

MATCH LINE - SHEET 2

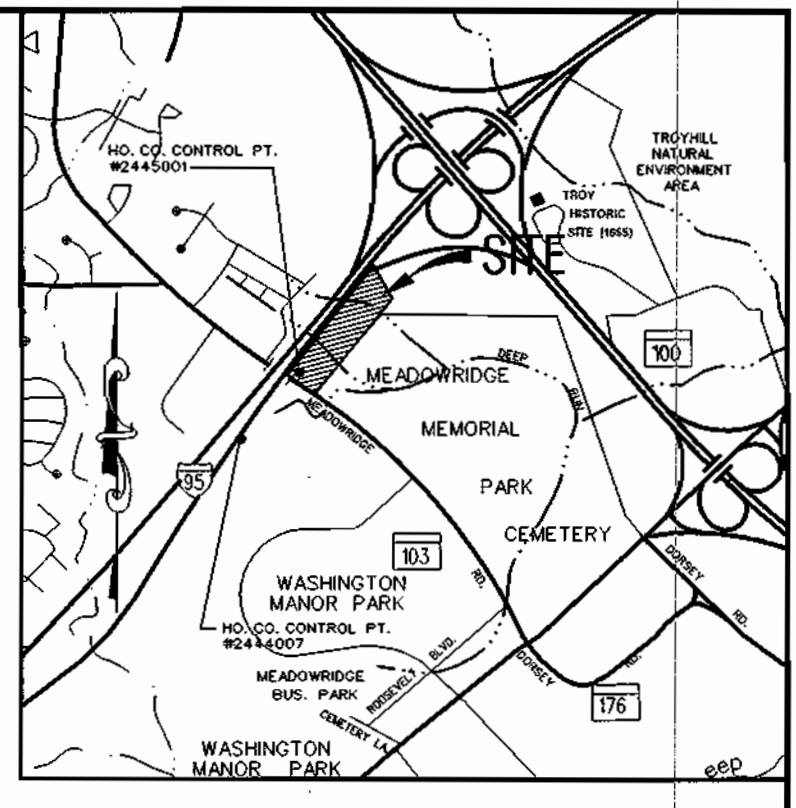
GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. 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.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

MISS UTILITY	1-800-257-7777
VERIZON TELEPHONE COMPANY	752-9976
HOWARD COUNTY BUREAU OF UTILITIES	392-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS & ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION/SURVEY DIVISION	792-7272
(24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	313-1880
- TOPO TAKEN FROM FIELD SURVEY DATED APRIL 1989 BY KCI.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- ALL COORDINATES ARE BASED ON HOWARD COUNTY GEODETIC CONTROL TRAVELER WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. REFERENCE HOWARD COUNTY CONTROL POINTS 2445001 (ELEV. 245.095) & 244007 (ELEV. 252.125).
- INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ALL ON-SITE ROADS PARKING AND DRAINAGE STRUCTURES (INCLUDING STORM DRAINS, WATER QUALITY BASINS, TWIN CULVERTS) SHALL BE PRIVATELY OWNED & MAINTAINED.
- GRAVITY SEWER SERVICE TO THE PROPOSED BUILDING CANNOT BE PHYSICALLY PROVIDED. A PRIVATELY OWNED AND MAINTAINED PUMP STATION SHALL BE PROVIDED FOR THESE PLANS AND SPECIFICATIONS. THE PLANS AND ASSOCIATED APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY PLUMBING CODE.
- REFER TO "MARYLAND'S GUIDELINES FOR WATERWAY CONSTRUCTION" BY THE WATER RESOURCES ADMINISTRATION (WRA) DATED SEPTEMBER 1999 REVISED NOVEMBER 2000 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE, SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3' COVER.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- INSTREAM CONSTRUCTION WILL NOT BE PERMITTED FROM MARCH 1ST THROUGH MAY 15TH INCLUSIVE.
- THE WATER PRESSURE ZONE FOR THIS CONTRACT IS 550.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATIONS C-153. DUCTILE IRON COMPACT FITTINGS 3"-12" FOR WATER AND OTHER LIQUIDS.
- GRAVITY SEWER LINE WILL BE 6" PVC.
- 2" SANITARY FORCE MAIN WILL BE PVC.
- NO GRADING OR REMOVAL OF VEGETATIVE COVER IS PERMITTED WITHIN 25 FT OF A WETLAND UNLESS APPROVED BY THIS PLAN. THIS SITE IS SUBJECT TO MDE/ACOE PERMIT NO. 2002-64709.
- THIS PLAN IS SUBJECT TO THE FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND THE NEW ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 50-2001.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$13,200.00 FOR 31 SHADE TREES OR SUBSTITUTIONS.
- THIS SITE IS SUBJECT TO SHA ACCESS PERMIT NO. B-HO-8208-02, ISSUED DECEMBER 31, 2002.
- STORMWATER MANAGEMENT WILL BE PROVIDED THROUGH 2 UNDERGROUND DETENTION AREAS, 3 BIORETENTION AREAS (F-6), 1 SAND FILTER (F-5), AND 2 GRASS SWALES. THESE FACILITIES ARE PRIVATE SWM FACILITIES AND WILL BE MAINTAINED BY THE OWNER.
- THE APPROVED APFO STUDY WAS PREPARED BY KCI TECHNOLOGIES, INC. AND APPROVED, SEPT. 5, 2002. THE MITIGATION REQUIREMENTS ARE AS FOLLOWS: NONE.
- WATER LINE WILL BE PUBLIC AND THE SANITARY SEWER WILL BE PRIVATE. THE EXISTING 16" WATER LINE CONTRACT NO. 713-W AND THE EXISTING 8" SANITARY SEWER IS CONTRACT NO. 14-15-12-10. THE PROPOSED METER WILL BE LOCATED INSIDE AN EASEMENT ON-SITE AND WILL BE PUBLIC.
- BA-99-58V APPROVED MAY 11, 2000. VARIANCE TO PERMIT A PARKING SETBACK OF 12' FROM AN EXTERNAL PUBLIC STREET RIGHT-OF-WAY IN LIEU OF THE REQUIRED 30' MINIMUM SETBACK. REAPPLIED BA-02-50C APPROVED December 18, 2002.
- "BIORETENTION AREAS DO NOT REQUIRE LANDSCAPE BUFFERING BECAUSE PLANTINGS WILL BE PLACED IN THOSE FACILITIES (SEE SHEET #13 - 14 FOR PLANT LIST AND DETAILS)".
- DESIGN MANUAL WAIVER DATED MARCH 19, 2002 GRANTED FOR THE USE OF PRESSURE SEWER BY HOWARD COUNTY BUREAU OF ENGINEERING.
- THIS SITE IS IN THE DEEP RUN TRIBUTARY WHICH FLOWS INTO THE PATAPSCO RIVER WATERSHED #02-13-09 AND IS CLASSIFIED AS A USE I. THE STREAM CLOSURE DATES ARE MARCH 1 THROUGH JUNE 15.
- THIS PROJECT IS CONDITIONALLY EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH THE FILING OF A DECLARATION OF INTENT FOR LESS THAN 40,000 SQUARE FEET OF CLEARING.
- WP-02-107 WAIVER TO PERMIT STOCKPILE AND ROUGH GRADING ON SITE PRIOR TO APPROVAL OF THE SDP WAS APPROVED ON JUNE 05, 2002 AND EXPIRES 1 YEAR AFTER ISSUANCE.

