GENERAL NOTES

- 1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standard and specifications if applicable.
- 2. The contractor shall notify the Department of Public Works, Bureau of Engineering, Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- 3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- 4. The contractor shall notify the Howard County Department of Public Works, Bureau of Utilities at (410) 313-4900 at least five working days prior to starting any excavation work.
- 5. Site area: 9.3820 acres.
- 6. All plan dimensions are to face of curb unless otherwise noted.
- 7. Existing topography is shown per field run survey information by Gutschick, Little & Weber, P.A.
- 8. Coordinates and bearings are based upon the MD State plan system (NAD '27).
- 9. Water and sewer shown is public.
- 10. Stormwater management for this site is existing (F-87-63, F-90-92 < SDP-98-40 < 4 F 87-125)
- 11. All existing water and sewer is per Contracts 24-1629-D and 24-9070 D.
- 12. All existing public storm drain is per F-87-125 and F-86-182.
- 13. All curb radii is 5' unless noted otherwise.
- 14. Sidewalks adjacent to perpendicular parking shall be 6' wide.

 All other sidewalks shall be 4' wide except where dimensioned otherwise.
- 15. Contractor shall utilize PVC pipe for all sewer house connections. Contractor shall utilize D.I.P. (CL. 51) for water house connections.
- 16. Use trench bedding class "C" for storm drains.
- 17. Paved areas indicated are private except as noted.
- 18. Project background: See Dept. of Planning & Zoning File Numbers: F-90-138, F-87-63, F-87-25 & GP-87-36.
- 19. Recording reference: Pla+ # 130014
- 20. All proposed ramps shall be in accordance with current A.D.A. standards. Maximum sidewalk cross slope shall be two percent. Provide a five-foot by five-foot level (2 percent max.) landing at the top and bottom of all ramps and building entrances and exits.
- 21. All proposed water meters shall be located inside buildings.
- 22. All proposed site utilities are to terminate 5' from the building. The building plumber shall connect to and extend these utilities to the inside of the building.
- 23. Existing utilities are based on approved design plans for construction and field location by Gutschick, Little & Weber, P.A.
- 24. There is no floodplain on this site.
- 25. There are no wetlands on this site.
- 26. All exterior lighting will comply with zoning Regulations section 134

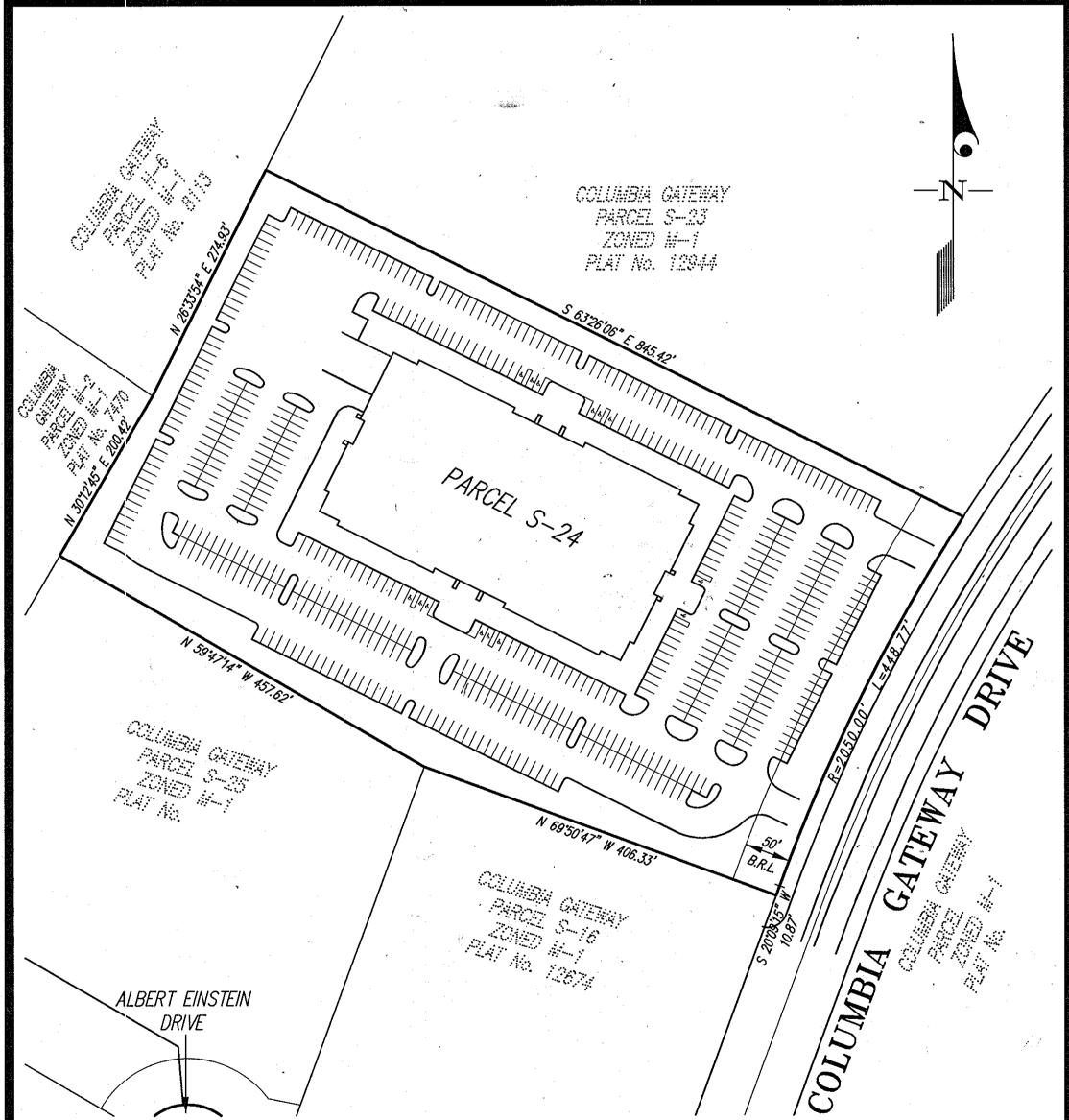
COLUMBIA GATEWAY PARCEL S-24

SITE DEVELOPMENT PLAN

oheet Index

1. Cover wheet
2. oite Development Plan
2. oite Development Plan
2. oite Development Plan
2. oite Detail wheet
4. Handicap Accessibility & oignage Detailor
5. Landacape Plan
6. Landacape Petailor, Noteon & achedules
7. Oediment Control Plan
8. Oediment Control Detailor & Noteon
9. Otorm Drain Profiles & ochedules

10.Utility Profiles
11.Drainage Area & Goila Map



oite Analysia

1.01te Area: 9.38 Ac. 201te Zoning: M-1

3. Limit of Gubminson Area: 9.36 Ac.

Building Area For Building
Coverage (Floor Area

4. Building Coverage: 3.218 Ac. or 35% of Gram Area (Proposed) * ratio) in: 143,019 on f.

5/2-King Tabulation:

Required Parking opaceon: 331/1000 x 145,700 = 4810p.
Required Handicap opaceon: 12 opaceon

Required Handicap Van apaceas: 2 apaceas
Proposed Parking apaceas Total: 5007 apaceas
Proposed Handicap Parking apaceas: 14 apaceas

Proposed Handicap Parking opoces: 14 opoces Proposed Handicap Van opoces: 2 opoces

Legend

____ otandard o"curb & Gutter

===== Exinting Curb

==== Prop. curb (by redline to F87-125)\$

Prop. Curb(by opp 98-40) Parcel 0-22

Prop. Curb (by redline to F87-125) Parcel 9-24

Reverse o" curb & outler

acreen Wall

xane Proposed apot Elevation

------ Existing Contour

Prop. contour (by appose-40)

Prop. Contour

Patron Access

Limit of aubmission

Light Pole

Light Pole Demignation

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Wirecton Date

Chief, Division of Land Development Date

Under Land Date

Chief, Division of Land Development Date

Under Land Date

Und



KEY MAF

SCALE : 1" = 100'

ADDRESS CHART STREET ADDRESS WATER CODE: SEWER CODE: 7.000 COLUMBIA GATEWAY DRIVE SUBDIVISION NAME: SECTION/AREA PARCEL COLUMBIA GATEWAY S-24 CENSUS TRACT TAX MAP BLOCK ELEC. DIST. 30014 6067.03

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

97155SP1.DWG

E & WEBER, P.A.

IRS, LANDSCAPE ARCHITECTS
SYLLE OFFICE PARK
886
889-2524 FAX: 301-421-4186

DES. MJT DRN. SJG CHK. MJT DATE

REVISION

BY APP'R.

OWNER:

1 1000 Honeya, LLC.

10711 Columbia Goteway Dr.

1041+e 200

1011-e 20

ELECTION DISTRICT No. 6

COLUMBIA GATEWAY
PARCEL S-24

COVER SHEET

SCALE ZONING G. L. W. FILE No.

