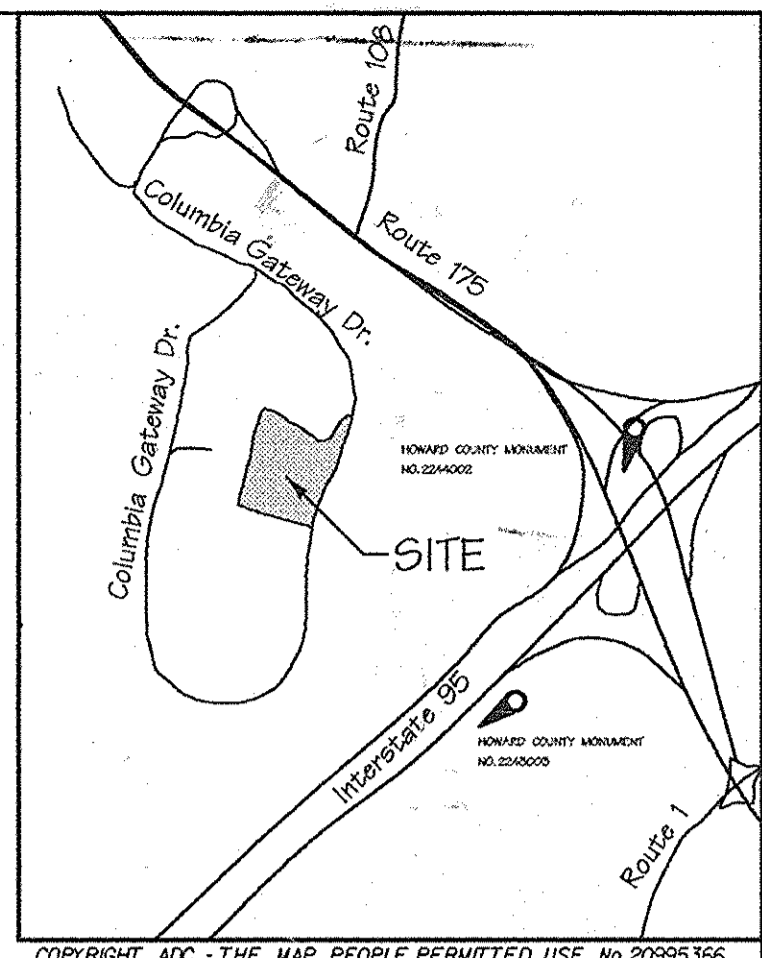
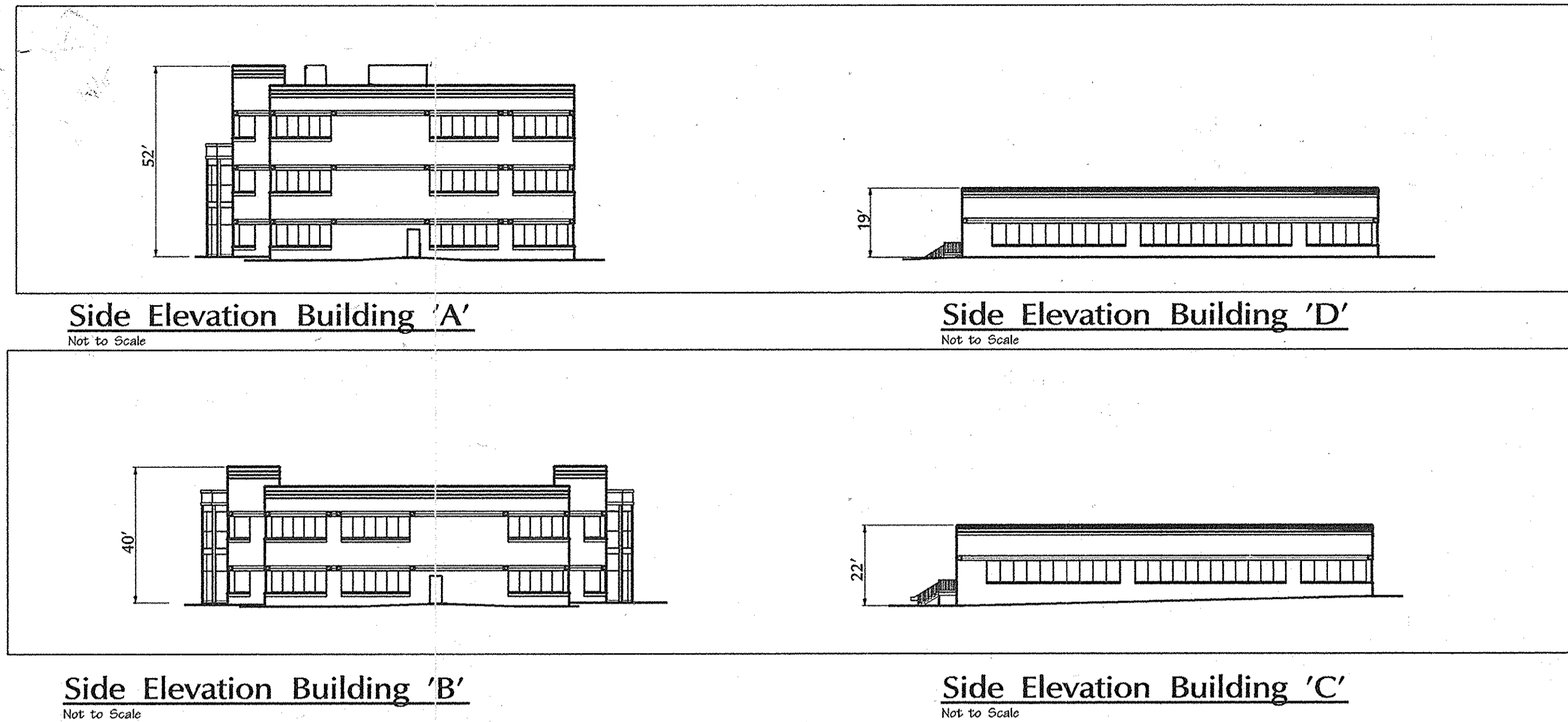


Sheet Index

SHEET	DESCRIPTION
1	COVER SHEET
2	SITE PLAN 1
3	SITE PLAN 2
4	ENTRY DETAILS
5	GRADING PLAN 1
6	GRADING PLAN 2
7	DRAINAGE AREA MAP
8	STORM DRAIN PROFILES + WATER PROFILE
9	STORM DRAIN PROFILES
10	UTILITY PROFILES (SEWER)
11	SITE DETAILS
12	SITE DETAILS
13	LANDSCAPE PLAN 1
14	LANDSCAPE PLAN 2
15	LANDSCAPE NOTES AND DETAILS
16	EROSION & SEDIMENT CONTROL PLAN
17	EROSION & SEDIMENT CONTROL PLAN
18	EROSION & SEDIMENT CONTROL DETAILS
19	EROSION & SEDIMENT CONTROL DETAILS
20	STORMCEPTOR DETAILS



LOCATION MAP
SCALE: 1" = 2000'

BENCHMARK DESCRIPTIONS
THE COURSES AND COORDINATES SHOWN HEREON ARE REFERRED TO THE MARYLAND COORDINATE SYSTEM AND ARE BASED ON SURVEY INFORMATION AS SHOWN ON A PLAT ENTITLED "COLUMBIA GATEWAY" PARCELS 9-1 THRU 9-7 A RESUBDIVISION OF PARCEL 9-15 WHICH PARCEL IS RECORDED AT THE LAND RECORDS OF HOWARD COUNTY AS PLATS 8802-8805 AND WHICH PLAT IS REFERRED TO TRAVERSE STATIONS 2245002, 2245003, 2344002.
ELEVATIONS SHOWN HEREON ARE REFERRED TO THE NATIONAL GEODETIC VERTICAL DATUM (NVD29) BASED UPON INFORMATION PROVIDED BY SHANBERGER & LANE IN JULY 1997.

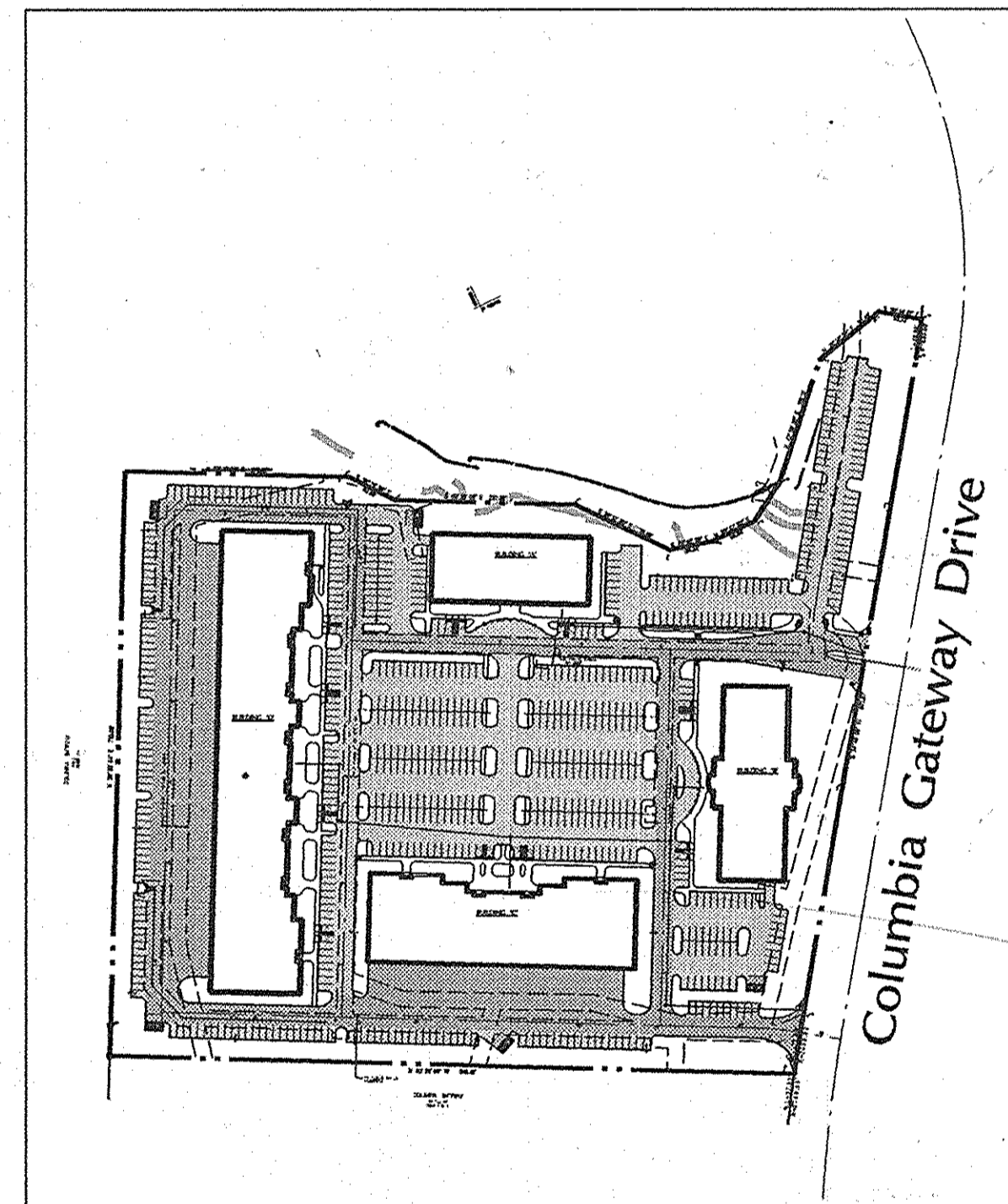
Site Development Plan

for

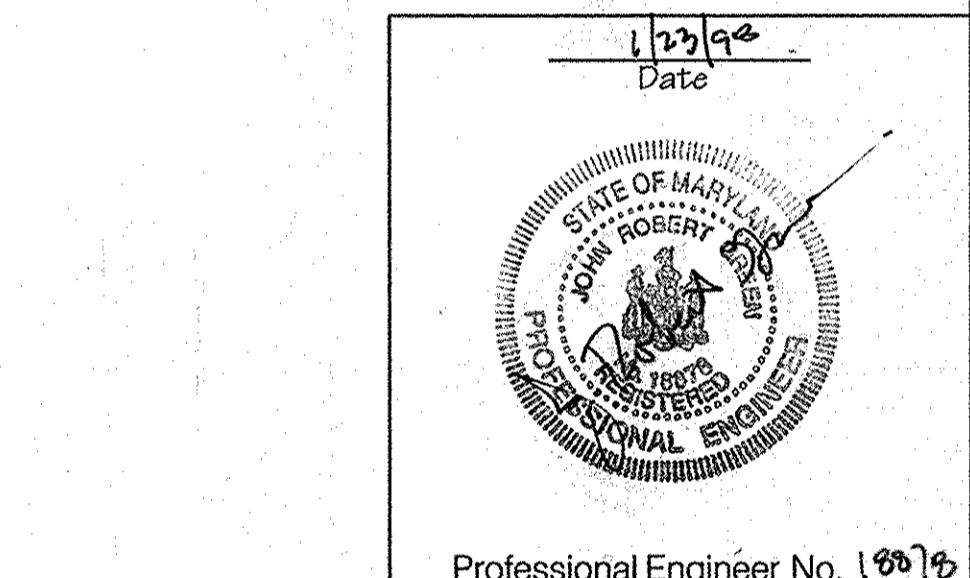
Westridge Corporate Center

At Columbia Gateway, Howard County, Maryland

PARCEL S-23



Professional Engineer: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 23393, Expiration Date: 7/1/2017



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION M.K. 1/29/98
CHIEF, DIVISION OF LAND DEVELOPMENT R.B. 2/2/98
DIRECTOR J.S. Rosta DATE

REV	DATE	DESCRIPTION	APPROVED
3	7/16/15	VERIZON WIRELESS SCREENED CONDUIT WITH CONCRETE EQUIPMENT PAD ADDED	

Westridge Corporate Center
At Columbia Gateway
OWNER: The Howard Research and Development Corporation
DEVELOPER: AAK, LLC/CIO
Abrams Development Group
10275 Little Patuxent Parkway, Suite 101
Columbia, Maryland 21044

DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
410 296 4705

SECTION/VAREA: Columbia Gateway
PLAN OR LOT: 12344
TAXZONE MAP: M-1
ELECT. DISTRICT: 43
CENSUS TRACT: 6th
GEOID: 6005.02

COVER SHEET

Des By: MM, AS Scale: As Shown Proj. No. 88036.D
Dwn By: AS, MSS Date: Nov. 18, 1997
Chk By: MM, MK Approved: MM 1 OF 20

Site Analysis Data Chart

- General Site Data
 - a. Present Zoning: M-1
 - b. Applicable DPZ File References: F-80-158, F-87-63, F-87-125, GP-87-36, WF-88-27, F-98-44, F-98-44 (PLAT NUMBERS 12343, 12344), F-98-92
 - c. Proposed Use of Site or Structure(s): Office and Office/Warehouse
 - d. Proposed Water and Sewer Systems: Public
 - e. Water and Sewer contract number: 44-3648-D, 44-3648-D
- Area Tabulation
 - a. Total Project Area: 15.0 Acres (Indicate by Section and Area As Shown on Final Plat or As Shown on Deed)
 - b. Net Area of Site: 15.0 Acres (Indicate by Section and Area As Shown on Final Plat)
 - c. Area of This Plan Submission: 15.0 Acres
 - d. Limit of Disturbed Area: 18.17 Acres
 - e. Building Coverage of Site: 3.9 Acres and 23 % of Gross Area (Proposed)
- Open Space Data: N/A
- Floor Space Data
 - a. Floor Space per floor of proposed use on site: 93,474 s.f. Office (Bldgs. A & B), 92,325 s.f. Office/Warehouse (Bldgs. C & D)
Building 'A' floor 1: 16,150 s.f. Office, Building 'A' floor 2: 16,150 s.f. Office, Building 'A' floor 3: 16,150 s.f. Office
Building 'B' floor 1: 22,512 s.f. Office, Building 'B' floor 2: 22,512 s.f. Office
Building 'C' floor 1: 24,825 s.f. Office/Warehouse
Building 'D' floor 1: 57,500 s.f. Office/Warehouse
 - b. Number of Parking Spaces Required by Zoning Regulations: 640 (93,474 S.F. Office @ 3.3/1000, 92,325 Office/Warehouse @ 2.5/1000)
 - c. Total Number of Parking Spaces Provided On-Site: 733
 - d. Number of Handicapped Parking Spaces Provided: 18 (2 % of Total)

General Notes

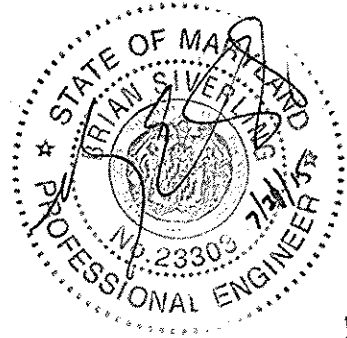
- All construction shall be performed in accordance with the latest standards and specifications of Howard County, plus MSHA standards and specifications if applicable or as specified.
- Approximate location of existing utilities are based solely on available records. Contractor shall verify the location of any utilities which may be impacted by the work. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- The contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings to verify their location and elevation. The contractor shall notify the engineer immediately if location of utilities is other than shown.
- The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work being done, and shall notify the Department of Public Works/Bureau of Engineering/Construction Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- 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.
- Any damage caused by the Contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be repaired at the Contractor's expense.
- The existing topography inside property line per mass grading as shown on GP-88-28 by Air Survey Corporation dated 8-18-87. Topography outside the property line was surveyed by DMW Inc. in August of 1997. The courses and coordinates shown are based upon the Maryland Coordinate system.
- All hydraulic data is for the 10-year storm unless otherwise noted.
- The subsurface exploration and geotechnical engineering analysis for this project was completed by Hillis Carnes on September 1997.
- All fill areas shall be compacted to a minimum of 95% of the maximum dry density as determined and verified in accordance with ASTM T-180.
- All plan dimensions are to face of curb unless otherwise noted. Numerically written dimensions take precedence over scale dimensions.
- The coordinates shown hereon are based upon the Howard County geodetic control which is based upon the Maryland State plane coordination system. Howard County monument nos. 2243003 and 2244002 were used for this project.
- Storm water quality management is provided by proposed stormceptors onsite. Stormwater quantity management is provided in a regional facility on parcel S-5 under contract: RP-98-92.
- Public water to be utilized. (Contract --, main Patuxent Drainage Area) 44-3648-D, 44-3648-D
- Public sewer to be utilized. (Contract --, main Patuxent Drainage Area) 24-1829-D
- There are no 100 year floodplain or wetlands on this site. Wetland limits on Parcel S-5 per record, date and registration from COE Permit RW 88-10103, MDE No. 88 W3-C481
- There are no known cemeteries or burial grounds on this site.
- A traffic report update has been prepared by Wells & Associates, dated October 1997
- Exterior Lighting will be in conformance with Section 134, Zoning Regulations
- Electric, gas, cable and telephone lines designed by others.
- WP 88-27 Waived the submission of an SDP to allow mass grading.

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
BLDG. A	6990 COLUMBIA GATEWAY DRIVE
BLDG. B	6996 COLUMBIA GATEWAY DRIVE
BLDG. C	6994 COLUMBIA GATEWAY DRIVE
BLDG. D	6992 COLUMBIA GATEWAY DRIVE

Professional Engineer: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 233242 Expiration Date: 7/1/2014



PROP. VIBRATION WIRELESS 20'-0" 1/2" CONCRETE WITH CONCRETE EMBEDMENT PRO & GENERATOR

REV	DATE	DESCRIPTION	APPROVED
1	7/14/15	VERTICAL WIRELESS SCREENED COMPARED WITH CONCRETE EMBEDMENT (P&S) MODS	

NOTE:
IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION OF HDPE PIPE, CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER.

LEGEND

- 590 --- EXISTING CONTOURS
- 588 --- PROPOSED CONTOURS
- PROPOSED STORM DRAIN
- PROPOSED SANITARY SEWER
- PROPOSED WATER MAIN
- PROPOSED VALVE & REDUCER
- PROPOSED FIRE HYDRANT
- PROPOSED REVERSE CURB
- PROPOSED CURB & GUTTER
- LIGHT DUTY PAVING HOWARD COUNTY STD. P-1
- MEDIUM DUTY PAVING HOWARD COUNTY STD. P-2
- PROPOSED LIGHT POLE
- PROPOSED BOLLARD
- 6 PROPOSED PARKING SPACE QUANTITY

NOTE:
SEE SHEET 4 FOR DETAILS OF ACCESSIBLE ROUTES TO EACH BUILDING ENTRY.
SEE F-87125 FOR IMPROVEMENTS TO GATEWAY DRIVE.

DATA SOURCES:
TOPOGRAPHY INSIDE OF PROPERTY LINE PER MASS GRADING ON WP 98-27.
TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DMW IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.

Date: 1/27/98

Professional Engineer No. 18318

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>Robert G. Hamilton</i>	1/27/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	DATE
<i>Cindy Hamilton</i>	2/3/98
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Joseph R. Bate</i>	2/3/98
DIRECTOR	DATE

Date	No.	Revision Description
2-6-98	1	FOOTPRINTS OF BLDGS B.C.D & CURB @ D.
4-30-98	2	ADD PKG. AR, ISLANDS & RELATED UTILITIES.
9-30-98	3	REVISED BUILDING 'A'

Westridge Corporate Center

At Columbia Gateway

OWNER: The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044

DEVELOPER: AAK, LLC, C/O Abrams Development Group
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21046

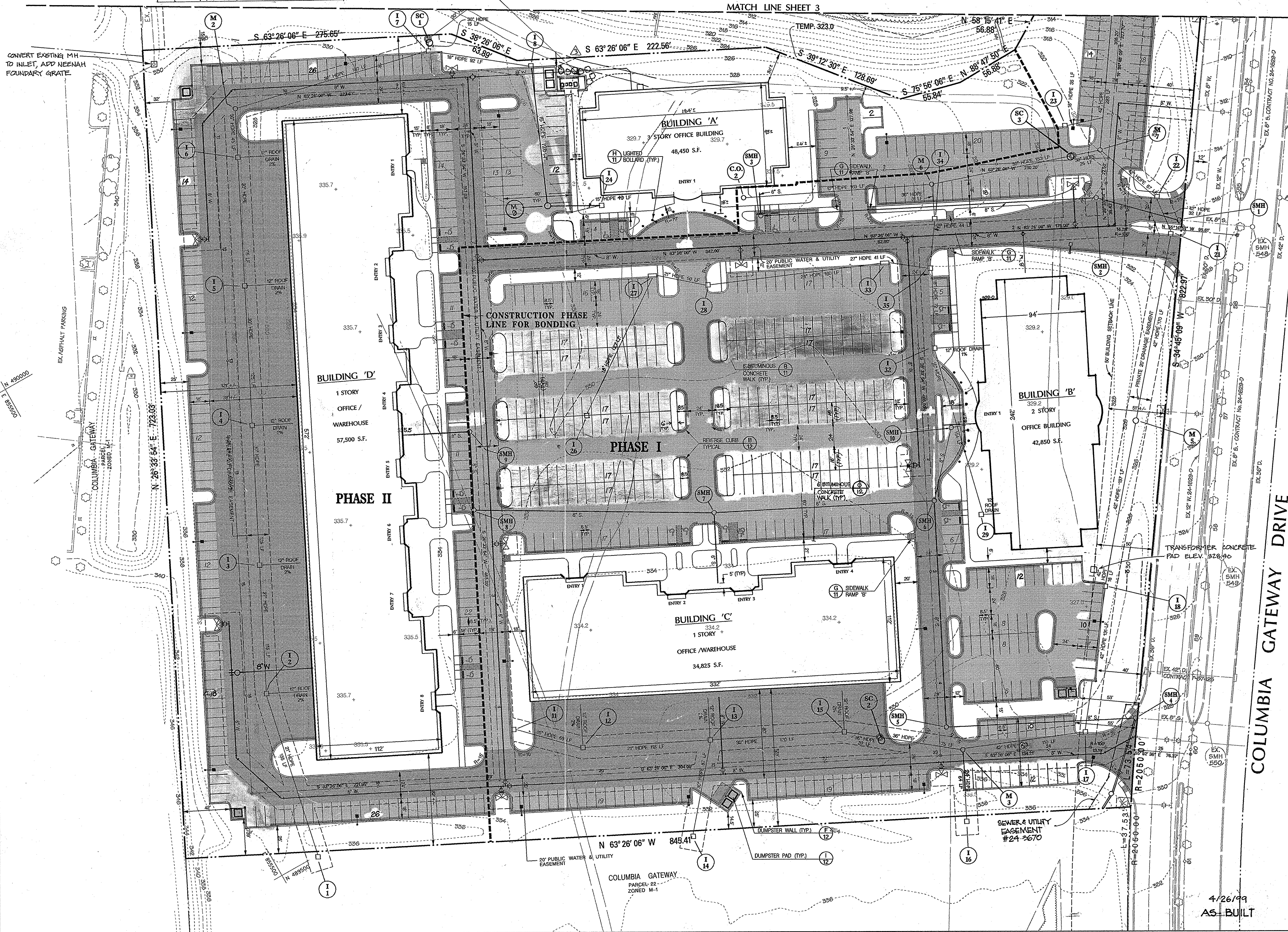
DMW
Daft • McCune • Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 286 3333
Fax 286 4705

SECTION NAME: Columbia Gateway	SECTION AREA: 43	LOTT/PARCEL #: 5-23
PLAT# OR L.F. BLOCK #1 ZONE: M-1	TAX/ZONE MAP: 43	ELECT. DISTRICT: 6th
WATER CODE: 13005	SEWER CODE: 6065.02	CELSUS TRACT: 6065.02

SITE DEVELOPMENT PLAN

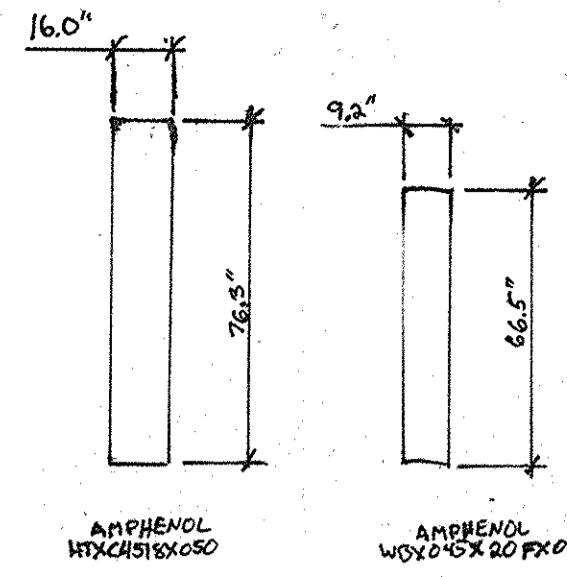
Des By: MM, AS	Scale: 1"=40'	Proj. No. 88036.D
Drn By: AS, MS6	Date: Jan. 14, 1998	
Chk By: MM, MK	Approved: MM	2 OF 20



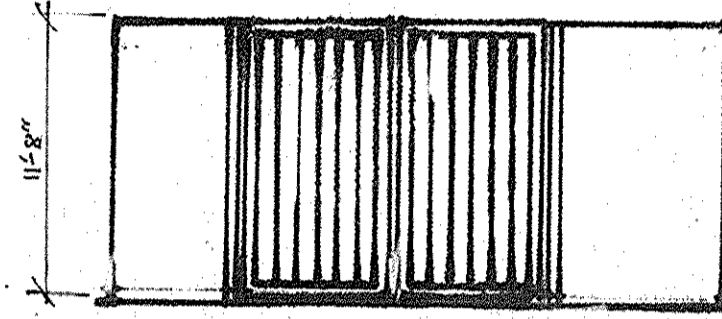
COLUMBIA GATEWAY DRIVE

4/26/99
AS BUILT

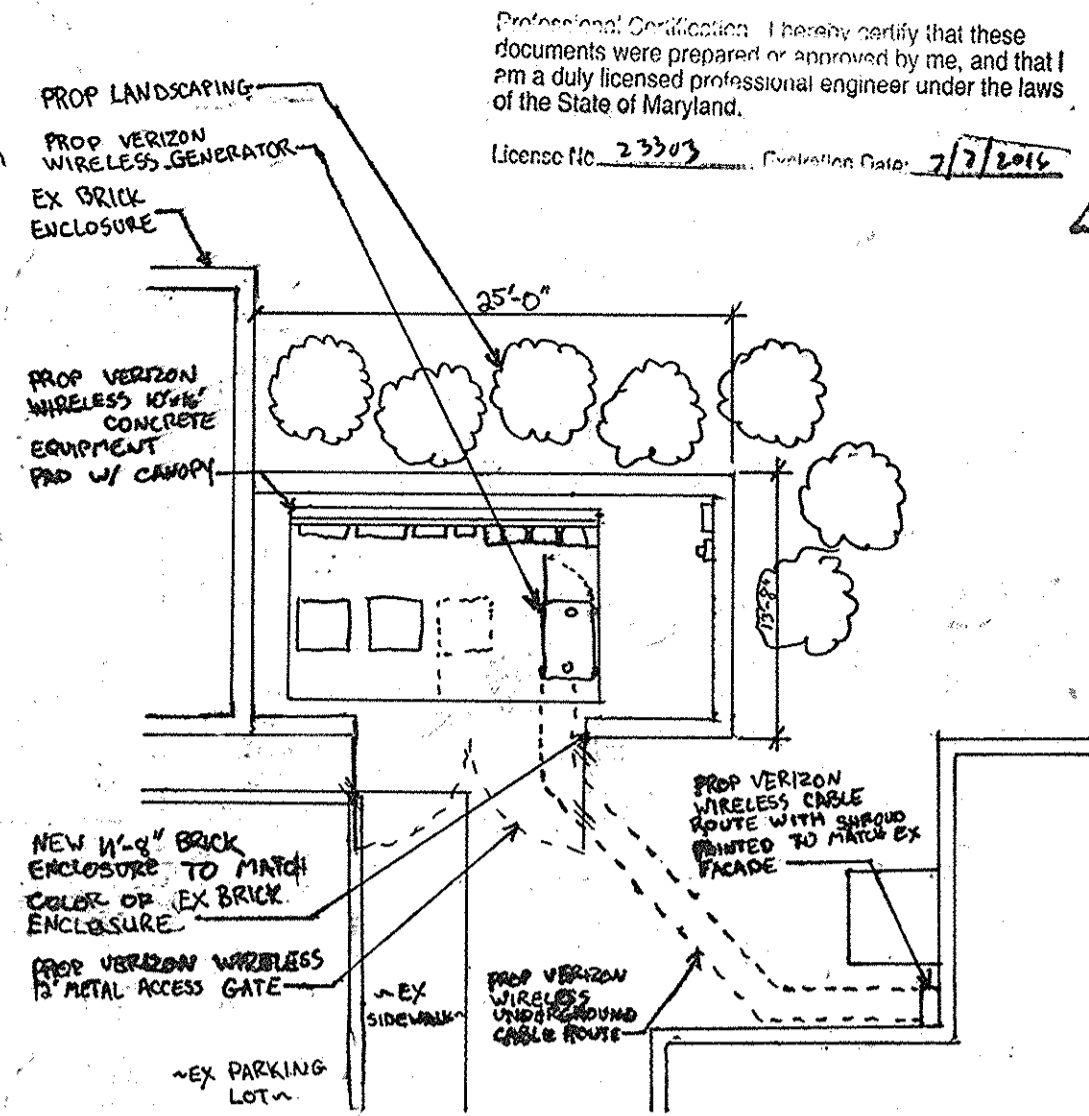
REV	DATE	DESCRIPTION	APPROVED
3	7/14/98	VERIZON WIRELESS SCREENED COMPOUND WITH CONCRETE EQUIPMENT AND ACCESS.	