LEGEND

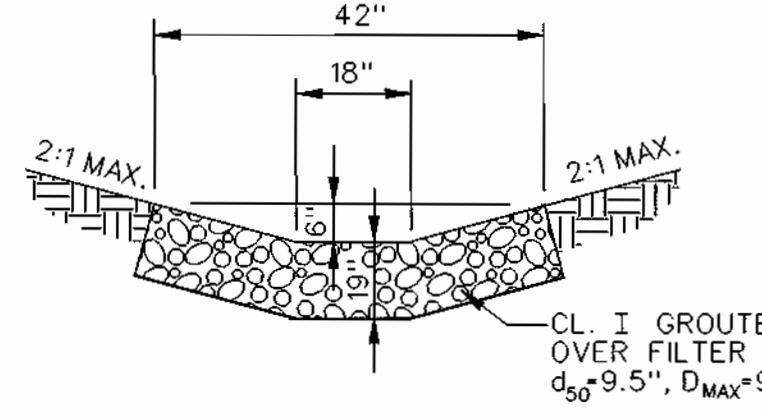
- PROP. TREE LINE
- EX. TREE LINE
- FIRE HYDRANT
- POLE
- POLE WITH LIGHT
- EVERGREEN TREE
- OAK
- EX. FENCE
- PROP. FENCE
- EX. CONTOURS
- PROP. CONTOURS
- BUILDING RESTRICTION LINE
- INDICATES SURFACE FLOW
- RAILROAD LINE
- SPOT ELEVATION
- STREET LIGHT
- WETLANDS
- PROP. 15' POLE WITH LIGHT
- SB-A
- STREAM



VICINITY MAP
SCALE: 1" = 2000'

SITE ANALYSIS

- GROSS AREA OF SITE: 6.8264 AC
- NET AREA OF SITE: 6.6041 AC
- PRESENT ZONING - PER SEPT. 19, 1993: ZONING M-1
- PROPOSED USE: OFFICE/WAREHOUSE
- FLOOR AREA: 19,680 SF
- NUMBER OF EMPLOYEES (MAX): 62 PERSONS
- PARKING SPACES REQUIRED: 62 SPACES
- OFFICE SPACE: 19,680 SF
- WAREHOUSE SPACE: 62,115 SF
- TOTAL: 79 PS - 4 HC - 89
- PARKING REQUIREMENT MODIFICATION WAS APPROVED BY THE DEPARTMENT OF PLANNING & ZONING TO BE BASED ON 1 SPACE PER EMPLOYEE.
- PARKING SPACES PROPOSED: 87 PS
- GREEN SPACE AREA: 3,1503 AC
- GREEN SPACE AS % OF NET AREA: 47.7%
- BUILDING COVERAGE: 1.57 AC
- BUILDING COVERAGE AS % OF GROSS AREA: 23.0%
- HANDICAP PARKING SPACES PROVIDED: 6
- TOTAL DISTURBED AREA: 5,550 AC OR 241,769 s.f.
- DPZ FILES: SDP90-81, BA99-58V, WP-02-107, BA02-50C



RIPRAP CHANNEL LINING FROM CURB TO ES-11
NOT TO SCALE

SHEET INDEX	
SHEET NO.	TITLE
1	SITE DEVELOPMENT PLAN - SHEET 1
2	SITE DEVELOPMENT PLAN - SHEET 2
3	SITE DETAILS
4	PROP. STORMDRAIN DRAINAGE AREA MAP
5	STORMDRAIN PROFILES
6	STORMDRAIN PROFILES
7	STORMDRAIN DETAILS
8	WATER AND SANITARY PROFILES
9	SWM RISER DETAILS (CS-2, CS-4, CS-6)
10	SWM DRAINAGE PLAN
11	UNDERGROUND STORAGE SWM PLAN
12	SWM DETAILS
13	BIORETENTION AREA 1 PLAN
14	BIORETENTION AREAS 2 & 3 PLAN
15	GRADING & SEDIMENT CONTROL PLAN 1
16	GRADING & SEDIMENT CONTROL PLAN 2
17	GRADING & SEDIMENT CONTROL DETAILS
18	GRADING & SEDIMENT CONTROL DETAILS
19	SEDIMENT CONTROL NOTES
20	LANDSCAPE PLAN - SHEET 1
21	LANDSCAPE PLAN - SHEET 2
22	LANDSCAPE DETAILS