AS SHOWN M-1 97155

DATE

AFFILING

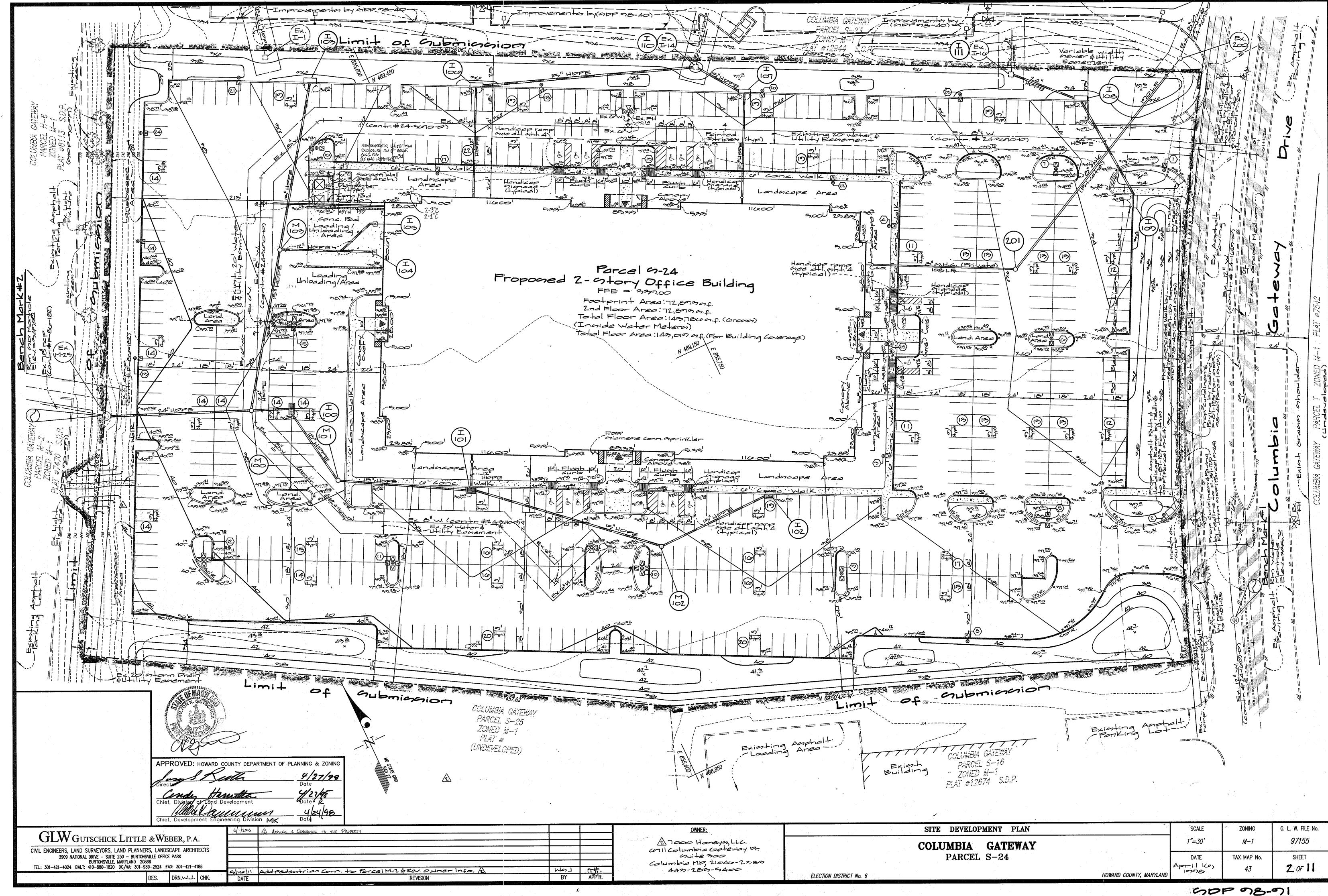
HOWARD COUNTY, MARYLAND

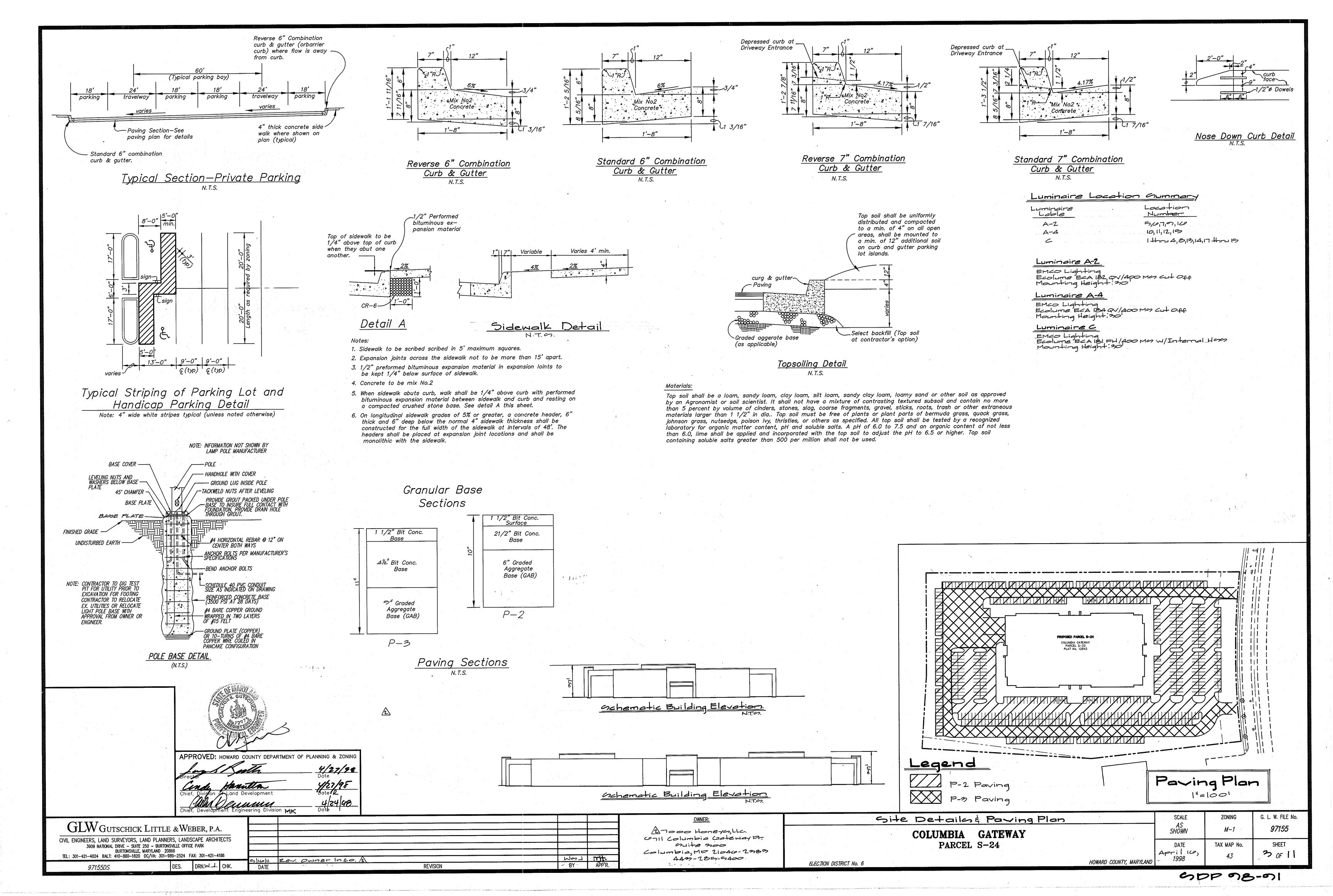
TAX MAP No.

