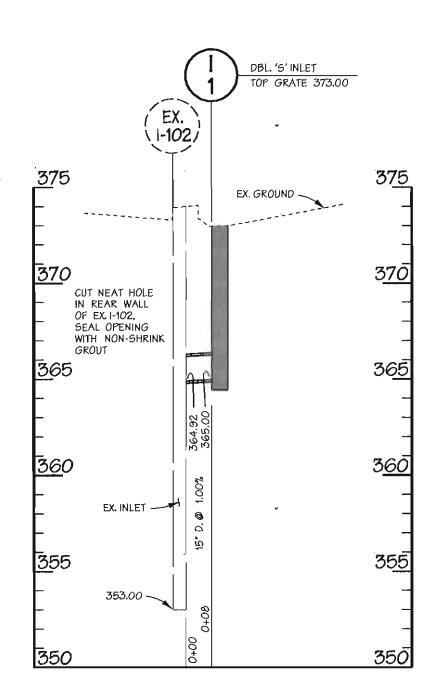
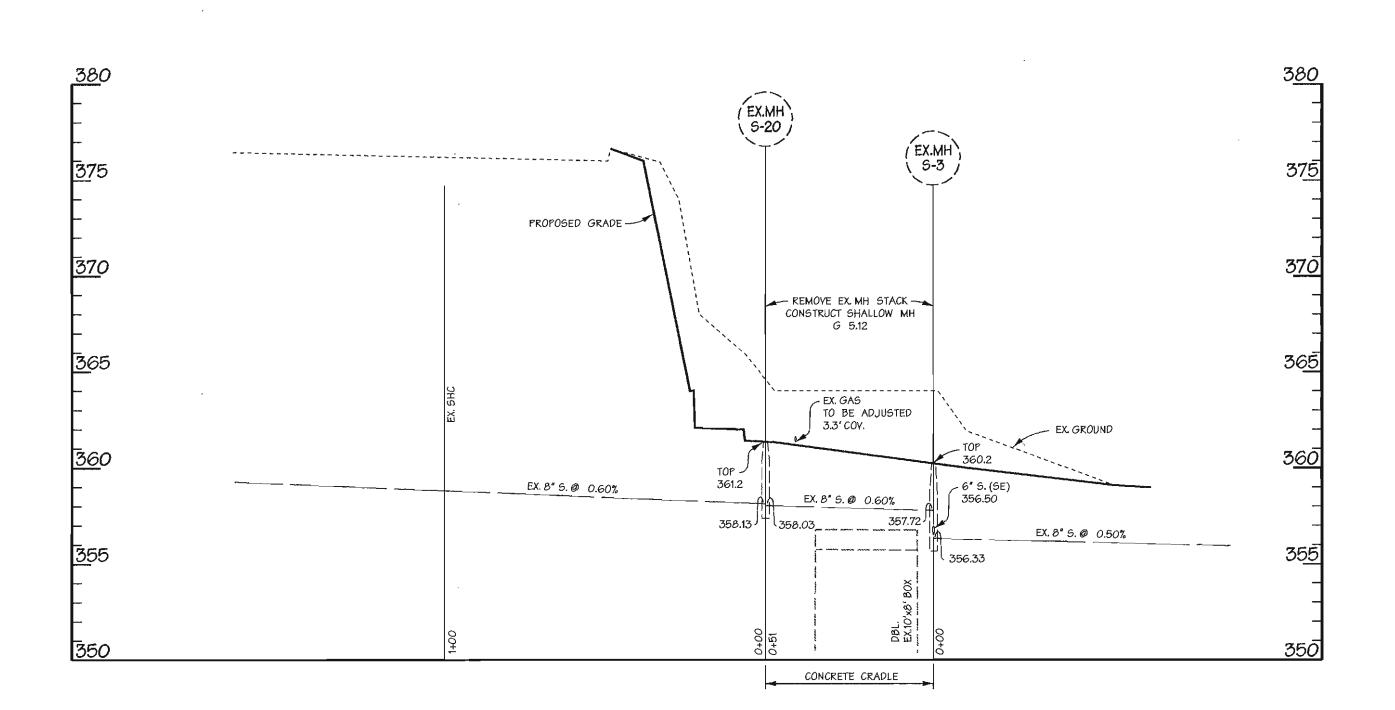


EX. GROUND — O+99 - REMOVE EXISTING %BEND CONNECT — TO EXISTING 8" W. VERIFY LOCATION AND DEPTHOF EX.8" W. BEFORE LAYING ANY PIPE - CONCRETE ENCASE WATER MAIN ທ (0+05 TO 0+20) LOCATION AND DEPTH OF EXISTING UTILITIES MUST BE VERIFIED BEFORE PLACING ANY PIPE.

WATER LINE 'A' PROFILE SCALE: HORIZ. 1"=30" VERT. 1"=5'

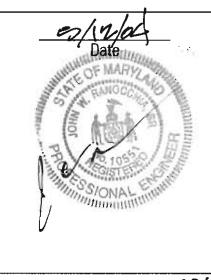
WATER LINE 'B' PROFILE SCALE: HORIZ. 1"=30' VERT. 1"=5'



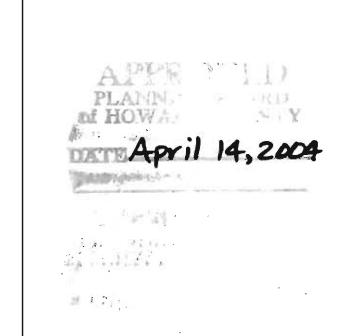


STORM DRAIN PROFILE SCALE: HORIZ. 1"=30' VERT. 1"=5'

SANITARY SEWER **PROFILE** SCALE: HORIZ. 1"=30' VERT. 1"=5'



Professional Engr. No. |



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mar	Ĺ.	harlana	U		6/2/.
DIRECTOR					DATE

Revision Description THE MALL IN COLUMBIA

PHASE IV TOWN CENTER SECTION 2 AREA 1 HOWARD COUNTY, MD LOT 42

OWNER /DEVELOPER: THE HOWARD RESEARCH & DEVELOPMENT CORP. COLUMBIA MALL, INC.

10275 LITTLE PATUXENT PARKWAY

COLUMBIA, MARYLAND 21044

Daft-McCune-Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3333 Fax 296–4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

PHASE V STORM DRAIN & UTILITY PROFILES

Des By	RLH	Scale	HORZ. 1" = 30' VERT. 1" = 5'	Proj. No.	95019.B6
Drn By	CMR, MSS	Date	5-12-04		
Chk By	JWR	Approve	d un	7	OF 13

N 42°20'02" E 124. 200'00" M BERM PROVE EXISTING PROVEMENT IN AREA OF STABLIZED CONTRUCTION ENTRANCE AND MOUNTABLE BERM > - SAFETY FENCE PROPOSED GRADING, RETAINING WALLS AND STAIRWAY SHOWN ABOYE PROPOSED CURB & GUTTER OCCURED IN PHASE I DISTURBANCE ~/ **(**jr "NORDSTROM" BRICK AND CONCRETE BUILDING

SEDIMENT & EROSION CONTROL SCALE: 1"=30'

LEGEND

EX SANITARY SEWER

EX STORM DRAIN

EX. EDGE OF ROAD

PROP. CONTOUR

PROP. UTILITIES

EX. CONTOUR

EX. WATER

DEVELOPER'S CERTIFICATION: "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT, I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER!

