

GENERAL NOTES

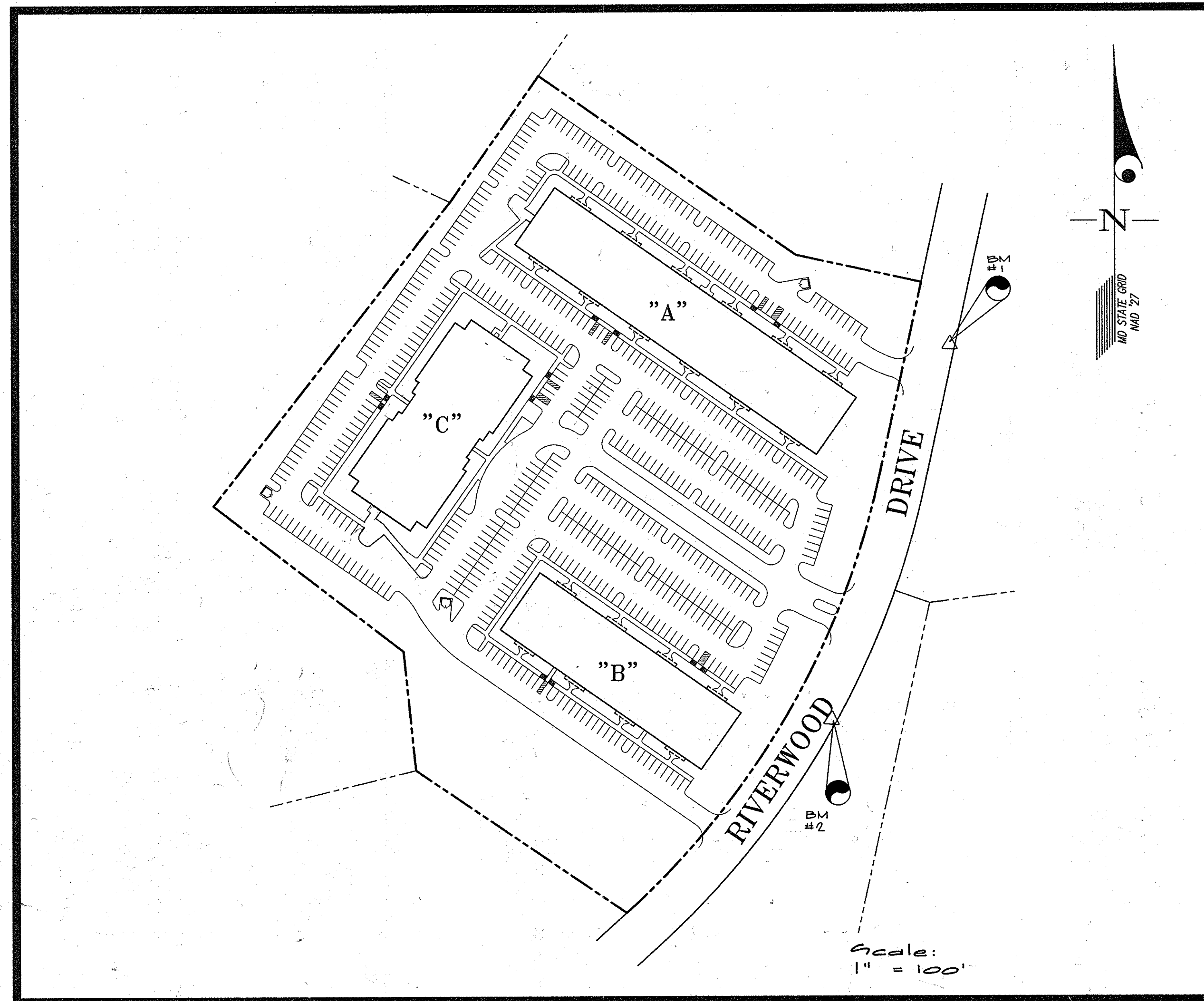
- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standard and specifications if applicable.
- The contractor shall notify the Department of Public Works at (410) 313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- 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.
- Area of Parcel: 12.6843 Ac. Disturbed Area: 11.72 Ac.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- All plan dimensions are to face of curb unless otherwise noted.
- Existing topography was determined by approved final construction plans for development.
- Boundary information and coordinate data for this site are based on the MD State Plane System (NAD83) as projected on the recorded plat for this subdivision.
- Water and sewer shown is public.
- All existing water and sewer is shown per Contract No. 34-1146-D & 24-1025-D.
- Stormwater management quantity and quality control is being provided onsite.
- All existing public storm drain is per F-84-02 & F-82-28.
- All curb radii is 5' unless noted otherwise.
- Utility information taken from approved final construction plans for development.
- Sidewalks adjacent to perpendicular parking shall be 6' wide. All other sidewalks shall be 5' wide, except where dimensioned otherwise. Provide 3' radius rounding at all angle breaks and intersections.
- Contractor shall utilize PVC pipe for all sewer house connections. Contractor shall utilize D.I.P. (Cl. 51) for 4" and 6" water house connections and D.I.P. (Cl. 50) for 8" water house connections.
- For all storm drain connections at existing stubs, the contractor shall remove the existing blocking and maintain the same grade and alignment.
- Use trench bedding class "C" for storm drains.
- Paved areas indicated are private except as noted.
- Project background: See Dept. of Planning & Zoning File Numbers: F-84-02, F-82-28, W/S Contr. No's. 24-146-D & 24-1025-D.
- Recording reference: Plat No. 6020.
- All proposed ramps shall be in accordance with current A.D.A. standards. Minimum 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.
- All water meters shall be located inside buildings.
- The proposed water and sewer house connection alignments indicated on the plans, from the existing utilities to the building, are to be constructed by the building plumber and are approximate. The proposed stubs are located 5' from the building face.
- The proposed roof drain alignment connections indicated on the plans, from the stubs to the building, are to be constructed by the building plumber and are approximate. The proposed stubs are located 5' from the building face.
- Maintain 2% cross-slopes on sidewalks, per standard details. Where sidewalk is adjacent to building, slope away from building, and utilize expansion joint material and sealer in the joint between the sidewalk and the building wall.
- Sufficient sight distance per the Howard County Design Manual must be provided at all access points. Any landscaping that obstructs the line of sight must be relocated.
- A traffic study and A.P.F.O. analysis, which included this Parcel, were performed as part of this site development plan.
- There is no floodplain on this site.
- There are no wetlands on this site.
- This site is exempt from the Forest Conservation Act in accordance with Section 16.1202(b)(1)(v).
- All exterior lighting shall comply with Zoning Regulations, Section 194.
- On Sept. 22, 1999, WP 00-19 was approved per Ho. Co. Subdivision & Land Development Regulations, Sect. 16.1101(a)(1) to permit grading with stream buffer, & is subject to the following:
 - Proposed grading can only occur above the point where "swale becomes natural" above the 340' contour.
 - Grading will be limited to the extent indicated on WP exhibit.
 - Grading in this area cannot occur until SDP 00-28 receives signature approval.

SITE DEVELOPMENT PLAN

RIVERS CORPORATE PARK

SECTION 1 AREA 2

PARCEL 'D'



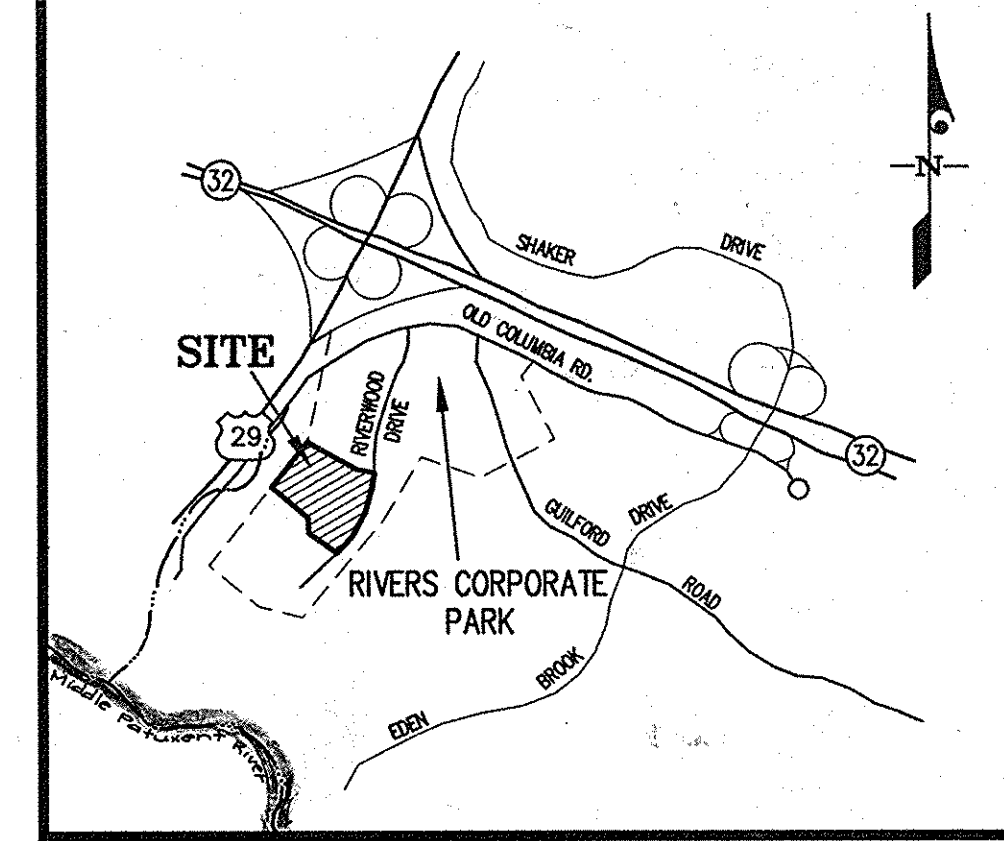
KEY MAP

SCALE: 1" = 100'

SHEET INDEX

- | | |
|--------------------------------|--|
| 1. Cover Sheet | 7. Sediment Control Details |
| 2. Site Development Plan | 10. Storm Drain Profiles & Schedules |
| 3. Site Details/Paving Plan | 11. Storm Drain Profiles & Schedules |
| 4. Handicap Accessibility Plan | 12. Stormwater Management Profiles/Details |
| 5. Landscape & Lighting Plan | 13. Stormwater Management Profiles/Details |
| 6. Landscape Notes & details | 14. WHC and SHC Profiles |
| 7. Drainage Area Map | 15. Utility Plan |
| 8. Sediment Control Plan | 16. Pond Specifications |

See F-14-059 for Parcel line adjustments and see SDP 00-28-042 for the latest site improvements at the southern corner of the site.



VICINITY MAP
1" = 2000'

BENCHMARK

BM#1 GLV Trav. Sta. 700	N 488748.49	Elev. 977.99	Desc: PK nail in top of curb.
BM#2 GLV Trav. Sta. 707	N 488759.09	Elev. 978.91	Desc: PK nail in top of curb.

SITE ANALYSIS

- Area of site: 552,528 sq. ft. or 12.6843 ac.
 - Disturbed Area: 11.72 ac.
 - Present Zoning: New Town (Employment)
FDP 184-A-III
 - Proposed Use: Research and Development/Office
 - Floor space: Building A 47,640 s.f.
Building B 29,520 s.f.
Building C 64,254 s.f. (2 story @ 32,127 s.f. each)
Total Floor Space: 134,414 s.f.
 - Total number of Parking Spaces required: 269*
 - Total number of Handicap Spaces required: 13
 - Minimum number of Van accessible: 2
 - Total number of Parking Spaces provided: 624
(provides parking ratio of 4.64 sp./1000 s.f.)
 - Total number of Handicap Spaces provided: 16
 - Total number of Van accessible provided: 5
 - Building coverage: 102,287 s.f.
 - Floor/Area ratio (F.A.R.): 134,414/552,528 = 0.24
 - Impervious area = 21%
- * - Based on General Office use @ 2. spaces/1000 s.f.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: Sept. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

John J. Cavigli 11/15/99
Director Date

Charles K. Hamilton 11/19/99
Chief, Division of Land Development Date

William J. ... 11/22/99
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
BURTNSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	REVISION	BY	APP'R.
11-24-99	add reference note		
11-20-99	revise site analysis sheet due to revision of Building 'A' footprint		
11-4-99	As submitted for signature		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21284
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

SITE DEVELOPMENT PLAN
RIVERS CORPORATE PARK
SECTION 1 AREA 2 ~ PARCEL 'D'
PLAT No. 6020

ADDRESS CHART	
PARCEL TO BLDG	STREET ADDRESS
"A"	7150 RIVERWOOD DRIVE
"B"	7170 RIVERWOOD DRIVE
"C"	7180 RIVERWOOD DRIVE

WATER CODE: E-10	SEWER CODE: 6440000	SUBDIVISION NAME: RIVERS CORPORATE PARK	SECTION/AREA: 1/2	PARCEL: 'D'
PLAT 6020	ZONE NEW TOWN	TAX MAP 41	BLOCK 12	ELEC. DIST. 6
SCALE AS SHOWN				ZONING NT
DATE Oct. 18, 1999				G. L. W. FILE No. 99030
HOWARD COUNTY, MARYLAND				SHEET 1 OF 16

SDP 00-28

Stormwater Management Facility Maintenance Schedule

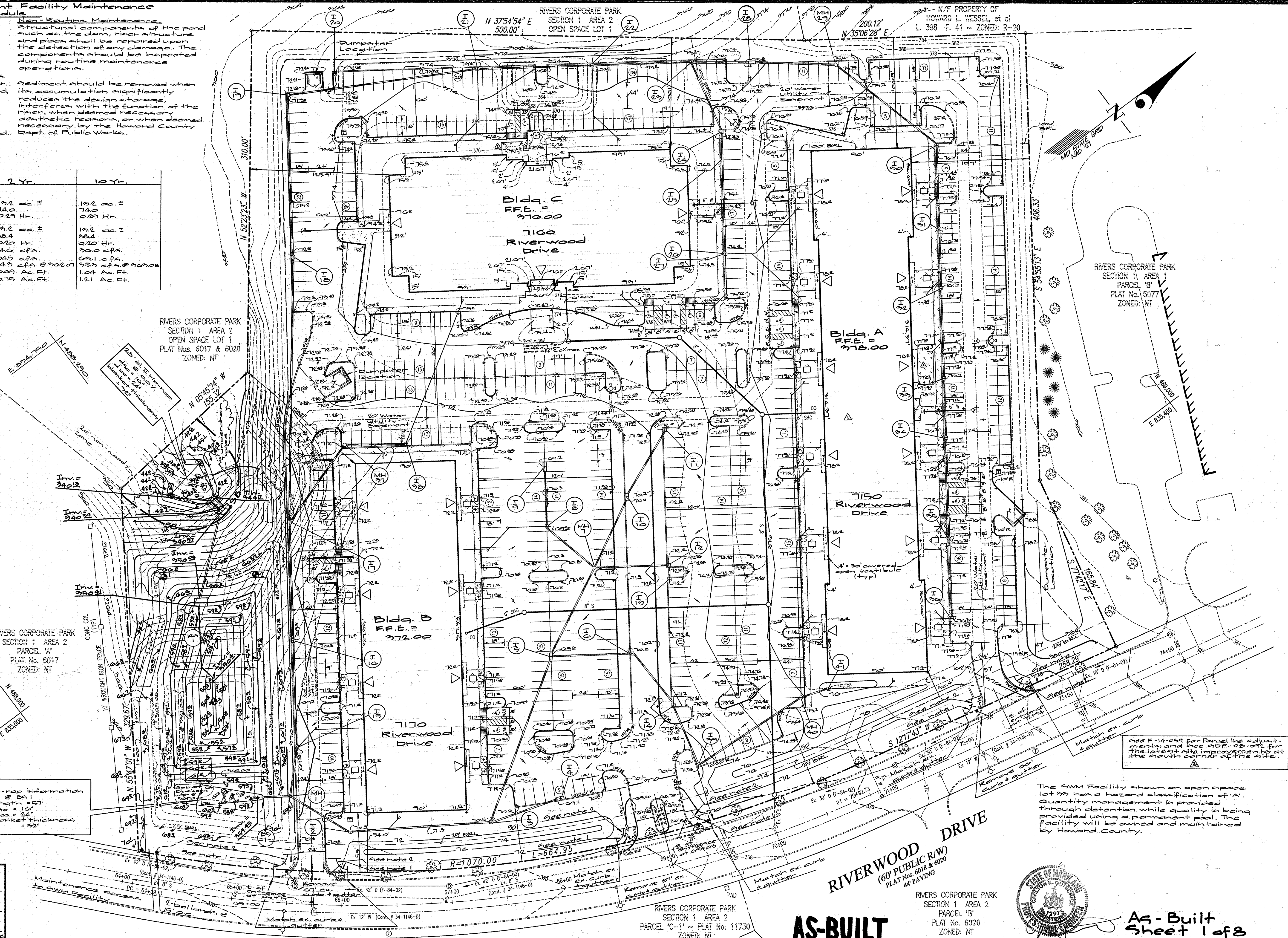
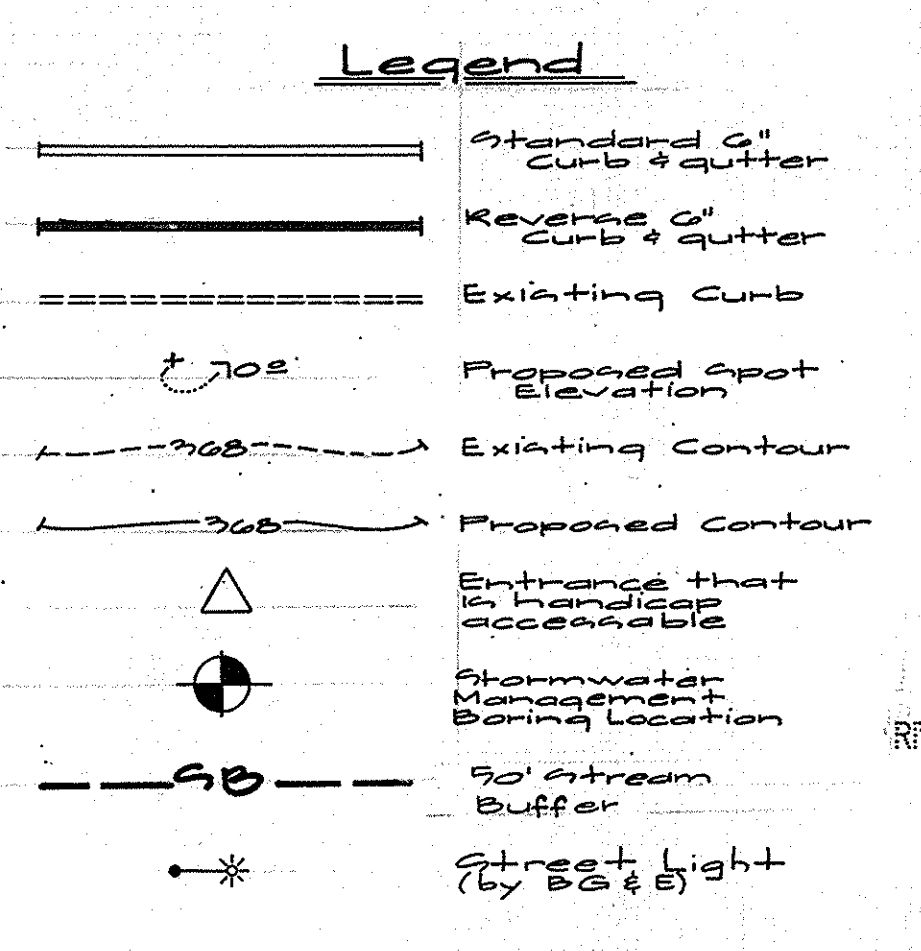
Routine Maintenance
 Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
 Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year. Once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
 Debris and litter next to the outlet structure shall be removed during regular mowing operations, and as needed.
 Visible signs of erosion in the pond as well as rip-rap outlet area shall be required as soon as it is noticed.

Non-Routine Maintenance
 Structural components of the pond such as the dam, riser structure and pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.
 Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary aesthetic reasons, or when deemed necessary by the Howard County Dept. of Public Works.

S.W.M. Facility Summary	2 Yr.	10 Yr.
Before Development		
Drainage Area	13.2 ac. ±	13.2 ac. ±
Curve Number	74.0	74.0
Time of Concentration	0.29 Hr.	0.29 Hr.
After Development		
Drainage Area	13.2 ac. ±	13.2 ac. ±
Curve Number	88.4	88.4
Time of Concentration	0.20 Hr.	0.20 Hr.
Before Development		
After Development (no management)	14.6 cfs.	30.0 cfs.
After Development (management)	74.5 cfs.	69.1 cfs.
Storage Required (TR-55)	14.9 ac. ft. @ 20.0'	25.9 ac. ft. @ 20.0'
Storage Provided (TR-20)	0.69 Ac. Ft.	1.04 Ac. Ft.
Storage Provided (TR-20)	0.75 Ac. Ft.	1.21 Ac. Ft.

Street Light Chart			
Street Name	Sta.	Fixt. Type	Comment
Riverwood Drive	65+45	28'L	250-watt HPS vapor pendant fixture (white) mounted at 20' on a bronze fiberglass pole using a 12' arm
"	69+35	28'L	"
"	72+19	28'L	"

- Notes**
- Contractor is to use stand./Rev. 1" curb & gutter in this area.
 - Contractor is to transition from 1" curb & gutter within R/W to 6" curb & gutter on site in this area.
 - For handicap parking/access see sheet.



APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE SEPT 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: Frank J. Levey Date: 11/15/99
 Chief, Division of Land Development: Cynthia Hamilton Date: 11/19/99
 Chief, Development Engineering Division: William Vanaman Date: 11/22/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK
 BURTONTVILLE, MARYLAND 20886
 TEL: 301-421-4024 FAX: 410-880-1820 DC/WA: 301-989-2524 FAX: 301-421-4186

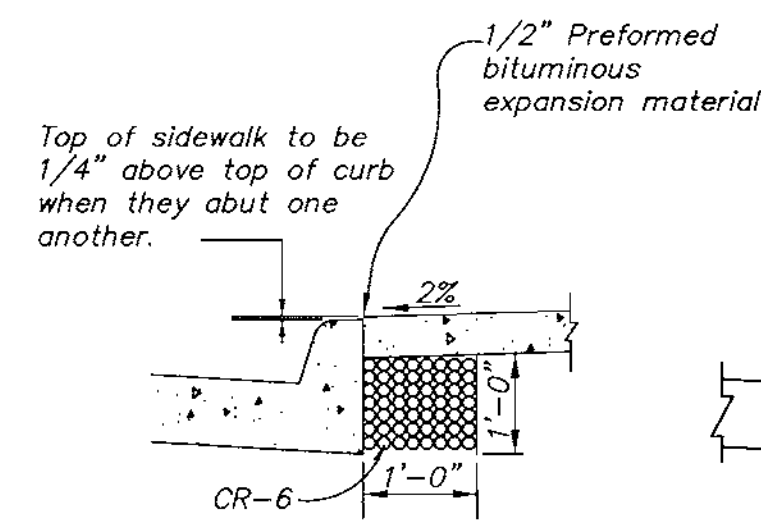
DATE	REVISION	BY	APPR.
11-1-2014	add reference note		SH
03-22-2014	add station front of Bldg. A & B		MR
11-22-2013	Rev. Building A footprint		
11-22-2013	As-Submitted Footprint		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
 100 WEST PENNSYLVANIA AVENUE
 TOWSON, MD. 21284
 PH: 410-825-0545
 ATTN: MR. CHUCK McMAHON

AS-BUILT
 SITE DEVELOPMENT PLAN
RIVERS CORPORATE PARK
 SECTION 1 AREA 2 ~ PARCEL 'D'
 PLAT No. 6020

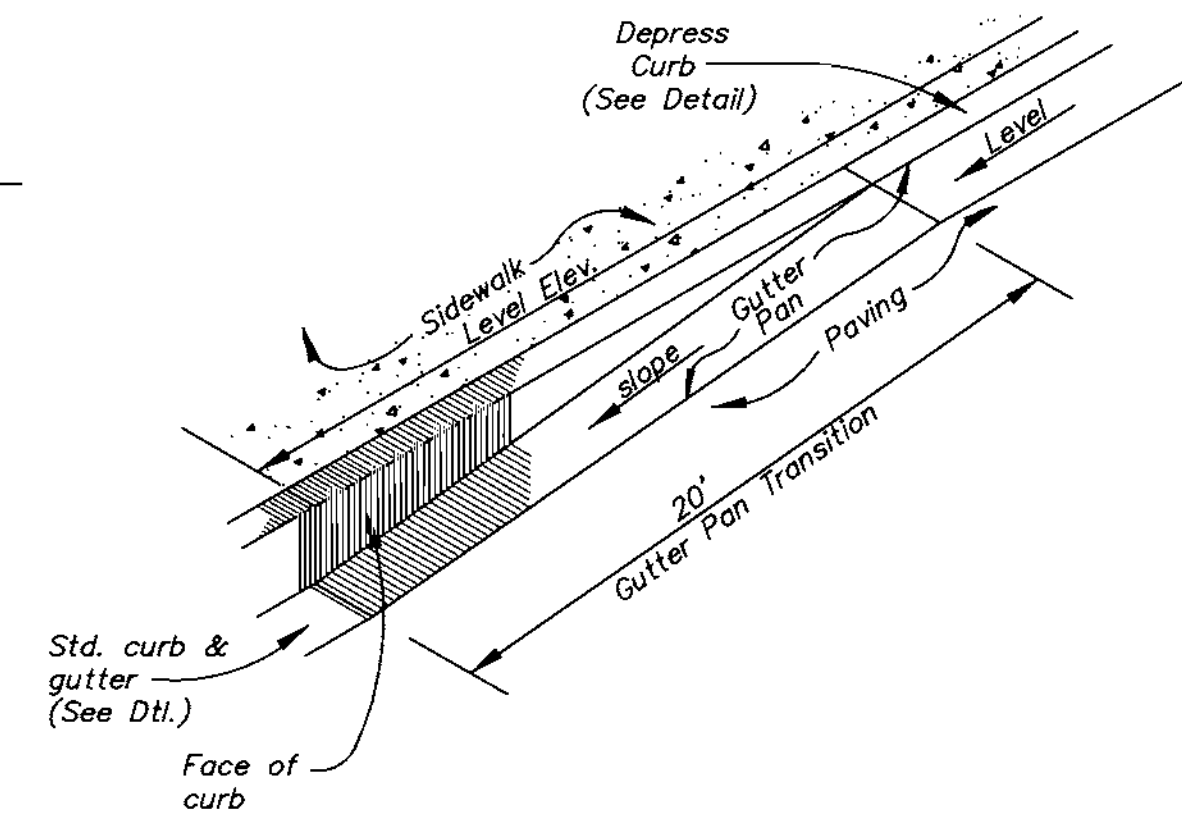
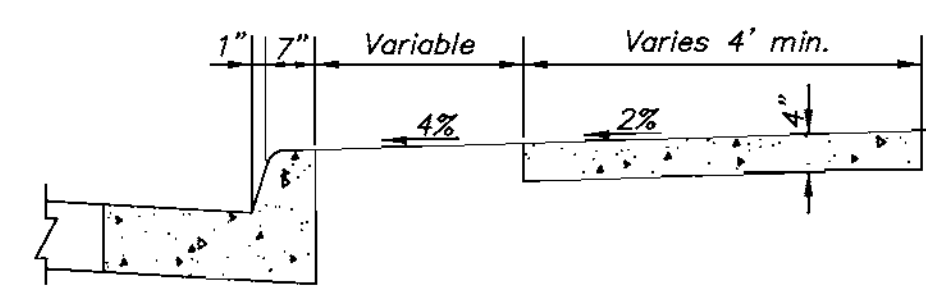
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1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
SEP 23 1999	41-12	2 OF 16

SDP-00-28

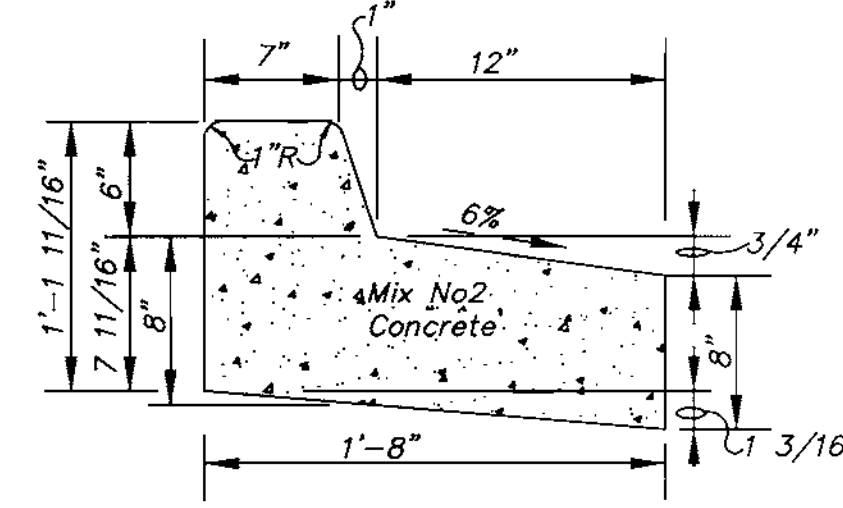


Detail A

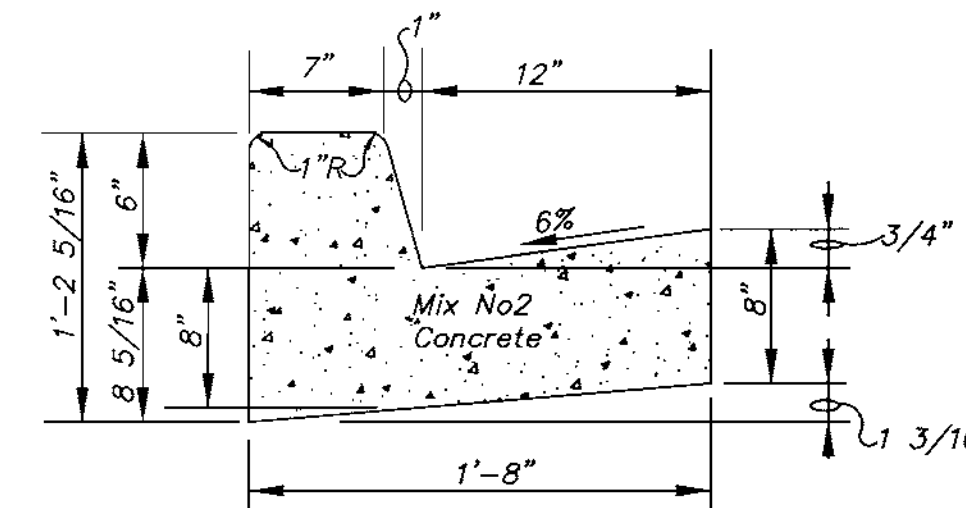
- Notes:
- Sidewalk to be scribed in 5' maximum squares.
 - Expansion joints across the sidewalk not to be more than 15' apart.
 - 1/2" preformed bituminous expansion material in expansion joints to be kept 1/4" below surface of sidewalk.
 - Concrete to be mix No.2
 - When sidewalk abuts curb, walk shall be 1/4" above curb with preformed bituminous expansion material between sidewalk and curb and resting on a compacted crushed stone base. See detail A this sheet.
 - On longitudinal sidewalk grades of 5% or greater, a concrete header, 6" thick and 6" deep below the normal 4" sidewalk thickness shall be constructed for the full width of the sidewalk at intervals of 48'. The headers shall be placed at expansion joint locations and shall be monolithic with the sidewalk.



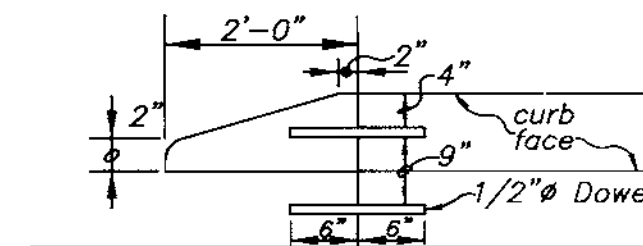
Gutter Transition - Isometric
N.T.S.



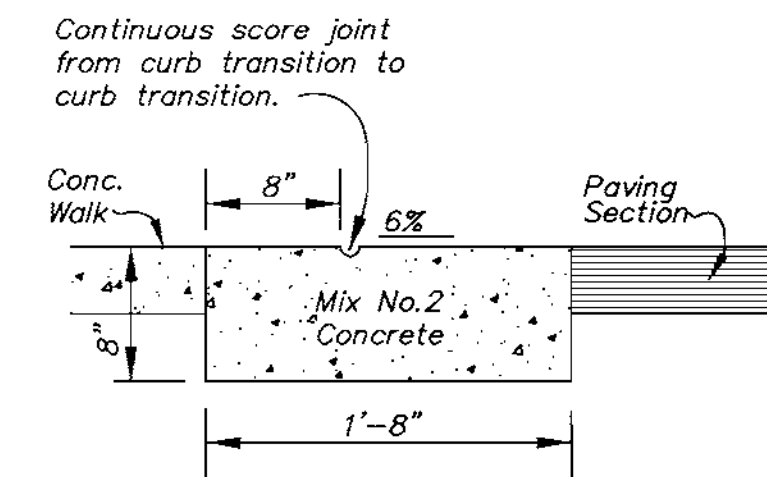
Reverse 6" Combination Curb & Gutter
N.T.S.



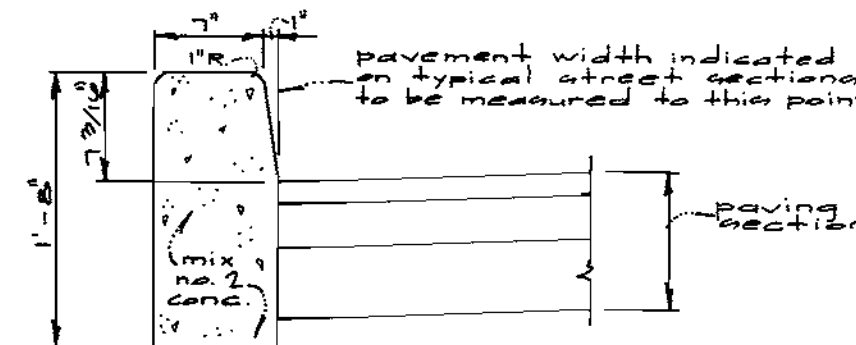
Standard 6" Combination Curb & Gutter
N.T.S.



Nose Down Curb Detail
N.T.S.



Depressed Curb Entrance
N.T.S.



Standard Barrier Curb
N.T.S.



BUILDING 'A'

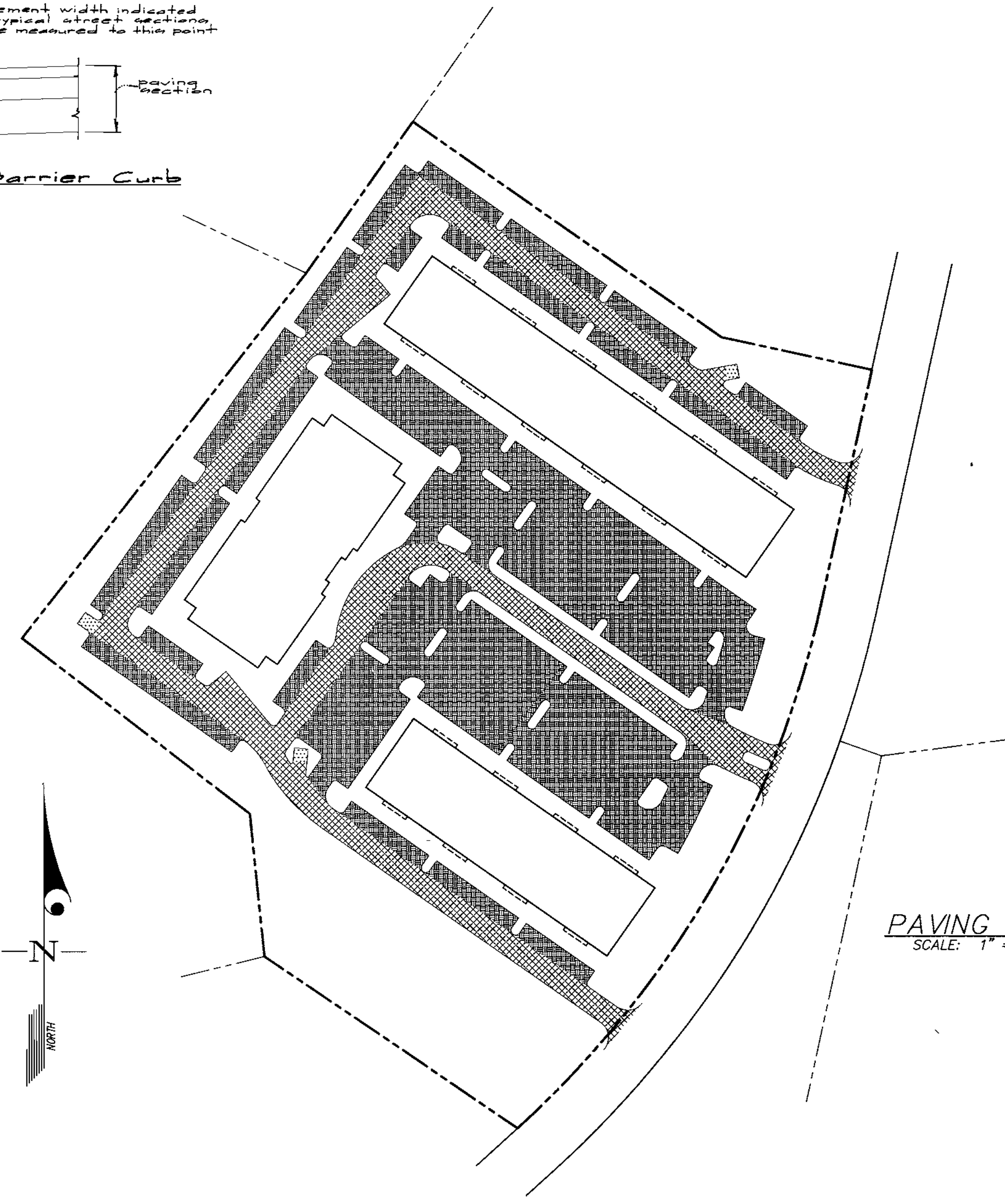


BUILDING 'B'

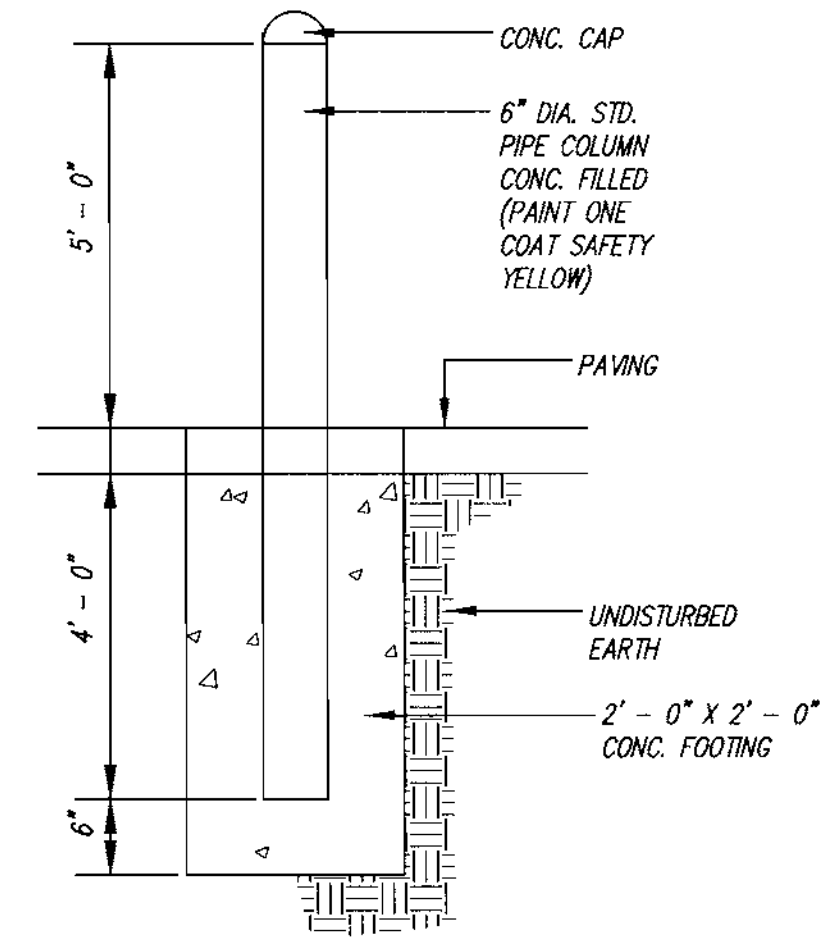


BUILDING 'C'

FRONT ELEVATIONS
SCALE: 1" = 30'



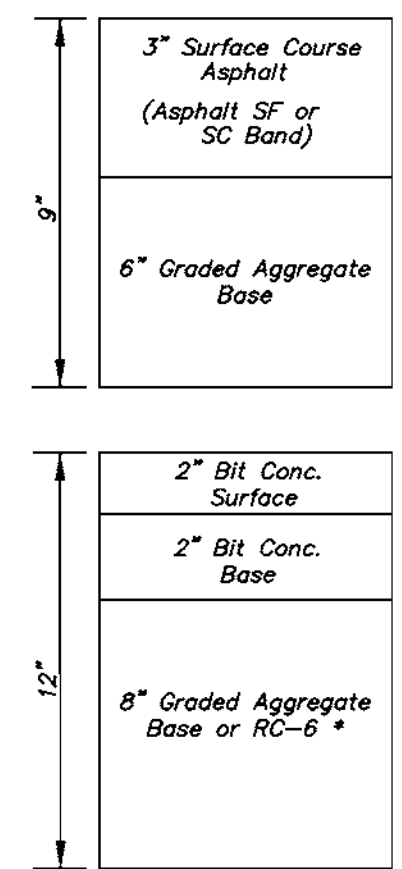
PAVING PLAN
SCALE: 1" = 100'



BOLLARD DETAIL
N.T.S.

Paving Section
N.T.S.

Granular Base Alternates



Note:
In accordance with the soils report prepared by E.C.S. Ltd., it is recommended that CBR testing be performed to develop specific pavement sections for the various vehicular uses on site.

* RC-6 can be substituted, given the material used meets the gradation requirements for graded aggregate base.

LEGEND

- Light Duty
- Heavy Duty
- Concrete * Pad

* - See Ho.Co. Detail # R.11.01 for concrete reinforcement

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: SEPT. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: [Signature] Date: 11/19/99
Chief, Division of Land Development: [Signature] Date: 11/19/99
Chief, Development Engineering Division: [Signature] Date: 11/19/99



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 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

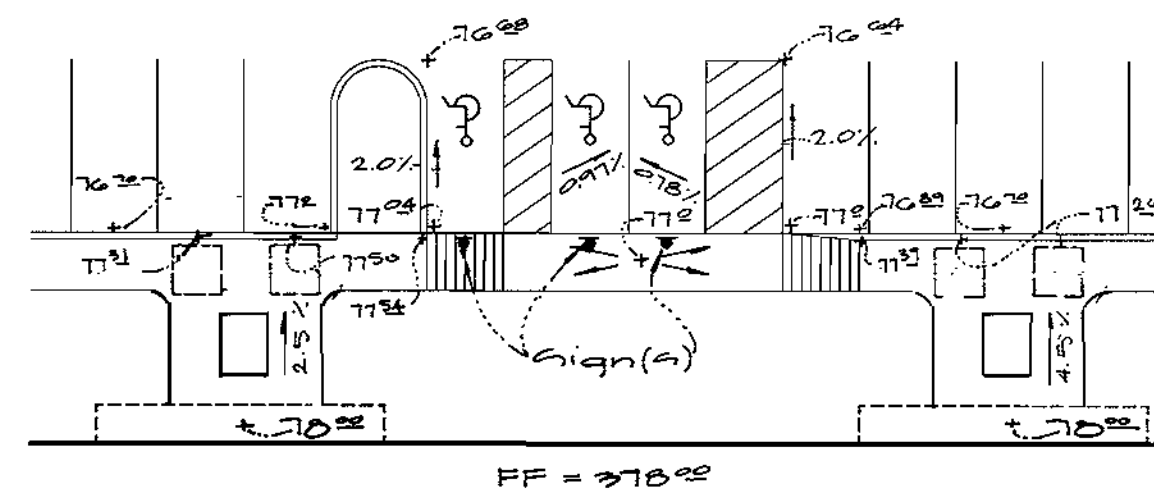
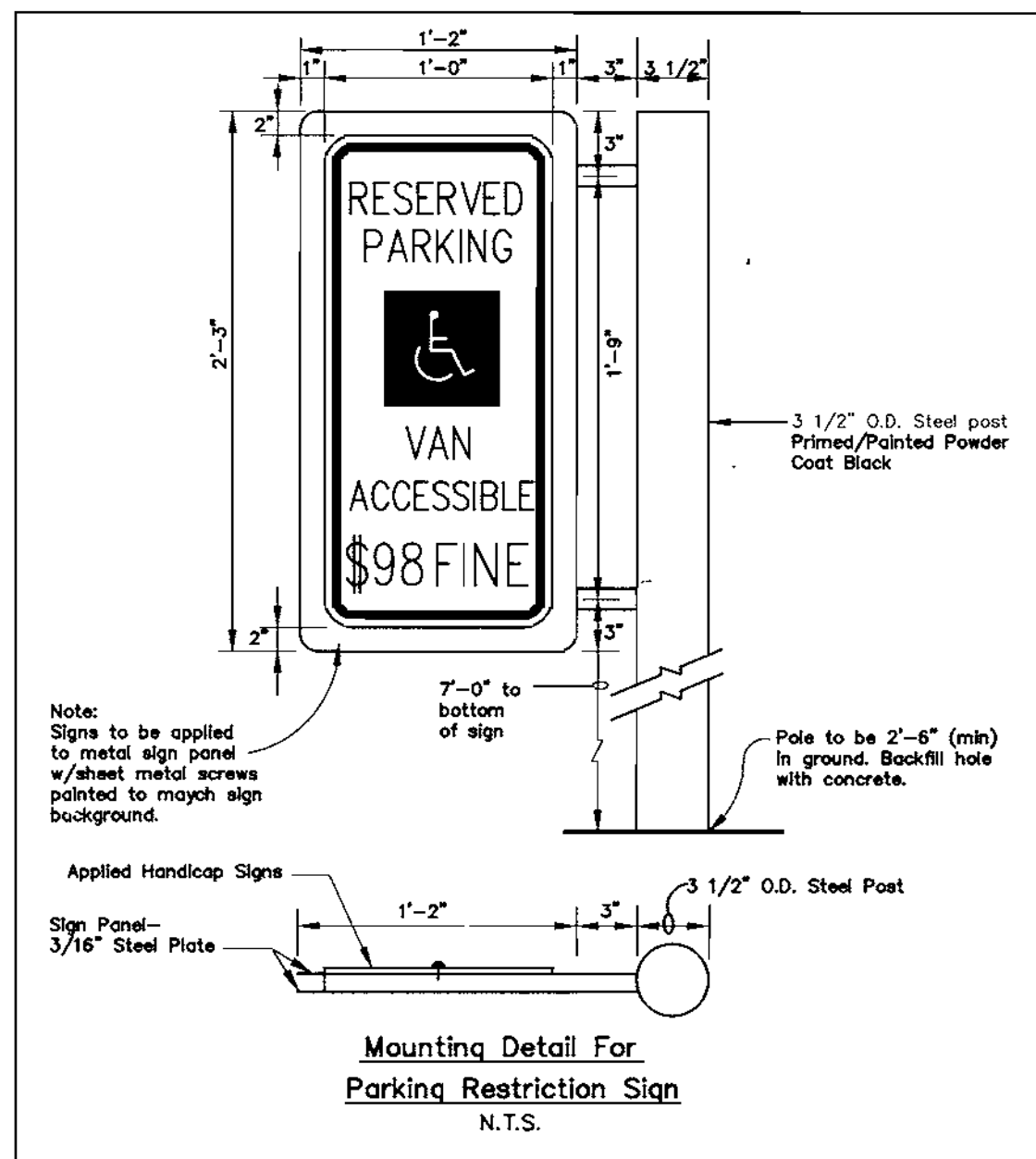
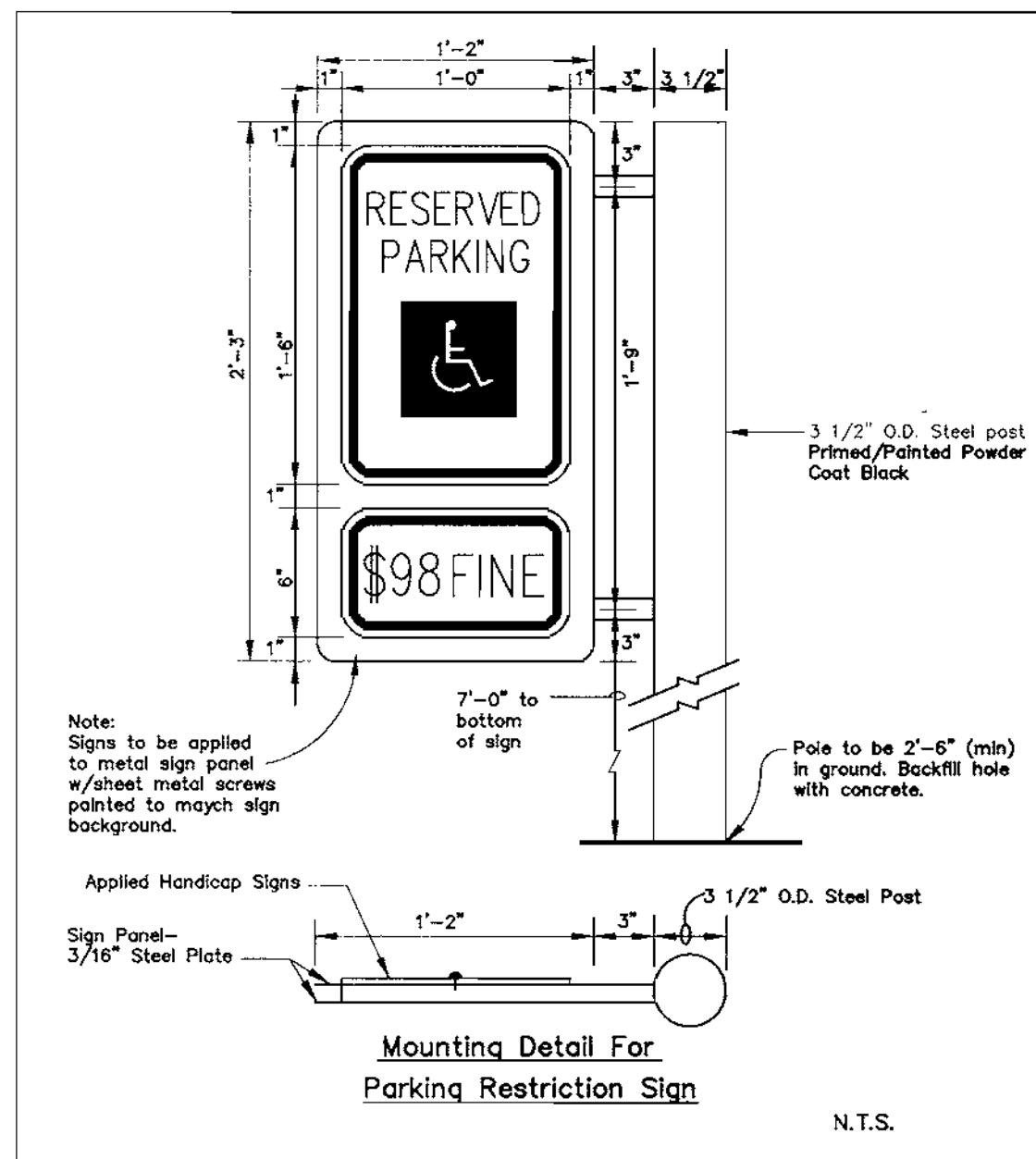
PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21204
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