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

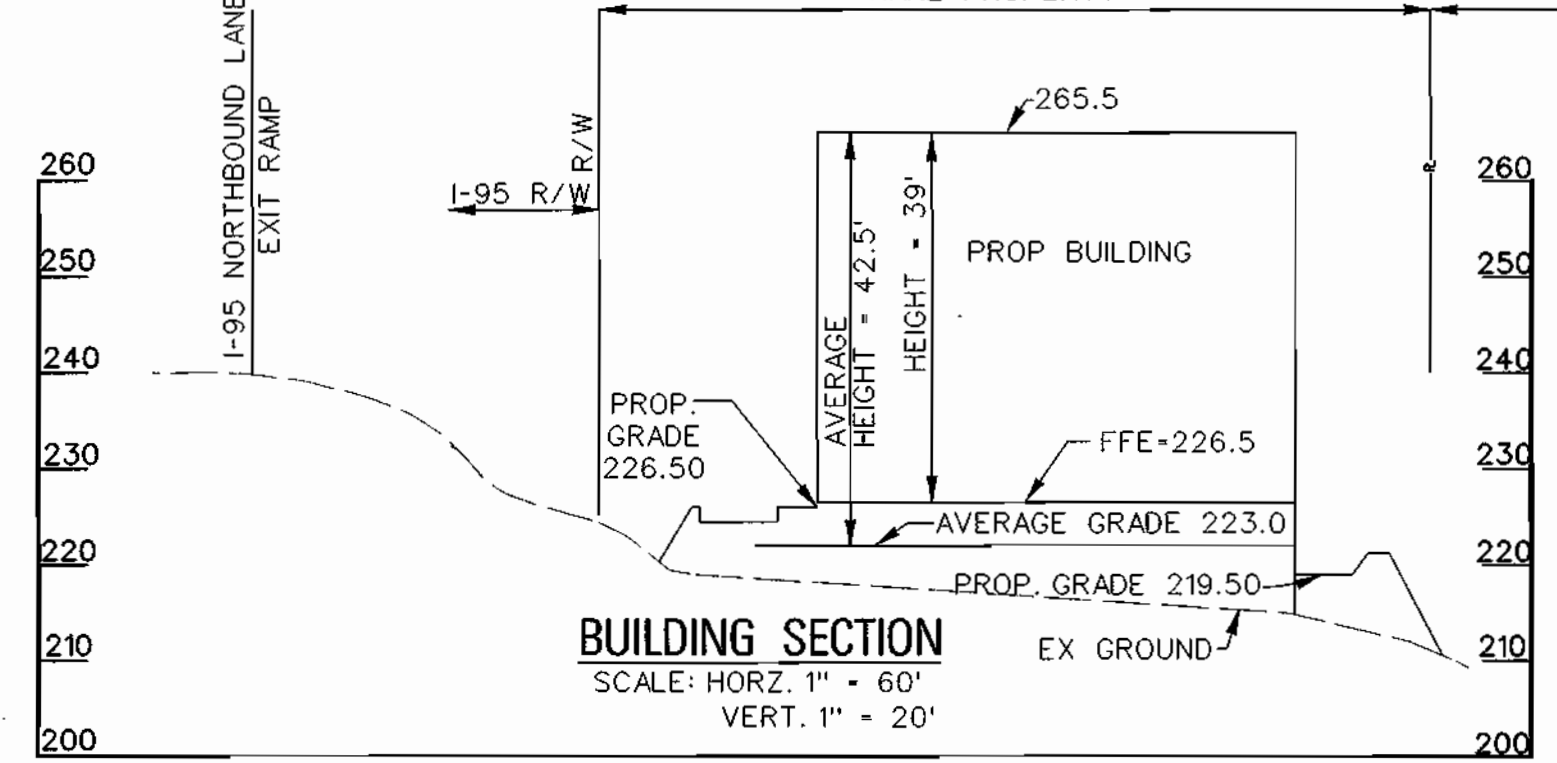
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
Cindy Hamant
5/16/03

CHIEF, DIVISION OF LAND DEVELOPMENT
Denise DeLozier
5/16/03

PERMIT INFORMATION CHART					
Subdivision Name: NA	Section/Area: NA	Lot/Parcel No.: 174			
Plot # or L/F: NA	Grid #	Zoning: M-1	Tax Map No.: 37	Elect Distr.: 1	Census Tract: 6012
Water Code: D04	Sewer Code: 2153000				
ADDRESS CHART					
LOT/PARCEL #	STREET ADDRESS				
174	6500 Kane Way				



BUILDING SECTION
SCALE: HORZ. 1" = 60'
VERT. 1" = 20'

KANE COMPANIES, INC. HEADQUARTERS

PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

WATER CODE: D04 SEWER CODE: 215 3000

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.