ENGINEER'S CERTIFICATION:

"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

5-11-04 SIGNATURE OF ENGINEER John W- Rancchic, S.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS

U.S. NATURAL RESOURCE CONSERVATION SERVICE THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND

SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

PAINTED ISLAND 6" STANDARD COMB. C&G 6" REV. COMB. C&G 1' SPECIAL CURB

SCENIO STABILIZED CONSTRUCTION

ENTRANCE W/ MOUNTABLE BERM

CIP INLET PROTECTION #2 STONE CHECK DAM I III I I III LIMIT OD DISTURBANCE

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

Placement of topsoil over a prepared subsoliprior to establishment of permanent

PURPOSE

To provide a suitable soil medium for vegetative growth. Soils of concern have low moleture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soll gradation.

CONDITIONS WHERE PRACTICE APPLIES

- !. This practice is limited to areas having 2:1 or flatter slopes where:
- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- 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
- c. The original soil to be vegetated contains material toxic to plant growth.
- d. The soll is so acidic that treatment with limestone is not feasible.
- II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plane.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- Topsoil salvages from the existing site may be used provided that is meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
- II. Topsoil Specifications Soil to be used as topsoil must meet the following:
- Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1-1/2% In diameter.
- il. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as
- ili. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoll. Lime chall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- II. For eltoe having disturbed areas under 5 acres:
- i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
- a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
- b. Organic content of topsoil shall be not less than 1.5 percent by
- c. Topsoil having soluble sait content greater than 500 parts per million shall not be used.
- d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic

Note: 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.

ii. Place topsoli (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods

PARKING LOT W-1 SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMITS. (2 DAYS)

2. CONTACT MISS UTILITY AT 1-800-257-7777 AT LEAST THREE DAYS IN ADVANCE OF STARTING WORK SHOWN ON PLANS. (1 DAY)

3. INSTALL EROSION AND SEDIMENT CONTROL MEASURES. SUPER SILT FENCE SHALL BE INSTALLED IN THE FOLLOWING MANOR: A REMOYE EXISTING CURB AND GUTTER OR SAW CUT ROADWAY AT LIMIT OF PROPOSED PAYEMENT. B. INSTALL SUPER SILT FENCE SO THAT FENCE FABRIC IS TOUCHING YERTICAL PORTION OF EXISTING C. APPLY COLD PATCH ON EXISTING PAYEMENT ON THE BACKSIDE OF THE SUPER SILT FENCE TO ENSURE THAT WATER DOES NOT FLOW BEHIND FENCE INTO THE GROUND.

D. SUPER SILT FENCE IN NON-PAVED AREA SHALL BE INSTALLED PER DETAIL. (4 DAYS)

4. ONCE EROSION AND SEDIMENT CONTROLS ARE OPERATIONAL AND WITH PERMISSION OF THE INSPECTOR, CLEAR AND GRUB SITE. (2 DAYS)

5. ROUGH GRADE SITE. EXISTING CURB AND GUTTER AND EXISTING PAYEMENT TO BE REMOVED SHALL BE REMOVED AT THIS TIME. ALL PAVEMENT AND CURB AND GUTTER REMOVED SHALL BE TAKEN TO AN APPROVED HOWARD COUNTY DUMP SITE, RELOCATE UTILITIES AS REQUIRED TO MAINTAIN APPROPRIATE COVER. INSTALL RETAINING WALLS AS REQUIRED TO COMPLETE ROUGH

GRADING. (28 DAYS) 6. INSTALL CURB AND GUTTER, PAVEMENT SUBBASE, RETAINING WALLS, AND STAIRWAY. (40 DAYS)

7. FINE GRADE REMAINING AREAS AND PERMANENTLY STABILIZE THOSE AREAS. (5 DAYS) 8. INSTALL PAYING BEGINNING AT LOOP ROAD AND WORKING TOWARD MALL. REMOVE PORTIONS OF SUPER SILT FENCE WHEN AREA OF ACTIVE PAYING REACHES SUPER SILT FENCE, SUPER SILT FENCE SHALL REMAIN IN PLACE AS LONG AS POSSIBLE. (14 DAYS)

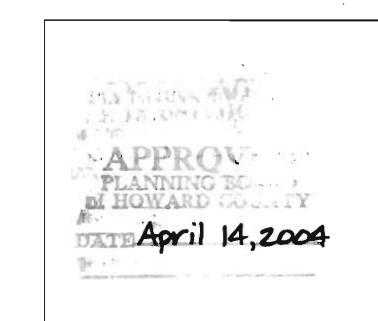
9. ONCE STABILIZATION IS COMPLETE, AND WITH APPROVAL OF THE INSPECTOR, REMOVE ALL REMAINING EROSION AND SEDIMENT CONTROL MEASURES AND PERMANENTLY STABILIZE THOSE AREAS. (2 DAYS)

V. Topsoll Application

applied as specified below:

- I. When topsolling maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Slit Fence and Sediment Traps and Basins.
- li. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4% - 8% higher in elevation.
- III. Topsoil shall be uniformly distributed in a 4% 8% layer and lightly compacted to a minimum thickness of 4%. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsolling or other operations shall be corrected in order to prevent the formation of depressions or water
- lv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- VI. Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be
 - i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - c. Composted sludge shall be applied at a rate of 1 ton/1,000 square
- iv. Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4 lb/1,000 square feet, and 1/3 the normal lime application

References: Guidelines Specifications, Soll Preparation and Sodding. MD-YA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.



APPROVED: HOWARD-COUNTY DEPT. OF PLANNING & ZONING DEVELOPMENT ENGINEERING DIVISION MK

No. Revision Description THE MALL IN COLUMBIA

COLUMBIA TOWN CENTER SECTION 2 AREA 1 LOT 47 HOWARD COUNTY, MD

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP. COLUMBIA MALL, INC.