SITE DETAILS / PAVING PLAN
RIVERS CORPORATE PARK
SECTION 1 AREA 2 ~ PARCEL 'D'
PLAT No. 6020

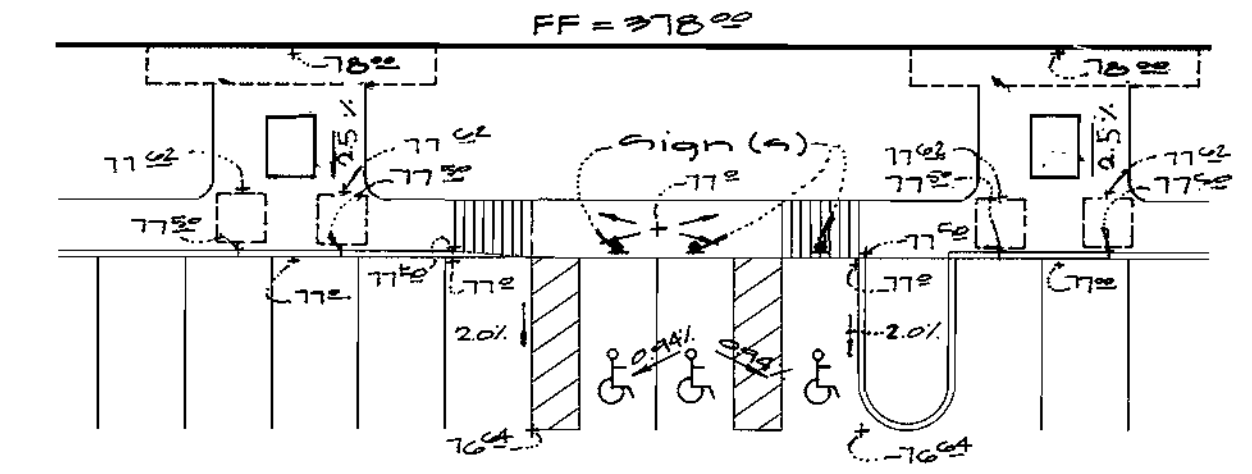
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AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 18, 1999	41 - 12	3 OF 10

GUILFORD ELECTRON DISTRICT No. 6

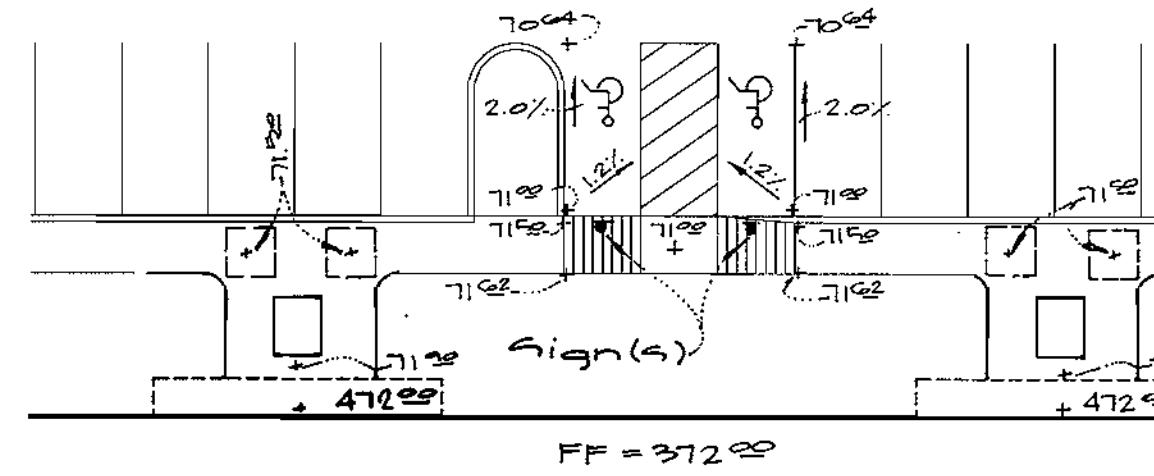
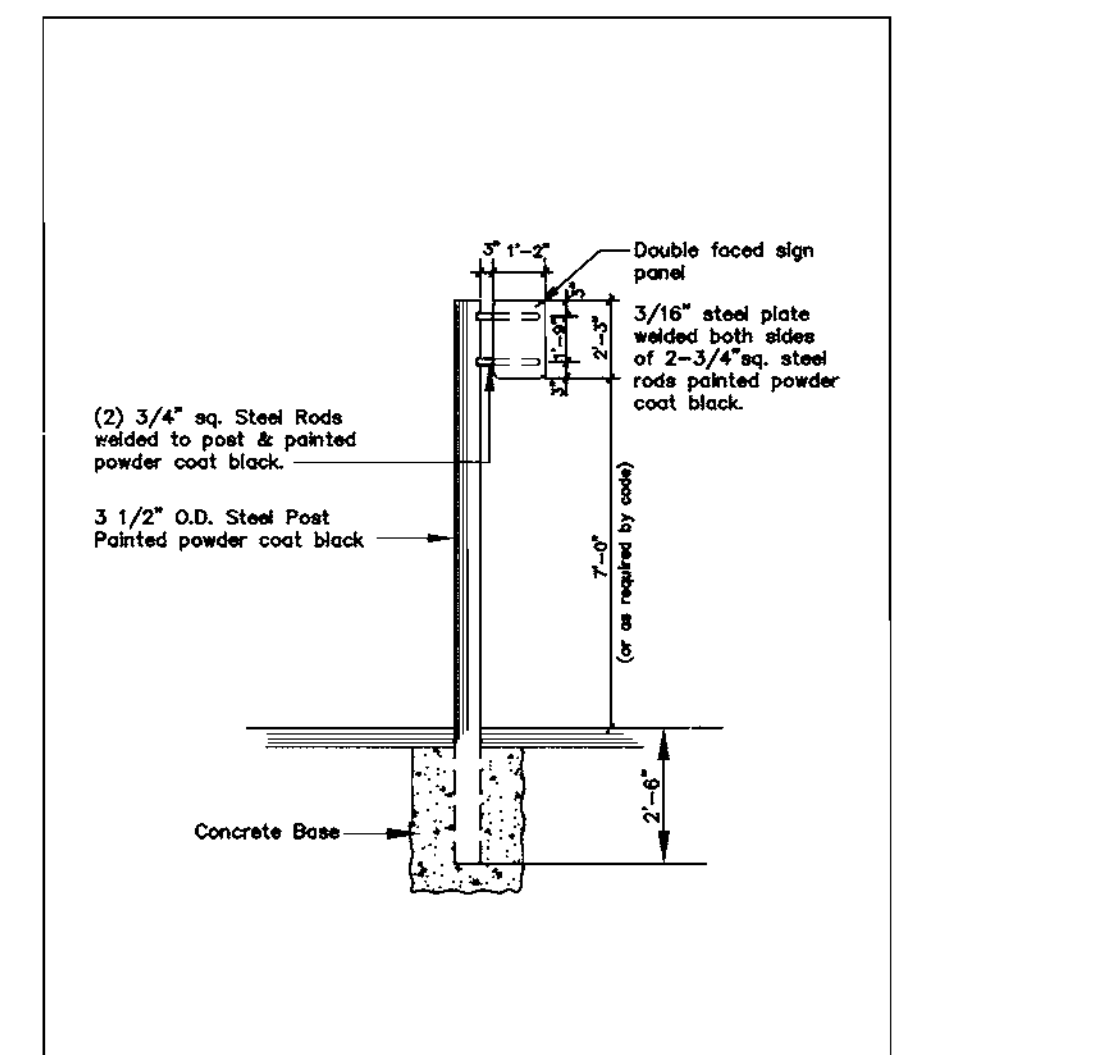
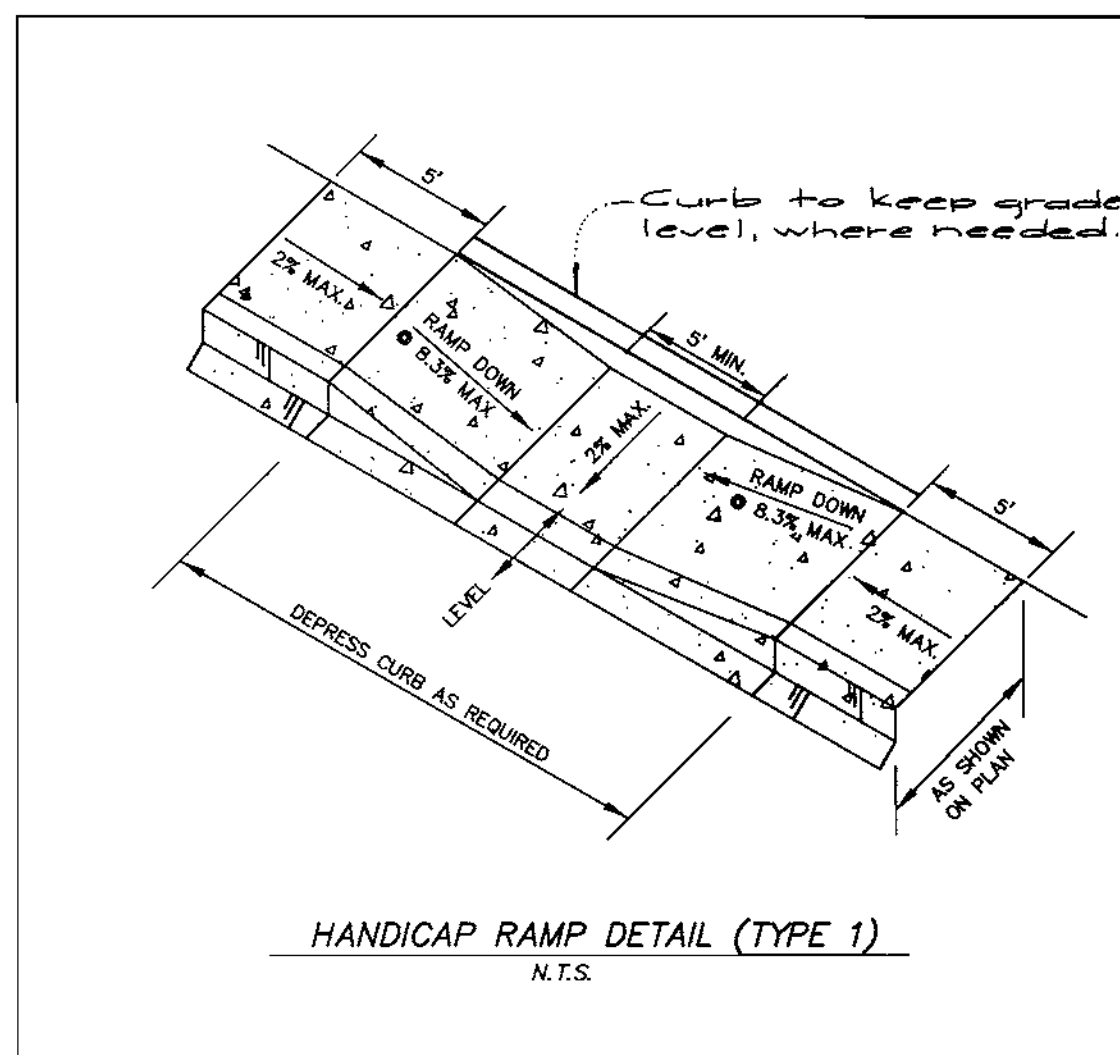
HOWARD COUNTY, MARYLAND



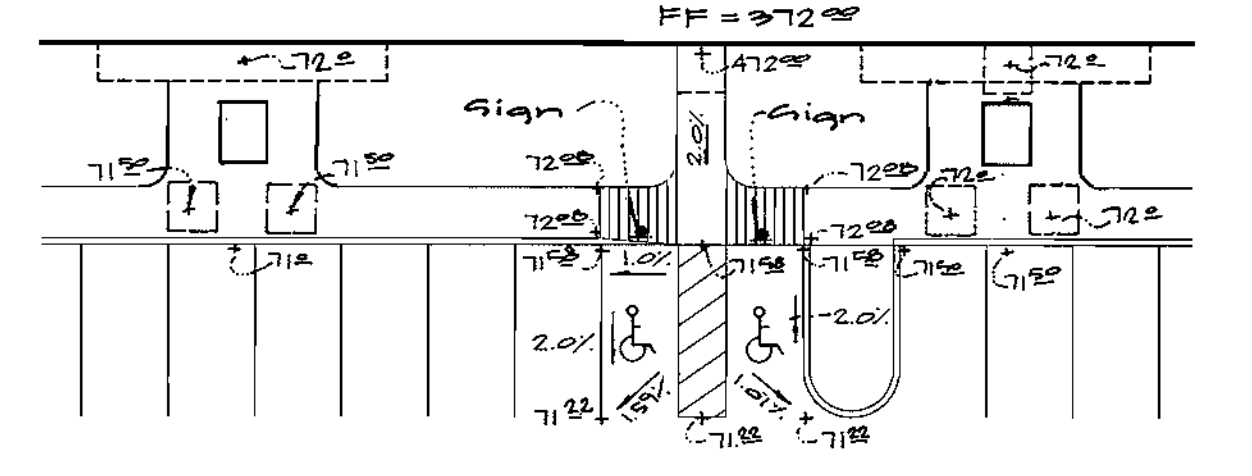
HANDICAP ACCESS DETAIL
BUILDING 'A' - NORTH SIDE
SCALE: 1"=20'



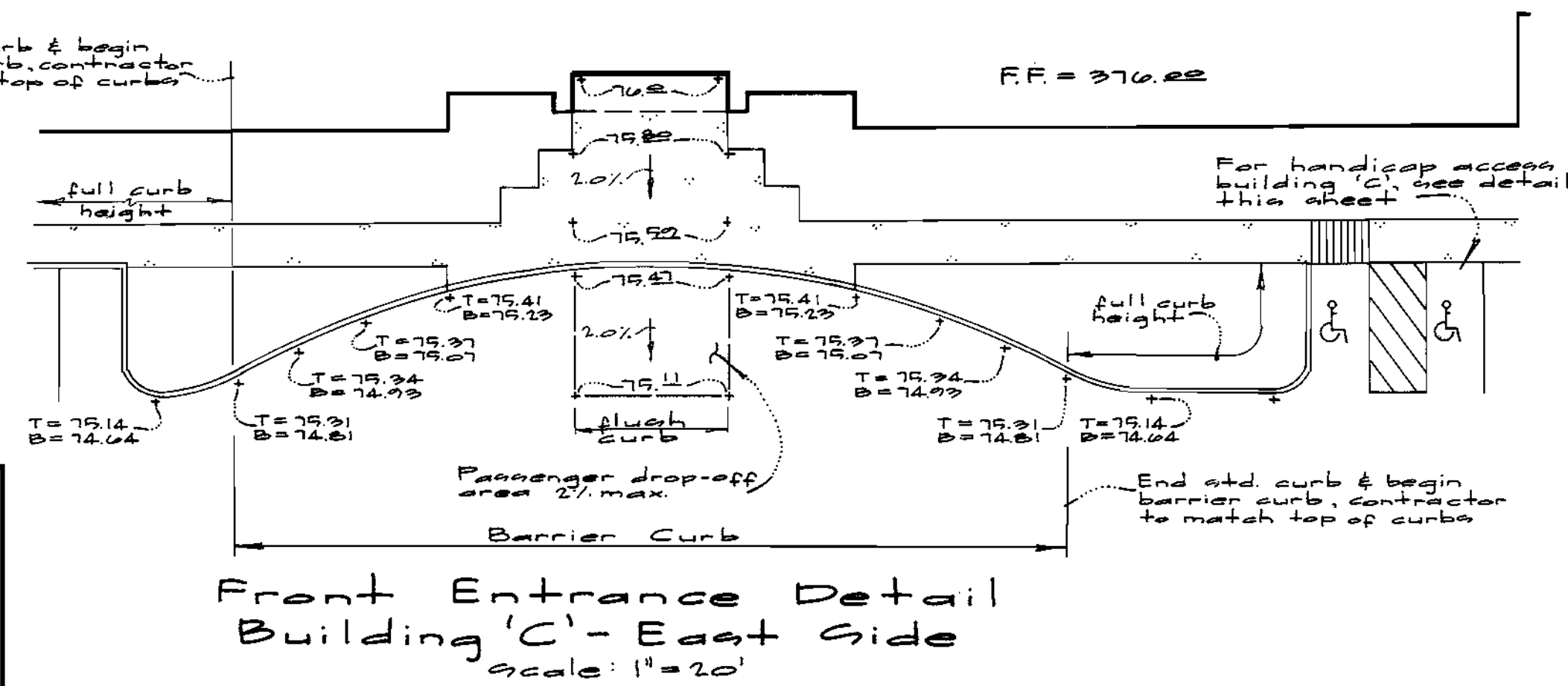
HANDICAP ACCESS DETAIL
BUILDING 'A' - SOUTH SIDE
SCALE: 1"=20'



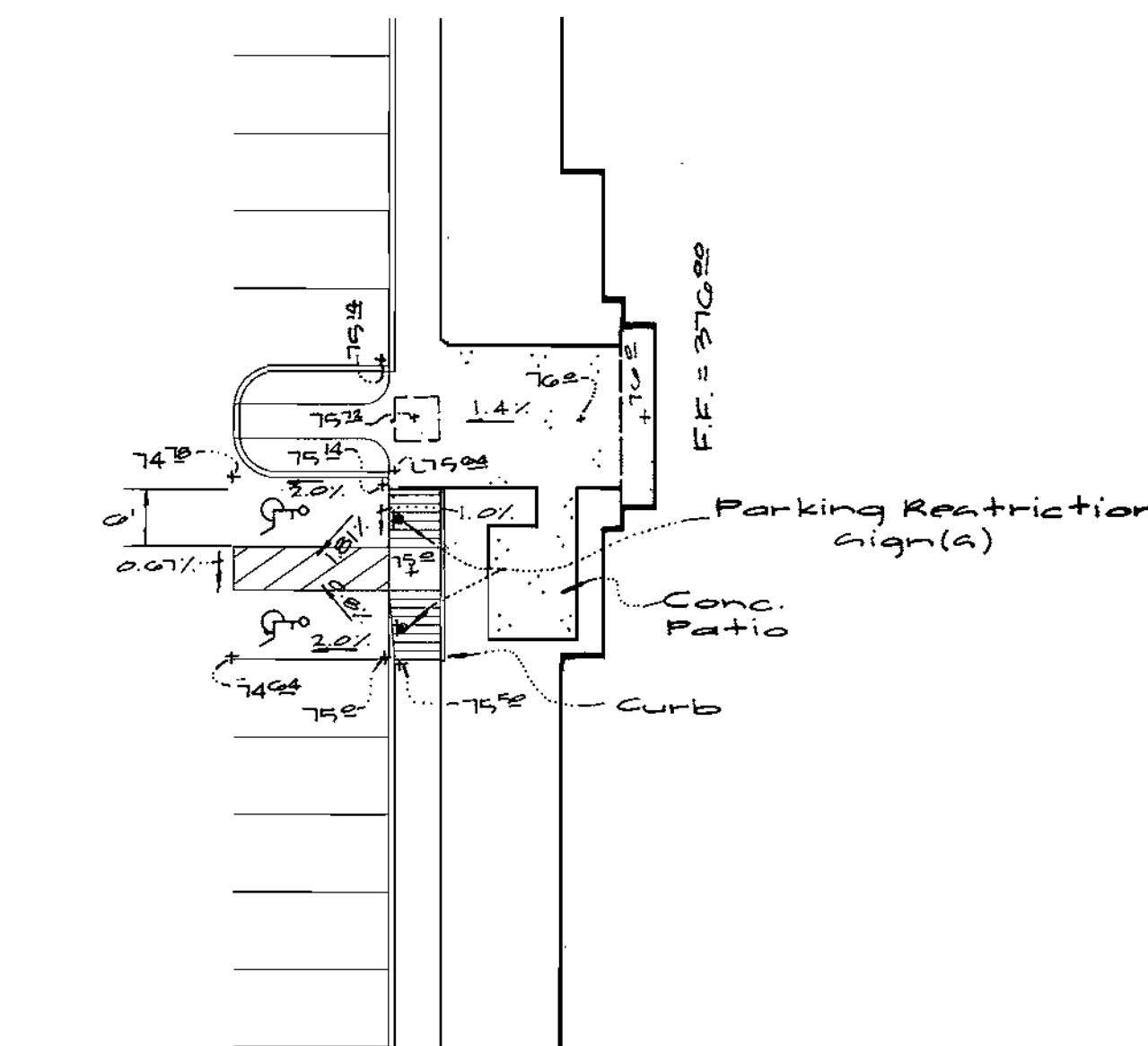
HANDICAP ACCESS DETAIL
BUILDING 'B' - NORTH SIDE
SCALE: 1"=20'



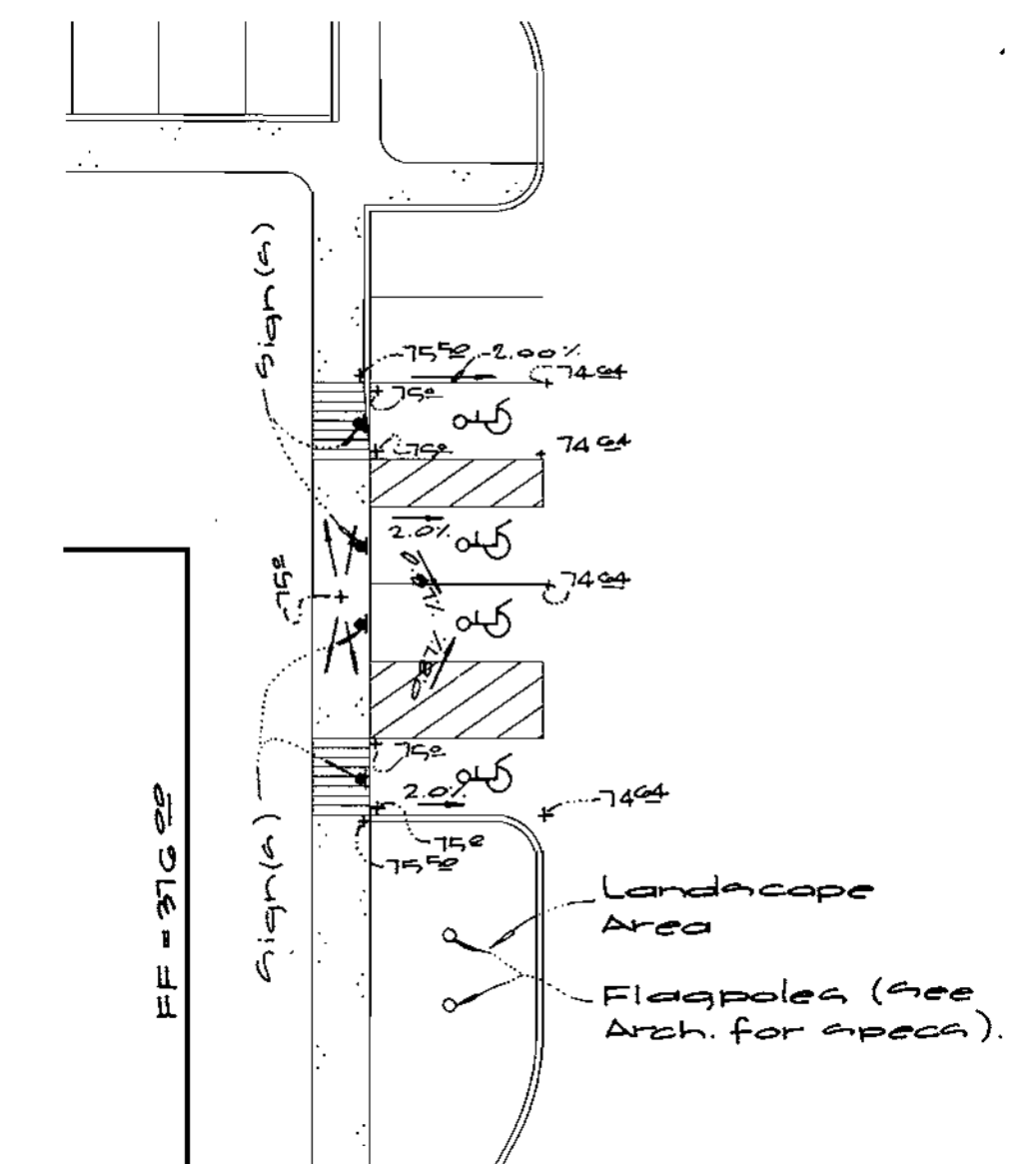
HANDICAP ACCESS DETAIL
BUILDING 'B' - SOUTH SIDE
SCALE: 1"=20'



Front Entrance Detail
Building 'C' - East Side
Scale: 1"=20'



HANDICAP ACCESS DETAIL
BUILDING 'C' - WEST SIDE
SCALE: 1"=20'



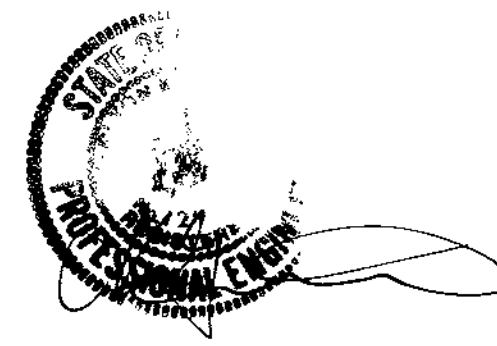
HANDICAP ACCESS DETAIL
BUILDING 'C' - EAST SIDE
SCALE: 1"=20'

APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE: Sept. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

David J. Ziegler - 11/18/99
Director Date
Cindy Hamilton - 11/19/99
Chief, Division of Land Development Date
John D. ... - 11/23/99
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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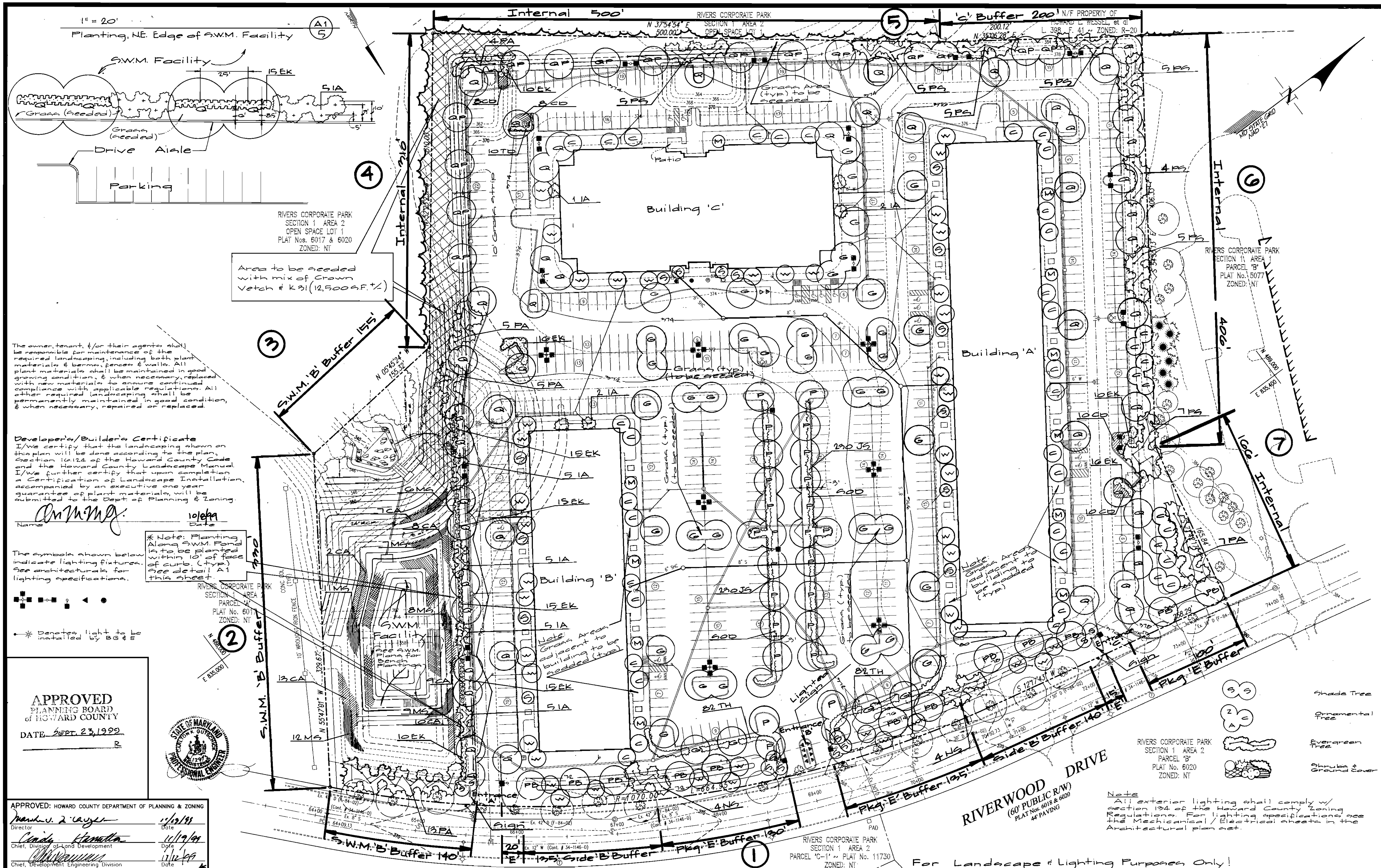
PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21204
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

HANDICAP ACCESS DETAILS
RIVERS CORPORATE PARK
SECTION 1 AREA 2 ~ PARCEL 'D'
PLAT No. 6020

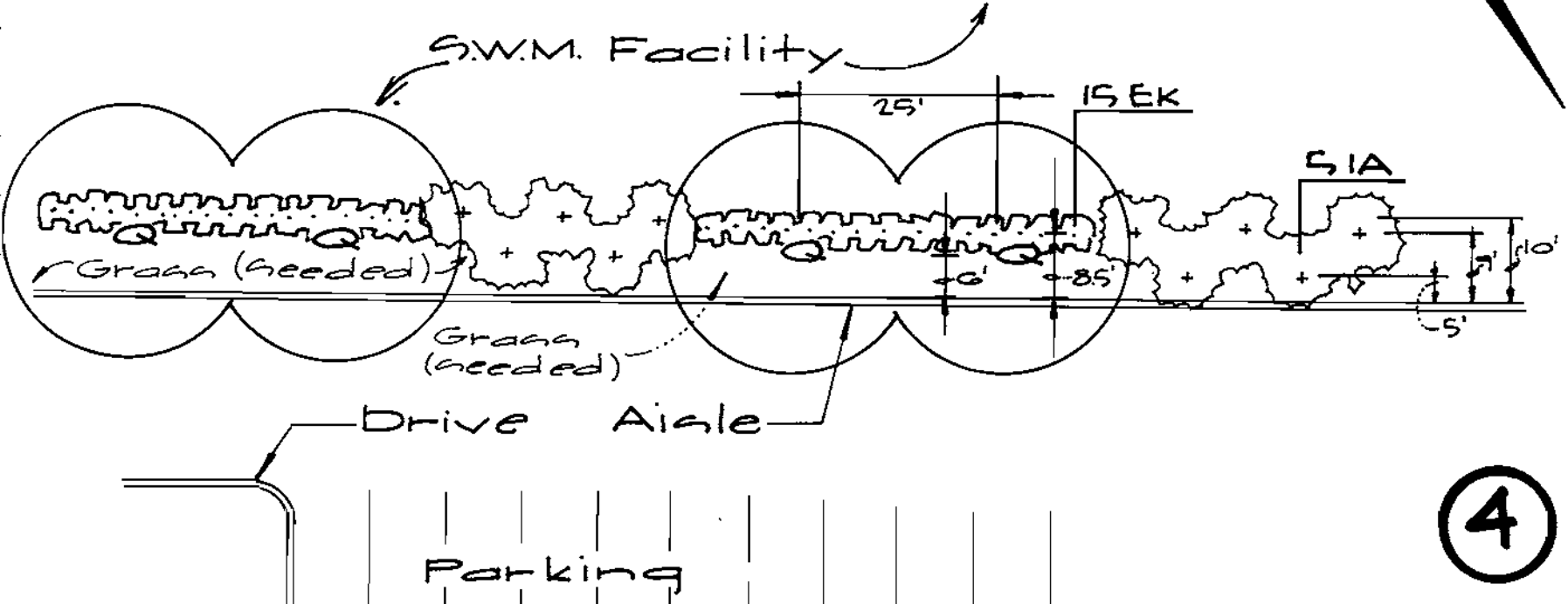
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AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 18, 1999	41 - 12	4 OF 16

GUILFORD ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND



1" = 20'
Planting, NE. Edge of SWM. Facility



RIVERS CORPORATE PARK
SECTION 1 AREA 2
OPEN SPACE LOT 1
PLAT Nos. 6017 & 6020
ZONED: NT

Area to be seeded
with mix of Crown
Vetch & K31 (12,500 S.F. +/-)

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

Developer's/Builder's Certificate
I/We certify that the landscaping shown on this plan will be done according to the plan, Section 12.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion, accompanied by an executive one year guarantee of plant materials, will be submitted to the Dept. of Planning & Zoning.

Name: *Ch. M. M. G.*
Date: 10/29/99

The symbols shown below indicate lighting fixtures. See architectural for lighting specifications.

* Denotes light to be installed by B.G. & E.

* Note: Planting Along SWM. Pond is to be planted within 10' of face of curb. (typ.) See detail A1 this sheet.

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: SEPT. 23, 1999



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: *Mark V. 2. Cayer* Date: 11/29/99
Chief, Division of Land Development: *Chad K. Kuntz* Date: 11/19/99
Chief, Development Engineering Division: *Chad K. Kuntz* Date: 11/12/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
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DATE	REVISION	BY	APP'R.
11-4-99	As submitted for signature		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21286
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

Landscaping & Lighting Plan
RIVERS CORPORATE PARK
SECTION 1 AREA 2 ~ PARCEL 'D'
PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct 18, 1999	41 - 12	5 OF 16

- (S) Shade Tree
- (Z) Ornamental Tree
- (A) Evergreen Tree
- (P) Shrub & Ground Cover

Note: All exterior lighting shall comply w/ section 12.4 of the Howard County Zoning Regulations. For lighting specifications see the Mechanical/Electrical sheets in the Architectural plan set.

For Landscape & Lighting Purposes Only!

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT	COMMENTS
SHADE TREES					
G	41	Gleditsia triacanthos var. inermis 'Shademaster' / Shademaster Honeylocust	3-3 1/2" Cal.	B&B	
P	27	Platanus x acerifolia 'Bloodgood' / Bloodgood London Planetree	3 1/2-4" Cal.	B&B	
PB	12	Platanus x acerifolia 'Bloodgood' / Bloodgood London Planetree	2 1/2-3" Cal.	B&B	
Q	50	Quercus palustris / Pin Oak	3 1/2-4" Cal.	B&B	
QP	15	Quercus palustris / Pin Oak	2 1/2-3" Cal.	B&B	
EVERGREEN TREES					
IA	25	Ilex x attenuata 'Fosteri' / Foster's American Holly	5'-6" Ht.	B&B	
PA	34	Picea abies / Norway Spruce	8'-10" Ht.	B&B	
NS	8	Picea abies / Norway Spruce	6'-8" Ht.	B&B	
PS	41	Pinus strobus / White Pine	8'-10" Ht.	B&B	
ORNAMENTAL TREES					
C	42	Cornus x 'Rutdon' / Celestial White Flowering Dogwood	1 3/4"-2" Cal.	B&B	
W	44	Crataegus viridis 'Winter King' / Winter King Hawthorn	1 3/4"-2" Cal.	B&B	
M	11	Magnolia x Galax / Galax Magnolia	6'-7" Ht.	B&B	
S	24	Styrax japonicus / Japanese Snowbell	6'-7" Ht.	B&B	
SHRUBS					
CD	36	Cotoneaster dammeri 'Coral Beauty' / Coral Beauty Cotoneaster	18"-24" Spr.	B&B	+/- 2.5'-3" O.C.
EK	112	Euonymus kiautschovicus 'Paulii' / Paulii Spreading Euonymus	2 1/2-3" Ht.	B&B	
JS	460	Juniperus chinensis var. sargentii / Sargent Juniper	15"-18" Spr.	B&B	+/- 2.5' O.C.
TD	10	Taxus media 'Densiflora' / Dense Yew	2-2 1/2" Ht.	B&B	
TH	164	Taxus media 'Hicksii' / Hicks Yew	2-2 1/2" Ht.	B&B	+/- 2' O.C. (set back min. of +/- 4' from curb)
GRASSES AND GROUNDCOVERS					
CA	59	Calamagrostis canadensis x stricta / Feather Reed Grass	1 Gal		plant with even spacing in approximate areas designated on plan
MS	53	Miscanthus sinensis / Japanese Silver Grass	1 Gal		plant with even spacing in approximate areas designated on plan

Note: - Crown Vetch mix (with K31) to be seeded along bank as shown on the Landscape Plan
 - Each tree located within a lawn area to be planted with a +/- three to five foot diameter mulch circle.

ALTERNATIVE COMPLIANCE:

- 2 1/2 - 3" Shade Tree..... = 1 E.S.T.
- 3 1/2 - 4" Shade Tree..... = 1.5 E.S.T.
- < 8' Evergreen Tree... = 0.5 E.S.T.
- 8-10' Evergreen Tree... = 1 E.S.T.
- All Ornamental Tree... = 0.5 E.S.T.

Required Planting (HRD Standards) = 28 E.S.T. per acre
 12.6843 Acres x 28 E.S.T./Acre = 355 E.S.T.

Planting Provided:

- (1 E.S.T.) 2 1/2 - 3" Shade Trees..... 27 = 27.0 E.S.T.
- (1.5 E.S.T.) 3 1/2 - 4" Shade Trees..... 118 = 177.0 E.S.T.
- (0.5 E.S.T.) < 8' Evergreen Trees.... 33 = 16.5 E.S.T.
- (1 E.S.T.) 8-10' Evergreen Trees.... 75 = 75.0 E.S.T.
- (0.5 E.S.T.) All Ornamental Trees... 121 = 60.5 E.S.T.

TOTAL PROVIDED:..... 356.0 E.S.T.

APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE: SEPT 23, 1999

R

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

John A. Ziegler - 11/19/99
 Director Date

Conrad Hamilton - 11/19/99
 Chief, Division of Land Development Date

John DeWitt - 11/12/99
 Chief, Development Engineering Division Date

SCHEDULE A PERIMETER LANDSCAPE EDGE Category	Perimeter										
	Adj. to Roadways					Adj. to Perimeter Property					On-site S.W.M. Perim.
	1a	1b	2a	3a	4	5a	5b	6	7	8	
Landscape Type	B	E	B	B	I	I	C	I	I	B	
Linear Feet of Roadway/Perimeter Frontage	415'	400'	330'	155'	310'	500'	200'	406'	166'	290'	
Credit for Ex. Vegetation (Yes, No, Linear Feet) (describe below if needed)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (describe below if needed)	YES 115'	YES 100'	NO	NO	NO	NO	NO	NO	NO	NO	
Number of Plants Required	8	10	7	3	n/a	n/a	5	n/a	n/a	6	
Shade Trees	8	0	8	4	n/a	n/a	10	n/a	n/a	7	
Evergreen Trees	0	75	0	0	n/a	n/a	0	n/a	n/a	0	
Shrubs											
Number of Plants Provided	- Alternative Compliance...exceeds county req. -										
Shade Trees	- Alternative Compliance...exceeds county req. -										
Evergreen Trees	- Alternative Compliance...exceeds county req. -										
Other Trees (2:1 subst.)	- Alternative Compliance...exceeds county req. -										
Shrubs (10:1 subst.)	- Alternative Compliance...exceeds county req. -										
(describe plant substitution credits below if needed)											
Schedule 'A' Number of Shade Trees for bonding:	39	x	\$300	=	\$11,700						
Schedule 'A' Number of Evergreen Trees for bonding:	37	x	\$150	=	\$5,550						
Schedule 'A' Number of Shrubs for bonding:	75	x	\$30	=	\$2,250						
Schedule 'A' Number of Street Trees for bonding:	0	x	\$30	=	\$0						
TOTAL Estimate for Bonding:	\$19,500										
COMMENTS:	SWM plantings to be relocated elsewhere on site to avoid conflict w/ SWM facility										

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING
Number of Parking Spaces = 624 Spaces (Provided)
Number of Trees Required = 31 Trees @ 1 per 20 spaces
Number of Trees Provided
Shade Trees
Other Trees (2:1 substitution)
NOTE: Alternative Compliance per HRD's Standards Alternative Compliance exceeds County requirements
Schedule 'B' Number of Equivalent Shade Trees (EST) for bonding: 31 x \$300 = \$ 9,300

LANDSCAPING NOTES

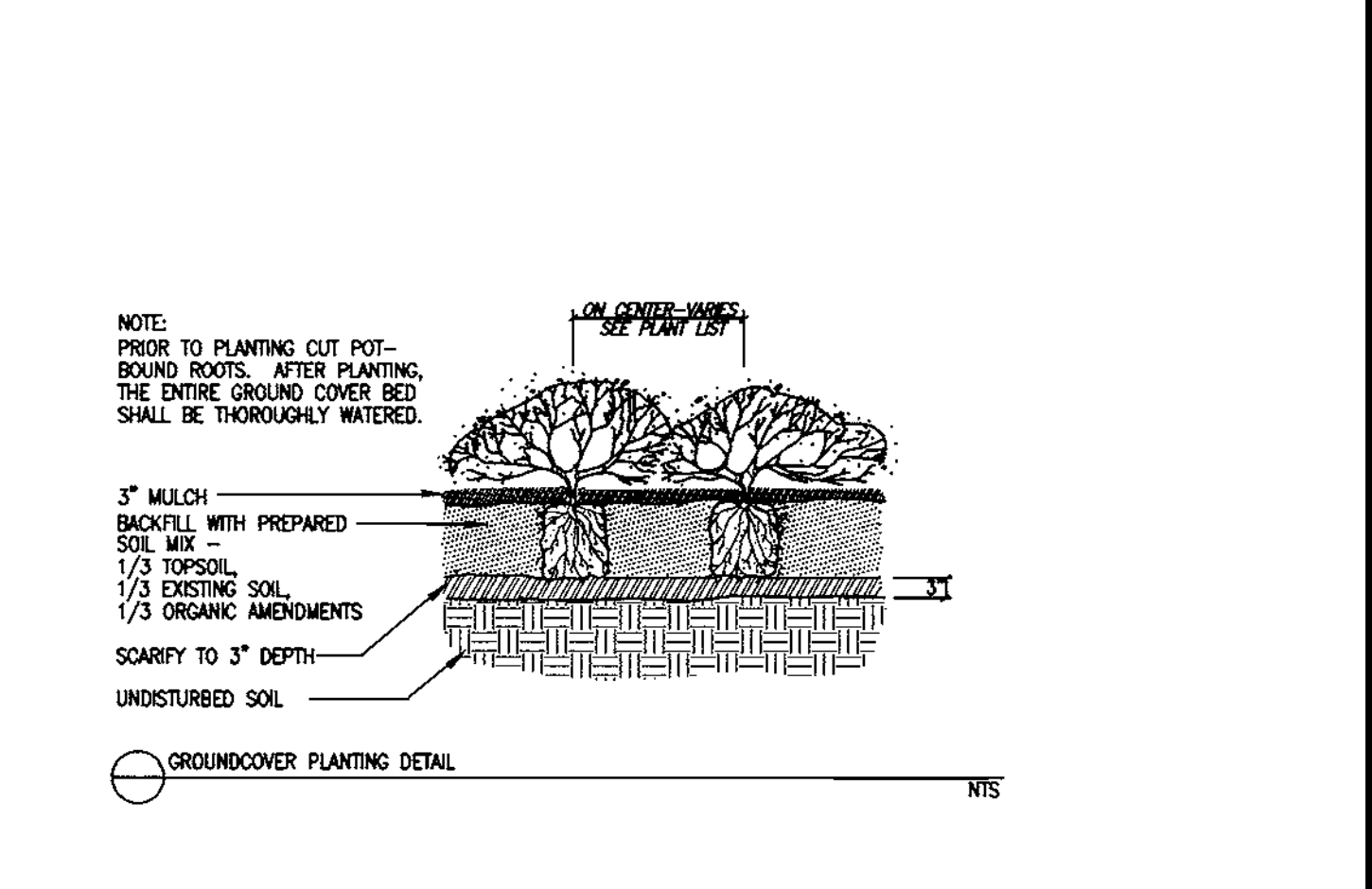
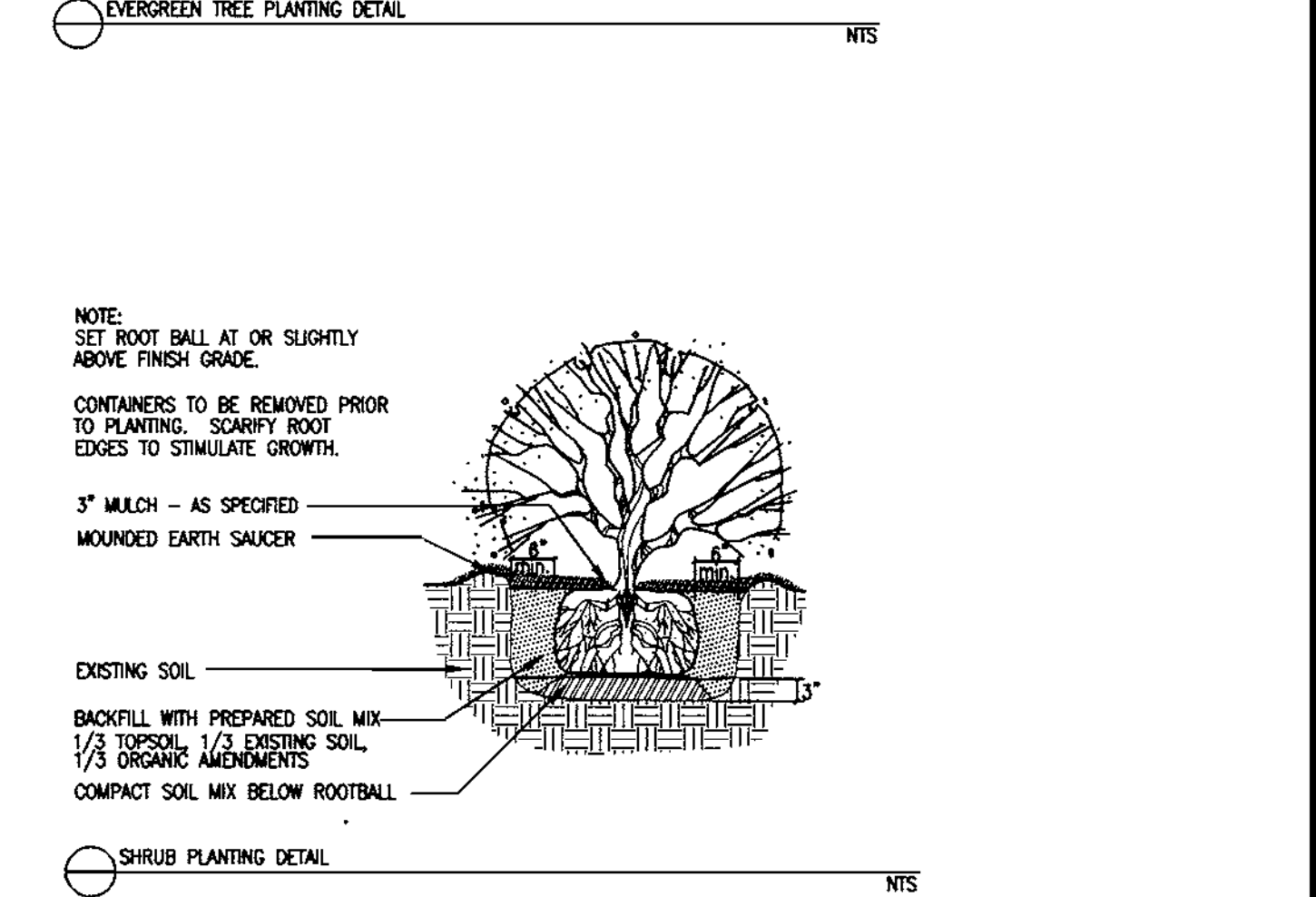
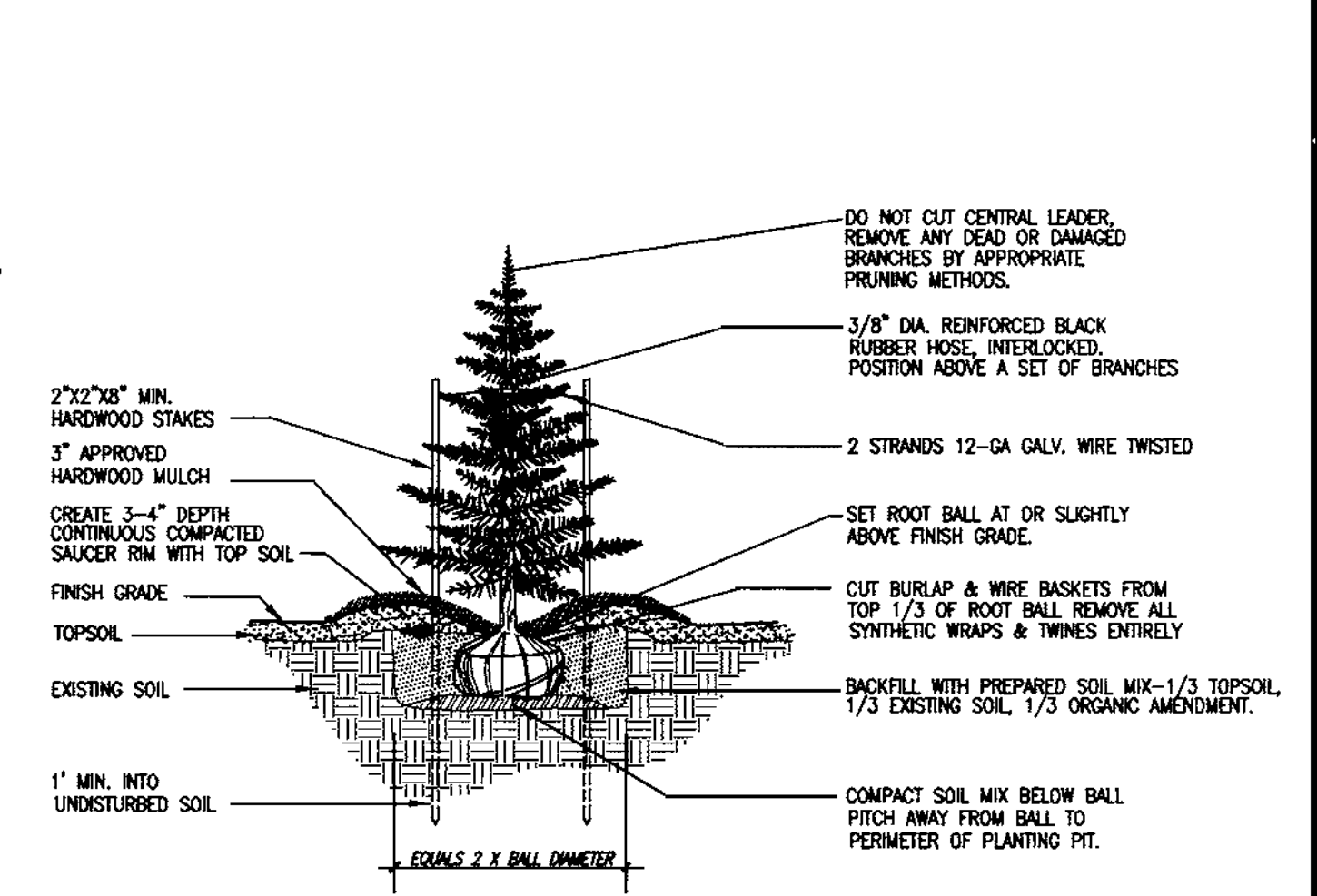
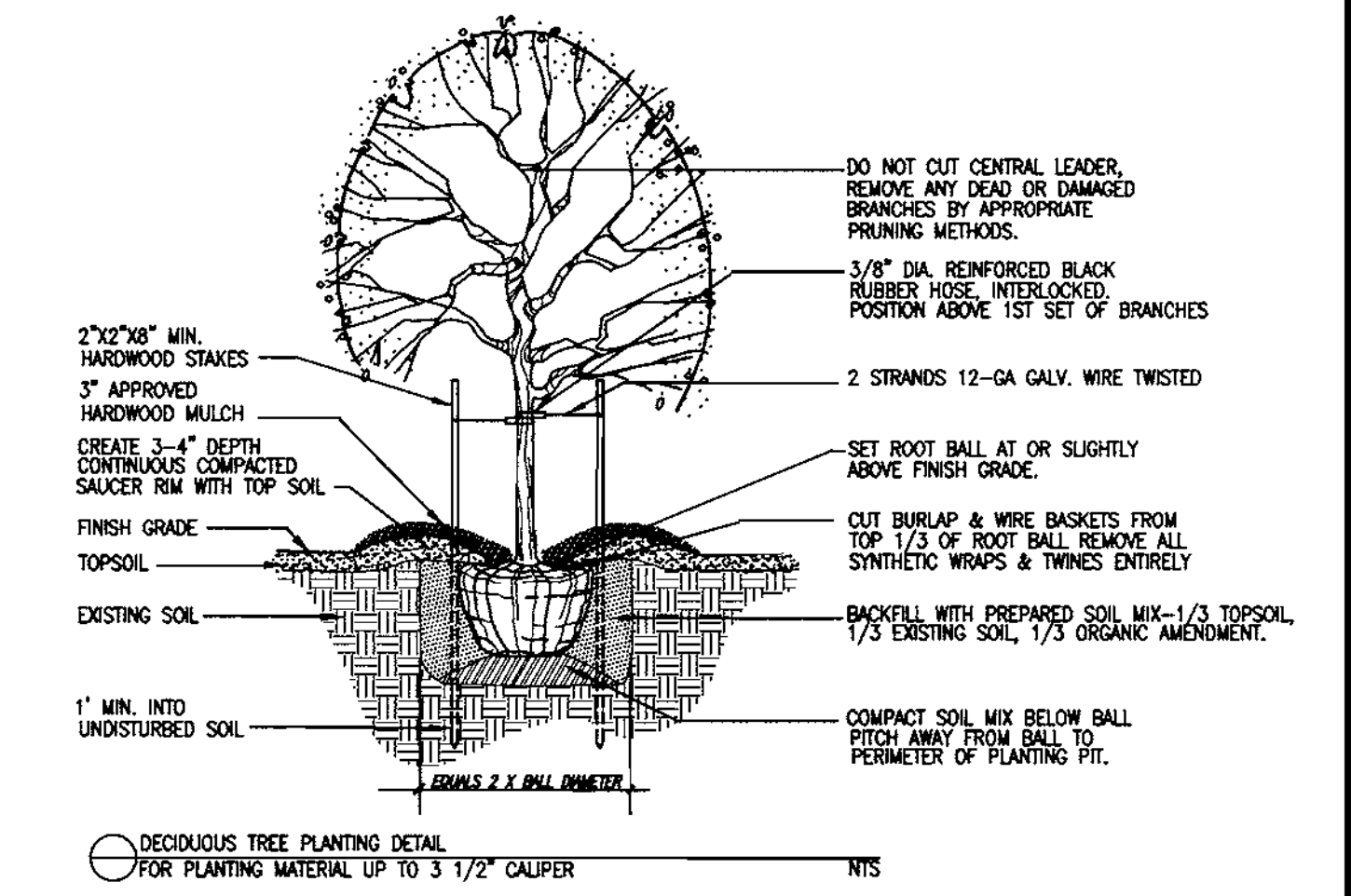
- This plan has been prepared in accordance with Section 16.124 of the Howard County Code and Chapter VI (Alternative Compliance) of the Howard County Landscape Manual.
- Contractor shall notify all utilities at least (5) five days before starting work. All General Notes, especially those regarding utilities, on Sheet 1 shall apply.
- Field verify underground utility locations and existing conditions before starting planting work. Contact engineer / landscape architect if any relocations are required.
- 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.
- 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.
- No substitution shall be made without written consent of the owner or his representative.
- All areas disturbed by construction activities but not otherwise planted, paved, or mulched shall be seeded or sodded in accordance with the project specifications.
- 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.
- All exposed earth within limits of planting beds shall be mulched with shredded hardwood mulch per Planting Details.
- *Schedule A - Perimeter Landscape Edge; and *Schedule B - Parking Lot Internal Landscaping* are provided for landscape surety calculation purposes only. Financial surety for the required landscaping shall be posted with the Developer Agreement in the amount of ~~\$29,100~~.
- Tabulation for landscape shown:
 Required planting by HRD for 12.6843 acre of office at 28 trees / acre = 355 E.S.T.
 Planting provided: (*See adjacent chart titled 'Alternative Compliance')
 (1 E.S.T.) 2 1/2 - 3" Shade Trees..... 27 = 27.0 E.S.T.
 (1.5 E.S.T.) 3 1/2 - 4" Shade Trees..... 118 = 177.0 E.S.T.
 (0.5 E.S.T.) < 8' Evergreen Trees.... 33 = 16.5 E.S.T.
 (1 E.S.T.) 8-10' Evergreen Trees.... 75 = 75.0 E.S.T.
 (0.5 E.S.T.) All Ornamental Trees... 121 = 60.5 E.S.T.
 TOTAL PROVIDED:..... 356.0 E.S.T.
 1 E.S.T. - Equivalent Shade Trees
- The balance of the HRD required shade trees is provided by larger caliper material and proposed shrubs and ground covers.
 - Foundation plantings to be designed at a future date; these plantings are above and beyond the aforementioned requirements and are therefore not subject to County/HRD review.