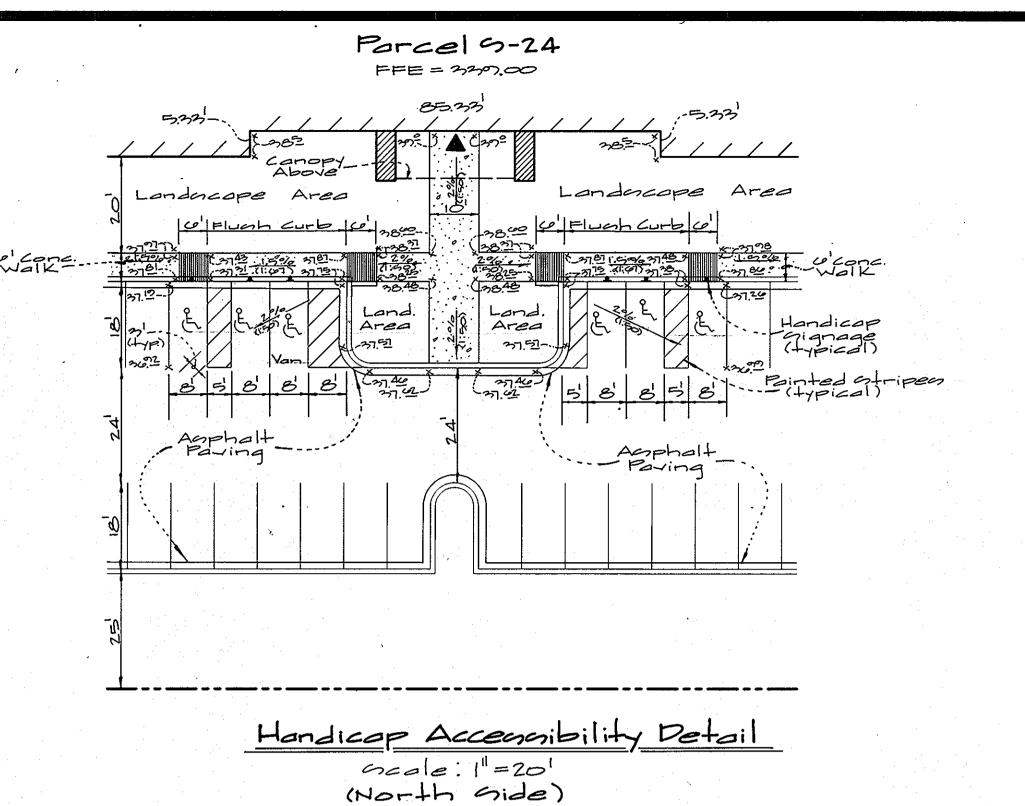
FOF III

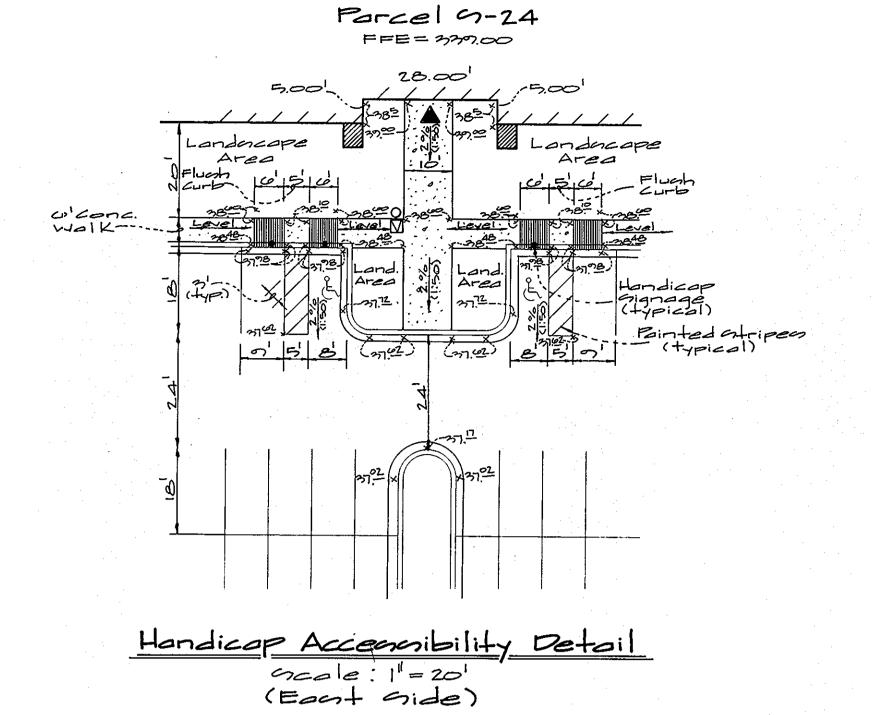
VICINITY MAP

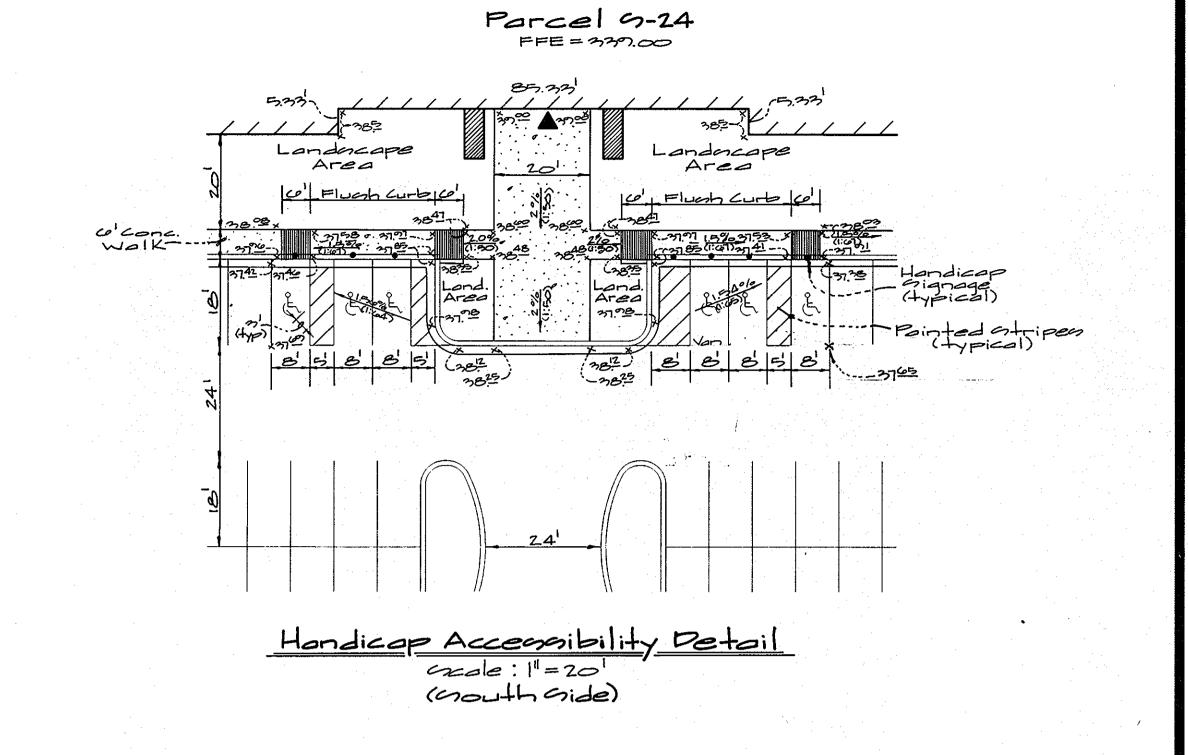
1*=2000'