DATE: APRIL 9, 2003
SHEET 1 OF 22

APR 14 2003

Drafting	JAB	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

14502 Greenview Drive, Suite 424
Laurel, Maryland 20708
(301) 953-1821 (410) 792-8086
Fax: (410) 792-7419
www.kci.com

OWNER:
C & S MEADOWRIDGE, LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

SITE DEVELOPMENT PLAN - SHEET 1

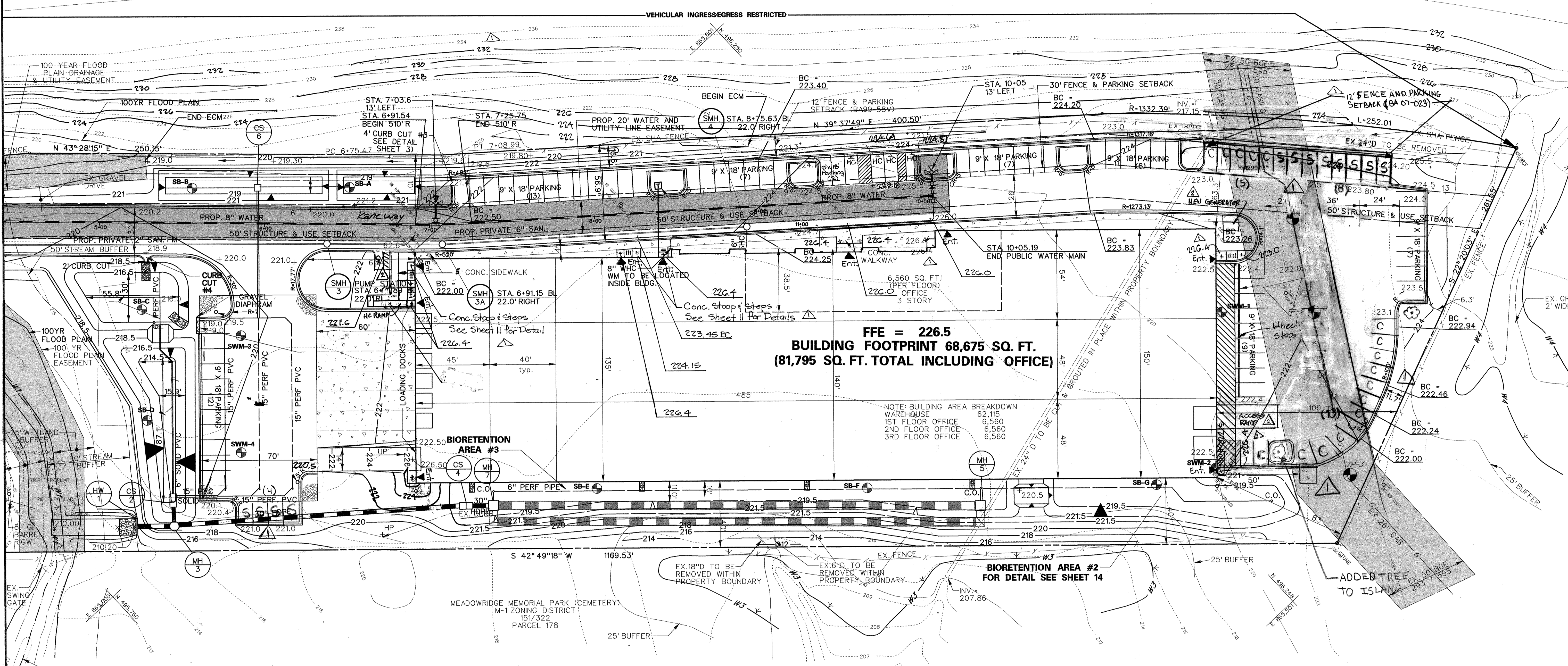
SDP-02-53
1602008\DRAWINGS\SHEET1.dgn

I-95 NORTH BOUND LANE