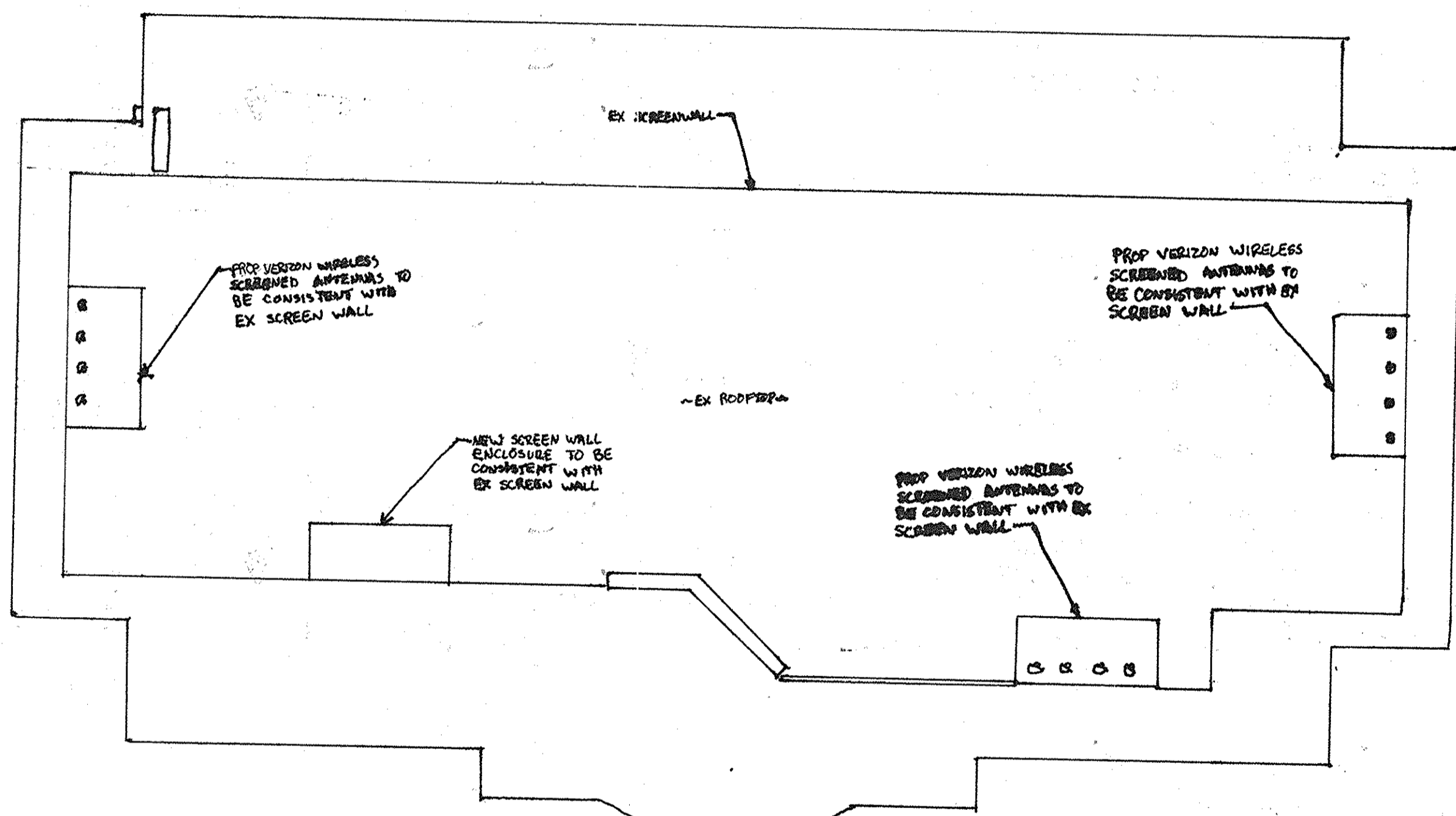
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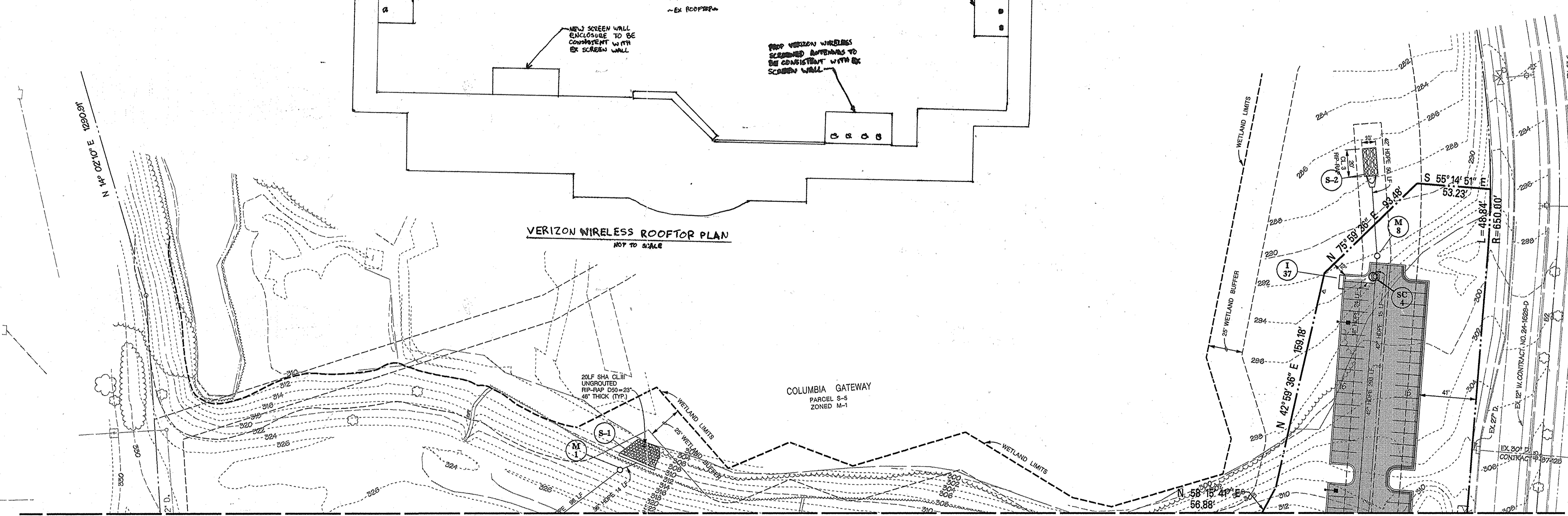
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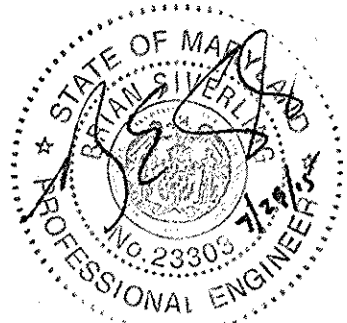
VERIZON WIRELESS COMPOUND PLAN
NOT TO SCALE



VERIZON WIRELESS ROOFTOP PLAN
NOT TO SCALE

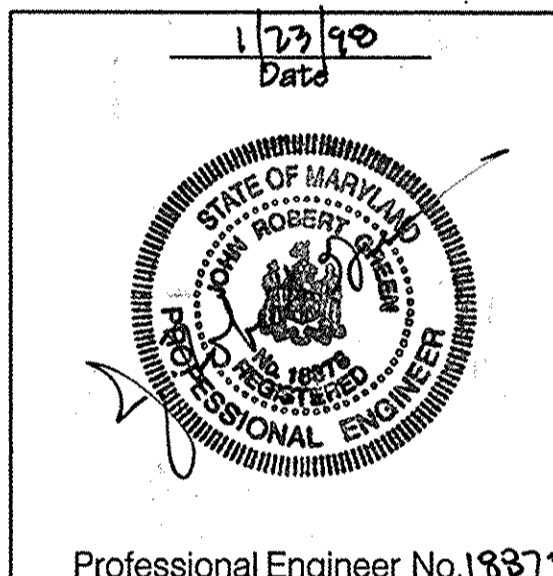


MATCH LINE - SEE SHEET 2



Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 23343 Expiration Date: 7/7/2016

DATA SOURCES:
TOPOGRAPHY INSIDE OF PROPERTY LINE PER MASS GRADING ON WP 98-27.
TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DWM IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.



Professional Engineer No. 18879

APPROVED:	HOWARD COUNTY DEPT. OF PLANNING & ZONING
<i>Howard Hamilton</i>	1/28/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Candy Hamilton</i>	2/1/98
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Jim S. Smith</i>	2/2/98
DIRECTOR	DATE

Date	No.	Revision Description
9-30-98	1	REVISED STORMDRAIN FROM I-37 TO SC-4

Westridge Corporate Center
At Columbia Gateway

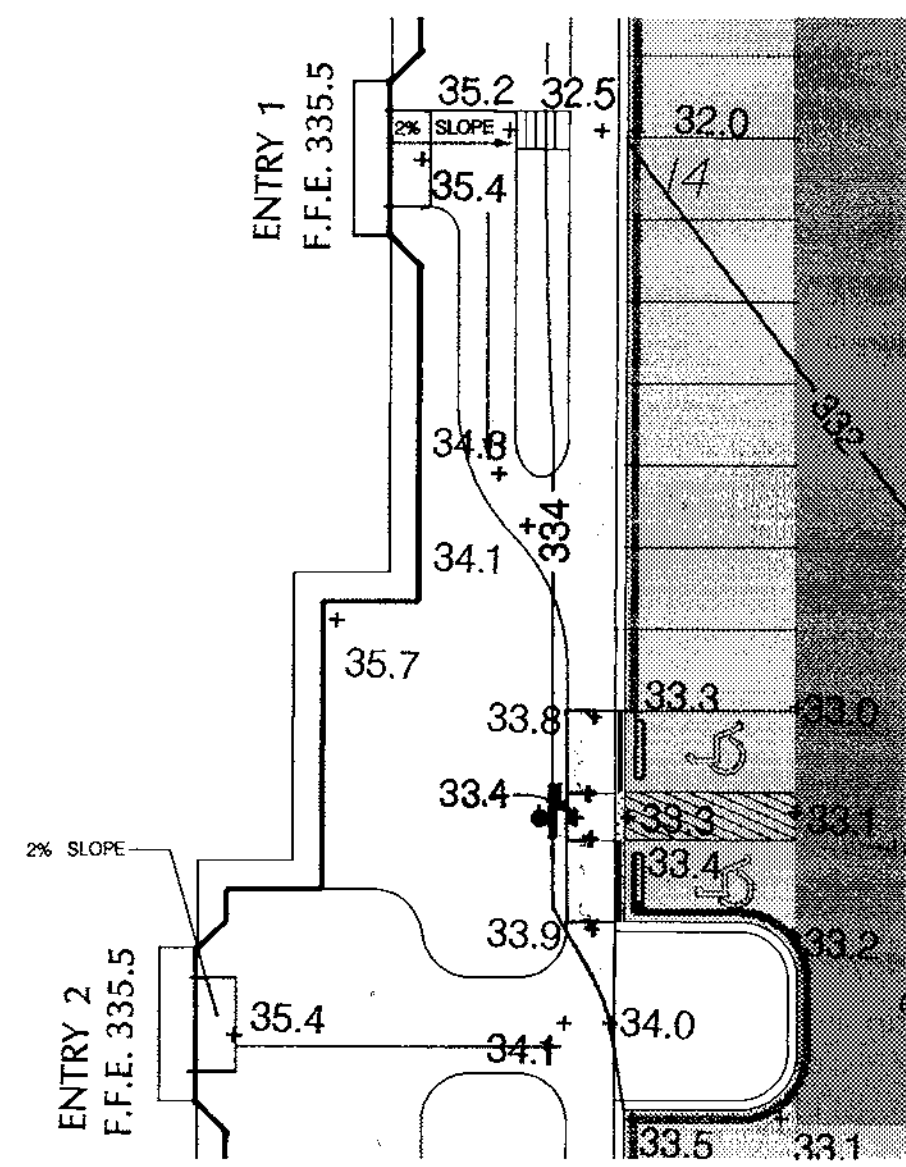
OWNER: The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044

DEVELOPER: AAK, L.L.C. / O
Abrams Development Group
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21044

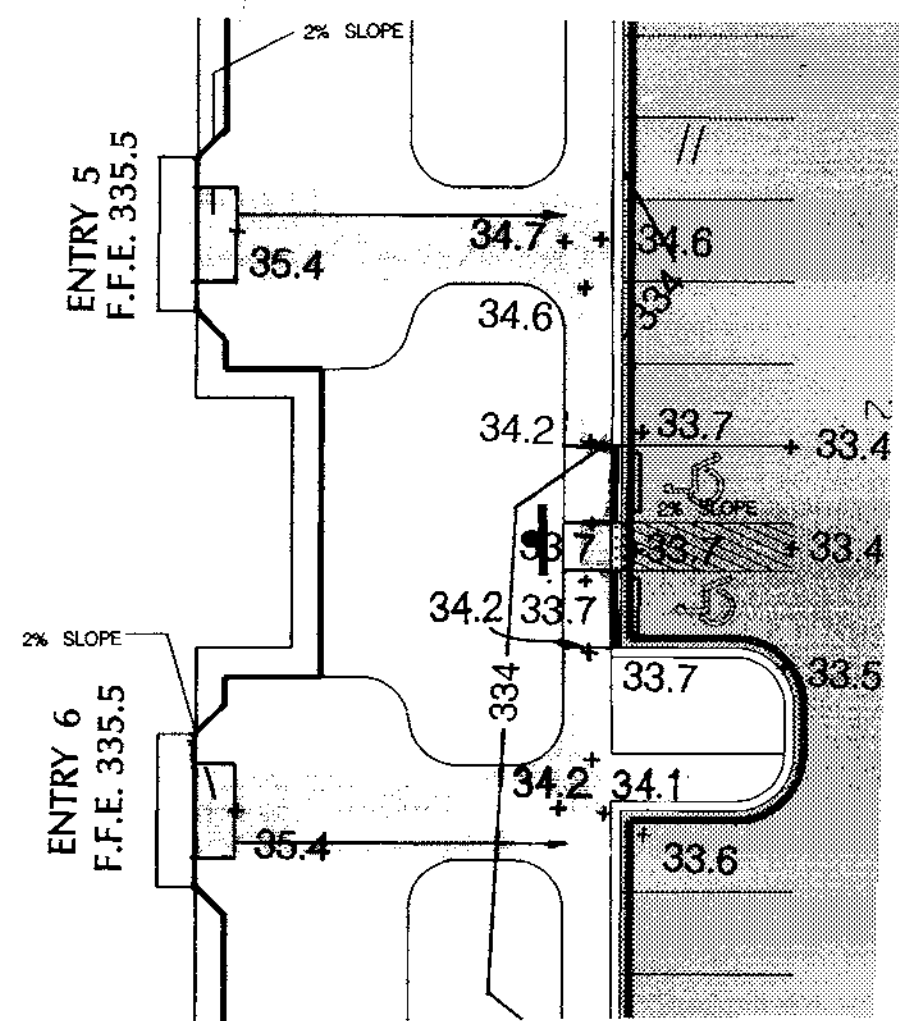
DMW Daft · McCune · Walker, Inc.			
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals		200 East Pennsylvania Avenue Towson, Maryland 21286 410 296 3333 Fax 296 4705	
SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL #	
Columbia Gateway		6-23	
PLAT # OR LOT BLOCK #	ZONE	TAXZONE MAP	ELECT. DISTRICT
15005	M-1	43	6th
WATER CODE	SEWER CODE	CENSUS TRACT	
		6085.02	

SITE DEVELOPMENT PLAN		
Des By: MM, AS	Scale: 1"=40'	Proj. No. 88036.D
Drn By: AS, MSS	Date: Jan. 14, 1998	
Chk By: MM, MYK	Approved: MM	3 OF 20

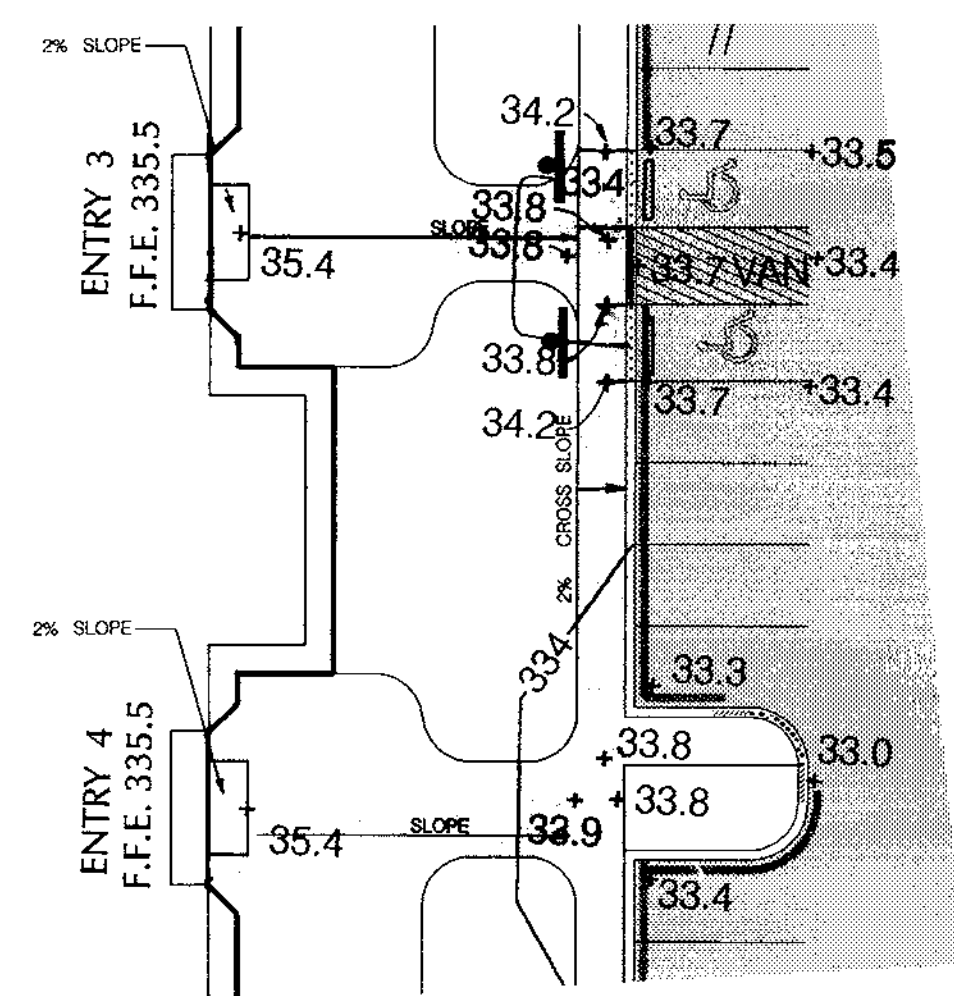
4/26/99
AS - BUILT



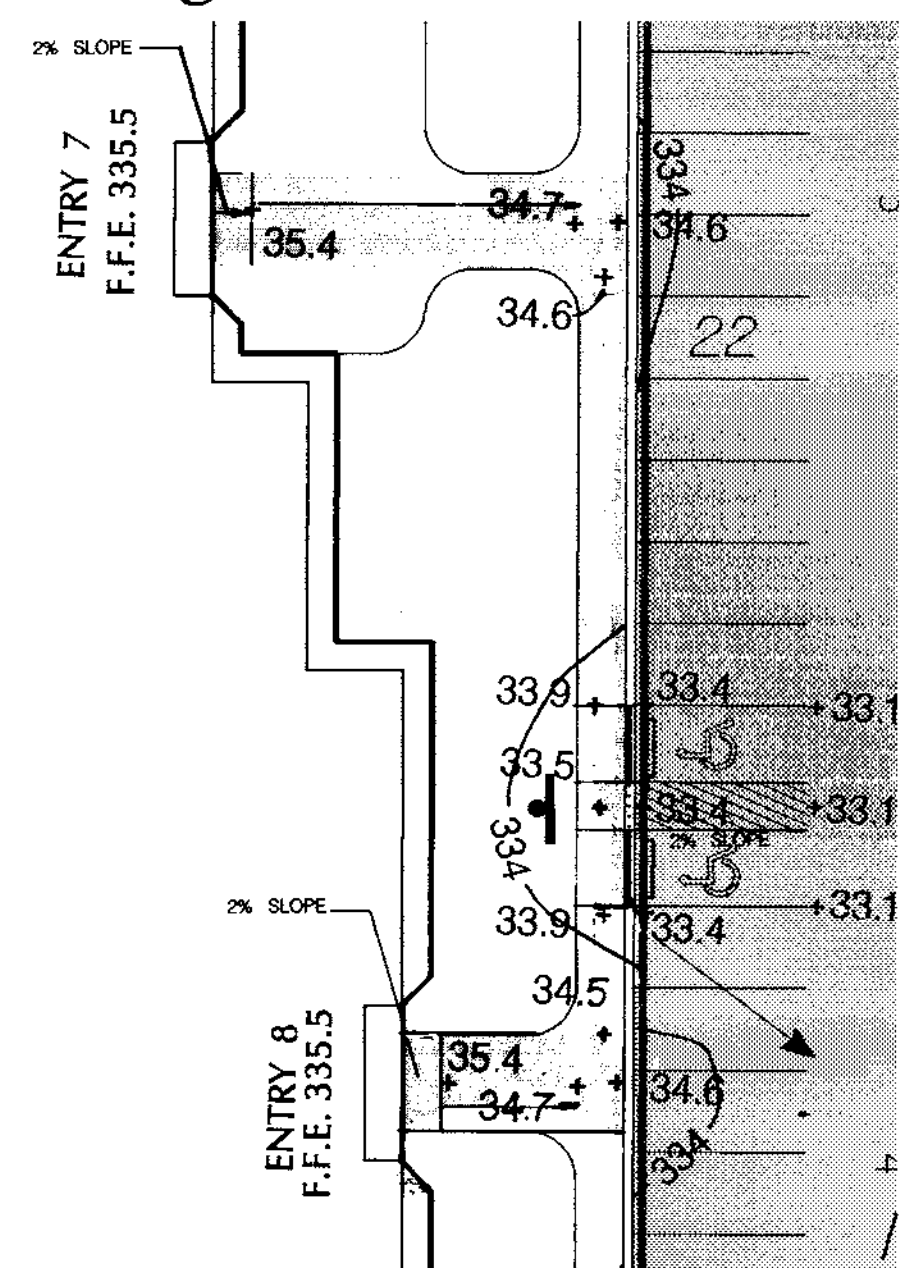
Building 'D' Entry 1 & 2
Scale: 1" = 20'



Building 'D' Entrances 5 & 6

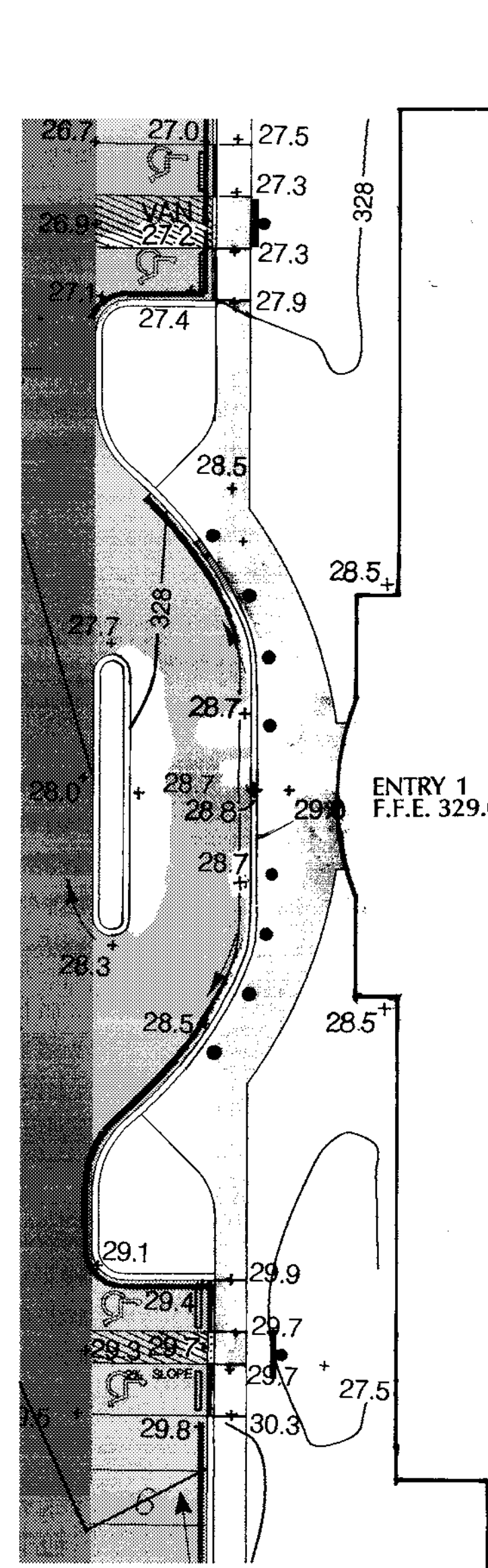


Building 'D' Entrances 3 & 4
Scale: 1" = 20'

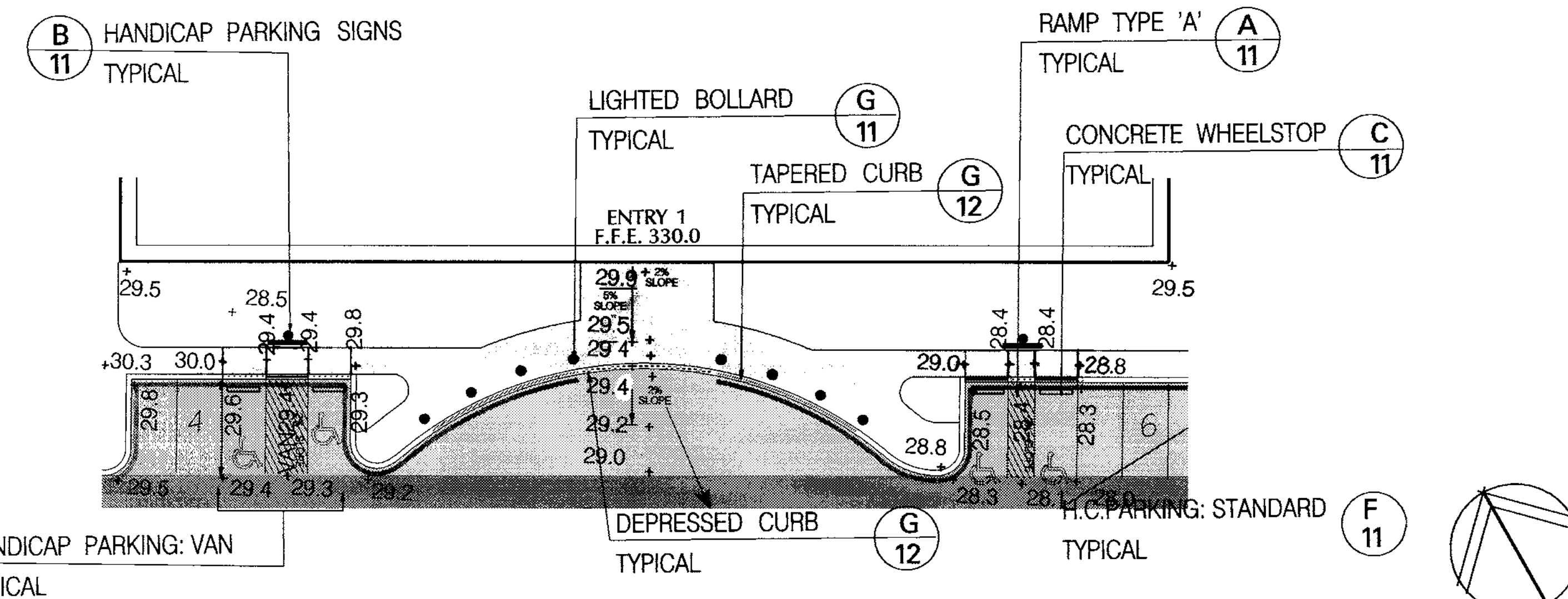


Building 'D' Entrances 7 & 8
Scale: 1" = 20'

RAMP TYPE 'B'
TYPICAL



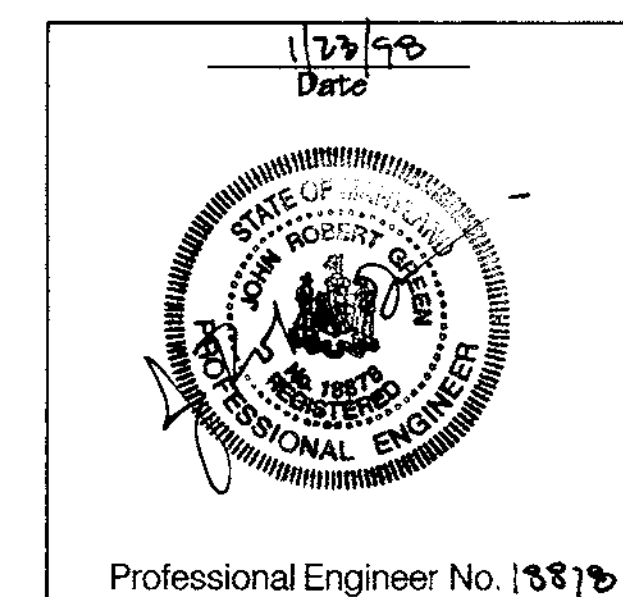
Building 'B' Entrance
Scale: 1" = 20'



Building 'A' Entrance
Scale: 1" = 20'

* NOTE:
ALL SIDEWALKS SHALL BE PITCHED WITH
A 2% CROSS SLOPE TOWARD THE CURB

ALL DOORWAY ENTRANCES SHALL BE PITCHED NO GREATER
THAN 2% TOWARD THE CURB FOR THE FIRST 5' AWAY FROM BLDG.



