRUCK LOAD OF CONCRETE **REINFORCEMENT**
- 1. ALL DEVELOPMENT AND SPLICES OF REINFORCEMENT SHALL CONFORM TO THE PROVISIONS OF ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-LATEST EDITION).
- 2. REINFORCING STEEL SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE NEW BILLET STEEL CONFORMING TO CURRENT REQUIREMENTS OF ASTM A615 GRADE 60. ALL HOOKS SHALL BE STANDARD HOOKS, UNLESS OTHERWISE NOTED.
- 3. REINFORCING BAR SUPPORTS AND SPACERS SHALL CONFORM TO ACI 315-(LATEST EDITION) DETAILING MANUAL.
- 4. SHOP DRAWINGS SHOWING ALL NECESSARY SECTIONS AND DETAILS FOR THE PROPER POSITIONING OF ALL REINFORCING STEEL SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW BEFORE FABRICATION OR PLACEMENT OF THE STEEL.

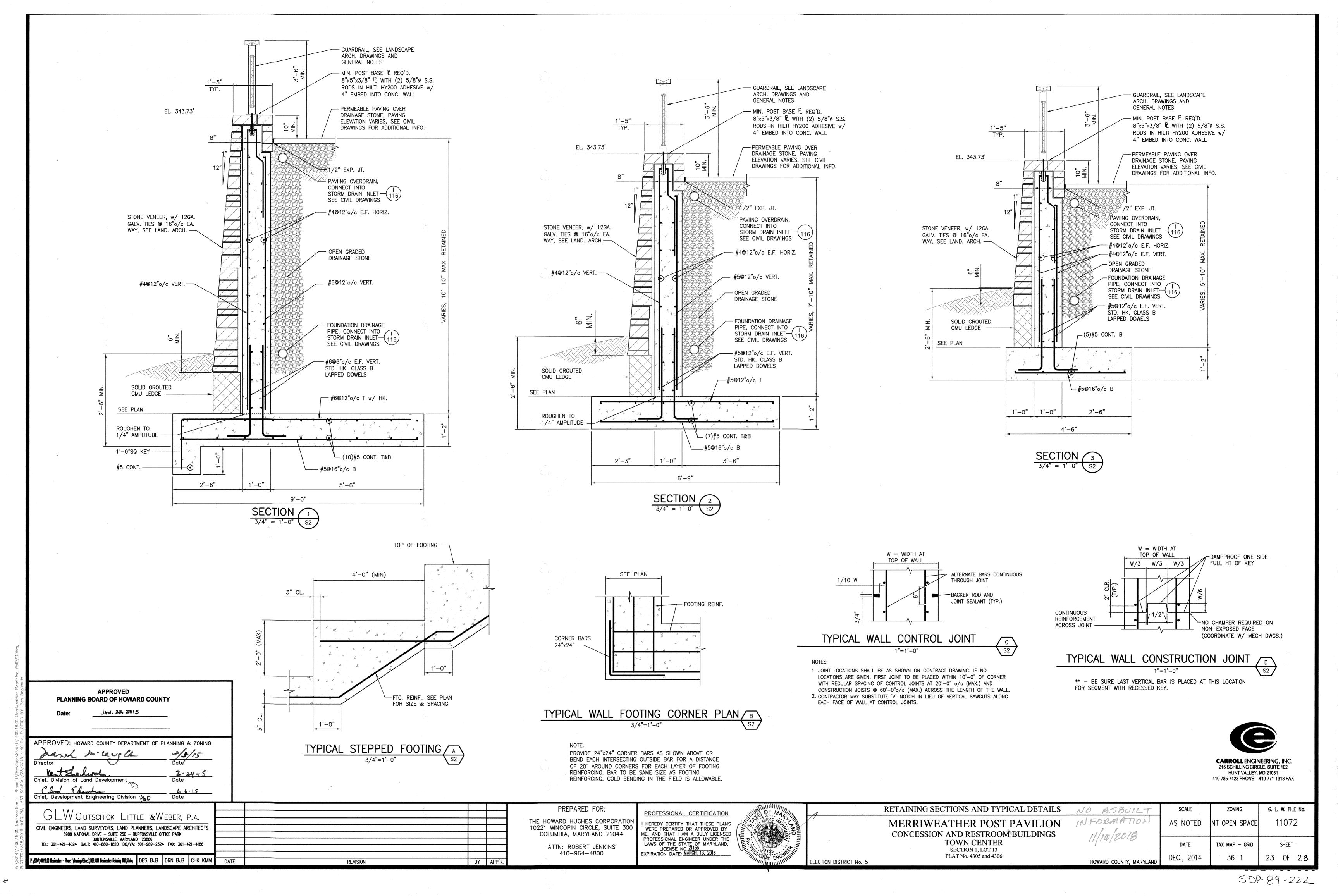
STEEL GUARDRAILS

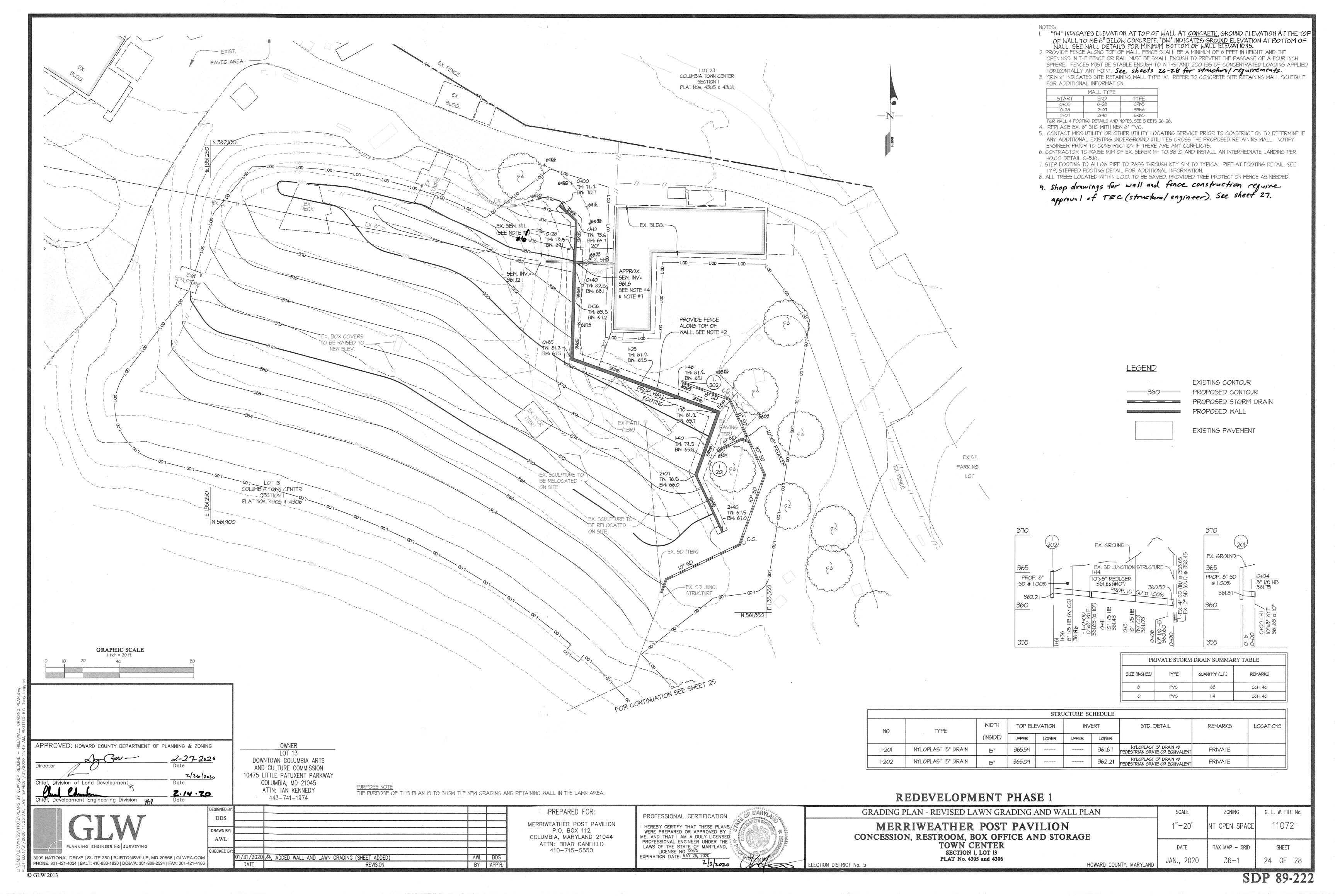
- 1. STEEL SUPPLIER SHALL DESIGN ALL FRAMING INCLUDING GUARDRAILS TO SUPPORT THE FOLLOWING DESIGN LOADS:
 - GUARDRAILS-
 - 100 LBS/FT VERTICALLY AND 50 LBS/FT HORIZONTALLY, OR A 200 LBS CONCENTRATED LOAD, WHICHEVER IS GREATER, APPLIED AT ANY POINT AND IN ANY DIRECTION TO THE TOP RAIL. A 200 LBS CONCENTRATED LOAD APPLIED ON A 1 S.F. AREA AT ANY POINT FOR REMAINING GUARDRAIL INFILL COMPONENTS.
- 2. WHERE STEEL BEARS ON WALL, MANUFACTURER TO PROVIDE BEARING PLATES TO MAINTAIN 200 P.S.I. BEARING PRESSURE.
- 3. SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR REVIEW PRIOR TO FABRICATION OR ERECTION. RAILING SUPPLIER'S SHOP DRAWINGS SHALL CONTAIN A CERTIFICATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER STATING THAT THE GUARDRAIL COMPONENTS HAVE BEEN DESIGNED TO SUPPORT THE SPECIFIED LOADS.