10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044



Daft McCune Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3333

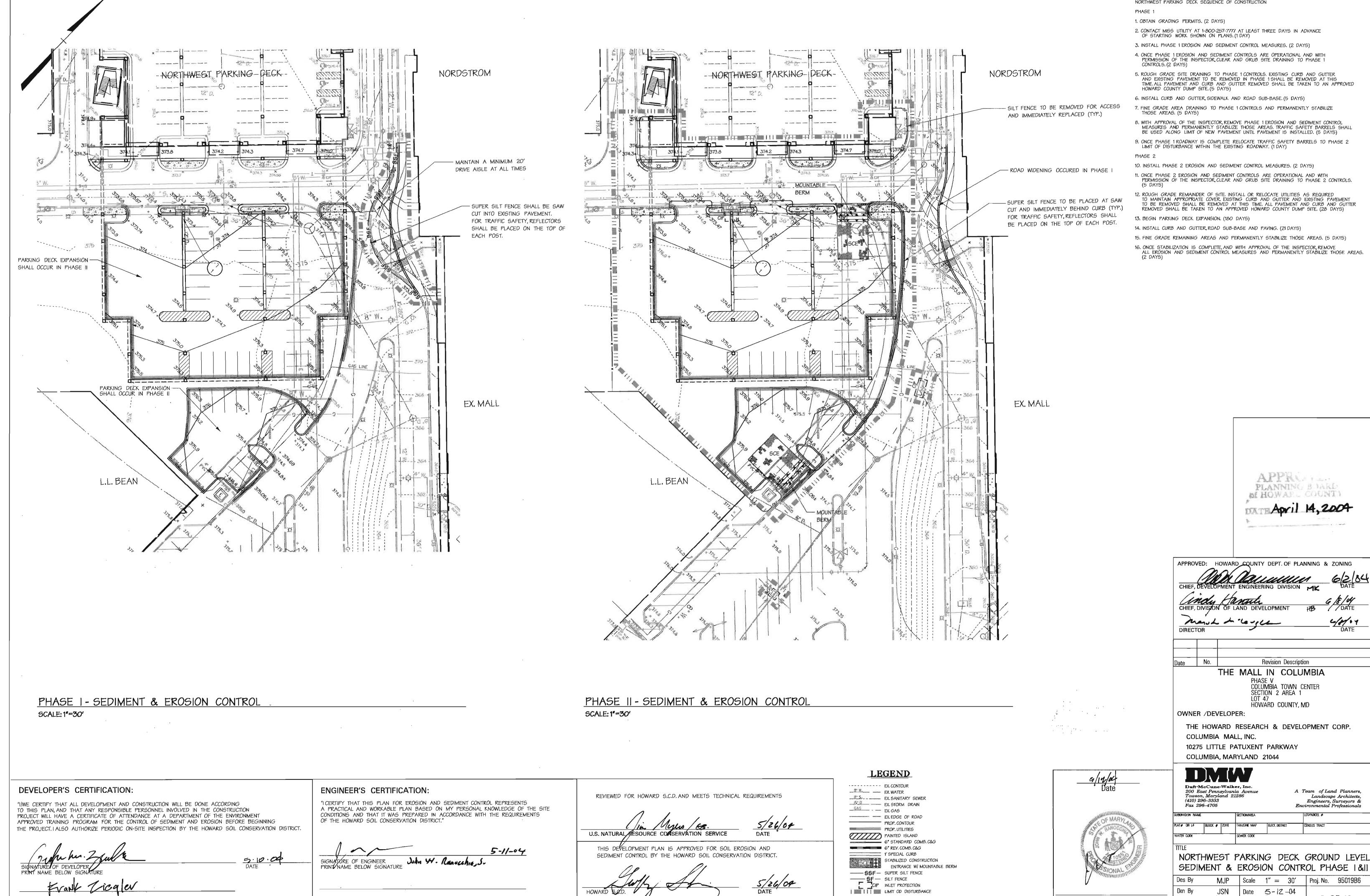
Fax 296-4705

Professional Engr. No. 1056

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

PARKING LOT W-1

SEDIMENT & EROSION CONTROL PLAN MJP | Scale 1" = 30' | Proj. No. 95019B6 JSN Date 5-12 -04 8 OF 13



NORTHWEST PARKING DECK SEQUENCE OF CONSTRUCTION

2. CONTACT MISS UTILITY AT 1-800-257-7777 AT LEAST THREE DAYS IN ADVANCE

3. INSTALL PHASE 1 EROSION AND SEDIMENT CONTROL MEASURES. (2 DAYS)

PERMISSION OF THE INSPECTOR, CLEAR AND GRUB SITE DRAINING TO PHASE 1

5. ROUGH GRADE SITE DRAINING TO PHASE 1 CONTROLS. EXISTING CURB AND GUTTER
AND EXISTING PAVEMENT TO BE REMOVED IN PHASE 1 SHALL BE REMOVED AT THIS
TIME.ALL PAVEMENT AND CURB AND GUTTER REMOVED SHALL BE TAKEN TO AN APPROVED

6. INSTALL CURB AND GUTTER, SIDEWALK AND ROAD SUB-BASE. (5 DAYS)

9. ONCE PHASE 1 ROADWAY IS COMPLETE RELOCATE TRAFFIC SAFETY BARRELS TO PHASE 2 LIMIT OF DISTURBANCE WITHIN THE EXISTING ROADWAY. (1 DAY)

10. INSTALL PHASE 2 EROSION AND SEDIMENT CONTROL MEASURES. (2 DAYS)

11. ONCE PHASE 2 EROSION AND SEDIMENT CONTROLS ARE OPERATIONAL AND WITH PERMISSION OF THE INSPECTOR CLEAR AND GRUB SITE DRAINING TO PHASE 2 CONTROLS.

12. ROUGH GRADE REMAINDER OF SITE. INSTALL OR RELOCATE UTILITIES AS REQUIRED TO MAINTAIN APPROPRIATE COVER. EXISTING CURB AND GUTTER AND EXISTING PAYEMENT TO BE REMOVED SHALL BE REMOVED AT THIS TIME. ALL PAVEMENT AND CURB AND GUTTER REMOVED SHALL BE TAKEN TO AN APPROVED HOWARD COUNTY DUMP SITE. (28 DAYS)

PLANNING B JAKE M HOWARL COUNTY

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Revision Description

COLUMBIA TOWN CENTER SECTION 2 AREA 1 LOT 47

THE HOWARD RESEARCH & DEVELOPMENT CORP.

10275 LITTLE PATUXENT PARKWAY

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

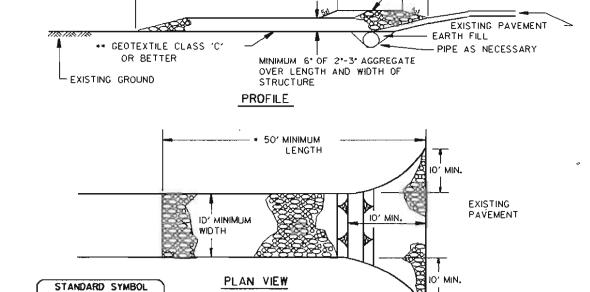
9 OF 13

SEDIMENT & EROSION CONTROL PHASE I &II MJP | Scale 1" = 30' | Proj. No. 95019B6 JSN Date 5-12-04

SDP-04-111

Professional Engr. No. 105051

my



i. Length - minimum of 50' (•30' for single residence lot).

2. Width - 10' minimum, should be flored at the existing road to provide a turning

Construction Specification

3. Geotextile fobric Class C (filter cloth) shall be ploced over the existing ground prior to placing stone. **The plan approval authority may not require single family

4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6° deep over the length and width of the

5. Surface Water - all surface water flowing to or diverted toward construction entrances shallbe piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5: slopes and a minimum of 6° of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6° minimum will be required.

6. Location - A stabilized construction entrance shallbe located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travelover the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE F - 17 - 3SOIL CONSERVATION SERVICE

STABILIZED CONSTRUCTION ENTRANCE

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

- MOUNTABLE BERM (SEE DETAIL)

NOT TO SCALE

	SIZE RANGE	D ₅₀	D 100	AASHTO	WEIGHT
NUMBER 57+	3/8" ~ 11/2"	1/2"	11/2"	M-43	N/A
NUMBER I	2* - 3*	21/21	3 "	M-43	N/A
RIP-RAP••	4* - 7*	51/21	7"	N/A	N/A
CLASS I	N/A	9.5"	!5 '	N/A	150lb max.
CLASS II	N/A	16"	24"	N/A	700lb max,
CLASS III	N/A	23*	34"	N/A	2000lb max.