APPROVED:	HOWARD COUNTY DEPT. OF PLANNING & ZONING
<i>[Signature]</i>	1/29/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION	MK
<i>[Signature]</i>	2/2/98
CHIEF, DIVISION OF LAND DEVELOPMENT	RB
<i>[Signature]</i>	2/2/98
DIRECTOR	

2-6-98	1	FOOTPRINTS OF BLDGS B,C,D & CURBS @ B & ADJUST SPOT ELEVATIONS.
Date	No.	Revision Description

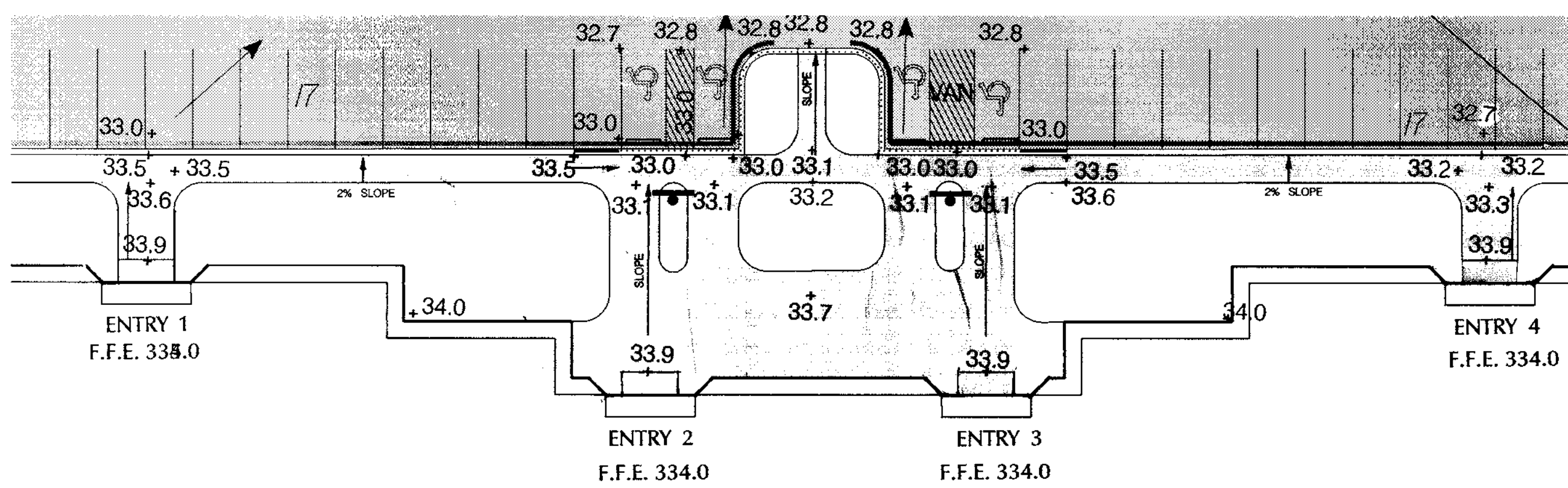
Westridge Corporate Center
At Columbia Gateway

OWNER: The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044

DEVELOPER: AAK, LLC, C/O Abrams Development Group
8806 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21045

DMW Daft · McCune · Walker, Inc.		200 East Pennsylvania Avenue Towson, Maryland 21286	
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals		410 286 3333 Fax 296 4705	
SUBMITTER NAME	SECTOR/AREA	LOTPARCEL #	
Columbia Gateway		5-23	
PLAT # OR L.P. BLOCK # ZONE	TAXZONE MAP	ELECT DISTRICT	CENSUS TRACT
13005 M-1 43	6th		6086.02
WATER CODE	SEWER CODE		

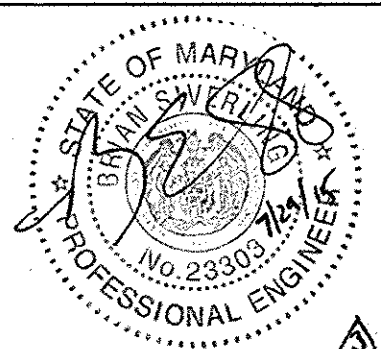
ENTRY DETAILS		
Des By: MM, AS	Scale: As Shown	Proj. No. 88036.D
Drn By: AS, M55	Date: Jan. 14, 1998	
Chk By: MM, MK	Approved: MM	4 OF 20



Building 'C' Entrances
Scale: 1" = 20'

LEGEND

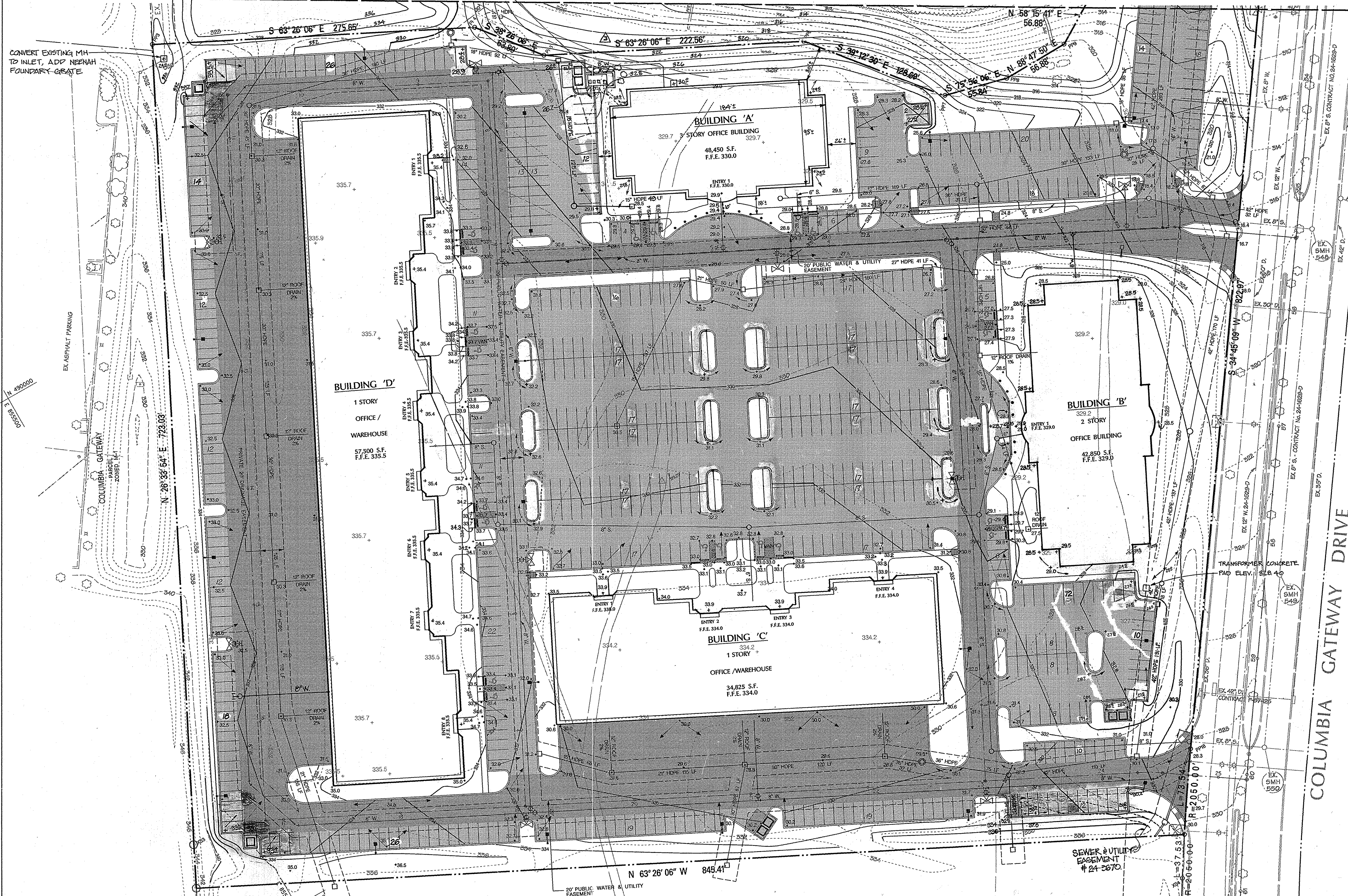
- Accessible Route
- Maximum Slope 0%
- Handicap Accessible Parking Space
- Parking Sign for Handicap Spaces
(1 Sign post for 2 H.C. Spaces Represents a Double Hung Sign otherwise 1 post per sign)
- VAN Handicap Accessible Van Parking Space



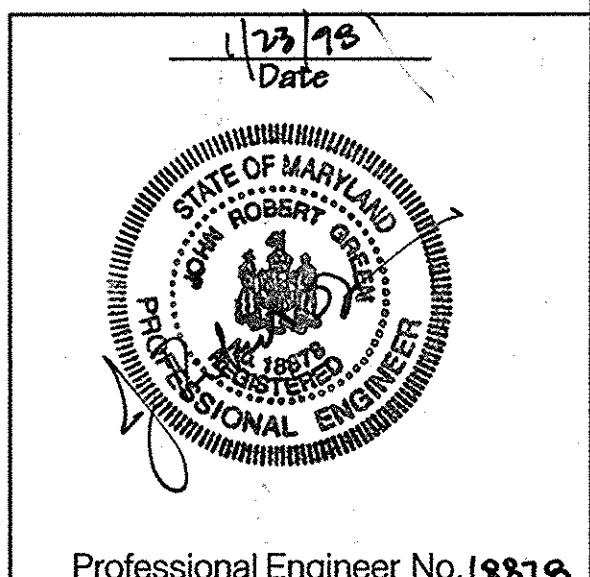
Professional Engineer. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 23343 Expiration Date: 7/1/2005

REV	DATE	DESCRIPTION	APPROVED
3	7/14/05	VERTICAL WIRELESS COMMUNICATIONS EQUIPMENT PAD ADDED	

MATCH LINE SHEET 6



DATA SOURCES:
 TOPOGRAPHY INSIDE OF PROPERTY LINE PER MASS GRADING ON WP 88-27.
 TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DMW IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.



Professional Engineer No. 19878

APPROVED:	HOWARD COUNTY DEPT. OF PLANNING & ZONING
<i>Mr. Dammann</i>	1/23/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Cindy Hamilton</i>	2/2/98
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Joseph</i>	2/2/98
DIRECTOR	DATE

2-6-98	1	FOOTPRINTS @ BLDGS. B, C, D & CURB B + ADJUST SPOT ELEVATIONS.
4-30-98	2	REVISED GRADING.
9-30-98	3	REVISED BUILD. 'A', GRADING, AND SPOT ELEVATIONS.

Date	No.	Revision Description
------	-----	----------------------

Westridge Corporate Center
 At Columbia Gateway

OWNER: The Howard Research and Development Corporation
 10275 Little Patuxent Parkway
 Columbia, Maryland 21044

DEVELOPER: AAK, LLC/CIO
 Abrams Development Corporation
 8805 Columbia 100 Parkway, Suite 101
 Columbia, Maryland 21046

DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors and Environmental Professionals

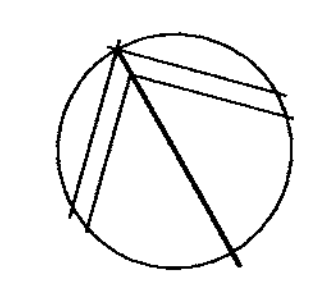
200 East Pennsylvania Avenue
 Towson, Maryland 21286
 410 296 3333
 Fax 296 4705

SUBMISSION NAME: Columbia Gateway
 SECTION/AREA: PARCEL 22
 LOY/PANEL #: 5-23

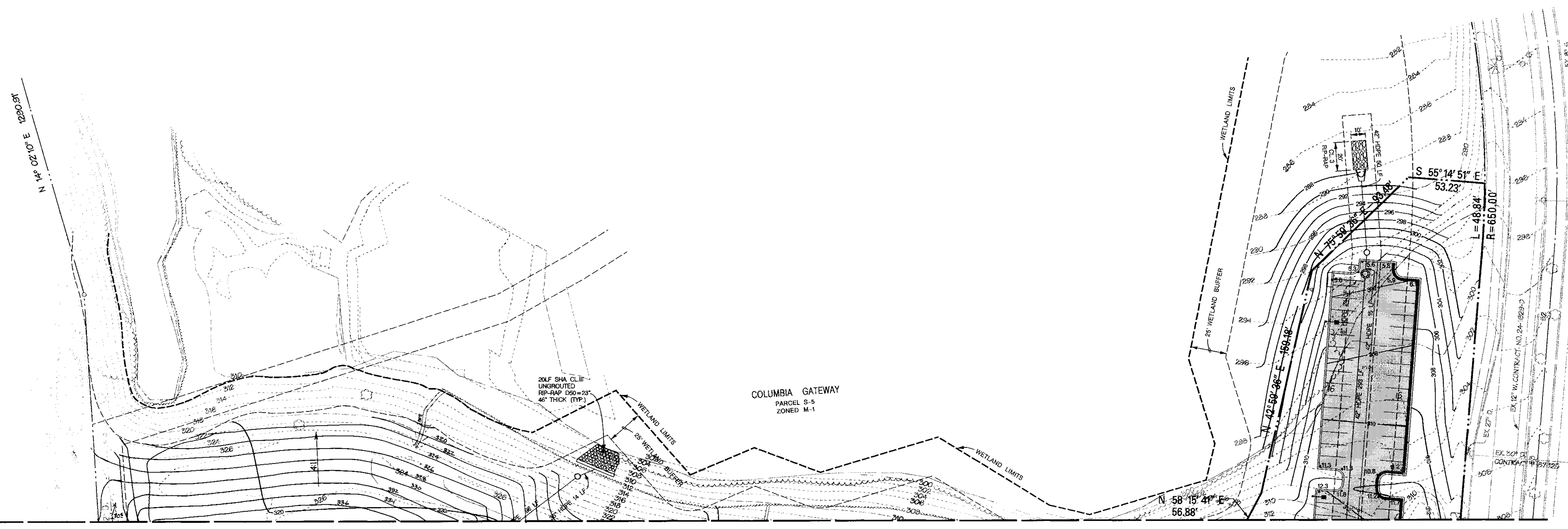
DATE OF LOT BLOCK & ZONE: 150005
 TAX/ZONE MAP: M-1
 EJECT DISTRICT: 43
 CENSUS TRACT: 6005.02

WATER CODE: SEWER CODE:

GRADING PLAN		
Des By: MM, AS	Scale: 1"=40'	Proj. No. 88036.D
Drn By: AS, MSK	Date: Jan. 14, 1998	
Chk By: MM, MK	Approved: MM	5 OF 20



DATA SOURCES:
 TOPOGRAPHY INSIDE OF PROPERTY LINE PER MASS GRADING ON WP 88-27.
 TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DMW IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.



MATCH LINE SHEET 5

Date 1/27/98

Professional Engineer No. 19878

APPROVED:	HOWARD COUNTY DEPT. OF PLANNING & ZONING
<i>Andrew Hamilton</i>	1/27/98
CHIEF DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Andy Hamilton</i>	2/3/98
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>James S. Bates</i>	2/3/98
DIRECTOR	DATE

9-20-98	1	REVISED GRADING + STORM DRAIN FROM I-37 TO SC-4
Date	No.	Revision Description

Westridge Corporate Center
 At Columbia Gateway

OWNER: The Howard Research and Development Corporation
 10275 Little Patuxent Parkway
 Columbia, Maryland 21044

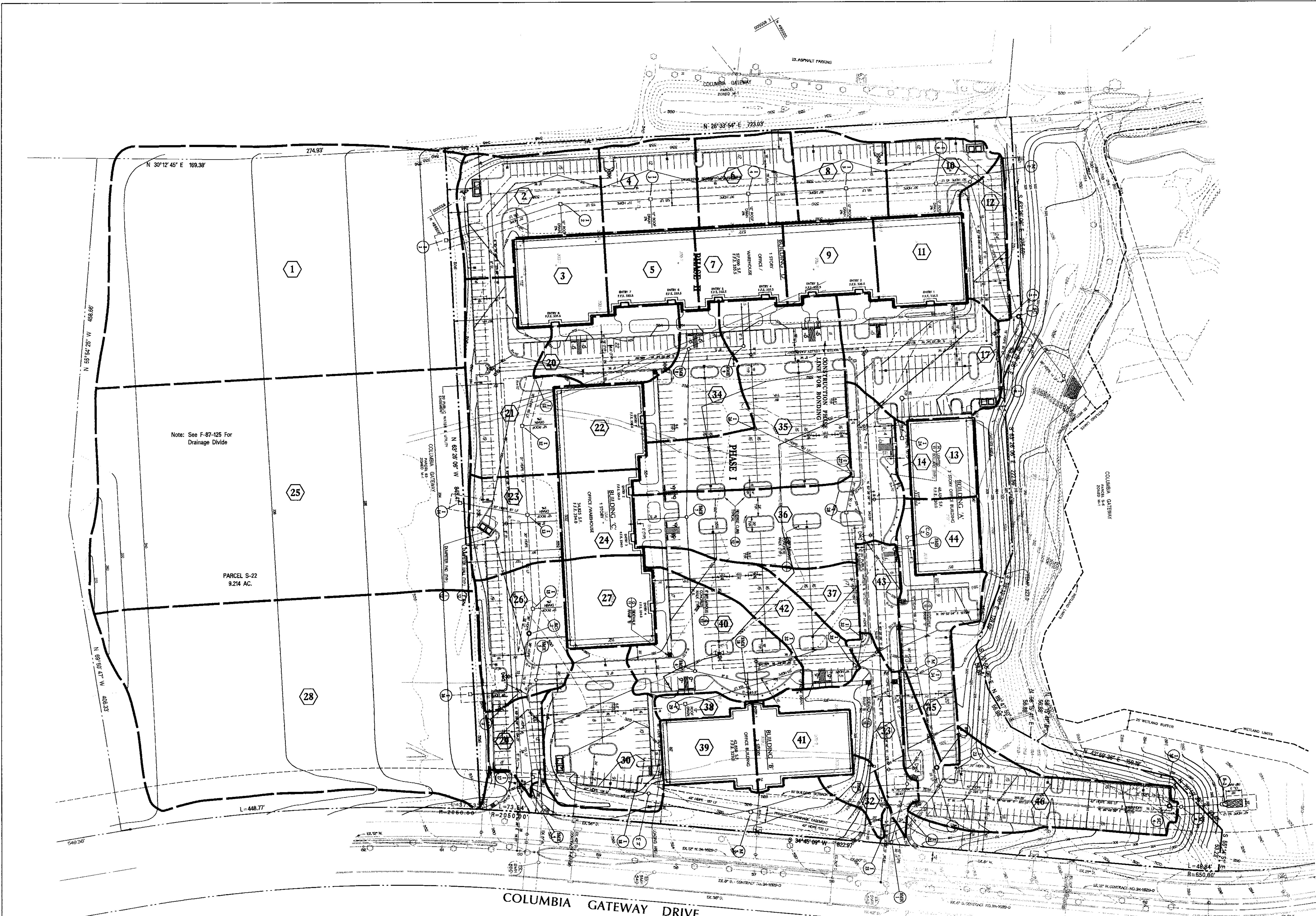
DEVELOPER: AAK, L.L.C./O
 Abrams Development Group
 8805 Columbia 100 Parkway, Suite 101
 Columbia, Maryland 21046

DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
 Towson, Maryland 21286
 410 298 3333
 Fax 298 4705

SUBDIVISION NAME	SECTION/AREA	LOTPARCEL #
Columbia Gateway		S-23
PLAT # OR L.P.	BLOCK #	ZONE
150025	1	M-1
WATER CODE	SEWER CODE	ELECT DISTRICT
		6th
		CENSUS TRACT
		60065.02

TITLE		
GRADING PLAN		
Des By: MM, AS	Scale: 1"=40'	Proj. No. 88036.D
Dm By: AS, MSS	Date: Jan. 14, 1998	
Chk By: MM, MK	Approved: MM	6 OF 20



Note: See F-87-125 For Drainage Divide

PARCEL S-22
9.214 AC.

DATA SOURCES:
TOPOGRAPHY INSIDE OF PROPERTY LINE PER MASS GRADING ON WP 98-57.
TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DWM IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.

1/23/98
Date

Professional Engineer No. 18978

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Robert J. Smith 1/23/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Candy Hamilton 2/2/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert J. Smith 2/2/98
DIRECTOR DATE

4-20-98	2	ADD DRAINAGE AREA TABLE & REVISED DRAINAGE AREAS.
---------	---	---

Date No. Revision Description

Westridge Corporate Center At Columbia Gateway

OWNER: The Howard Research and Development Corporation
10275 Lissa Parkway, Suite 101
Columbia, Maryland 21044

DEVELOPER: AAK, L.L.C./IO
8806 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21045

DMW
Daft - McCune - Walker, Inc.
A Team of Land Planners,
Landscape Architects,
Engineers, Surveyors &
Environmental Professionals

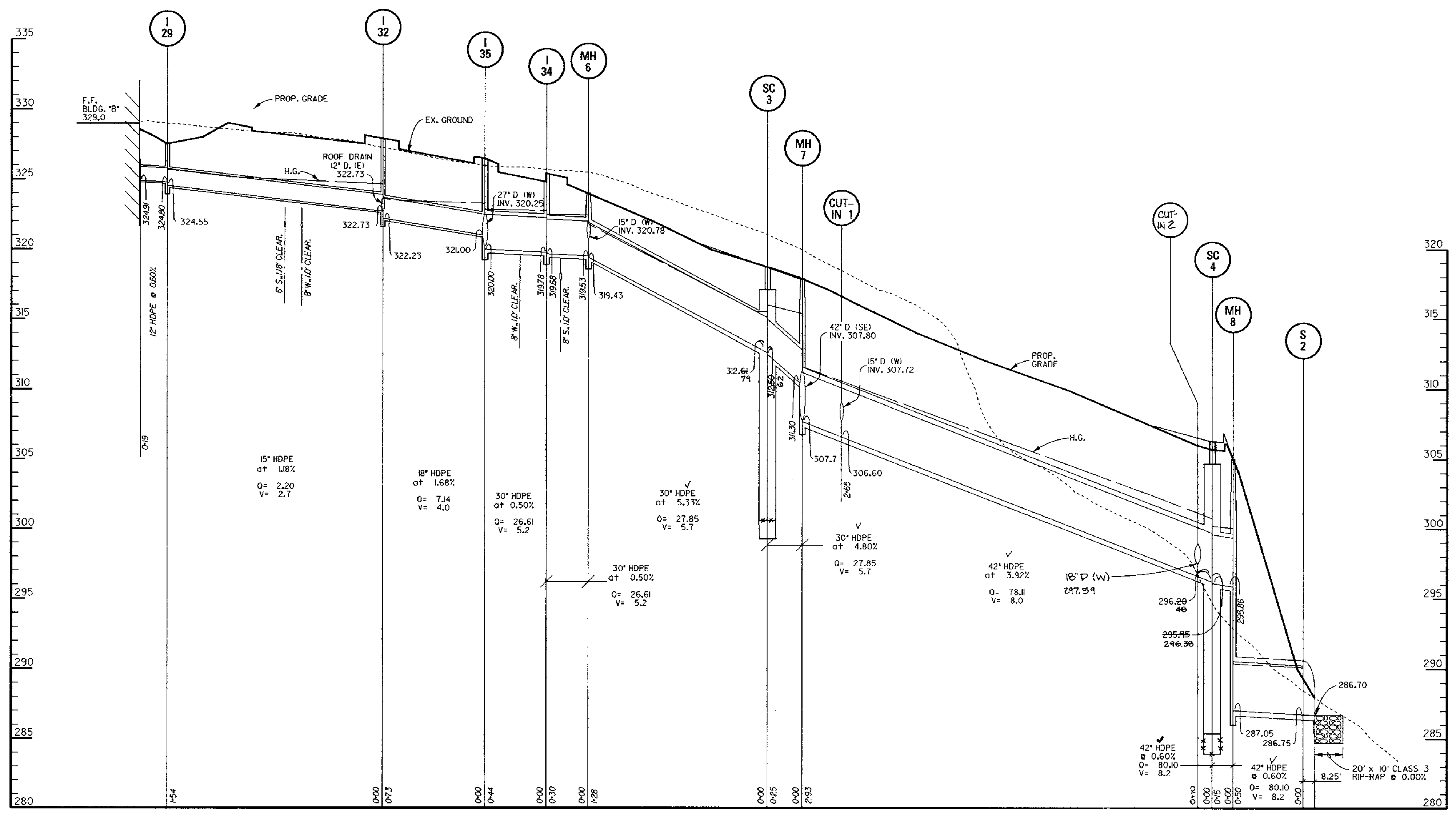
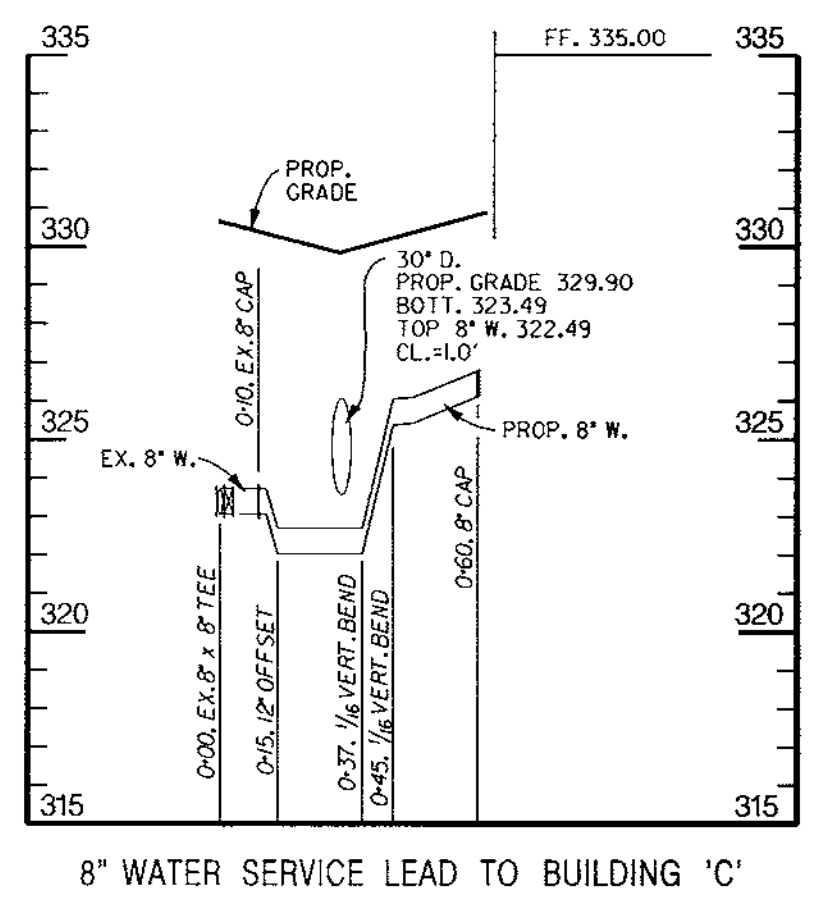
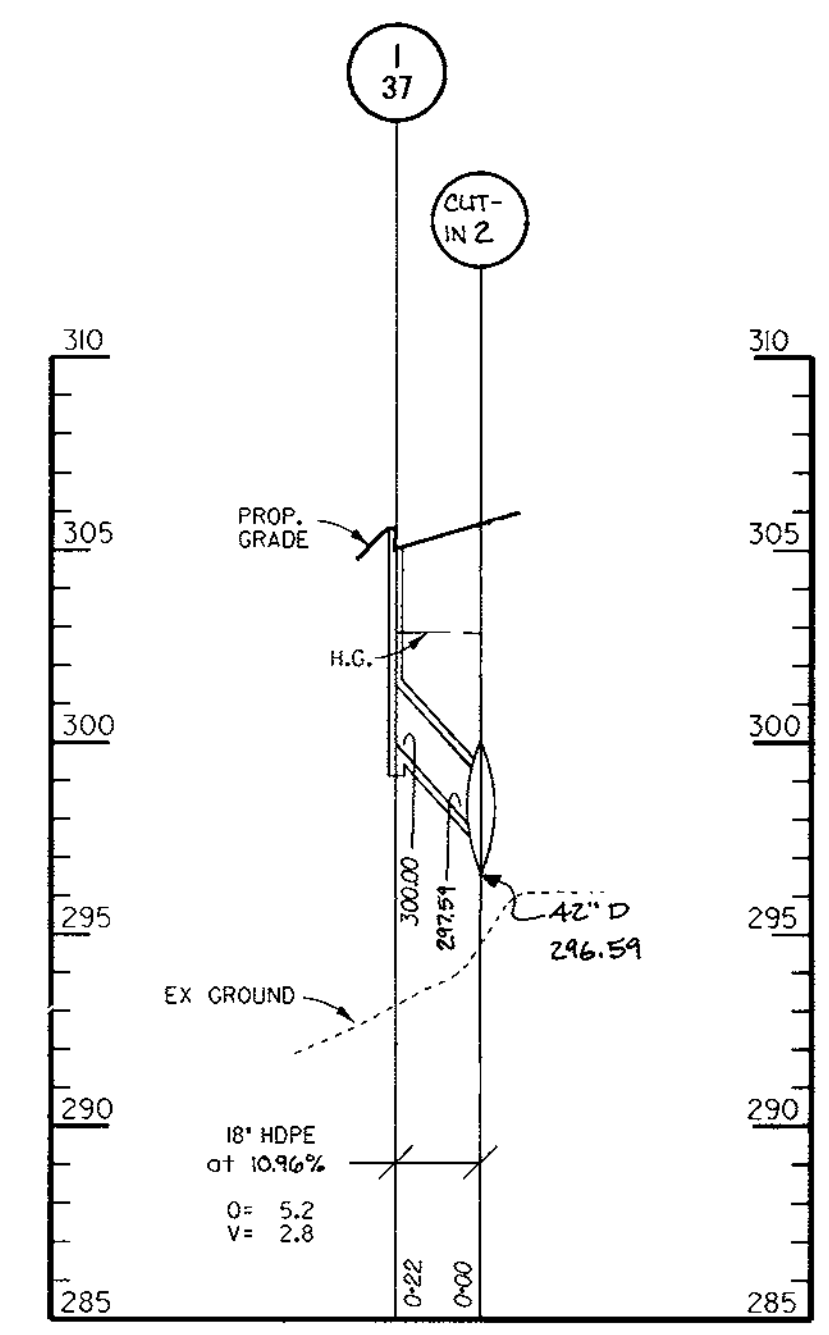
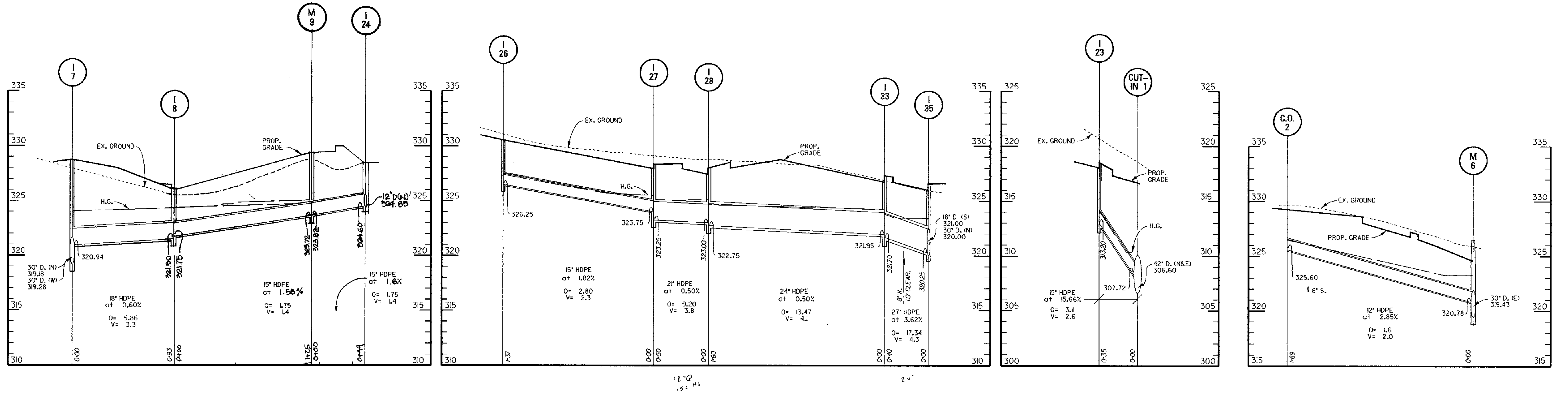
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBSCRIBER NAME Columbia Gateway	SECTION AREA 13006	LOT/PARCEL # S-23
PLAT OR 1/4 BLOCK # M-1	ELECT. DISTRICT 6th	TENURE TRACT 6065.02
WATER CODE	SEWER CODE	