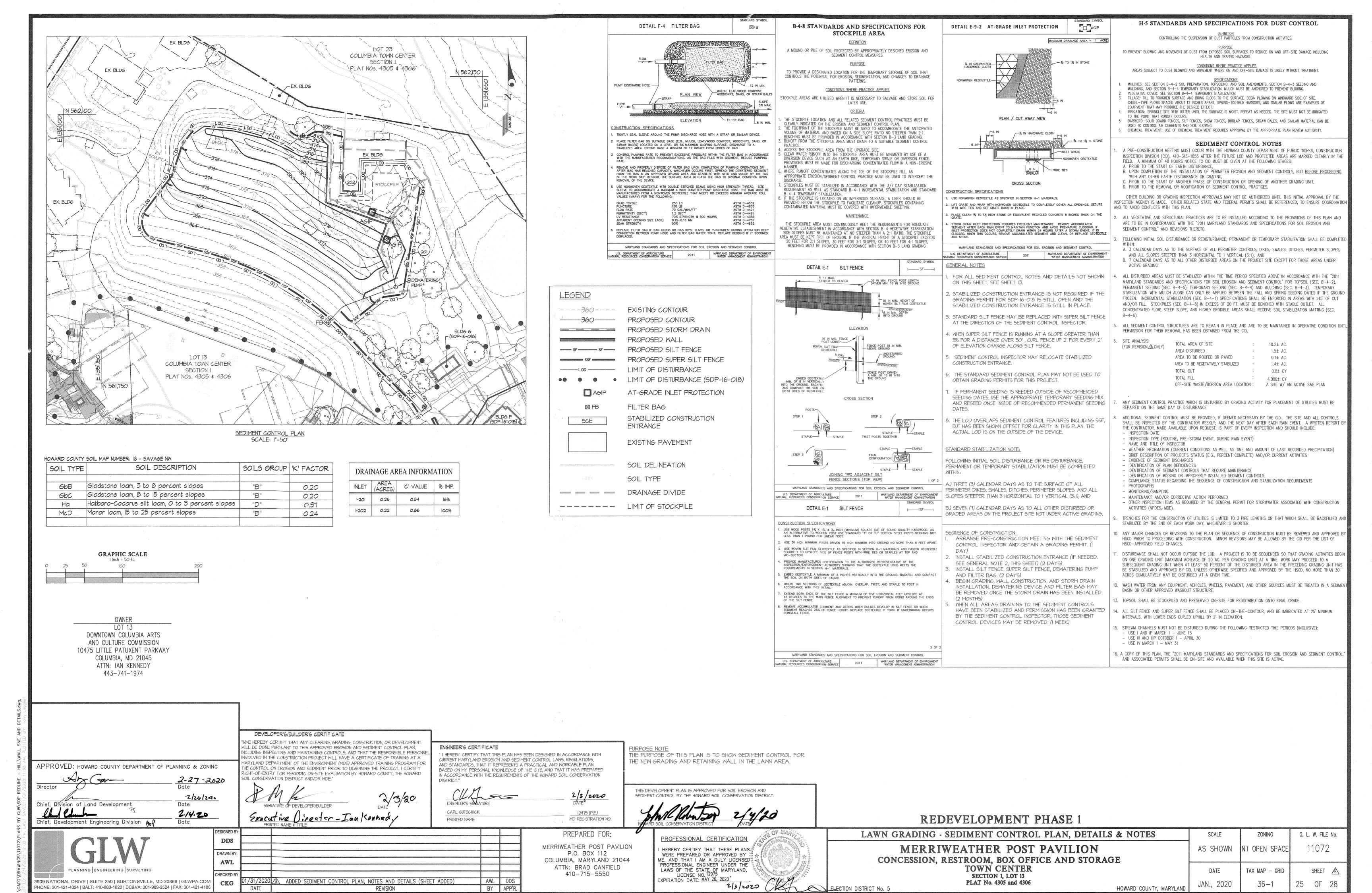


CARROLL ENGINEERING, INC 215 SCHILLING CIRCLE, SUITÉ 102 HUNT VALLEY, MD 21031 410-785-7423 PHONE 410-771-1313 FAX

		5AME SIZE AND NUMBER (1/2 BARS EACH SIDE INTERRUPTED BY THE OPENING OUT BARS WHICH						
	PREPARED FOR:	PROFESSIONAL CERTIFICATION	∧ RETAINING	G WALL FOUNDATION PLAN, ELEVATIONS AND	GENERAL NOTES	SCALE	ZONING	G. L. W. FILE No.
=	THE HOWARD HUGHES CORPORATION 10221 WINCOPIN CIRCLE, SUITE 300 COLUMBIA, MARYLAND 21044	L HEBERY CERTIFY THAT THESE DI ANS		MERRIWEATHER POST PAVILION CONCESSION AND RESTROOM BUILDINGS	NO ASBUILT INFORMATION		NT OPEN SPACE	11072
	ATTN: ROBERT JENKINS	PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21155 EXPIRATION DATE: MARCH, 13, 2016		TOWN CENTER SECTION 1, LOT 13	11/16/2018	DATE	TAX MAP — GRID	SHEET
R.	410-964-4800	EXPIRATION DATE: MARCH, 13, 2016	ELECTION DISTRICT No. 5	PLAT No. 4305 and 4306	HOWARD COUNTY, MARYLAND	DEC., 2014	36–1	22 OF 2 8