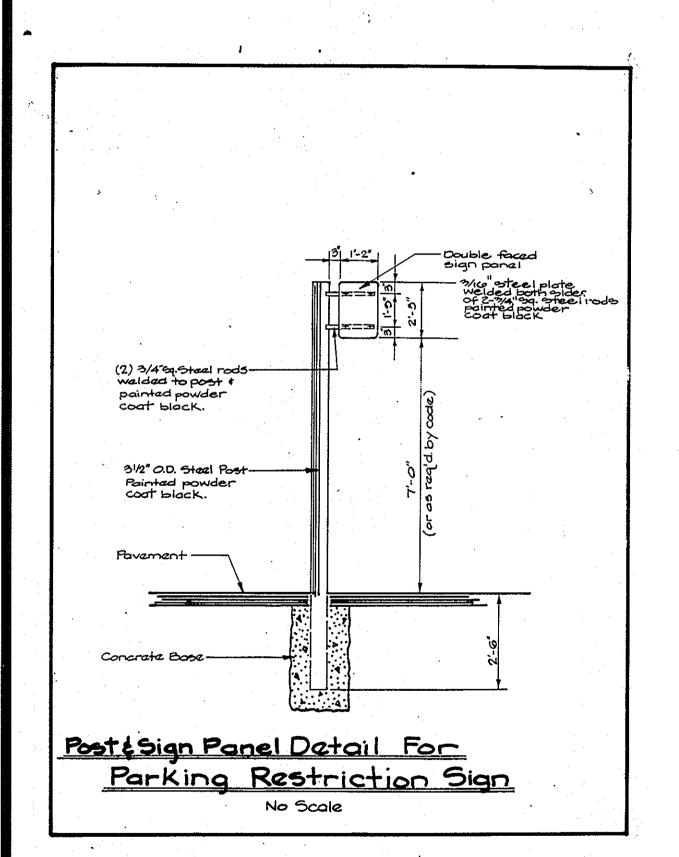


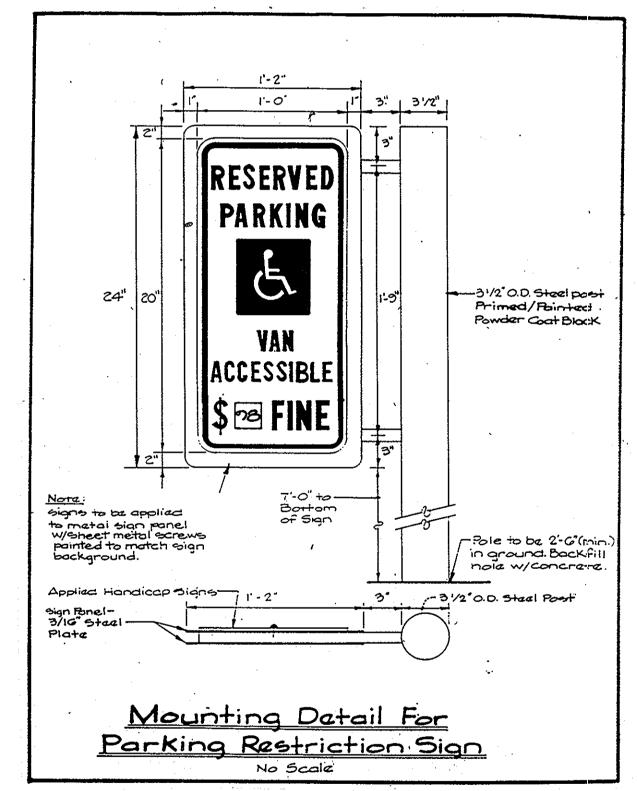




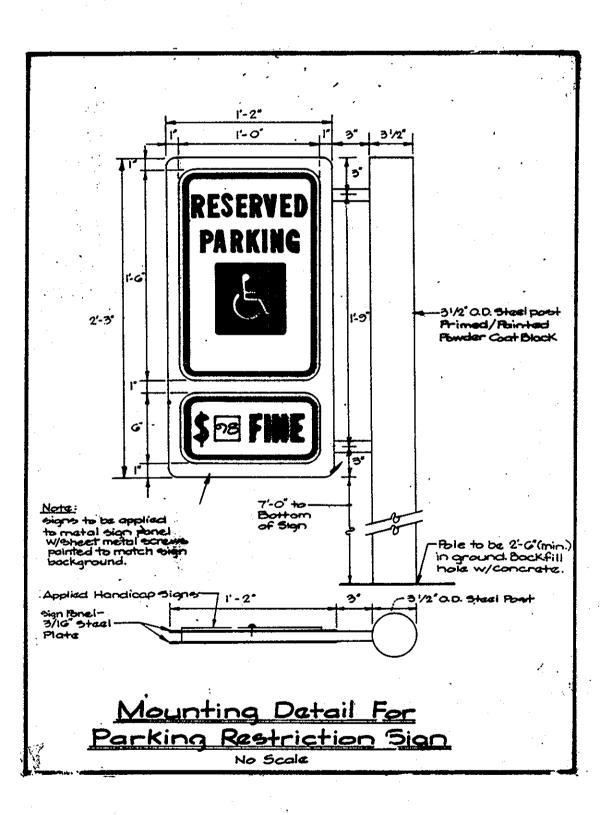




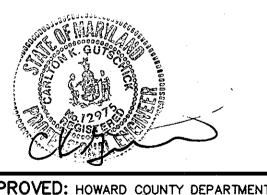












APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Oirect

Date

Chief, Division of Lond Development

Chief, Development Engineering Division MK

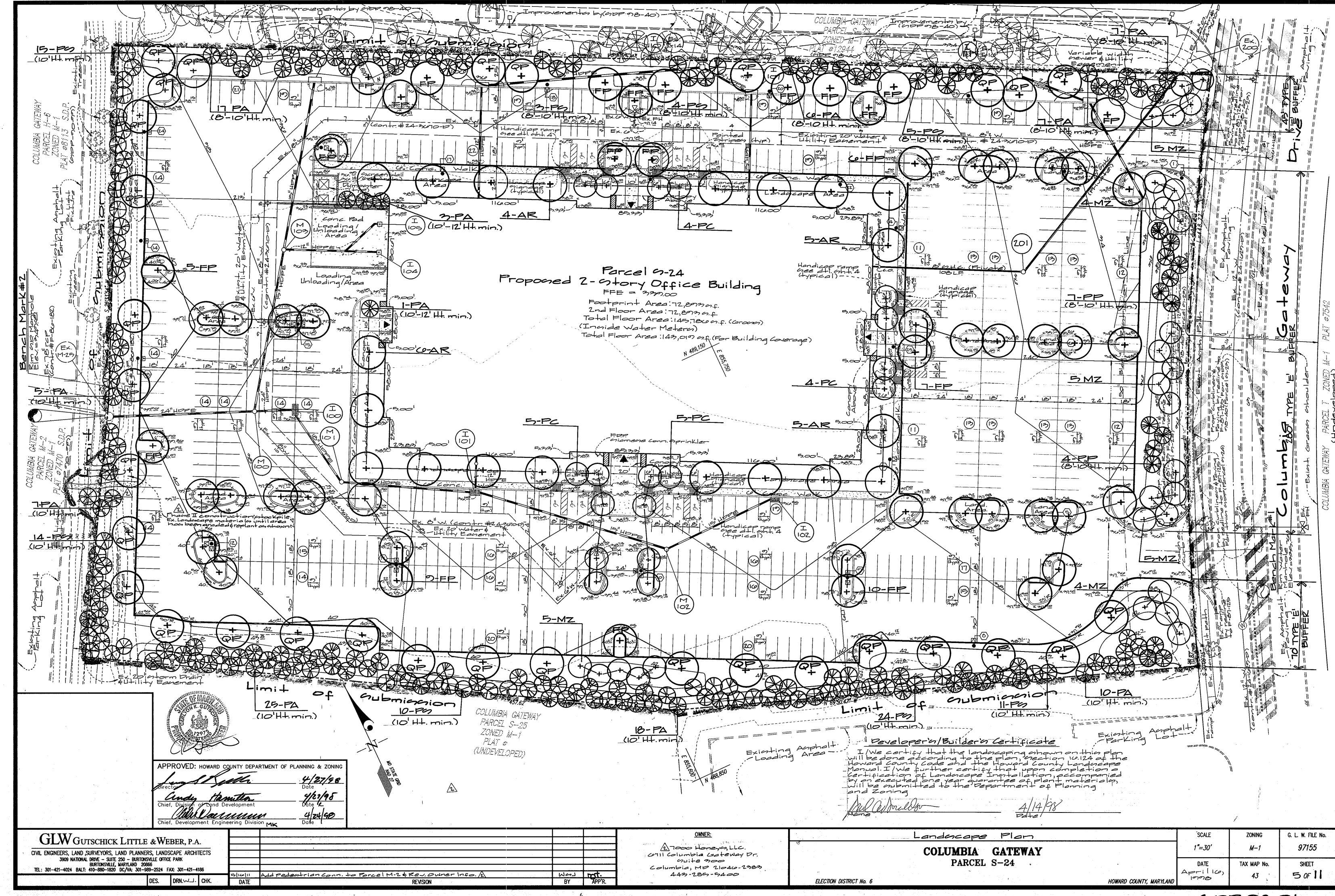
Date

2

- Notes:

 1. Maximum sidewalk crosslope
 15 2% (1:50).
- 2. A 5' x 5' minimum level (2%) landing is required at the top and bottom of all ramps. Ramps are slopes greater than 5%.
- m. Maximum olope in any direction of the handicap accessible parking is 20%.

omer, bevelopment engin	recting bivioloti MK buye					<u> </u>		· · · · · · · · · · · · · · · · · · ·
GLW GUTSCHICK LITTLE & WEBER, P.A.				OWNER:	Handicap Accessibility Details	SCALE	ZONING	G. L. W. FILE No.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS				6711 Columbia Coteway Dr.	COLUMBIA GATEWAY	SHOWN	M-1	97155
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				Columbia, MD 21046-2383	PARCEL S-24	DATE	TAX MAP No.	SHEET
DES. DRN. M. CHK.	DATE DATE	REVISION	RY APP'R	447-285-5400	ELECTION DISTRICT No. 6	HOWARD COUNTY, MARYLAND 1998	43	4 OF 11
		TICHOION	DI AFR		ELECTION DIGITION NO. 0	TIOTHER GOOTTI, INVESTIGATION		



PLANT MATERIALS AND PLANTING METHODS

1. Plant Materials

The landscape contractor shall furnish and install and/or dig, ball, burlap and transplant all of the plant materials called for on drawings and/or listed in the Plant Schedule.

1. Plant Names

Plant names used in the Plant Schedule shall conform with "Standardized Plant Names," latest edition.

2. Plant Standards

All plant material shall be equal to or better than the requirements of the "USA Standard for Nursery Stock" latest edition, as published by the American Association of Nurserymen (hereafter referred to as AAN Standards). All plants shall be typical of their species and variety, shall have a normal habit of growth and shall be first quality, sound, vigorous, well-branched and with healthy, well-furnished root systems. They shall be free of disease, insect pests and mechanical injuries.

All plants shall be nursery grown and shall have been grown under the same climate conditions as the location of this project for at least two years before planting. Neither heeled-in plants nor plants from cold storage will be accepted.

Plant Measurements

All plants shall conform to the measurements specified in the Plant Schedule as approved by

- a. Caliper measurements shall be taken six inches (6") above grade for trees under four-inch (4") caliper and twelve (12") above grade for trees four inches (4") in caliper and over.
- b. Minimum branching height for all trees shall be six feet (6'), maximum eight feet (8').
- c. Minimum size for planting shade trees shall be 3-3 1/2" caliper, 14'-16' in height.
- d. Minimum size for planting minor or intermediate focus trees (pines, crabapples, etc.) shall be 3"-3 1/2" caliper, 10'-12' in height.
- e. Minimum size for planting shrubs shall be 18" 24" spread unless noted otherwise.
- f. Caliper, height, spread and size of ball shall be generally as follows:

CALIPER HEIGHT SPREAD SIZE OF BALL

3" - 3 1/2" 14'-16' 6'-8' 32" diameter 3 1/2"- 4" 14'-16' 8'-10' 36" diameter 4" - 4 1/4" 16'-18' 8'-10' 40" diameter 4 1/2"- 5" 16'-17' 10'-12' 44" diameter 5" - 5 1/2" 16'-20' 10'-12' 48" diameter 5 1/2"- 6" 18'-20' 12'-14' 52" diameter

All plant material shall generally average the median for the size ranges indicated above as indicated in the "AAN

4. Plant Identification

Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bundles or boxes of other plant material giving the botanical and common names, size and quantity of each. Each shipment of plants shall bear certificates of inspection as required by Federal, State and County authorities.

Plant Inspection

The ARC may, upon request by the builder or developer, at least ten (10) days prior to the installation of any proposed plant material, inspect all proposed plant material at the source

B. Planting Methods

All proposed plant materials that meet the specifications in Section A are to be planted in accordance with the following methods during the proper planting seasons as described in the following:

1. Planting Seasons

The planting of deciduous trees, shrubs and vines shall be from March 1st to June 15th and from September 15th to December 15th. Planting of deciduous material may be continued during the winter months providing there is no frost in the ground and frost-free topsoil planting mixtures are used.

The planting of evergreen material shall be from March 15th to June 15th and from August 15th to December 1st. No planting shall be done when ground is frozen or excessively moist. No frozen or wet topsoil shall be used at any time.

2. Digging

All plant material shall be dug, balled and buriapped (B+B) in accordance with the "AAN Standards".