Table 28 Stone Size

 This classification is to be used on the inside face of stone outlets and check dams. ** This classification is to be used when ever small rip-rap is required. The State Highway Administration designation for this stome is Stone For Gabions (905.01.04

Stone For Gabion Baskets

BASKET TH	HICKNESS	SIZE OF INDIVIDUAL STONES		
INCHES	мм	INCHES	ММ	
6	150	3 - 5	75 - 125	
9	225	4 - 7	100 - 175	
12	300	4 - 7	100 - 175	
18	460	4 ~ 7	100 - 175	
36	910	4 - 12	100 - 300	

NOTE: Recycled concrete equivalent may be substituted for all stone classifications.
Recycled concrete equivalent shall be concrete broken into the sizes meeting the appropriate classification, shall contain no steel reinforcement, and shall have a density of 150 pounds per cubic foot.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES: I. <u>PREFERRED</u> - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.) ACCEPTABLE - APPLY 2 TOMS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SO.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH I THRU APRIL 30, AND AUGUST I THRU OCTOBER IS, SEED WITH 60 LBS. PER ACRE (1.4 LBS/1000 SO.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY ITHRU JULY 3I SEED WITH 60 LBS. KENTUCKY 3I TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS/1000 SO.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 3ITALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL

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 APPLICATIONS USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SO.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SO.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

<u>SEEDBED PREPARATION</u> - LOOSEN UPPER THREE INCHES OF SOIL BE RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

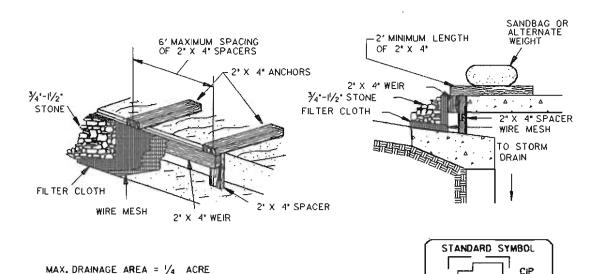
SOIL AMENDMENTS - APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SO.FT.)

SEEDING - FOR THE PERIODS MARCH ITHRU APRIL 30, AND AUGUST 15 OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3,2 LBS/1000 SO.FT.). FOR THE PERIOD MAY ITHRU 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 WEED FREE 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 ASPHLAT ON FLAT AREAS. ON SLOPES 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL/1000 SO.FT.) FOR ANCHORING.

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

SEEDING NOTES



Construction Specifications

I. Attach a continuous piece of $\frac{1}{2}$ $\frac{x}{2}$ wire mesh (30° minimum width by throat length plus 4") to the $2" \times 4"$ weir (measuring throot length plus 2") as shown on the standard

2. Place a continuous piece of Geotextlle Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2"x 4" weir. 3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between

4. Place the assembly against the inlet throat and nall(minimum 2'lengths af 2° x 4° to the top of the welr at spacer locations). These 2° x 4° anchors shall extend across the inlet top and be held in place by sondbags ar alternate weight. 5. The assembly shall be placed so that the end spacers are a minimum I' beyond both ends of the throat opening.

6. Form the $\frac{1}{2}$ x $\frac{1}{2}$ wire mesh and the geotextile fobric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean $\frac{y_4}{2}$ x $\frac{1}{2}$ stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

NOT TO SCALE

7. This type of protection must be inspected frequently and the filter clath and stone replaced when clagged with sediment. 8. Assure that storm flow does not byposs the inlet by installing a temporary

U.S. DEPARTMENT OF AGRICULTURE		MARYLAND DEPARTMENT OF ENVIRONMENT
SGIL CONSERVATION SERVICE	$E - 16 - \delta B$	WATER MANAGEMENT ADMINISTRATION

earth or asphalt dike to direct the flow to the inlet.

Table 27 Geotextile Fobrics

CURB INLET PROTECTION (COG OR COS INLETS)

the well and the inlet face (max. 4' apart).

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB, MIN.	BURST STRENGTH PSI. MIN.
Α	0.30**	250	500
В	0.60	200	320
С	0.30 .	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80	90	190

 US Std. Sleve CW-02215
 50 mm max. for Super Silt Fence The properties shall be determined in accordance with the following procedures: · Apporent opening size MSMT

- Grab tensile strength ASTMD 1682: 4x8 specimen, 1x2 clamps, 12 /min. strain rate in both principal directions of geotextile fabric.
ASTMD D 3786 - Burst strength

he fabric shallbe inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers cansisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolephins, polyesters, or polyamides. The geotectile fabric shall resist deterioration from ultraviolet exposure.

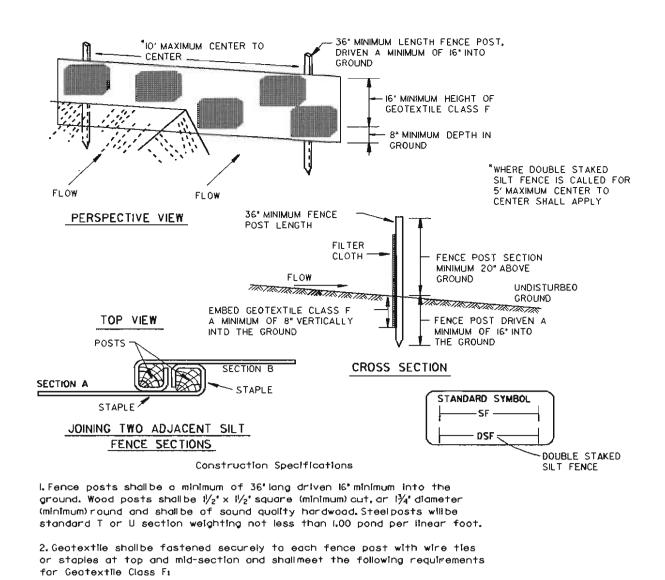
In addition, Classes A through E shallhave a 0.01cm./sec. minimum permeability when tested in accordance with MSMT 507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grob tensile strength requirements listed obove.

Class F geotextile fabrics for silt fence shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modules when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft./min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322. Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

MATERIALS SPECIFICATIONS H - 24 - 1

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (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 1994 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:
- SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES
- FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE
- 4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. I, CHAPTER 7, OF THE "HOWARD COUNTY DESIGN MANUAL," STORM DRAINAGE.
- 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING, AND MULCHING (SECTION G). 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 AREA DISTURBED AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED
- ACRES ◆ 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 CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
- 10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- II. TRENCHES FOR THE CONSTRUCTION OF UTILITES ARE LIMITED TO 3 PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SEDIMENT CONTROL GENERAL NOTES



ensile Strenath 50 lbs/in (min.) Test: MSMT 509 20 lbs/in (min.) Test: MSMT 509 Tensile Modulus

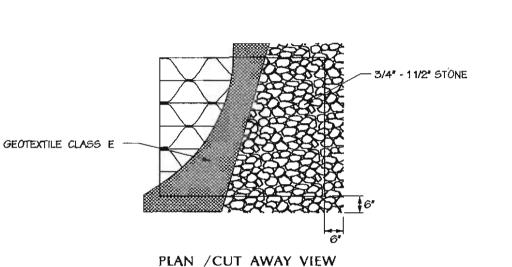
0.3 golft/minute Flow Rate Test: MSTM 322 Filtering Efficiency 75% (min.) Test: MSMT 322 3. Where ends of geotextile fabric come together, they shall be overlapped. folded and stapled to prevent sediment bypass.