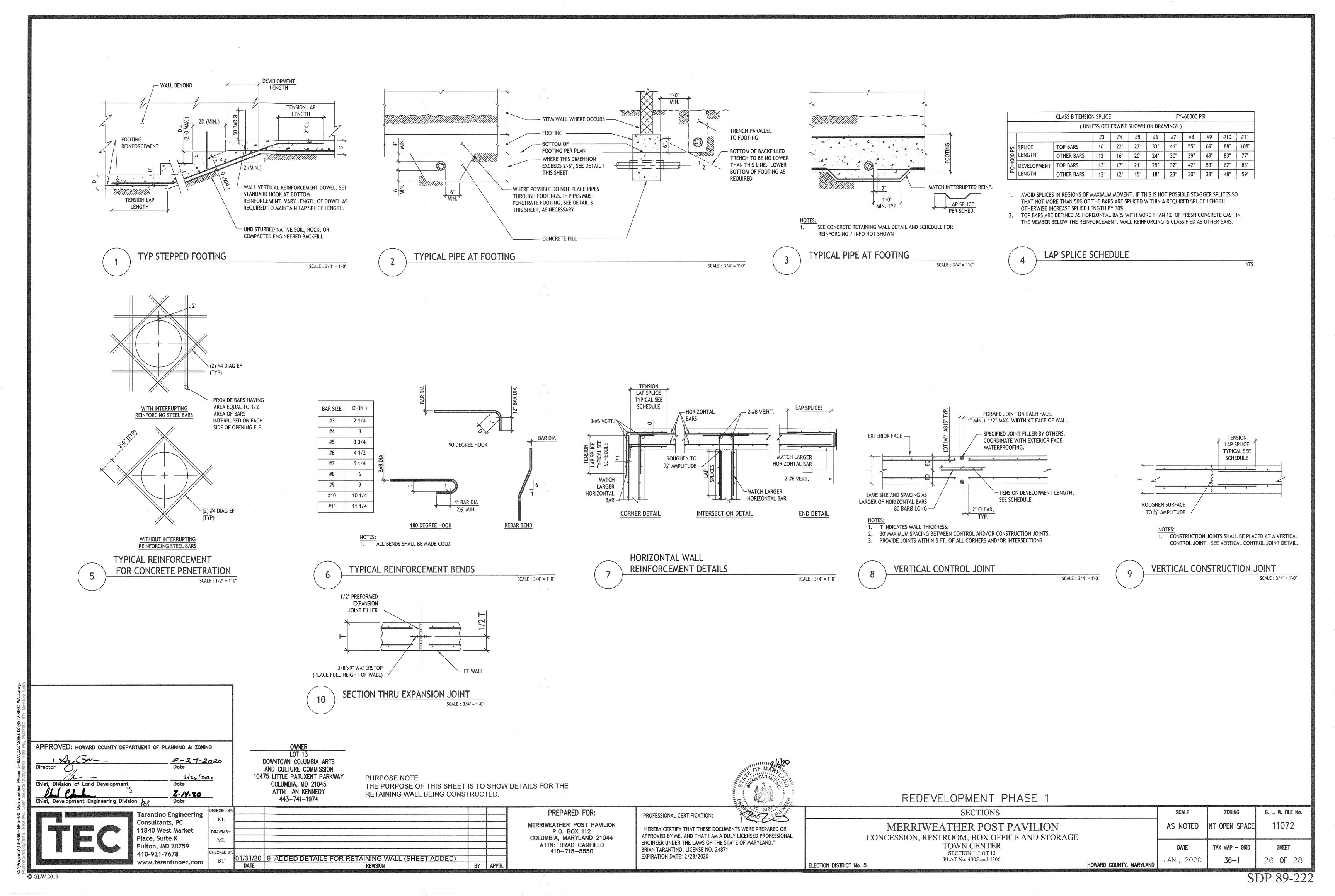






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DP 89-22



3.1 REFERENCE GEOTECHNICAL REPORT:

3.2 EXCAVATION:

THE CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO STARTING

PROJECT IS COMPLETE. DO NOT USE SALT OR CHLORIDE COMPOUNDS TO DE-ICE THE SITE.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UTILITIES, ABOVE AND BELOW GRADE STRUCTURES, ETC., WHETHER
- INDICATED OR NOT, THAT MAY BE AFFECTED BY THE CONSTRUCTION PROCESS.
- D. UTILITIES LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL UNLESS DETAILED OTHERWISE IN THE
- ALL SHORING. SHEETING AND DEWATERING SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR'S ENGINEER, REGISTERED IN THE PROJECT'S JURISDICTION, SHALL DESIGN THE SHEETING AND SHORING AND PROVIDE SIGNED AND SEALED SUBMITTALS FOR REVIEW.

3.3 BACKFILL AGAINST WALLS:

- A. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL WALL CONCRETE IS AT FULL DESIGN STRENGTH. BACKFILL WITH APPROVED MATERIAL PLACED IN 8 IN. LAYERS AND COMPACTED TO 95% DENSITY AT OPTIMUM MOISTURE CONTENT AND FREE OF DEBRIS AS DEFINED BY ASTM D-1557, METHOD D.
- WHERE THE FINAL GRADE ELEVATIONS ARE APPROXIMATELY EQUAL ON BOTH SIDES OF A WALL, BACKFILL IN LIFTS TO MAINTAIN LEVEL ELEVATIONS WITHIN 12 IN. ON BOTH SIDES AT ANY TIME.