PLANT MATERIALS AND PLANTING METHODS

- A. Plant Materials**
- The landscape contractor shall furnish and install and/or dig, ball, burlap and transport all of the plant materials called for on drawings and/or listed in the Plant Schedule.
- Plant Names**
 Plant names used in the Plant Schedule shall conform with "Standardized Plant Names," latest edition.
 - 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 seed-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 the ARC.
 - 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.
 - Minimum branching height for all shade trees shall be six feet (6'), maximum eight feet (8').
 - Caliper, height, spread and size of ball shall be generally as follows:

CALIPER	HEIGHT	SPREAD	SIZE OF BALL
3" - 3.5"	14'-16'	6'-8'	32" diameter
3.5" - 4"	14'-16'	8'-10'	36" diameter
4" - 4.5"	16'-18'	8'-10'	40" diameter
4.5" - 5"	16'-18'	10'-12'	44" diameter
5" - 5.5"	16'-20'	10'-12'	48" diameter
5.5" - 6"	18'-20'	12'-14'	52" diameter
 - Plant Identification**
 Legible labels shall be attached to all shade trees, minor trees, specimen shrubs and bushes 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 of origin.
 - 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:
 - 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.
 - Digging**
 All plant material shall be dug, balled and burlapped (B&B) in accordance with the "AAN Standards".
 - Excavation of Plant Pits**
 The landscaping contractor shall excavate all plant pits, vine pits, hedge trenches and shrub beds in accordance with the following schedule:
 - 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.
 - 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.

PLANT SIZE	ROOT BALL	PIT DIAMETER	PIT DEPTH
3" - 3.5" cal.	32"	64"	28"
3.5" - 4" cal.	36"	72"	32"
4" - 4.5" cal.	40"	80"	36"
4.5" - 5" cal.	44"	88"	40"
5" - 5.5" cal.	48"	96"	44"
5.5" - 6" cal.	52"	104"	48"
 - Plant Pruning, Edging and Mulching**
 - Each tree, shrub or vine shall be pruned in an appropriate manner to its particular requirements, in accordance with accepted standard practices. 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 pointed with an approved antiseptic tree wound dressing.
 - 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 pockets.
 - 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.
 - 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.
 - 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.
 - 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 season.
 - 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.
- B. Sodding**
- All sodding shall be in accordance to the "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Area" latest edition, approved by the Landscape Contractors Association of Metropolitan Washington and the American Society of Landscape Architects.
 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 Escort.



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE, SUITE 250 - BERTONSVILLE OFFICE PARK
 BERTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VIA: 301-988-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
11-4-99	As submitted for signature		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
 100 WEST PENNSYLVANIA AVENUE
 TOWSON, MD 21204
 PH. 410-825-0545
 ATTN: MR. CHUCK McMAHON

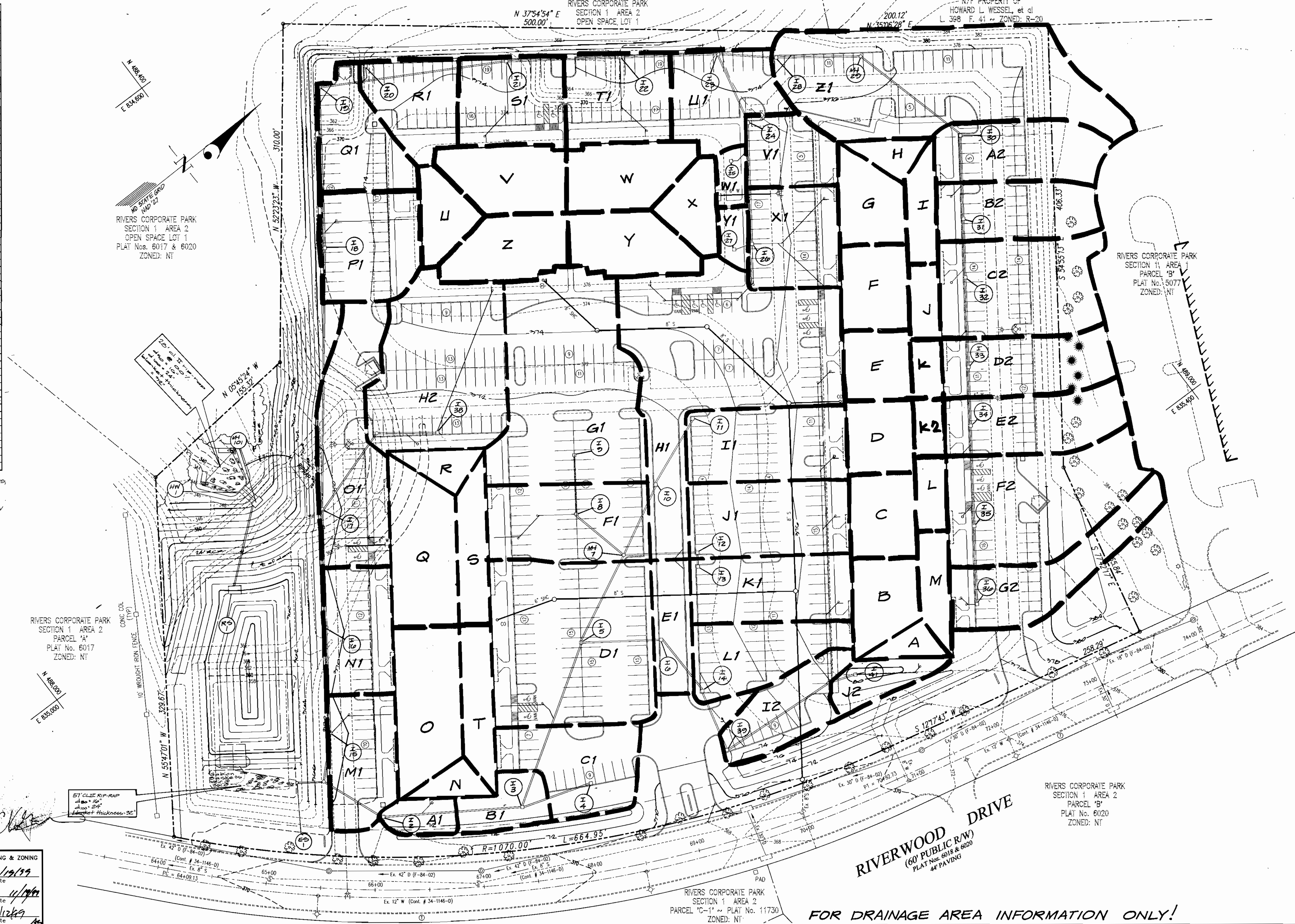
LANDSCAPE NOTES & DETAILS
RIVERS CORPORATE PARK
 SECTION 1 AREA 2 - PARCEL 'D'
 PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
NOT TO SCALE (PLOT AT 1"=1')	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct 18, 1999	41-12	6 OF 16

HOWARD COUNTY, MARYLAND

Area	Inlet	Area	Imp.	1/2 Imp.	CN
A1	I-2	0.04	0	0.00	0.17
B1	I-3	0.02	0	0.00	0.17
C1	I-4	0.2	0.12	0.60	0.50
D1	I-5	0.52	0.4	0.77	0.71
E1	I-6	0.1	0.07	0.70	0.60
F1	I-8	0.28	0.19	0.68	0.64
G1	I-9	0.55	0.5	0.91	0.8
H1	I-10	0.60	0.46	0.70	0.60
I1	I-11	0.23	0.18	0.63	0.71
J1	I-12	0.24	0.19	0.72	0.72
K1	I-13	0.21	0.16	0.70	0.7
L1	I-14	0.17	0.14	0.82	0.74
M1	I-15	0.17	0.11	0.65	0.67
N1	I-16	0.17	0.11	0.65	0.67
O1	I-17	0.3	0.22	0.73	0.68
P1	I-18	0.2	0.14	0.70	0.60
Q1	I-19	0.16	0.13	0.81	0.73
R1	I-20	0.16	0.11	0.69	0.65
S1	I-21	0.18	0.13	0.72	0.67
T1	I-22	0.18	0.13	0.72	0.67
U1	I-23	0.18	0.13	0.72	0.67
V1	I-24	0.12	0.10	0.67	0.64
W1	I-25	0.04	0.01	0.25	0.36
X1	I-26	0.18	0.13	0.72	0.67
Y1	I-27	0.04	0.01	0.25	0.36
Z1	I-28	0.21	0.20	0.48	0.51
A2	I-30	0.19	0.07	0.37	0.44
B2	I-31	0.07	0.07	0.39	0.45
C2	I-32	0.27	0.12	0.41	0.47
D2	I-33	0.18	0.1	0.53	0.54
E2	I-34	0.2	0.07	0.35	0.42
F2	I-35	0.37	0.19	0.35	0.43
G2	I-36	0.21	0.08	0.38	0.49
H2	I-38	0.42	0.22	0.76	0.7
I2	I-39	0.15	0.1	0.67	0.64
J2	I-41	0.08	0	0.00	0.10
A	Wdgs 'A'	0.04	0.04	1.00	0.80
B	Wdgs 'B'	0.1	0.1	1.00	0.80
C	Wdgs 'C'	0.1	0.1	1.00	0.80
D	Wdgs 'D'	0.1	0.1	1.00	0.80
E	Wdgs 'E'	0.09	0.09	1.00	0.80
F	Wdgs 'F'	0.11	0.11	1.00	0.80
G	Wdgs 'G'	0.1	0.1	1.00	0.80
H	Wdgs 'H'	0.04	0.04	1.00	0.80
I	Wdgs 'I'	0.07	0.07	1.00	0.80
L	Wdgs 'L'	0.05	0.05	1.00	0.80
M	Wdgs 'M'	0.05	0.05	1.00	0.80
N	Wdgs 'N'	0.07	0.07	1.00	0.80
O	Wdgs 'O'	0.04	0.04	1.00	0.80
P	Wdgs 'P'	0.185	0.185	1.00	0.80
Q	Wdgs 'Q'	0.04	0.04	1.00	0.80
R	Wdgs 'R'	0.04	0.04	1.00	0.80
S	Wdgs 'S'	0.09	0.09	1.00	0.80
T	Wdgs 'T'	0.09	0.09	1.00	0.80
U	Wdgs 'U'	0.15	0.15	1.00	0.80
V	Wdgs 'V'	0.15	0.15	1.00	0.80
W	Wdgs 'W'	0.15	0.15	1.00	0.80
X	Wdgs 'X'	0.15	0.15	1.00	0.80
Y	Wdgs 'Y'	0.15	0.15	1.00	0.80
Z	Wdgs 'Z'	0.15	0.15	1.00	0.80

NOTES:
 1. DUE TO PREVIOUS MASS GRADING OPERATIONS, 'C' SOILS WERE USED FOR STORM DRAIN DESIGN.
 2. 5.0 MINUTE INLET TIME OF CONCENTRATION WAS USED FOR STORM DRAIN DESIGN.



APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE: SEPT 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: Paula J. McLaughlin 11/19/99
 Chief, Division of Land Development: Condy Kinnella 11/19/99
 Chief, Development Engineering Division: William Deussen 11/12/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3609 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

DATE	BY	APP'R.	REVISION
11-4-99	As submitted for signature		

PREPARED FOR:
 NOTTINGHAM PROPERTIES, INC.
 100 WEST PENNSYLVANIA AVENUE
 TOWSON, MD. 21204
 PH: 410-825-0545
 ATTN: MR. CHUCK McMAHON

RIVERS CORPORATE PARK
 SECTION 1 AREA 2 ~ PARCEL 'D'
 PLAT No. 6020
 FOR DRAINAGE AREA INFORMATION ONLY!

SCALE	ZONING	G. L. W. FILE No.
1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct 18, 1999	41-12	7 OF 16

EX. TRAP #3 (DETAIL 3)

STONE OUTLET SEDIMENT TRAP ST.II	
EX. DRAINAGE AREA	1.57 AC
PROP. DRAINAGE AREA	1.50 AC
STORAGE REQUIRED	1164 CF
STORAGE PROVIDED	8842 CF
LIMIT OF WET STORAGE	364.30
WEIR LENGTH	5'
CHANNEL DEPTH	1'
TOP OF DAM ELEV.	360.00
WEIR CREST ELEV.	360.00
OUTLET ELEV. (LIMIT WET STG.)	360.3
CLEANOUT ELEV.	365.15
BOTTOM ELEV.	364.00
BOTTOM DIMENSIONS	24' x 56'

SEDIMENT BASIN DATA

EXISTING DRAINAGE AREA	13.2 AC	
PROPOSED DRAINAGE AREA	13.2 AC	
STORAGE REQUIRED:		
WET	23,760 CF	
DRY	23,760 CF	
STORAGE PROVIDED:		
WET	23,760 CF @ 357.4	
DRY	24,025 CF @ 355.5	
RISER:		
BARREL	10' x 6' (MOD. A-10)	
TOP OF DAM	36' R.C.P. ASTM. C-301	
WEIR LENGTH:		
2-YEAR	10'-2"	
10-YEAR	3'-2"	
WEIR CREST ELEVATION:		
2-YEAR	369.50	
10-YEAR	362.50	
RISER CREST ELEVATION	363.10	
BOTTOM DIMENSIONS	54' x 163'	
BOTTOM ELEVATION	355.0	
CLEANOUT ELEVATION	350.2	
DISCHARGES:		
BEFORE	AFTER (W/MANAGEMENT)	
2 YEAR	14.6 CFS	14.1 CFS @ 362.47
10 YEAR	36.0 CFS	35.4 CFS @ 363.66

These Plans for small pond construction, soil erosion & sediment control meet the requirements of the Howard Soil Conservation District.

John J. Kelly 11/19/99
 Director, Howard Soil Conservation District

These plans have been reviewed for the Howard Soil Conservation District & meet the technical requirements for small pond construction, soil erosion & sediment control.

Cheryl Simmon/CS 11/19/99
 Natural Resources Conservation Service

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: Sept 23, 1999

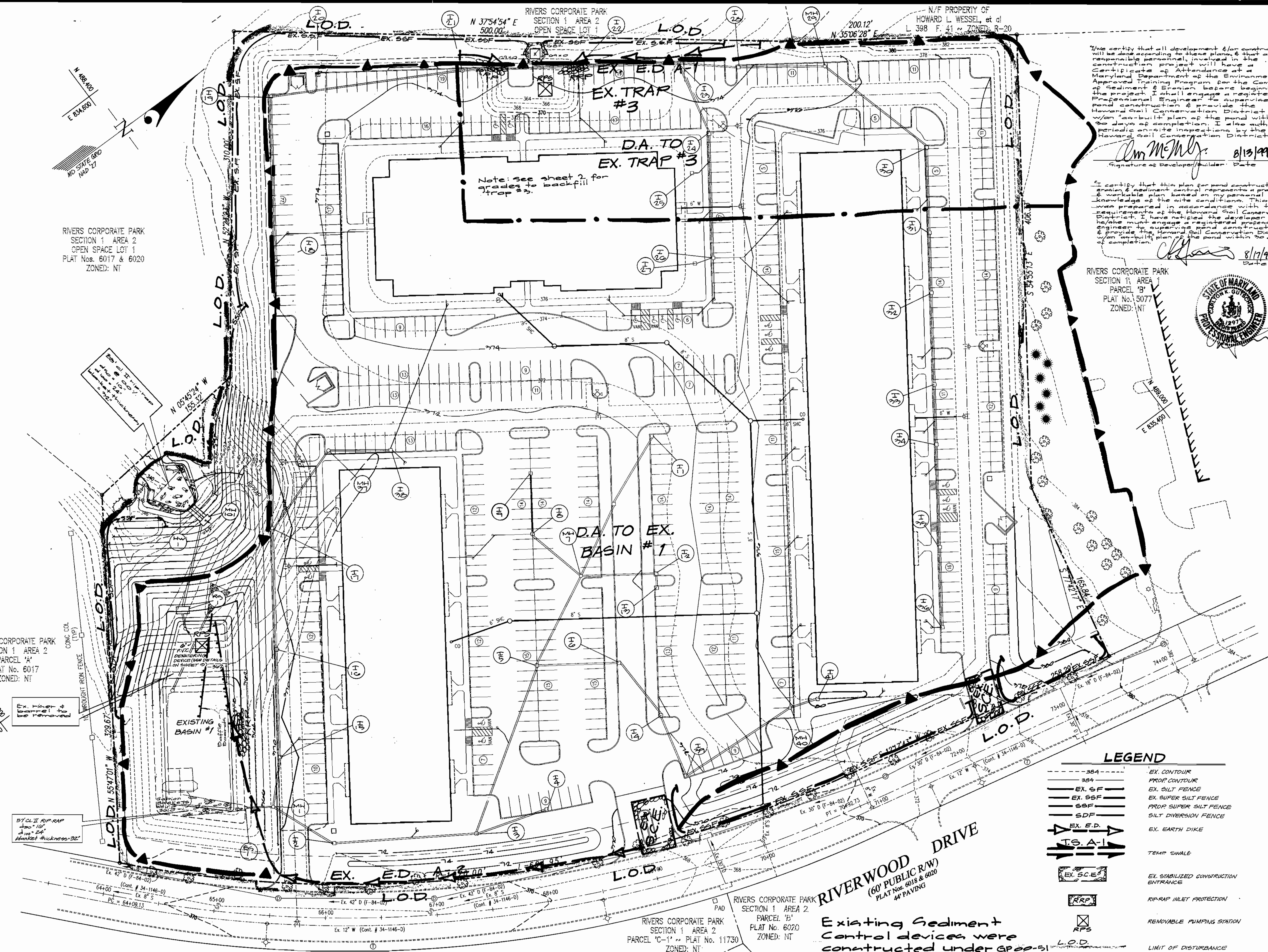
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Frank V. D'Agostino 11/19/99
 Director

David H. Smith 11/19/99
 Chief, Division of Land Development

Cheryl Simmon 11/19/99
 Chief, Development Engineering Division

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 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186



I/we certify that all development &/or construction will be done according to these plans & 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 & Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction & provide the Howard Soil Conservation District with a "as-built" plan of the pond within 30 days of completion. I also authorize periodic onsite inspections by the Howard Soil Conservation District.

Cheryl Simmon 8/13/99
 Signature of Developer/Builder Date

I certify that this plan for pond construction, erosion & sediment control represents a practical & workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction & provide the Howard Soil Conservation District with a "as-built" plan of the pond within 30 days of completion.

Cheryl Simmon 8/17/99
 Date

RIVERS CORPORATE PARK
 SECTION 1 AREA 1
 PARCEL 'B'
 PLAT No. 5077
 ZONED: NT

STATE OF MARYLAND
 DEPARTMENT OF THE ENVIRONMENT
 SOIL CONSERVATION DISTRICT

LEGEND

---354---	EX. CONTOUR
---354---	PROP. CONTOUR
---	EX. GF
---	EX. SBF
---	EX. SUPER SILT FENCE
---	PROP. SUPER SILT FENCE
---	SDF
---	EX. E.D.
---	EX. E.D.
---	TEMP. SWALE
---	EX. SCE
---	EX. STABILIZED CONSTRUCTION ENTRANCE
---	RIP-RAP INLET PROTECTION
---	REMOVABLE PUMPING STATION
---	LIMIT OF DISTURBANCE

Existing Sediment Control devices were constructed under GPO-51

SEDIMENT & EROSION CONTROL PLAN
RIVERS CORPORATE PARK
 SECTION 1 AREA 2 ~ PARCEL 'D'
 PLAT No. 6020

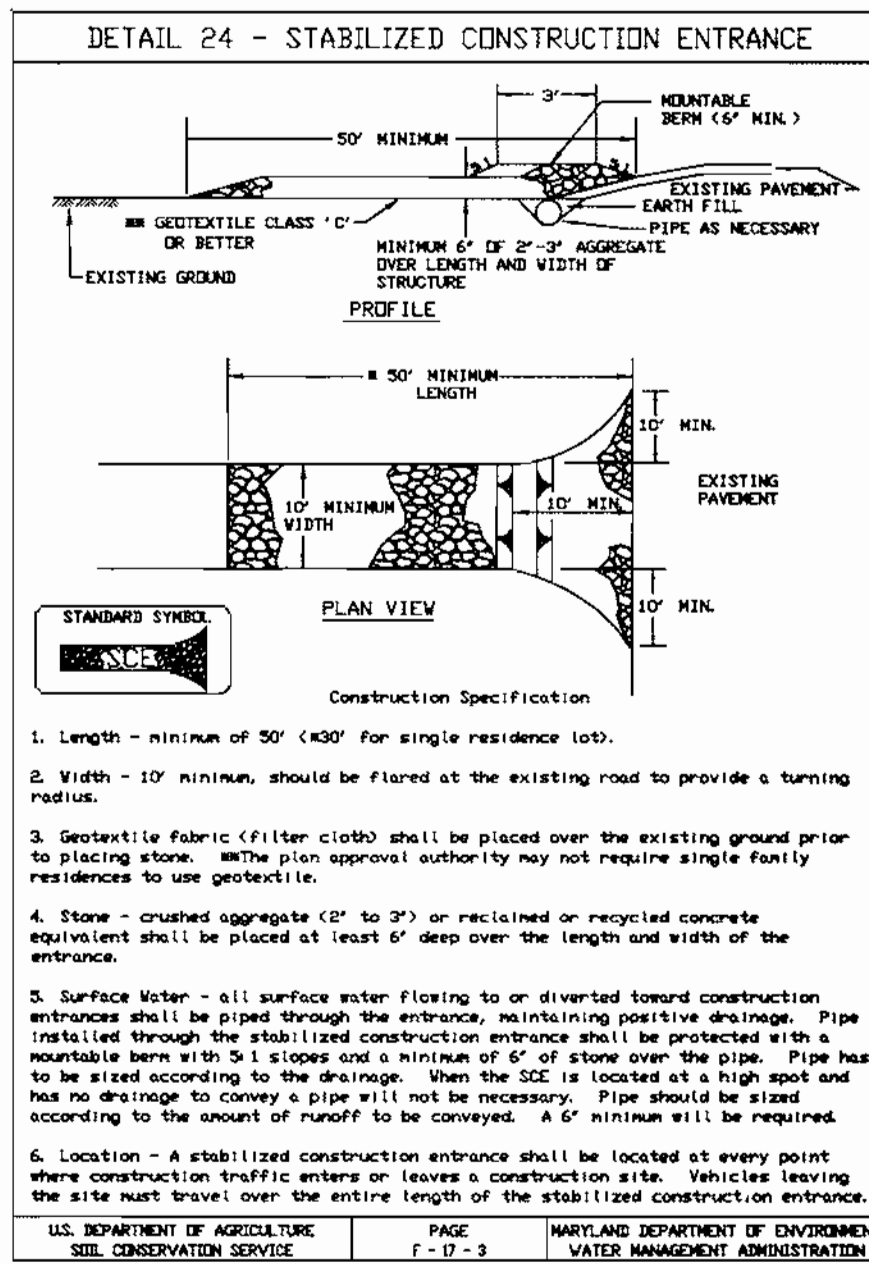
SCALE	ZONING	G. L. W. FILE No.
1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct 18, 1999	41-12	B OF 16

DATE	REVISION	BY	APPR.
11-4-99	As submitted for signature		

PREPARED FOR:
 NOTTINGHAM PROPERTIES, INC.
 100 WEST PENNSYLVANIA AVENUE
 TOWSON, MD. 21284
 PH: 410-825-0545
 ATTN: MR. CHUCK McMAHON

GUILFORD ELECTION DISTRICT No. 6

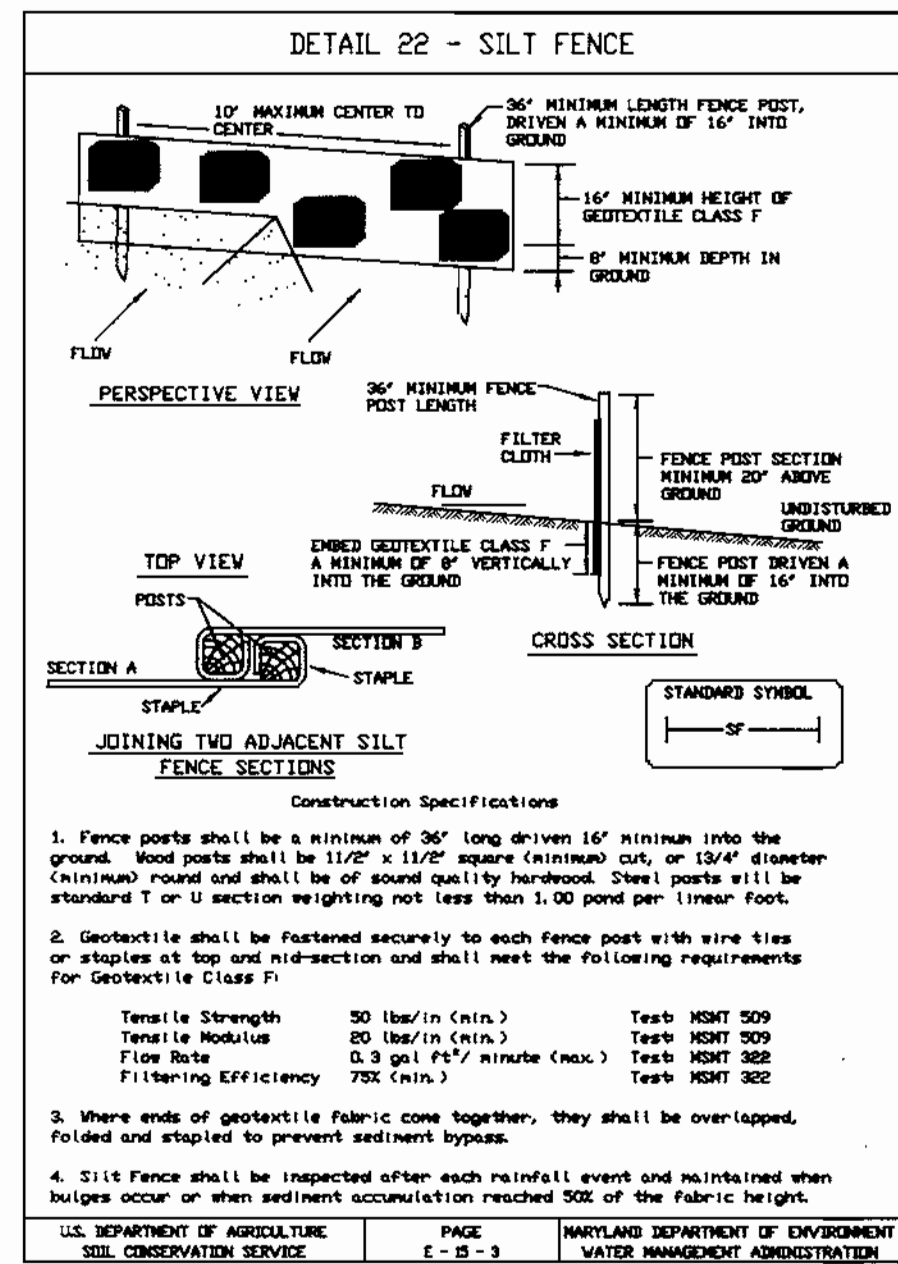
HOWARD COUNTY, MARYLAND



Construction Specifications

- Length - minimum of 50' (40' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- 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.
- 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 entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrance shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a reasonable berm 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.
- 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 stabilized construction entrance.

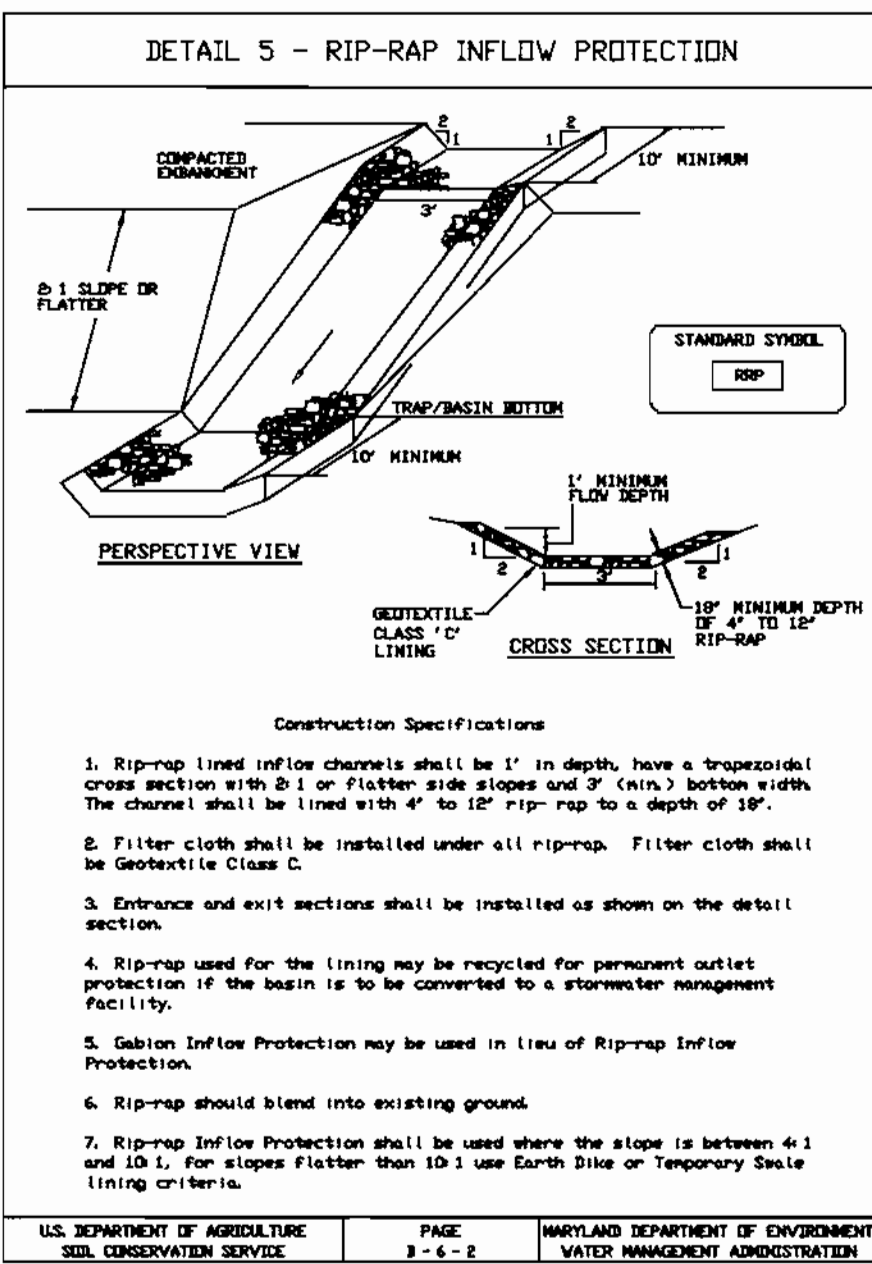
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class C:
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

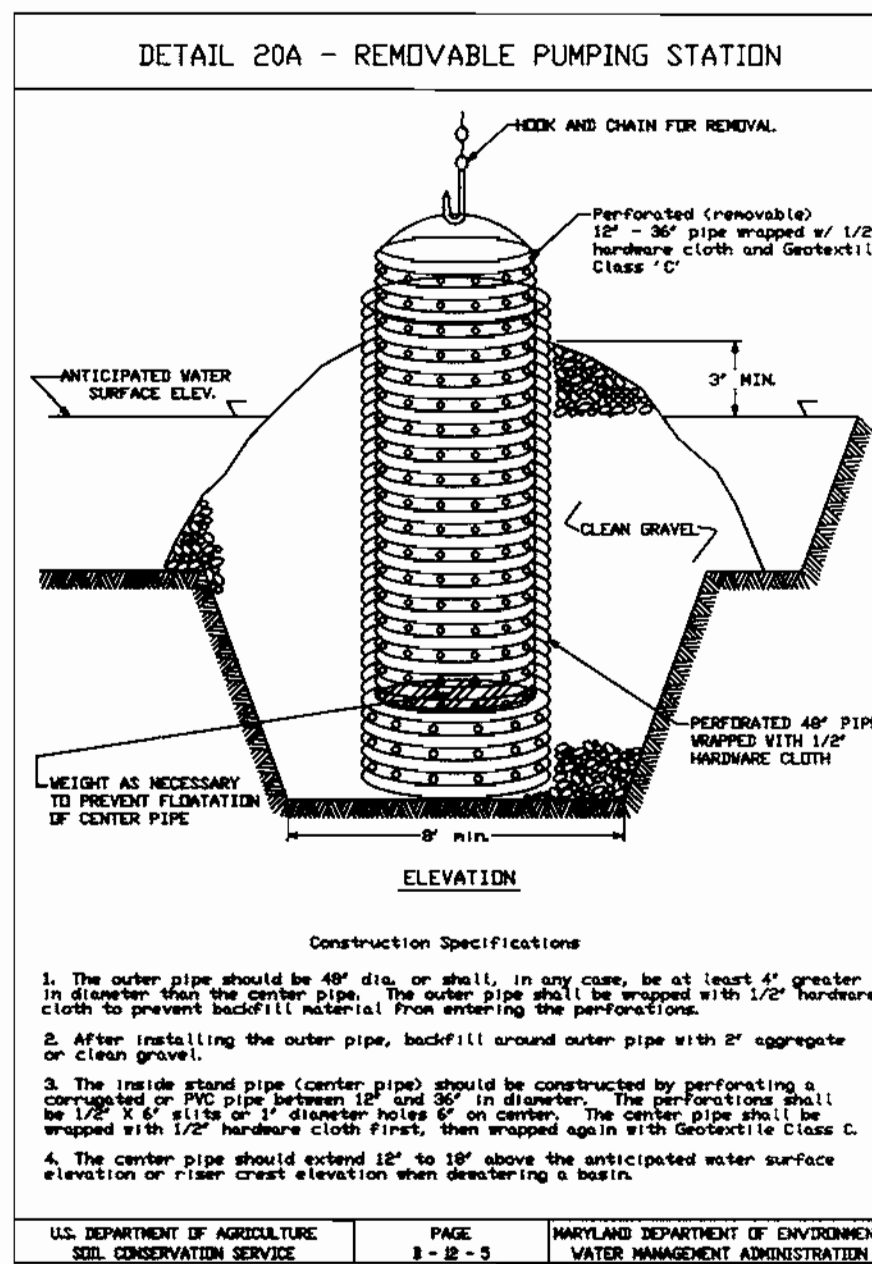
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



Construction Specifications

- Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with B:1 or Flatter side slopes and 3" (min.) bottom width. The channel shall be lined with 4' to 12' rip-rap to a depth of 18".
- Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
- Entrance and exit sections shall be installed as shown on the detail section.
- Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
- Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
- Rip-rap should blend into existing ground.
- Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1. For slope flatter than 10:1 use Earth Bank or Temporary Stone Lining criteria.

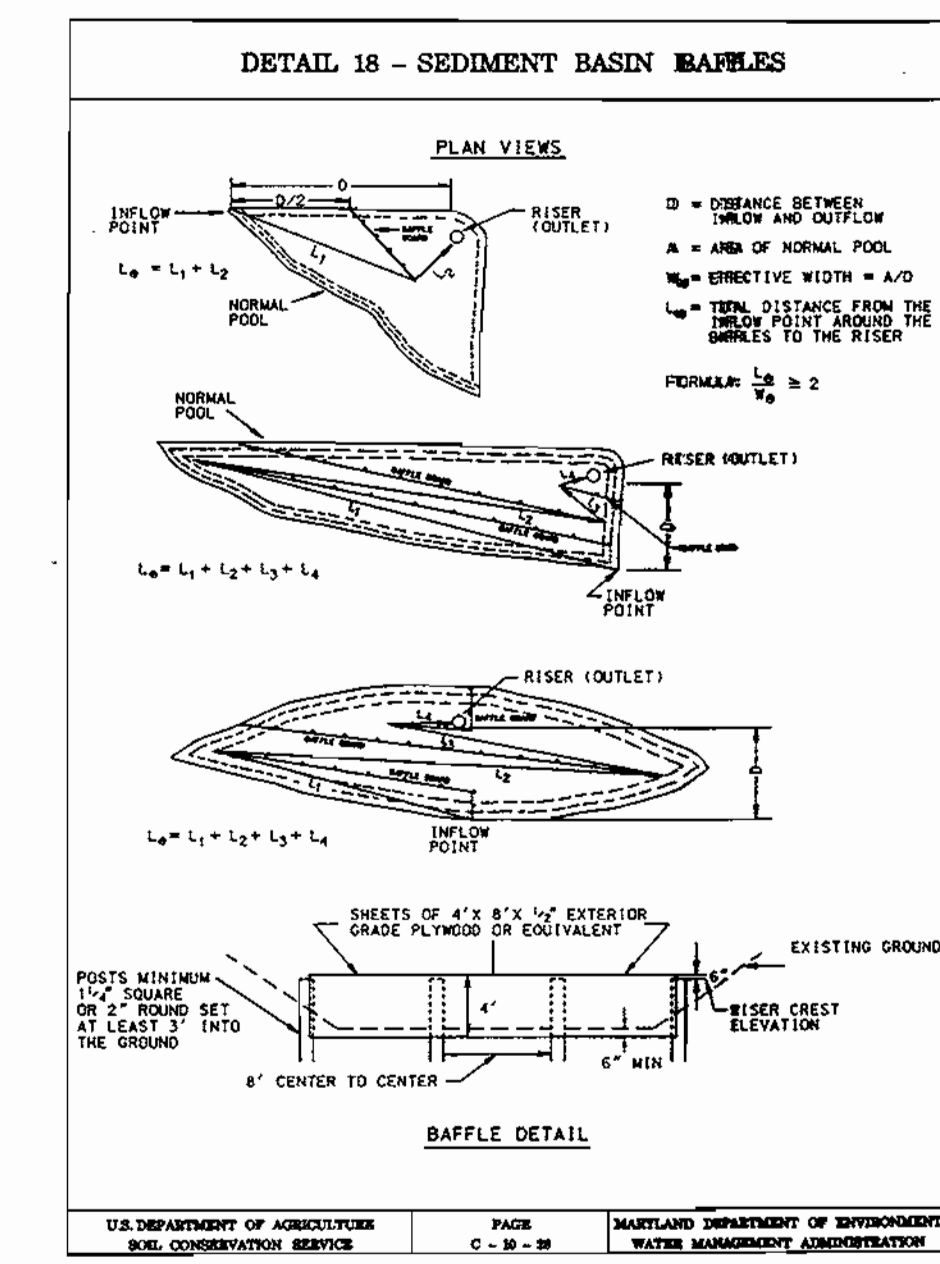
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



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 perforated with 1/2" diameter cloth to prevent backfill material from entering the perforations with 1/2" diameter holes or 1" diameter holes if on cover. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with 1/2" Geotextile Class C.
- The inside stand pipe (center pipe) should be constructed by perforating a 48" diameter pipe with 1/2" holes spaced 12" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with 1/2" Geotextile Class C.
- The center pipe should extend 12" to 18" above the anticipated water surface elevation or 18" crest elevation when desastering a basin.

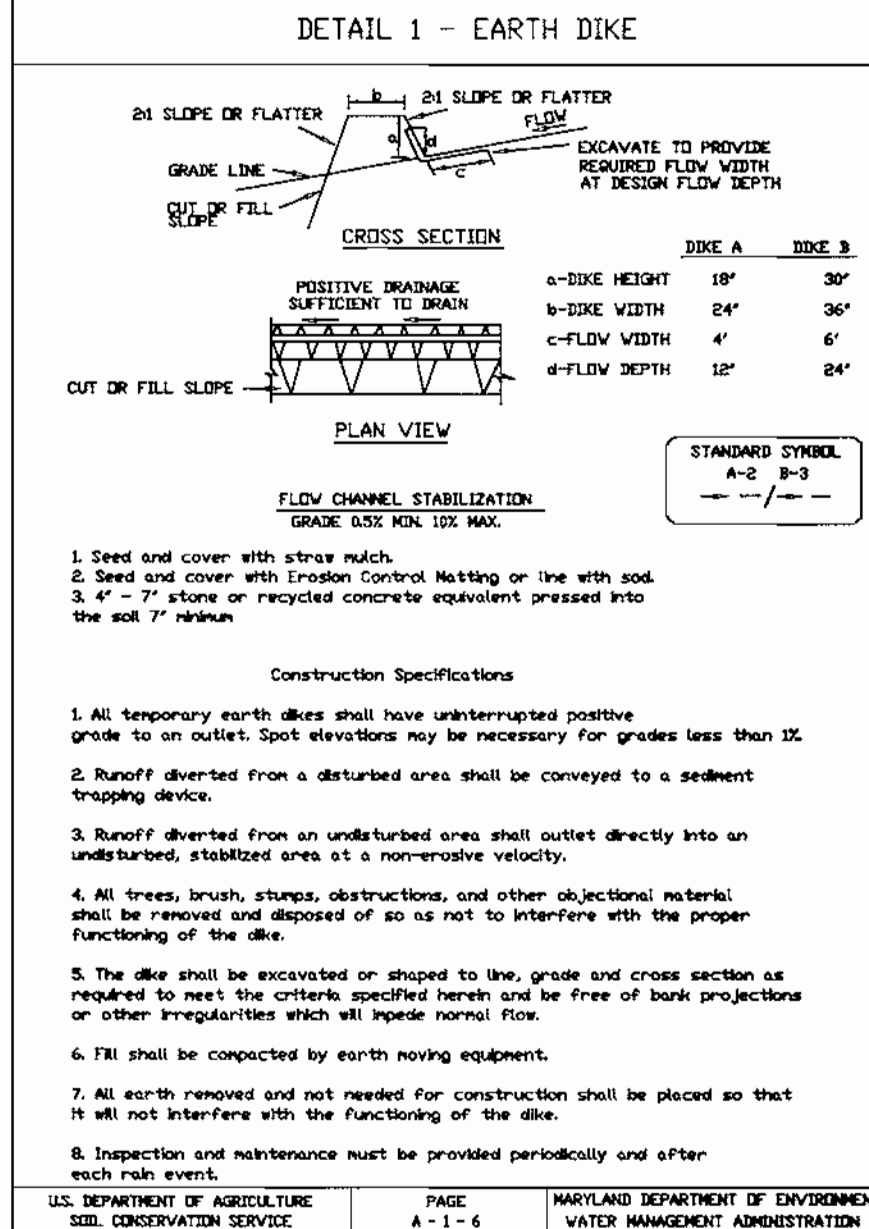
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



Construction Specifications

- Perforations in the draw-down device may not extend into the wet storage.
- The total area of the perforations must be greater than 2 times the area of the internal orifice.
- The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class C.
- Provide support of draw-down device to prevent sagging and flotation. An approved alternative measure is to stake both sides of draw-down device against a 1" by 4" board or 1" by 4" square or 2" round wooden posts set 3" minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

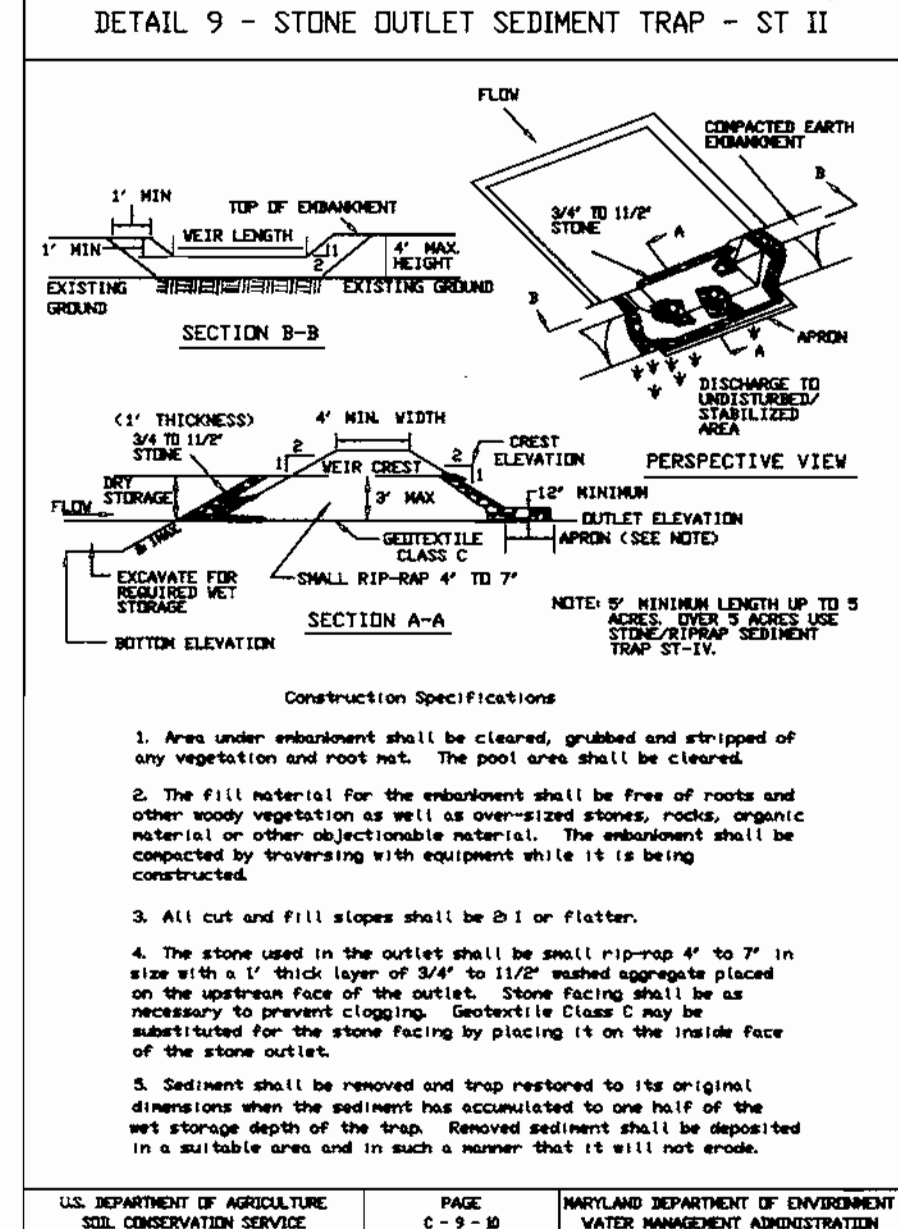
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



Construction Specifications

- Seed and cover with straw mulch.
- Seed and cover with Erosion Control Matting or the with sod.
- 3" - 7" stone or recycled concrete equivalent pressed into the soil 1" minimum.