 (S.R.C. PLATS 36757, 36758, 34722, 3471)
 380' R/W
 (LIMITED ACCESS FREEWAY)

EXIT RAMP TO RTE.100 EAST

VEHICULAR INGRESS/EGRESS RESTRICTED

MATCH LINE - SHEET 1



APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

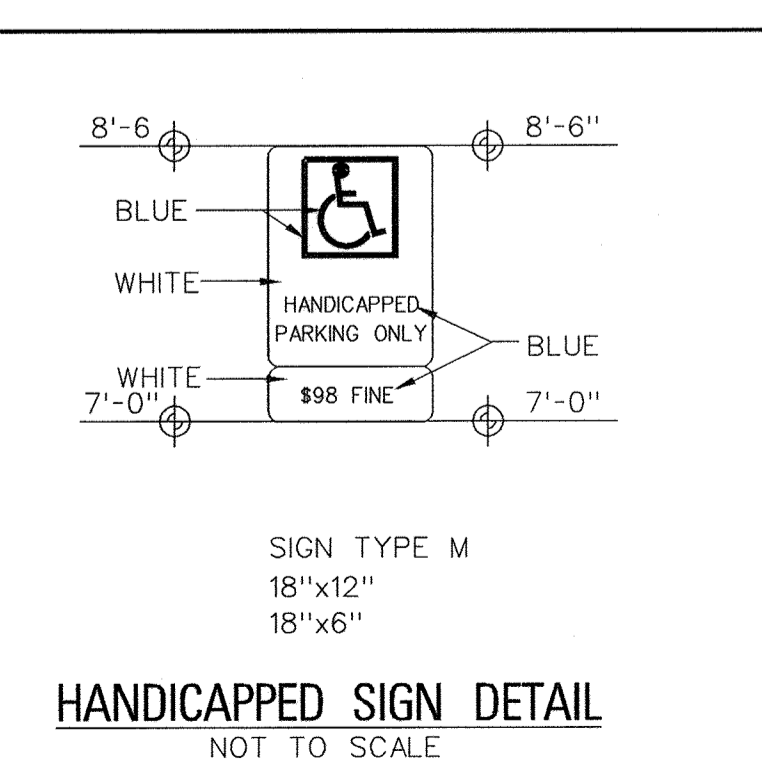
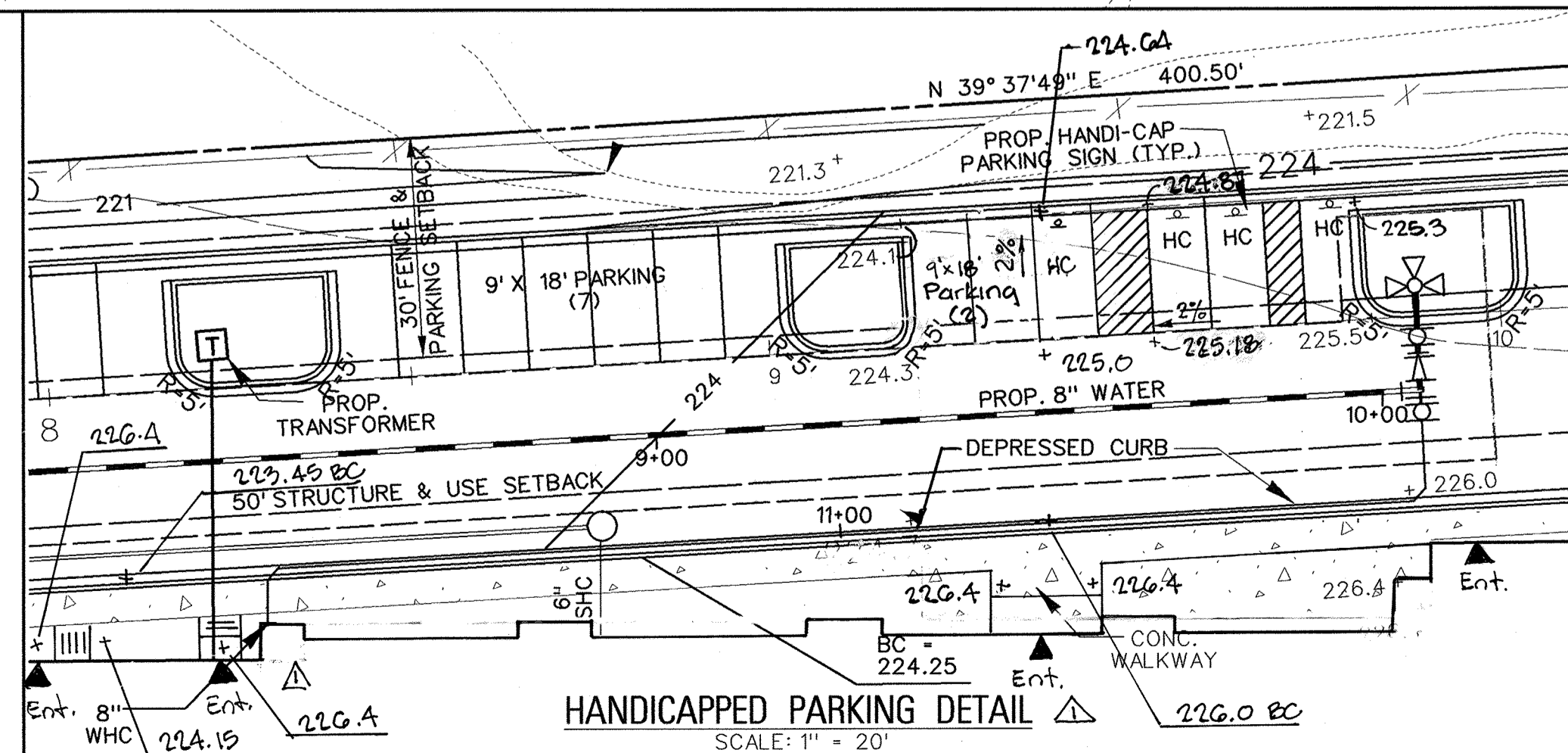
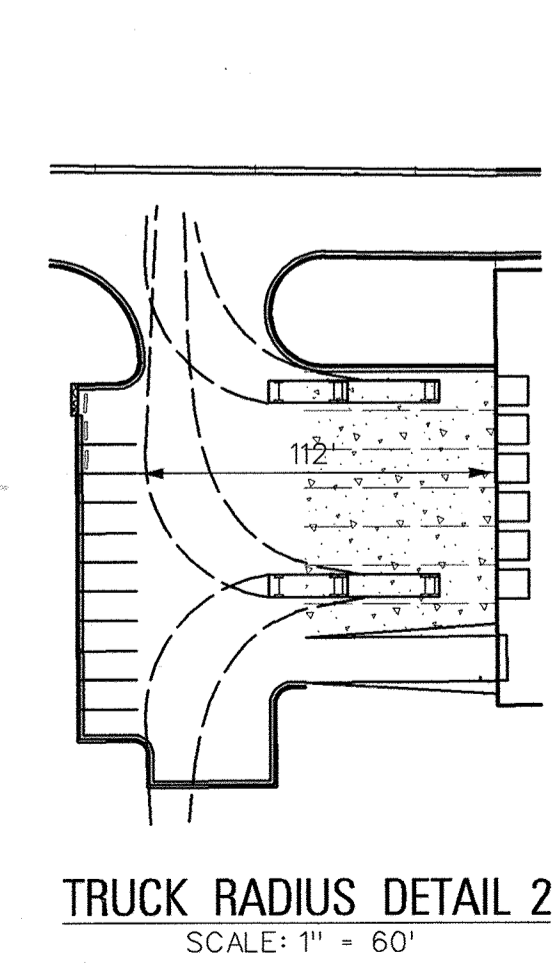
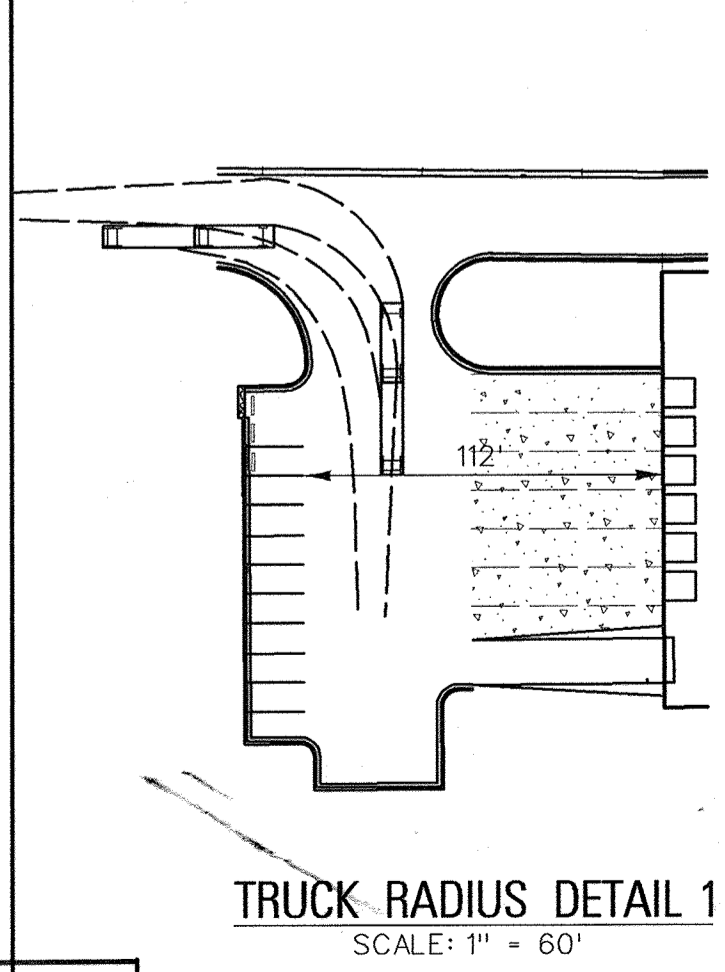
COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/8/02