- 3.4 FOUNDATION PLACEMENT & PROTECTION: A. DO NOT PLACE FOUNDATION CONCRETE IN WATER OR ON FROZEN GROUND. PROTECT IN-PLACE FOUNDATIONS AND SLABS FROM FROST PENETRATION UNTIL THE
 - NEW FOOTING BEARING ELEVATION IS TO MATCH ADJACENT EXISTING FOOTING BEARING ELEVATION WHERE APPLICABLE UNLESS NOTED OR DETAILED OTHERWISE ON

 - C. CONCRETE FOR FOUNDATIONS SHALL BE POURED ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE GEOTECHNICAL ENGINEER.

CHECKED B'

BT

DATE

Z.14.20

Date

Tarantino Engineering

www.tarantinoec.com

Consultants, PC

Place, Suite K

410-921-7678

11840 West Market

Fulton, MD 20759

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 2-27-2020 XIn (sa-DOWNTOWN COLUMBIA ARTS AND CULTURE COMMISSION 10475 LITTLE PATUXENT PARKWAY PURPOSE NOTE 2/26/2020 COLUMBIA, MD 21045 Chief, Division of Land Development

ATTN: IAN KENNEDY

443-741-1974

1/31/20 | 9 ADDED NOTES FOR RETAINING WALL (SHEET ADDED)

REVISION

THE PURPOSE OF THIS SHEET IS TO SHOW NOTES FOR THE RETAINING WALL BEING CONSTRUCTED

BY APP'R

PART 4 - CONCRETE WORK

4.2 STANDARD SPECIFICATIONS AND REFERENCE STANDARDS:

ACI 302

ACI 304

ACI 305

ACI 306

ACI 315

ACI 318

ACI 347

A. ELEMENT (NORMAL WEIGHT UNO)

A. MILD REINFORCED CONCRETE

4.4 STEEL REINFORCEMENT:

4.6 GENERAL REQUIREMENTS:

4.5 CONCRETE COVER:

4.3 CONCRETE MIX PROPERITES

"BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318-14", AMERICAN CONCRETE INSTITUTE.

FOLLOW THE LATEST RECOMMENDATIONS AND SPECIFICATIONS OF THE AMERICAN CONCRETE INSTITUTE:

MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE

WATERSTOPS: AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS, PROVIDE CONTINUOUS WATERSTOPS AT ALL HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS IN

CONCRETE QUANTITIES: THE CONCRETE SLABS SHALL BE FINISHED, WITHIN TOLERANCE AND FLOOR FLATNESS REQUIREMENTS, TO THE ELEVATIONS INDICATED ON THE

DRAWINGS. CONTRACTOR SHALL PROVIDE AT THEIR COST, ADDITIONAL CONCRETE AS REQUIRED DUE TO FORMWORK AND FRAMING DEFLECTION TO ACHIEVE THIS

FOR INITIAL BEAM DEFLECTIONS DUE TO THE WEIGHT OF THE WET CONCRETE AND CONSTRUCTION LOADS. THE CONCRETE FLOOR SURFACE SHALL BE LEVEL WITH

A. NO SPLICES OF REINFORCEMENT SHALL BE PERMITTED EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. MAKE BARS CONTINUOUS AROUND

FINISHED TOP OF SLAB ELEVATION. CONTRACTOR NOTE: THE STRUCTURAL FLOOR FRAMING SYSTEM UTILIZED ON THIS BUILDING IS CONCRETE POURED OVER METAL

DECK SUPPORTED BY STEEL BEAMS. THIS FLOOR FRAMING HAS BEEN DESIGNED AS UNSHORED CONSTRUCTION AND WILL REQUIRE ADDITIONAL CONCRETE TO ACCOUNT

SPLICE BARS AS SHOWN ON DRAWINGS BUT NOT LESS THAN 50 BAR DIAMETERS FOR SLABS AND BEAM BOTTOM BARS, AND NOT LESS THAN 65 BAR DIAMETERS FOR WALLS

PROVIDE #4 CHAIR BARS, HIGH CHAIRS, TIES, CLIPS, SLAB BOLSTERS AND OTHER ACCESSORIES WHERE NOT SPECIFIED ON THE DRAWINGS IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE OR DETAILING REINFORCING CONCRETE STRUCTURES ACI 315 OR CRSI-WRSI MANUAL OF STANDARD PRACTICE. USE PLASTIC TIPS ON ALL

UNAUTHORIZED REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RE-SUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS

PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IS IN CONTACT WITH THE BOLSTERS OR CHAIRS IS EXPOSED.

A. CONSTRUCTION JOINTS FOR MILD-REINFORCED CONCRETE SHALL BE LOCATED WITHIN THE MIDDLE THIRD OF THE SPAN. PROPOSED CONSTRUCTION JOINT LOCATIONS

THE AGENCY SHALL MONITOR ALL STRUCTURAL CONCRETE PLACEMENT FOR CONFORMANCE WITH APPLICABLE ACI REQUIREMENTS.

SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172. MOLD TEST CYLINDERS IN ACCORDANCE WITH ASTM C31.

CONCRETE STRENGTHS HAVE NOT BEEN ATTAINED, AS DIRECTED BY THE STRUCTURAL ENGINEER.

SHALL BE SHOWN ON THE REINFORCING STEEL SHOP DRAWINGS. ANY STOP IN CONCRETE WORK MUST BE MADE WITH VERTICAL BULKHEADS AND HORIZONTAL KEYS,

THE AGENCY SHALL INSPECT THE FORMWORK AND REINFORCING STEEL PLACEMENT FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS AND SHOP DRAWINGS.

THE FOLLOWING NUMBER OF TEST CYLINDERS SHALL BE CAST FOR EACH DAY'S POUR OR EACH 50 CUBIC YARDS, WHICHEVER RESULTS IN MORE TEST CYLINDERS.

THE AGENCY WILL MAKE ADDITIONAL TESTS OF IN-PLACE CONCRETE AT THE CONTRACTOR'S EXPENSE WHEN THE TEST RESULTS INDICATE SPECIFIED

UNLESS INDICATED OTHERWISE. FOUNDATIONS, PILE CAPS, DRILLED PIERS, SLABS, BEAMS, GIRDERS, AND JOISTS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE

A. SUBMIT FOR APPROVAL, COMPLETE BENDING AND PLACING DETAILS OF ALL REINFORCEMENT INCLUDING WELDED WIRE REINFORCEMENT, INDICATING POSITION OF

REINFORCING AND DESTRUCTION OF CONCRETE. ALL BOLTS AND ANCHORS SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.

CHAMFER ALL EXPOSED CONCRETE CORNERS, 3/4 IN. X 3/4 IN. MINIMUM, UNLESS NOTED OTHERWISE ON THE ARCHITECTURAL DRAWINGS.

CORNERS. WHEN PERMITTED, SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICE, UNLESS NOTED OTHERWISE.

A. THE OWNER SHALL ENGAGE A TESTING AGENCY TO PROVIDE SERVICES AS INDICATED BELOW AND SUBMIT REPORTS.

2@7 DAYS, 2@28 DAYS

2@7 DAYS, 2@28 DAYS

2@7 DAYS, 2@28 DAYS

NO WELDING OF REINFORCING SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR APPROVED BY THE STRUCTURAL ENGINEER.

GENERAL DESIGN OF ITEMS NOT OTHERWISE SPECIFIED

ALL BELOW GRADE FOUNDATION WALLS, ELEVATOR PITS AND OTHER PIT WALLS.

MINIMUM THICKNESS SPECIFIED ON THE CONTRACT DOCUMENTS.

CHAIRS PLACED ON THE SIDES OF CONCRETE FORMWORK.

PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.

a. FOR FOOTINGS AND OTHER STRUCTURAL CONCRETE:

LAB CURED

LAB CURED FIELD CURED

FOR WALLS:

SPLICES. INCLUDE ACCESSORY DRAWINGS.

UNLESS DETAILED OTHERWISE.

CAST-IN-PLACE CONCRETE:

4.7 SPLICING AND PLACEMENT OF REINFORCEMENT:

4.8 REINFORCEMENT SHOP DRAWINGS:

4.9 CONSTRUCTION JOINTS

4.10 INSPECTION AND TESTING:

"ACI MANUAL OF CONCRETE PRACTICE - PARTS 1 THROUGH 5", AMERICAN CONCRETE INSTITUTE.

"MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE.

CONCRETE FLOOR AND SLAB CONSTRUCTION

ACI 301 STRUCTURAL CONCRETE FOR BUILDINGS

HOT WEATHER CONCRETING

COLD WEATHER CONCRETING

DETAILING REINFORCING STEEL

FORMWORK

4.1 CODES:

PREPARED FOR: MERRIWEATHER POST PAVILION P.O. BOX 112 COLUMBIA, MARYLAND 21044

ATTN: BRAD CANFIELD

410-715-5550

"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." BRIAN TARANTINO, LICENSE NO. 24871

EXPIRATION DATE: 2/28/2020

1704.3 STATEMENT OF SPECIAL INSPECTIONS

THE CONTRACTOR OR BUILDING OWNER SHALL RETAIN AN APPROVED THIRD PARTY AGENCY TO PERFORM SPECIAL INSPECTIONS. SPECIAL INSPECTIONS AND REPORTING SHALL CONFORM TO CHAPTER 17 OF THE 2015 INTERNATIONAL BUILDING CODE.

1704.2.5 SPECIAL INSPECTION OF FABRICATED ITEMS. WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION.

1705.2.1 STRUCTURAL STEEL. SPECIAL INSPECTIONS AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL ELEMENTS IN BUILDINGS, STRUCTURES AND PORTIONS THEREOF SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC 360.

1705.2.2 COLD-FORMED STEEL DECK. SPECIAL INSPECTIONS AND QUALIFICATION OF WELDING SPECIAL INSPECTORS FOR COLD-FORMED STEEL FLOOR AND ROOF DECK SHALL BE IN ACCORDANCE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF SDI QA/QC.