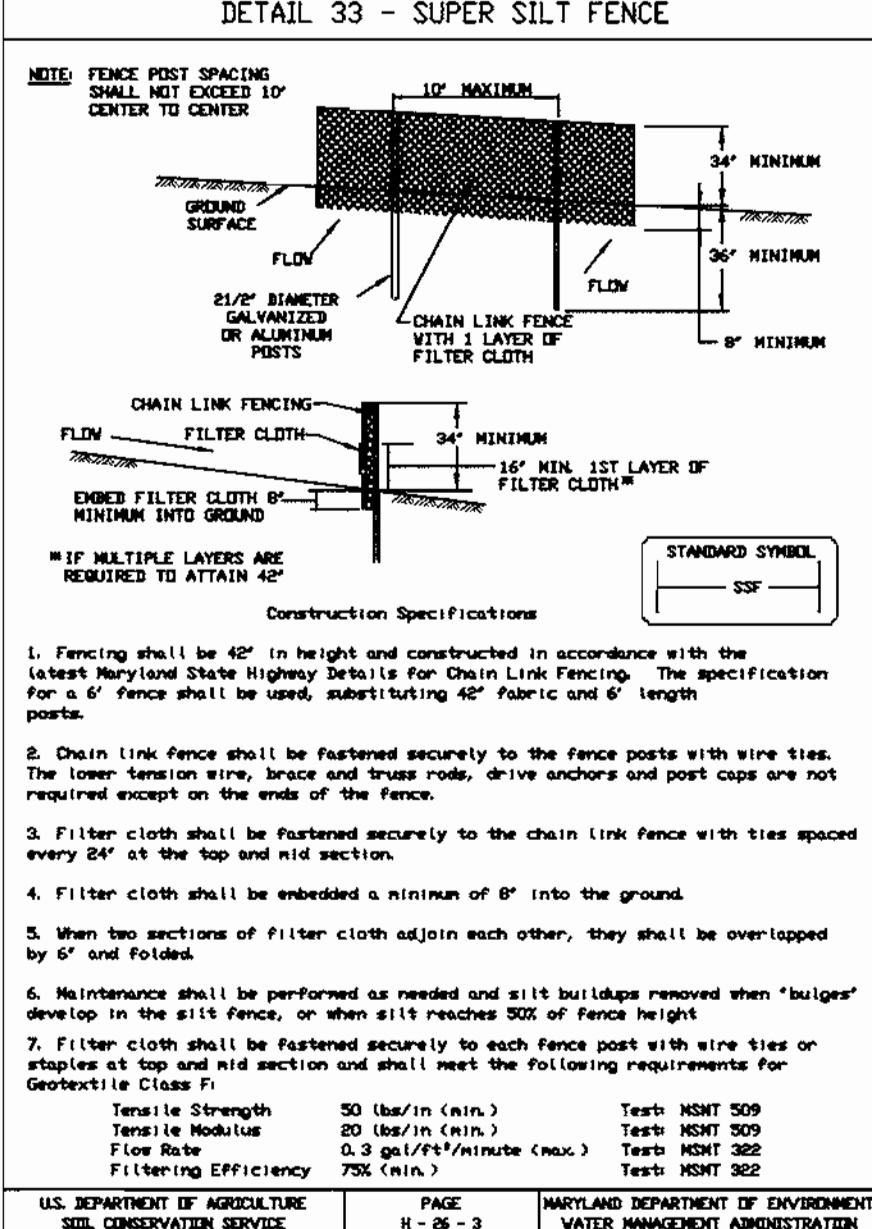
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



Construction Specifications

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and rock mat. The post area shall be cleared.
- The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by reversing with equipment while it is being constructed.
- All cut and fill slopes shall be 3:1 or flatter.
- The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" void layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
- Sediment shall be removed and truck hauled to its original destination when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

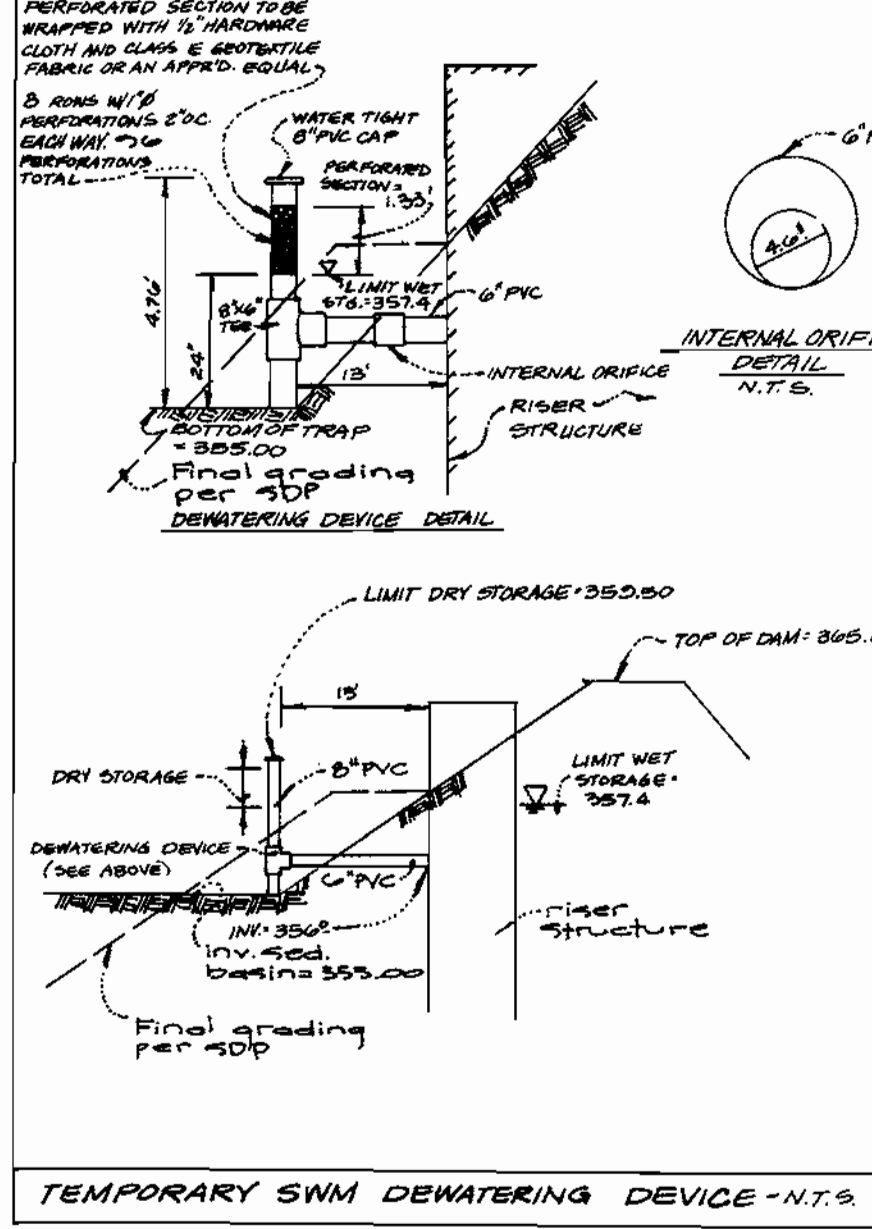
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



Construction Specifications

- Fencing shall be 40" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 4" fence shall be used, substituting 40" fabric and 6" length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt bulges removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class C:

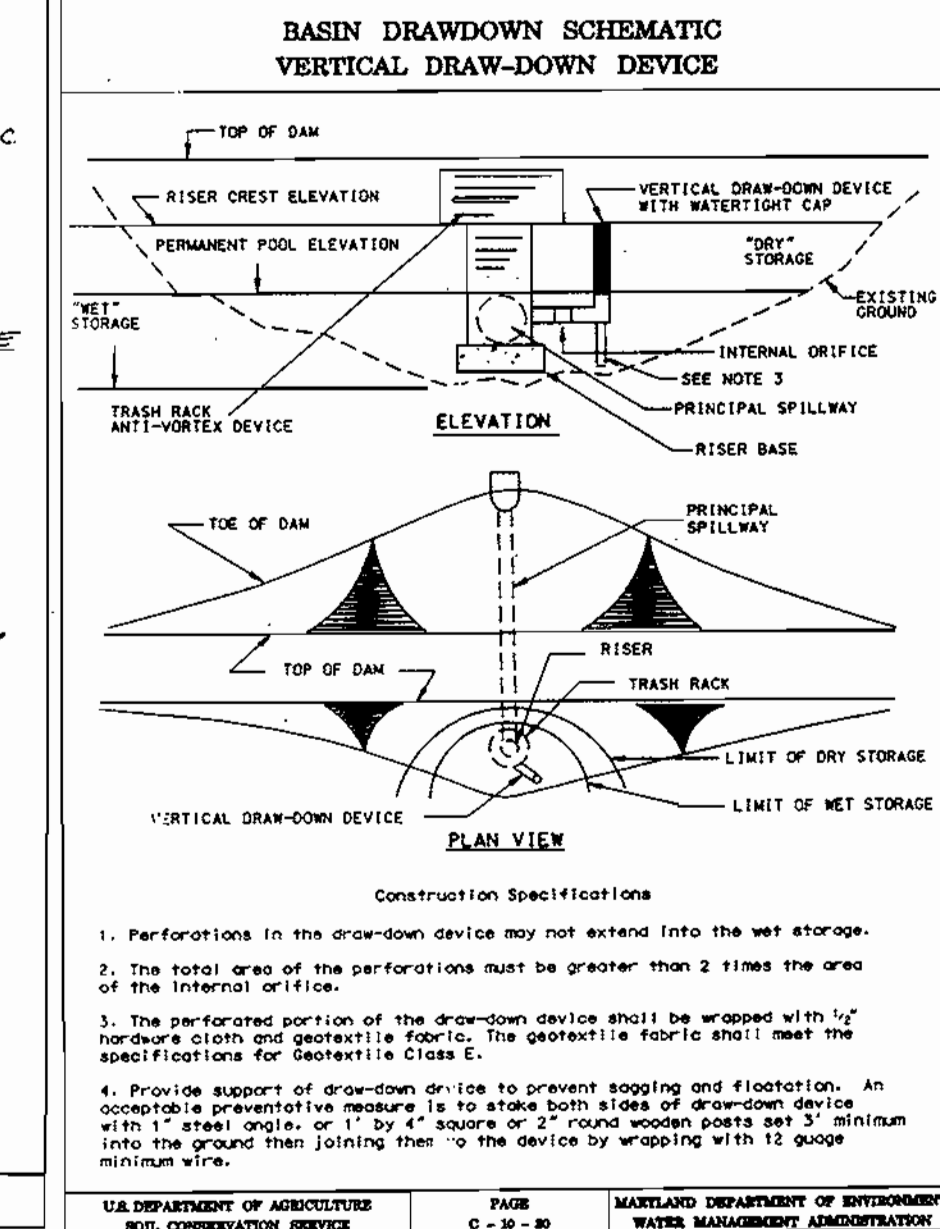
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION



Construction Specifications

- Perforations in the draw-down device may not extend into the wet storage.
- The total area of the perforations must be greater than 2 times the area of the internal orifice.
- The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class C.
- Provide support of draw-down device to prevent sagging and flotation. An approved alternative measure is to stake both sides of draw-down device against a 1" by 4" board or 1" by 4" square or 2" round wooden posts set 3" minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

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- Provide support of draw-down device to prevent sagging and flotation. An approved alternative measure is to stake both sides of draw-down device against a 1" by 4" board or 1" by 4" square or 2" round wooden posts set 3" minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

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PERMANENT SEEDING NOTES

Apply to graded or cleared area 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, discing or other acceptable means before seeding (unless previously loosened).

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

- 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 ureaform fertilizer (9 lbs/1000 sq ft).
- Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) 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 (14 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 (0.5 lbs/1000 sq ft) of weeping lovegrass. During the period of October 15 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 gal 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.

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TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed 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 ryegrass (3.2 lbs/1000 sq ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (0.7 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 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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SEDIMENT CONTROL NOTES

- 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.
- 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.
- Following initial soil disturbance or redistribution, 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 greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 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.
- 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.
- 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.
- Site Analysis:

Total Area of Site	: 12.68	Acres
Area Disturbed	: 11.98	Acres
Area to be roofed or paved	: 7.26	Acres
Area to be vegetatively stabilized	: 4.72	Acres
Total Cut	: 57.21	Cu. Yds.
Total Fill	: 57.21	Cu. Yds.
Off-site waste/borrow area location:	N/A	
- Additional sediment control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
- 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.
- 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.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: SEPT 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: [Signature] 10/19/99
Chief, Division of Land Development: [Signature] 11/19/99
Chief, Development Engineering Division: [Signature] 11/24/99

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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 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4166

NOV 27 1999
DATE: 11/27/99
BY: [Signature]
APPR: [Signature]

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

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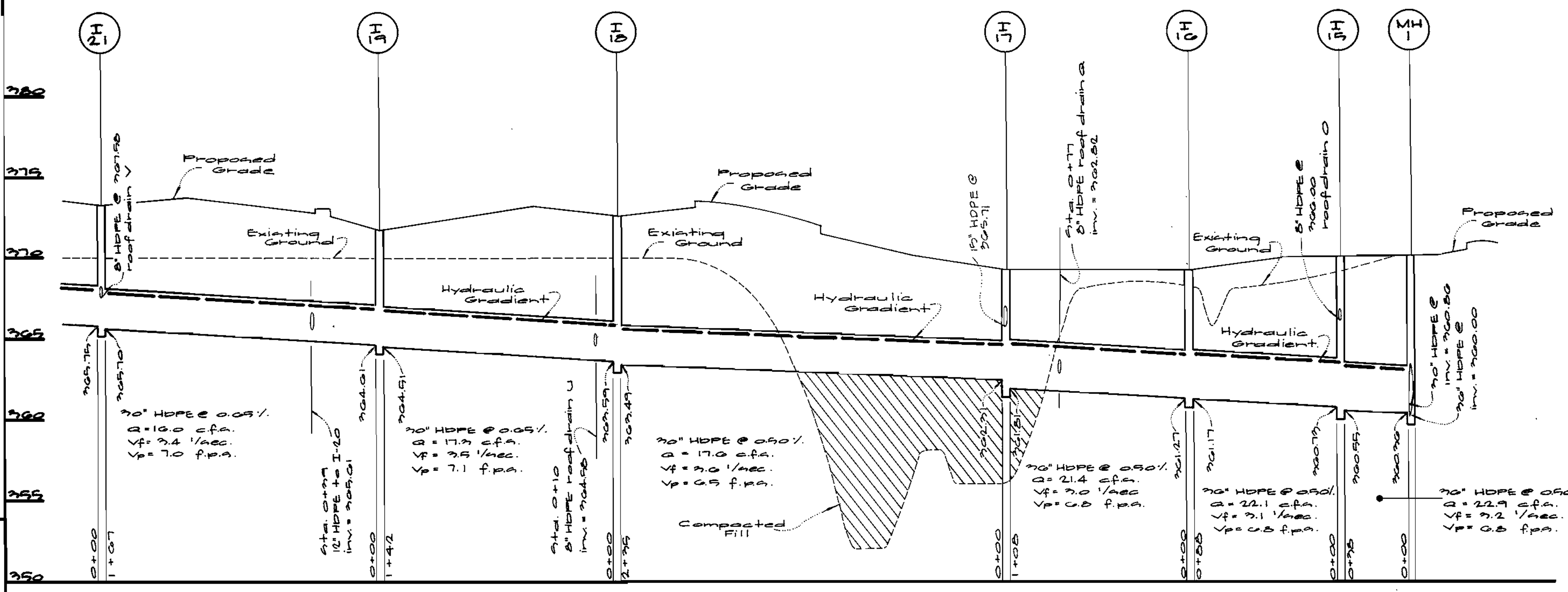
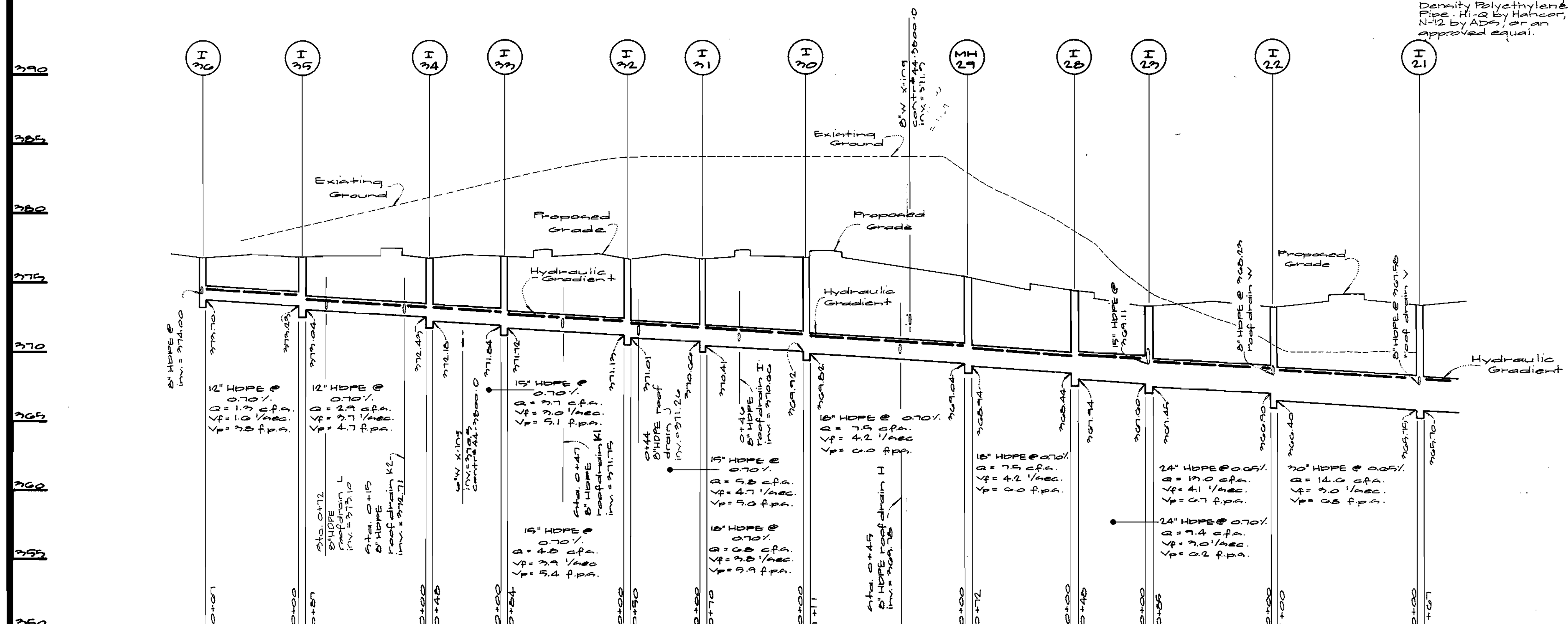
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 1-10-3, MARYLAND DEPARTMENT OF ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION

Pipe Schedule			
size	type	quantity (l.f.)	Remarks
8"	HDPE	572'	
12"	"	154'	
15"	"	102'	
24"	"	132'	
30"	"	644'	
36"	"	234'	

Structure Schedule									
No.	Type	Width (inside)	Top Elevation		Invert Elevation		St'd Detail	Locations	Remarks
			Upper	Lower	Upper	Lower			
I-15	WR Inlet	—	367.70	—	366.00	366.55	SD 4.3B	See Plan	
I-16	"	—	367.70	—	366.50	361.17	"	"	
I-17	"	—	367.70	—	365.17	361.81	"	"	
I-18	"	—	373.10	—	363.50	363.40	"	"	
I-19	"	—	372.48	372.48	364.61	364.51	"	"	
I-21	"	—	373.70	—	367.98	365.70	"	"	
I-22	"	—	373.70	—	368.23	366.40	"	"	
I-28	A-5 Inlet	—	374.38	374.38	368.44	367.94	SD 4.40	"	
I-30	WR Inlet	—	377.10	377.20	369.92	369.82	SD 4.3B	"	
I-31	"	—	377.20	—	370.00	370.41	"	"	
I-32	"	—	377.20	—	371.13	371.01	"	"	
I-33	"	—	377.20	—	371.84	372.72	"	"	
I-34	"	—	377.20	—	372.43	372.18	"	"	
I-35	"	—	377.20	—	373.23	373.04	"	"	
I-36	"	—	377.20	—	374.00	373.70	"	"	
I-20	Double Comb	—	373.10	373.20	—	369.50	SD 4.3B	"	
MH 29	St'd Manhole	4'-0"	—	—	367.04	368.94	S. 5.01	"	
MH10	A-10 Inlet	4'-0"	350.00	—	341.00	340.90	SD 4.41	"	
HW 1	type C' endwall	—	344.00	—	340.00	—	SD 5.21	"	

HDPE indicates High Density Polyethylene Pipe. H-12 by Hancox, H-12 by Apsco, or an approved equal.

Note: For inlets located within parking or in grass areas, top elevation indicates grate elevation. For all other instances, top elevation indicates top of curb.



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT 23, 1999



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: Shawn C. McLaughlin 11/19/99
 Chief, Division of Land Development: Cliff Hamilton 11/19/99
 Chief, Development Engineering Division: Cliff Hamilton 11/12/99

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 TEL: 301-421-4024 FAX: 301-989-2524

DATE	BY	APP'R	REVISION
Nov 4, 99	As submitted for signature		

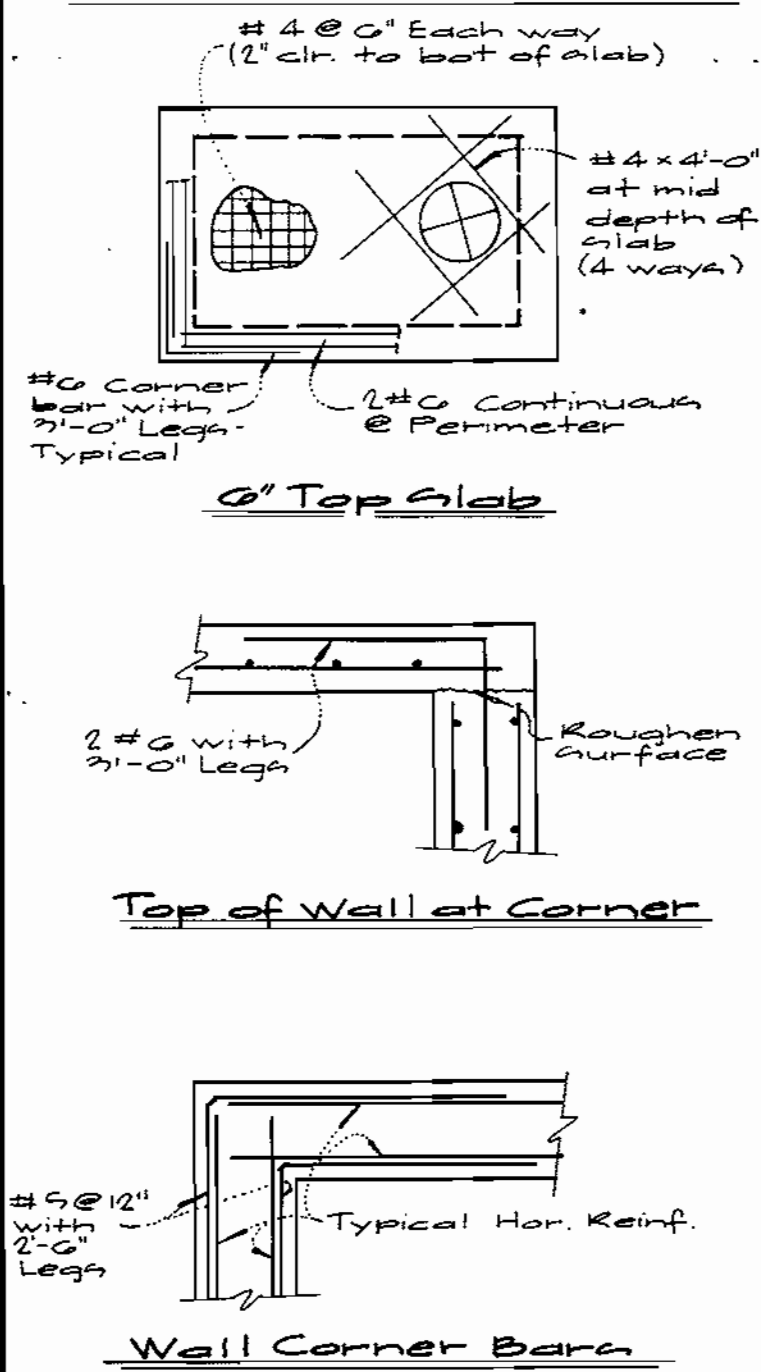
PREPARED FOR:
 NOTTINGHAM PROPERTIES, INC.
 100 WEST PENNSYLVANIA AVENUE
 TOWSON, MD. 21204
 PH: 410-825-0545
 ATTN: MR. CHUCK McMAHON

STORM DRAIN PROFILES & SCHEDULES
RIVERS CORPORATE PARK
 SECTION 1 AREA 2 - PARCEL 'D'
 PLAT No. 6020
 GUILFORD ELECTION DISTRICT No. 6
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 18, 1999	41 - 12	11 OF 16

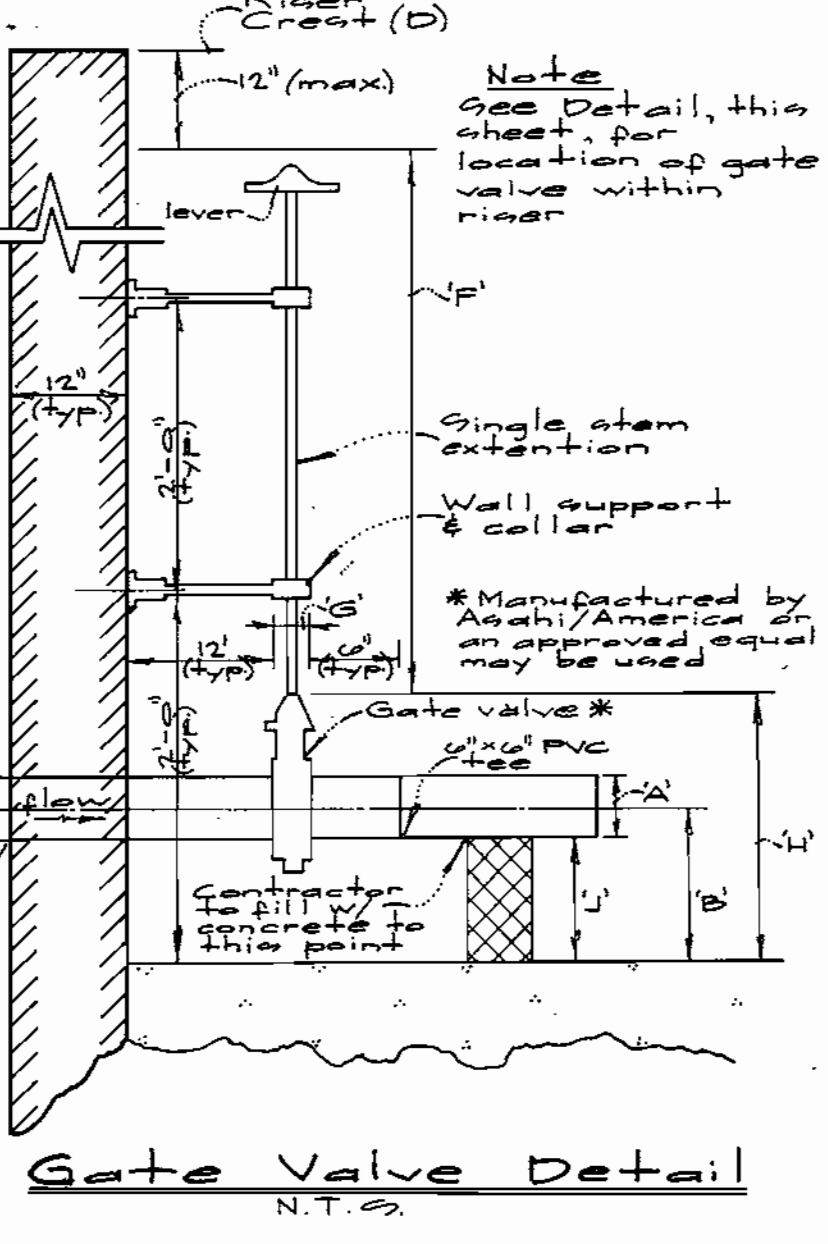
GDP 00-28

Riser Sections

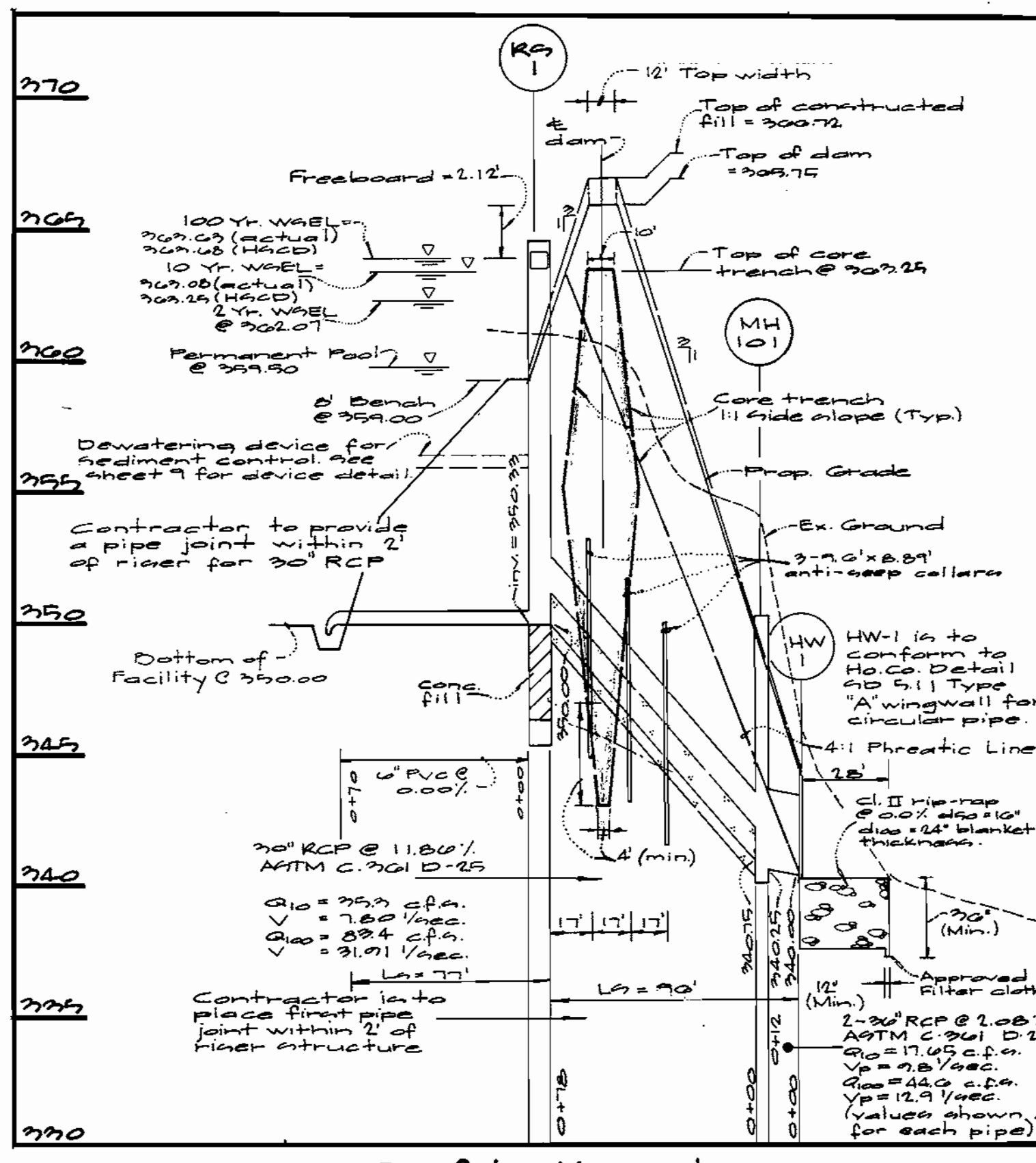
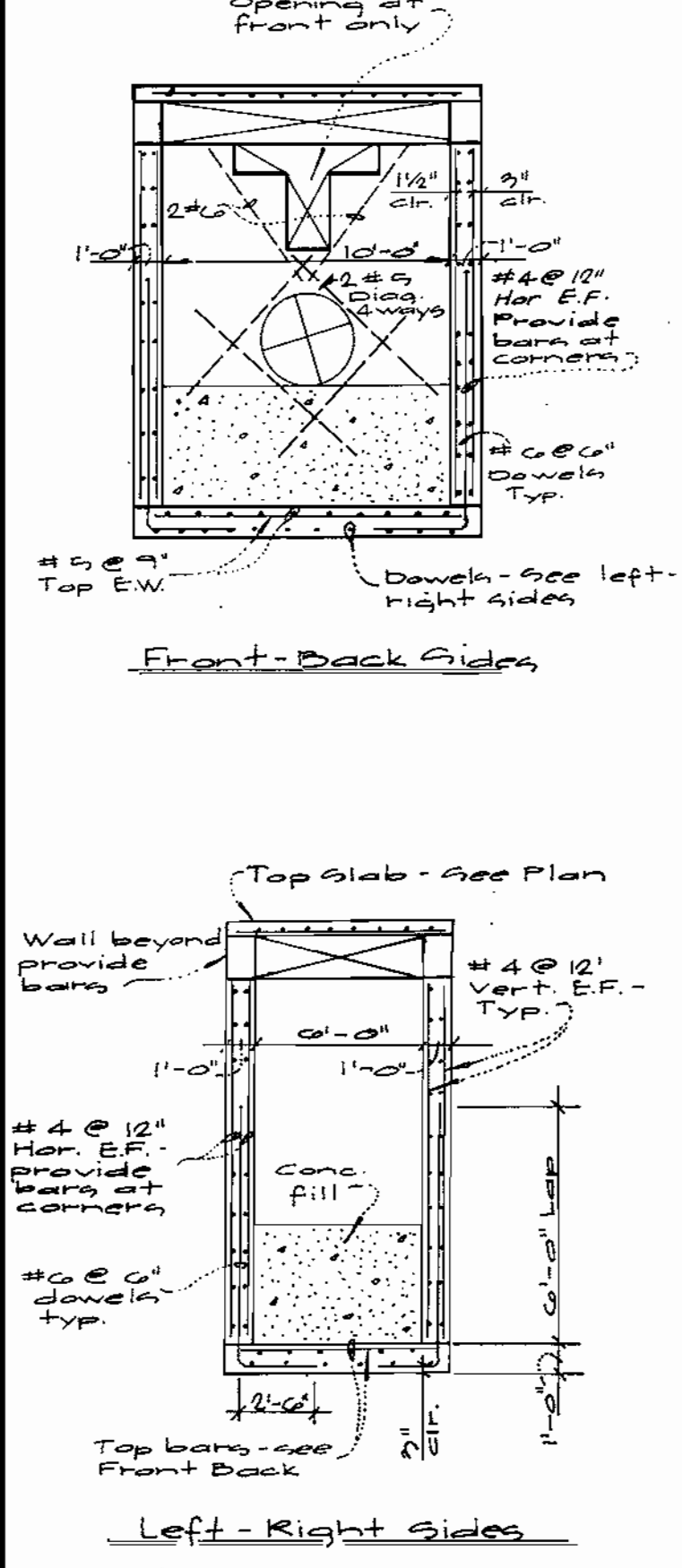
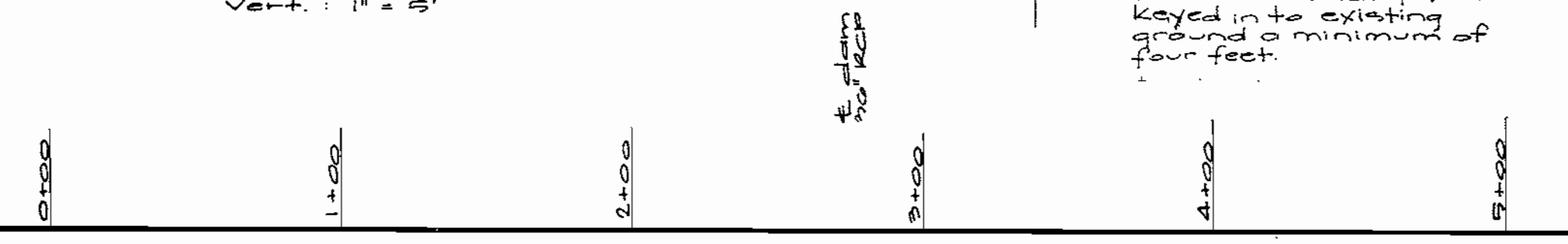


Gate Valve Dimensions & Elevations

A	B(in)	C	D	E	F(ft)	G(in)	H(in)	I	J(in)
0'	7'	35000	30910	35050	12'-2"	10 1/2"	17 1/4"	35033	4"

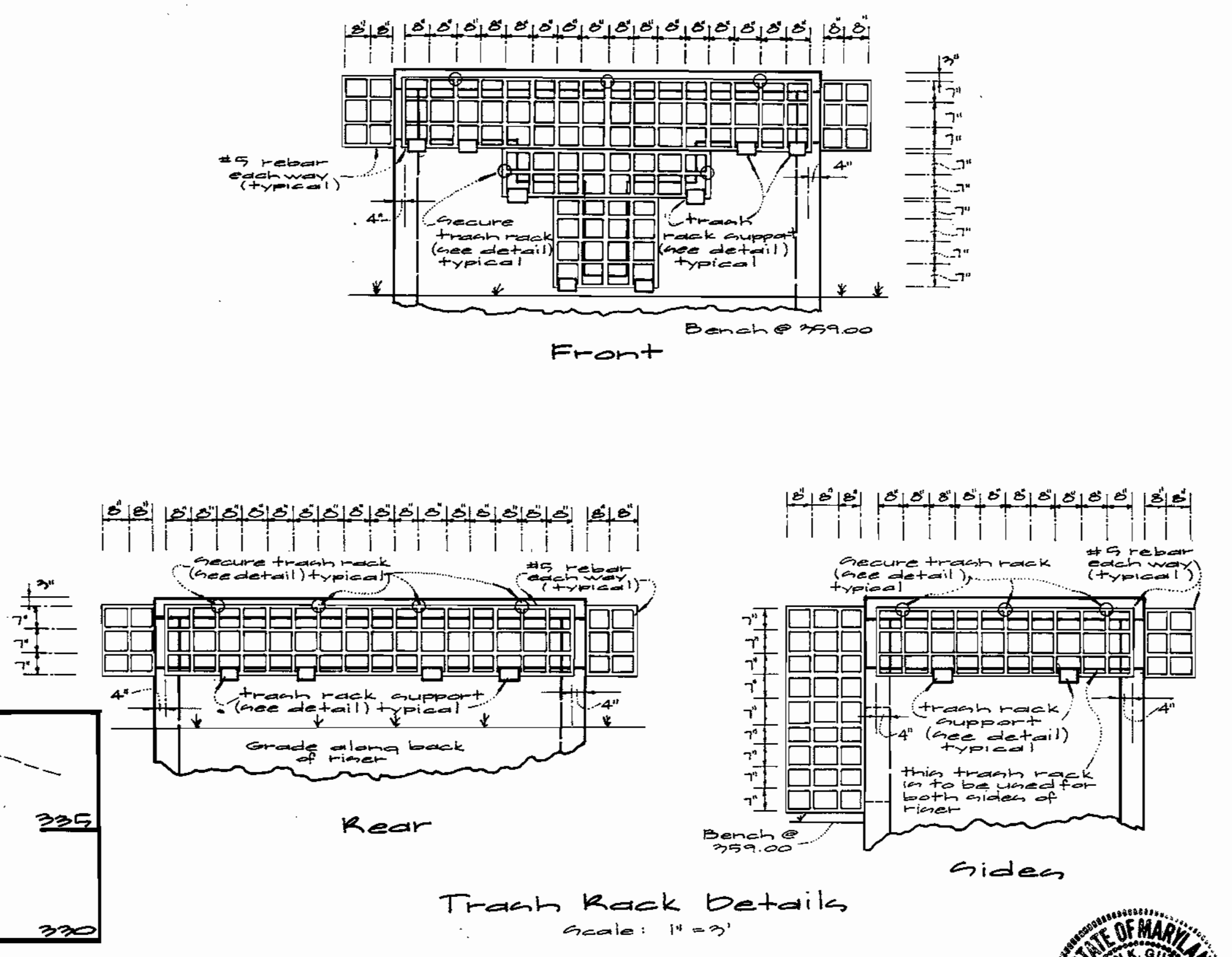


Profile Along Access And Centerline of Dam/Core Trench



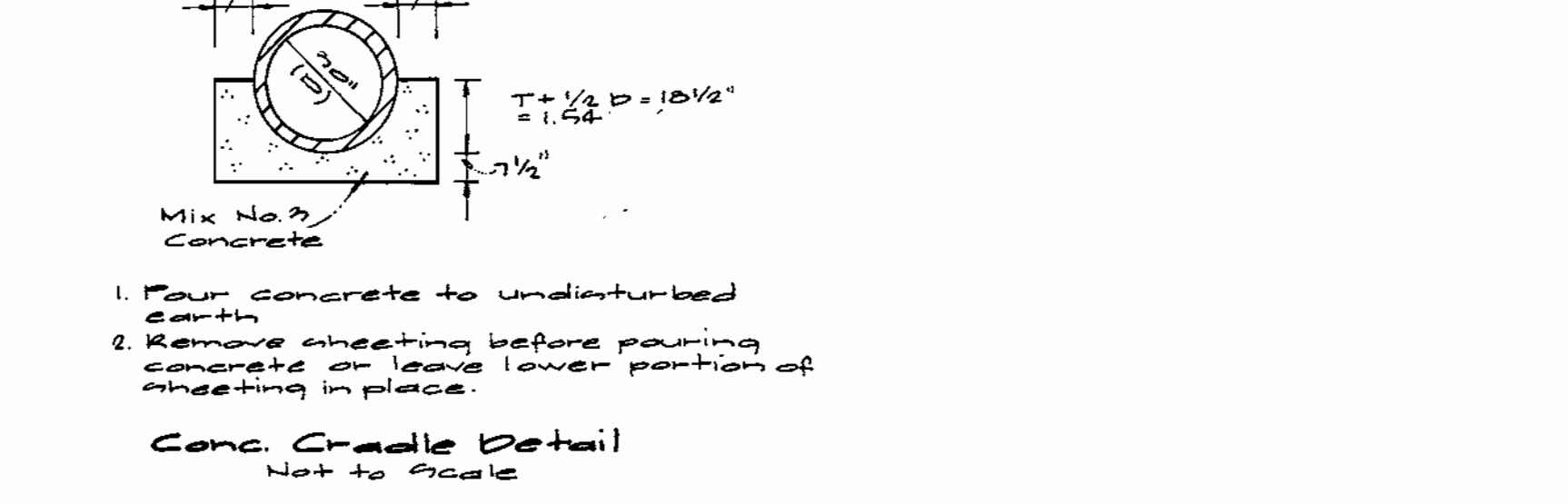
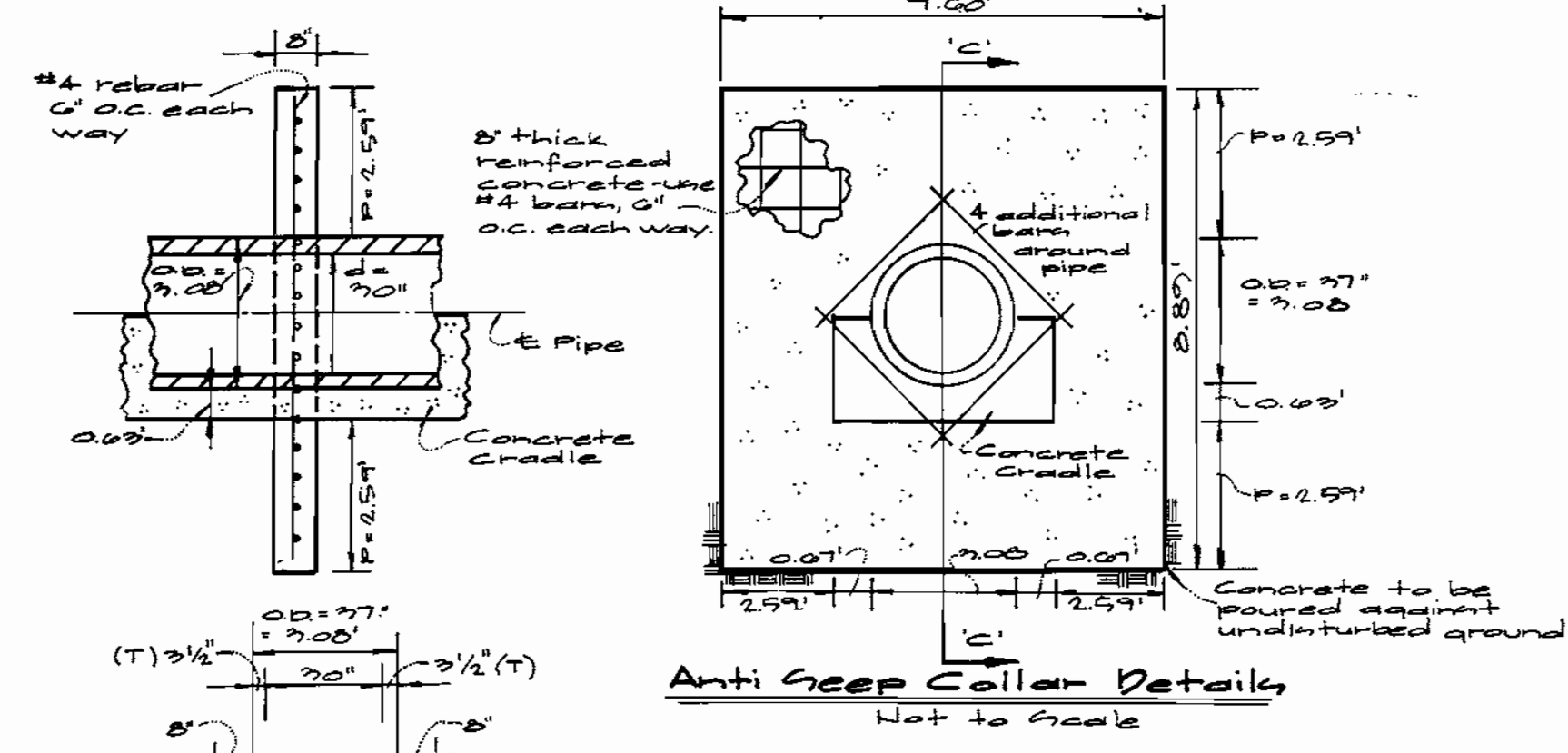
Profile Along & Principal Spillway

Scale: Horiz.: 1" = 50'
Vert.: 1" = 5'

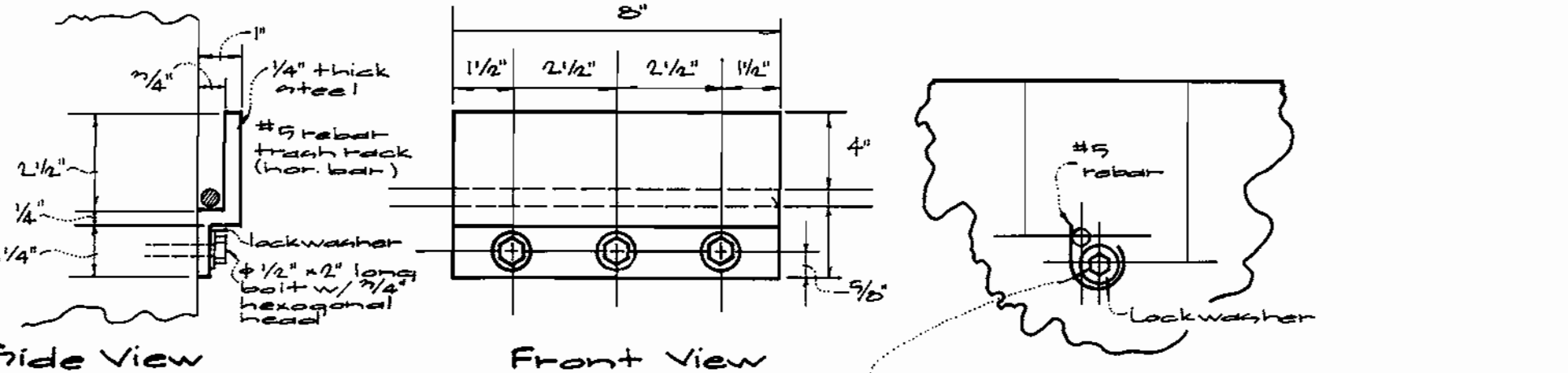


Trash Rack Details

Scale: 1" = 2'

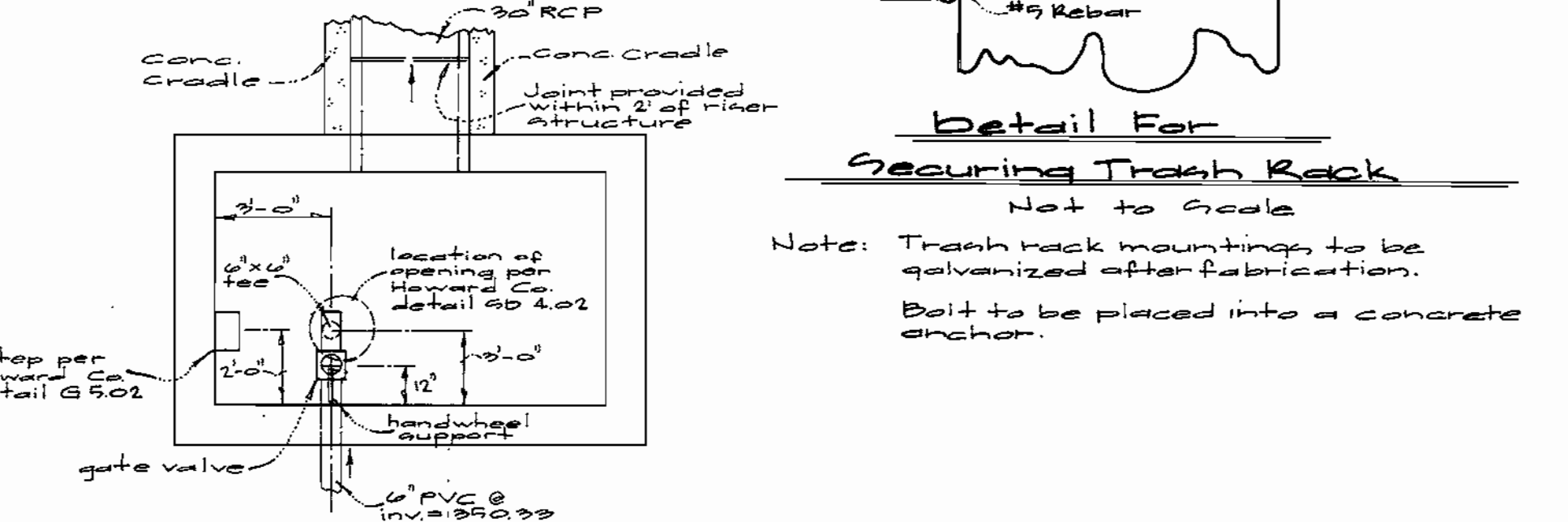


Concrete to be poured against undisturbed ground.