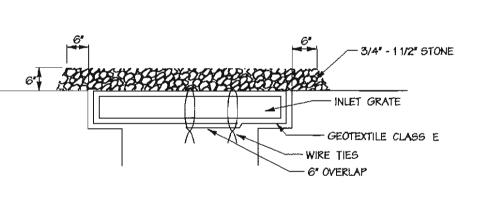
4. Slit Fence shall be inspected after each roinfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION B - 15 - 3

SILT FENCE

NOT TO SCALE





STANDARD SYMBOL

CROSS SECTION MAX. DRAINAGE AREA = 1/4 ACRE

CONSTRUCTION SPECIFICATIONS

— 6" MINIMUM #2 STONE (10" IF PART OF HEAVY DUTY STABILIZED CONSTRUCTION ENTRANCE)

--- FILTER CLOTH

#2 STONE

50-100-0-

STO. SILT FENCE SUPER SILT FENCE

OR 9' MAX YERTICAL CHANCE IN ELEV.

#2 STONE

24" HKH

36 WIDE

80'-100 O.C.

IF MOUNTABLE BERM IS PART OF A "B" CLASS DIKE, COMPACTED EARTH MUST BE 30" MINIMUM.

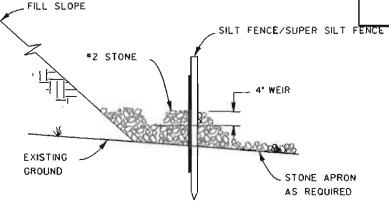
MOUNTABLE BERM DETAIL

1.LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE. 2. PLACE 34" TO 11/2" STONE, 4"-6" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE ADDITIONAL FILTRATION.

U.S. DEPARTMENT OF AGRICULTURE BOIL CONSERVATION SERVICE AT GRADE INLET PROTECTION MARYLAND DEPARTMENT OF ENVIRONME

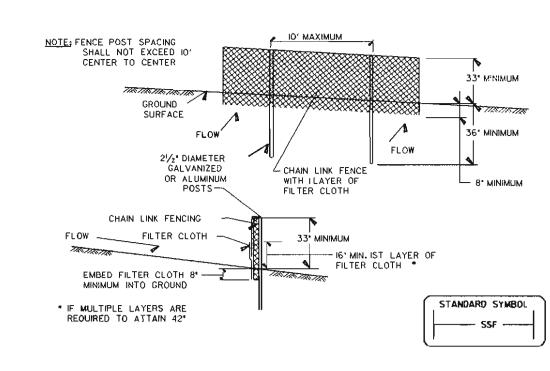
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IOHARD COUNTY DEPT OF PLANNING & ZONING



LIMITED USE WHERE SILT FENCE DOESN'T FOLLOW CONTOURS

#2 STONE CHECK DAM



Construction Specificotions

I. Fencing shallbe 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fobric and 6' length posts. 2. The posts do not need to be set in concrete.

3. Chain link fence shall be fastened securely to the fence posts with wire ties or stoples. The lower tension wire, brace and truss rods, drive anchors and post cops are not required except on the ends of the fence. The choin link fencing shollbe six (6) gauge or heavier.

4. Fliter cioth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

5. Filter cloth shall be embedded a minimum of 8' into the ground. 6. When two sections of filter cloth adjain each other, they shall be overlapped by 6" and folded.

7. Maintenance shall be performed as needed and slit buildups removed when "builges" develop in the slit fence, or when slit reaches 50% of fence height

U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT H - 26 - 3WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE

SUPER SILT FENCE

NOT TO SCALE

DUST CONTROL SPECIFICATIONS

- I. Mulches See Standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
- 2. Vegetative Cover See standards for temporary vegetative cover. 3. Tilloge - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before solibiowing starts. Begin plowing an windward side of site. Chisel-type plows spaced about 12 Inches apart, spring-toothed harrows, and similar plaws ore examples of equipment which may produce the desired effect.
- Irrigation This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed.
- At no time should the site be irrigated to the point the runoff begins to flow. 5. Barriers - Salid board fences, snaw fences, burlap fences, straw bales, and similar material can be used to control air curents and soli blowing. Barriers placed of right angles to prevoiting currents at Intervals of about 10 times their height are affective in controlling soll blowing.
- 6. Calcium Chlaride Apply at a rate that will keep surface maist. May need

Permanent Methods:

- Permonent Vegetation See standards for permanent vegetative cover, and permonent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
- Topsolling Covering with less erosive soil materiols. See standards for topsolling.
- Stane Cover surface with crushed stone ar coorse gravel.

U.S. DEPARTMENT OF AGRICULTURE

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DUST CONTROL SPECIFICATIONS

NOT TO SCALE

UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL PRACTICES

- I. EXCAVATED TRENCH MATERIAL SHALL BE PLACED ON UPSTREAM SIDE OF TRENCH 2. IMMEDIATELY FOLLOWING PIPE INSTALLATION, THE TRENCH SHALL BE BACKFILLED, COMPACTED AND IMMEDIATELY
- STABILIZED (MULCHED, SEEDED, AND/OR SODDED MECHANICAL STABILIZATION) AT THE END OF EACH WORK DAY. 3. SILT FENCE SHALL BE PLACED IMMEDIATELY DOWN STREAM OF ANY DISTURBED AREA INTENDED TO REMAIN
- DISTURBED LONGER THAN ONE (1) WORKING DAY. (SILT FENCE AS PER SCS STANDARD DRAWING E-15-3)
- 4. THE CONTRACTOR SHALL DISTURB AND OPEN TRENCH THE MINIMUM PRACTICAL AREA REQUIRED TO ACCOMPLISH THE WORK DESIGNATED FOR EACH DAY. 5. ALL SEDIMENT AND EROSION CONTROL PRACTICES AND VEGETATIVE STABILIZATION SHALL BE IN ACCORDANCE

WITH THE 'STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS." ANY EROSION AND SEDIMENT CONTROL PRACTICES DAMAGED BY UTILITY CONSTRUCTION ARE TO BE UTILITY CONSTRUCTION OUTSIDE SEDIMENT CONTROL



Revision Description NORDSTROM PARKING DECK

THE MALL IN COLUMBIA COLUMBIA TOWN CENTER SECTION 2 AREA 1 LOT 48 HOWARD COUNTY, MD

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORP. COLUMBIA MALL, INC.

10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044



Professional Engr. No. (055)

Daft McCune Walker, Inc 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3333 Fax 296-4705