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5/8/02

DIRECTOR
 DATE: 5/8/02



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. 16997, Expiration Date: 8/15/19

[Signature]
 PROFESSIONAL ENGINEER
 FOR REV #2 ONLY

KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 30 0 15 30 60
 (IN FEET)
 1 inch = 30ft.
 DATE: APRIL 9, 2003
 SHEET 2 OF 22

DATE	REVISIONS
6/25/03	HANDICAP RAMP & ACCESS RAMP
11/20/01	Revise offsite grading
11/23/01	Revise stoop & steps per revised architectural
04-07	Updated Parking Added Island

KCI TECHNOLOGIES
 ENGINEERS PLANNERS ARCHITECTS CONSTRUCTION MANAGERS

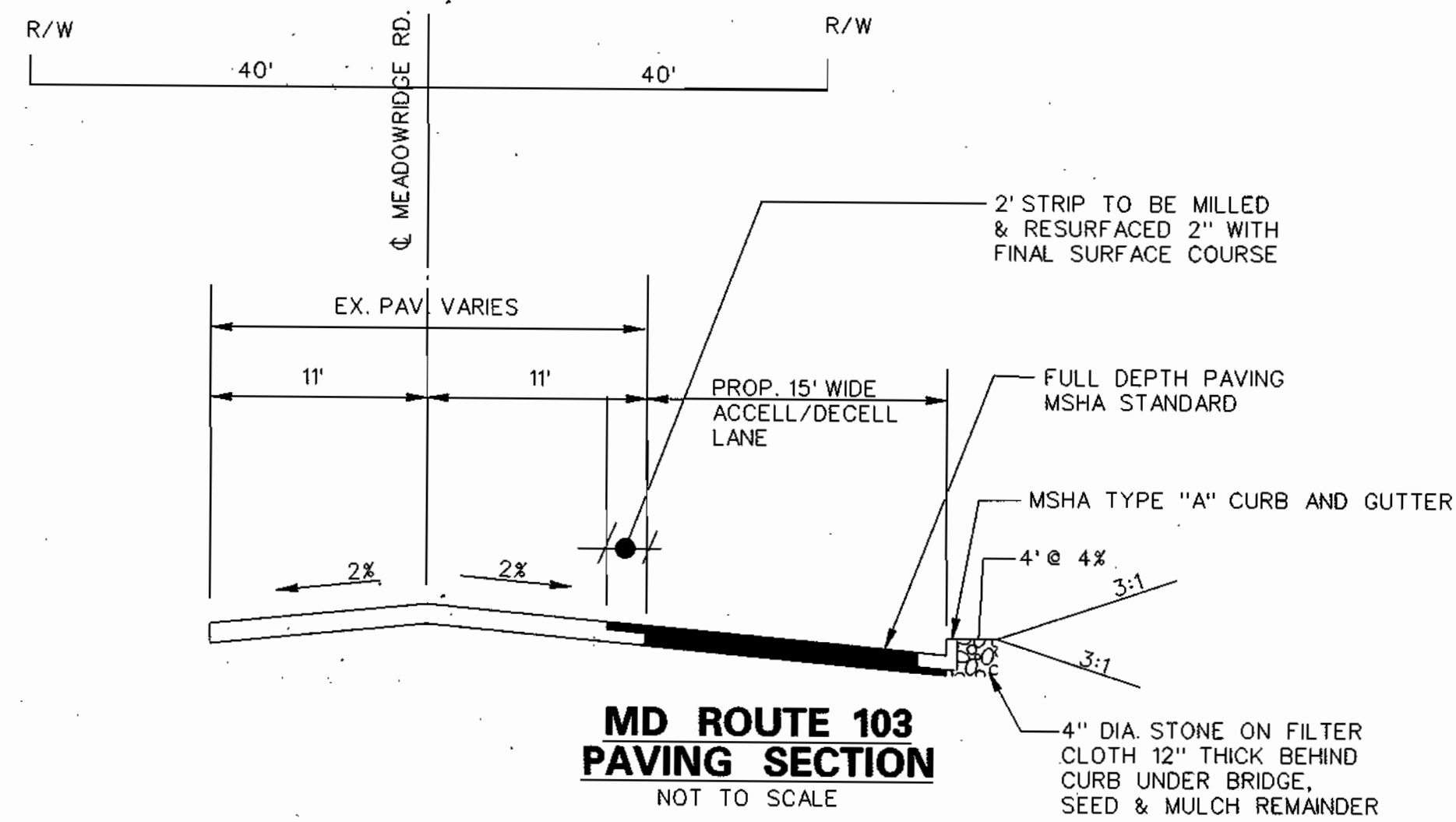
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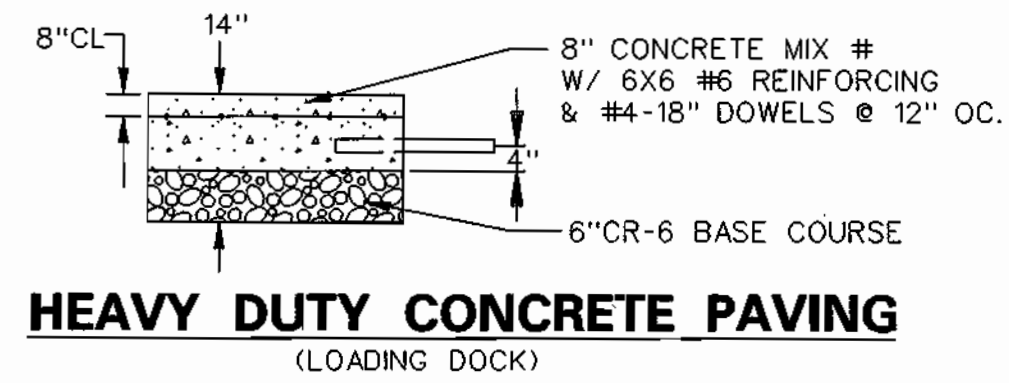
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SITE DEVELOPMENT PLAN - SHEET 2

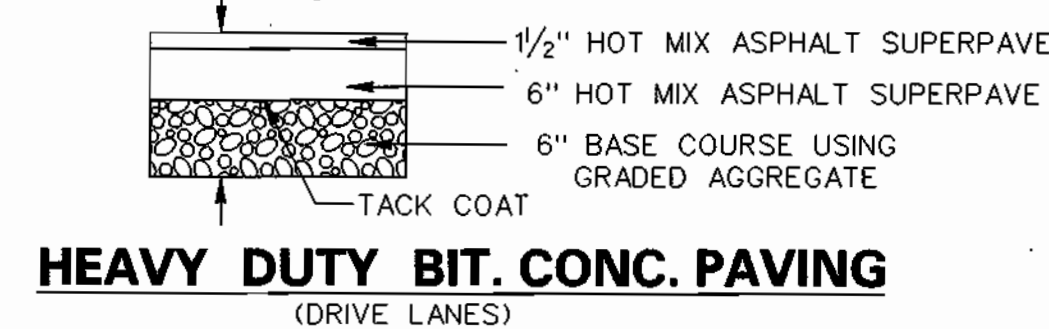
APR 14 2003



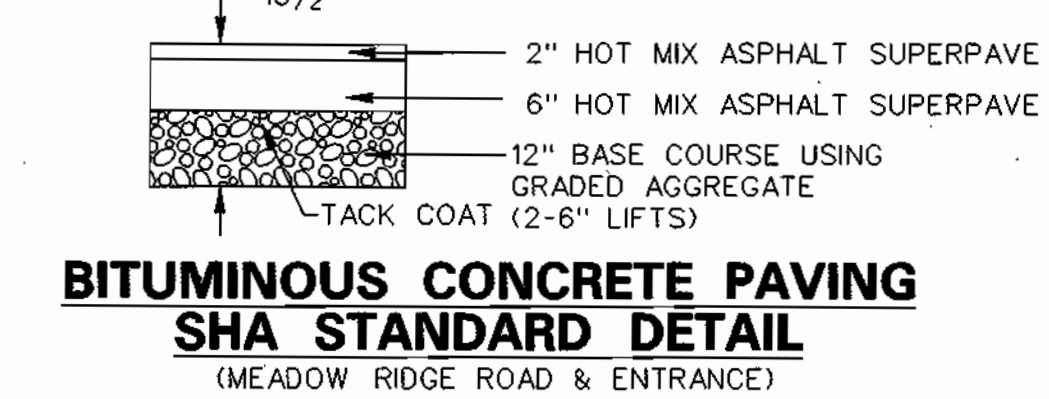
MD ROUTE 103 PAVING SECTION
NOT TO SCALE