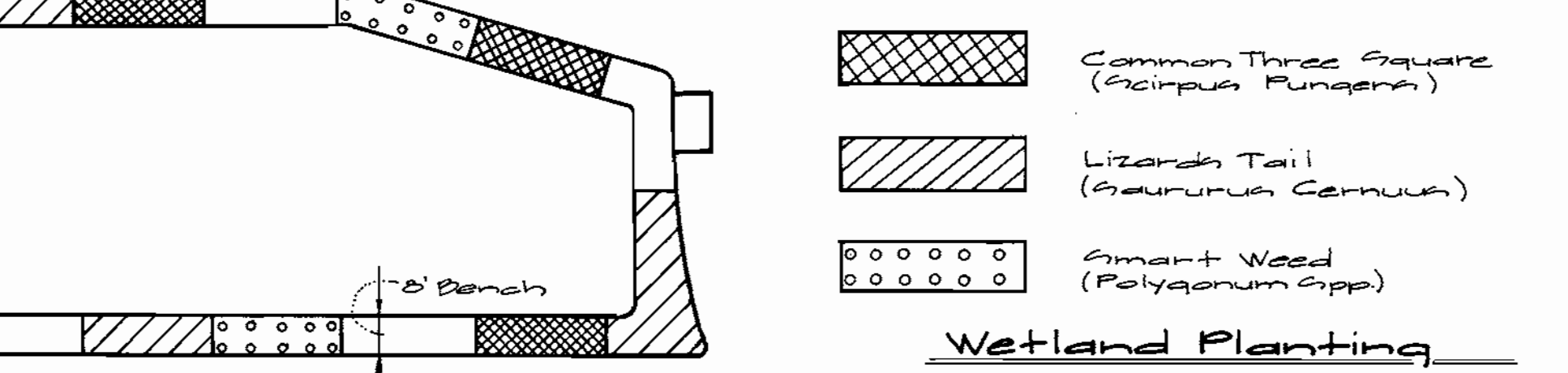
Trash Rack Support

Note: Trash rack mountings to be galvanized after fabrication.



Detail For Securing Trash Rack

Note: Trash rack mountings to be galvanized after fabrication.



Detail For Dewatering Device

Scale: 1" = 4'

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: SEPT. 23, 1999

Contractor must provide shop drawings to Gutschick, Little & Weber, P.A. for review and submission to Howard County Department of Planning & Zoning Engineering Division if a precast pier structure is chosen rather than poured in place.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *[Signature]* 11/19/99
Chief, Division of Land Development: *[Signature]* 11/19/99
Chief, Development Engineering Division: *[Signature]* 11/12/99

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance of a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

[Signature] 01/13/99
Signature of Developer/Builder Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

[Signature] 11/19/99
Natural Resources Conservation Service

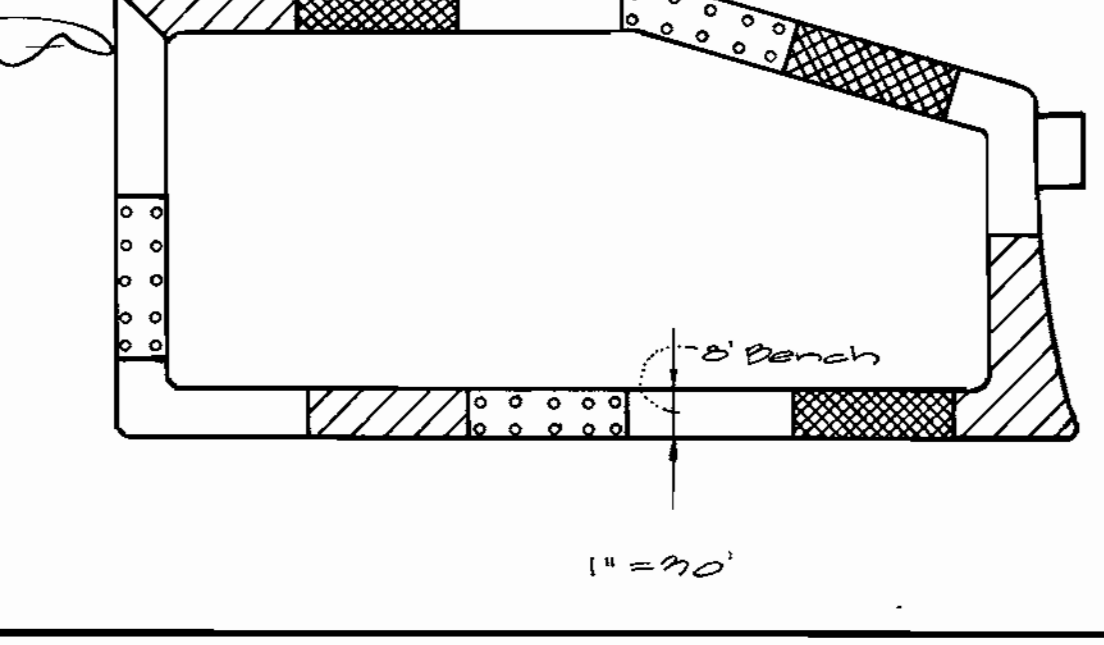
These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

[Signature] 11/19/99
Howard Soil Conservation District

ENGINEER'S CERTIFICATE

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

[Signature] 8/17/99
Date



Wetland Planting Detail

1" = 20'

- Common Three Square (Scirpus Pungens)
- Lizard Tail (Saururus Cernuus)
- Smart Weed (Polygonum Spp.)

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20866
TELEPHONE: (301)421-4024 NO. VA. (301)989-2524 BALTO. (301)880-1820 FAX (301)421-4186

PREPARED FOR:

Nottingham Properties, Inc.
100 West Pennsylvania Ave.
Towson, Maryland 21204

Mr. Charles McMahon
410-825-0545

Guilford Election District No. 6

REVISION	DATE	BY	APPR.
As submitted for signature	Nov. 4, 99		

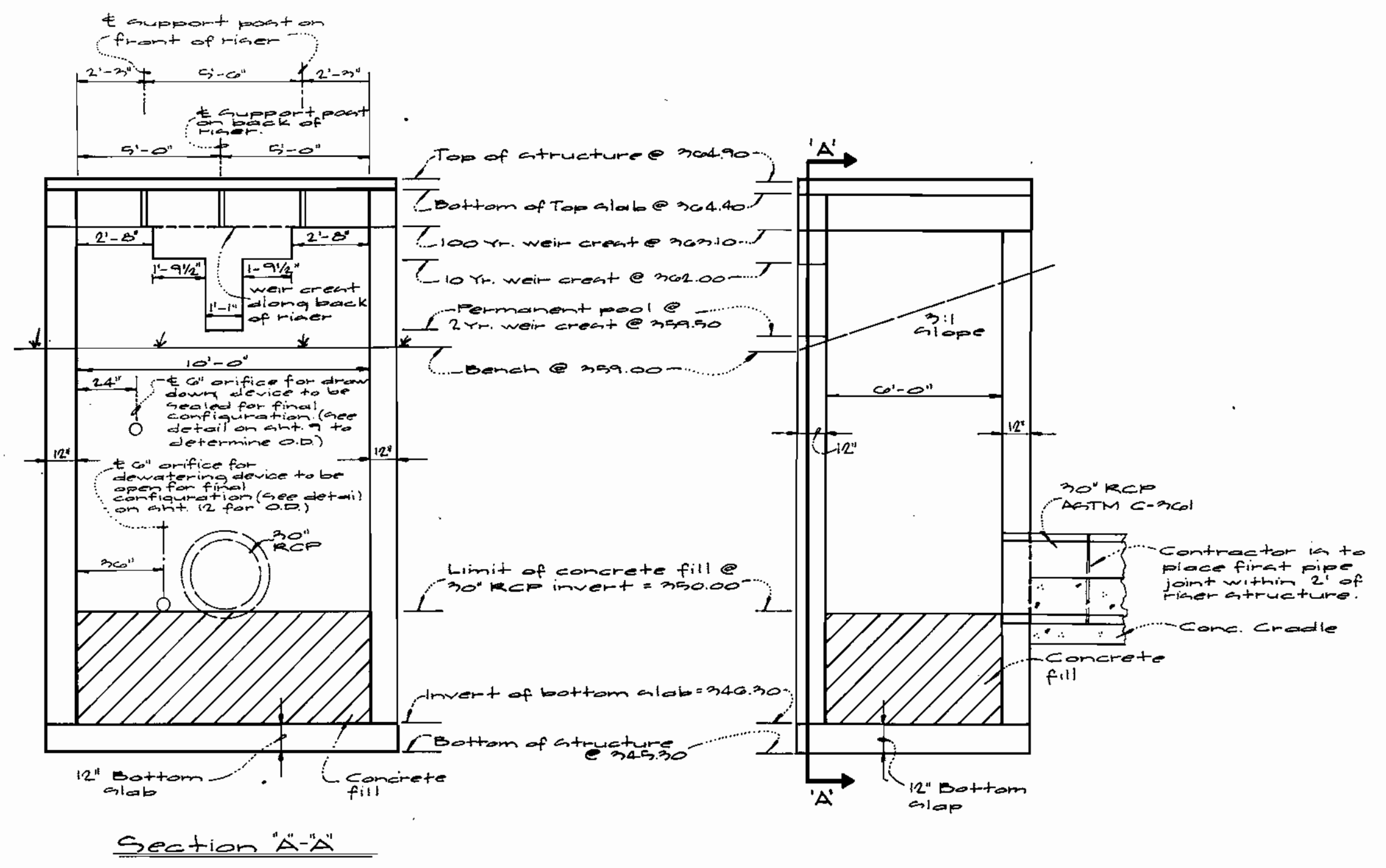
S.W.M. Profiles and Details

Rivers Corporate Park
Section 1 Area 2 Parcel 'D'
Plat No. 0020

DES.: dev.
SCALE: As Shown
ZONING: NT
G.L.W. FILE NO.: 99070

DRN.: f.m.m.
DATE: Oct. 18, 1999
TAX MAP NO.: 41
SHEET: 12 of 16

CHK.: [Signature]



Elev.	Soil Description	Extra Depth
704.4	Surface	0.25
704.10	Topsoil	0.25
701.9	Micaceous fine to med. sand, with silt, trace fine to med. rock fragments, gray brown, moist, med. dense (SM/Fill) sandy loam	2.5
700.4	Micaceous fine to med. sand, some silt, trace clay, brown, moist, loose (SM/Fill) sandy loam	0.0
700.1	Micaceous fine to coarse sand, some silt, trace clay, orange brown, very moist, med. dense (SM) loamy sand	0.5
700.0	Very micaceous fine to med. sand, little silt, dark greenish brown, saturated, loose to med. dense (SM) [Saprolite] loamy sand	15.0

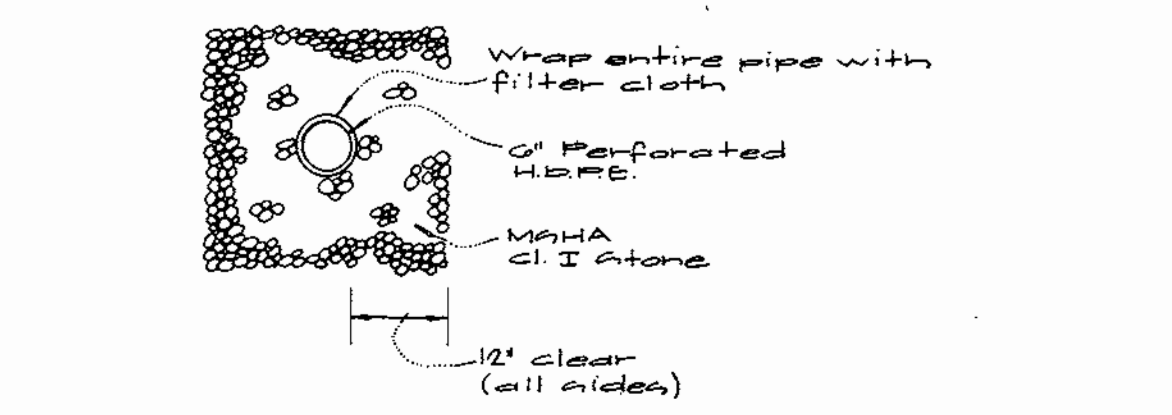
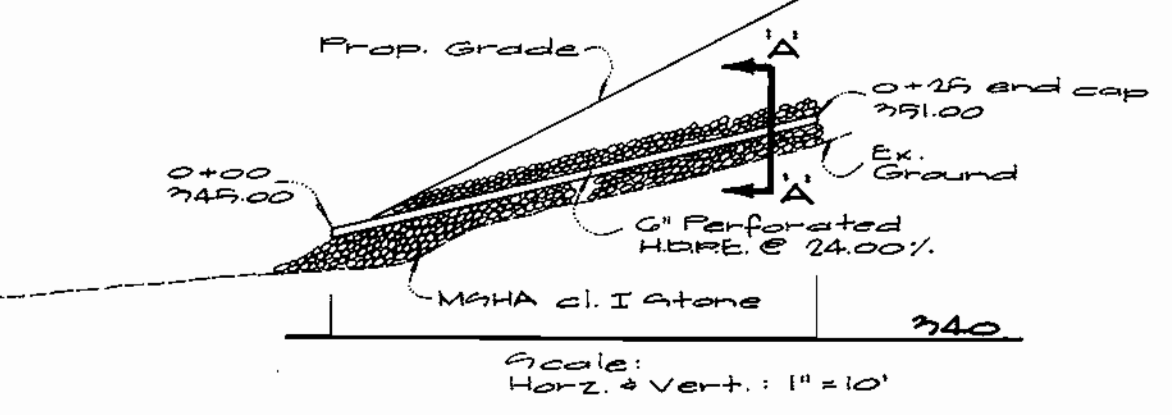
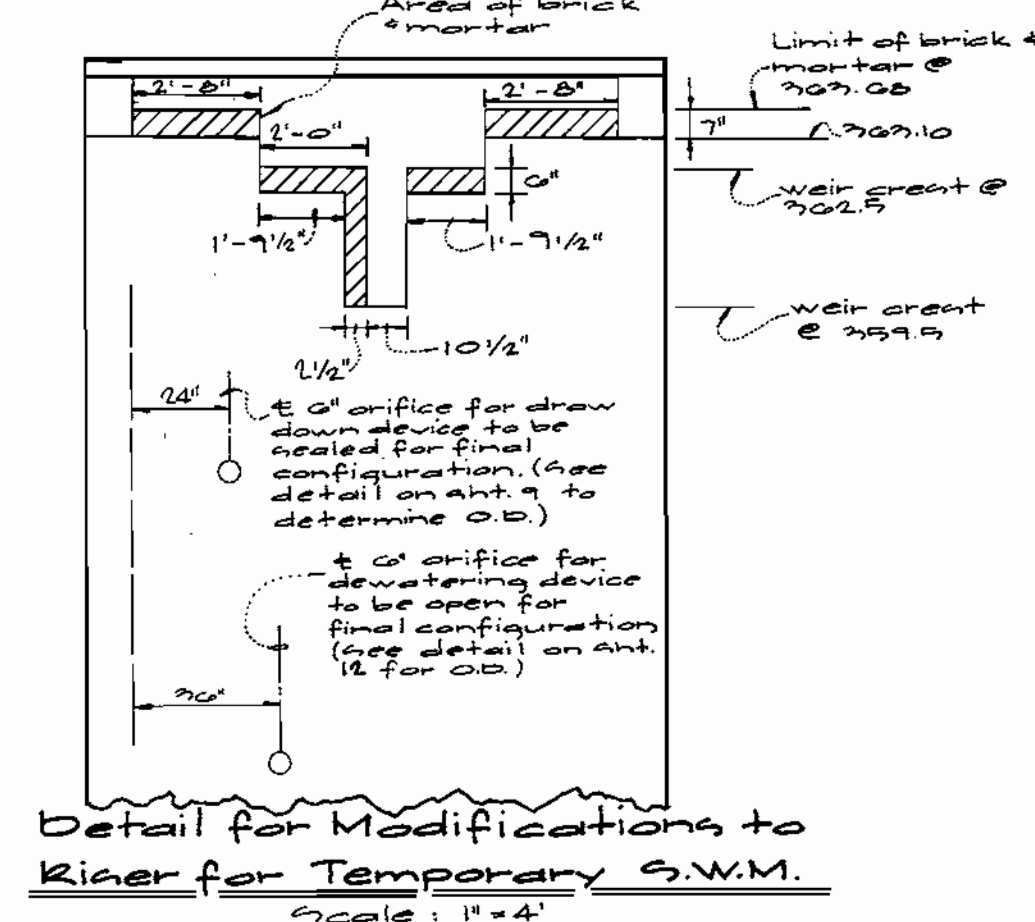
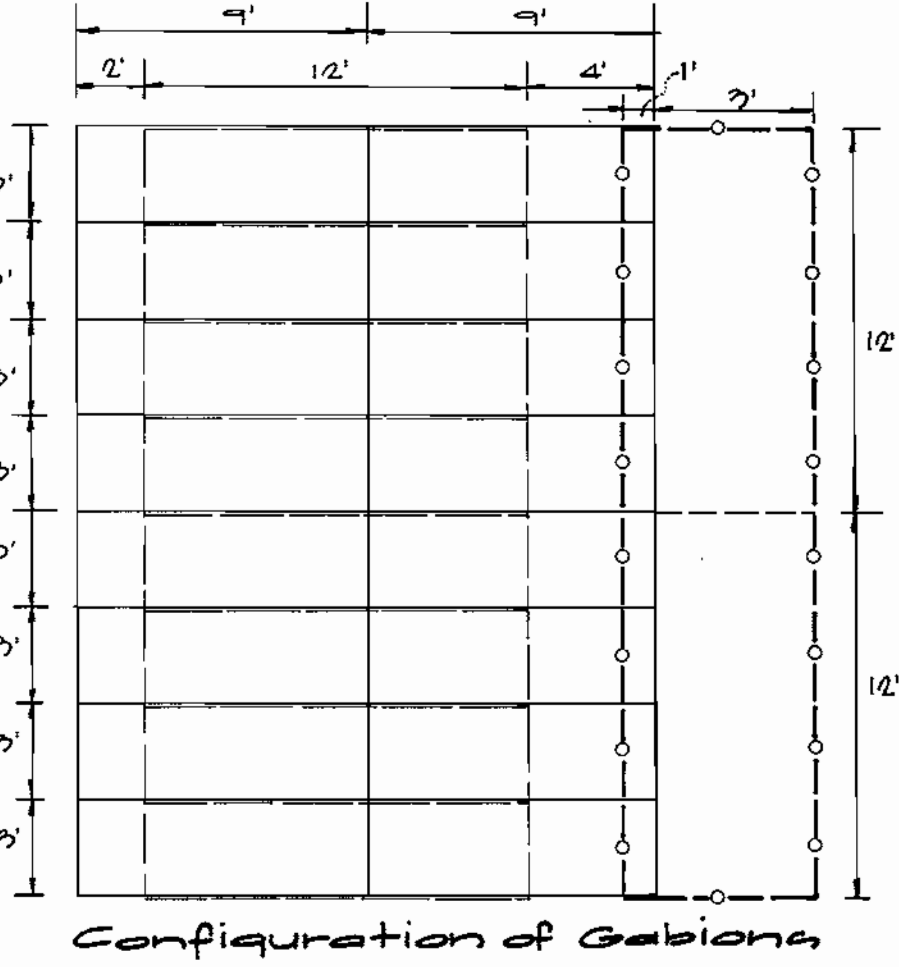
At completion of boring, hole wet & saved at 7'5"
 * 24 hours after completion water at 5'7", hole saved at 6'0"

Elev.	Soil Description	Extra Depth
704.4	Surface	0.25
704.10	Topsoil	0.25
701.9	Micaceous fine to med. sand, some silt, trace fine to med. rock fragments, gray brown, moist, med. dense (SM/Fill) sandy loam	2.5
700.4	Micaceous fine to med. sand, little silt, trace clay, trace orange, gray-brown, moist, very dense to extremely dense (SM/Fill) sandy loam	0.0
700.1	Micaceous fine to med. sand, little silt, trace clay, trace orange, gray-brown, moist, very dense to extremely dense (SM/Fill) loamy sand	0.5
700.0	Micaceous fine to coarse sand w/ fine to med. rock fragments, little silt, dark orange-brown, saturated, extremely dense (SM/GM) decomposed rock sand	15.0

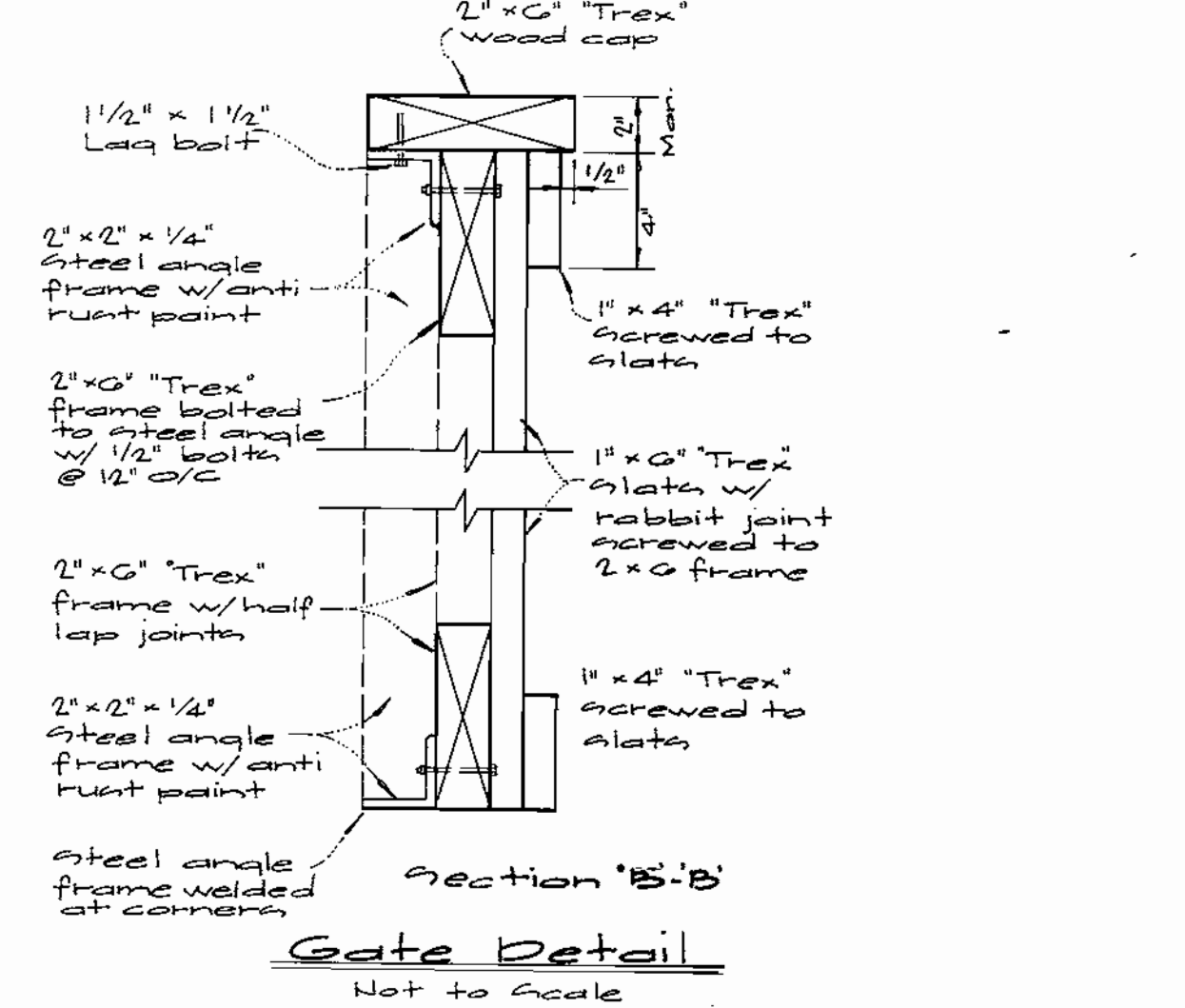
At completion of boring hole wet & saved at 10'2"
 * 24 hours after completion water at 4'9", hole saved at 5'2"

Elev.	Soil Description	Extra Depth
704.4	Surface	0.25
704.10	Topsoil	0.25
701.9	Micaceous clayey silt, with fine to med. sand, little silt, trace fine rock fragments, orange brown, moist, med. dense (CL/Fill) silt loam	5.50
700.4	Micaceous fine to med. sand, little sand trace clay, gray-brown, moist, med. dense (SM/Fill) loamy sand	0.00
700.1	Clayey fine to med. sand, some silt, trace rath, dark gray, moist, med. dense (SM/GM) possible topsoil materials, sandy loam	11.00
700.0	Micaceous fine to med. sand, little silt, brown green, saturated, med. dense (SM) [Saprolite] loamy sand	15.50
700.0	Micaceous fine to coarse sand, some silt, greenish brown, saturated, medium dense (SM) [Saprolite] sandy loam	18.50
700.0		25.00

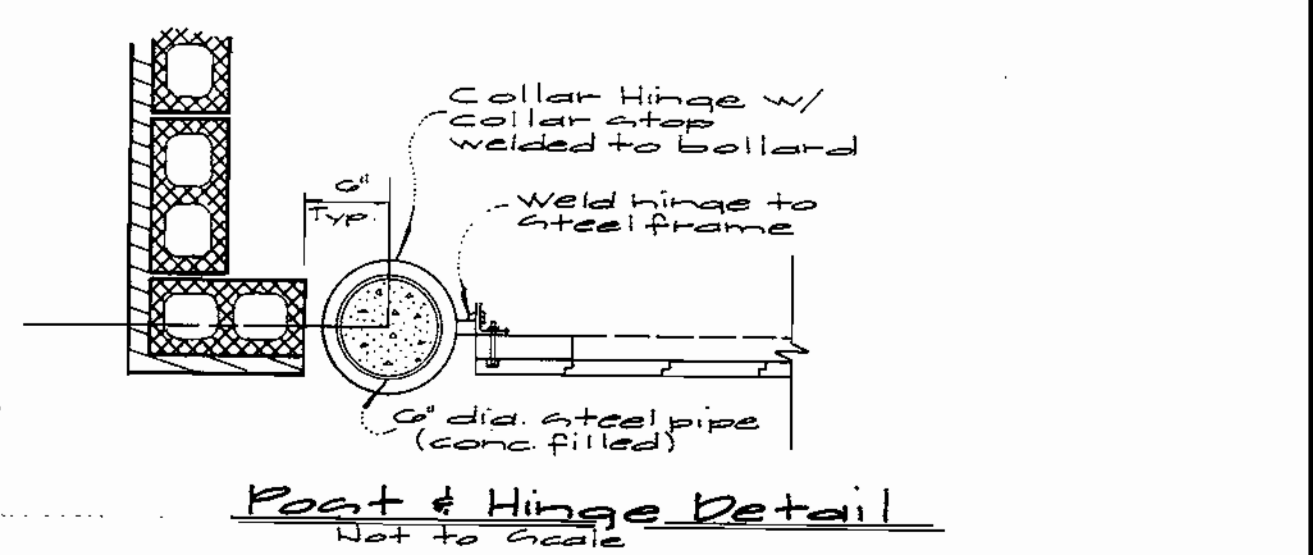
At completion of boring hole wet & saved at 11'4"
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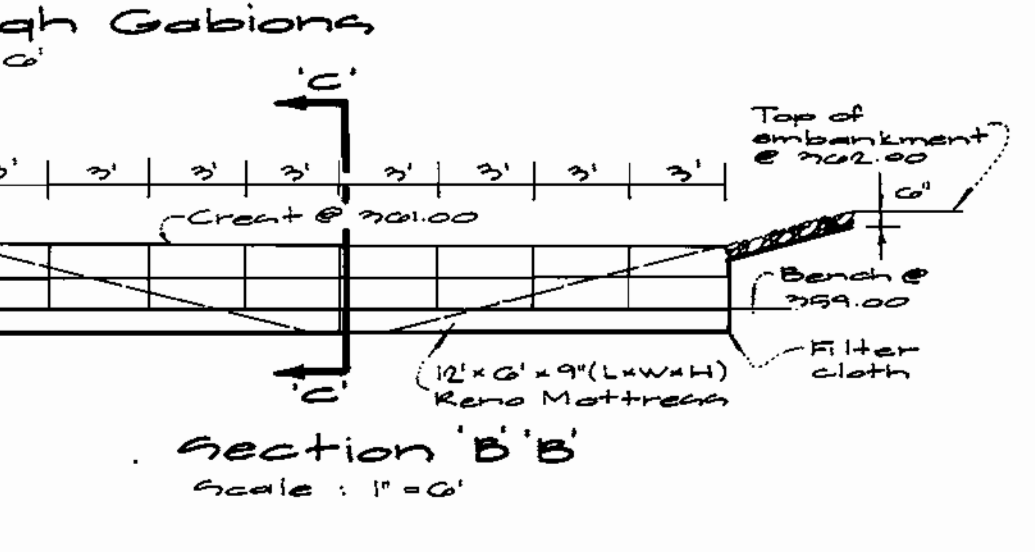
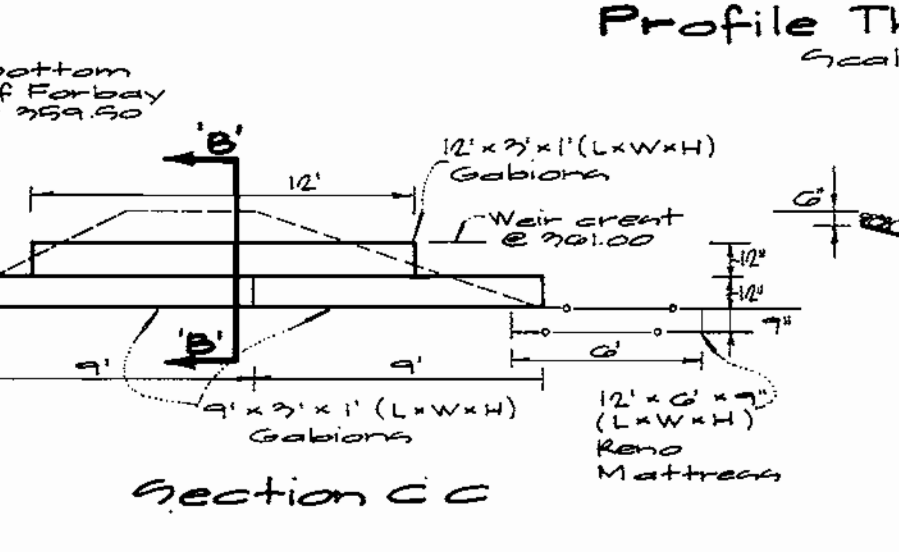
Section A-A
 1" = 2'
 Underdrain Detail



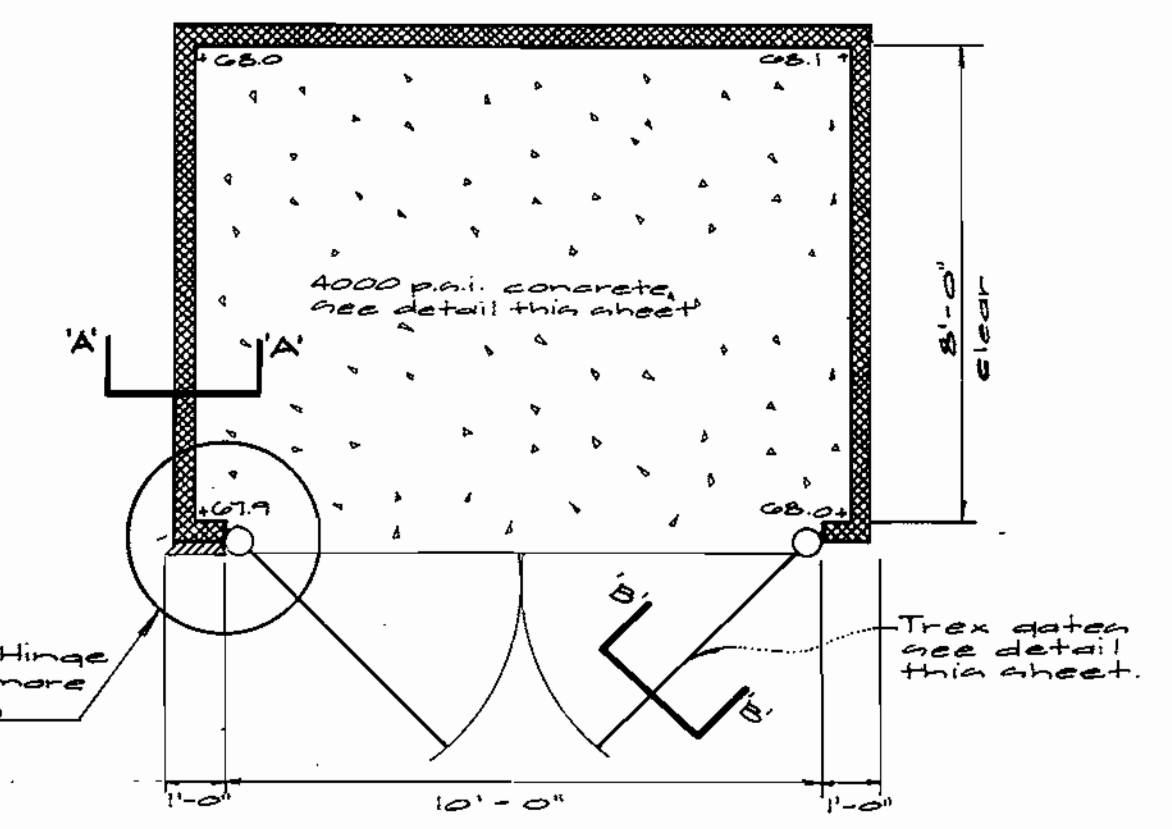
Gate Detail
 Not to Scale



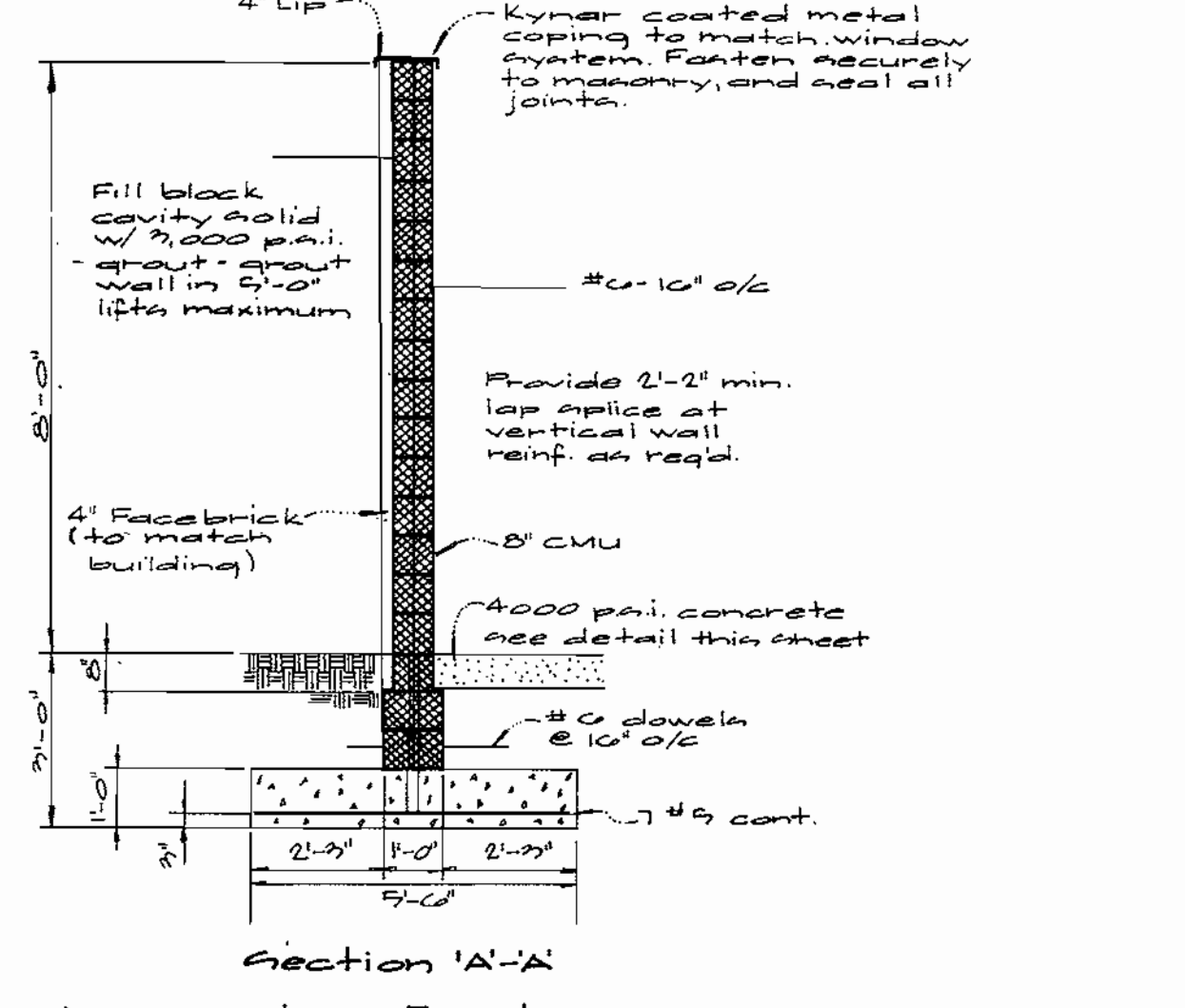
Post & Hinge Detail
 Not to Scale



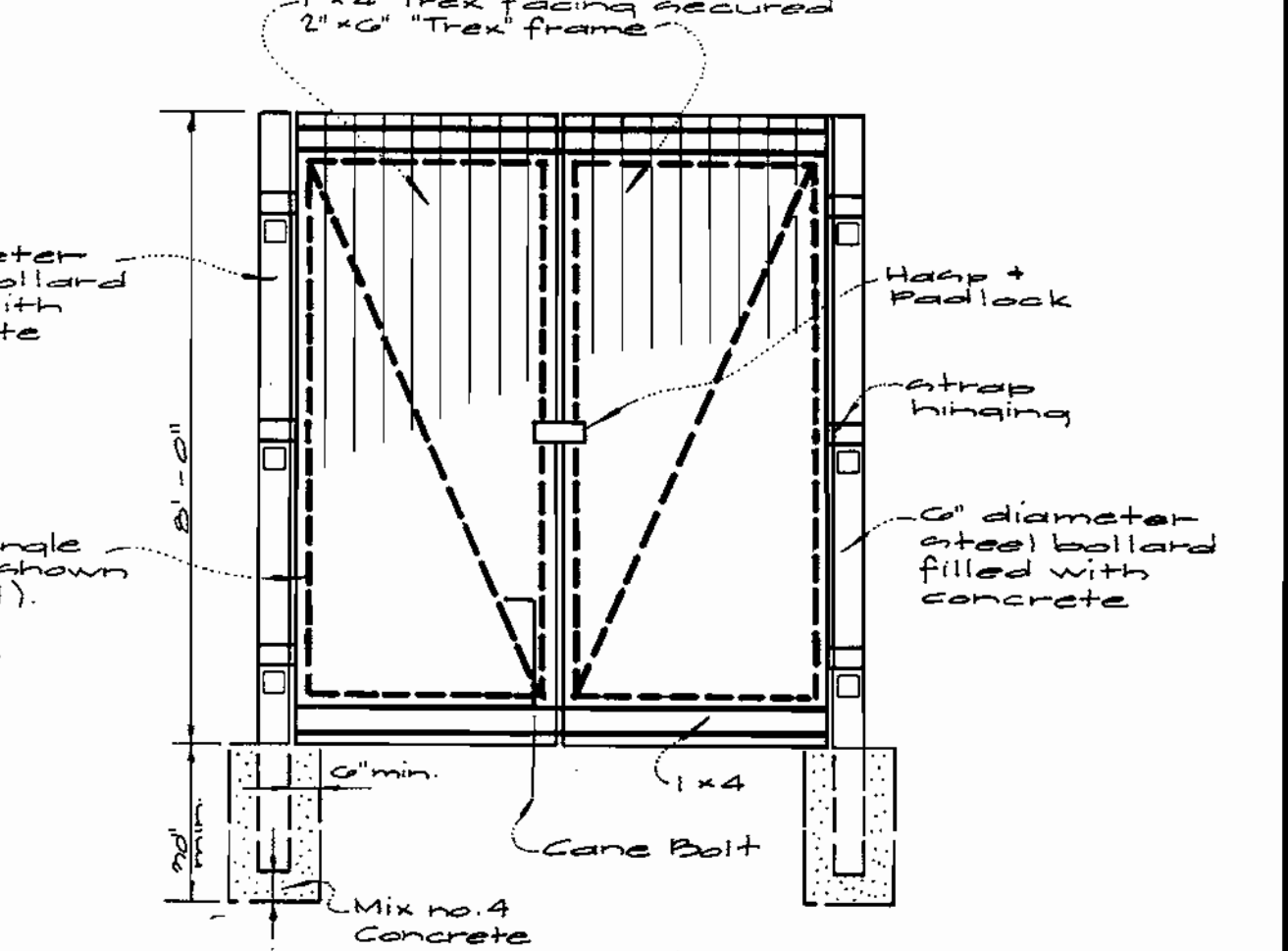
Profile Through Gabions
 Scale: 1" = 0'



Dumpster Enclosure
 Plan
 Not to Scale



Dumpster Enclosure
 Wall Section Detail
 Not to Scale



Dumpster Enclosure
 Gate Detail
 Not to Scale

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE SEPT. 23, 1999

Approved: Howard County Department of Planning & Zoning
 Director: Frank V. ... Date: 11/19/99
 Chief, Division of Land Development: ... Date: 11/12/99
 Chief, Development Engineering Division: ... Date: 11/12/99



DEVELOPER'S/BUILDER'S CERTIFICATE
 I/We certify that all development and/or construction will be done according to these plans, 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 shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.
 Signature of Developer/Builder: ... Date: 8/17/99

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
 Signature: ... Date: 11/19/99
 Signature: ... Date: 11/19/99

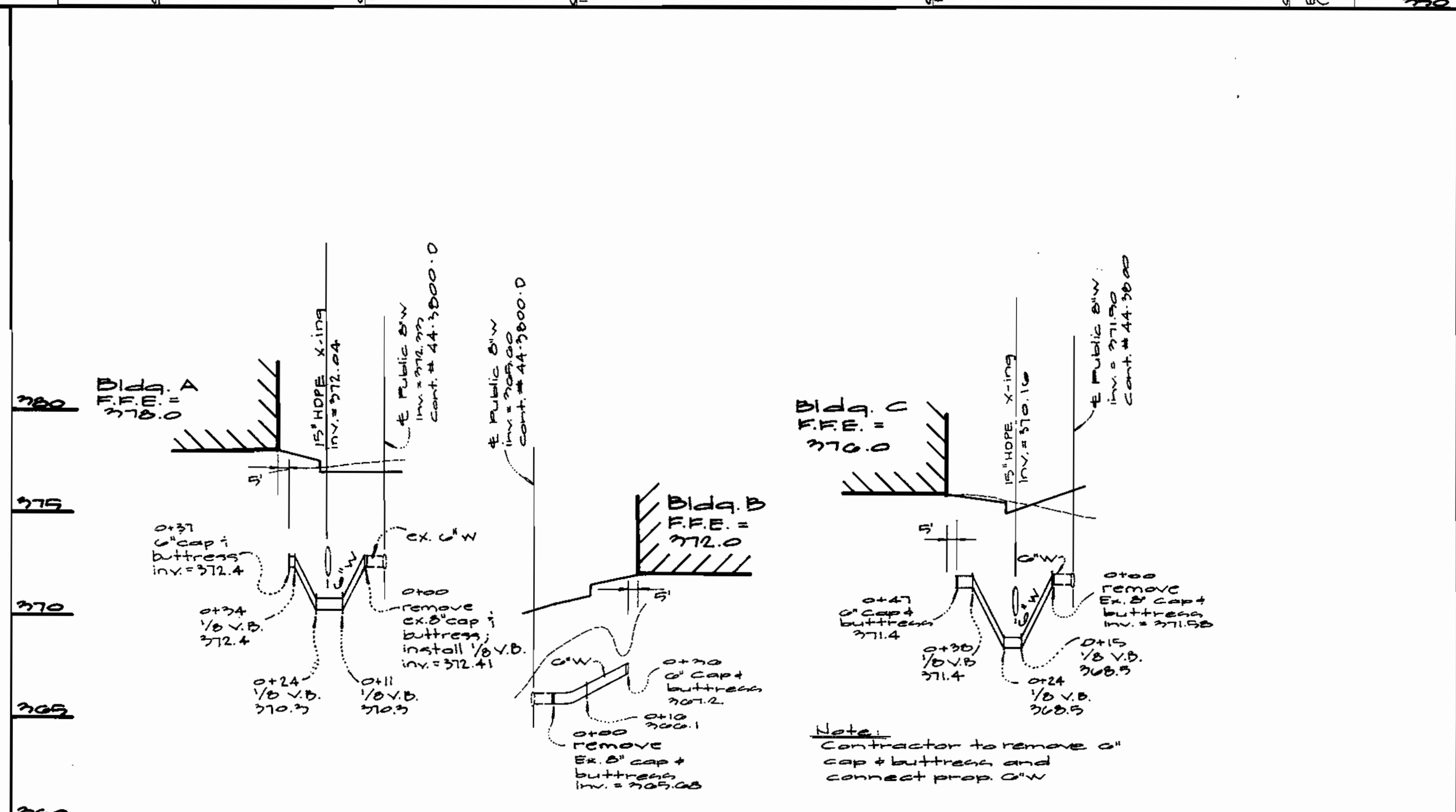
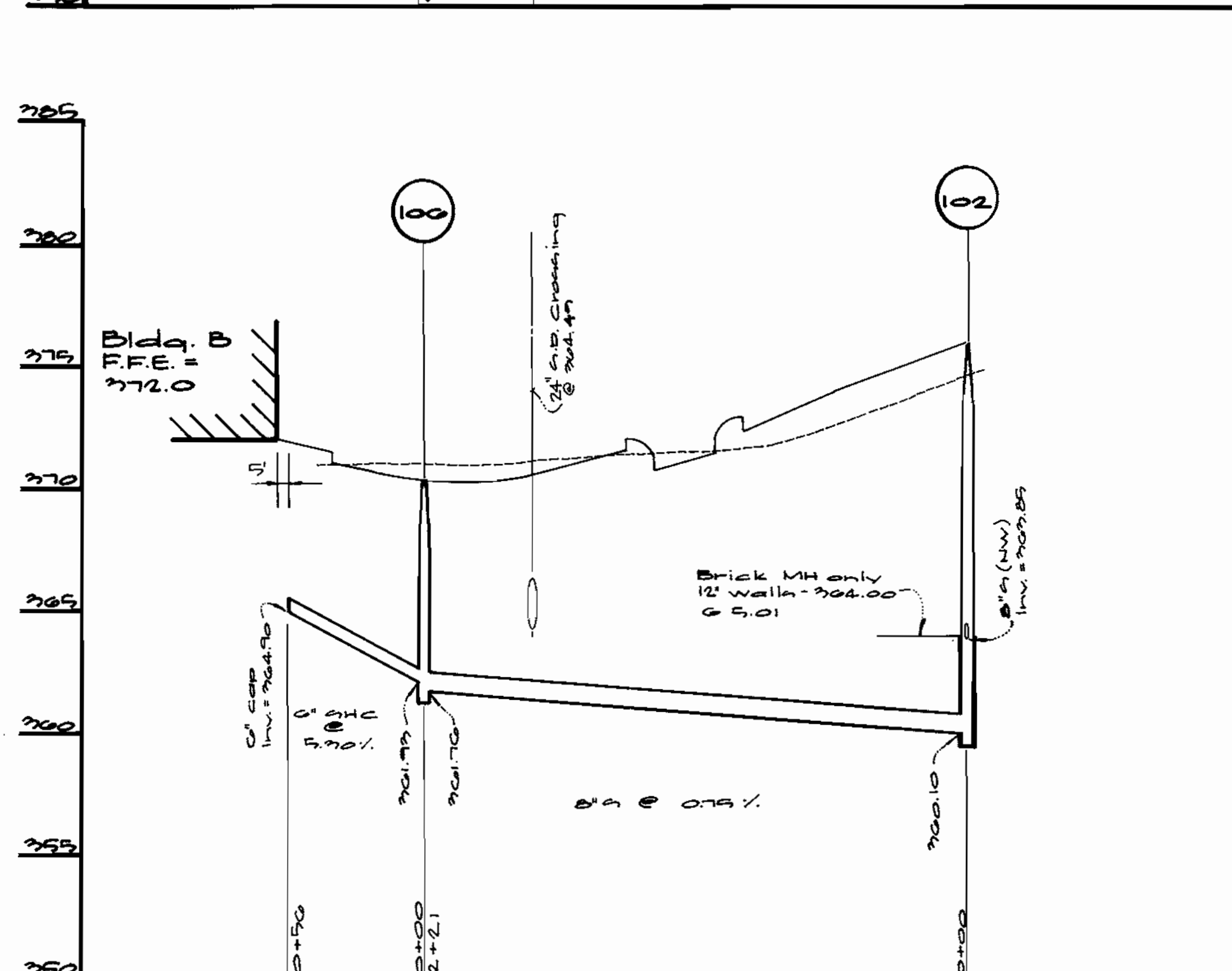
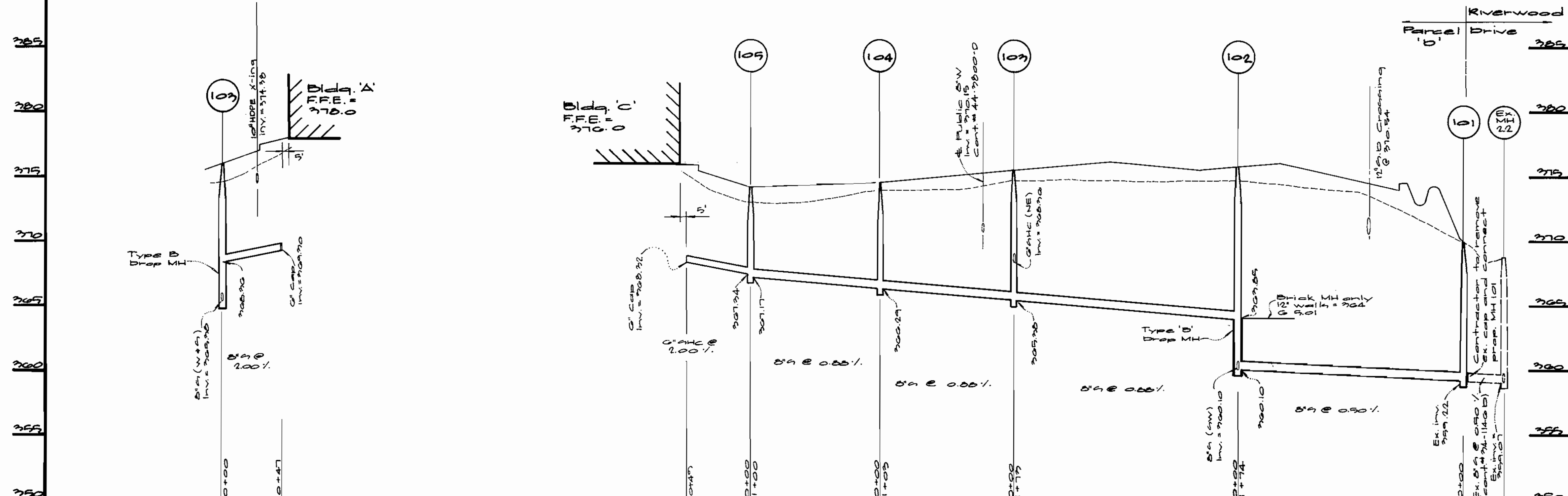
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MD. 20866
 TELEPHONE: (301)421-4024 NO. VA. (301)989-2524 BALTO. (301)860-1820 FAX (301)421-4166