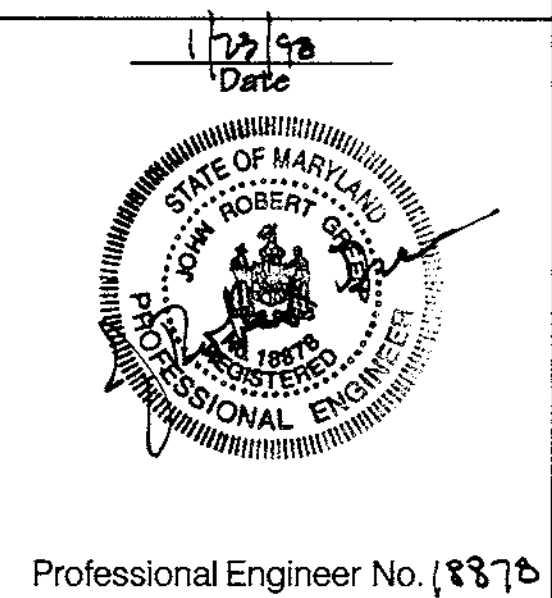
TITLE DRAINAGE AREA MAP		
Des By: MM, AS	Scale: 1"=60'	Proj. No. 88036.D
Drn By: AS, MGG	Date: Jan. 14, 1998	
Chk By: MM, MK	Approved: MM	7 OF 20

NO.	D.A.	% IMP	"C"
I-1	2.82	93%	0.95
I-2	0.78	93%	0.92
I-3	0.30	93%	0.92
I-4	0.61	93%	0.92
I-5	0.67	93%	0.92
I-6	0.67	93%	0.92
I-7	0.32	93%	0.90
I-8	0.65	93%	0.91
I-11	0.36	93%	0.90
I-12	0.38	93%	0.93
I-13	0.38	93%	0.92
I-14	2.82	93%	0.95
I-15	0.43	93%	0.90
I-16	2.82	93%	0.95
I-17	0.16	93%	0.86
I-18	0.70	93%	0.85
I-21	0.10	93%	0.80

NO.	D.A.	% IMP	"C"
I-22	0.34	93%	0.92
I-24	0.24	93%	0.94
I-26	0.86	93%	0.91
I-27	0.36	93%	0.90
I-28	0.84	93%	0.88
I-29	0.34	93%	0.91
I-32	0.55	93%	0.89
I-33	0.15	93%	0.90
I-34	0.17	93%	0.89
I-35	0.36	93%	0.90
I-39	0.36	93%	0.90
I-40	0.40	93%	0.90



PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING		DATE: 1/25/98	
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK		DATE: 2/2/98	
CHIEF, DIVISION OF LAND DEVELOPMENT		DATE: 2/2/98	
DIRECTOR		DATE: 2/2/98	
4-30-90	1	REVISED PROFILE I-24 TO I-7	
4-30-98	2	REVISED PROFILE I-37 TO SC-4	
Date	No.	Revision Description	

Westridge Corporate Center
At Columbia Gateway

OWNER: The Howard Research and Development Corporation
10276 Little Patuxent Parkway
Columbia, Maryland 21044

DEVELOPER: AAK, LLC, C/O Abrams Development Group
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21045

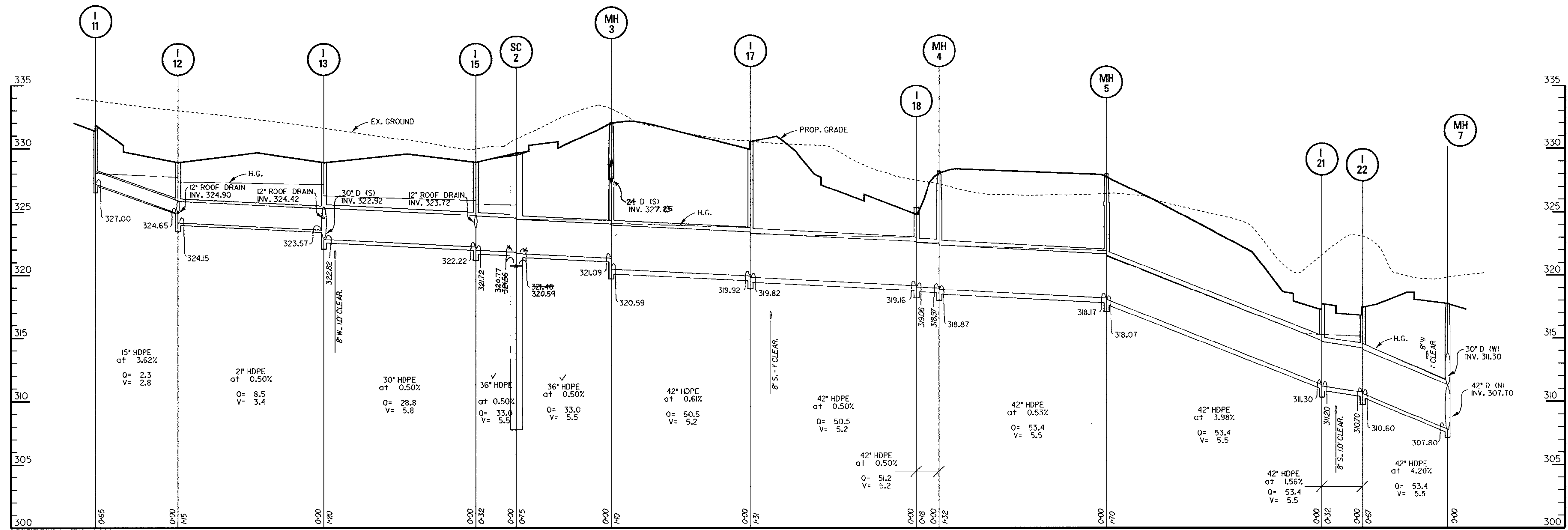
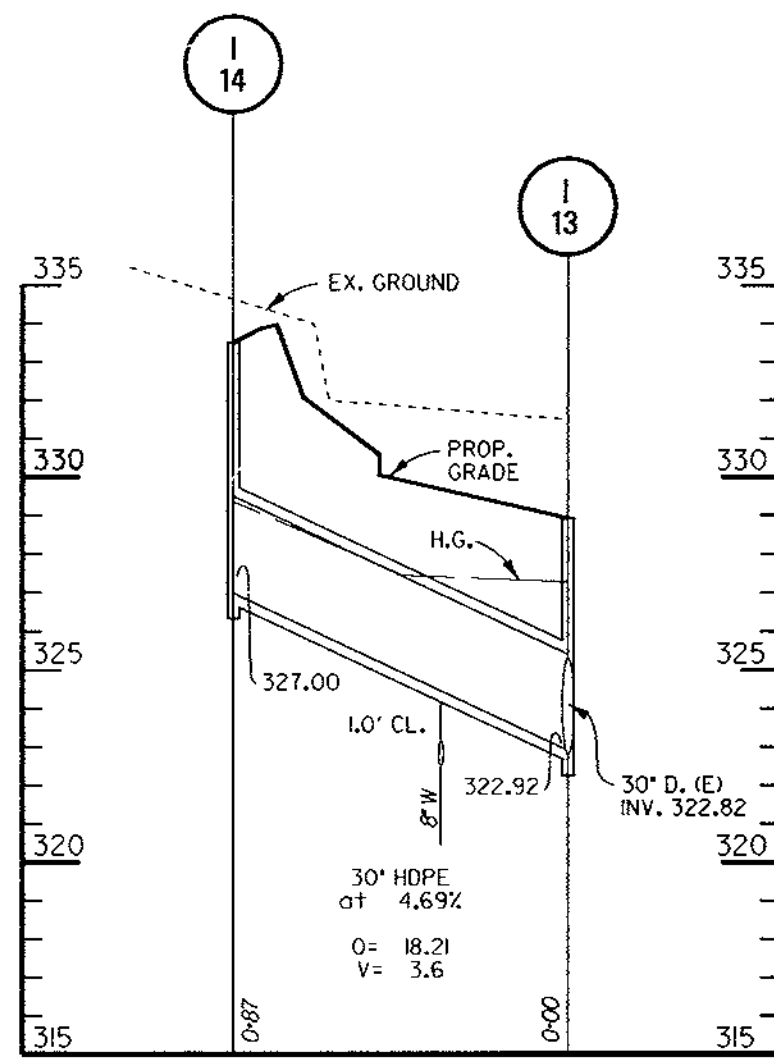
DMW
Daft · McCune · Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBDIVISION NAME: Columbia Gateway SECTION/AREA: LOT/PARCEL # 5-23
PLAT OR L.P. BLOCK # ZONE TAXZONE MAP PROJECT DISTRICT GENERAL TRACT
55025 M-1 43 05H 6065.02
WATER CODE: SEWER CODE:

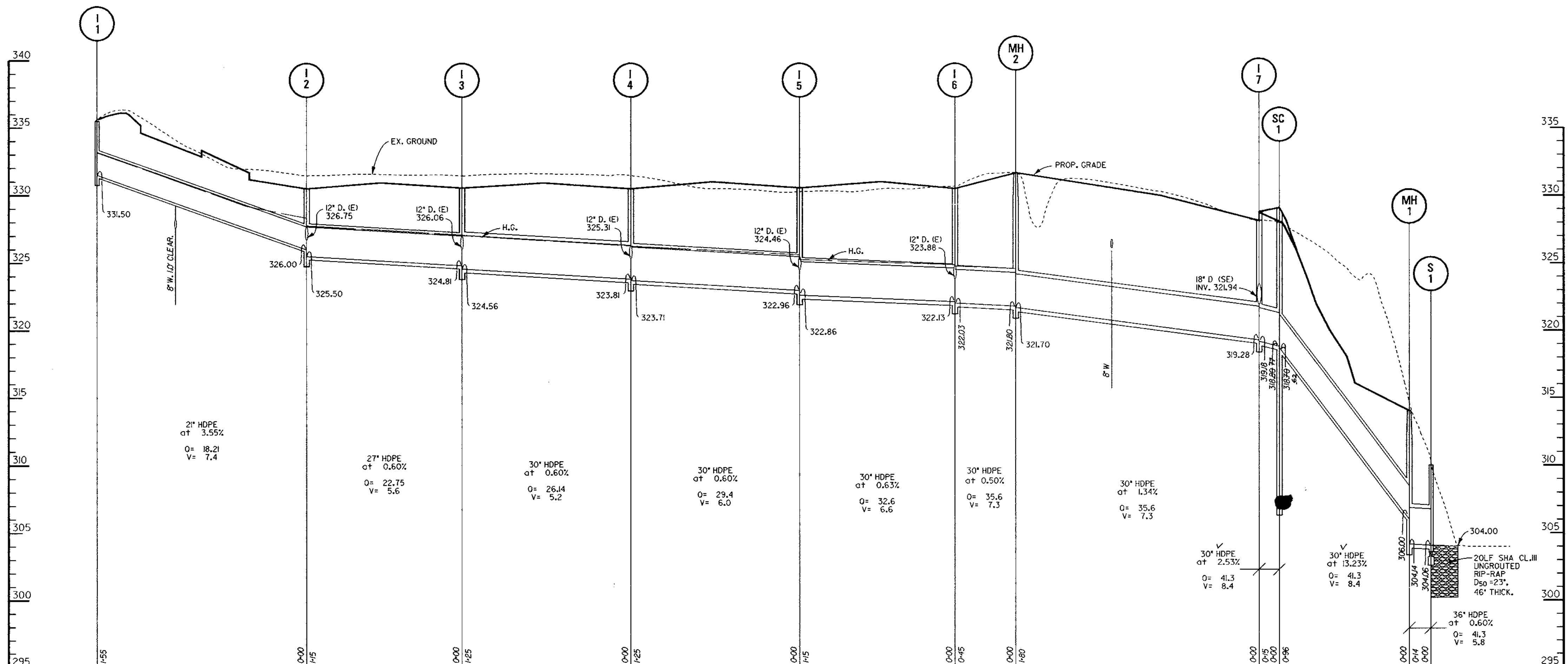
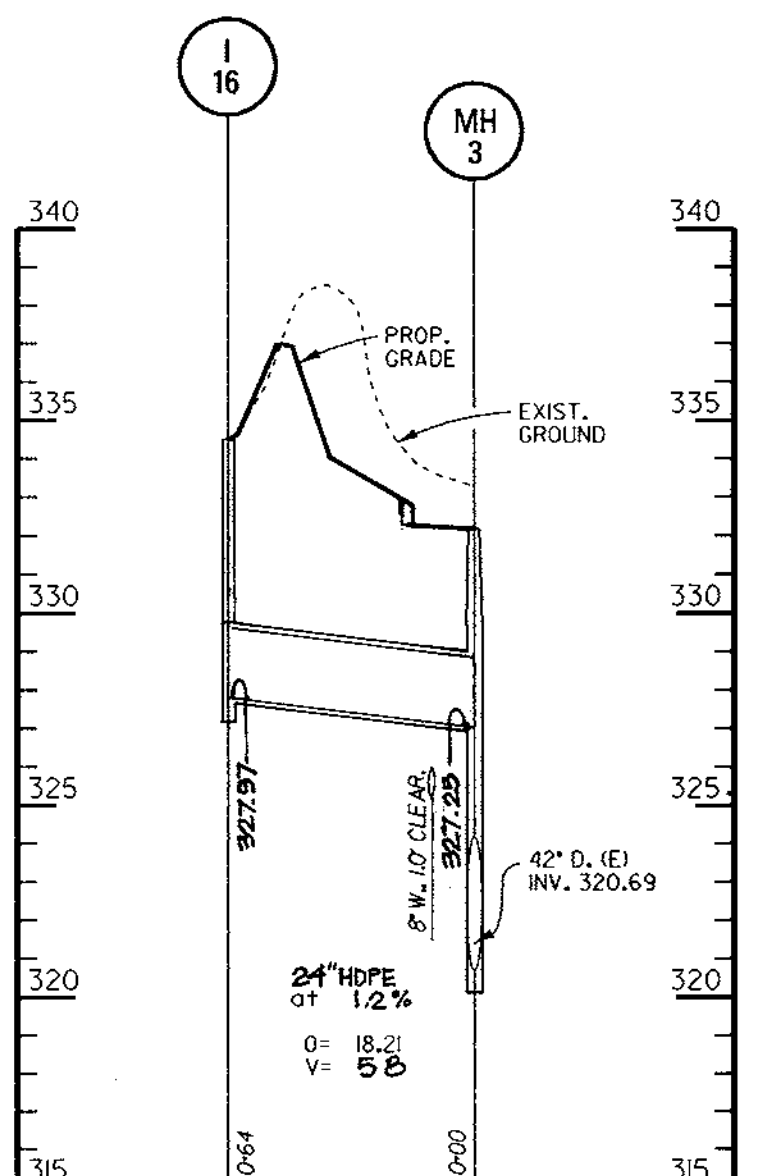
TITLE
STORM DRAIN PROFILES & WATER PROFILE

Des By: Scale: As Shown Proj. No. 88036.D
Dm By: FJZ, MSS Date: Dec. 29, 1997
Chk By: MM, MK Approved: MM 8 OF 20



PROFILE
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

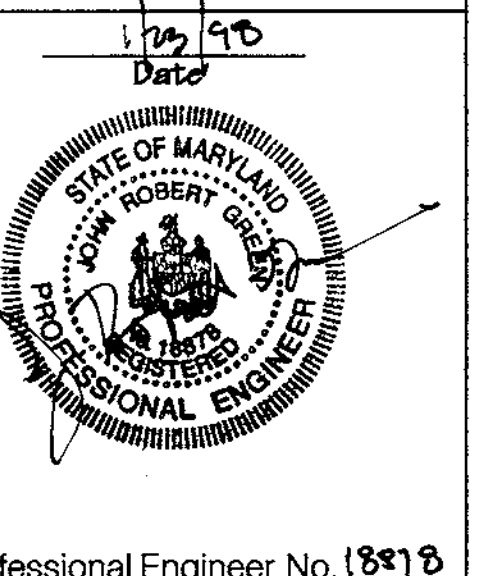
24" 10' P.C.



16' P.C. 14'

27" 10' P.C.

AS-BUILT 4/26/99



Professional Engineer No. 18718

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division: *MM* 1/27/98
 Chief, Division of Land Development: *MM* 2/2/98
 Director: *MM* 2/2/98

Date	No.	Revision Description
4/27/98		REV. PROFILE I-16

Westridge Corporate Center
At Columbia Gateway

OWNER: The Howard Research and Development Corporation
 DEVELOPER: AAK, L.L.C. / Abrams Development Group


DMW
Daft - McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 8333
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21046
Fax 296 4705

TITLE: **STORM DRAIN PROFILES**

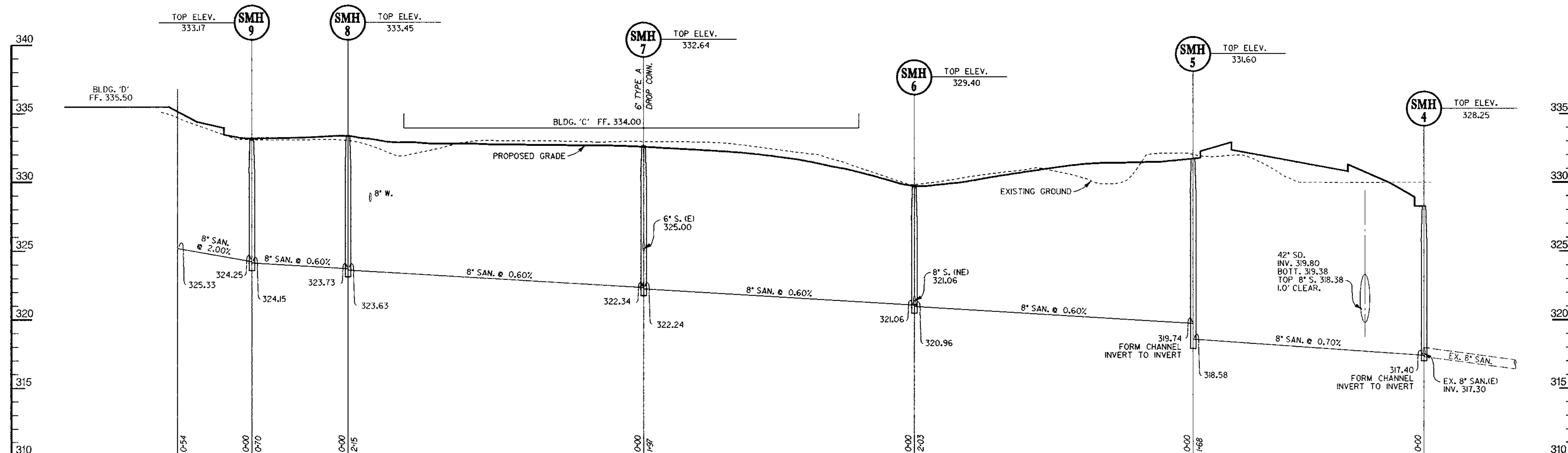
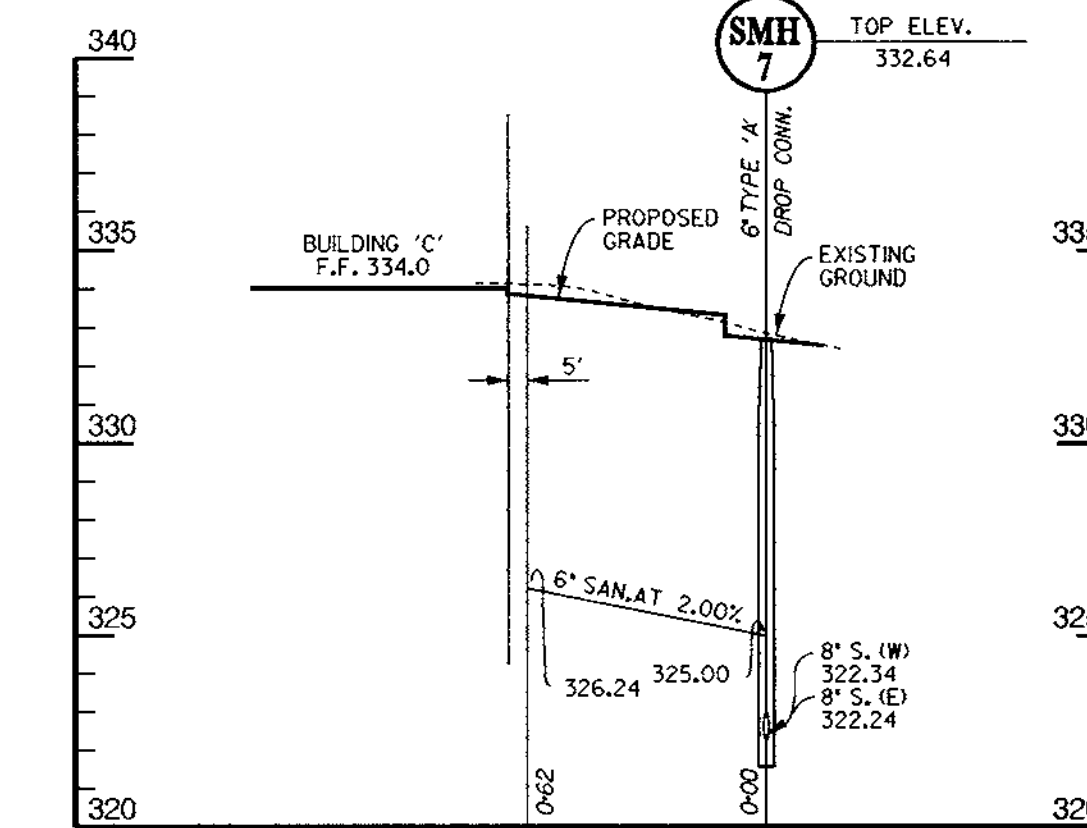
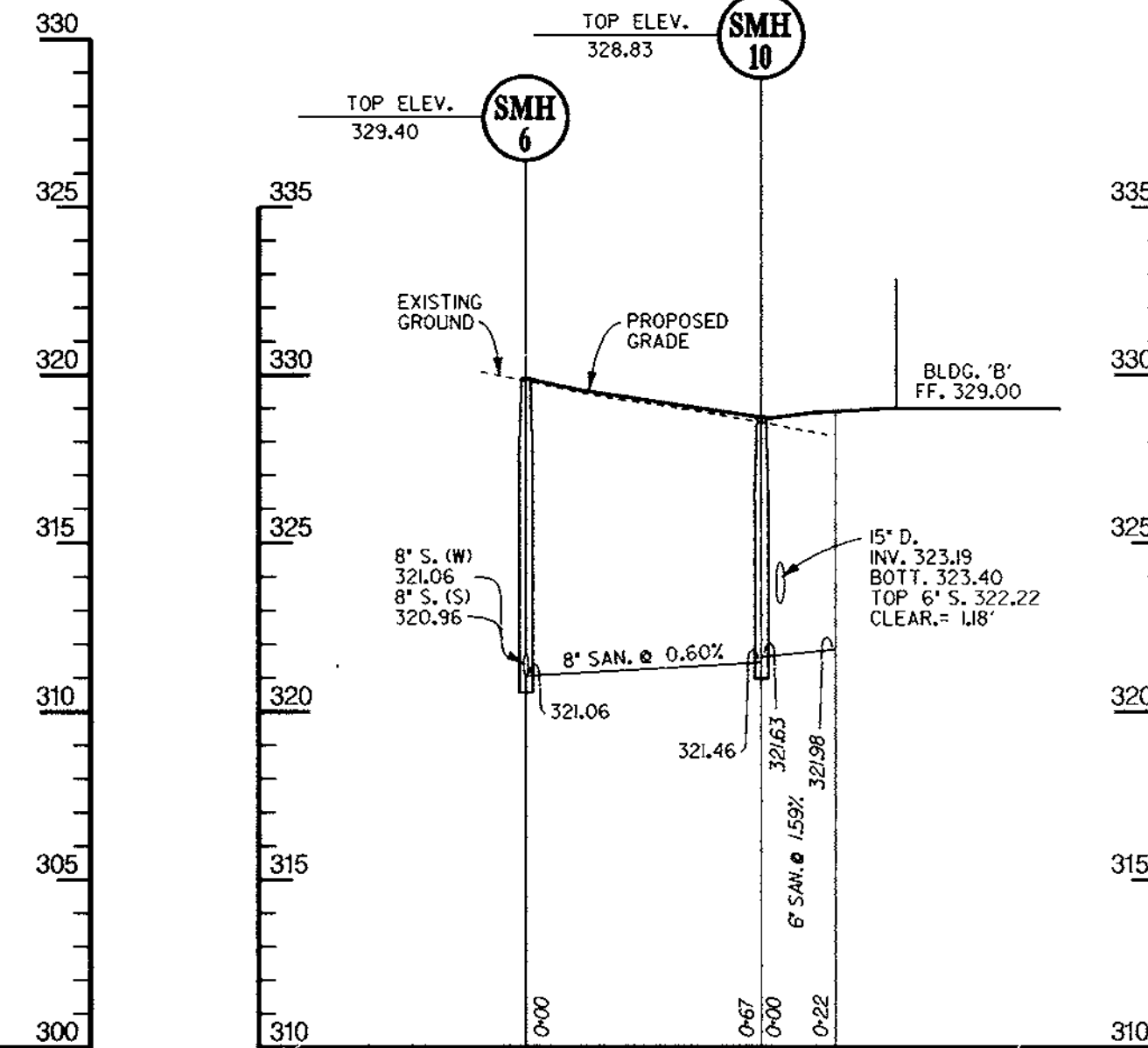
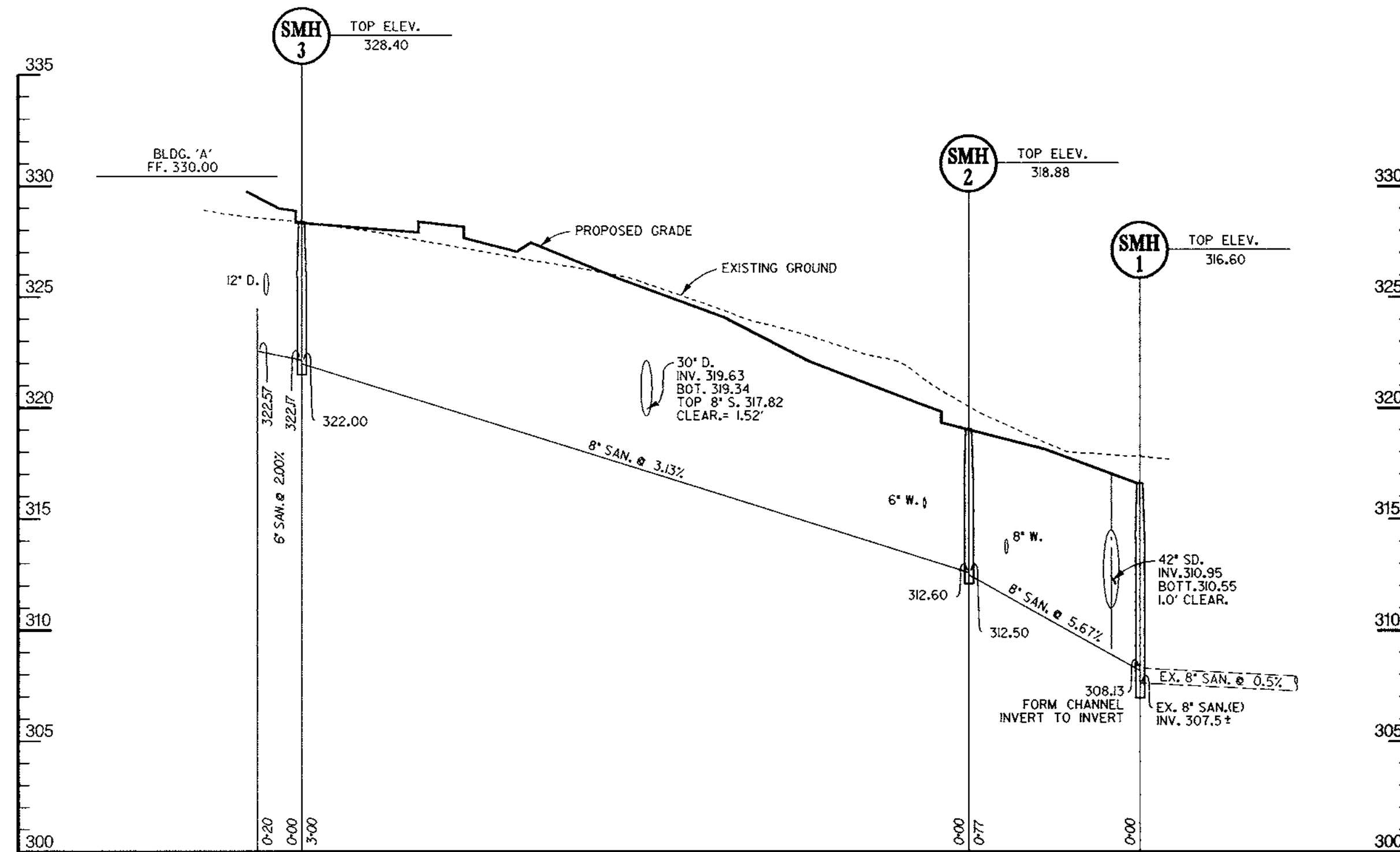
Des By: Scale: As Shown Proj. No. 88036.D
 Dm By: FJZ, M55 Date: Dec. 29, 1997
 Chk By: MM, MK Approved: MM 9 OF 20

PART I

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 1'00".
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL  AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 410-531-5533
 - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES 410-561-2585
 - BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL - 410-234-5621
 - BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING - 410-298-5013
 - MISS UTILITY - 1-800-559-0100
 - COLONIAL PIPELINE CO. - 410-795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 410-992-2366
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.

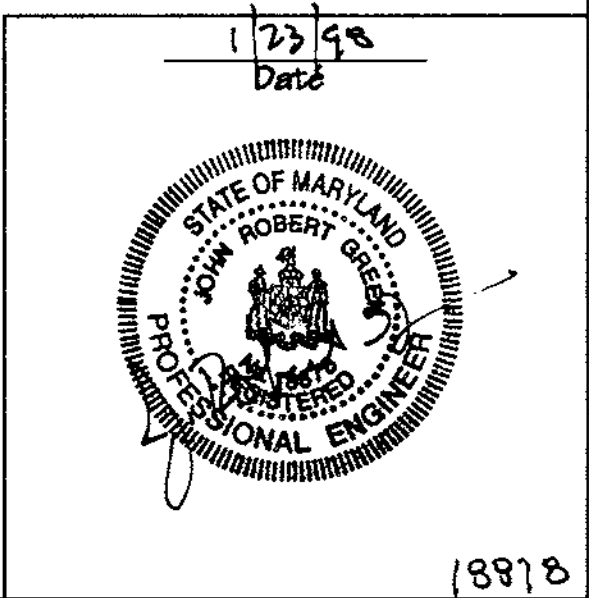
PART 2 - SEWER

- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR P.V.C. UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL 'C.N.S.' INDICATES THAT CELLAR CANNOT BE SERVED.