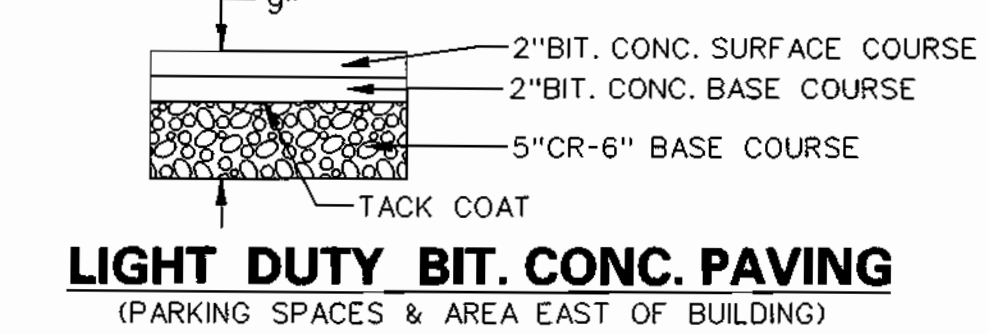
HEAVY DUTY CONCRETE PAVING
(LOADING DOCK)



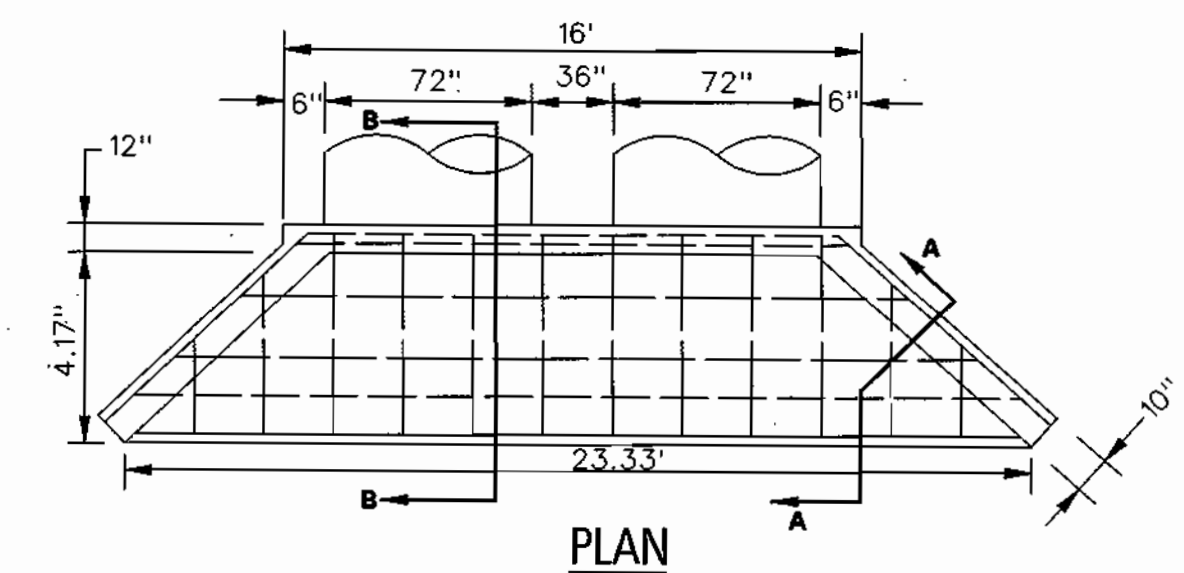
HEAVY DUTY BIT. CONC. PAVING
(DRIVE LANES)



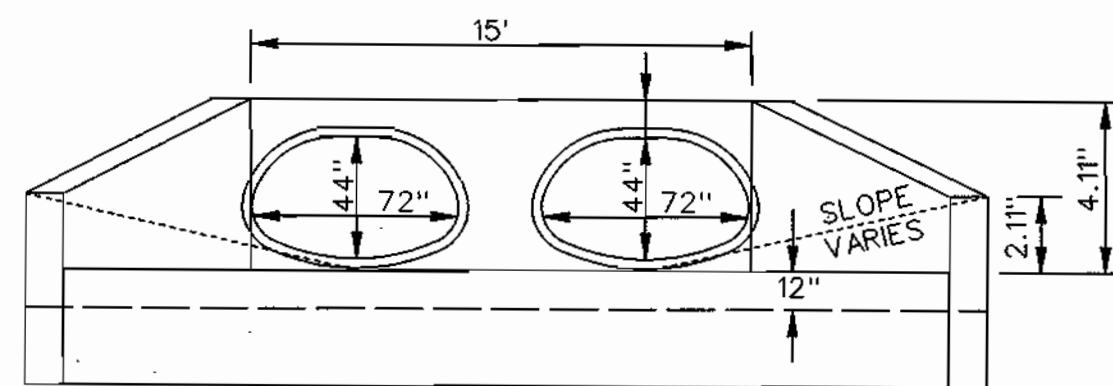
BITUMINOUS CONCRETE PAVING
SHA STANDARD DETAIL
(MEADOW RIDGE ROAD & ENTRANCE)



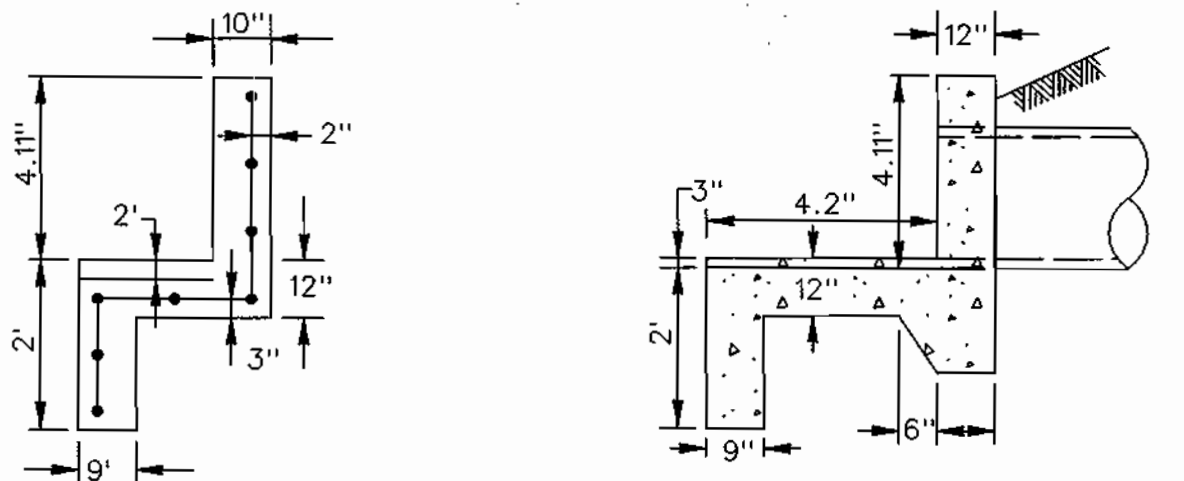
LIGHT DUTY BIT. CONC. PAVING
(PARKING SPACES & AREA EAST OF BUILDING)