DATE	REVISION	BY	APP'R.
Nov. 1, 99	As submitted for signature		

PREPARED FOR:
 Nottingham Properties, Inc.
 100 West Pennsylvania Avenue
 Towson, Maryland 21204
 Mr. Charles E. McMahon
 410-225-0945

Stormwater Management / site details
Rivera Corporate Park
 Section 1 Area 2 Parcel 'D'
 Plat No. 0020
 Guilford Election District No. 6
 Howard County, Maryland

DES.:	SCALE	ZONING	G.L.W. FILE NO.
d.e.v.	A8	NT	99090
DRN.:	DATE	TAX MAP NO.	SHEET
f.m.m.	Oct 18, 1999	41-12	13 of 16



Water House Connection Profiles

Scale: Horiz. 1" = 50'
Vert. 1" = 5'

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE SEPT. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Mark V. deLany 11/19/99
Director Date
Linda Hamilton 11/19/99
Chief, Division of Land Development Date
Chuck DeLaney 11/23/99
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
Nov. 4, 99	As submitted for signature		

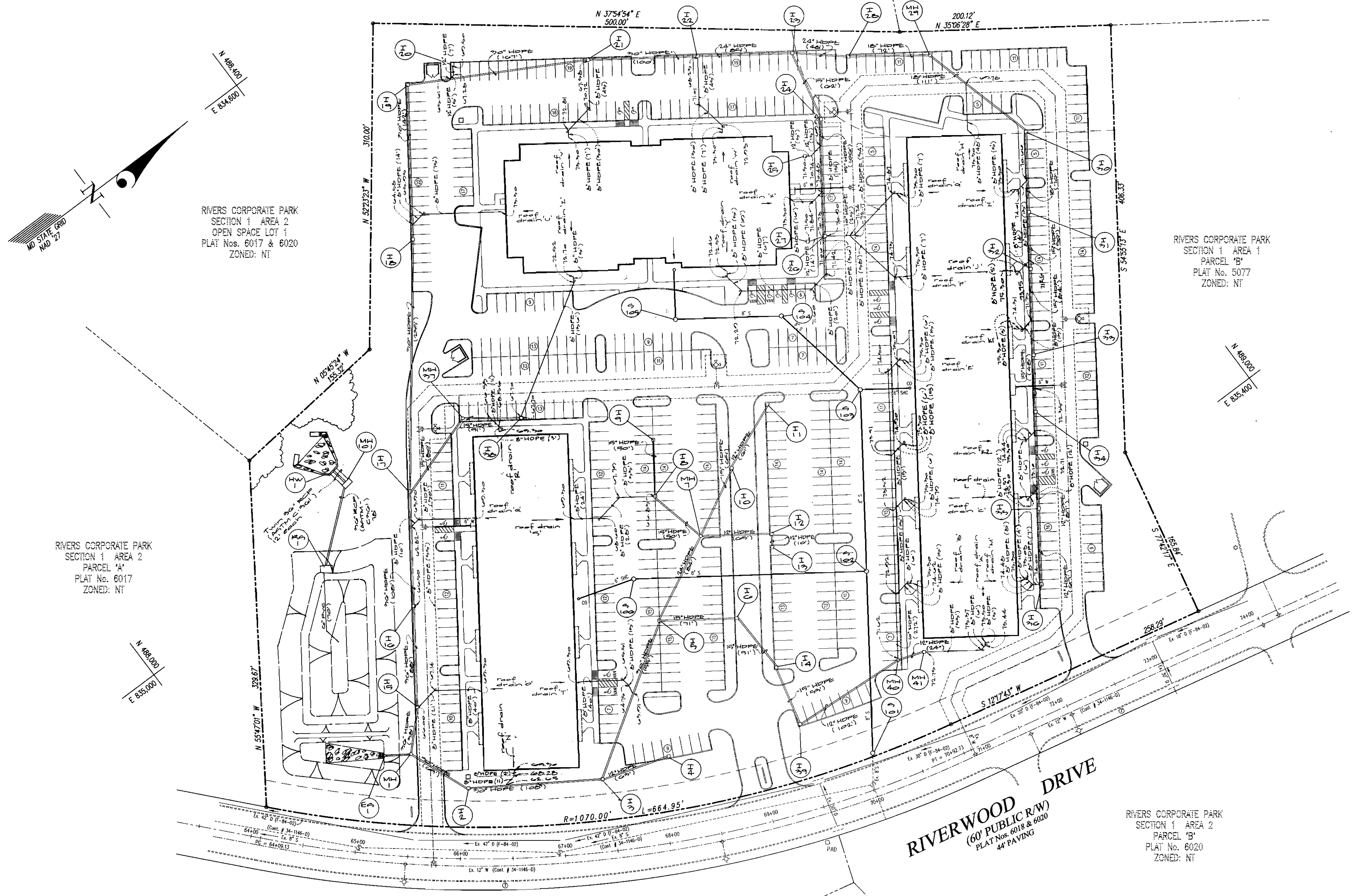
PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWNSON, MD. 21204
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

UTILITY PROFILES
RIVERS CORPORATE PARK
SECTION 1 AREA 2 - PARCEL 'D'
PLAT No. 6020
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP -- GRID	SHEET
0 = + 10, 1999	41 - 12	14 OF 16

RIVERS CORPORATE PARK
SECTION 1 AREA 2
OPEN SPACE LOT 1

N/F PROPERTY OF
HOWARD L. WESSEL, et al
L 398 F. 41 ~ ZONED: R-20



RIVERS CORPORATE PARK
SECTION 1 AREA 2
OPEN SPACE LOT 1
PLAT Nos. 6017 & 6020
ZONED: NT

RIVERS CORPORATE PARK
SECTION 1 AREA 1
PARCEL 'B'
PLAT No. 5077
ZONED: NT

RIVERS CORPORATE PARK
SECTION 1 AREA 2
PARCEL 'A'
PLAT No. 6017
ZONED: NT

RIVERS CORPORATE PARK
SECTION 1 AREA 2
PARCEL 'B'
PLAT No. 6020
ZONED: NT

RIVERS CORPORATE PARK
SECTION 1 AREA 2
PARCEL 'C-1' ~ PLAT No. 11730
ZONED: NT

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE Sept. 23, 1999

Approved: Howard County Department of Planning & Zoning
Mark V. Laughlin 11/19/99
 Director
Candy Hamilton 11/19/99
 Chief, Division of Land Development
Bill Newman 11/19/99
 Chief, Development Engineering Division



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 BAL: 410-880-1820 DC/VA: 301-389-2524 FAX: 301-421-4186

DATE	BY	APP'R.	REVISION
Nov 4, 99	As submitted for signature		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
 100 WEST PENNSYLVANIA AVENUE
 TOWSON, MD. 21204
 PH: 410-825-0545
 ATTN: MR. CHUCK McMAHON

Utility Plan
RIVERS CORPORATE PARK
 SECTION 1 AREA 2 ~ PARCEL 'D'
 PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
1"=50'	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct 18, 1999	41 - 12	15 OF 16

DES. DRN. CHK.

GUILFORD ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND

POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Area on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated in to the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within $\pm 2\%$ of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

1. **Materials** - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plast-Cote, Bloc-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.
2. **Materials** - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Material - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized balls may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. **Coupling bands, anti-seep collars, end sections, etc.**, must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. **Connections** - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe & riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide huggar type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

Helically corrugated pipe shall have either continuously welded seams or have lock seams.

4. **Bedding** - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soil, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
5. **Backfilling** shall conform to "Structure Backfill".
6. **Other details** (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. **Materials** - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.
2. **Bedding** - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10X of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
3. **Laying pipe** - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

4. **Backfilling** shall conform to "Structure Backfill".

5. **Other details** (anti-seep collars, valves, etc.) shall be shown on the drawings.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. **Materials** - PVC pipe shall be PVC - 1120 or PVC - 1220 conforming to ASTM D-1785 or ASTM D-2241.
2. **Joints and connections to anti-seep collars** shall be completely watertight.
3. **Bedding** - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soil, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
4. **Backfilling** shall conform to "Structure Backfill".
5. **Other details** (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standards Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The rip rap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation of such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

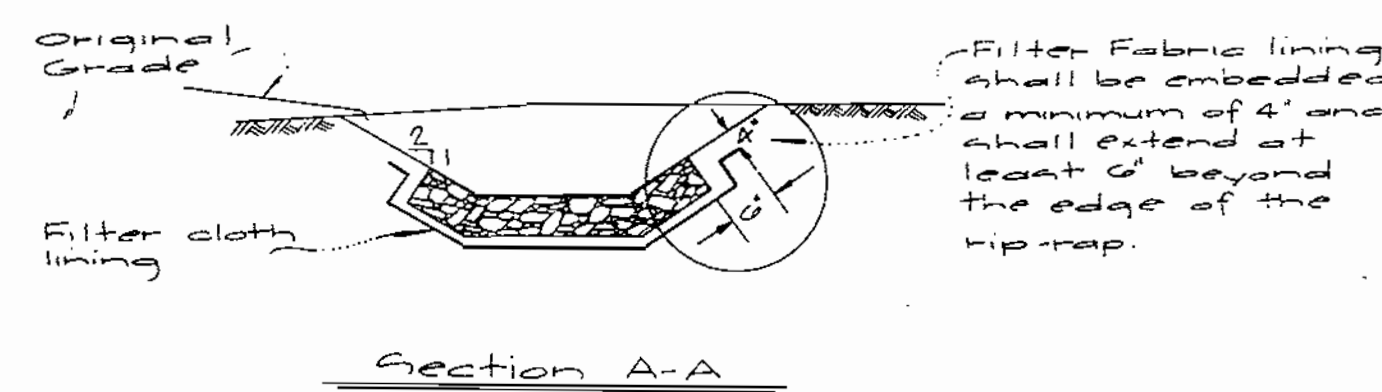
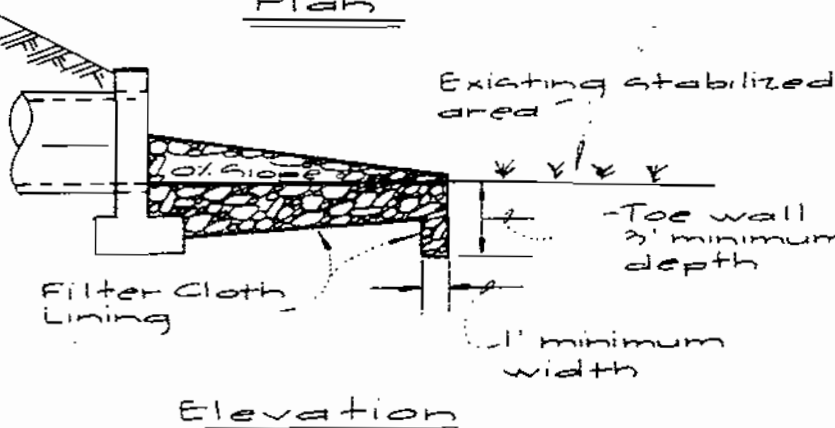
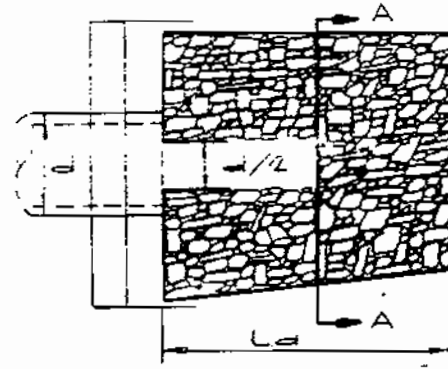
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS

- 1) No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 2) Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 3) Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
- 4) Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 5) Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
- 6) Rectify any nontidal wetlands, wetland buffers, waterways, or 100-year floodplain temporarily impacted by any construction.
- 7) All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Setaria italica*), Barley (*Hordeum sp.*), Oats (*Avena sp.*), and/or Rye (*Secale cereale*). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. Kentucky 31 fescue shall not be utilized in wetland or buffer areas. The area should be seeded and mulched to reduce erosion after construction activities have been completed.
- 8) After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- 9) To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream:

Use 1 waters: in-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.

- 10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
- 11) Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.



Rock Outlet Protection III

2.2. STANDARD AND SPECIFICATIONS

FOR

TOPSOIL

Details

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

1. This practice is limited to areas having 2:1 or flatter slopes where:
 - a. The surface of the exposed subsoil/underground 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 adequate supply of moisture and plant nutrients.
 - c. The original soil to be replaced contains material toxic to plant growth.
 - d. The soil is so acidic that treatment with limestone is not feasible.
2. For the purpose of these Standard and Specifications, areas having slopes steeper than 2:1 require special considerations and depths for subsoil stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilizations shown on the plans.

Construction and Material Specifications

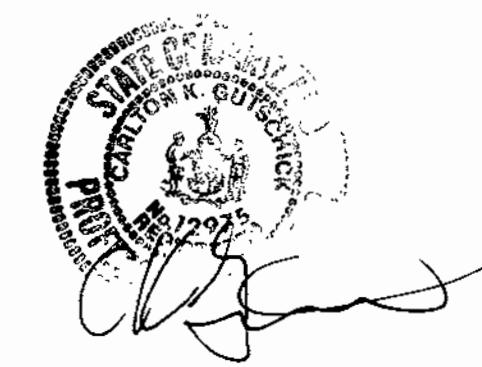
1. Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given site type shall be based on the requirements and profile studies for the site type as determined by USDA-ARS in cooperation with Maryland Agricultural Experiment Station.
2. Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, heavy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil shall not be a mixture of excavating material and soil that contains less than 5% by volume of clays, silt, sand, coarse aggregate, gravel, rocks, roots, or other material larger than 1/4" in diameter.
 - ii. Topsoil must be free of plants or plant parts such as burdock grass, quackgrass, johnsongrass, knotweed, poison ivy, thistle, or others as specified.
 - iii. Where the subsoil is either highly acidic or comprised of heavy clays, ground limestone shall be spread at the rate of 48 pounds (100-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over the ground area and worked into the soil in conjunction with tillage operations as described in the following procedures.
3. For sites having disturbed areas under 5 acres:
 - a. Place topsoil (if required) and apply amendments as specified in 2.02 Vegetation Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
4. For sites having disturbed areas over 5 acres:
 - a. On soil meeting Topsoil specifications, obtain soil results (nutrient fertilizer and lime determinations) to bring the site into compliance with the following:
 - i. 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 permitted to raise the pH to 6.5 or higher.
 - ii. Organic content of topsoil shall be not less than 1.5 percent by weight.
 - iii. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - iv. No soil or seed shall be placed on soil which has been treated with soil poisons or chemicals and for seed covered soil which has been treated with herbicides (14 days) to permit distribution of phyto-toxic materials.
 - b. Note: Topsoil structure or amendments, as recommended by a qualified agronomist or soil scientist approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - c. Place topsoil (if required) and apply amendments as specified in 2.02 Vegetation Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
5. Topsoil Application
 - i. When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Side Face and Sediment Traps and Basins.
 - ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 6" higher as desired.
 - iii. Topsoil shall be uniformly distributed to a 4" - 6" layer and lightly compacted to a minimum thickness of 4". Topsoiling shall be performed in such a manner that treading or walking can proceed with a minimum of additional soil compaction and rutting. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pools.
 - iv. 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.
6. Alternative for Permanent Seeding - Instead of applying the full amount of lime and commercial fertilizer, composted studge and amendments may be applied as specified below:
 - i. Composted Studge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to determine suitability and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - a. Composted studge shall be supplied by, or originate from, a process that is permitted (at the time of acquisition of the product) by the Maryland Department of the Environment under COMAR 26.06.06.
 - b. Composted studge shall consist of at least 1 percent nitrogen, 1 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 amendments shall be added to meet the requirements prior to use.
 - c. Composted studge shall be applied at a rate of 1,000,000 square feet.
 - d. Composted studge shall be amended with a potassium fertilizer applied at the rate of 4,161,000 square feet, and 1/3 the normal lime application rate.
 - ii. Reference: Odorous Specifications, Soil Preparation and Seeding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1975.

NOTE:
In addition to the Howard County Standard Specifications, and those on this sheet, the construction of the Stormwater Management facility shall be in accordance with the recommendations contained in the geotechnical report by ECS, Ltd., dated May 11, 1999 and August 11, 1999. If the provisions of the report conflict with Howard County's specifications or those on this sheet in any way, the more stringent requirement shall apply. The private geotechnical engineer hired by Nottingham Properties, Inc. shall be on the site to observe all Stormwater management construction and to provide testing and approvals where needed for proper implementation of the plans and specifications and to provide information for future as-builts.

APPROVED PLANNING BOARD of HOWARD COUNTY

DATE SEPT 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signatures and dates for approval]



ENGINEER'S CERTIFICATE
 I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.
 [Signature] 8/17/99

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/We certify that all development and/or construction will be done according to these plans, 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 shall engage a registered Professional Engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.
 [Signature] 8/13/99

These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
 [Signature] 8/13/99

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
 [Signature] 8/13/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWNE OFFICE PARK
 BURTONTOWNE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-421-4196

DRW.	PREP.	CHK.	DES.	DRN.	CHK.
------	-------	------	------	------	------

DATE	REVISION	BY	APPR.

PREPARED FOR:
 Nottingham Properties, Inc.
 100 West Pennsylvania Avenue
 Towson, Maryland 21284
 Mr. Charles B. McMahon
 410-825-0945

Rivera Corporate Park
 Section 1 Area 2 Parcel 'b'
 Plat No. 0020
 Guilford Election District No. 6
 Howard County, Maryland

SCALE	ZONING	G. L. W. FILE No.
as shown	NT	99030
DATE	TAX MAP - GRD	SHEET
Oct 18, 1999	41-12	16 of 16

SOP 0028

GENERAL NOTES

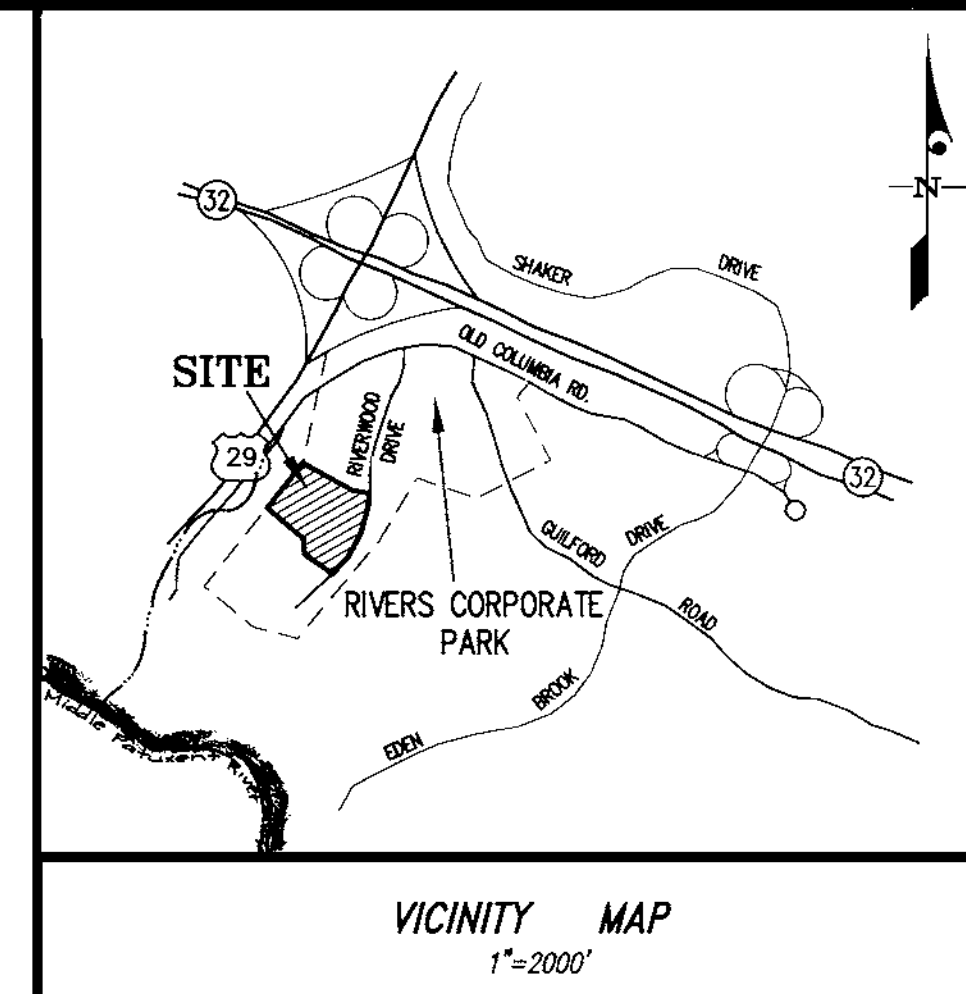
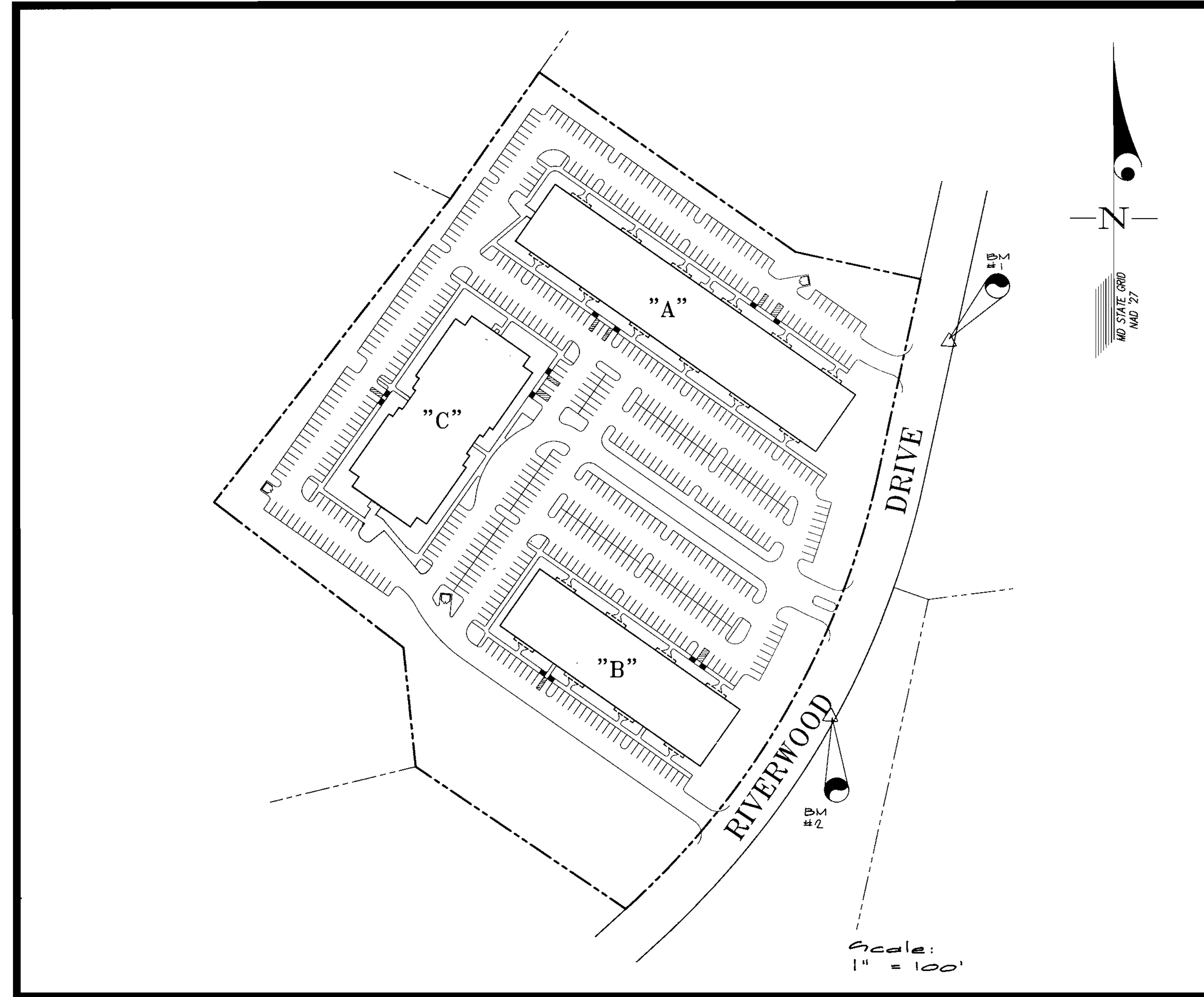
- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standard and specifications if applicable.
- The contractor shall notify the Department of Public Works at (410) 313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- 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.
- Area of Parcel: 12.6843 Ac. Disturbed Area: 11.28 Ac.
- Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- All plan dimensions are to face of curb unless otherwise noted.
- Existing topography was determined by approved final construction plans for development.
- Boundary information and coordinate data for this site are based on the MD State Plane System (NAD 83) as projected on the recorded plat for this subdivision.
- Water and sewer shown is public.
- All existing water and sewer is shown per Contract No. 34-1146-D & 24-1025-D.
- Stormwater management quantity and quality control is being provided onsite.
- All existing public storm drain is per F-84-02 & F-82-28.
- All curb radii is 5' unless noted otherwise.
- Utility information taken from approved final construction plans for development.
- Sidewalks adjacent to perpendicular parking shall be 6' wide. All other sidewalks shall be 5' wide, except where dimensioned otherwise. Provide 3' radius rounding at all angle breaks and intersections.
- Contractor shall utilize PVC pipe for all sewer house connections. Contractor shall utilize D.I.P. (Cl. 51) for 4" and 6" water house connections and D.I.P. (Cl. 50) for 8" water house connections.
- For all storm drain connections at existing stubs, the contractor shall remove the existing blocking and maintain the same grade and alignment.
- Use trench bedding class "C" for storm drains.
- Paved areas indicated are private except as noted.
- Project background: See Dept. of Planning & Zoning File Numbers: F-84-02, F-82-28, W/S Contr. No's. 34-1146-D & 24-1025-D.
- Recording reference: Plat No. 6020.
- 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 (2 percent max.) landing at the top and bottom of all ramps and building entrances and exits.
- All water meters shall be located inside buildings.
- The proposed water and sewer house connection alignments indicated on the plans, from the existing utilities to the building, are to be constructed by the building plumber and are approximate. The proposed stubs are located 5' from the building face.
- The proposed roof drain alignment connections indicated on the plans, from the stubs to the building, are to be constructed by the building plumber and are approximate. The proposed stubs are located 5' from the building face.
- Maintain 2% cross-slopes on sidewalks, per standard details. Where sidewalk is adjacent to building, slope away from building, and utilize expansion joint material and sealer in the joint between the sidewalk and the building wall.
- Sufficient sight distance per the Howard County Design Manual must be provided at all access points. Any landscaping that obstructs the line of sight must be relocated.
- A traffic study and A.P.F.O. analysis, which included this Parcel, were performed as part of this site development plan.
- There is no floodplain on this site.
- There are no wetlands on this site.
- This site is exempt from the Forest Conservation Act in accordance with Section 16.1202(b)(1)(v).
- All exterior lighting shall comply with Zoning Regulations, Section 124.
- On Sept. 22, 1999, WP 00-28 was approved per Ho. Co. Subdivision & Land Development Regulations, Sect. 16.110(a)(1) to permit grading by stream buffer, & is subject to the following:
 - Proposed grading can only occur above the point where "swale becomes natural" above the 340' contour.
 - Grading will be limited to the extent indicated on WP exhibit.
 - Grading in this area cannot occur until GDP 00-28 receives signature approval.

SITE DEVELOPMENT PLAN

RIVERS CORPORATE PARK

SECTION 1 AREA 2

PARCEL 'D'



BENCHMARK

BM#1	GLV Trav. Sta. 700	N 400746.49	Elev. 377.99	Desc. Pk nail in top of curb.
BM#2	GLV Trav. Sta. 707	N 400159.69	Elev. 370.51	Desc. Pk nail in top of curb.

- SITE ANALYSIS**
- Area of site: 552,528 sq. ft. or 12.6843 ac.
 - Disturbed Area: 11.28 ac.
 - Present Zoning: New Town (Employment) FDP 184-A-II
 - Proposed Use: Research and Development/Office
 - Floor space: Building A 40,640 s.f. Δ
Building B 29,520 s.f.
Building C 64,254 s.f. (2 story @ 32,127 s.f. each)
Total Floor Space: 134,414 s.f.
 - Total number of Parking Spaces required: 269*
 - Total number of Handicap Spaces required: 13
 - Minimum number of Van accessible: 2
 - Total number of Parking Spaces provided: 624 (provides parking ratio of 4.64 sp./1000 s.f.)
 - Total number of Handicap Spaces provided: 16
 - Total number of Van accessible provided: 5
 - Building coverage: 102,287 s.f.
 - Floor/Area ratio (F.A.R.): $134,414/552,528 = 0.24$
 - Impervious area = 0.1%
- * - Based on General Office use @ 2. spaces/1000 s.f.

KEY MAP

SCALE: 1" = 100'

SHEET INDEX

- | | |
|--------------------------------|--|
| 1. Cover Sheet | 7. Sediment Control Details |
| 2. Site Development Plan | 10. Storm Drain Profiles & Schedules |
| 3. Site Details/Paving Plan | 11. Storm Drain Profiles & Schedules |
| 4. Handicap Accessibility Plan | 12. Stormwater Management Profiles/Details |
| 5. Landscape & Lighting Plan | 13. Stormwater Management Profiles/Details |
| 6. Landscape Notes & details | 14. WMC and SMC Profiles |
| 7. Drainage Area Map | 15. Utility Plan |
| 8. Sediment Control Plan | 16. Pond Specifications |

APPROVED
DATE: Sept. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

John V. Leavelle 11/15/99
Director Date

Cindy Hamilton 11/19/99
Chief, Division of Land Development Date

Chad Williamson 11/12/99
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONTVILLE OFFICE PARK
BURTONTVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-885-1820 DC/VA: 301-599-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
12-20-99	rev. site analysis sheet due to revision of Building 'A' footprint		
11-4-99	As submitted for signature		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21284
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

SITE DEVELOPMENT PLAN
RIVERS CORPORATE PARK
SECTION 1 AREA 2 - PARCEL 'D'
PLAT No. 6020

ADDRESS CHART	
PARCEL 'D' BLDG.	STREET ADDRESS
"A"	7150 RIVERWOOD DRIVE
"B"	7170 RIVERWOOD DRIVE
"C"	7100 RIVERWOOD DRIVE

WATER CODE: E-10	SEWER CODE: 6440000	SUBDIVISION NAME: RIVERS CORPORATE PARK	SECTION/AREA 1/2	PARCEL D'	
PLAT 6020	ZONE NEW TOWN	TAX MAP 41	BLOCK 12	ELEC. DIST. 6	CENSUS TRACT 6068 01

SCALE AS SHOWN	ZONING NT	G. L. W. FILE No. 99030
DATE Oct. 15, 1999	TAX MAP - GRID 41 - 12	SHEET 1 OF 16

HOWARD COUNTY, MARYLAND

GDP 00-28

Stormwater Management Facility Maintenance Schedule

Routine Maintenance

Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.

Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year. Once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.

Debris and litter next to the outlet structure shall be removed during regular mowing operations, and as needed.

Visible signs of erosion in the pond as well as rip-rap outlet area shall be required as soon as it is noticed.

Non-Routine Maintenance

Structural components of the pond such as the dam, high structure and pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.

Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary aesthetic reasons, or when deemed necessary by the Howard County Dept. of Public Works.

S.W.M. Facility Summary

	2 Yr.	10 Yr.
Before Development		
Drainage Area	19.2 ac. ±	19.2 ac. ±
Curve Number	74.0	74.0
Time of Concentration	0.29 Hr.	0.29 Hr.
After Development		
Drainage Area	19.2 ac. ±	19.2 ac. ±
Curve Number	88.4	88.4
Time of Concentration	0.20 Hr.	0.20 Hr.
Before Development	14.5 cfs.	700 cfs.
After Development (no management)	34.5 cfs.	69.1 cfs.
After Development (managed)	14.3 cfs. @ 70.0'	35.3 cfs. @ 70.0'
Storage Required (TK-55)	0.09 Ac. Ft.	1.04 Ac. Ft.
Storage Provided (TK-20)	0.75 Ac. Ft.	1.21 Ac. Ft.

Street Light Chart

Street Name	Sta.	Off-Set	Fixture / Pole Type	Comment
Riverwood Drive	65+40	18'L	150' with HPS vapor shield fixture mounted at 30' on a 40' pole. Fiber optic pole using a 12' arm.	angle shown on plan
	67+35	29'L		
	71+19	29'L		

- Notes**
- Contractor is to use stand/Rev 7" curb & gutter in this area.
 - Contractor is to transition from 7" curb & gutter within R/W to 6" curb & gutter on site in this area.
 - For handicap parking/access see sheet.

Legend

- Standard 6" Curb & gutter
- Reverse 6" Curb & gutter
- Existing Curb
- Proposed Spot Elevation
- Existing Contour
- Proposed Contour
- Entrance that is handicap accessible
- Stormwater Management Basin Location
- 50' stream Buffer
- Street Light (6" BS & 8")

APPROVED
 PLANNING BOARD
 HOWARD COUNTY
 DATE: Sept 23, 1999

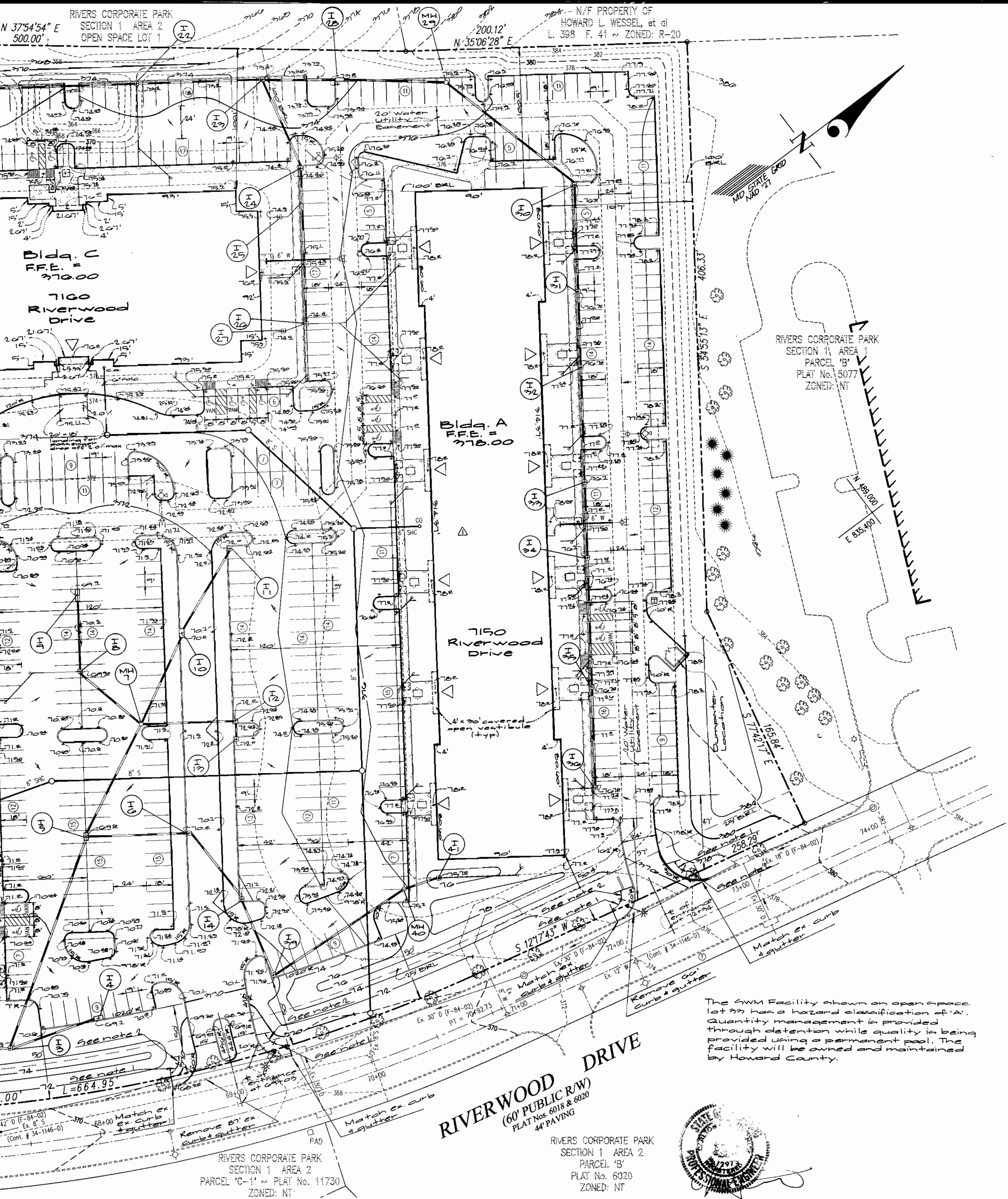
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: Frank J. Laugel - 11/19/99
 Chief, Division of Land Development: Cathy Hamilton - 11/19/99
 Chief, Development Engineering Division: John Vanman - 11/19/99

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Rip-rap information @ E=1
 length = 57'
 dia = 10"
 blanket thickness = 9"

Maintenance access to S.W.M. Facility

DATE	REVISION	BY	APP'R.
12-10-99	rev Building 'A' footprint		
11-4-99	As submitted for signature		



The S.W.M. Facility shown on an open space lot has a hazard classification of 'A'. Quantity management is provided through detention while quality is being provided using a permanent pool. The facility will be owned and maintained by Howard County.

RIVERWOOD DRIVE
 (60' PUBLIC R/W)
 PLAT Nos. 6018 & 6020
 44' PAVING

RIVERS CORPORATE PARK
 SECTION 1 AREA 2
 PARCEL 'C-1' PLAT No. 11730
 ZONED: NT

SITE DEVELOPMENT PLAN
RIVERS CORPORATE PARK
 SECTION 1 AREA 2 - PARCEL 'D'
 PLAT No. 6020

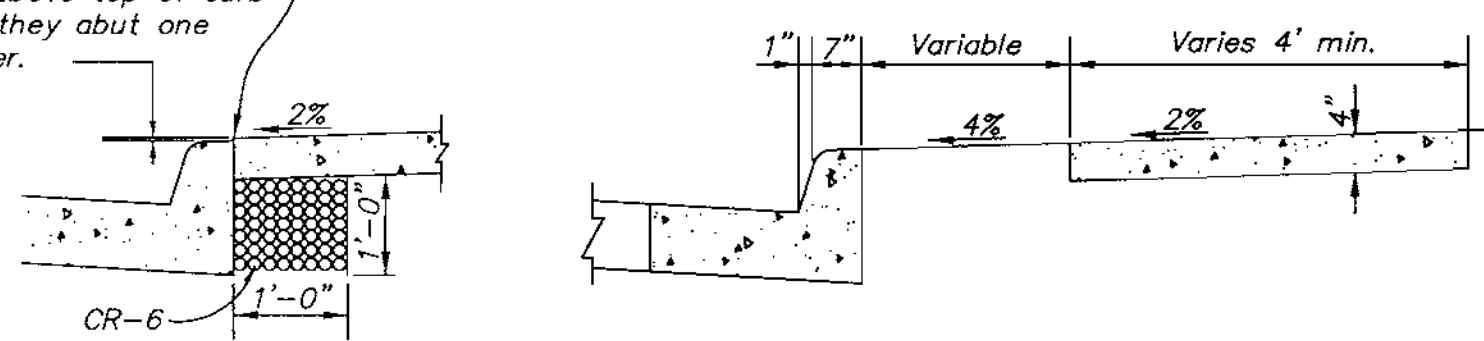


SCALE	ZONING	G. L. W. FILE No.
1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct 18, 1999	41 - 12	2 OF 10

GUILFORD ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND

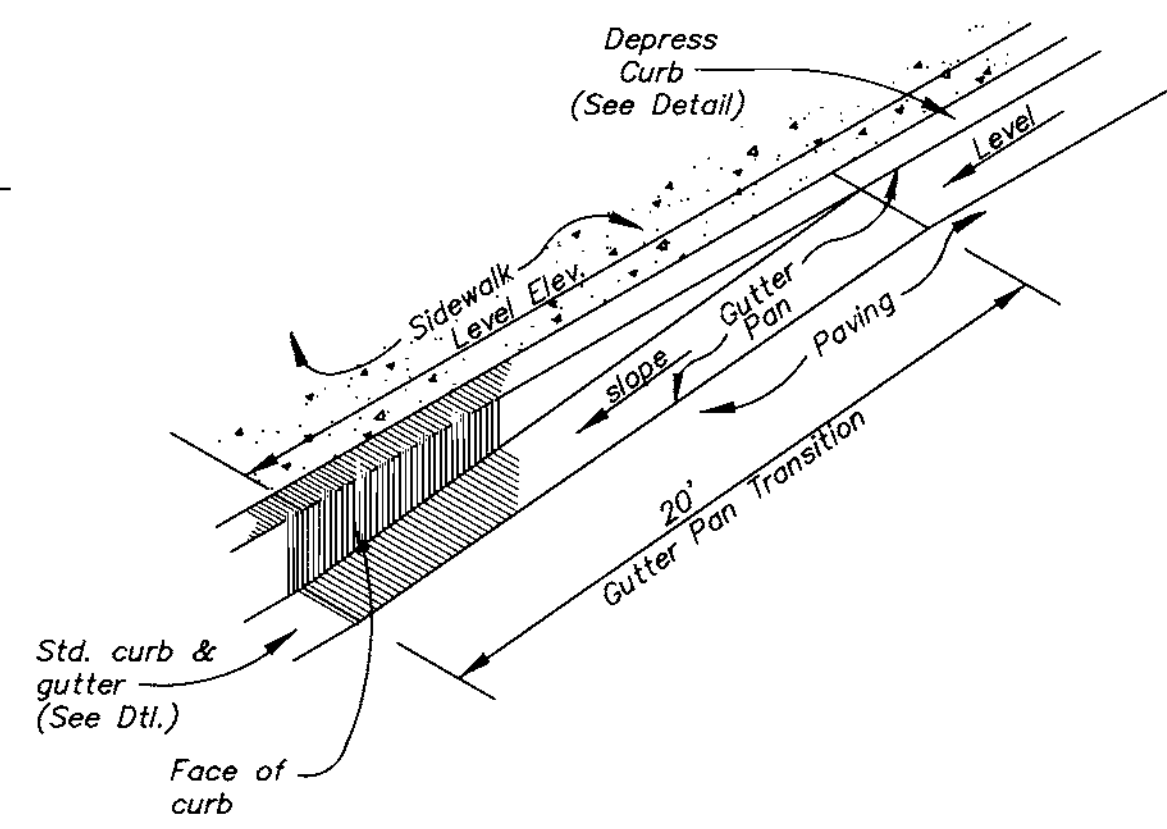
1/2" Preformed bituminous expansion material
Top of sidewalk to be 1/4" above top of curb when they abut one another.



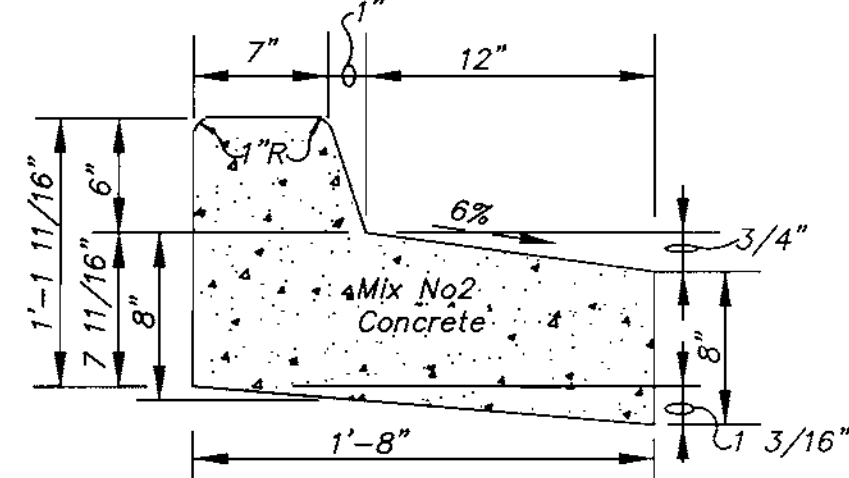
Detail A

Notes:

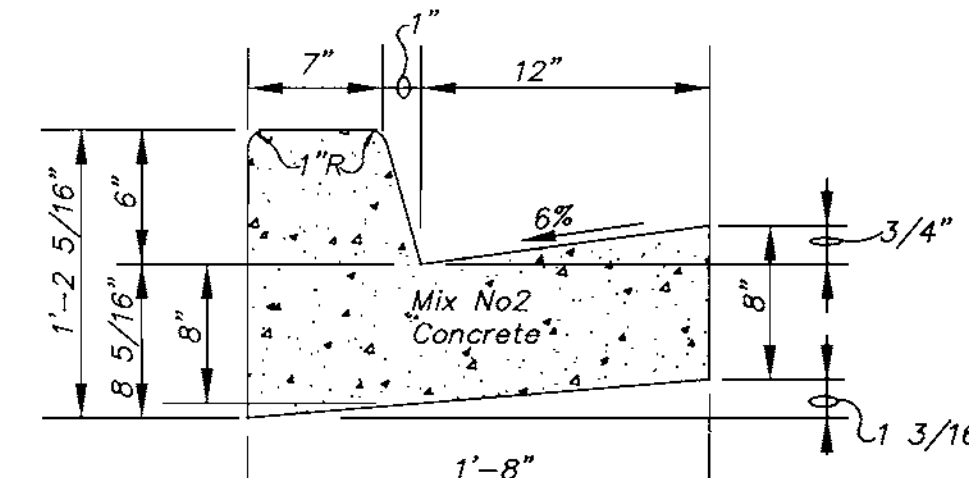
- Sidewalk to be scribed in 5' maximum squares.
- Expansion joints across the sidewalk not to be more than 15' apart.
- 1/2" preformed bituminous expansion material in expansion joints to be kept 1/4" below surface of sidewalk.
- Concrete to be mix No.2
- When sidewalk abuts curb, walk shall be 1/4" above curb with preformed bituminous expansion material between sidewalk and curb and resting on a compacted crushed stone base. See detail A this sheet.
- On longitudinal sidewalk grades of 5% or greater, a concrete header, 6" thick and 6" deep below the normal 4" sidewalk thickness shall be constructed for the full width of the sidewalk at intervals of 48'. The headers shall be placed at expansion joint locations and shall be monolithic with the sidewalk.



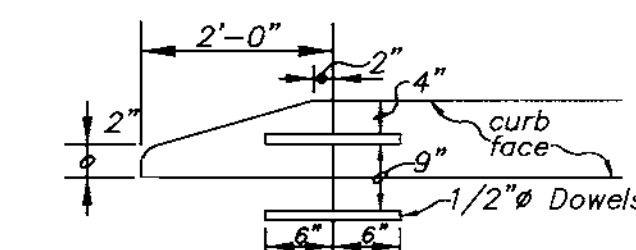
Gutter Transition - Isometric
N.T.S.



Reverse 6" Combination Curb & Gutter
N.T.S.

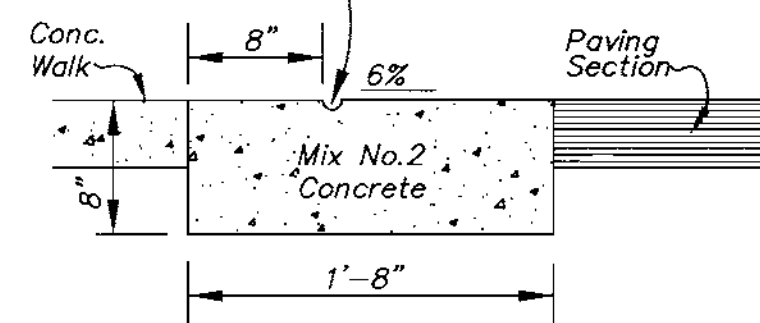


Standard 6" Combination Curb & Gutter
N.T.S.