PROFILE

SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] DATE: 1/23/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 [Signature] DATE: 2/2/98
 CHIEF, DIVISION OF LAND DEVELOPMENT RB
 [Signature] DATE: 2/2/98
 DIRECTOR

Date	No.	Revision Description

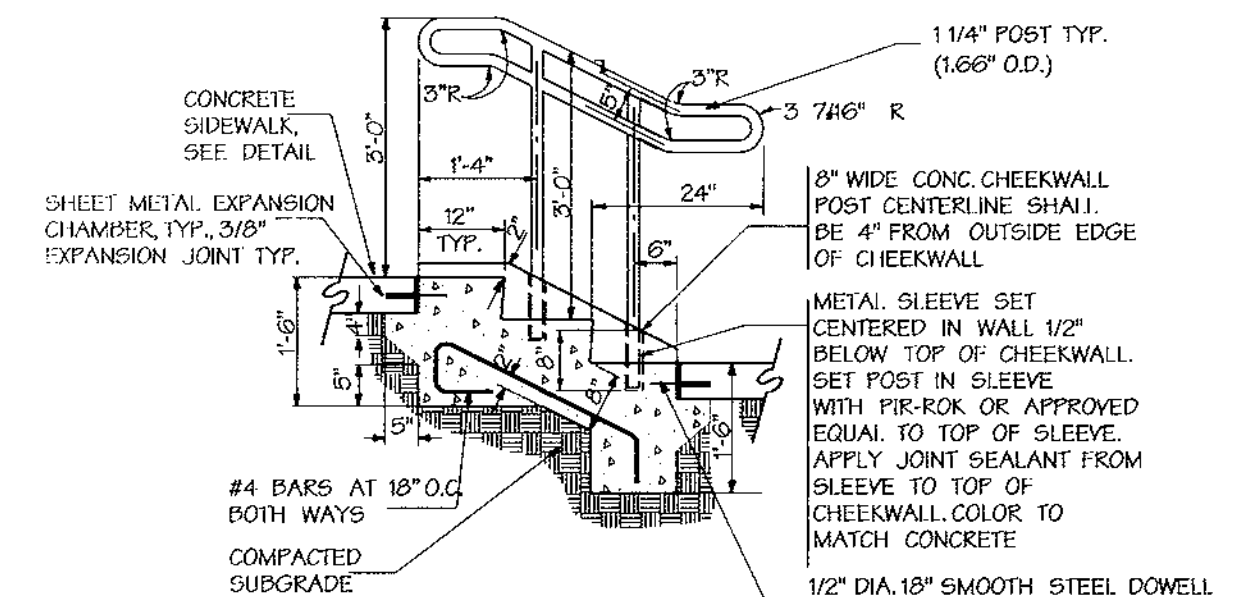
Westridge Corporate Center
 At Columbia Gateway
 OWNER: The Howard Research and Development Corporation
 DEVELOPER: AAK, LLC, CIO
 10276 Little Patuxent Parkway, Columbia, Maryland 21044
 8805 Columbia 100 Parkway, Suite 101, Columbia, Maryland 21045

DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
 200 East Pennsylvania Avenue, Towson, Maryland 21286
 410 296 3333
 Fax 410 296 4705

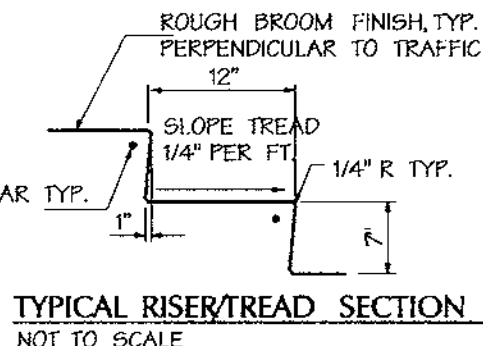
SUBDIVISION NAME: Columbia Gateway SECTION/AREA: LOT/PARCEL #:
 PLAT OR L.P. BLOCK # ZONE TAXING MAP EJECT. DISTRICT CENSUS TRACT
 150225 M-1 45 C-2 6006.02
 WATER CODE: SEWER CODE:

TITLE: **SANITARY SEWER PROFILES**

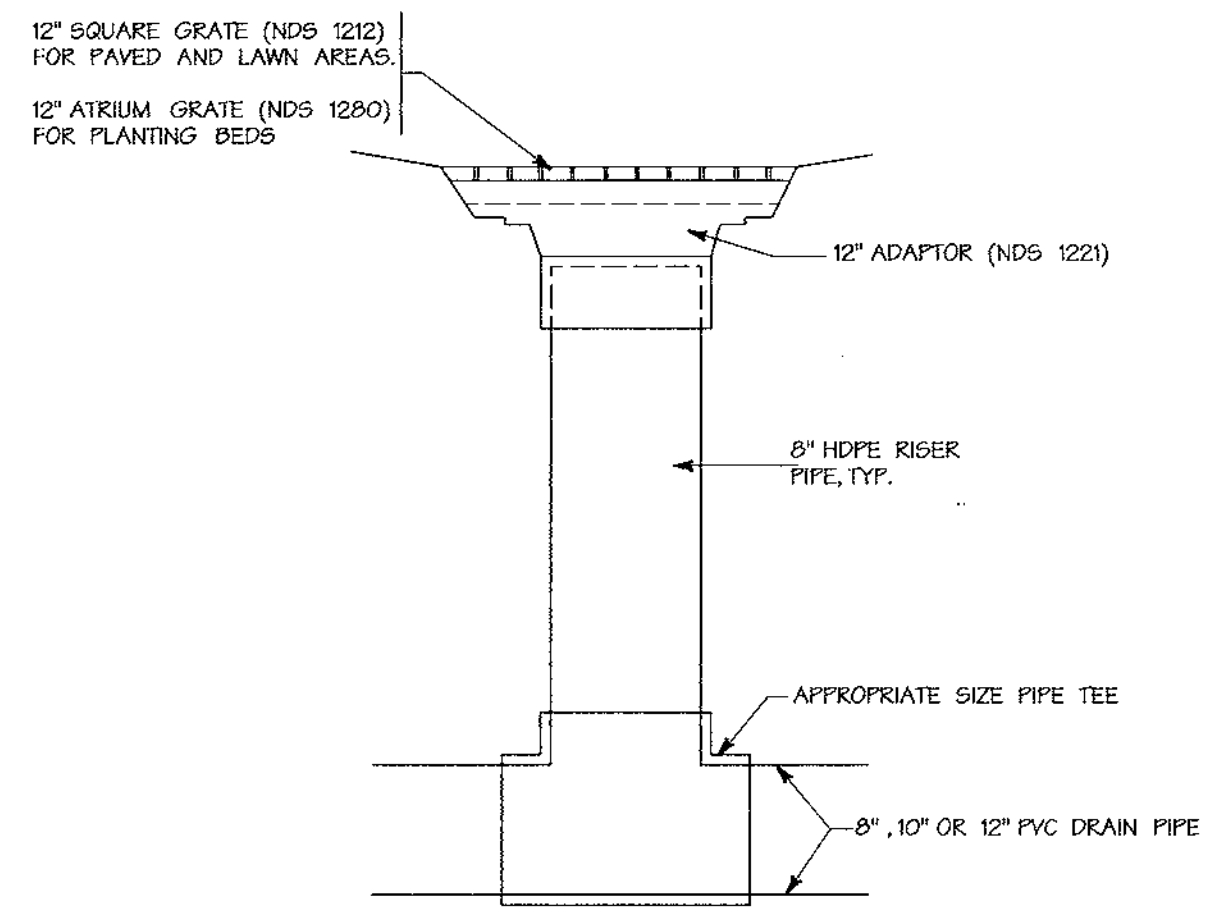
Des By: PH Scale: As Shown Proj. No. 88036.D
 Dwn By: MSS Date: Dec. 29, 1997
 Chk By: MM, MK Approved: MM 10 OF 20



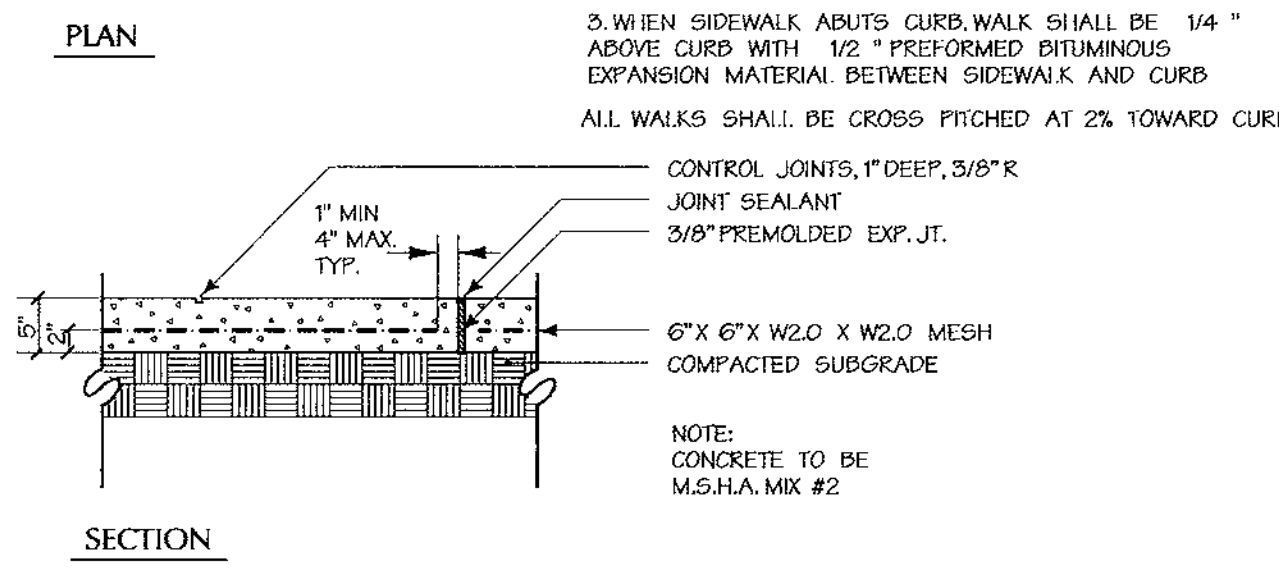
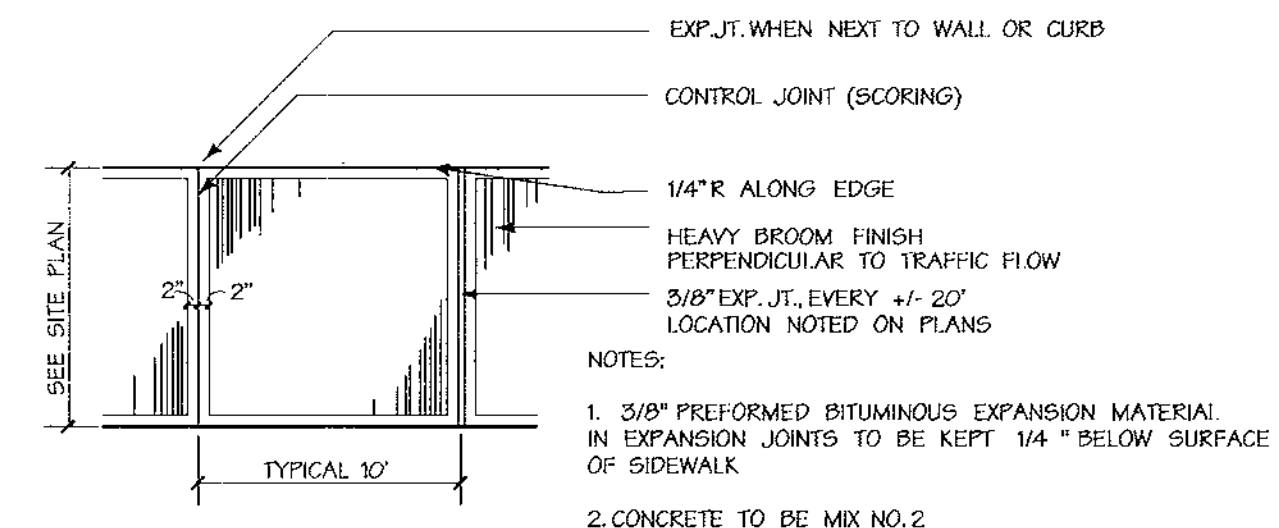
- NOTES:
1. RAILING SHALL BE BLACK CARBON STEEL TUBING, ASTM-A53, TYPE B, GRADE A, SCHEDULE 40, NPS SIZE DESIGNATION.
 2. ALL WELDS SHALL BE FULL SECTION, GROUND SMOOTH.
 3. MIDRAIL SPACING: 2'-6" O.C. MIN., 4" O.C. MAX.
 4. RAILING SHALL COMPLY WITH 1989 BOCA CODE, SECTIONS 825.0 & 1109.8
 5. PAINT WITH ONE COAT #769 DAMP PROOF RED PRIMER AND ONE COAT EXTERIOR FLAT BLACK ENAMEL. ALL PAINT SHALL BE RUST-OLEUM OR AN APPROVED EQUAL.
- * SEE SITE PLAN FOR NUMBERS OF RISERS



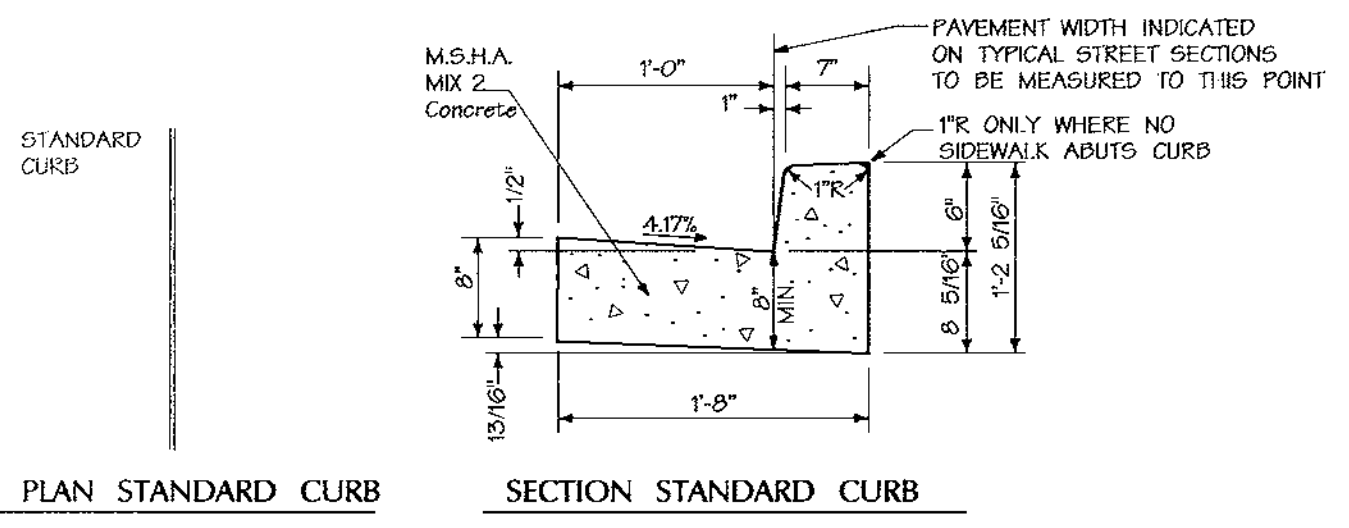
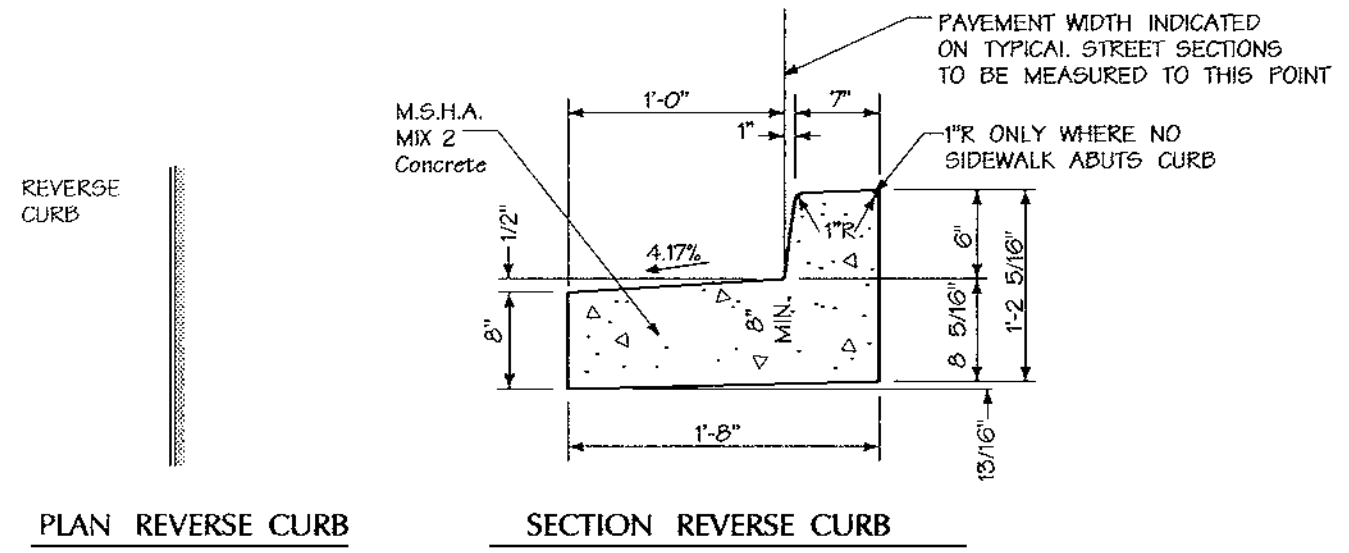
A Concrete Steps
Not To Scale



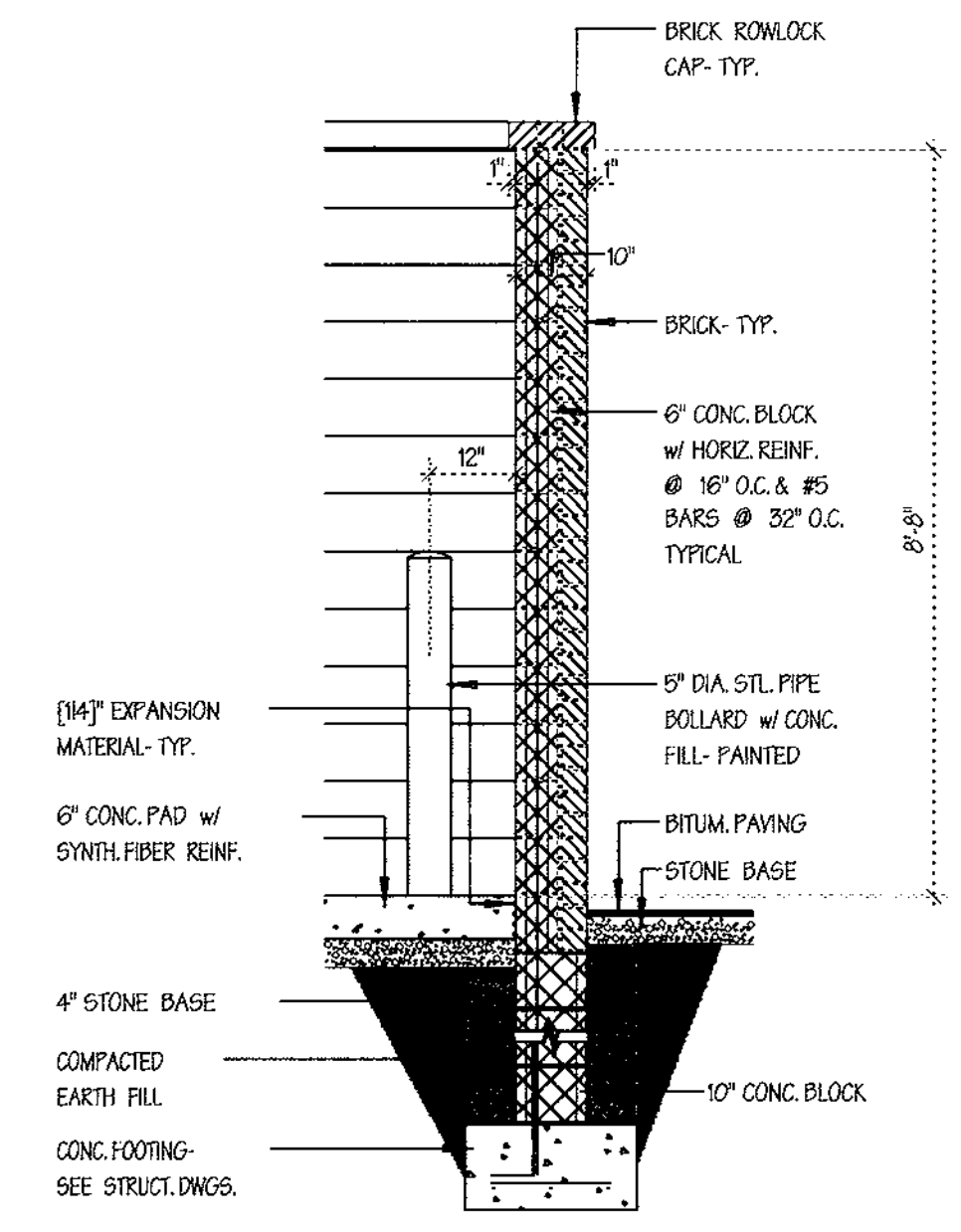
E Yard Inlet
Not To Scale



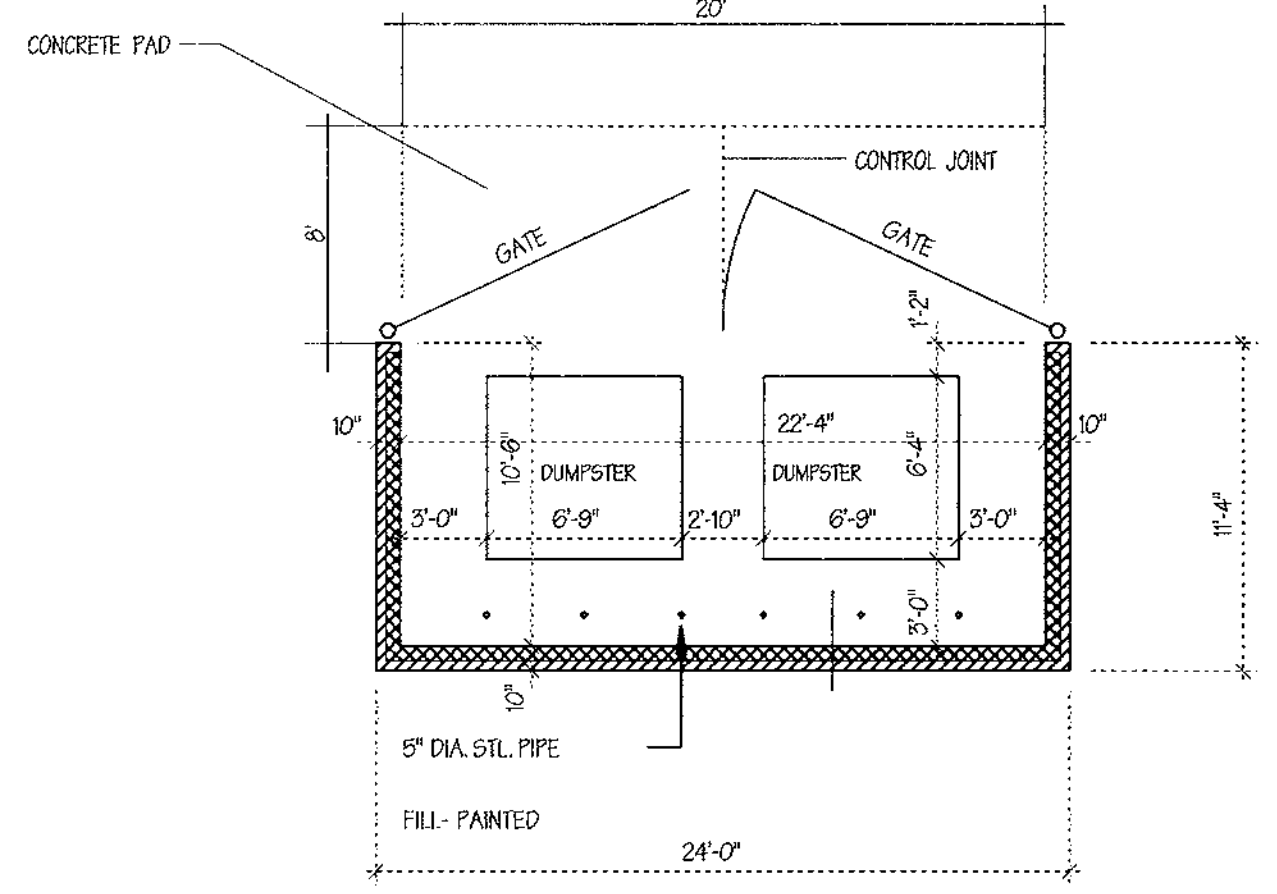
H Concrete Walk
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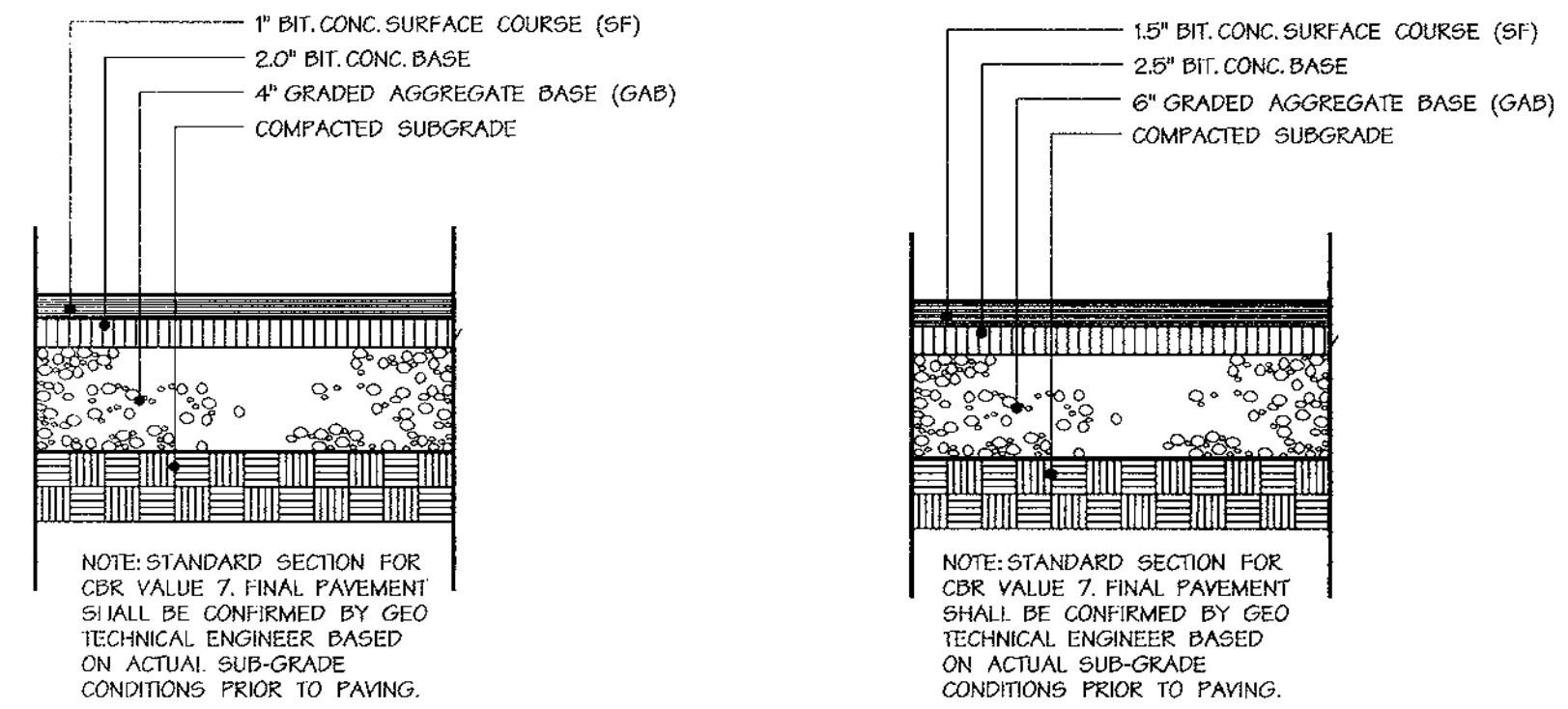
B Concrete Curb, Typical
Not To Scale



F Wall Section
Not To Scale

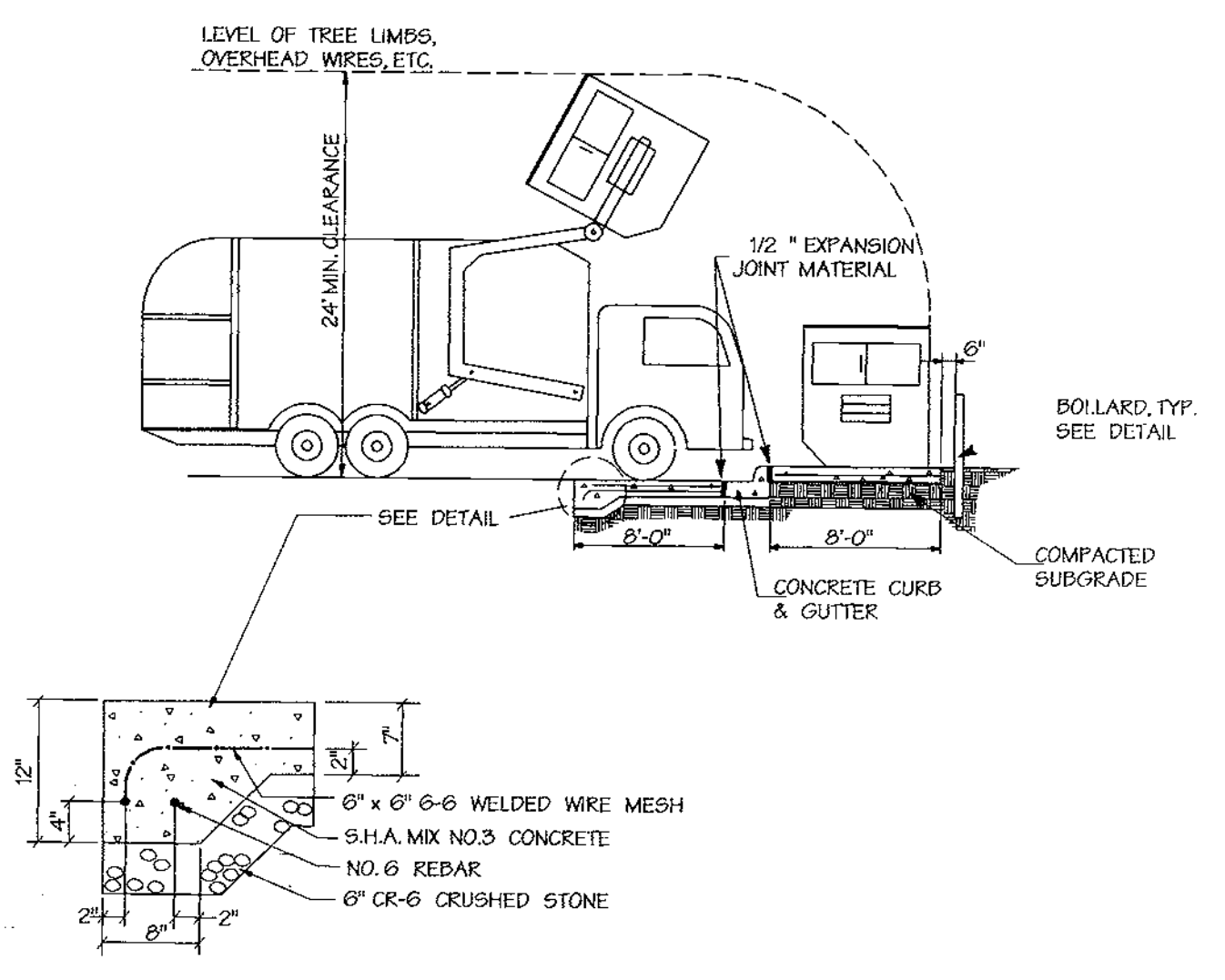


I Dumpster Plan
Not To Scale

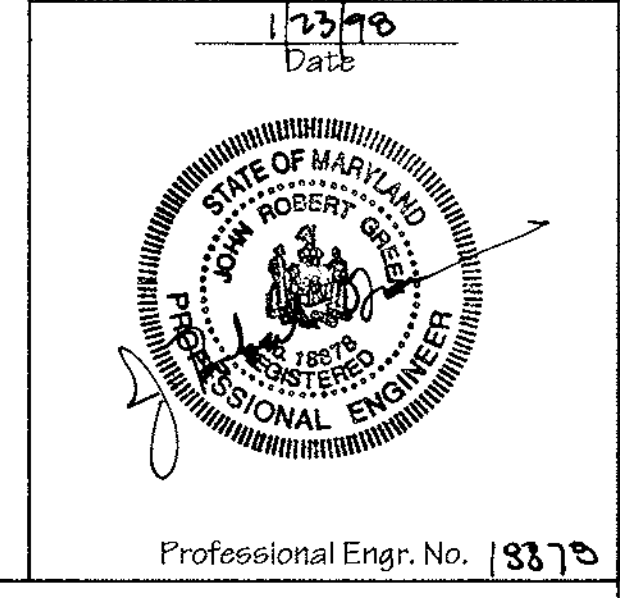


C P1 Paving
Not To Scale

D P2 Paving
Not To Scale



G Service Pad & Recycling Bins Section
Not To Scale



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING		12/2/98	
<i>John Gable</i>	DATE		
CHIEF, DEVELOPMENT ENGINEERING DIVISION		MK	
<i>Cathy Hamilton</i>	DATE	2/2/95	
CHIEF, DIVISION OF LAND DEVELOPMENT		AB	
<i>John S. Kuster</i>	DATE	2/2/98	
DISAPPROVED:			
Date	No.	Revision Description	
Westridge Corporate Center At Columbia Gateway			
OWNER: The Howard Research and Development Corporation 10275 Little Patuxent Parkway Columbia, Maryland 21044		DEVELOPER: AAK, L.L.C. C/O Abrams Development Group 8805 Columbia 100 Parkway, Suite 105 Columbia, Maryland 21045	
DMW Daft - McCune - Walker, Inc. A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals			
200 East Pennsylvania Avenue Towson, Maryland 21286 410 296 3333 Fax 296 4705			
REVISION NAME	REVISION DATE	DATE	BY
Columbia Gateway		5-23	
PLATE OR I.P.	BLOCK #	PLANNING MAP	FEED BACK
M-1	M-1	45	6th
DATE CODE	SEWER CODE	PROJECT	SEWER
		6065.02	
SITE DETAILS			
Des. By:	AS	Scale:	1"=40'
Drn. By:	AS	Date:	Nov. 18, 1997
Chk. By:	MK, MM	Approved:	MM
		Proj. No.	88036.D
		12 OF 20	