3. Excavation of Plant Pits

The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following

- a. Locations of all proposed plant material shall be staked and approved in the field by the landscape architect before any of the proposed plant material is installed by the landscape contractor.
- b. All pits shall be generally circular in outline, vertical sides; depth shall not be less than 6" deeper than the root ball, diameter shall not be less than two times the diameter of the root ball as set forth in the following schedule.
- c. If areas are designated as shrub beds or hedge trenches, they shall be excavated to at least 18" depth minimum. Areas designated for ground covers and vines shall be excavated to at least 12" in depth minimum.
- d. Diameter and depth of tree pits shall generally be as follows:

INT SIZE	ROOT BALL	DIAMETER	DEPTH
3 1/2" cal.	32"	<i>64</i> "	28"
/2"- 4" cal.	36"	72"	32"
- 4 1/2" cal.	40"	80*	36"
/2"- 5" cal.	44"	88*	40"
- 5 1/2" cal.	<i>48</i> "	96"	44*
/2"- 6" cal.	52"	104"	48"

A 20% compaction figure of the soil to be removed is topsoil. The tabulated pit sizes are for purposes of uniform calculation and shall not override the specified depths below the bottoms of the root balls.

4. Staking, Guying and Wrapping

All plant material shall be staked or guyed, and wrapped in accordance with the following specifications:

- a. Stakes: Shall be sound wood 2" x 2" rough sawn oak or similar durable woods, or lengths, minimum 7'-0" for major trees and 5'-0" minimum for minor trees.
- b. Wire and Cable: Wire shall be #10 ga. galvanized or bethanized annealed steel wire. For trees over 3" caliper, provide 5/16" turn buckles, eye and eye with 4" takeup. For trees over 5" caliper, provide 3/16", 7 strand cable cadmium plated steel, with galvanized "eye" thimbles of wire and hose on trees up to 3" in
- c. Hose: Shall be new, 2 ply reinforced rubber hose, minimum 1/2 I.D. "Plastic Lock Ties" or "Paul's Trees Braces" may be used in place of wire and hose on trees up to 3 in caliper.
- d. All trees under 3" in caliper are to be planted and staked in accordance with the attached "Typical Tree Staking Detail". All trees over 3" in caliper are to be planted and guyed in accordance with the attached "Typical Tree Guying

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5. Plant Pruning, Edging and Mulching

- pruned in an appropriate manner to its particular requirements, in accordance with accepted standard practice. Broken or bruised branches shall be removed with clean cuts flush with the adjacent trunk or branches. All cuts over 1" in diameter shall be painted with an approved antiseptic tree wound
- b. All trenches and shrub beds shall be edged and cultivated to the lines shown on the drawing. The areas around isolated plants shall be edged and cultivated to the full diameter of the pit. Sod which has been removed and stacked shall be used to trim the edges of all excavated areas to the neat lines of the plant pit saucers, the edges of shrub areas, hedge trenches and vine
- c. After cultivation, all plant materials shall be mulched with a 2* layer of fine, shredded pine bark, peat moss, or another approved material over the entire area of the bed or saucer.

6. Plant Inspection and Acceptance

The ARC shall be responsible for inspecting all planting projects on a periodic basis to assure that all work is proceeding in accordance with the approved plans and specifications.

7. Plant Guarantee

All plant material shall be guaranteed for the duration of one full growing season, after final inspection and acceptance of the work in the planting project. Plants shall be alive and in satisfactory growing condition at the end of the guarantee period.

- a. For this purpose, the "growing season" shall be that period between the end of the "Spring" planting season, and the commencement of the "Fall" planting
- b. Guarantee for planting performed after the specified end of the "Spring" planting season, shall be extended through the end of the next following "Spring" planting season.

All sodding shall be in accordance to the "Landscape Specification Guidelines for Baltimore-Washington metropolitan Areas latest edition, approved by the Landscape Contractors Association of Metropolitan Washington and the American Society of Landscape

All sod shall be strongly rooted sod, not less than two years old and free of weeds and undesirable native grasses. Provide only sod capable of growth development when planted and in strips not more than 18" wide x 4" long. Provide sod composed principally of improved strain Kentucky bluegrass, such as, Columbia, Victa, or

> The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in goof growing condition, and where necessary, replaced with new material to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

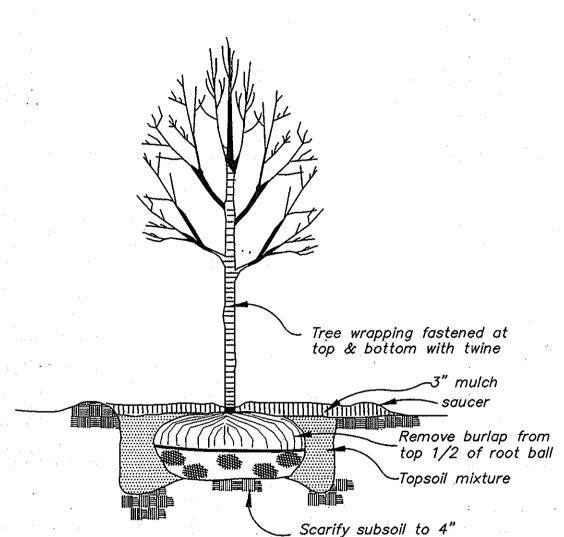




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a. Each tree, shrub or vine shall be

Evergreen Planting Detail N.T.S.



Typical Deciduous Tree Planting N. T. S.

LANDSCAPING NOTES

1. This plan has been prepared in accordance with Section 16.124 of the Howard County Code and Chapter VI (Alternative Compliance) of the Howard County Landscape Manual.

-Must have central main leader.

Hose over wire

Stakes (2 required)

Remove covering from

-First lateral root flush

with finished grade

Wire guy

top of ball

3" mulch

— 3" soil well

Topsoil Mixture

—Finished grade

- 2. Contractor shall notify all utilities at least (5) five days before starting work. All General Notes, especially those regarding utilities, on Sheet 1 shall apply.
- 3. Field verify underground utility locations and existing conditions before staring planting work. Contact owner or his representative if any relocations are required.
- 4. Plant quantities shown on Plant List are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall take precedence.
- 5. All plant material shall be full, heavy, well formed, and symmetrical, and conform to the A.A.N. Specifications, and be installed in accordance with project specifications.
- 6. No substitution shall be made without written consent of the owner or his representative.
- 7. All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be seeded or sodded in accordance with project specifications.
- 8. The contractor shall notify the owner in writing if he/she encounters soil drainage conditions which may be detrimental to the growth of the plants.
- 9. All exposed earth within limits of planting beds shall be mulched with shredded hardwood mulch per Planting 10. "Schedule A - Perimeter Landscape Edge" and "Schedule B - Parking Lot Internal Landscaping" is provided for landscape surety calculation purposes only. The required surety is:
- 39 required shade tree (or equivalent) x 100 = \$3,900 "Financial surety for the required landscaping has been posted as part of the DPW Developer's Agreement

in the amount of \$3,900.00.

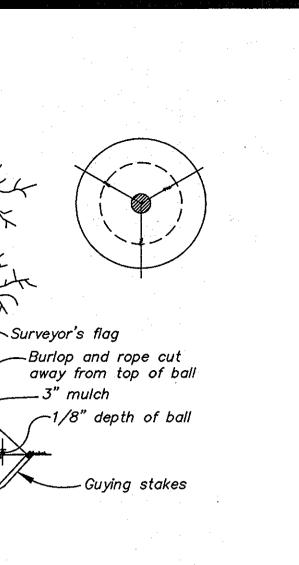
ELECTION DISTRICT No. 6

11. Tabulation for landscape shown:

10.7% ac of R&D use at 24 trees/ac = 225 shade trees (or equivalent) Planting provided: shade trees 46 = 23 E.S.T.ornamental trees: evergreen trees (existing and proposed): 160 = 98 E.S.T.

1 E.S.T. - Equivalent Shade Trees

Required planting by HRD for



Typical Tree Guying Detail

•

Rubber Hose

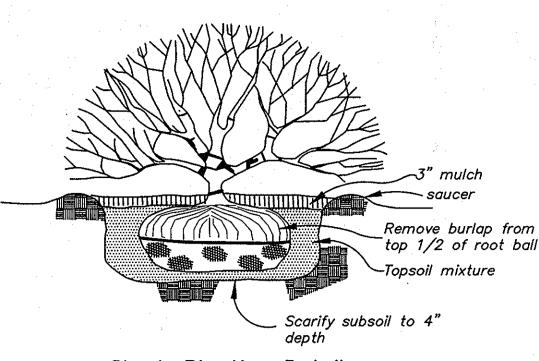
twisted for support

Topsoil Mixture~

2- strands of

galvanised, wire

2"-3" saucer-



Shrub Planting Detail

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	E	N/A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	400 LF	N/A
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	N/A
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED	YES, BERM (AT LEAST 3' HIGH) ALONG ROADWAY	N/A
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	Ø 1/40 = 10 NONE NONE (BERM CREDIT)	N/A
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBTITUTION CREDITS BELOW IS NEEDED)	PER ALTERNATIVE COMPLIANCE HRD'S STANDARD	N/A

LANDSCAPE SURETY FOR SCHEDULE A REQUIRED PLANTINGS: 10 X 100 = \$1,000.00

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

PARKING COT INTERNAL EARDSCAPING					
NUMBER OF PARKING SPACES	567				
NUMBER OF PARKING SPACES	6 1/20 = 29				
NUMBER OF PARKING SPACES SHADE TREES OTHER SHADE TREES (2:1 SUBTITUTION)	PER ALTERNATIVE COMPLIANCE HRD'S STANDARDS	. *			

LANDSCAPE SURETY FOR SCHEDULE B REQUIRED PLANTINGS: 29 X 100 = \$2,900.00 see note #10 for total swely

PLANT LIST

SYMBOL "	QTY.	NAME BOTANICAL/COMMON	SIZE	REMARKS
SHADE TR	EES			
AR	20	Acer rubrum "Armstrong"/ Armstrong Red Maple	2 1/2-3" cal. 12-14' Ht.	<i>B&B</i>
FP	<i>53</i>	Fraxinus pennsylvanica "Summit"/ Summit Ash	2 1/2-3" cal. 12-14' Ht.	<i>B&B</i>
QP	31	Quercus palustris/Pin Oak	2 1/2-3" cal. 12-14' Ht.	<i>B&B</i>
ORNAMEN	TAL TREES			
MZ	18	Malus Zumi/ Crabapple	2 1/2" min. 10–12' Ht.	<i>B&B</i>
PC	28	Prunus cerasifera "Thundercloud"/ Purpleleaf Flowering Plum	2 1/2" min. 10–12' Ht.	<i>B&B</i>
EVERGREE	N TREES			
PA	99	Picea abies/Norway Spruce	2 1/2" min. 8–10' Ht.	8&B (4@ 10-12' Ht.)
PP	. 11	Picea pungens/Green Spruce	2 1/2" min. 8–10' Ht.	<i>B&B</i> *
PS	86	Pinus strobus/Eastern White Pine	2 1/2" min. 8-10' Ht.	<i>B&B</i> *

*NOTE: 10' HT ON PLAN IN CERTAIN PLACES.