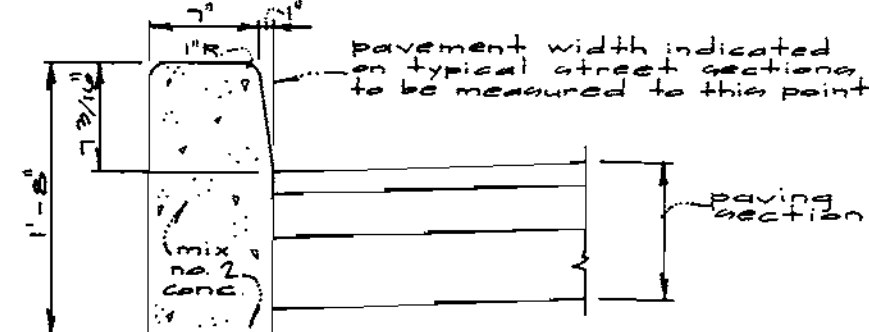


Nose Down Curb Detail
N.T.S.

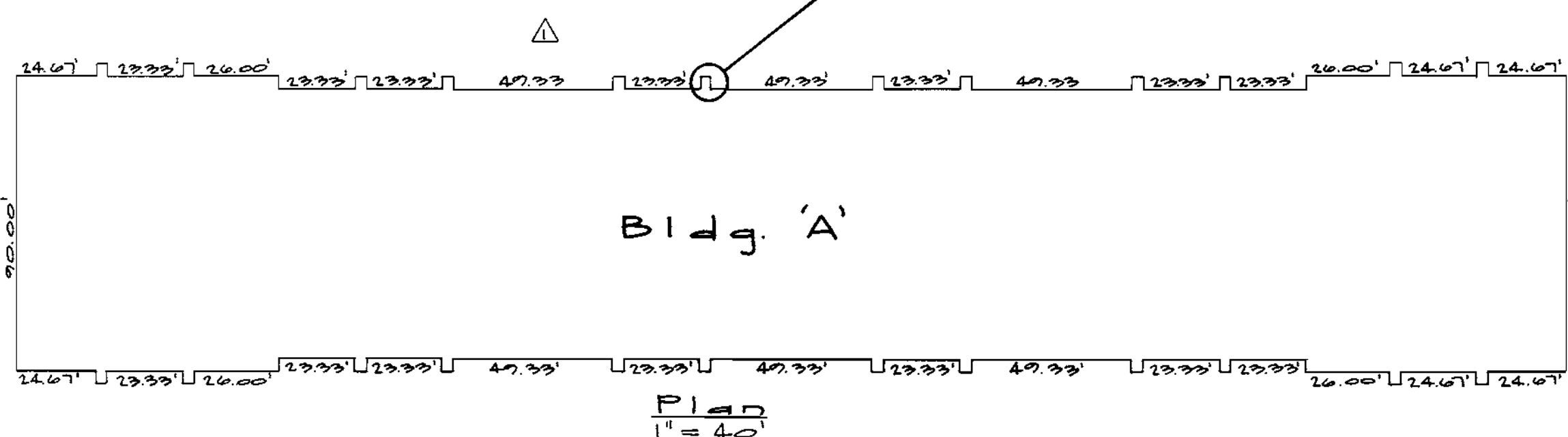
Continuous score joint from curb transition to curb transition.



Depressed Curb Entrance
N.T.S.



Standard Barrier Curb
N.T.S.



BLDG. 'A'

Plan
1" = 40'



BUILDING 'A'

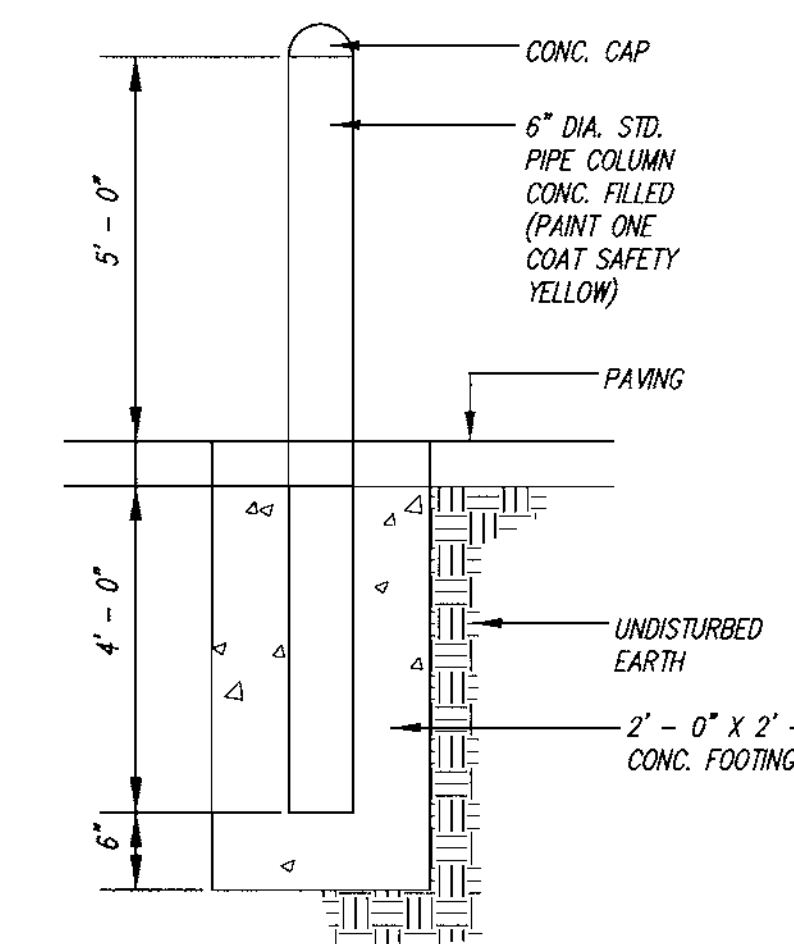


BUILDING 'B'

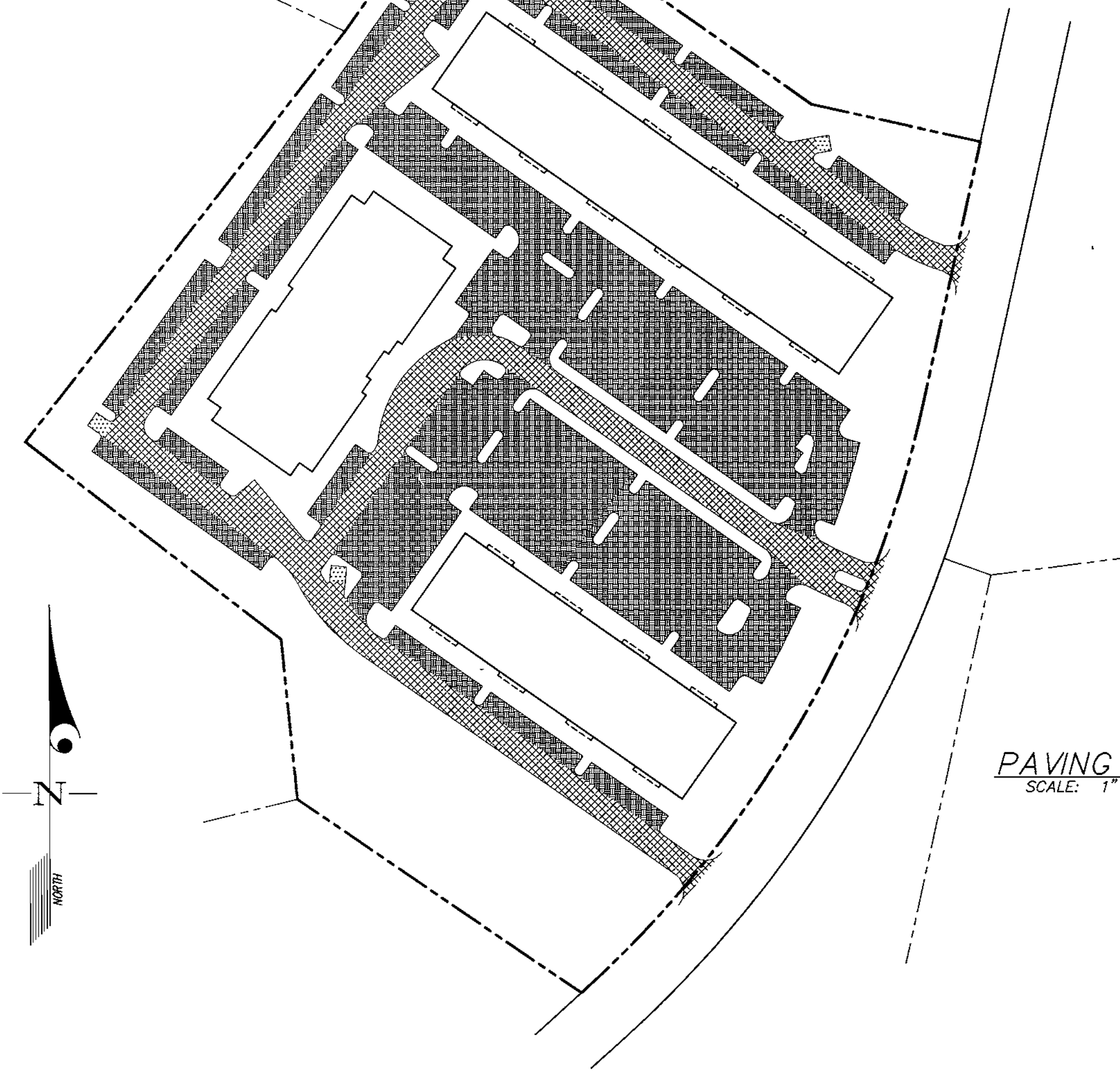


BUILDING 'C'

FRONT ELEVATIONS
SCALE: 1" = 30'



BOLLARD DETAIL
(N.T.S.)



PAVING PLAN
SCALE: 1" = 100'

LEGEND

- Light Duty [Pattern]
- Heavy Duty [Pattern]
- Concrete * Pad [Pattern]

* - See Ho.Co. Detail # R.11.01 for concrete reinforcement

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE: SEPT. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: [Signature] Date: 11/13/99
Chief, Division of Land Development: [Signature] Date: 11/19/99
Chief, Development Engineering Division: [Signature] Date: 11/22/99



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

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21284
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

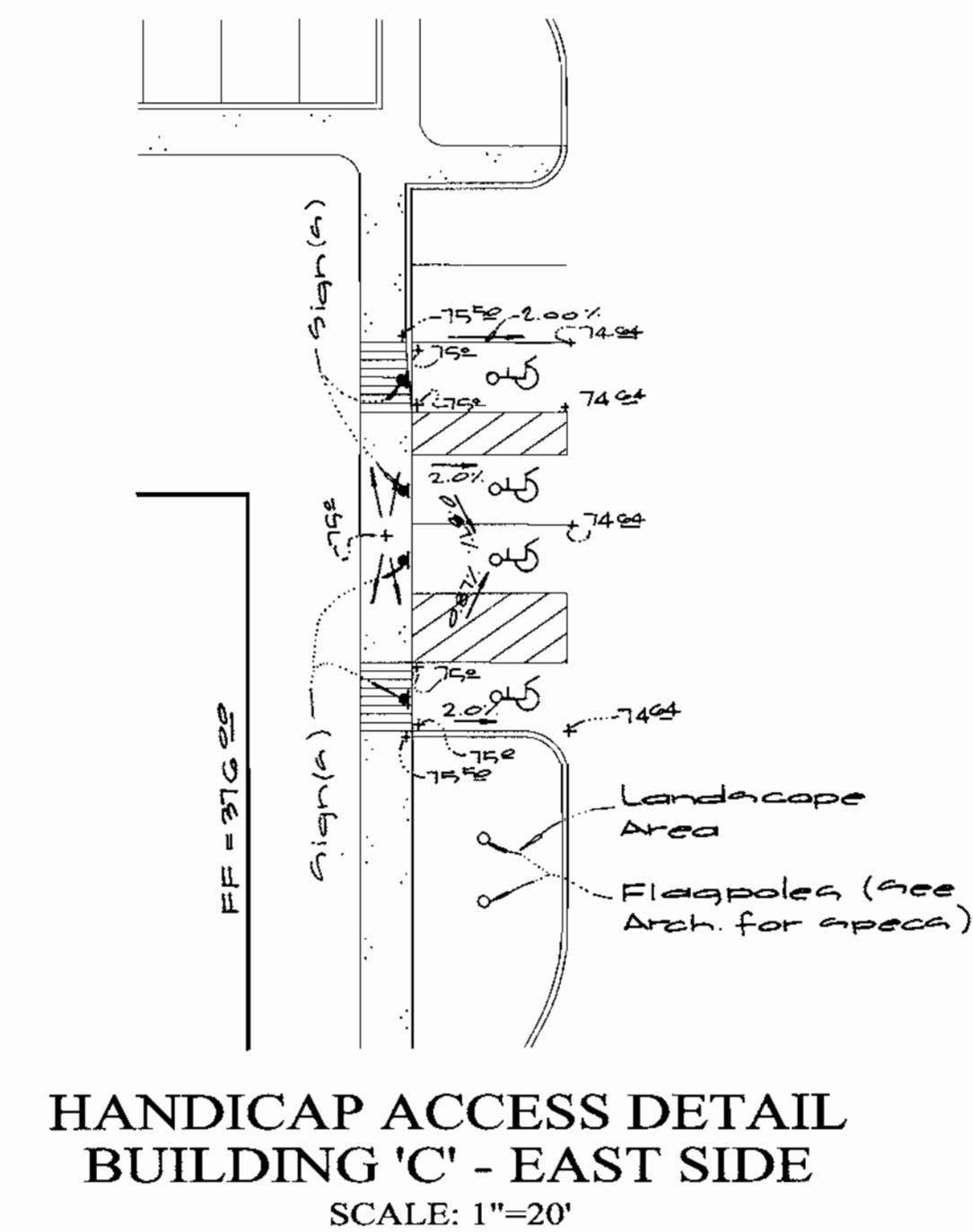
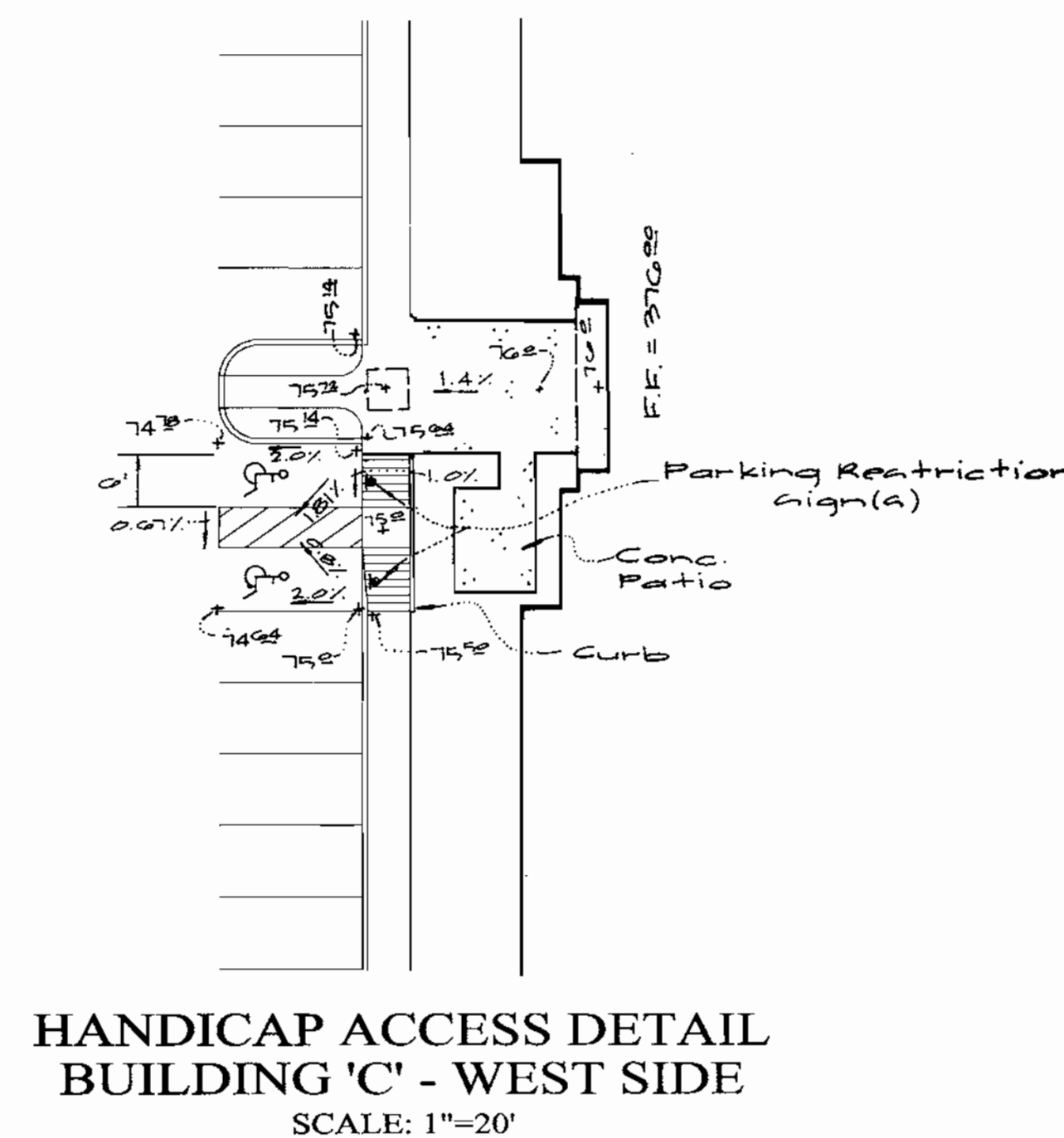
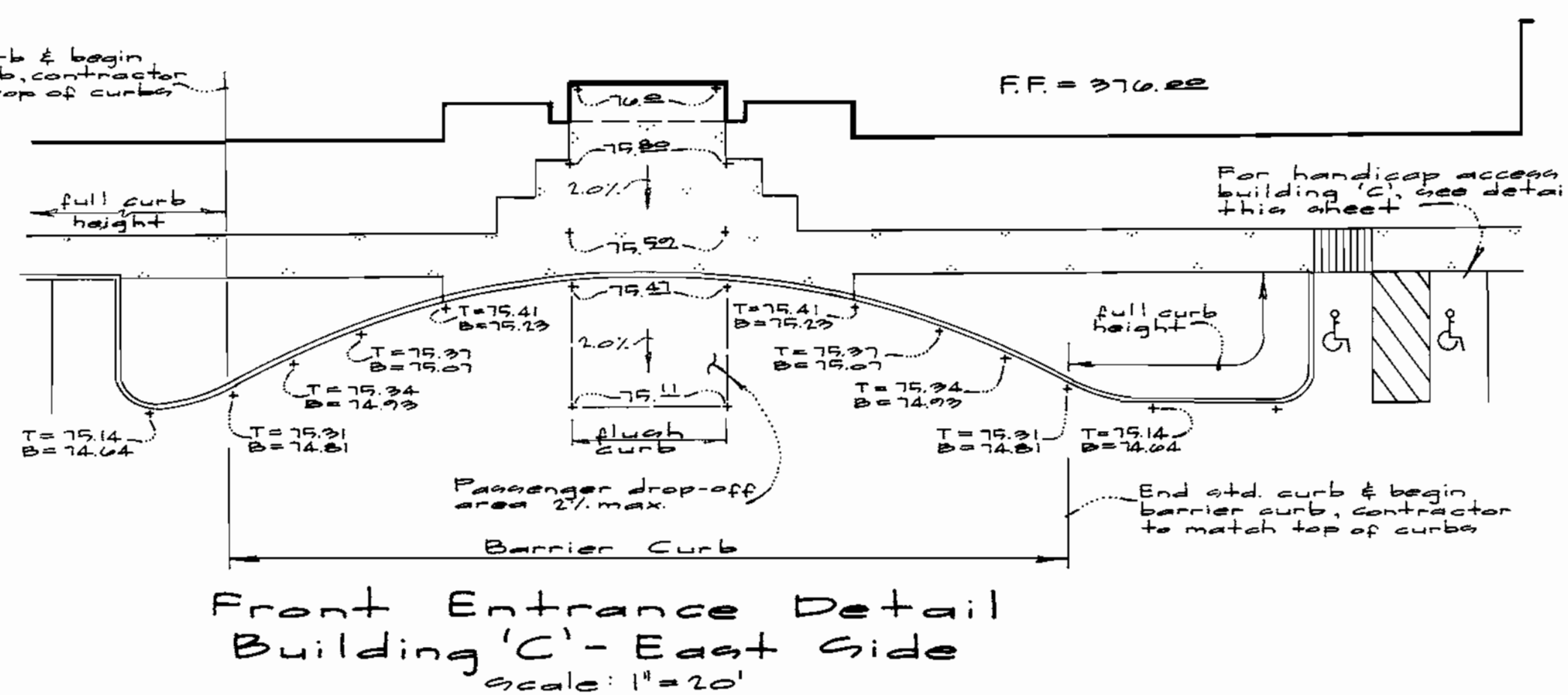
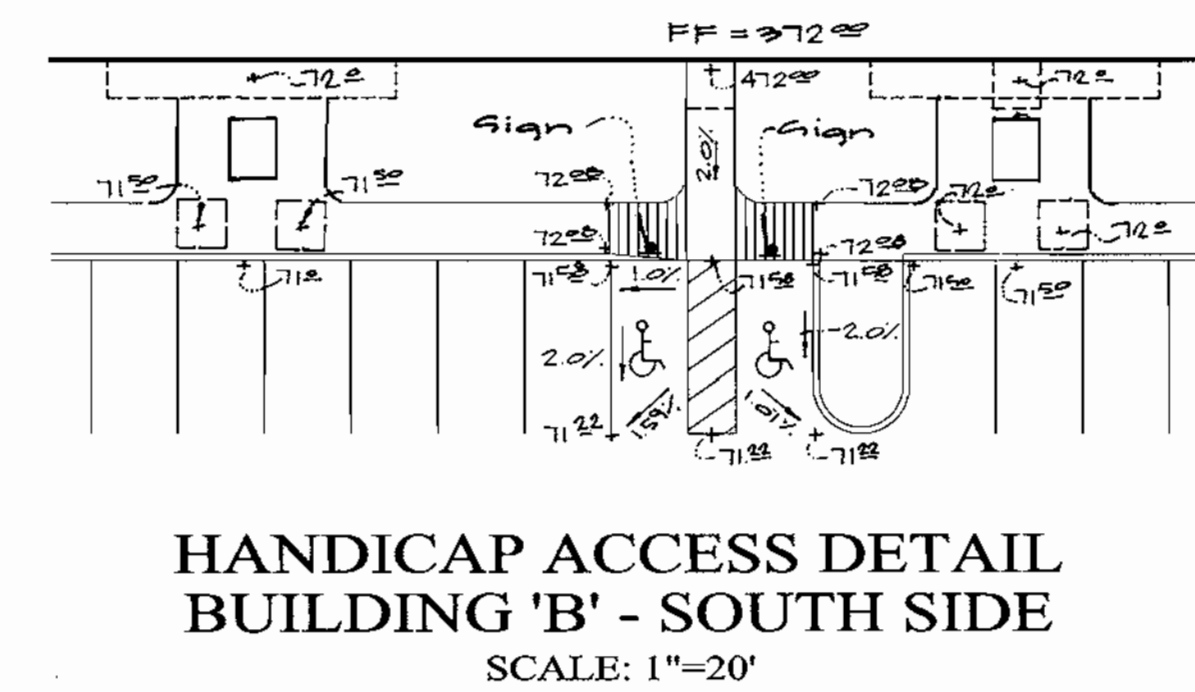
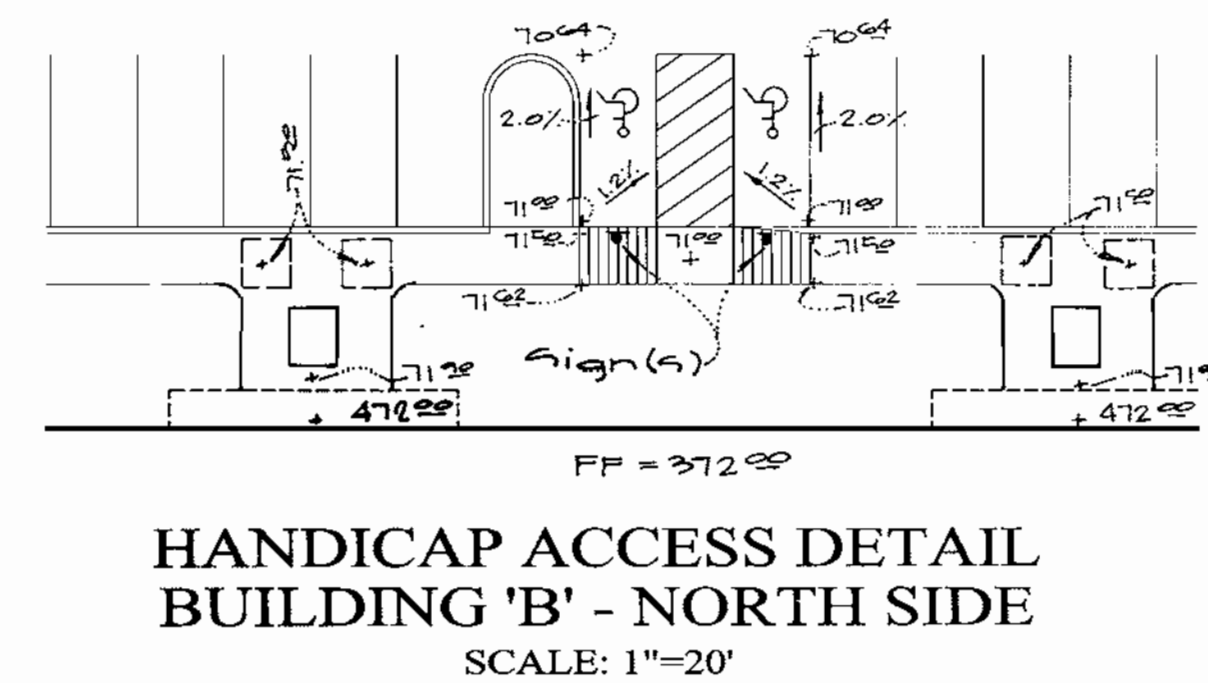
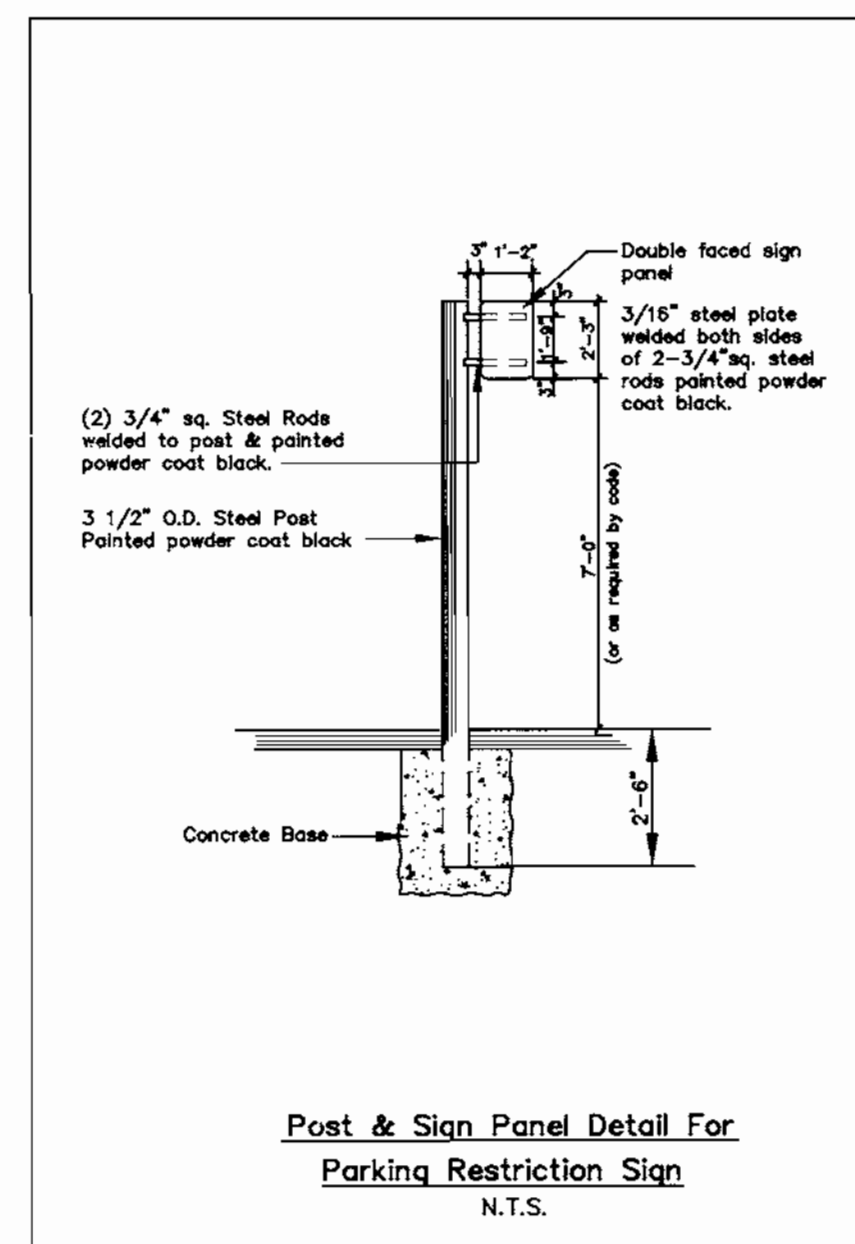
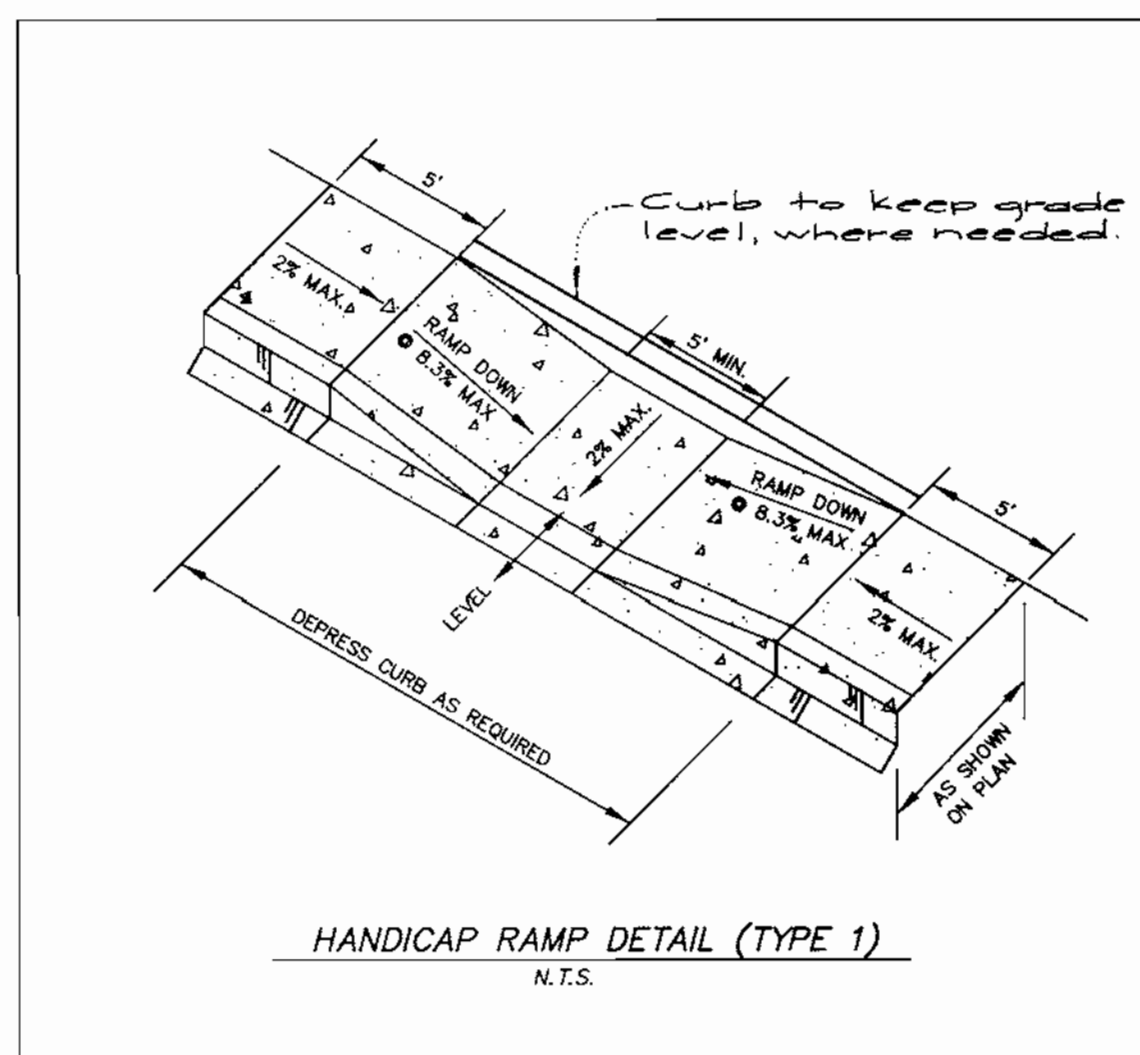
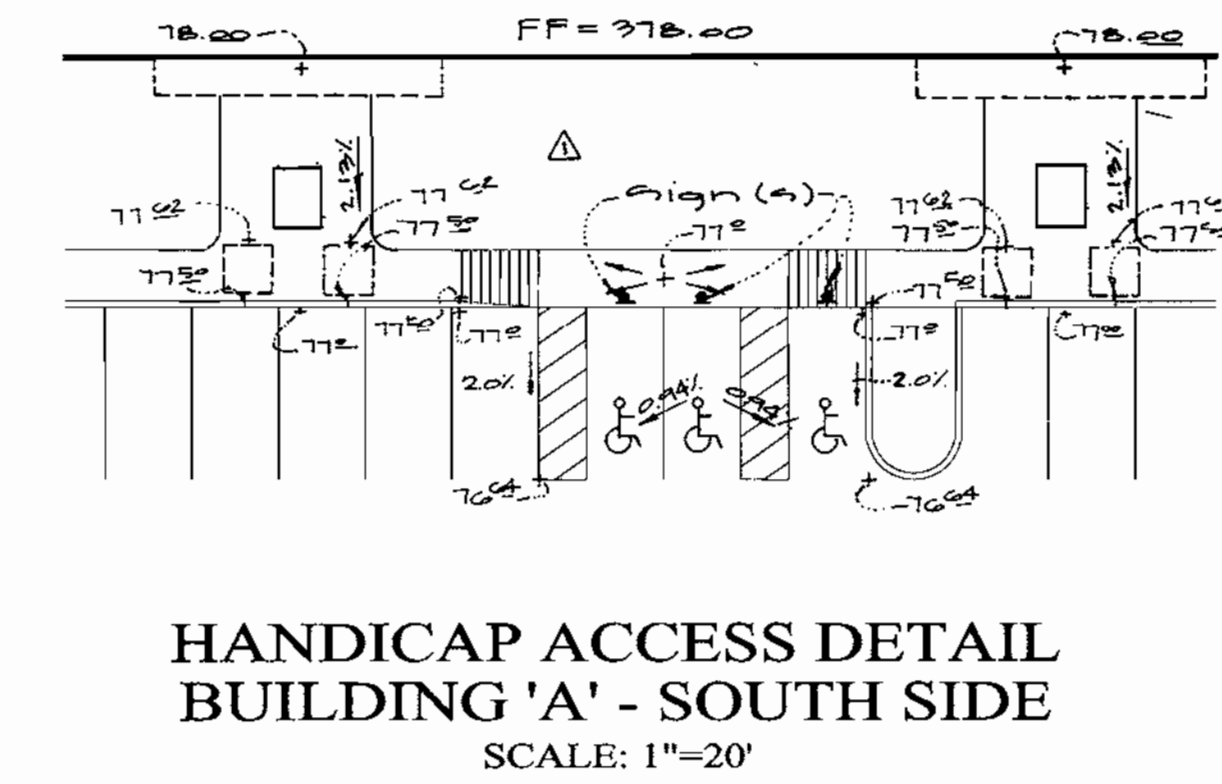
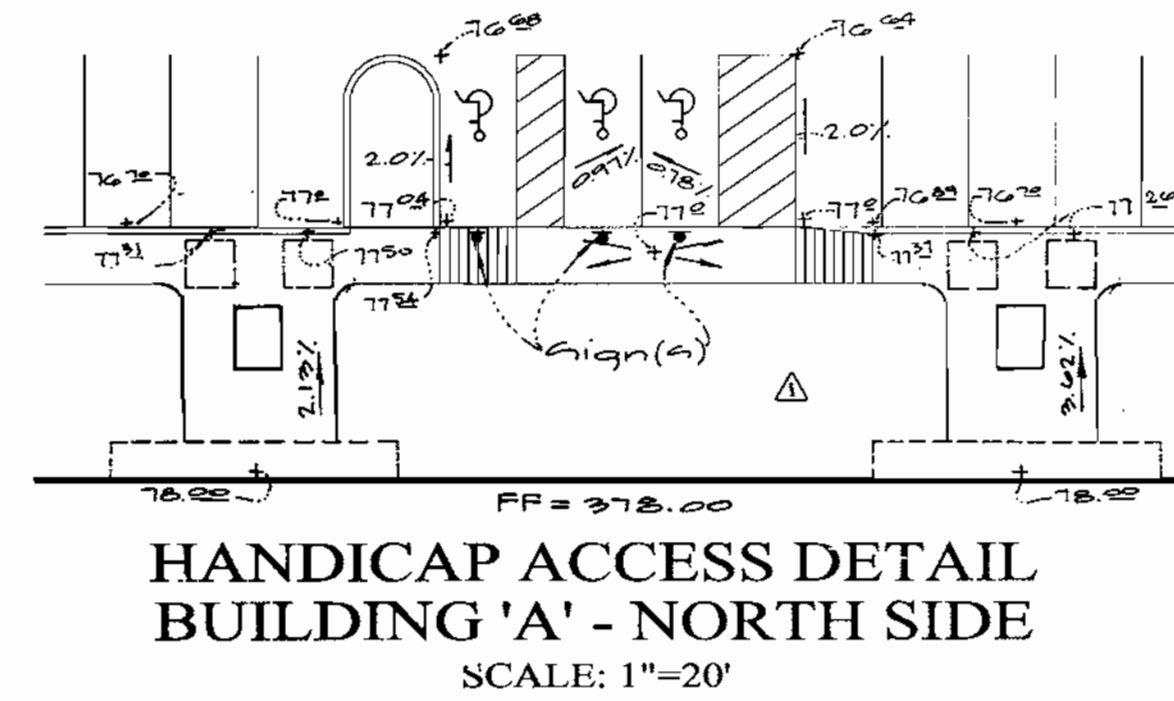
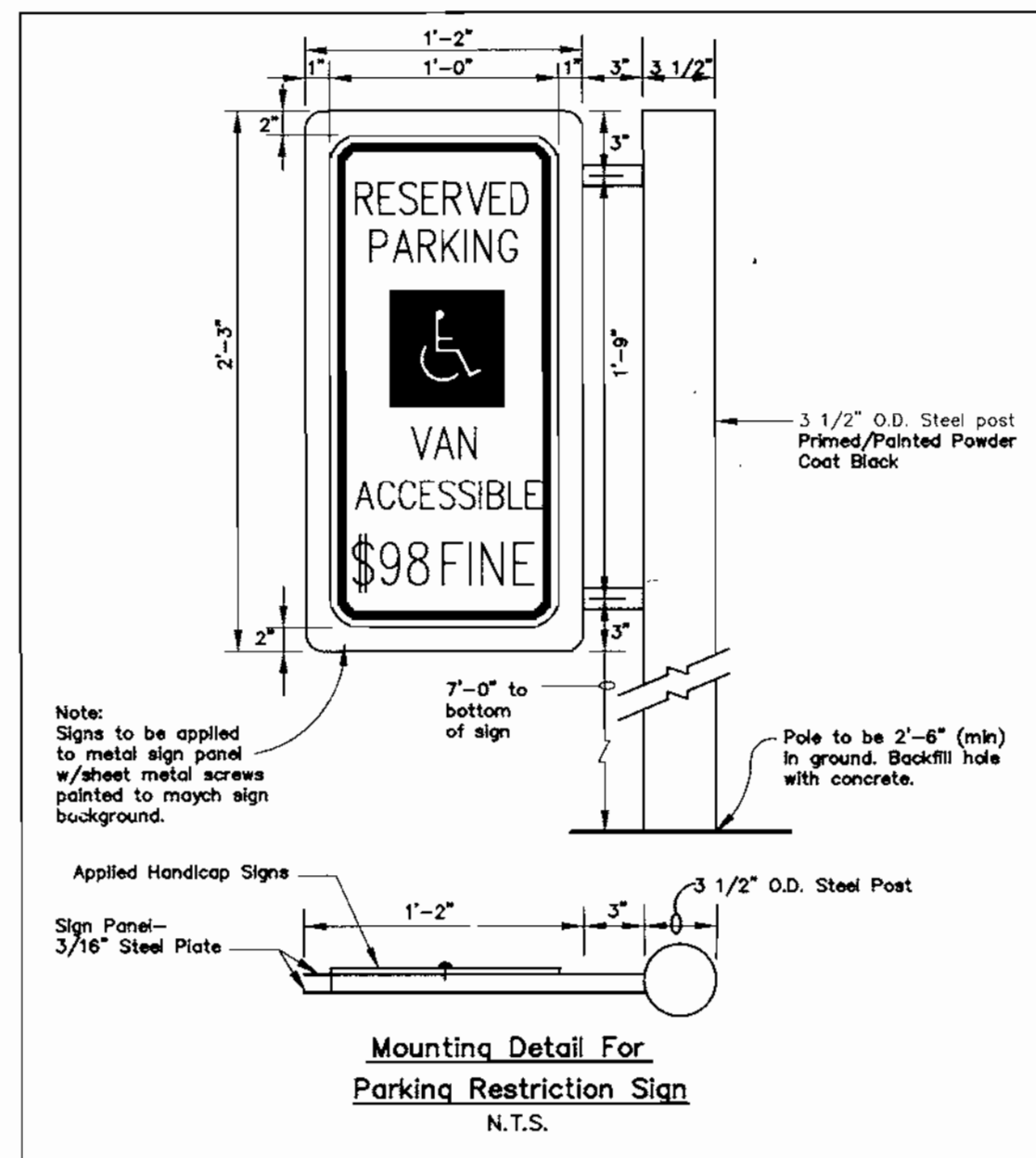
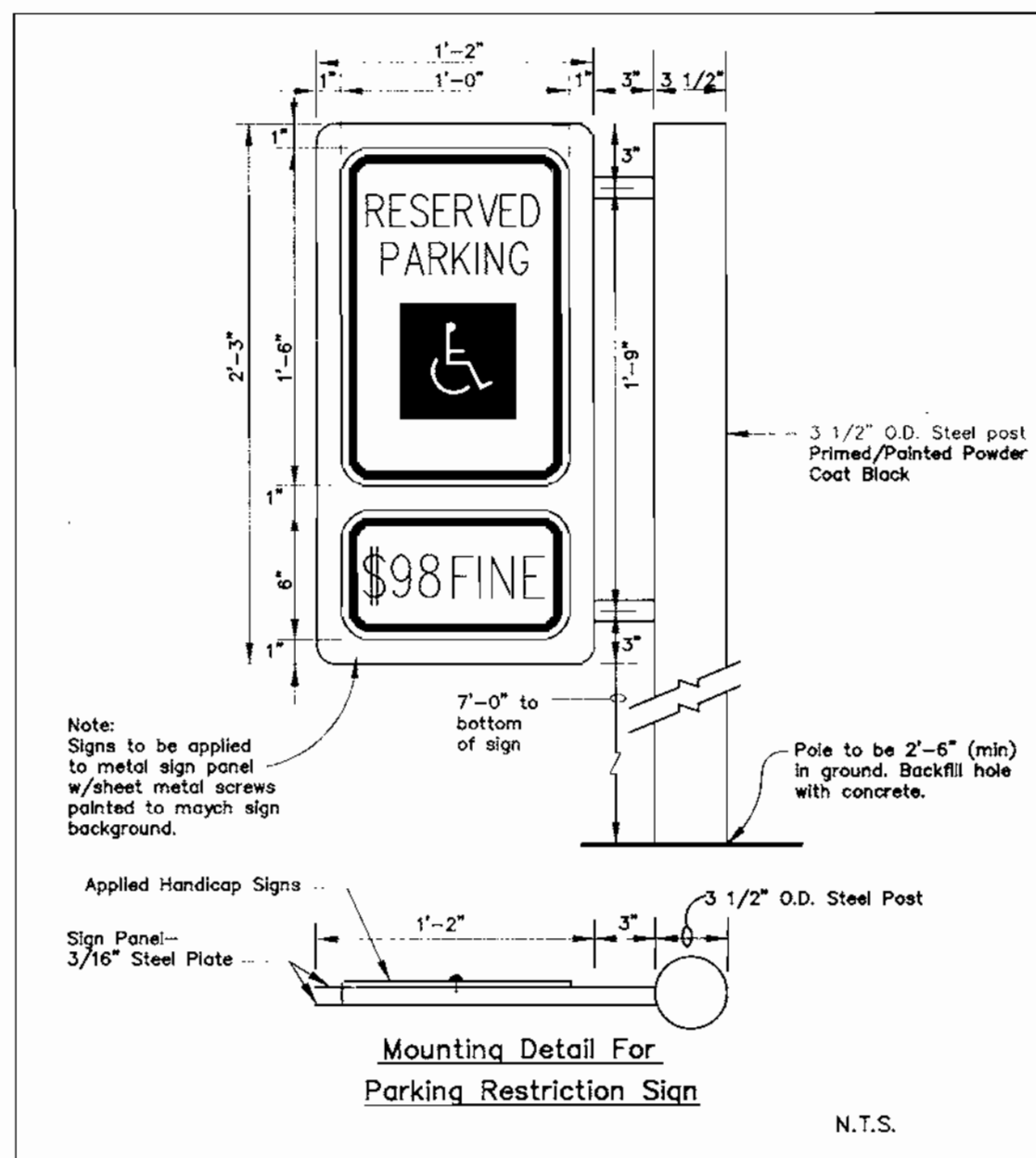
SITE DETAILS / PAVING PLAN
RIVERS CORPORATE PARK
SECTION 1 AREA 2 ~ PARCEL 'D'
PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 10, 1999	41 - 12	3 OF 16

DES.	DRN.	CHK.	DATE	REVISION	BY	APPR.

GUILFORD ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND



APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE: Sept. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: David V. 2 1/2 1/99 Date: 11/10/99

Chief, Division of Land Development: David Hamilton Date: 11/19/99

Chief, Development Engineering Division: John P. ... Date: 11/12/99



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

DATE	REVISION	BY	APP'R.
11-20-99	rev. handicap access details for Building 'A'		
11-4-99	As submitted for signature		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21284
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

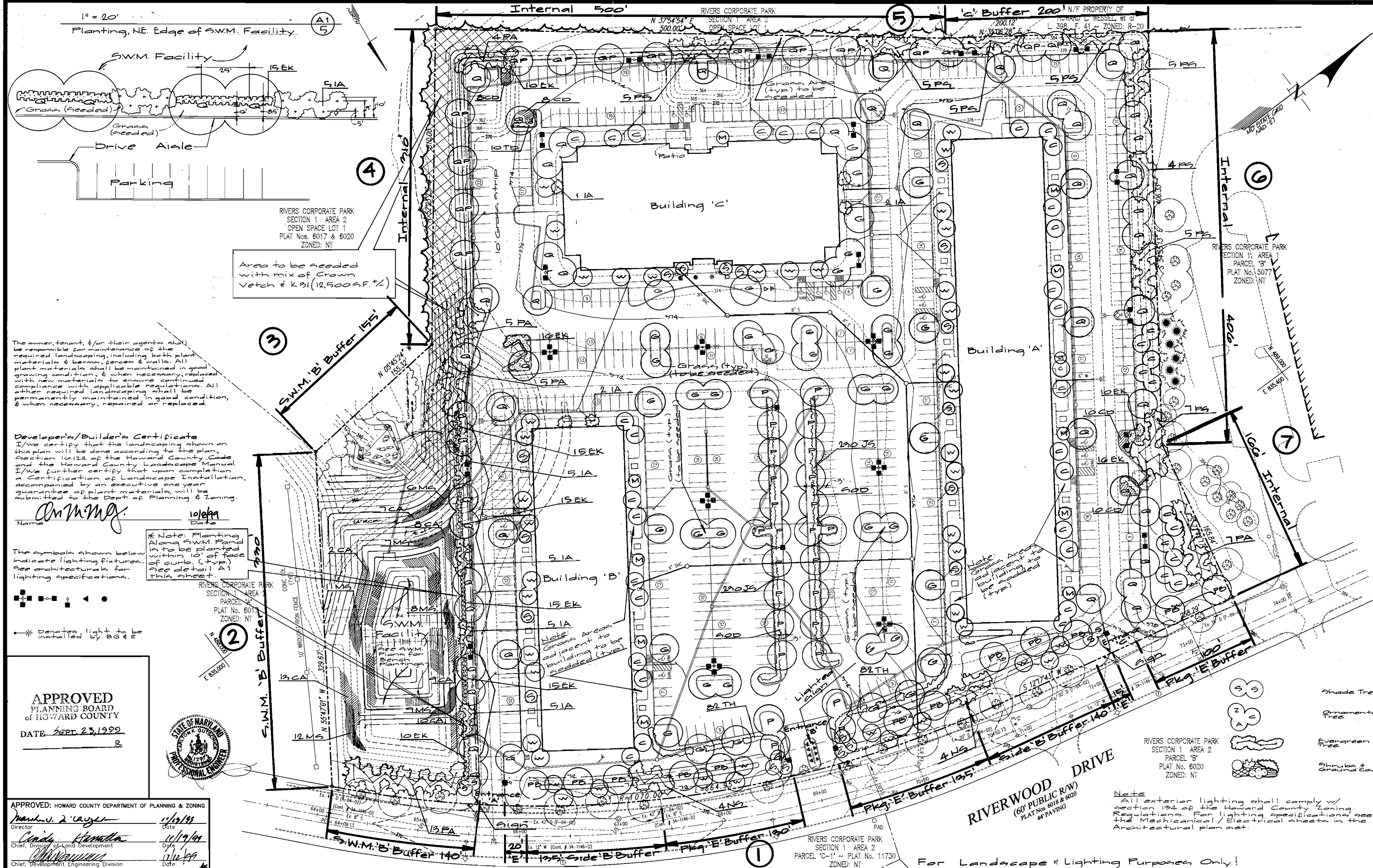
HANDICAP ACCESS DETAILS
RIVERS CORPORATE PARK
SECTION 1 AREA 2 ~ PARCEL 'D'
PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 18, 1999	41 - 12	4 OF 16

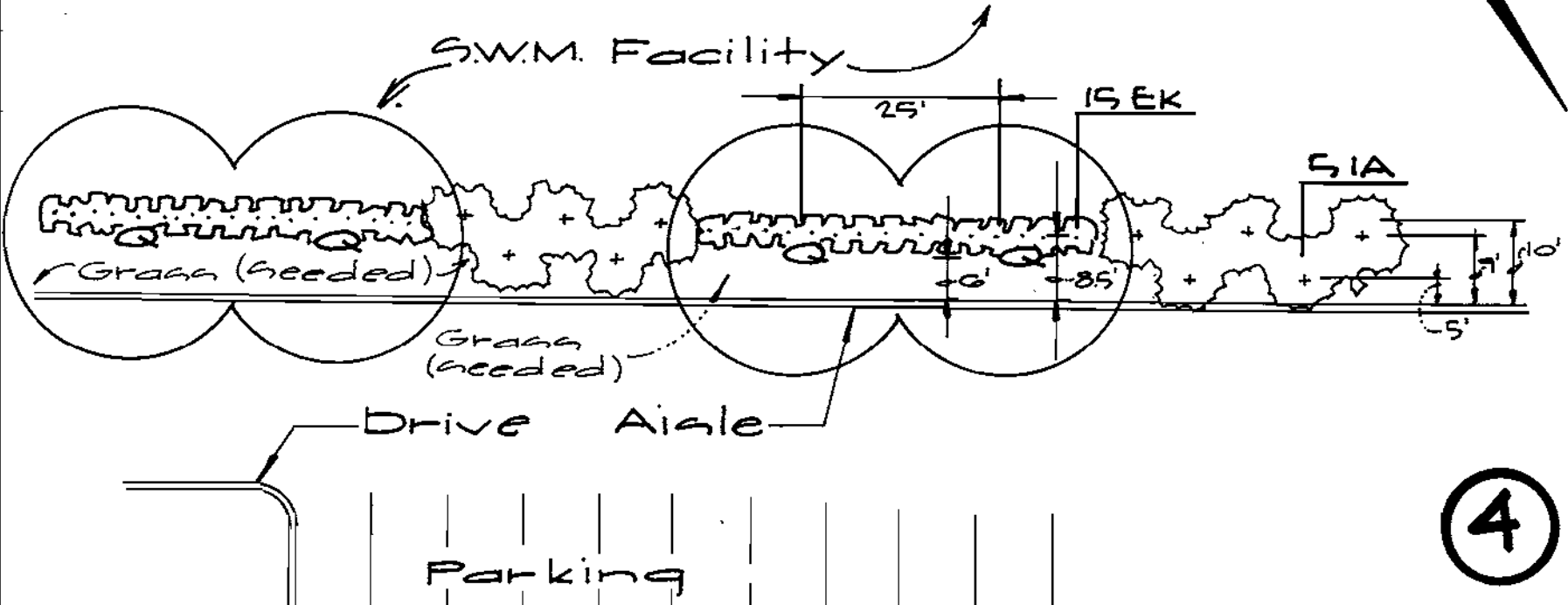
GUILFORD ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND

SDP 00-28



1" = 20'
Planting, NE. Edge of S.W.M. Facility.