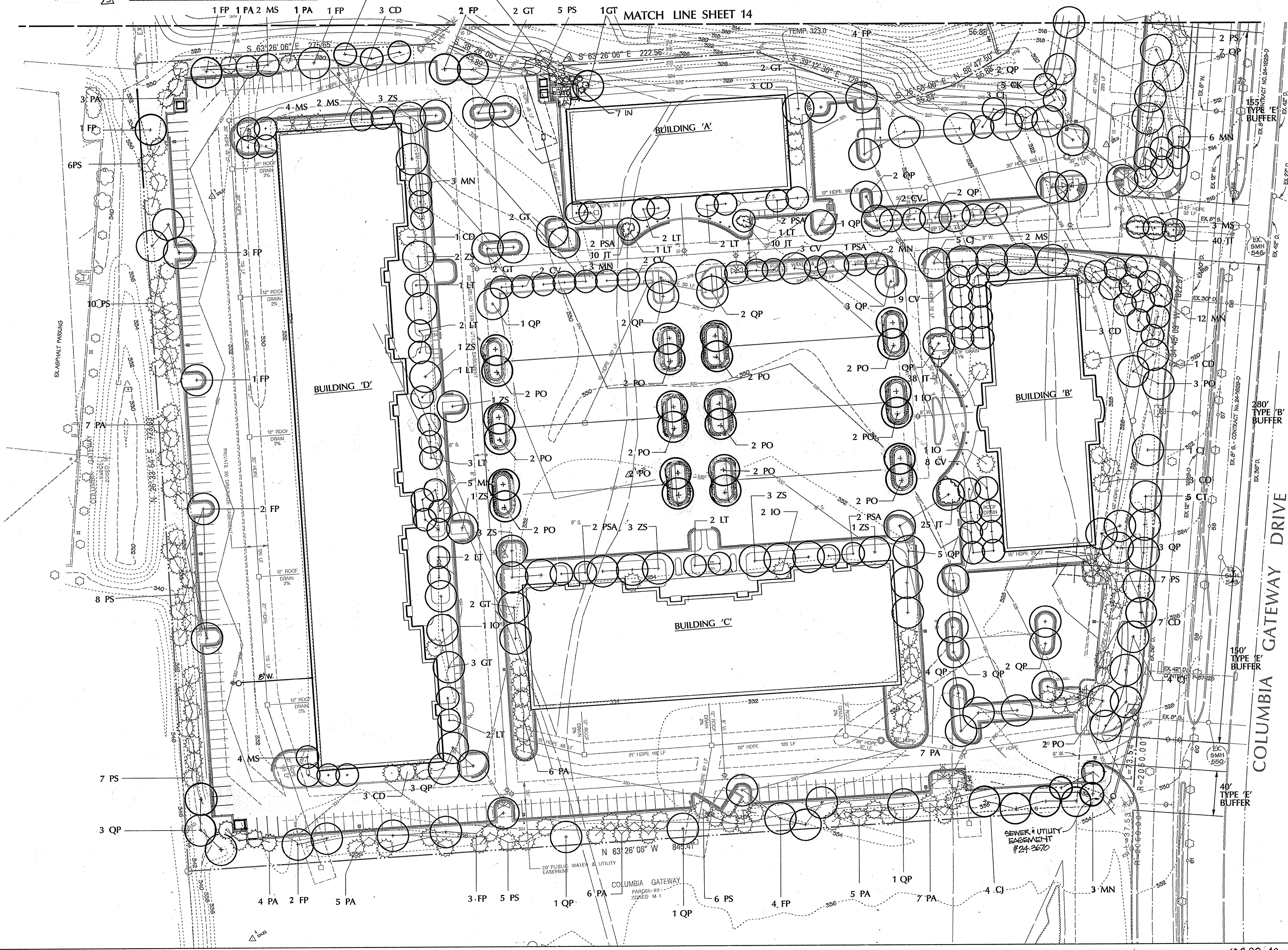


Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 23303 Expiration Date 7/2/2016

REV	DATE	DESCRIPTION	APPROVED
3	7/16/15	VERTIZON WIRELESS SCREENED COMPOUND WITH CONCRETE PAD ADDED	

PROP VERTIZON WIRELESS 25'-0" x 13'-6" COMPOUND WITH CONCRETE EQUIPMENT PAD & GENERATOR

MATCH LINE SHEET 14



DATA SOURCES:
 TOPOGRAPHY INSIDE OF PROPERTY LINE WAS DIGITIZED FROM AERIAL PHOTO PRODUCED BY AIR SURVEY CORPORATION ON 8-15-07.
 TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DMW IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.

12.29.97
Date

Landscape Architect No. 551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>John J. Cummings</i>	1/2/15
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK	DATE
<i>Candy Hamilton</i>	2/2/16
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>David R. Smith</i>	2/2/16
DIRECTOR	DATE

43098	2	ADJ. LANDSCAPE PER PKG & UTILITIES
-------	---	------------------------------------

Date No. Revision Description

Westridge Corporate Center
At Columbia Gateway

OWNER: The Howard Research and Development Corporation
10276 Little Patuxent Parkway
Columbia, Maryland 21044

DEVELOPER: AAKLLC, C/O Abrams Development Group
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21045

DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

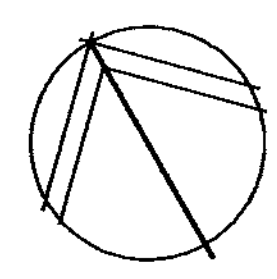
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

SUBMISSION NAME	SECTION/AREA	LOTPARCEL #
Columbia Gateway		
PLAT # OR L.P. #	TAXZONE MAP	ELECT. DISTRICT
15005	M-1	6th
WATER CODE	SEWER CODE	CENSUS TRACT
		6065.02

TITLE

LANDSCAPE PLAN

Des By: AS	Scale: 1"=40'	Proj. No. 88056.D
Drn By: AS, MSS	Date: Dec. 29, 1997	
Chk By: MM	Approved: MM	13 OF 20



DATA SOURCES:
 TOPOGRAPHY INSIDE OF PROPERTY LINE PER MASS GRADING ON WP 98-27.
 TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DMW IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.

12-21-97
Date

Landscape Architect No. 551

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

McDermott 1/29/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Cindy Hamilton 2/2/98
 CHIEF, DIVISION OF LAND DEVELOPMENT RB DATE

David Smith 2/2/98
 DIRECTOR DATE

Date	No.	Revision Description

Westridge Corporate Center
 At Columbia Gateway

OWNER: The Howard Research and Development Corporation
 10275 Little Patuxent Parkway
 Columbia, Maryland 21044

DEVELOPER: AAKLLC.CO
 Abrams Development Group
 8805 Columbia 100 Parkway, Suite 101
 Columbia, Maryland 21046

DMW
 Daft · McCune · Walker, Inc.
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

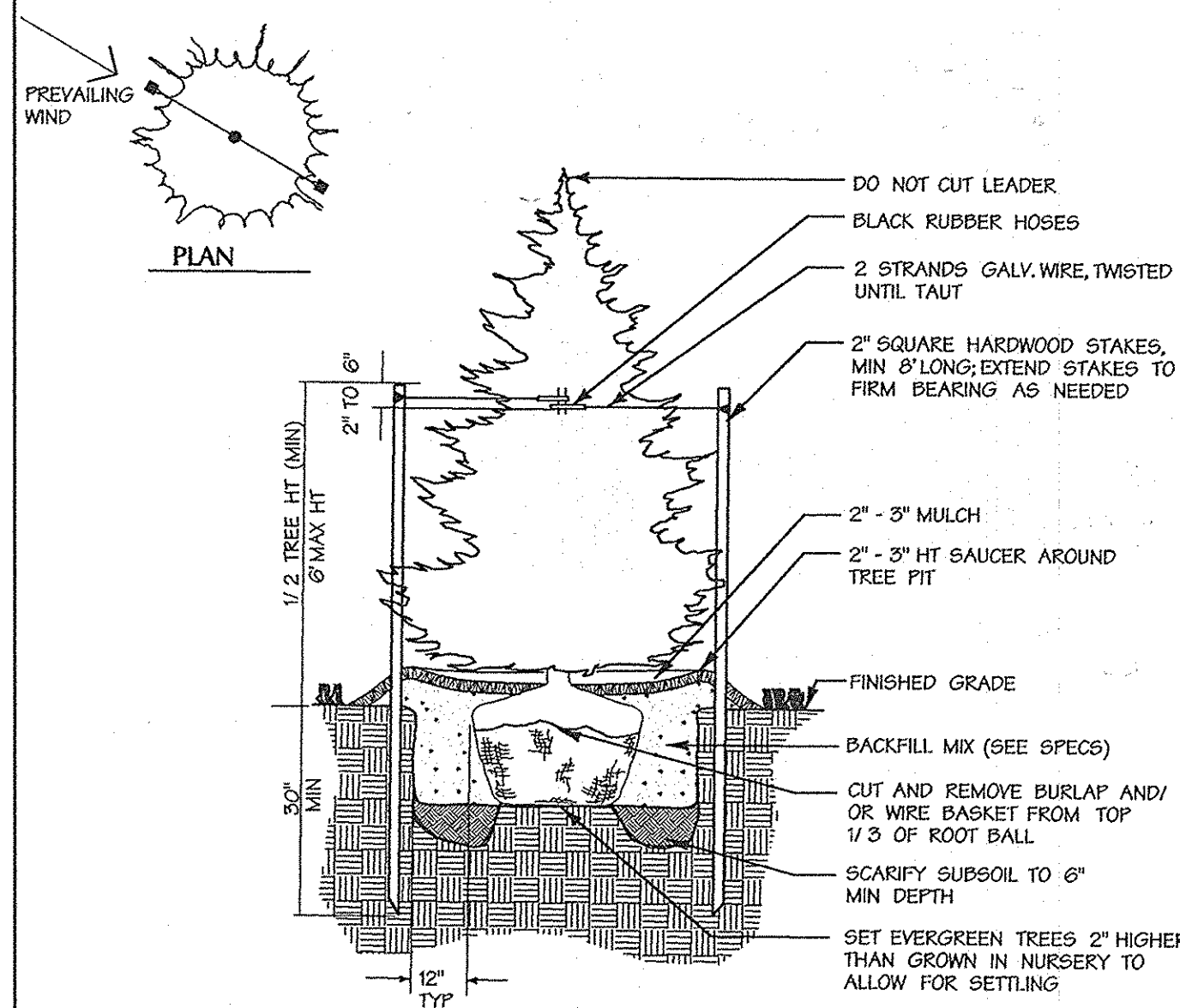
200 East Pennsylvania Avenue
 Towson, Maryland 21286
 410 296 3333
 Fax 296 4705

SUBDIVISION NAME Columbia Gateway	SECTION/AREA TAXZONE MAP 13005 M-1	LOTPARCEL # ELECT. DISTRICT 6th	CONDESS TRACT 6065.02
WATER CODE	SEWER CODE		

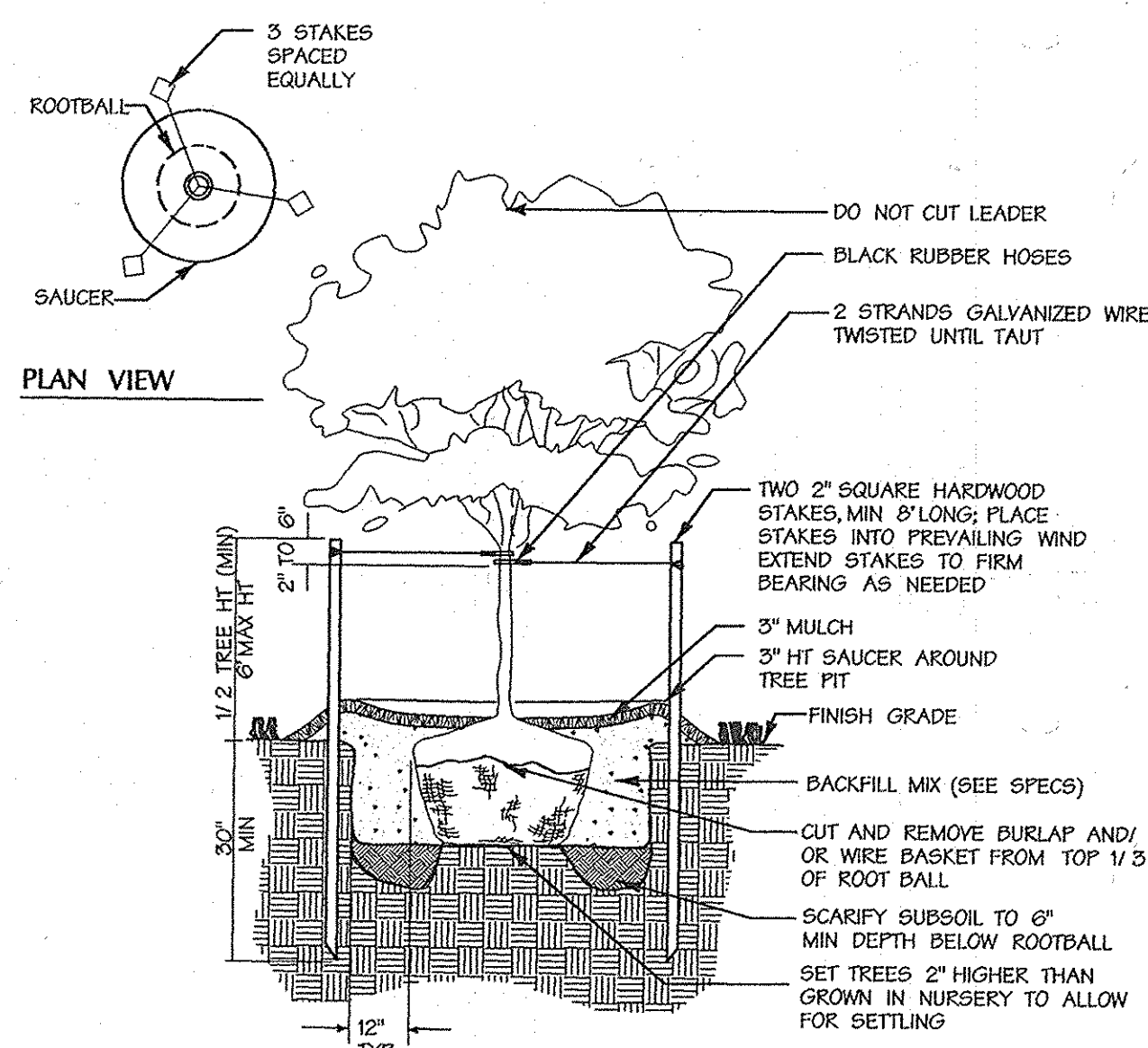
TITLE
LANDSCAPE PLAN

Des By: AS Scale: 1"=40' Proj. No. 88036.D
 Dm By: AS, MSS Date: Dec. 29, 1997
 Chk By: MM Approved: 14 OF 20

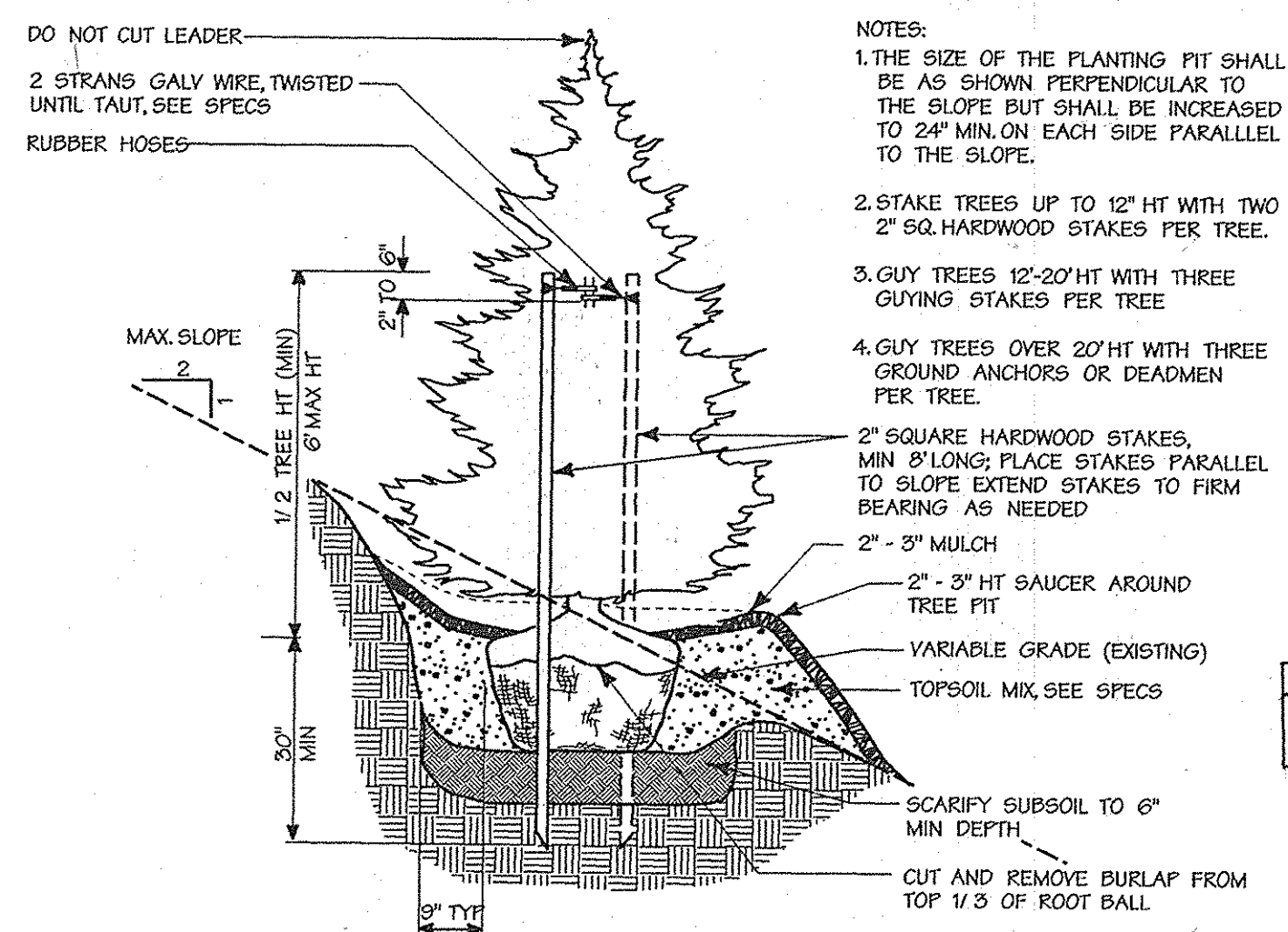
MATCH LINE SHEET 13



A Evergreen Tree Planting
Not To Scale



B Less Than 3\"/>



C Evergreen Tree Planting on Slope
Not To Scale

Landscape Notes

- The contractor shall review architectural/engineering plans to become thoroughly familiar with grading and surface utilities.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow. See Seasonal Plant List for planting times of bulbs and seasonal plants.
- The contractor shall coordinate with lighting and irrigation contractors regarding timing of installation of plant material.
- The contractor shall insure that his work does not interrupt established or projected drainage patterns.
- During planting operations, excess waste materials shall be promptly and frequently removed from the site.
- The contractor is advised of the existence of underground utilities on the site. Their exact location shall be verified in the field with the owner or general contractor prior to the commencement of any digging operations. In the event they are uncovered, the contractor shall be held responsible for all damage to utilities and such damage shall not result in any additional expenses to the owner.
- If utility lines are encountered in excavation of tree pits, other locations for trees shall be made by the contractor without additional compensation. No changes of location shall be made without approval of the landscape architect.
- Maintain positive drainage out of planting beds at a minimum 2% slope. All grades, dimensions, and existing conditions shall be verified by the contractor on site before construction begins. Any discrepancies shall be brought to the attention of the landscape architect or owner.
- Every possible safeguard shall be taken to protect building surfaces, equipment, and furnishings. The contractor shall be responsible for any damage or injury to person or property which may occur as a result of his negligence in the execution of the work.
- In the event of variation between quantities shown on the plant list and the plans, the plans shall control. The contractor is responsible for verifying all plant quantities prior to the commencement of work. Sod quantity take-offs are the responsibility of the contractor. All discrepancies shall be reported to the landscape architect for clarification prior to bidding. The contractor shall furnish plant material in sizes as specified in plant list.
- The contractor shall stake all material located on the site for review and/or adjustment by the landscape architect prior to planting. All locations are to be approved by the landscape architect before excavation.
- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regard to size, growth, size of ball and density of branch structure. Plant material shall be tagged at the source by the landscape architect unless this requirement is specifically waived.
- All plants (B&B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the landscape architect or agent in charge.
- Any material and/or work may be rejected by the landscape architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.
- No substitutions shall be made without written consent of the owner or landscape architect.
- The landscape architect or owner shall have the right, at any stage of the operations, to reject any and all work and material which, in his opinion, does not meet the requirements of these plans and specifications.
- The contractor shall be wholly responsible for stability and conditions of all trees and shrubs and shall be legally liable for any damage caused by instability of any plant materials.

Plant List

SYM	BOTANICAL NAME/COMMON NAME	SIZE	QUANTITIES	REMARKS
SHADE TREES				
QP	QUERCUS PHELLOS WILLOW OAK	2 1/2" - 3" CAL.	55	B & B
FP	FRAXINUS PENNSYLVANICA 'SUMMIT' 'SUMMIT' ASH	2 1/2" - 3" CAL.	29	B & B FULL HEAD
PO	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	2 1/2" - 3" CAL.	29	B & B FULL HEAD
GT	GLEDITSIA TRICANTHOS INERMIS 'SKYCOLE' SKYLINE HONEYLOCUST	2 1/2" - 3" CAL.	14	B & B FULL HEAD
CJ	CERCIDIPHYLLUM JAPONICUM KATSURU TREE	2 1/2" - 3" CAL.	23	B & B FULL HEAD
ZS	ZELKOVA SERATA GREEN VASE ZELKOVA	2 1/2" - 3" CAL.	18	B & B FULL HEAD
FLOWERING TREES				
CV	CRATAEGUS VIRIDIS 'WINTER KING' WINTER KING HAWTHORN	1 1/2" - 2" CAL.	26	B & B FULL HEAD
OP	CRATAEGUS PHAENOPHYLLUM WASHINGTON HAWTHORN	1 1/2" - 2" CAL.	8	B & B FULL HEAD
CK	CORNUS KOUSA 'CHINENSIS' KOUSA DOGWOOD	1 1/2" - 2" CAL.	5	B & B
PSA	PRUNUS SUBHIRTATA 'AKEBONO' AKEBONO CHERRY	1 1/2" - 2" CAL.	9	B & B FULL HEAD
MS	MALLUS SARGENTI SARGENT CRAB	1 1/2" - 2" CAL.	17	B & B FULL HEAD
MN	MALLUS 'NARAGANSETT' NARAGANSETT CRAB	1 1/2" - 2" CAL.	37	B & B FULL HEAD
LT	LIGUSTROBIA X TUSKAGEE TUSKAGEE GRAPE MYRTLE	1 1/2" - 2" CAL.	19	B & B FULL HEAD
EVERGREEN TREES				
IO	ILEX OPACA AMERICAN HOLLY	6"-8" HT.	5	B & B 1 MALE PER 9 FEMALES
PA	PRUNUS NORWAY SPRUCE	6"-8" HT.	50	B & B
PS	PRUNUS STROBUS WHITE PINE	6"-8" HT.	75	B & B NATURAL
CD	CEDRUS DEODORA INDIAN CEDAR	6"-8" HT.	25	B & B
IM	ILIC 'MELVILLE' R. STEVENS	6"-8" HT.	7	B & B 10'-D" O.C. MAX
SHRUBS				
JT	JUNIPERUS SABINA VAR. TAMARISIFOLIA TAM JUNIPER	18-24" SPD.	123	CON. 3.5" O.C.



I, the undersigned, hereby certify that these documents were prepared or reviewed by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 23305, Expiration Date: 7/17/2016

REV	DATE	DESCRIPTION	APPROVED
3	7/16/15	VERTICAL WIRELESS SCREENED CONCRETE EQUIPMENT PAD ADDED	

- All proposed trees to be installed either entirely in or entirely out of planting beds. Planting bed lines are not to be obstructed. All shrubs and ground cover areas shall be planted in continuous prepared bed and top dressed with 5-inch shredded hardwood mulch. Mulch shall have been shredded within the last six months.
- All planting beds adjacent to lawn, sod, or seeded areas shall be spade edged.
- Maintenance shall begin after each plant has been installed and shall continue until 90 days after final acceptance by the architect or owner representative. Maintenance includes mowing of turf, watering, pruning, weeding, fertilizing, mulching, replacement of sick or dead plants, and any other care necessary for the proper growth of the plant material. The contractor must be able to provide continued maintenance if requested by the owner.
- Upon completion of all landscaping, an acceptance of the work shall be held. The contractor shall notify the landscape architect or owner for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
- All trees shall be guaranteed for 12 months from the date of acceptance. All shrubs and ground covers shall be guaranteed for 12 months from the date of acceptance.
- The contractor is responsible for testing project soils. The contractor is to provide a certified soils report to the owner. The contractor shall verify that the soils on site are acceptable for the proper growth of the proposed plant material. Should the contractor find poor soil conditions, the contractor shall be required to provide soil amendments as necessary. These amendments shall include, but not be limited to, fertilizers, lime, and topsoil. Proper planting soils must be verified prior to planting of materials.
- PLANTING MIX:**
 - Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.
 - Thoroughly mixed in the following proportions for tree and shrub planting mix:
 - 5 cy existing soil
 - 2 cy sharp sand
 - 3 cy wood residuals
 - 4.5 lbs treble superphosphate
 - 5 lbs dolomite limestone (eliminate for acid loving plants)
 - For bed planting, shrubs and groundcover spaces 24 inches or closer, incorporate the following ingredients per 20 sf and incorporate into top 8 inches of existing soils by rototilling or similar method of incorporation:
 - 2 cy sharp sand
 - 3 cy organic material
 - 4.5 lbs treble superphosphate
 - 5 lbs dolomite limestone (eliminate for acid loving plants)
- The contractor shall dispose of stumps and major roots of all plants to be removed. Any depressions caused by removal operations shall be refilled with fertile, friable soil placed and compacted so as to reestablish proper grade for new planting and/or lawn areas.
- The contractor shall insure adequate vertical drainage in all plant beds and planters.
- All disturbed areas on the site not planted with shrubs or ground cover shall be fine graded and seeded or sodded as noted on landscape plan.
- All sod shall be obtained from areas having growing conditions familiar to areas to be covered. Areas to be sodded shall be rated of stones and debris. Debris and stones over 1 inch in diameter shall be removed from the site. All damaged sod will be rejected. All sod must be placed with staggered joints, tightly butted with no inequalities in grade. Place all sod in rows at right angles to slopes (where applicable).

**SCHEDULE A *
PERIMETER LANDSCAPE EDGE**

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	B (Front-Non Res.) E (Parking)	N/A
Linear Feet of Roadway Frontage / Perimeter	280 LF (Front) 530 LF (Parking)	N/A
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	NO	N/A
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	Yes, berm in south corner for 55 LF parking	N/A
Number of Plants Required Shade Trees Evergreen Trees Shrubs	32 shade trees 8 evergreen trees 120 shrubs	280/50=6 Shade trees 280/40=8 Evergreen 530/4=133 Shade trees 530/4=130 Shrubs
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	30 8 0	N/A

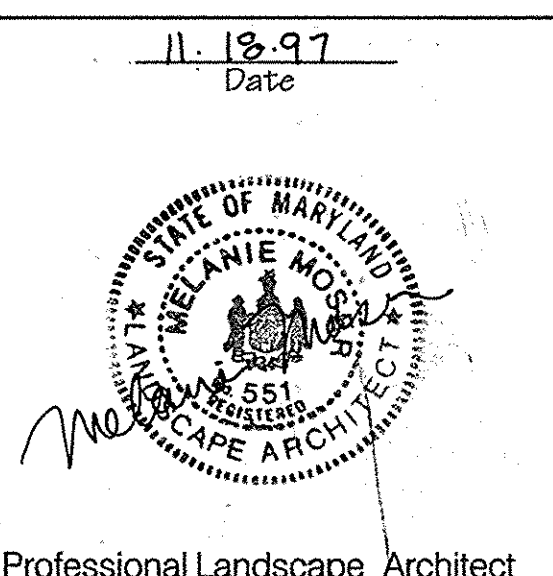
* Substituted 13 Shade Trees in Place of 130 Shrubs

**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

Number of Parking Spaces	680
Number of Trees Required	@ 1/20 sp. = 35
Number of Trees Provided Shade Trees Other Trees (2:1 substitution)	35
Number of Islands Required @ 1/20 sp.	35
Number of Islands Provided	64

NOTE:
This project will be constructed under alternate compliance - HRD standards. The Landscape calculations shown have been prepared in accordance with the provisions in section 16.124 of the Howard County Landscape Manual for bonding purposes only.