1705.3 CONCRETE CONSTRUCTION. SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THIS SECTION AND TABLE 1705.3.

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

. ELEMENT (NORMAL WEIGHT UNO) 28-DAY STRENGTH - W/C MAX(b) - AIR CONTENT(a) 1. RETAINING WALLS: 4,000 PSI 0.50 6% +/- 1.5		FREQUENCY O	F INSPECTION	REFERENCE C	RITERIA
a. AIR CONTENT OF TROWEL FINISHED FLOORS SHALL NOT EXCEED 3% b. PUMP MIXES: MAXIMUM WATER/CEMENT (W/C) RATIO MUST BE MAINTAINED. IF ADDITIONAL WORKABILITY IS REQUIRED FOR PUMPED PLACEMENT, THE	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCE STANDARD	IBC REFERENCE
HIGH OR MID-RANGE WATER REDUCERS SHALL BE USED IN LIEU OF ADDITIONAL WATER. c. ELEVATED DECKS THAT ARE EXPOSED TO FREEZING TEMPERATURES, I.E. PLAZA DECKS, THAT DO NOT RECEIVE A TROWEL FINISH SHALL HAVE AN AIR CONTENT OF 6% +/- 1.5	1. INSPECTION OF REINFORCING STEEL.	-	X	ACI 318 CH. 20, 25.2, 25.3, 26.5.1-26.5.3	1908.4
PORTLAND CEMENT: ASTM C150, TYPE I OR II. CEMENT SUBSTITUTES: ASTM C595, TYPE LS (LIMIT TO 50% MAX OF CEMENTITIOUS CONTENT BY WEIGHT) AGGREGATES / DENSITY: ASTM C33 / 145 PCF - NORMAL WEIGHT AIR-ENTRAINMENT: ASTM C260	2. REINFORCING BAR WELDING: a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706; b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"; AND c. INSPECT ALL OTHER WELDS.	- - X	. X . X	AWS D1.4 ACI 318:26.5.4	-
TEEL REINFORCEMENT: 1. DEFORMED REINFORCING BARS: ASTM A615 GRADE 60	3. INSPECT ANCHORS CAST IN CONCRETE.	-	Х	ACI 318: 17.8.2	-
ONCRETE COVER: . MILD REINFORCED CONCRETE 1. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 2. CONCRETE EXPOSED TO EARTH OR WEATHER: #6 BAR OR LARGER 2 IN.	4. INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS. a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a.	X -	- X	ACI 318: 17.8.2.4 ACI 318: 17.8.2	
#5 BAR OR SMALLER 1½ IN. 3. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	5. VERIFY USE OF REQUIRED DESIGN MIX.	-	Х	ACI 318: CH. 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
SLABS, WALLS AND JOISTS: #11 BAR OR SMALLER 3/4 IN. BEAMS AND COLUMNS: TO TIES, STIRRUPS, OR SPIRALS 1 1/2 IN. ENERAL REQUIREMENTS: REINFORCEMENT AT OPENINGS: UNLESS DETAILED OTHERWISE, PROVIDE 2 - #6 AT EACH SIDE OF ALL OPENINGS IN WALLS AND SLABS AND EXTEND 2 FT-6 IN. BEYOND	6. PIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-	ASTM C 172 ASTM C 31 ACI 318: 26.4.5, 26.12	1908.10
THE OPENING OR AS DETAILED, EXCEPT VERTICAL BARS AT SIDES OF OPENINGS IN WALLS ARE TO EXTEND FROM FLOOR TO FLOOR. BARS MAY BE MOVED ASIDE AT OPENINGS OR SLEEVES, BUT DO NOT CUT OR OMIT. MINIMUM REINFORCEMENT: REINFORCE ALL WALLS WITH AT LEAST #4 @ 12 IN. EACH WAY EACH FACE AND 2 - #6 EACH EDGE, UNLESS DETAILED OTHERWISE.	7. INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	. X	-	ACI 318: 26.4.5	1908.6, 1908.7, 1908.8
FORMWORK, SHORING AND RESHORING: SHALL BE DESIGNED AND SUBMITTED BY THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION WITH ALL SUBMISSIONS BEARING THE ENGINEER'S SEAL AND SIGNATURE. INSERTS AND SLEEVES: CONTRACTOR SHALL FURNISH DIMENSIONED SHOP DRAWINGS AT ALL LEVELS SHOWING LOCATIONS OF ALL CAST-IN-PLACE SLEEVES, INSERTS AND	8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	Χ	ACI 318: 26.4.7-26.4.9	1908.9
OPENINGS REQUIRED BY ALL TRADES FOR REVIEW BY THE MEP, ARCHITECT AND STRUCTURAL ENGINEER, IN THAT ORDER. NO SLEEVE SHALL BE PLACED THROUGH ANY CONCRETE ELEMENT UNLESS SHOWN ON THE APPROVED SHOP DRAWINGS OR SPECIFICALLY AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD. CORES AND DRILLED FASTENERS:	9. ERECTION OF PRECAST CONCRETE MEMBERS.	~	Χ	ACI 318: CH. 26.8	-
 DRILLED OR POWDER DRIVEN FASTENERS WILL BE PERMITTED WHEN PROVEN TO THE SATISFACTION OF THE STRUCTURAL ENGINEER THAT THE FASTENERS WILL NOT SPALL THE CONCRETE OR DAMAGE EXISTING REINFORCEMENT. CORE DRILLING OF FOUNDATIONS SHALL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER. 	10. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		Х	ACI 318: 26.10.1(b)	-
3. WHEN INSTALLING EXPANSION OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING	470E (COULC CRECIAL INCRECTIONS AND TESTS OF EVICTING SITE SOIL CONDITIONS FILL	DI ACEMENT AND LOAD D	ADING DEGLUDENENT	C CUALL DE DEDEODMED IN ACCORDAN	CE WITH THE