RIVERS CORPORATE PARK
SECTION 1 AREA 2
OPEN SPACE LOT 1
PLAT Nos. 6017 & 6020
ZONED: NT

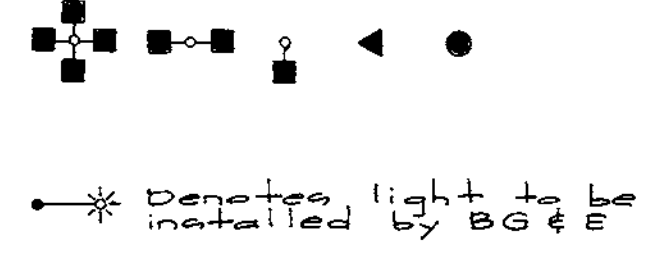
Area to be seeded
with mix of Crown
Vetch & K31 (12,500 S.F. +/-)

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

Developer's/Builder's Certificate
I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executive one-year guarantee of plant materials, will be submitted to the Dept. of Planning & Zoning.

Name: *Ch. M. M. G.*
Date: 10/29/99

The symbols shown below indicate lighting fixtures. See architectural for lighting specifications.



* Note: Planting Along S.W.M. Pond is to be planted within 10' of face of curb. (typ.) See detail A1 this sheet.

RIVERS CORPORATE PARK
SECTION 1 AREA 2
PARCEL 'D'
PLAT No. 6017
ZONED: NT

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: SEPT. 23, 1999



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: *Mark V. 2. Cayer* Date: 11/2/99
Chief, Division of Land Development: *Cindy Hamilton* Date: 11/19/99
Chief, Development Engineering Division: *[Signature]* Date: 12/12/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3908 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

DATE	REVISION	BY	APPR.
11-2-99	Add patio in front of Bldg. 'A'		MCF
11-4-99	As submitted for signature		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21284
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

LANDSCAPE & LIGHTING PLAN
RIVERS CORPORATE PARK
SECTION 1 AREA 2 - PARCEL 'D'
PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
1" = 40'	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 18, 1999	41 - 12	5 OF 16

Note: All exterior lighting shall comply w/ section 16.4 of the Howard County Zoning Regulations. For lighting specifications see the Mechanical/Electrical sheets in the Architectural plan set.

For Landscape & Lighting Purposes Only!

Stormwater Management Facility Maintenance Schedule

Routine Maintenance
 Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.

Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year. Once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.

Debris and litter next to the outlet structure shall be removed during regular mowing operations, and as needed.

Visible signs of erosion in the pond as well as rip-rap outlet area shall be required as soon as it is noticed.

Structural Maintenance
 Structural components of the pond such as the dam, liner structure and pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.

Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the filter, when deemed necessary, aesthetic reasons, or when deemed necessary by the Howard County Dept. of Public Works.

SWM Facility Summary

	2 Yr.	10 Yr.
Before Development		
Drainage Area	19.2 ac. ±	19.2 ac. ±
Curve Number	14.0	14.0
Time of Concentration	0.29 Hr.	0.29 Hr.
After Development		
Drainage Area	19.2 ac. ±	19.2 ac. ±
Curve Number	00.4	00.4
Time of Concentration	0.20 Hr.	0.20 Hr.
Before Development	14.0 cfs.	14.0 cfs.
After Development (no management)	24.5 cfs.	24.5 cfs.
After Development (managed)	14.3 cfs. @ 20.0'	25.3 cfs. @ 20.0'
Storage Required (TR-55)	0.07 Ac.Ft.	1.04 Ac.Ft.
Storage Provided (TR-20)	0.19 Ac.Ft.	1.21 Ac.Ft.

Street Light Chart

Street Name	Sta.	Off-Set	Fixture Pole Type	Comment
Riverwood Drive	65+48	28'L	250-watt HPS vapor sealed fixture mounted at 30' on a 12' arm	angle shown on plan
"	67+35	20'L	"	"
"	71+19	20'L	"	"

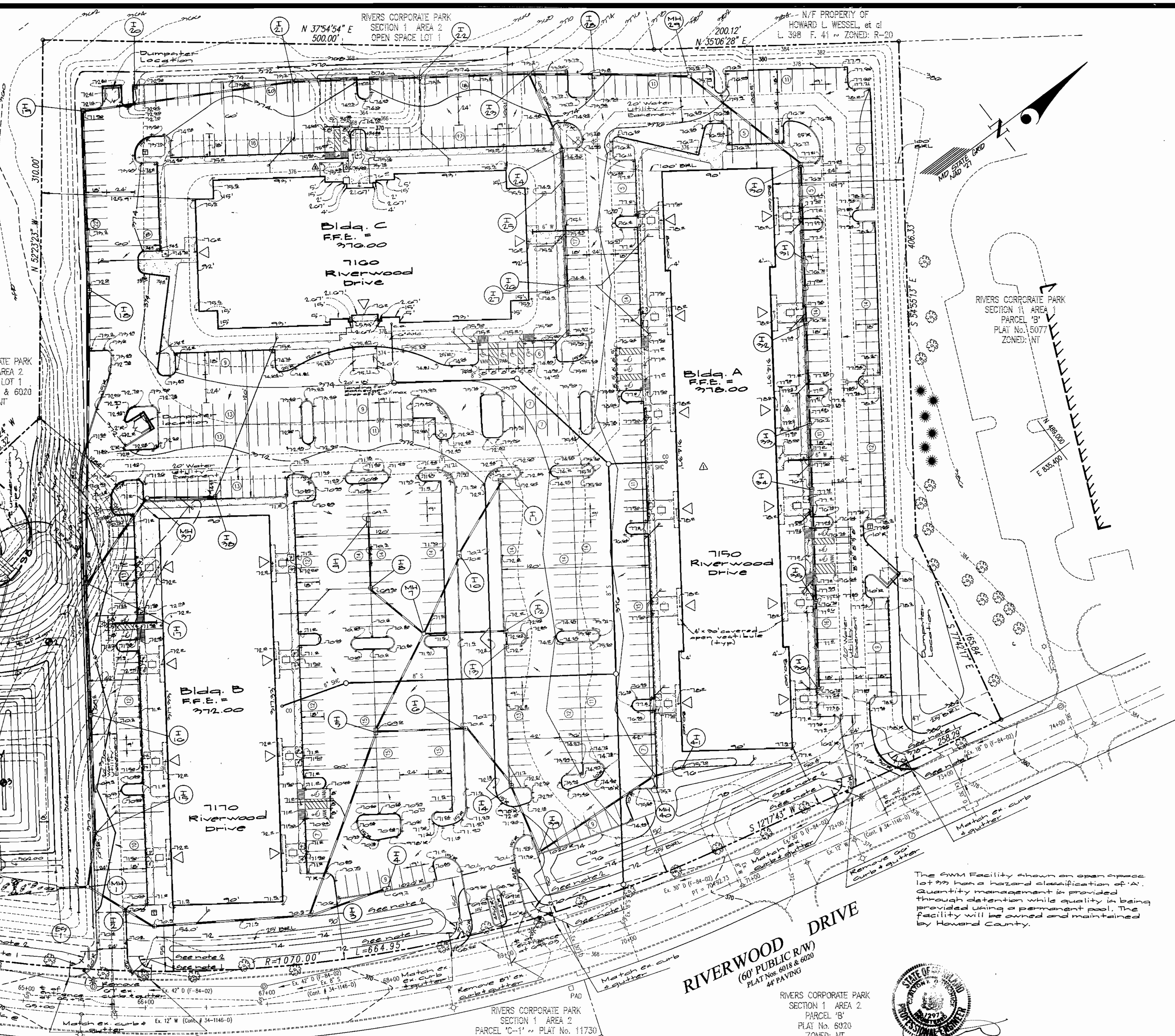
- Notes**
- Contractor is to use stand/Rev 7" curb & gutter in this area.
 - Contractor is to transition from 7" curb & gutter within R/W to 6" curb & gutter on site in this area.
 - For handicap parking/access see sheet.

Legend

- Standard 6" Curb & gutter
- Reverse 6" Curb & gutter
- Existing Curb
- Proposed Spot Elevation
- Existing Contour
- Proposed Contour
- Entrance that is handicap accessible
- Stormwater Management Boring Location
- 30' Stream Buffer
- Street Light (by 60' & 8')

RIVERS CORPORATE PARK
 SECTION 1 AREA 2
 PARCEL 'A'
 PLAT No. 6017
 ZONED: NT

Rip-rap Information
 @ 8" x 12"
 length = 57'
 d50 = 10"
 d100 = 24"
 blanket thickness = 2'



RIVERS CORPORATE PARK
 SECTION 1 AREA 1
 PARCEL 'B'
 PLAT No. 15077
 ZONED: NT

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: SEP 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: Mark S. McLaughlin 11/19/99
 Chief, Division of Land Development: Cindy Hamilton 11/19/99
 Chief, Development Engineering Division: Bill Vannaman 11/26/99

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3809 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

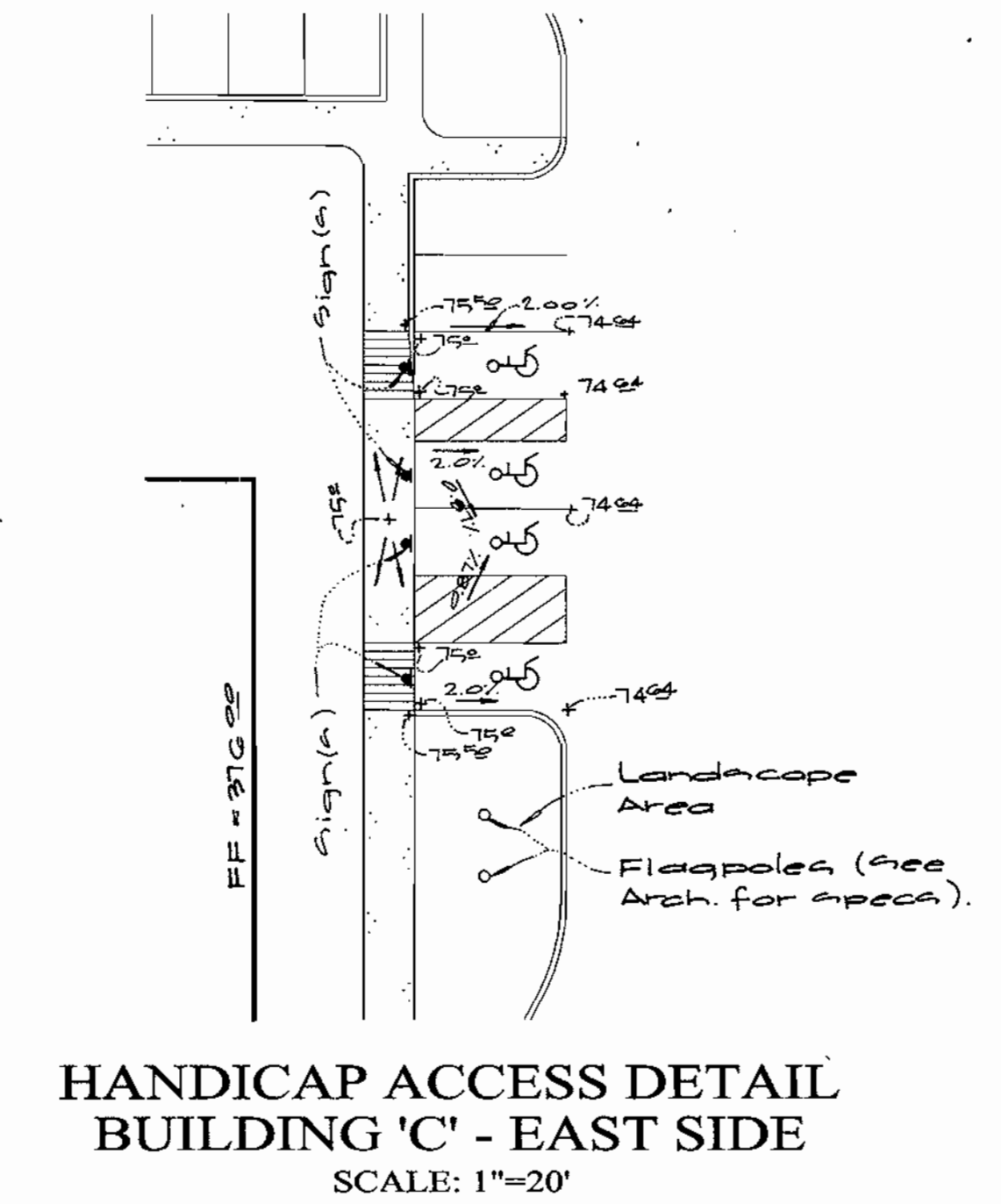
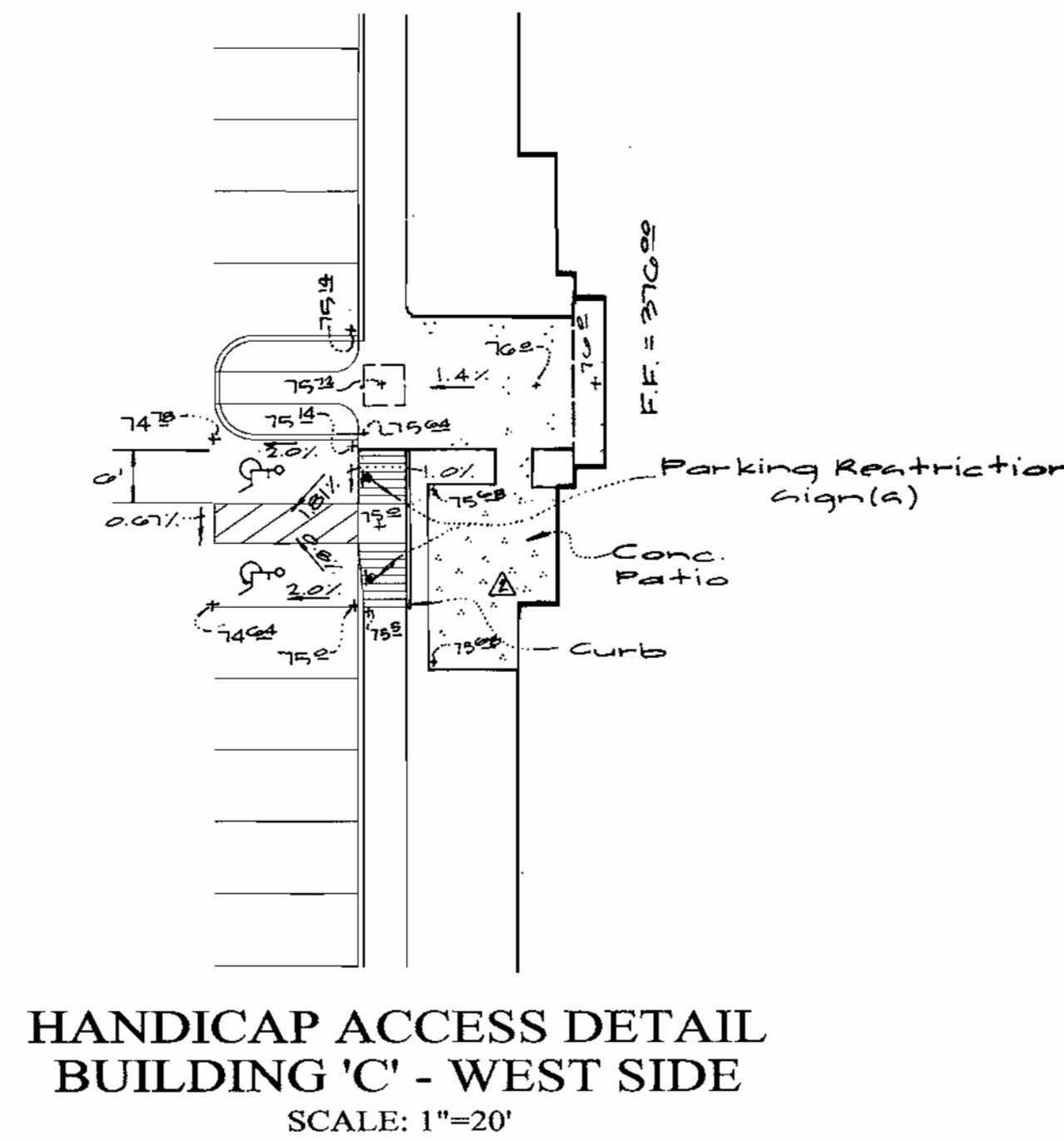
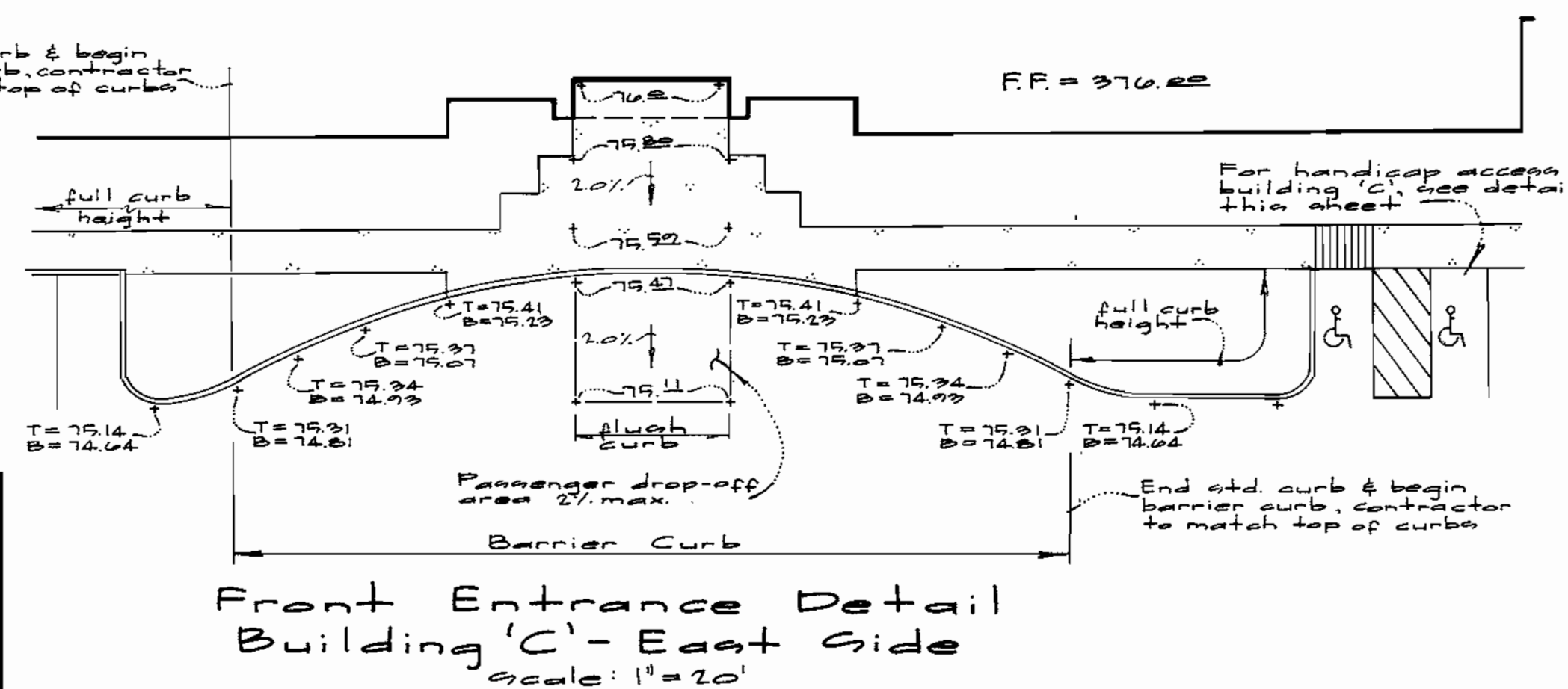
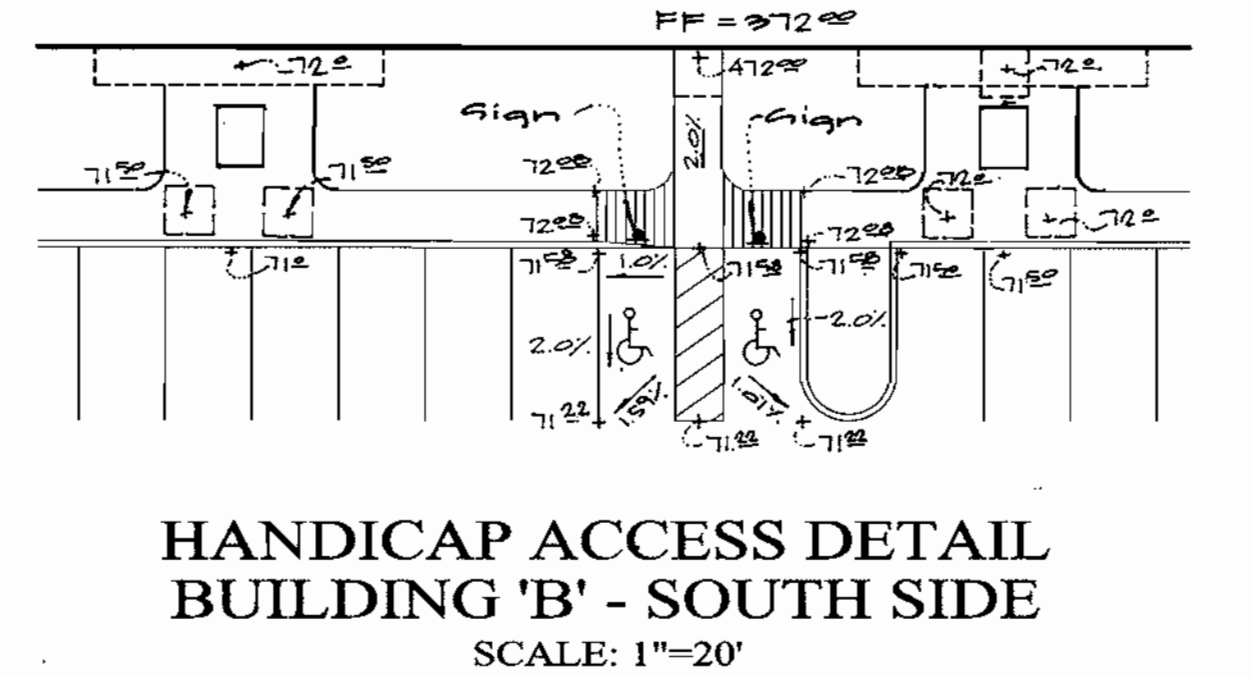
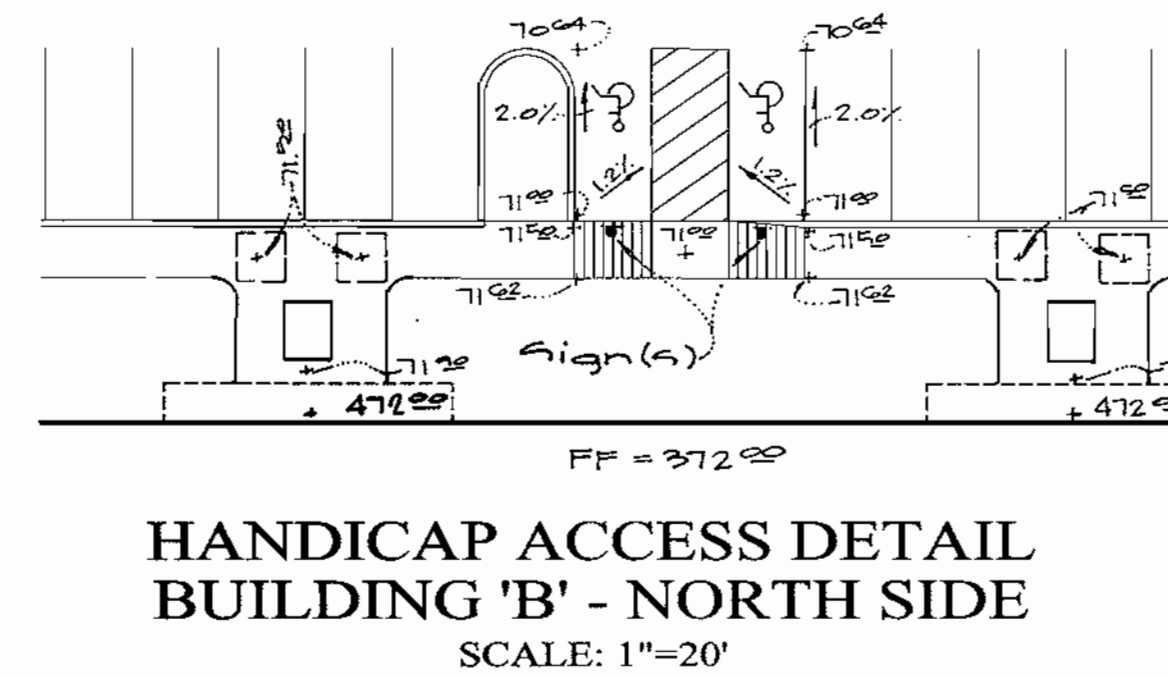
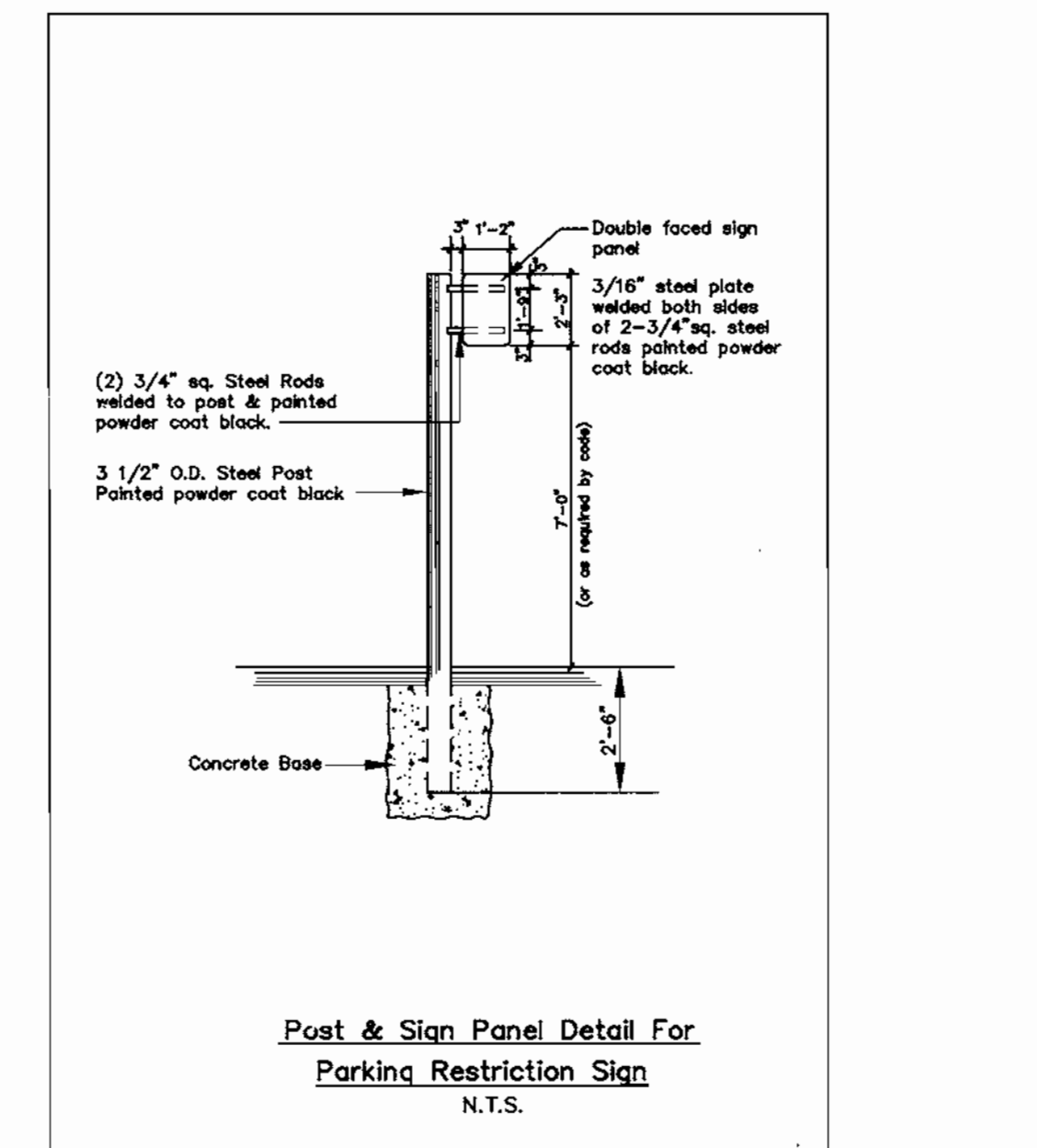
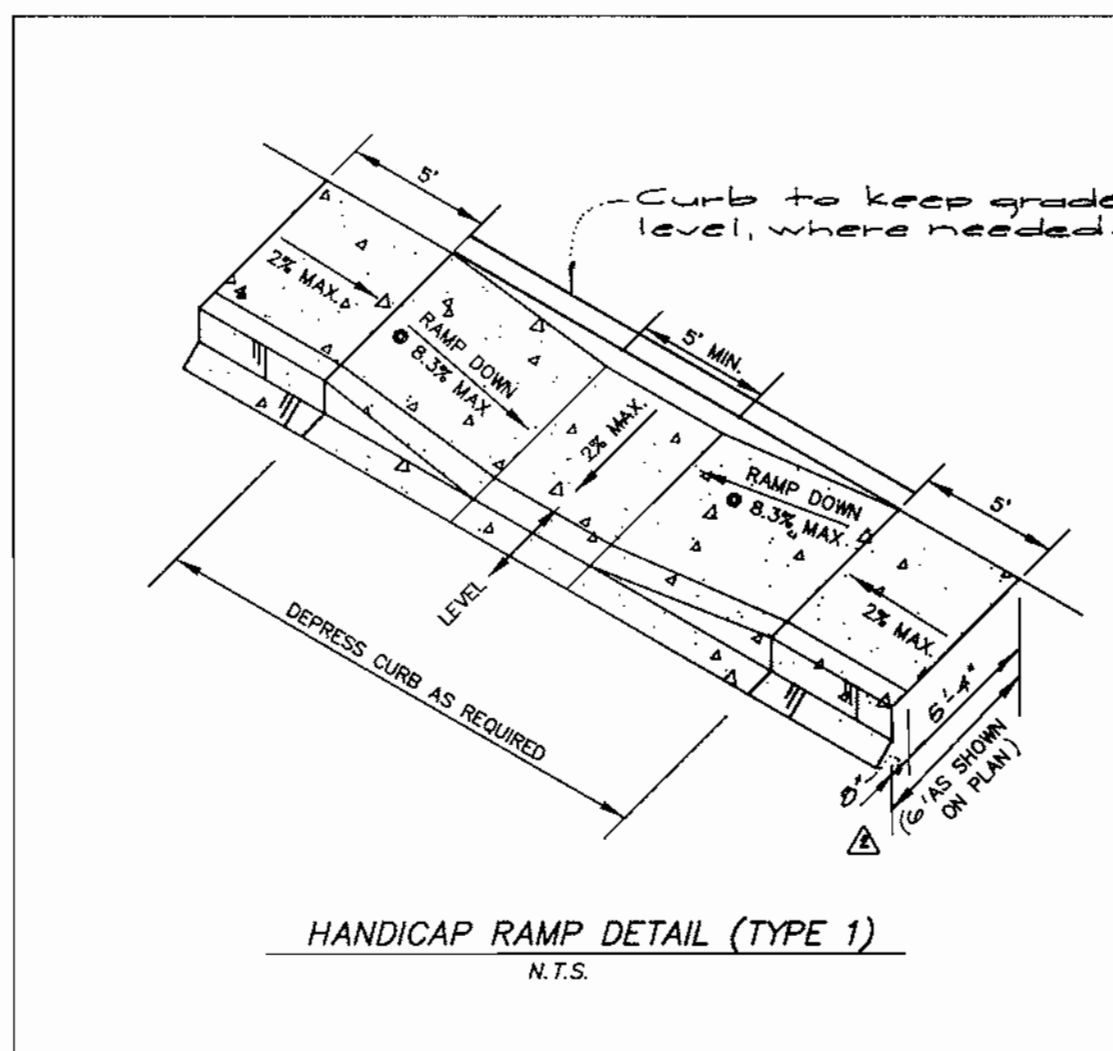
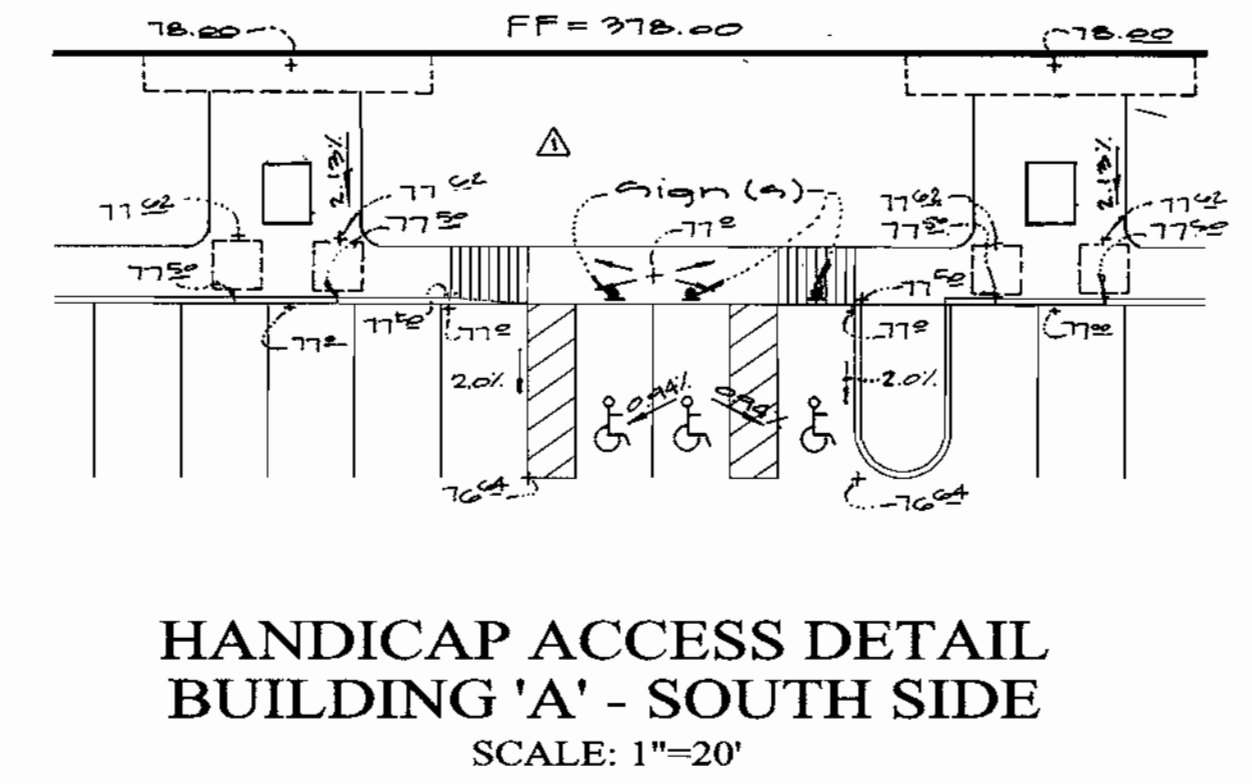
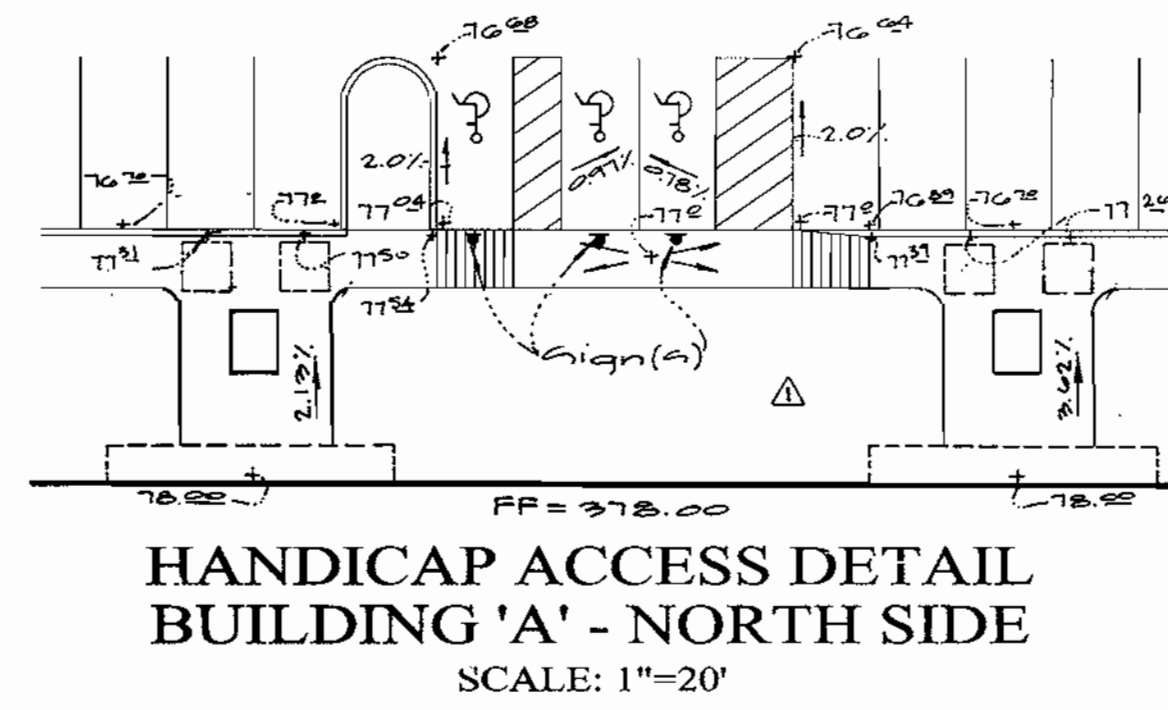
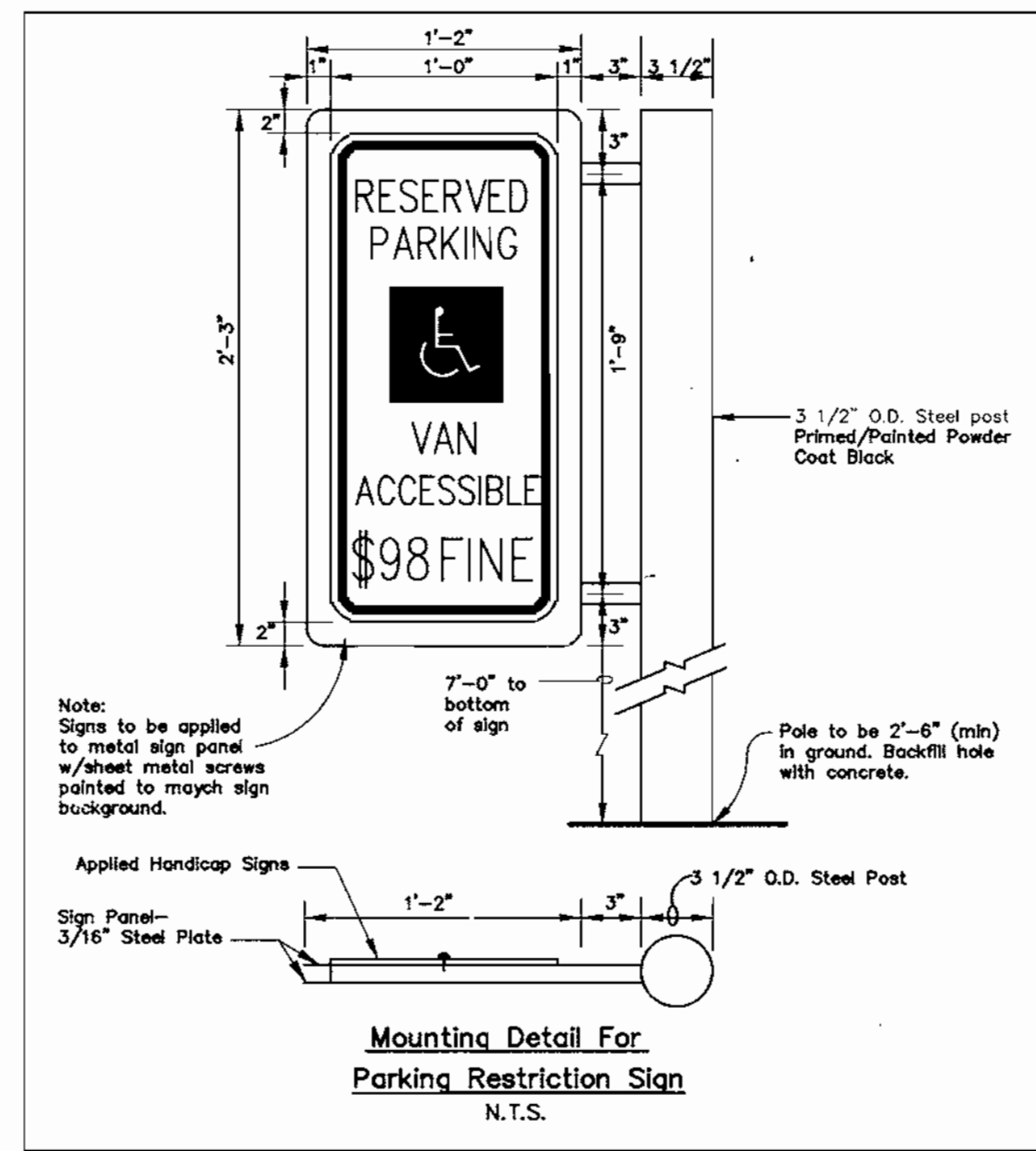
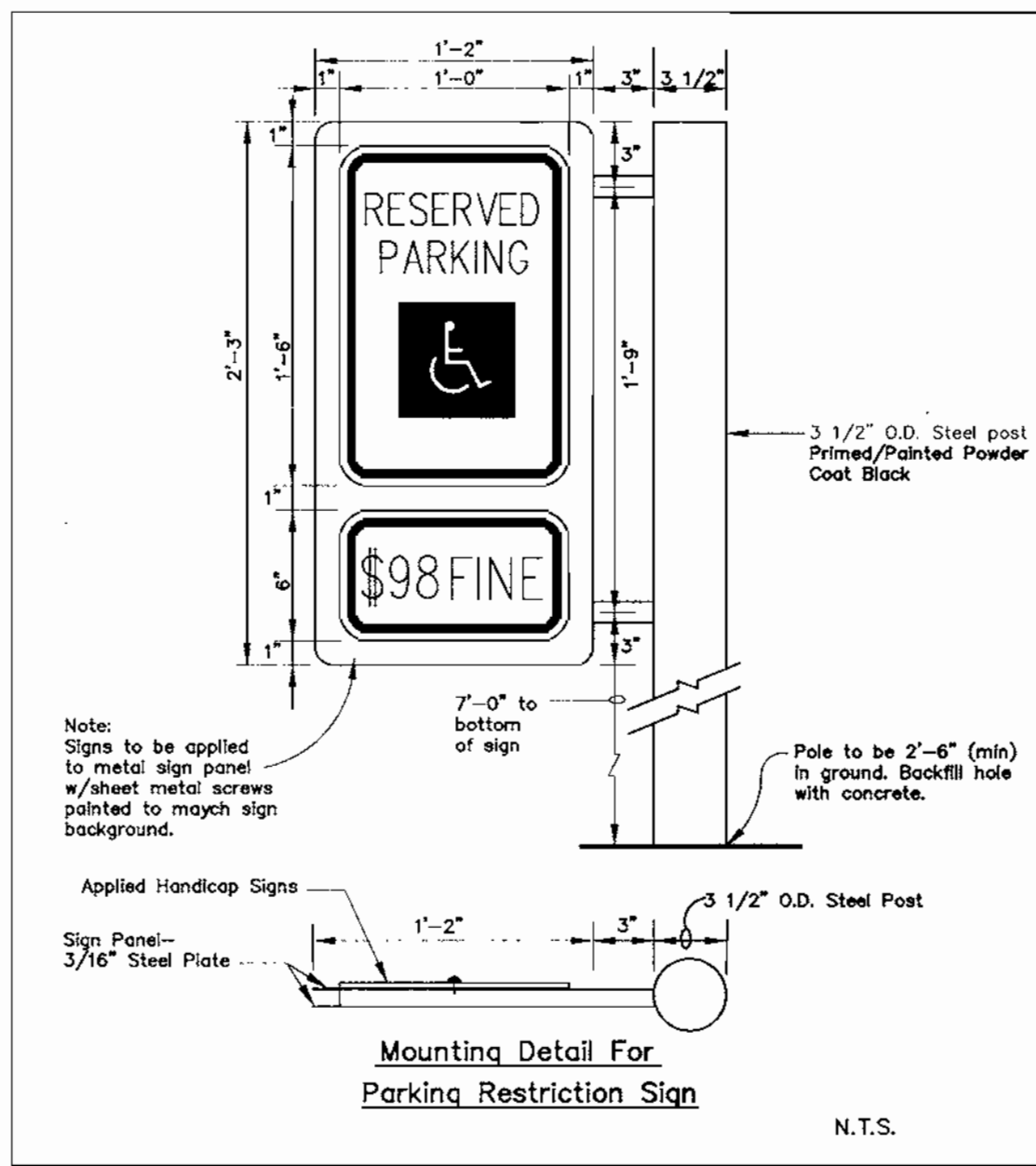
DATE	REVISION	BY	APPR.
09-00	add path in front of Bldgs. A & C		
11-20-99	rev. Building 'A' footprint	MCF	
11-24-99	As submitted for signature		

PREPARED FOR:
 NOTTINGHAM PROPERTIES, INC.
 100 WEST PENNSYLVANIA AVENUE
 TOWNSHIP, MD. 21204
 PH: 410-825-0545
 ATTN: MR. CHUCK McMAHON

SITE DEVELOPMENT PLAN
RIVERS CORPORATE PARK
 SECTION 1 AREA 2 ~ PARCEL 'D'
 PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
1"=40'	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 18, 1999	41 - 12	2 OF 10





APPROVED
PLANNING BOARD
of HOWARD COUNTY

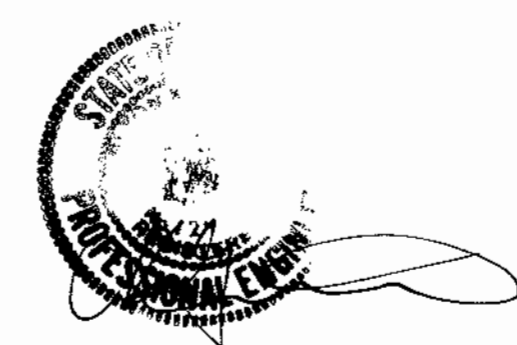
DATE: Sept. 23, 1999

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

David W. Ziegenfuss
Director
Date: 11/18/99

Cindy Hamilton
Chief, Division of Land Development
Date: 11/18/99

Chief, Development Engineering Division
Date: 11/18/99



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 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.
8-3-00	Rev. HOCF Access detail		MCP
12-10-00	Rev. handicap access details for Building 'A'		
11-4-99	As submitted for signature		

PREPARED FOR:
NOTTINGHAM PROPERTIES, INC.
100 WEST PENNSYLVANIA AVENUE
TOWSON, MD. 21284
PH: 410-825-0545
ATTN: MR. CHUCK McMAHON

HANDICAP ACCESS DETAILS
RIVERS CORPORATE PARK
SECTION 1 AREA 2 ~ PARCEL 'D'
PLAT No. 6020

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	NT	99030
DATE	TAX MAP - GRID	SHEET
Oct. 18, 1999	41 - 12	4 OF 16

GUILFORD ELECTION DISTRICT No. 6

HOWARD COUNTY, MARYLAND

SDP 00-28