GLW GUTSCHICK 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

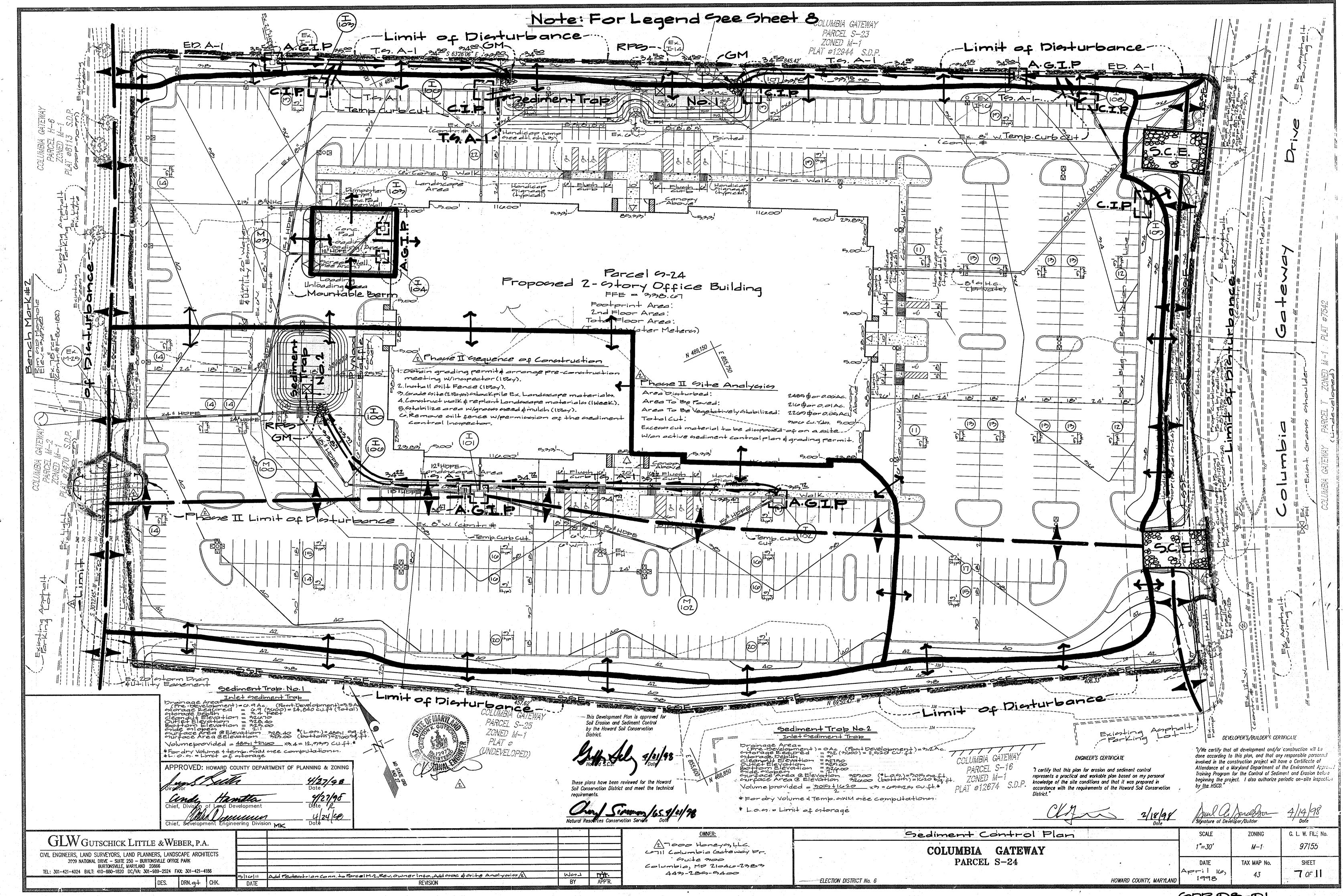
GLW GUTSCHICK LITTLE &WEBER, P.A.						
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TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186						
	DES.	DRN.	снк.			

5/10/11 Rev. Owner Info. A REVISION

2 7000 Honeya, LLC. courte moo 443-285-5400 <u>mi.</u> APP'R.

<u>OWNER:</u> coll Columbia Gateway Dr. Columbia, MD 21040-2383 LANDSCAPE NOTES, DETAILS & SCHEDULES G. L. W. FILE No. SCALE ZONING 97155 M-1COLUMBIA GATEWAY PARCEL S-24 SHEET TAX MAP No. April 100 6 OF 11 HOWARD COUNTY, MARYLAND

SPP 98-91



SEDIMENT CONTROL NOTES

- 1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (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 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: 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 graded areas on the project site.
- 4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1. Chapter 12. of the HOWARD COUNTY DESIGN MANUAL. Storm Drainage.
- 5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, sod, temporary seeding and mulching (Sec. 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 : 9.38 Acres 9.15 Acres Area Disturbed : (0.8%) Acres Area to be roofed or paved Area to be vegetatively stabilized : 2.32 Acres Total Cut : 7,000 Cu. Yds. Total Fill : 7,900 Cu. Yds. Off-site waste/borrow area location: ~ / A

3. 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.
- 11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within one working day, whichever is shorter.

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 October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000 sa.ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sa 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 asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchorina.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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 Ibs per acre 10-10-10 fertilizer (14 lbs/1000 sa 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 Ibs/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.

SEQUENCE OF CONSTRUCTION

- 1. Obtain grading permit and arrange on-site pre-construction meeting with Inspector. (1 day)
- 2. Install stabilized construction entrances. (1 day)
- 3. Install Sediment Trap No. 1 and associated earth dike and temporary swales. Install remainder of perimeter controls.
- 4. Install storm drain from Existing M-25 to Inlet I-100. Construct Sediment Trap No. 2. (2 weeks)
- 5. Grade site. (1 month)
- 6. Install utilities and storm drain. (1 month)
- 7. Construct building. (6 months)
- 8. Install curb and gutter. (1 month)
- 9. Base pave. (2 weeks)
- 10. Install sidewalks and landscaping. (3 weeks)
- 11. Remove sediment controls when areas draining to them have been stabilized and permission is granted by the Sediment Control Inspector (fill traps, remove earth dikes, remove temporary swales, remove silt fence, etc.) Stabilize remaining areas. (1 week)
- 12. Surface pave site.

Inatall atorm drain. Expone no more trench than can be backfilled in one day, at the end of each day provide a watertight HDPE cap on the end of the atorm drain line. Pump any accumulated rain water to a mediment trap.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING 4/27/98 Humm Development Engineering Division ML

STANDARD AND SPECIFICATIONS FOR TOPSOIL DEFINITION

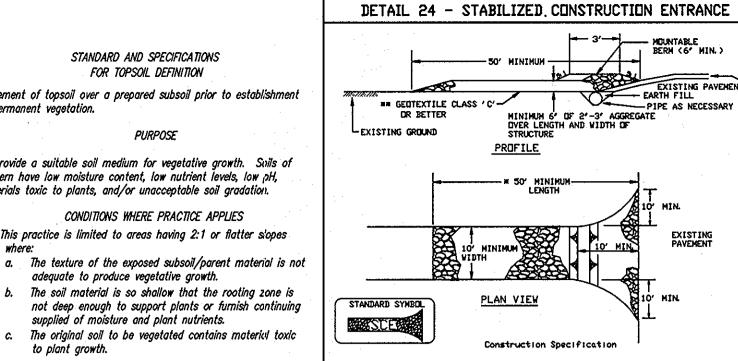
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

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

- CONDITIONS WHERE PRACTICE APPLIES I. This practice is limited to areas having 2:1 or flatter slopes
- adequate to produce vegetative growth. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplied of moisture and plant nutrients. c. The original soil to be vegetated contains material toxic
- to plant arowth. d. The soil 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 stopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- Topsoil salvaged from the existing site may be used provided that it 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 respective soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental
- i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by a agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, aravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
- ii. Topsoil must be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.
- iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate if 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- II. For sites having disturbed areas under 5 acres:
- i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization Section 1 Vegetative Stabilization Methods and Materials.
- III. For sites having disturbed greas over 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 weight. c. Topsoil having soluble salt greater than 500 parts
 - per mill shall not be used. d. No sod or seed shall be placed on soil which has weed control until sufficient time has elapsed (14 days min.) to permit dissipation of photo-toxic
- 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 topsoil (if required) and apply soil amendments as specified in 2.0 Vegetative Stabilization - Section I -
- Vegetative Stabilization Methods and Materials. Topsoil Application i. When topsoilling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment
- Traps and Basins. ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" -8" higher in elevation.
- iii. Topsoil shall be uniformly distributed in a 4'-8' layer and lightly compacted to a minimum thickness of 4." Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoilling or other operations shall be corrected in order to prevent the formation of depressions or water
- iv. Topsoil shall not be placed while the topsoil or subsoil is 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 applied as specified below: 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.
- Composted sludge shall be applied at a rate of 1 ton/1.000 square feet. iv. Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4lb/1,000 square feet,
- and 1/3 the normal lime application rate. References: Guideline Specifications, Soil Preparation and Sodding. MD-VA Pub. #1 , Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.