1705.6 SOILS. SPECIAL INSPECTIONS AND TESTS OF EXISTING SITE SOIL CONDITIONS, FILL PLACEMENT AND LOAD-BEARING REQUIREMENTS SHALL BE PERFORMED IN ACCORDANCE WITH THIS SECTION AND TABLE 1705.6. THE APPROVED GEOTECHNICAL REPORT AND THE CONSTRUCTION DOCUMENTS PREPARED BY THE REGISTERED DESIGN PROFESSIONALS SHALL BE USED TO DETERMINE COMPLIANCE, DURING FILL PLACEMENT, THE SPECIAL INSPECTOR SHALL VERIFY THAT PROPER MATERIALS AND PROCEDURES ARE USED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT.

TABLE 1705.6

ELECTION DISTRICT No. 5

REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS

VED AND INCRECTION	FREQUENCY O	F INSPECTION
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	. X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	Χ
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	x
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	Χ	-
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	Х
ADDDEN/IATIONIC EA	FACH	MAX

VLINI I IIIAT 31	TIL HAJ DELN FREFARED FROFERET.				
ABBREVIATIONS	S	EA	EACH	MAX	MAXIMUM
ASD	ALLOWABLE STRESS DESIGN	EF	EACH FACE	MECH	MECHANICAL
ALT	ALTERNATE	ES	EACH SIDE	MIN	MINIMUM
ACI	AMERICAN CONCRETE INSTITUTE	EW	EACH WAY	NWC	NORMAL WEIGHT CONCRETE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	EL	ELEVATION	NTS	NOT TO SCALE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	EOR	ENGINEER OF RECORD	NO, NMB OR #	NUMBER
AB	ANCHOR BOLT	EQ	EQUAL	OC	ON CENTER
ARCH	ARCHITECT	EXP BOLT	EXPANSION BOLT	PL OR LP	PLATE
@	AT RATE OF	EXP JT OR EJ	EXPANSION JOINT	PSF	POUNDS / SQUARE FOOT
BM	BEAM	EXT	EXTERIOR	PSI	POUNDS / SQUARE INCH
B OR BOT	BOTTOM	FT OR '	FEET	REF	REFERENCE
BEW	BOTTOM EACH WAY	FIN	FINISH	REINF	REINFORCE OR REINFORCEMENT
CIP	CAST-IN-PLACE	FIN FL	FINISH FLOOR	SECT	SECTION
CTR	CENTERED	FL	FLOOR	SHT	SHEET
С	CENTERLINE	FTG	FOOTING	SIM	SIMILAR
CLR	CLEAR	FND	FOUNDATION	SPA	SPACES
COL	COLUMN	GALV	GALVANIZED	SOG	SLAB-ON-GRADE
CONC	CONCRETE	GA	GAUGE	SQ	SQUARE
CRSI	CONCRETE REINFORCING STEEL INSTITUTE	GENL	GENERAL	STL	STEEL
CONST	CONSTRUCTION	GR	GRADE	STR	STRUCTURAL
CONT	CONTINUOUS	GC	GENERAL CONTRACTOR	T	TOP
DET	DETAIL	H OR HORIZ	HORIZONTAL	T&B	TOP & BOTTOM
DIA	DIAMETER	IN OR "	INCH	TYP	TYPICAL
DIM	DIMENSION	INFO	INFORMATION	UNO	UNLESS NOTED OTHERWISE
DWLS	DOWELS	JT	JOINT	V OR VERT	VERTICAL
DWG	DRAWING	MATL	MATERIAL	VIF	VERTICAL INSIDE FACE
	SEVELODMENT DILACE	a		WWR W/	WELDED WIRE REINFORCEMENT
1 3 1 1	AND	8		1A1 /	10/11 I-I

REDEVELOPMENT PHASE W/ WITH GENERAL NOTES SCALE ZONING G. L. W. FILE No. MERRIWEATHER POST PAVILION AS NOTED NT OPEN SPACE CONCESSION, RESTROOM, BOX OFFICE AND STORAGE TOWN CENTER TAX MAP - GRID SHEET SECTION 1, LOT 13 PLAT No. 4305 and 4306 27 **OF** 28 JAN., 2020

HOWARD COUNTY, MARYLAND

Chief, Development Engineering Division 1/54