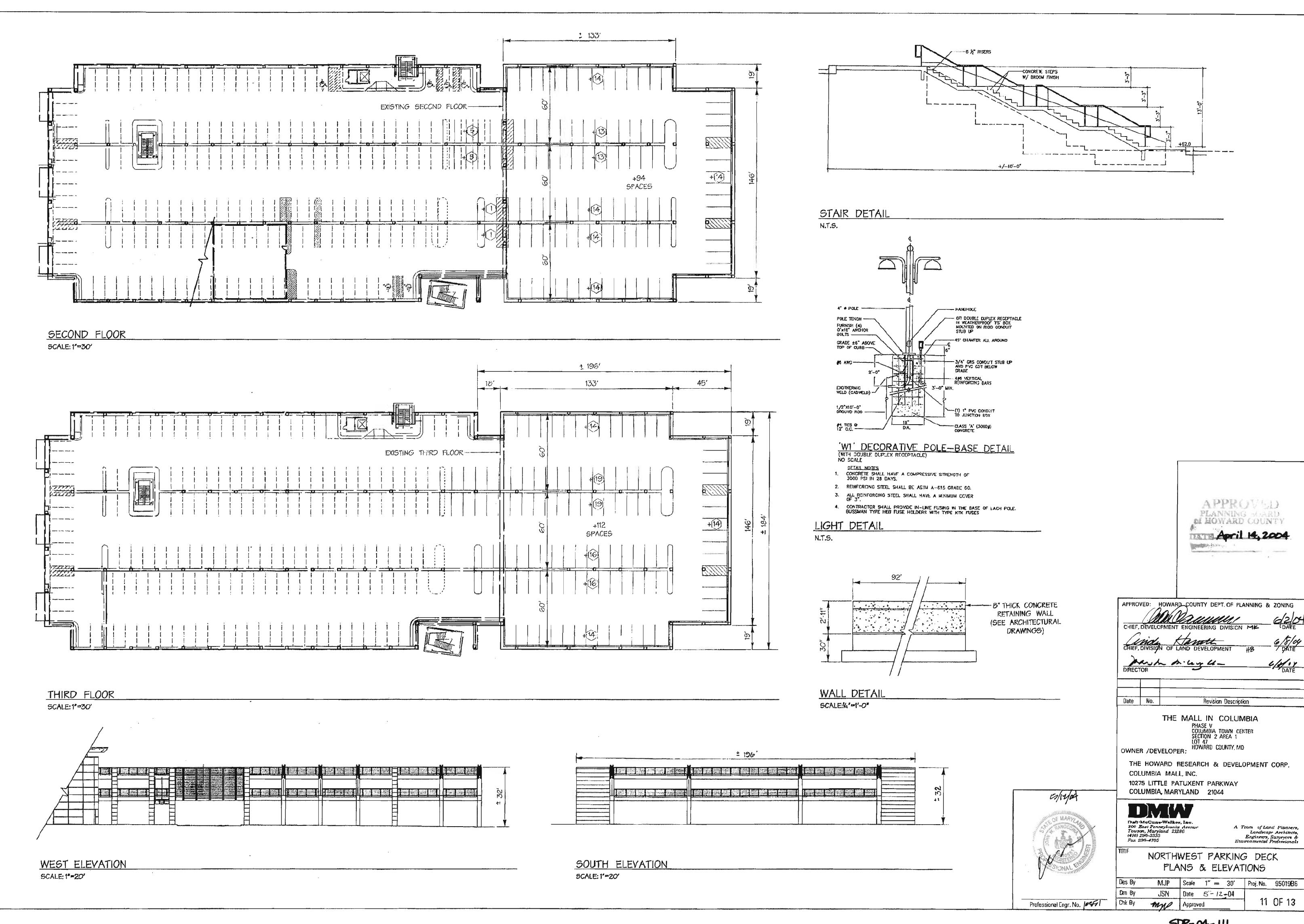
A Team of Land Planners Landscape Architects, Engineers, Surveyors & Environmental Professionals