DATA SOURCES:
TOPOGRAPHY INSIDE OF PROPERTY LINE PER MASS GRADING ON WP 88-27.
TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DAW IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] 1/28/98 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK
 [Signature] 2/2/98 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT RB
 [Signature] 2/2/98 DATE
 DIRECTOR

Westridge Corporate Center
At Columbia Gateway

OWNER: The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044

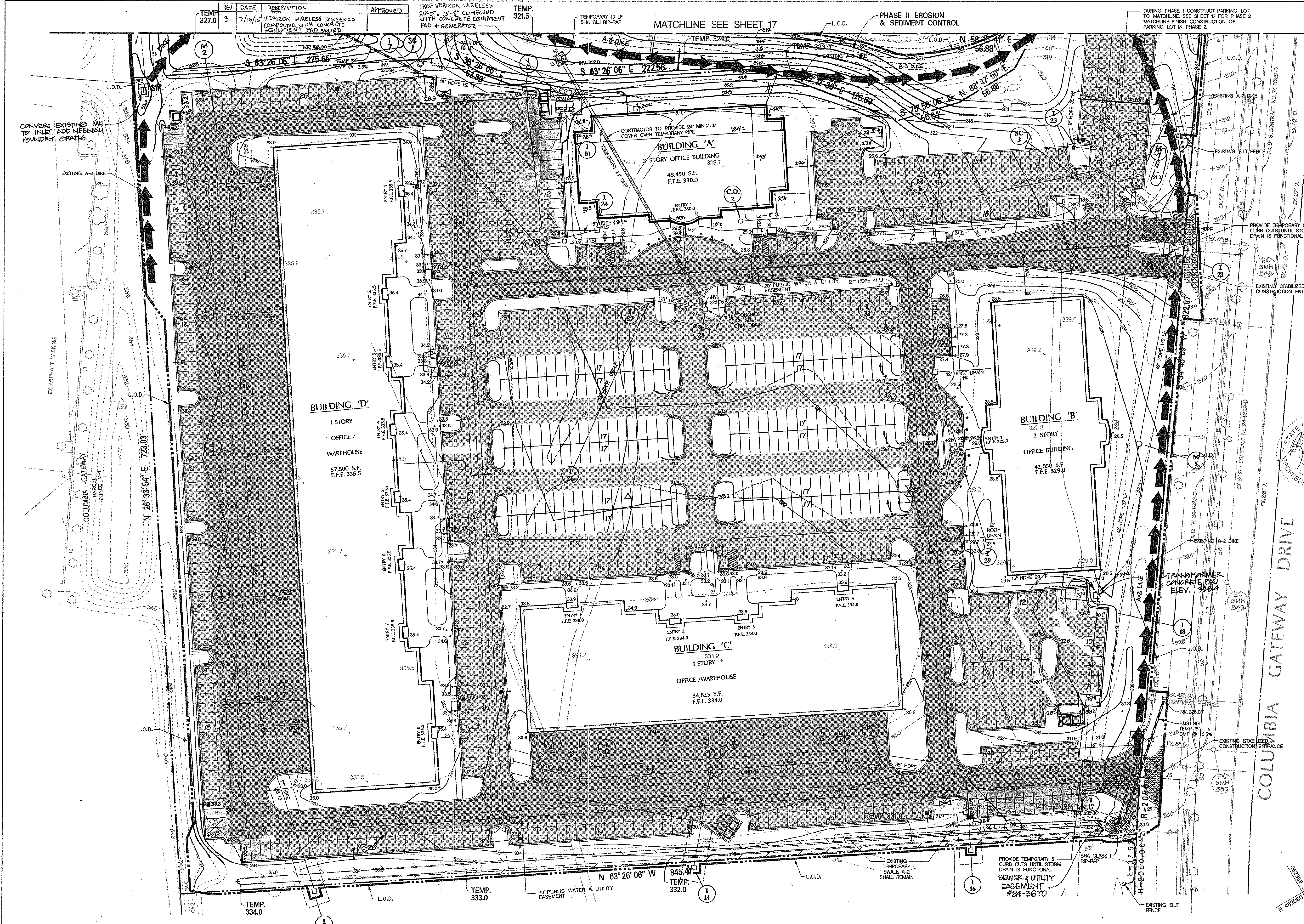
DEVELOPER: AAKLLC, CO
Abrams Development Group
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21045

DMW
Daft McCune Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3833
Fax 296 4705

SUBDIVISION NAME: Columbia Gateway
SECTION AREA: 5-23
PARCEL OR LOT BLOCK OR ZONE: 12944 M-1
INVESTING MAP: 43
ELECT. DISTRICT: 6th
CENSUS TRACT: 6065.02
WATER CODE: SEWER CODE:

TITLE: **LANDSCAPE NOTES & DETAILS**

Des By: MM, AS Scale: 1"=40' Proj. No. 88036.D
 Drn By: AS, MGS Date: Nov. 18, 1997
 Chk By: MM Approved: MM 15 OF 20



REV	DATE	DESCRIPTION	APPROVED
3	7/16/15	VERIZON WIRELESS SCREENED COMPOUND WITH CONCRETE EQUIPMENT PAD ADDED	[Signature]

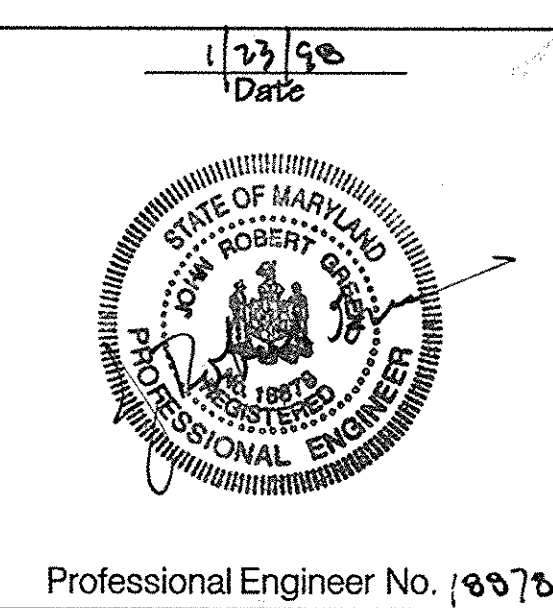
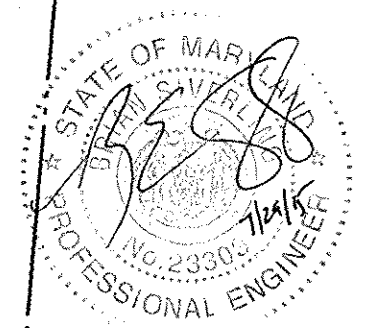
LEGEND

- 210 --- EXISTING CONTOUR
- 210 --- PROPOSED REVERSE SLOPE CURB & GUTTER
- 4" ROCP CL.V. 85 LF --- PROPOSED CURB & GUTTER
- 4" ROCP CL.V. 85 LF --- PROPOSED STORM DRAIN
- 13 --- PROPOSED PARKING SPACE COUNT
- 13 --- LIMIT OF DISTURBANCE
- SF --- SUPER SILT FENCE
- 18.8 --- SPOT ELEVATION
- [Symbol] --- EXISTING EARTH DIKE
- [Symbol] --- EXISTING STABILIZED CONSTRUCTION ENTRANCE
- SF --- EXISTING SILT FENCE
- [Symbol] --- TEMPORARY SWALE
- [Symbol] --- PHASE ONE TEMPORARY GRADING

NOTE:
EXISTING SEDIMENT & EROSION CONTROL MEASURES TAKEN FROM WP 98-27.

Professional Engineer No. 23243
Date: 7/1/15

DATA SOURCES:
TOPOGRAPHY INSIDE OF PROPERTY LINE PER MASS GRADING ON WP 98-27.
TOPOGRAPHY OUTSIDE PROPERTY LINE WAS SURVEYED BY DMW IN AUGUST OF 1997. THE COURSES AND COORDINATES SHOWN ARE BASED UPON THE MARYLAND STATE COORDINATE SYSTEM.



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature]	1/29/98
CHIEF DEVELOPMENT ENGINEERING DIVISION MK	DATE
[Signature]	2/2/98
CHIEF DIVISION OF LAND DEVELOPMENT	DATE
[Signature]	2/2/98
DIRECTOR	DATE

Date	No.	Revision Description
4-20-98	2	REV. PKG & UTILITIES
9-30-98	3	REVISED BUILD 'A', GRADING, AND SPOT ELEVATIONS

Westridge Corporate Center
At Columbia Gateway

OWNER: The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044

DEVELOPER: AAK, LLC, C/O Akrans Development Group
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21044

DMW
Daft, McCune, Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

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

[Signature]
JAMES ABRAMS
1/14/98

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

[Signature]
J. Roberts
1/23/98

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

[Signature]
1/23/98

[Signature]
1/23/98

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

SECTION NAME	Columbia Gateway	DATE	5-23
PLAT # OR L.P. BLOCK #	13005	TAX/ZONE MAP	45
WATER CODE	M-1	ELECT. DISTRICT	6th
		SEWER CODE	6066.02

TITLE
EROSION & SEDIMENT CONTROL PLAN 1

Des By: MM, AS Scale: 1"=40' Proj. No. 88036.D
 Dm By: AS, MSB Date: Jan. 12, 1998
 Chk By: MM, MK Approved: MM 16 OF 20

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENEED.

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

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS./1000 SO.F.T.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SO.F.T.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SO.F.T.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATIONS USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SO.F.T.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SO.F.T.) FOR ANCHORING.

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

TEMPORARY SEEDING NOTES

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

SEEDBED PREPARATION - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENEED.

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

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SO.F.T.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SO.F.T.). 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.

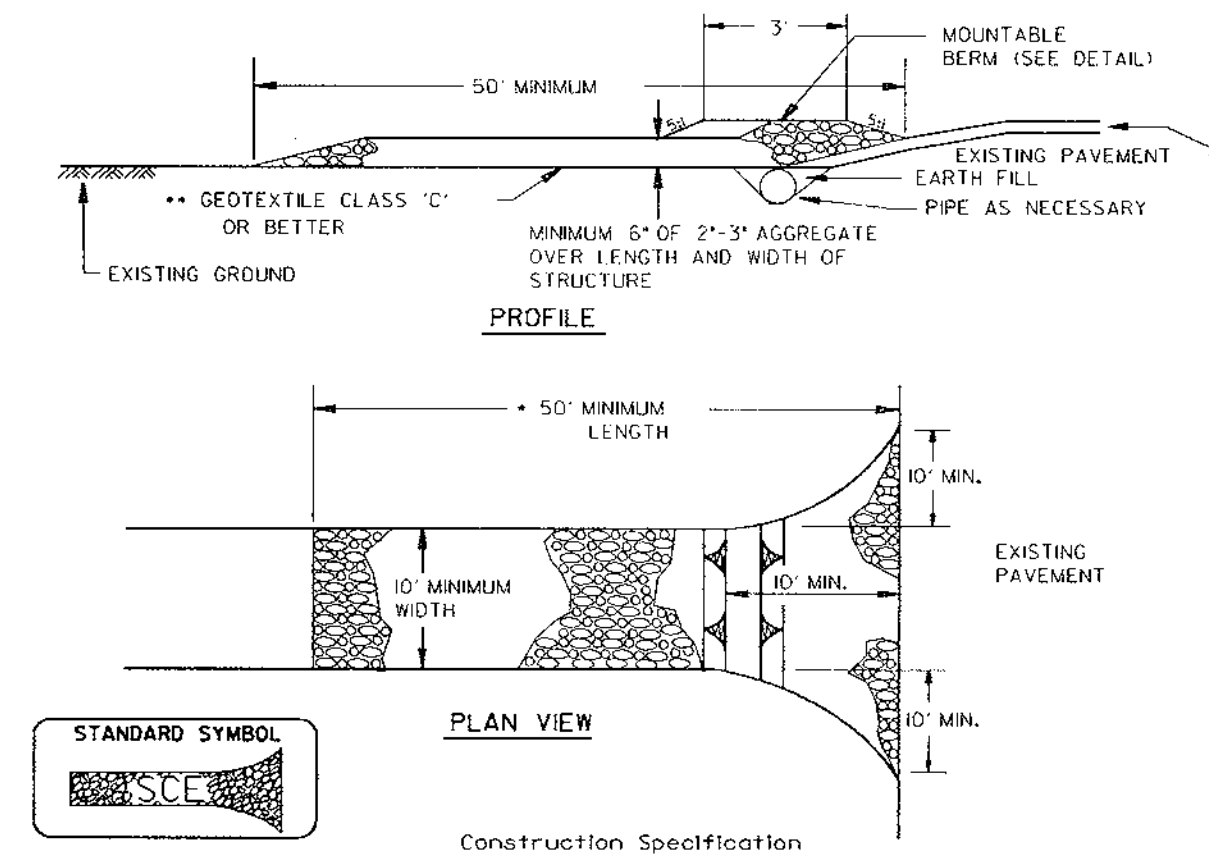
MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SO.F.T.) OF UNROTTED WHEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL/1000 SO.F.T.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL/1000 SO.F.T.) FOR ANCHORING.

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

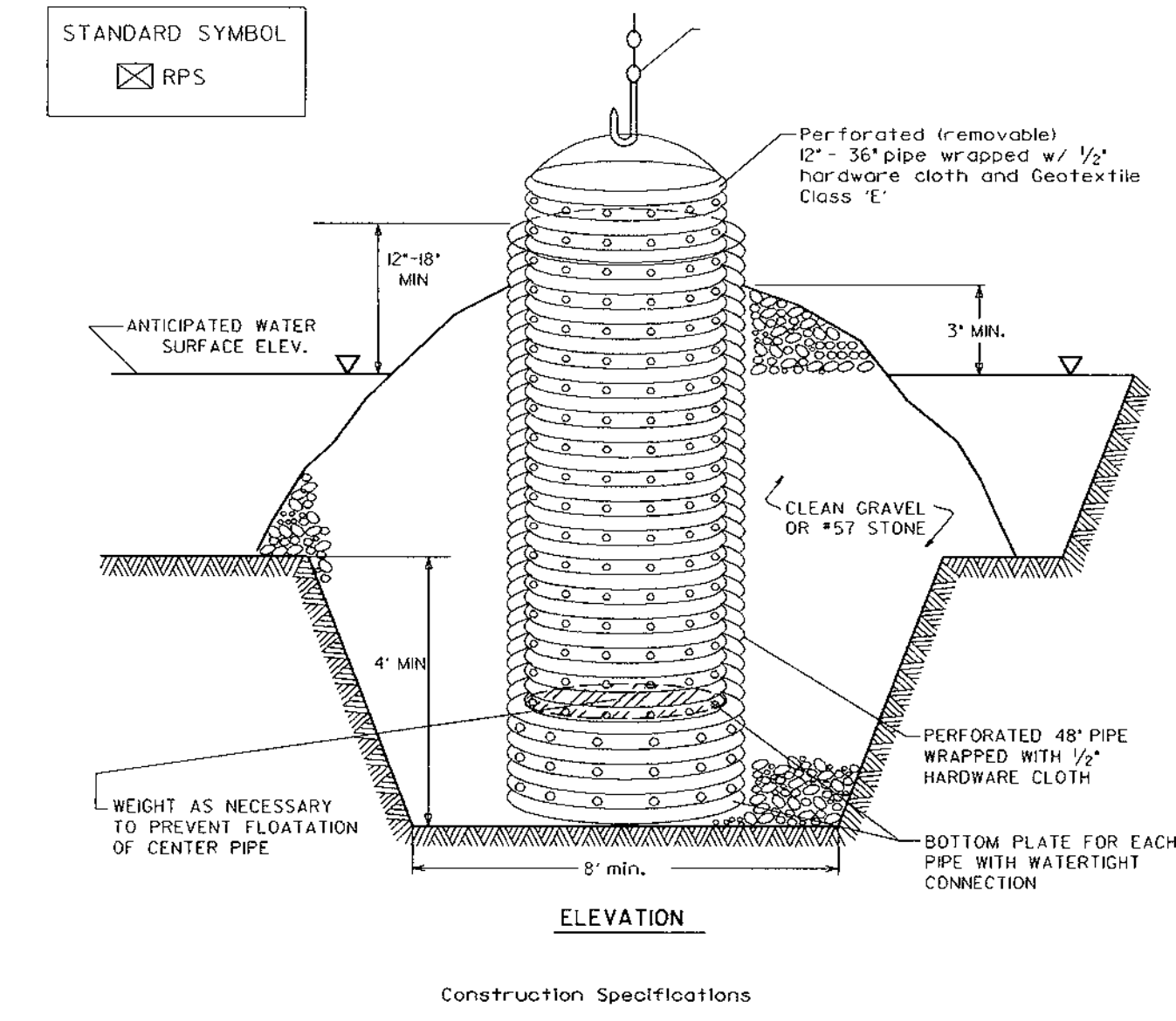
PERMANENT SEEDING NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (192-2437).
- 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 REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1
 - FOURTEEN 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING, AND MULCHING (SECTION C). 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	15.0 ACRES
AREA DISTURBED	16.17 ACRES
AREA TO BE ROOFED OR PAVED	10.1 ACRES
AREA TO BE VEGETATIVELY STABILIZED	6.07 ACRES
TOTAL CUT	15,555 CUBIC YARDS
TOTAL FILL	15,555 CUBIC YARDS
OFF-SITE WASTE/BORROW AREA LOCATION	WASTE - N/A
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS 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.



- Construction Specifications
- Length - minimum of 50' (+30' for single residence lot).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - Geotextile fabric Class C (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 entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable 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 entire length of the stabilized construction entrance.



- Construction Specifications
- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
 - After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
 - The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" slots, or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class E.
 - The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

SEDIMENT CONTROL GENERAL NOTES

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

F - 17 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

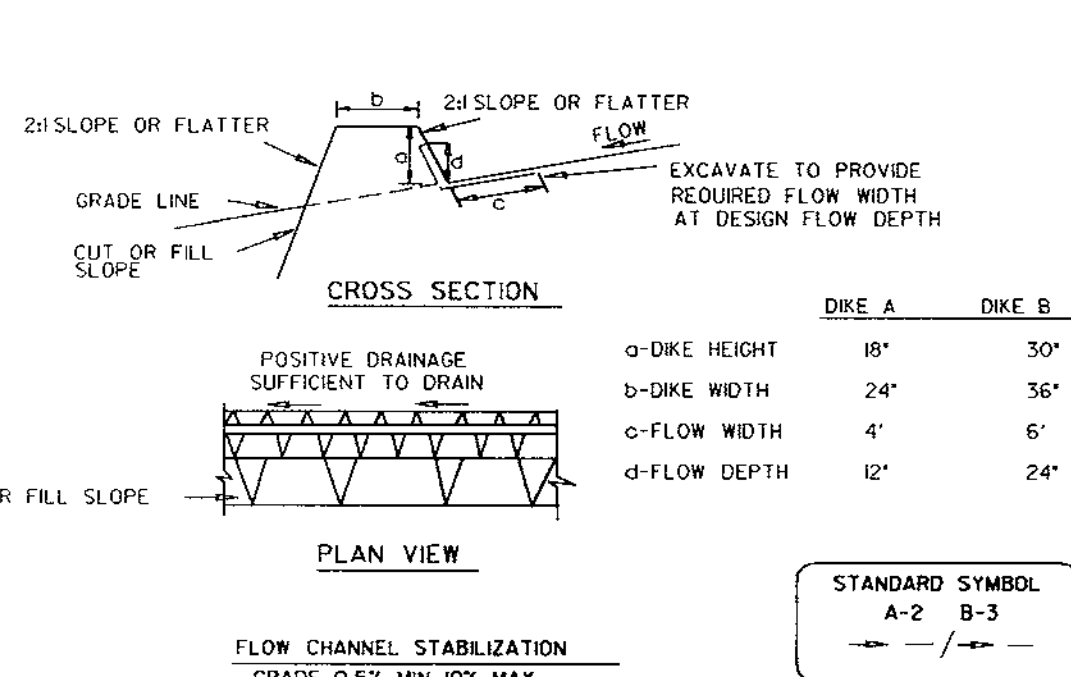
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

D - 12 - 6

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

REMOVABLE PUMPING STATION

NOT TO SCALE



- Construction Specifications
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
 - The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fill shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
 - Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

A - 1 - 6

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

EARTH DIKE

NOT TO SCALE

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

A - 2 - 4

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

TEMPORARY SWALE

NOT TO SCALE

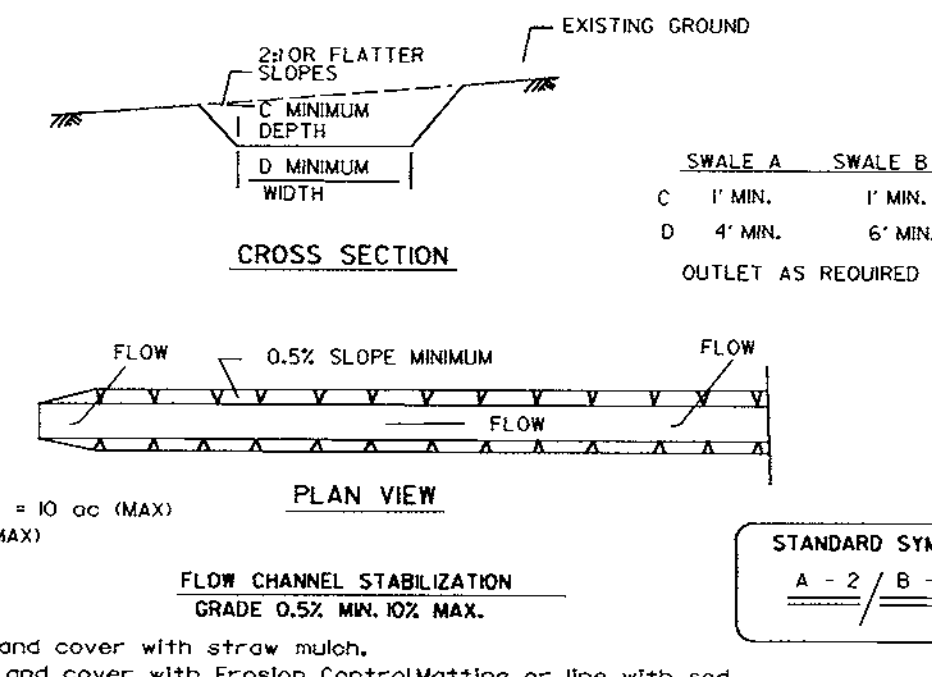
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

F - 17 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



- Construction Specifications
- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control Matting or line with sod.
 - 4\"/>
- Construction Specifications
- All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
 - The swale shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fill, if necessary, shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.
 - Inspection and maintenance must be provided periodically and after each rain event.

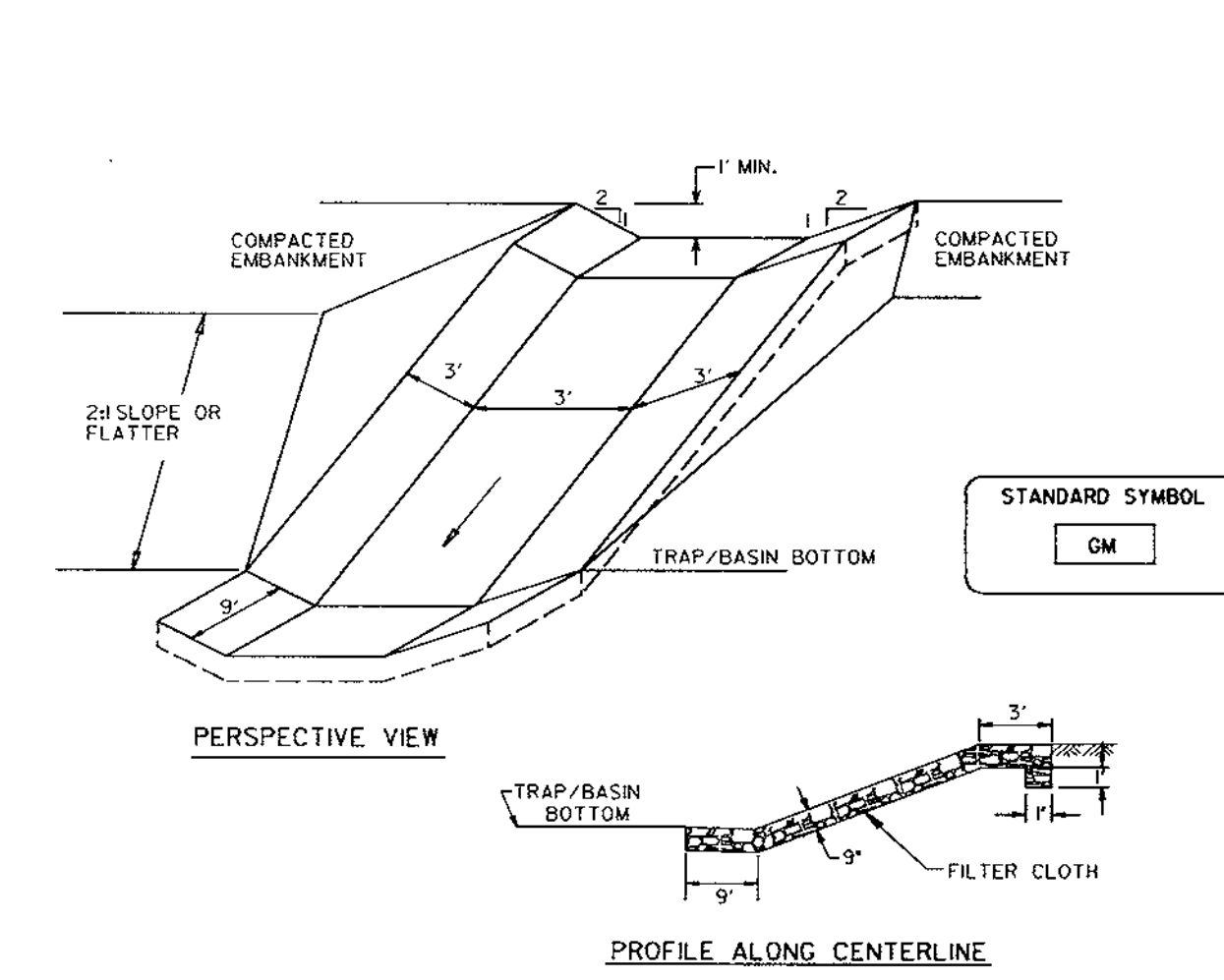
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

B - 7 - 2

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

GABION INFLOW PROTECTION

NOT TO SCALE



- Construction Specifications
- Gabion inflow protection shall be constructed of 9' x 3' x 3' gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
 - Geotextile Class C shall be installed under all gabion baskets.
 - The stone used to fill the gabion baskets shall be 4\"/>

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

B - 7 - 2

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

GABION INFLOW PROTECTION

NOT TO SCALE

1/23/98
Date

Professional Engineer No. 18178

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John V. ... 1/21/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Cindy ... 2/6/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE RB

Joseph ... 2/2/98
DIRECTOR DATE

Date	No.	Revision	Description

Westridge Corporate Center
At Columbia Gateway

OWNER: The Howard Research and Development Corporation
12272 Little Patuxent Parkway
Columbia, Maryland 21044

DEVELOPER: AK, L.L.C. C/O Abrams Development Group
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21045

DMW
Daft - McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals
200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax: 296 4705

SUBDIVISION NAME: Columbia Gateway
PLAT OR L.P. BOOK & PAGE: 12344 43
WATER CODE: M-1
SEWER CODE: 43
SECTION/PARCEL: 6th
LOT/PARCEL #: 5-23
GENESIS TRACT: 6065.02

EROSION & SEDIMENT CONTROL DETAILS

Des By: MM, AS Scale: As Shown Proj. No. 88036.D
Dm By: AS, MGS Date: Nov. 18, 1997
Chk By: MM, MK Approved: MM 18 OF 20

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

James Abrams 11/16/97
SIGNATURE OF DEVELOPER DATE
PRINT NAME BELOW SIGNATURE

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

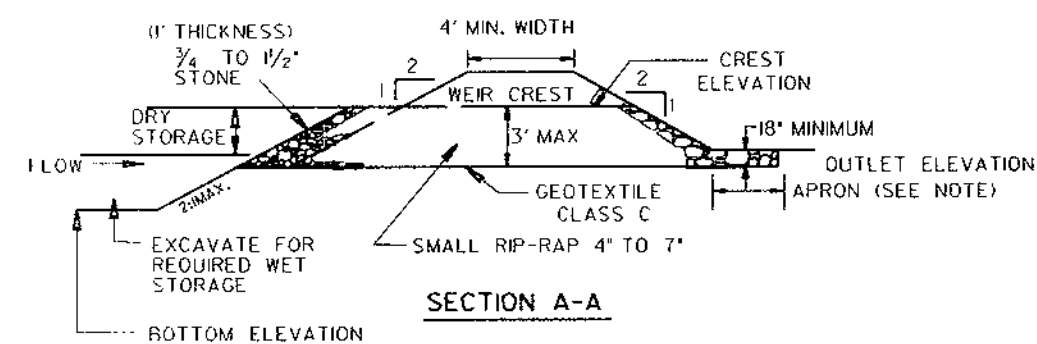
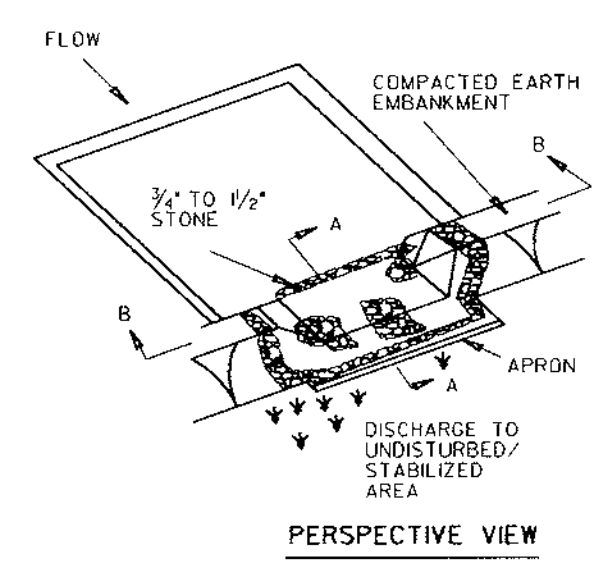
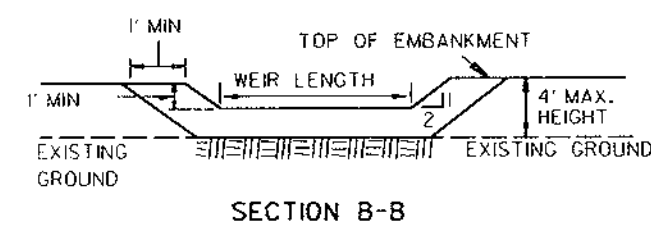
J. Robert Gasson 1/23/98
SIGNATURE OF ENGINEER DATE
PRINT NAME BELOW SIGNATURE

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

Cheryl ... 2/2/98
U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE

Keith ... 2/2/98
HOWARD S.C.D. DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.