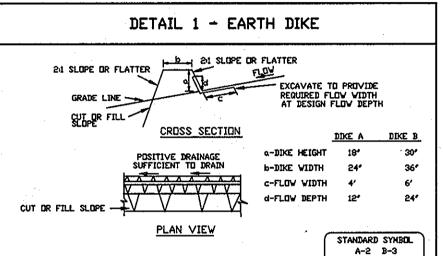
1, Length – minimum of 50' (#30' for single residence lot). 2. Width - 10' minimum, should be flared at the existing road to provide a turning

Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

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 shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable bern with 5:1 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

5. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SUIL CONSERVATION SERVICE F - 17 - 3 VATER MANAGEMENT ADMINISTRATION SUIL CONSERVATION SERVICE



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1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4' - 7' stone or recycled concrete equivalent pressed into

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%. 2. Runoff diverted from a disturbed area shall be conveyed to a sediment

3. Runoff diverted from an undisturbed area shall outlet directly into an

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper

5. The dike shall be excavated or shaped to line, grade and cross section as required to neet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow. 6. Fill shall be compacted by earth moving equipment.

CROSS SECTION

Construction Specifications For ST-III

1. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to 1/2 the designed depth of the trap. Removed sediment shell be deposited in a suitable area and in such a manner that it will not erode.

2. The volume of seatment storage shall be 1800 cubic feet per acre of contributory

3. The structure shall be inspected after each rain and repairs made as needed

Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.

6. All cut slopes shall be 11 or flatter.

U.S. DEPARTMENT OF AGRICULTURE

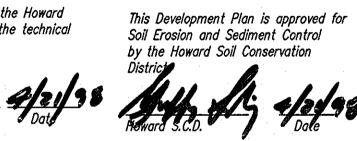
5. The sediment trap shall be removed and the area stabilized when the constructed

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike. 8. Inspection and maintenance must be provided periodically and after

U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE A -- 1 - 6 VATER MANAGEMENT ADMINISTRATION

Soil Conservation District and meet the technical requirements. STURM INLET SEDIMENT TRAP ST-III

MAX. BRAINAGE AREA = 1/4 ACRE



DETAIL 23B - AT GRADE INLET PROTECTION GEOTEXTILE CLASS ! PLAN/CUT AWAY VIEW -3/4" - 11/2" STONE WIRE TIES -6' DVERLAP CROSS SECTION STANDARD SYMBOL MAX. DRAINAGE AREA = 1/4 ACRE AGIP Construction Specifications 1. Lift grate and wrap with Geotextile Class E to completely cover all openings, Place 3/4" to 11/2" stone, 4"-6" thick on the grate to secure the fabric and MARYLAND DEPARTMENT OF ENVIRONMENT VATER MANAGEMENT ADMINISTRATION SUIL CONSERVATION SERVICE

DETAIL 20A - REMOVABLE PUMPING STATION

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Construction Specifications

The outer pipe should be 48' dia. or shall, in any case, be at least 4' greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2' hardwar cloth to prevent backfill material from entering the perforations.

2. After installing the outer pipe, backfill around outer pipe with 2' aggregate or clean gravel.

3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12° and 36° in diameter. The perforations shall be 1/2° X 6° slits on 1° diameter holes 6° on center. The center pipe shall be wrapped with 1/2° hardware cloth first, then wrapped again with Geotextile Class C.

4. The center pipe should extend 12' to 18' above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

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ELEVATION

0 0 0

STANDARD SYMBOL

X RPS

SURFACE ELEV.

HOBK AND CHAIN FOR REMOVAL

CLEAN GRAVEL-

-Perforated (removable) 12' - 36' pipe wrapped w/ 1/

WRAPPED WITH 1/2'

DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS) " MINIMUM LENGTH 2' X 4' WEIR WIRE MESH 2' X 4' VEIR

PROFILE ALONG CENTERLINE

Construction Specifications

. Geotextile Class C shall be installed under all gabion baskets.

3. The stone used to fill the gabian baskets shall be 4' - 7'.

. Gabion inflow protection shall be constructed of 9' x 3' x 9' gabion

baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes,

4. Gabions shall be installed in accordance with manufacturers recommendations.

5. Gabion Inflow Protection shall be used where concentrated flow is present

DETAIL 6 - GABION · INFLOW PROTECTION

TANDARD SYMBOL GM

*Provide 1' Freeboard

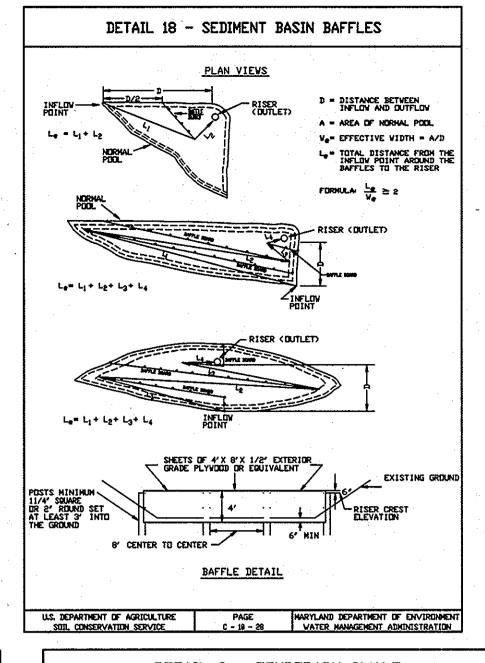
Construction Specifications 1. Attach a continuous piece of wire mesh (30' minimum width by throat length plus 4') to the 2' x 4' welr (measuring throat length plus 2') as shown on the standard 2. Place a continuous piece of Geotextile Class E the same dimensions as the wire 3. Securely nall the 2' X 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 of $2' \times 4'$ to the top of the weir at spacer locations). These $2' \times 4'$ anchors shall extend across the inlet top and be held in place by sandbags or alternate weight. 5. The assembly shall be placed so that the end spacers are a minimum 1' beyond 6. Form the 1/2 $^{\prime}$ x 1/2 $^{\prime}$ wire mesh and the geotextile fabric to the concrete gutter ar against the face of the curb on both sides of the inlet. Place clean 3/4 $^{\prime}$ x 1 1/2 $^{\prime}$

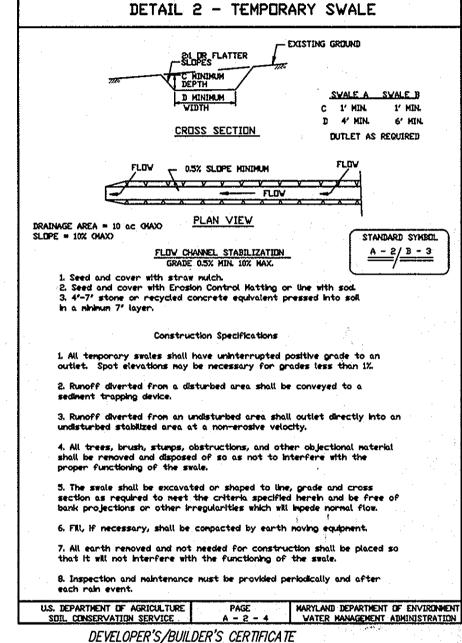
stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile. 7. This type of protection must be inspected frequently and the fliter cloth 8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet

These plans have been reviewed for the Howard

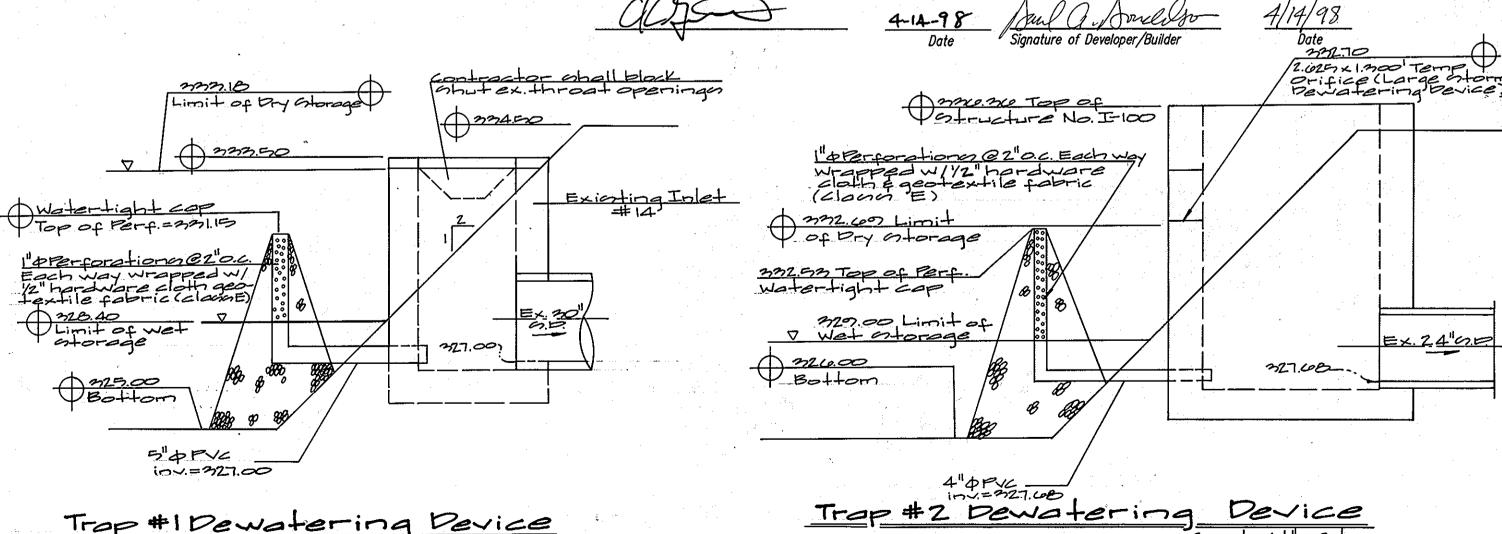
ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation





"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 Attendance at a Maryland 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

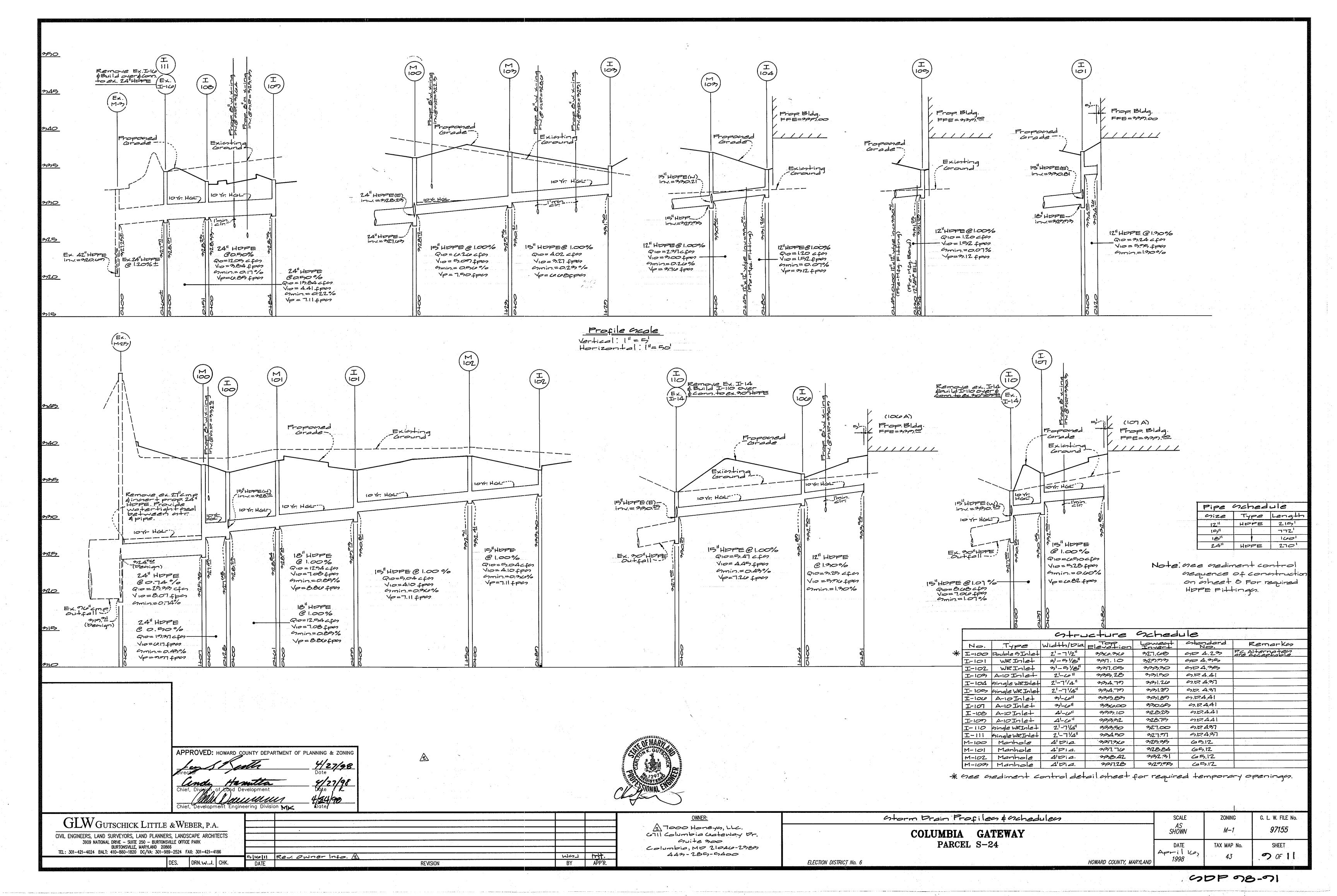


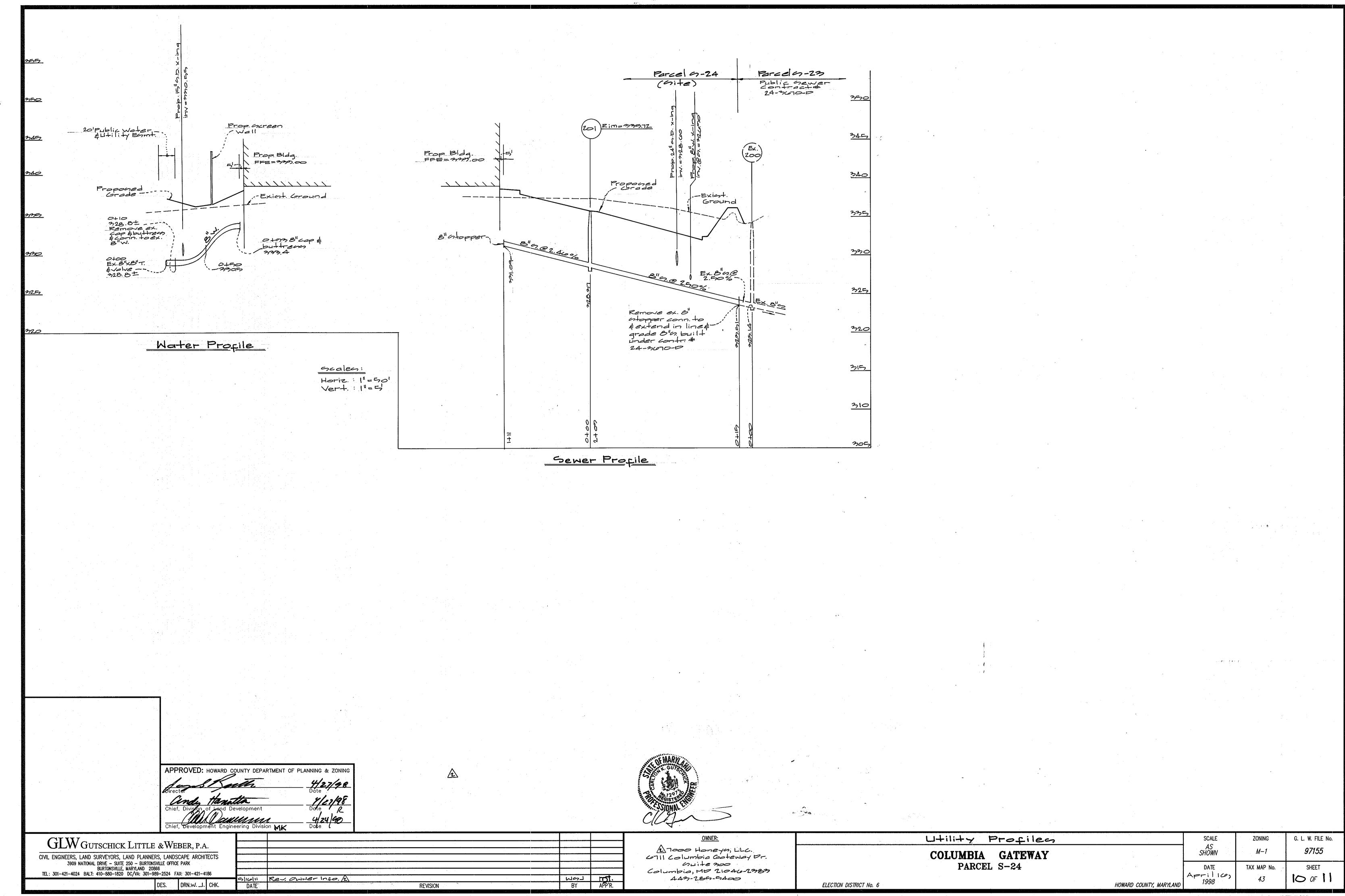
SEDIMENT CONTROL DETAILS AND NOTES PREPARED FOR: G. L. W. FILE No. GUTSCHICK LITTLE & WEBER, P.A. AO 27000 Honeyo, LLC. 97155 COLUMBIA GATEWAY ahown 6711 Columbia Gateway Dr. CIVIL ENGINEERS. SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS onlite 300 PARCEL S-24 SHEET DATE TAX MAP No. Columbia, MD 21046-2383 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MARYLAND 20866 April 100 442-285-5400 8 OF 11 5/16/11 Rev. Owner Info. Was I hat TEL: (301) 421-4024 NO. VA.: (301) 989-2524 BALT: (410) 880-1820 FAX: (301) 421-4186 DES. HOWARD COUNTY, MARYLAND ELECTION DISTRICT No. 6 DATE REVISION ₿Y APP'R.

STANDARD DRAVING

ST-III

SDP 98-9





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