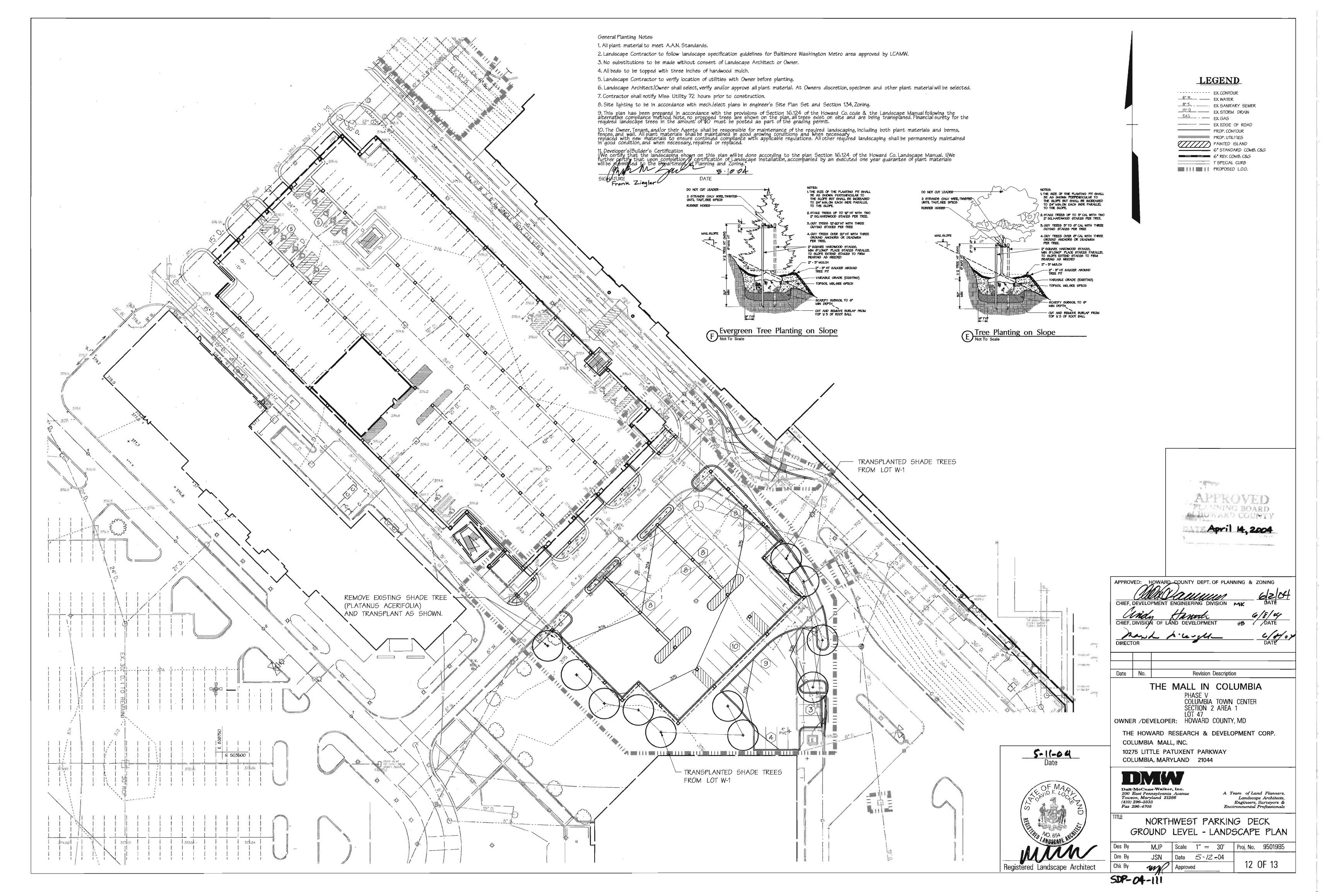
LOT/PARCEL # UBDIVISION NAME

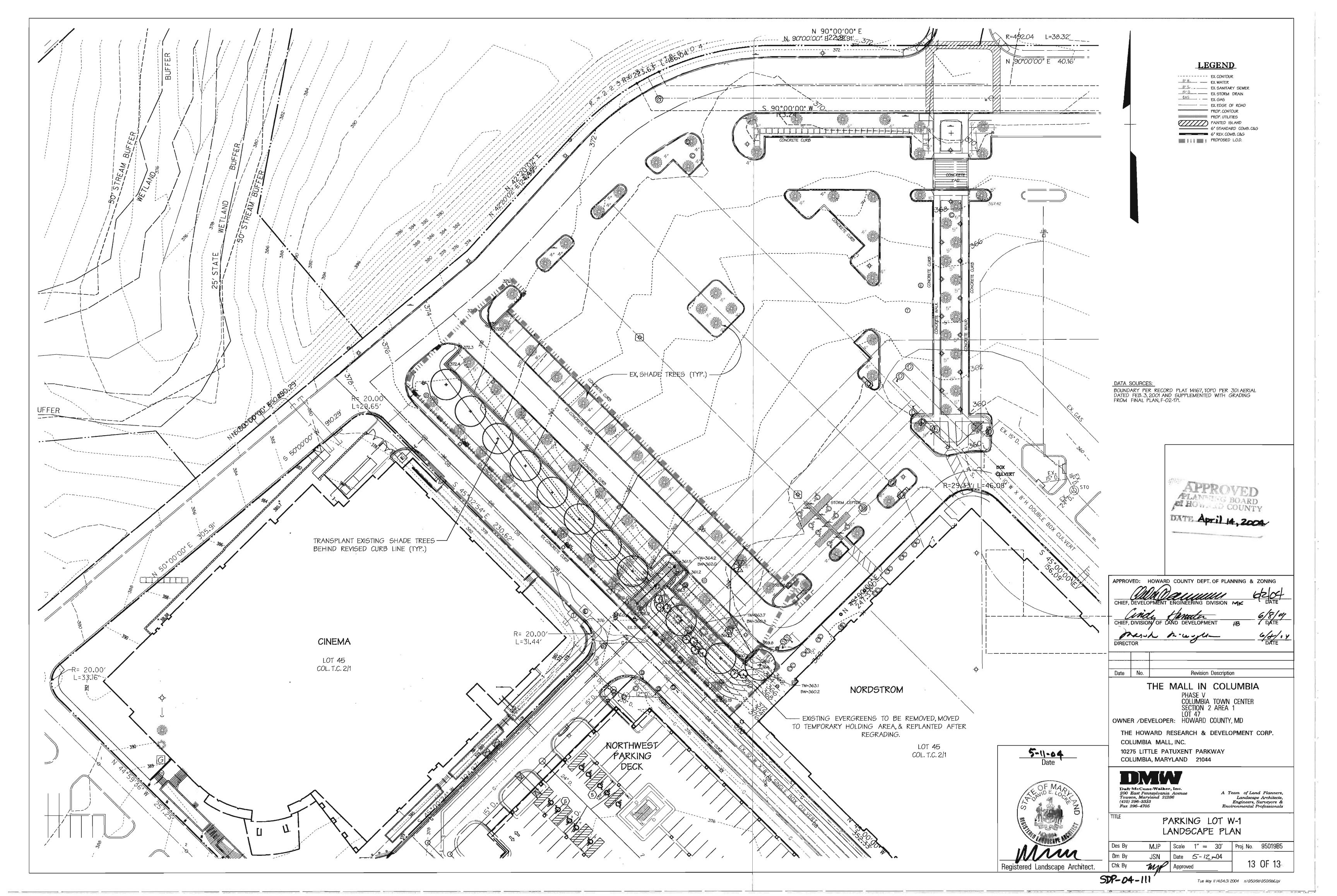
NORTHWEST PARKING DECK GROUND LEVEL SEDIMENT & EROSION CONTROL PHASE I &II

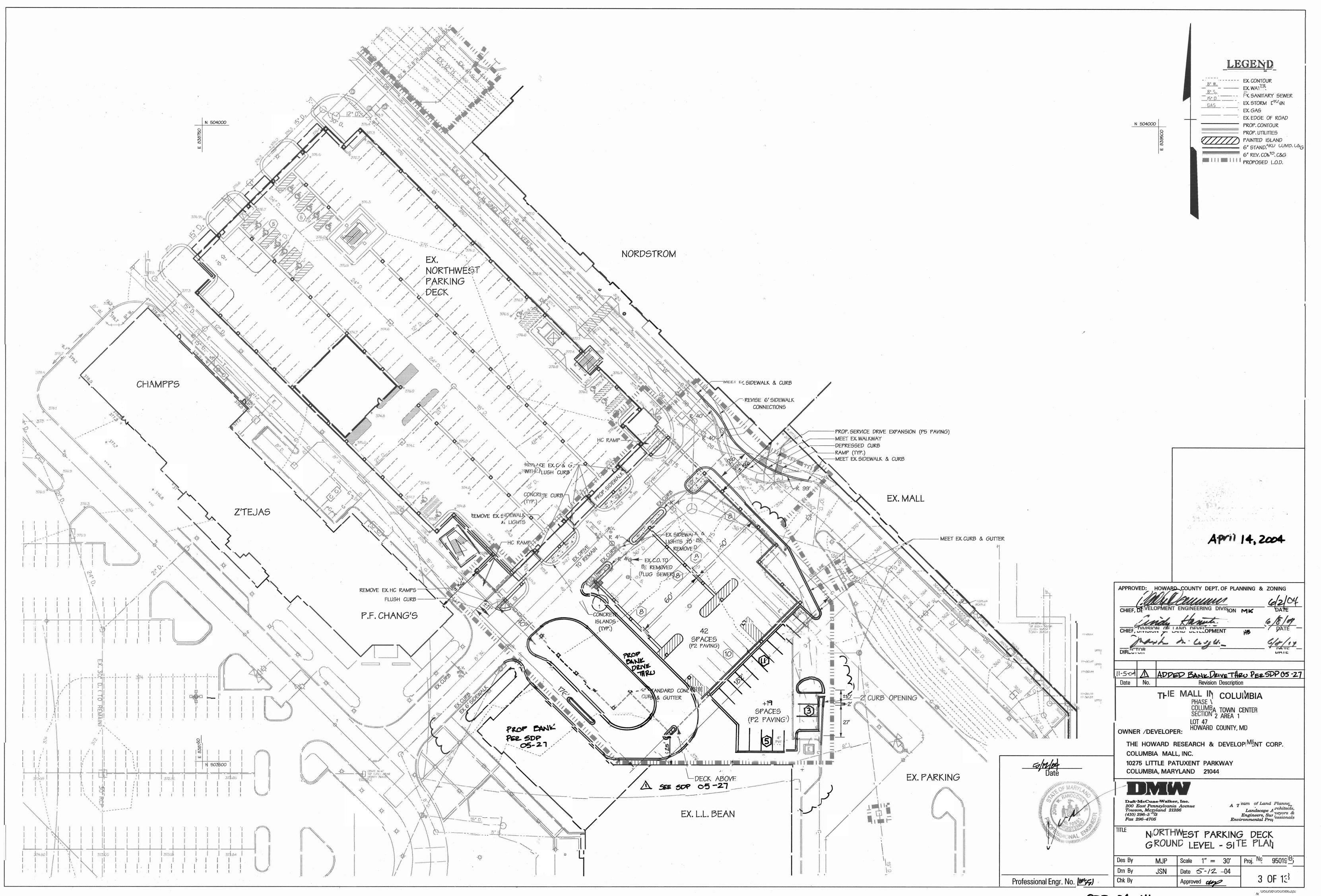