NOTE: 5' MIN LENGTH UP TO 5 ACRES, OVER 5 ACRES USE 10' MIN

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

C - 9 - 16

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

STONE / RIP-RAP OUTLET SEDIMENT TRAP - ST IV

Construction Specifications

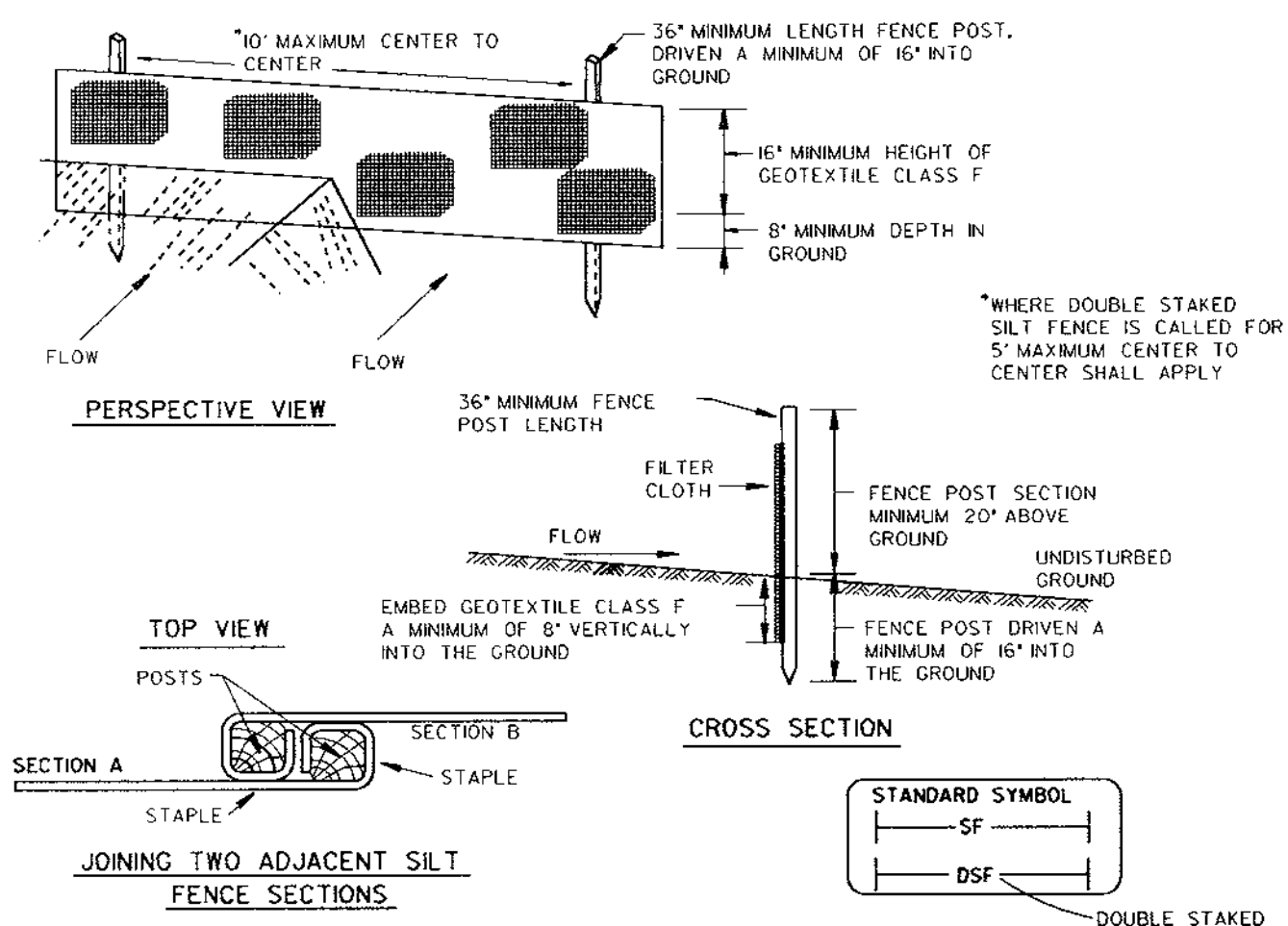
- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be 4', measured at centerline of embankment.
- All cut and fill slopes shall be 2:1 or flatter.
- Elevation of the top of any dike directing water into trap must equal or exceed the height of trap embankment.
- Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 9).
- Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6" into existing ground at entrance of outlet channel.
- 4" - 7" stone shall be used to construct the weir and 4" - 12" or Class I rip-rap shall be used to construct the outlet channel.
- Outlet - An outlet shall include a means of conveying the discharge in an erosion free manner to an existing stable channel. Protection against scour at the discharge point shall be provided as necessary.
- Outlet channel must have positive drainage from the trap.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 of the wet storage depth of the trap (300 c/f/acre). Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- The structure shall be inspected periodically after each rain and repaired as needed.
- Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
- The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

C - 9 - 16A

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

STONE / RIP-RAP OUTLET SEDIMENT TRAP - ST IV



- Construction Specifications
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1/2" x 1/2" square (minimum) cut, or 1 1/2" diameter minimum round and shall be of sound quality hardwood. Steel posts will be standard I or U section weighting not less than 100 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 F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft ² /minute (max.)	Test: MSTM 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
 - 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 reached 50% of the fabric height.

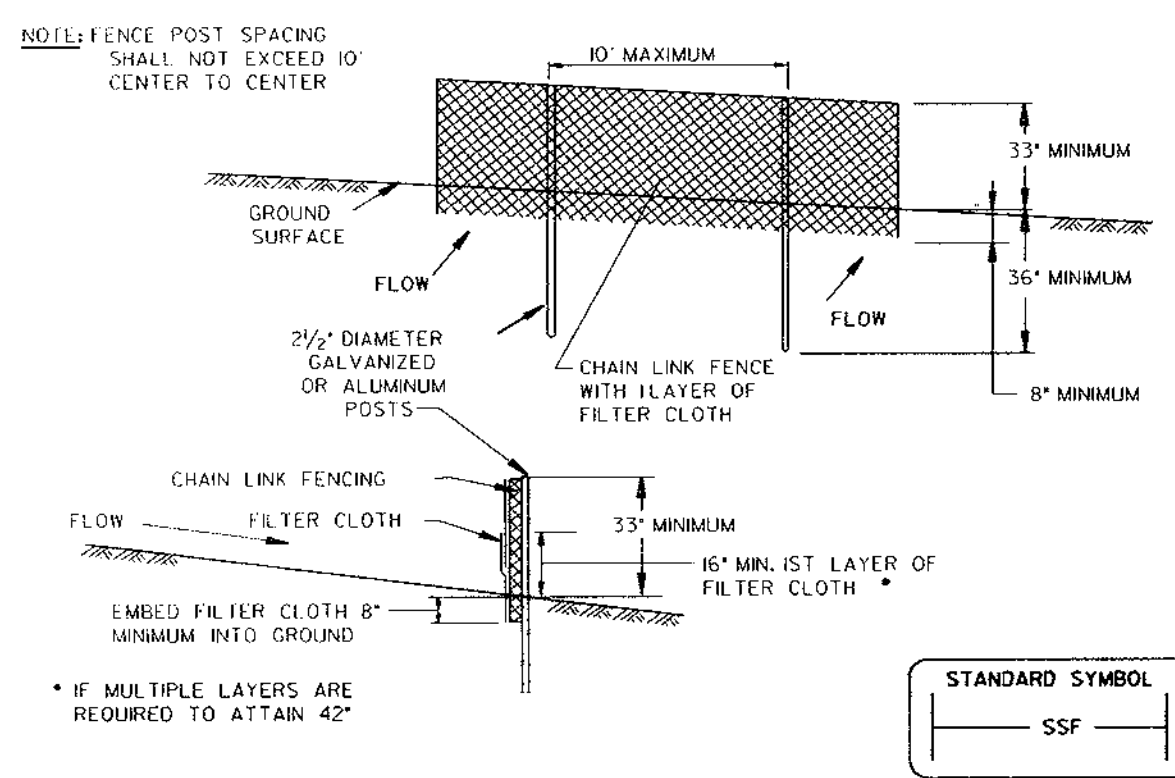
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

E - 15 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

SILT FENCE

NOT TO SCALE



Construction Specifications

- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- The posts do not need to be set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.
- 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 8" 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 buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.

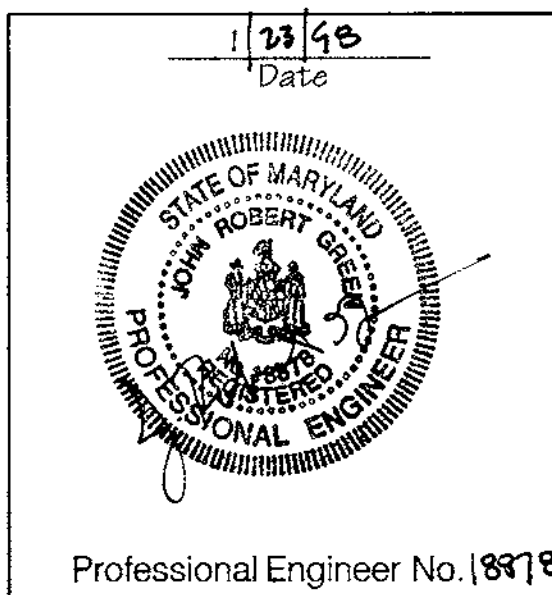
U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

H - 26 - 3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

SUPER SILT FENCE

NOT TO SCALE



APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

John Robert Green 1/23/98
DATE

Condy Hewitt 2/2/98
DATE

James Adams 2/2/98
DATE

Date No. Revision Description

Westridge Corporate Center
At Columbia Gateway

OWNER: The Howard Research and Development Corporation
10275 Little Patuxent Parkway
Columbia, Maryland 21044

DEVELOPER: AKLL LLC
Abrams Development Group
8805 Columbia 100 Parkway, Suite 101
Columbia, Maryland 21046

DMW
Daft - McCune - Walker, Inc.
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue
Towson, Maryland 21286
410 296 3333
Fax 296 4705

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

James Adams 1/18/98
DATE

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

J. Robert Green 1/23/98
DATE

J. Robert Green
SIGNATURE OF ENGINEER
PRINT NAME BELOW SIGNATURE

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

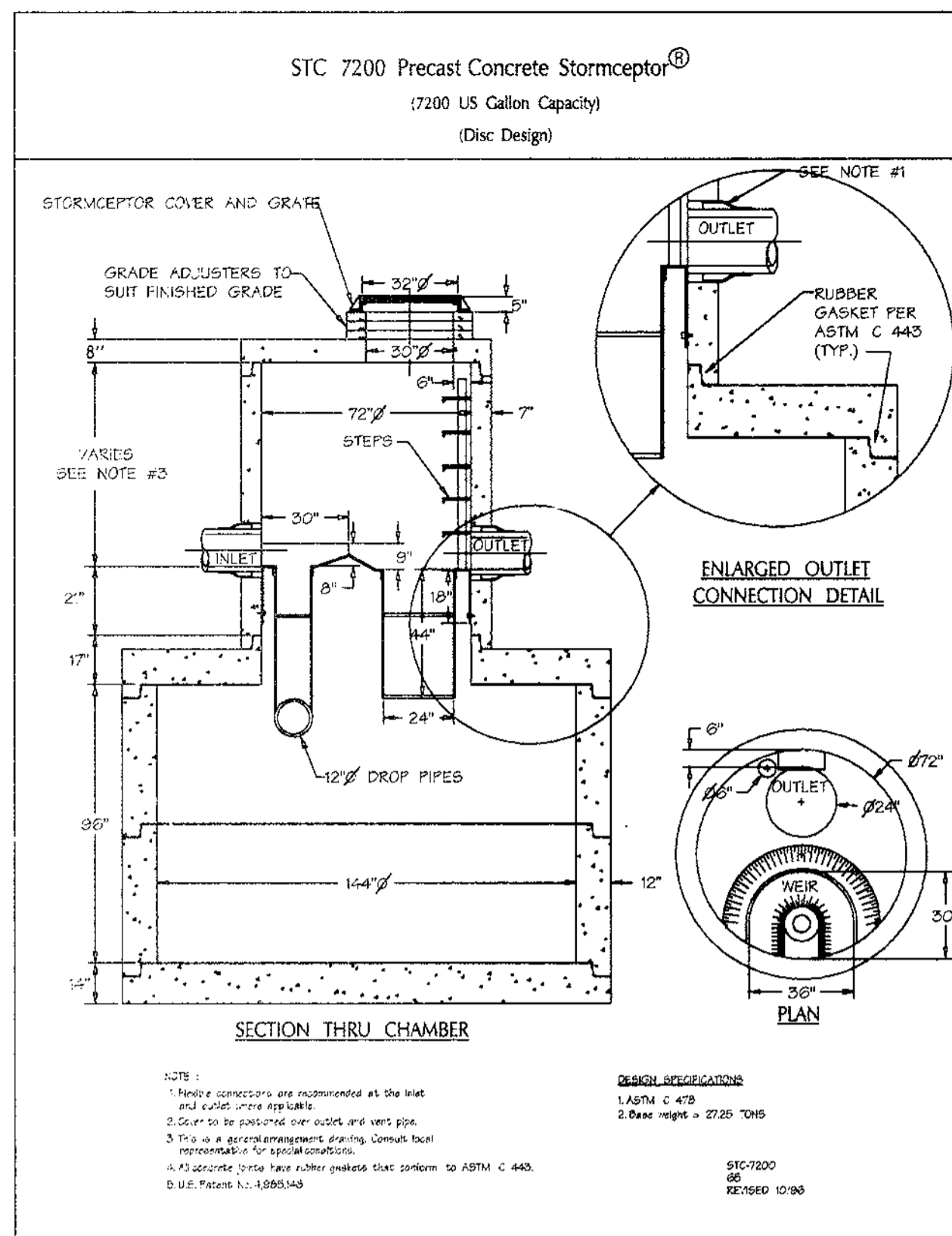
Carol Simms / es 2/2/98
DATE

U.S. NATIONAL RESOURCE CONSERVATION SERVICE

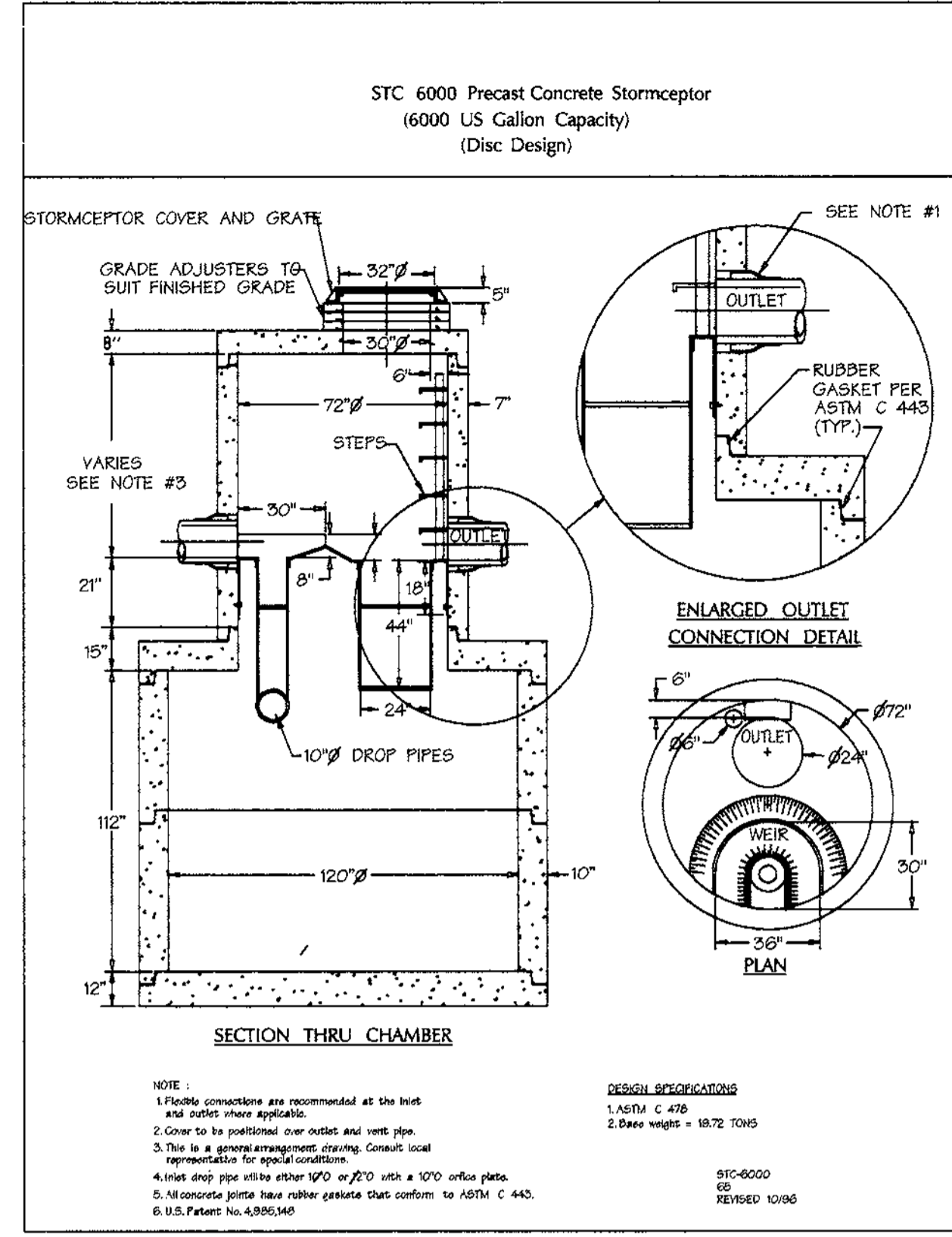
James Adams 2/2/98
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

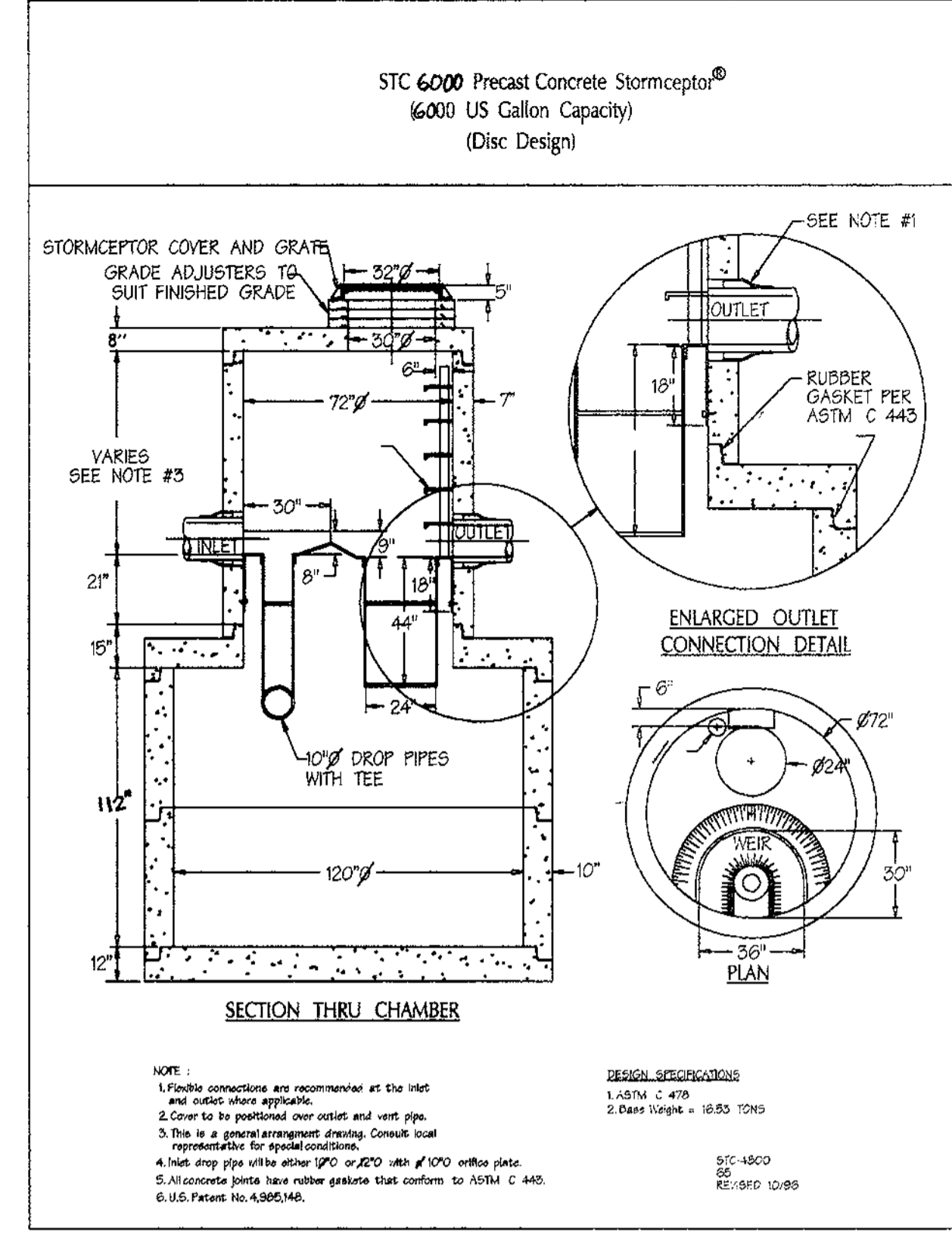
SUBPROJECT NAME Columbia Gateway	SECTION AREA M-1	LOTFRAGEL # S-23
PLAN # OR L.P. 22944	BLOCK # 43	SECTION MAP 6th
WATER CODE	SEWER CODE	GENUS TRACT 6085.02
TITLE EROSION & SEDIMENT CONTROL DETAILS		
Des By: MM, AS	Scale: As Shown	Proj. No. 88036.D
Drn By: AS, MS	Date: Nov. 18, 1997	
Chk By: MM, MK	Approved: MM	19 OF 20



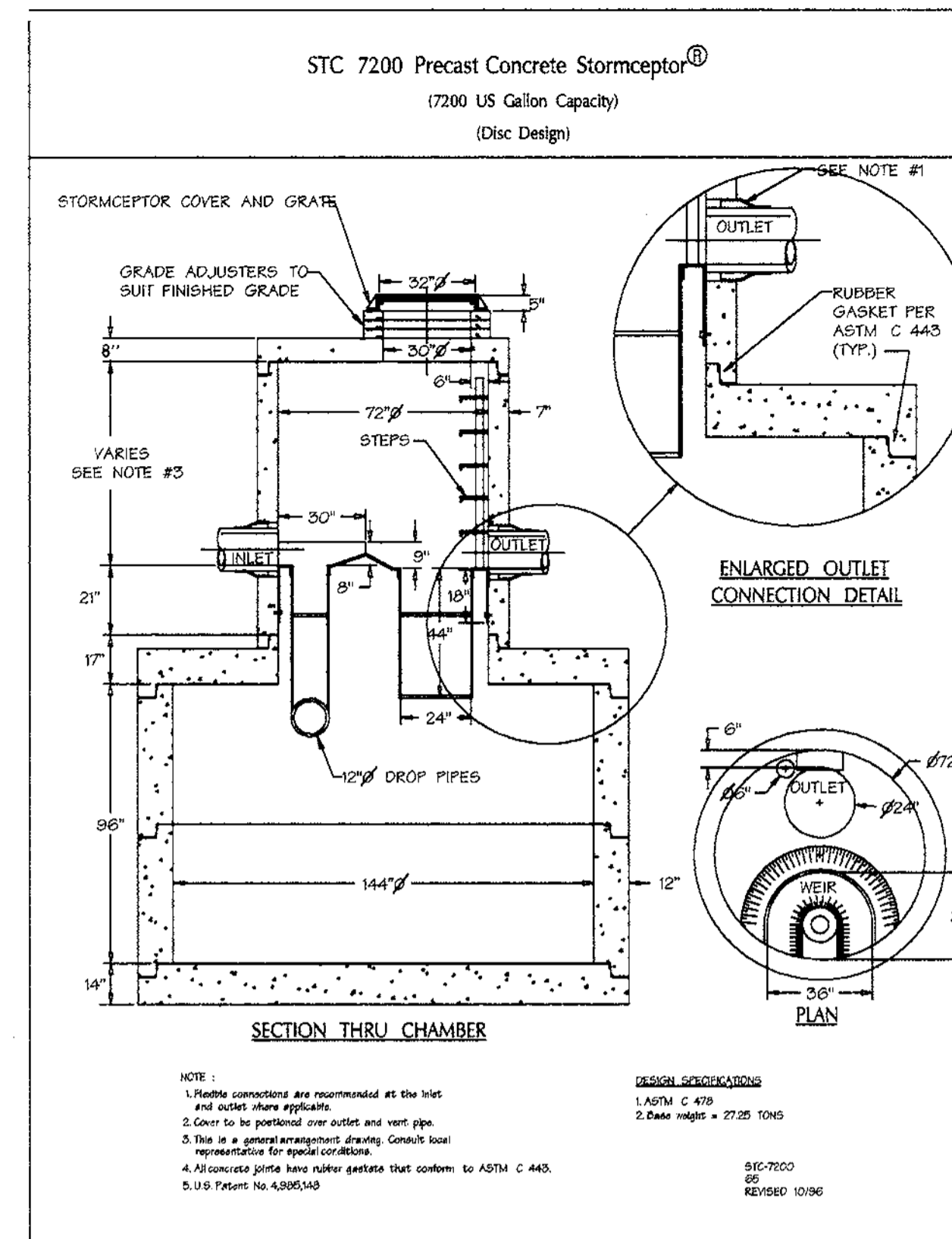
DETAIL SC-1



DETAIL SC-2



DETAIL SC-3



DETAIL SC-4

- OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE
- Stormceptor water quality structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the Stormceptor unit inspected yearly or as required by HOWARD County, utilizing the Stormceptor Inspection/Monitoring Form. Inspections can be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When sediment depths exceed the specified level (Table 9 of Technical Manual) then cleaning of the unit is required.
 - Stormceptor water quality structures must be checked and cleaned immediately after petroleum spills, contact appropriate regulatory agencies.
 - Maintenance of Stormceptor units should be done by a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in unit. The proper cleaning and disposal of the removed materials and liquid must be followed.
 - Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the Stormceptor will be repaired as needed.
 - Owner shall retain and make Stormceptor Inspection/Monitoring Forms available to HOWARD County officials upon their request.

Precast Concrete Order Request Form

Contractor Information
Name: Kinsley Construction
Address: 2700 Water Street
City: York
State: Pennsylvania
Zip Code: 17403-9306
Phone: 717-741-3841
Fax: 717-741-5292

Owner Information
Name: AAK, L.L.C.
Phone: 410-720-0400

Project Name: WESTRIDGE CORPORATE CENTER

PLEASE FILL OUT COMPLETELY AND FAX TO: GSR Hydro Conduit
ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)971-1900
FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE (703)971-1900

Precast Concrete Order Request Form

Contractor Information
Name: Kinsley Construction
Address: 2700 Water Street
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ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)971-1900
FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE (703)971-1900

STRUCTURE SCHEDULE

NO.	TYPE	WIDTH	TOP ELEV.	INV. OUT	STD. DETAIL	LOCATION
I-1	K	3'-0"	335.50	331.50	4.12	OFFSITE
I-2	DBL 'S'	2'-7 1/2"	330.30	325.50	4.23	See Plan
I-3	"	2'-7 1/2"	330.30	324.50	"	"
I-4	"	2'-7 1/2"	330.30	323.71	"	"
I-5	"	2'-7 1/2"	330.30	322.80	"	"
I-6	"	2'-7 1/2"	330.30	322.03	"	"
M-2	5'-0" PRECAST MH	5'-0"	331.80	321.70	G 5.13	"
I-7	A-5	4'-0"	328.80	319.18	4.01	"
I-8	A-10	2'-6"	328.50	321.50	4.02	"
I-11	A-5	2'-6"	331.80	327.00	4.01	SEE PLAN
I-12	DBL 'S'	2'-7 1/2"	328.80	324.15	4.23	"
I-13	"	2'-7 1/2"	328.80	322.82	"	"
I-14	K	3'-0"	333.50	327.00	4.12	OFFSITE
I-15	DBL 'S'	2'-7 1/2"	328.80	321.72	4.23	See Plan
I-16	K	3'-0"	324.50	322.97	4.12	OFFSITE
M-3	5'-0" PRECAST MH	5'-0"	332.00	325.50	G 5.13	See Plan
I-17	A-5	4'-0"	330.70	319.82	4.01	"
I-18	A-10	2'-6"	329.00	319.06	4.02	"

STRUCTURE SCHEDULE

NO.	TYPE	WIDTH	TOP ELEV.	INV. OUT	STD. DETAIL	LOCATION
M-5	MSHA MP 384.05	6'-0"	327.70	318.07	-	SEE PLAN
I-21	A-5	2'-6"	317.69	311.20	4.01	"
I-22	A-5	2'-6"	317.52	310.60	4.01	"
M-7	MSHA MP 384.05	6'-0"	317.86	307.70	-	"
I-23	A-5	2'-6"	318.60	313.40	4.01	"
I-24	'S'	2'-7 1/2"	328.50	324.60	4.22	"
I-25	DBL 'S'	2'-7 1/2"	330.50	326.25	4.23	"
I-26	A-10	2'-6"	328.40	323.25	4.01	"
I-27	A-5	2'-6"	328.00	322.75	4.02	"
I-28	'S'	2'-7 1/2"	327.50	324.53	4.22	"
I-29	A-5	2'-6"	328.02	322.23	4.01	"
I-30	A-5	2'-6"	327.80	321.70	4.01	"
I-31	A-5	2'-6"	328.44	319.68	4.01	"
I-32	A-5	2'-6"	328.50	320.00	4.01	"
I-33	A-10	2'-6"	325.60	320.00	4.02	"
M-8	MSHA MP 384.05	6'-0"	325.00	287.05	-	"
M-1	5'-0" PRECAST MH	5'-0"	314.00	304.16	G 5.13	"
M-9	"	5'-0"	324.33	319.43	G 5.13	"

STRUCTURE SCHEDULE

NO.	TYPE	DIA.	TOP ELEV.	INV. OUT	STD. DETAIL	LOCATION
S-1	TYPE 'C' CIR. PIPE	36"	310.00	304.06	SD 5.21	See Plan *
S-2	END SECT. CIR. PIPE	42"	-	286.70	SD 5.21	See Plan
M-9	STANDARD PRECAST	48"	320.50	323.72	G 5.12	SEE PLAN

* INCREASE H DIMENSION TO 6' AND L DIMENSION TO 28'

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK 1/29/98
CHIEF, DIVISION OF LAND DEVELOPMENT 2/6/98
DIRECTOR 2/2/98

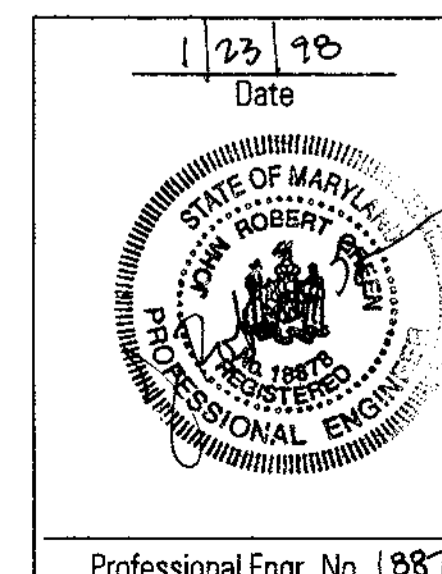
4-27-98 1 REV. STRUCTURE SCHEDULE I-16
4-30-98 2 REVISED SC-4 ORDER FORM

Westridge Corporate Center
At Columbia Gateway

OWNER/DEVELOPER:
AAK, L.L.C. CO ABRAMS DEVELOPMENT GROUP
8221 COLUMBIA PARKWAY, STE 3, COLUMBIA, MD 21045

DMW
Duff McCune Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4706

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



STORMCEPTOR DETAILS

Des By MK Scale AS SHOWN Proj. No. 88036.D
Dwn By MK Date 12-30-97
Chk By MK, JLS Approved 20 OF 20

4/26/99
AS BUILT.