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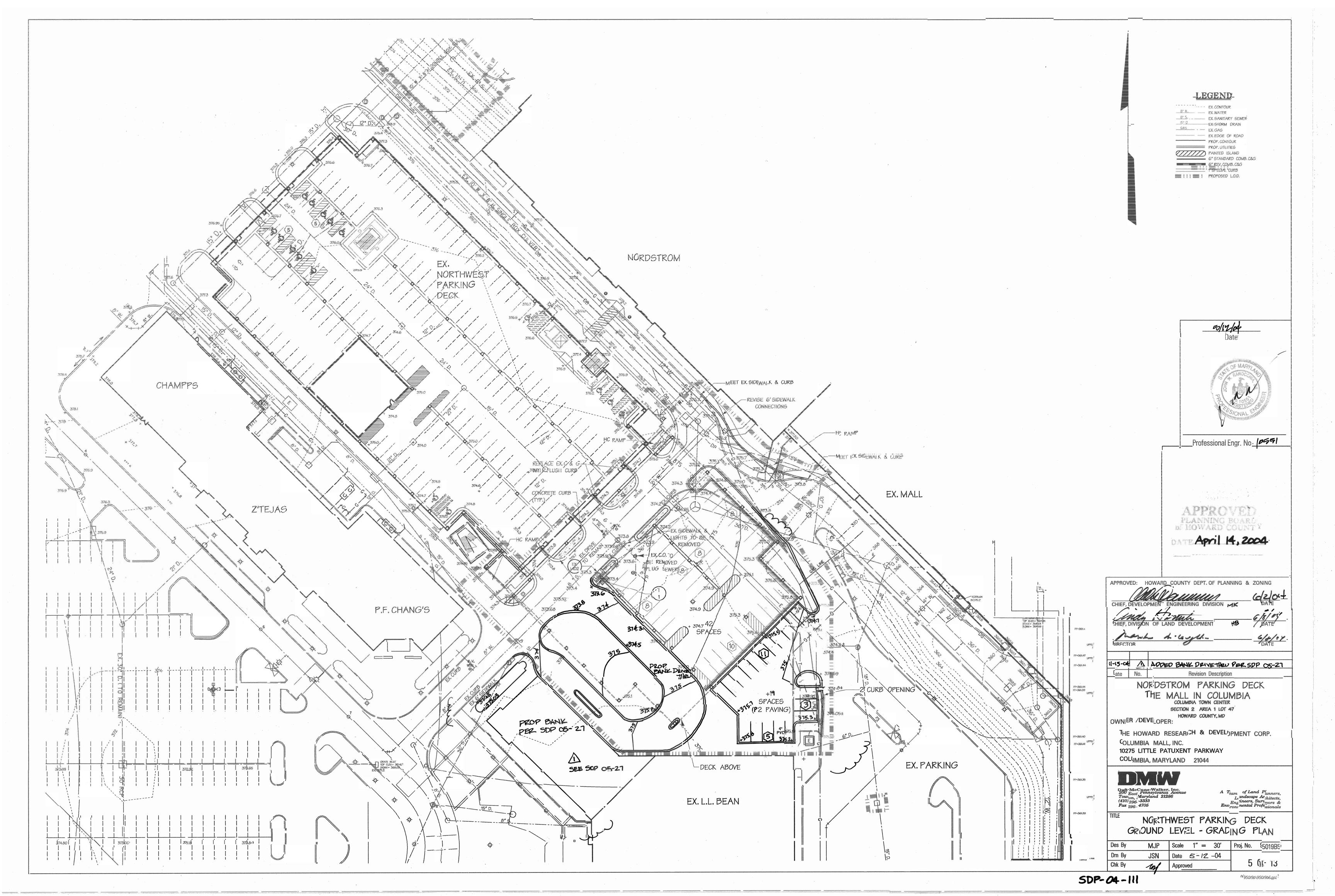
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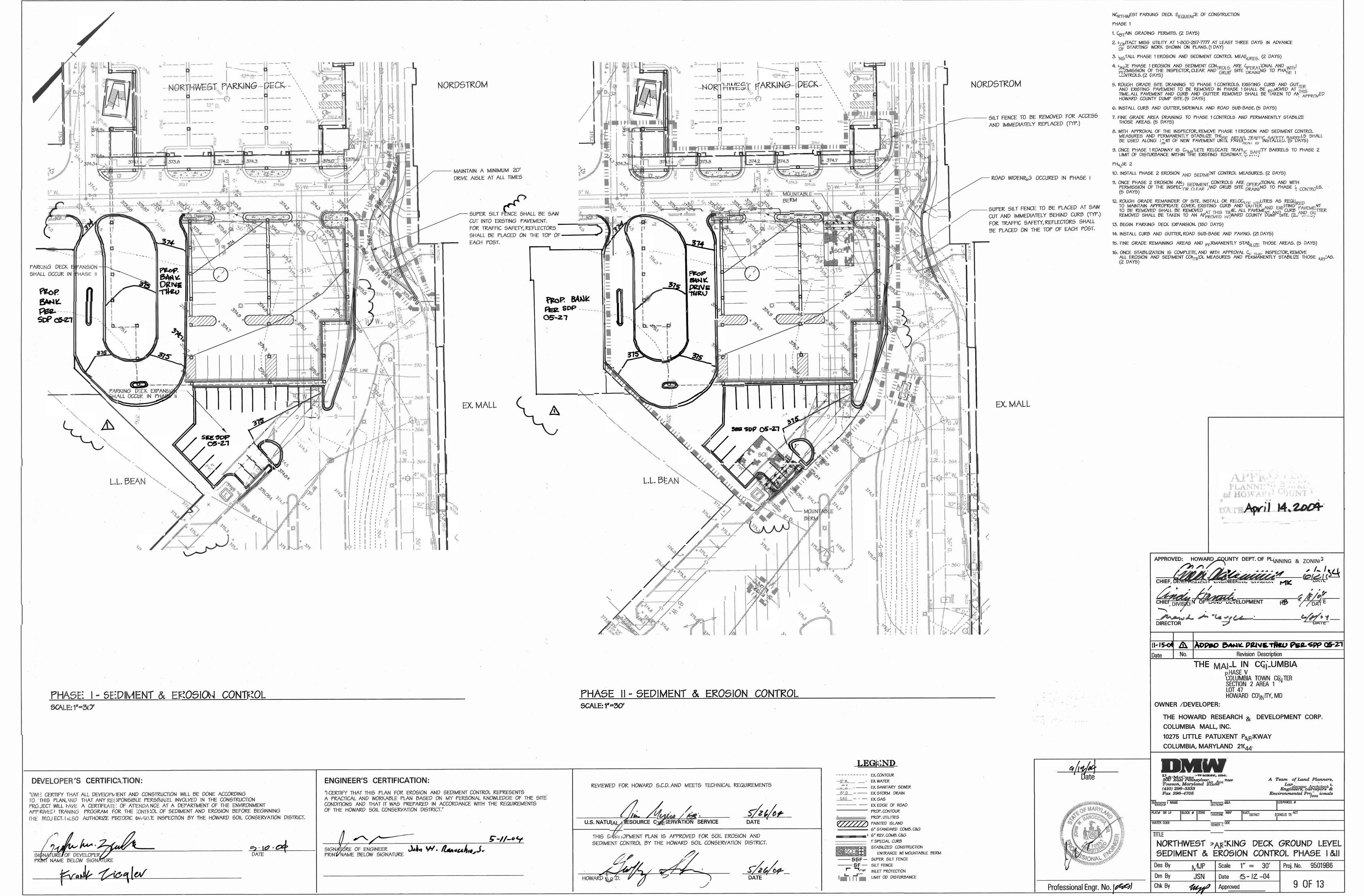












SDP-04-111