PLAN



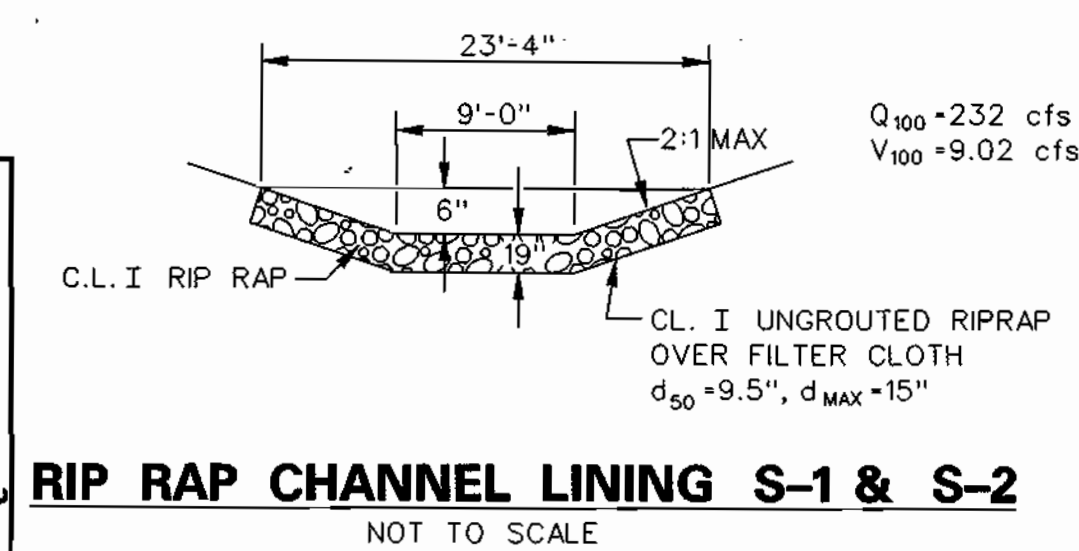
ELEVATION



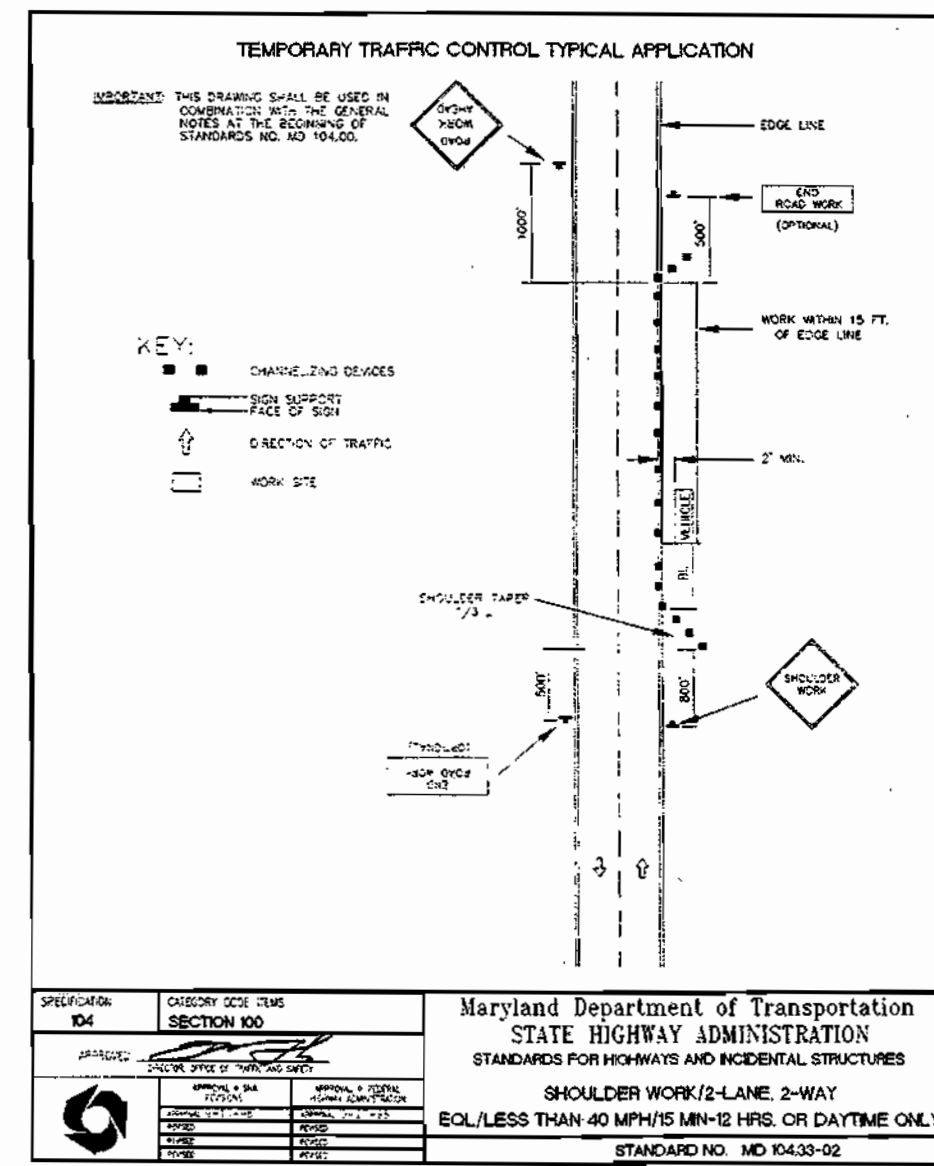
SECTION A-A

SECTION B-B

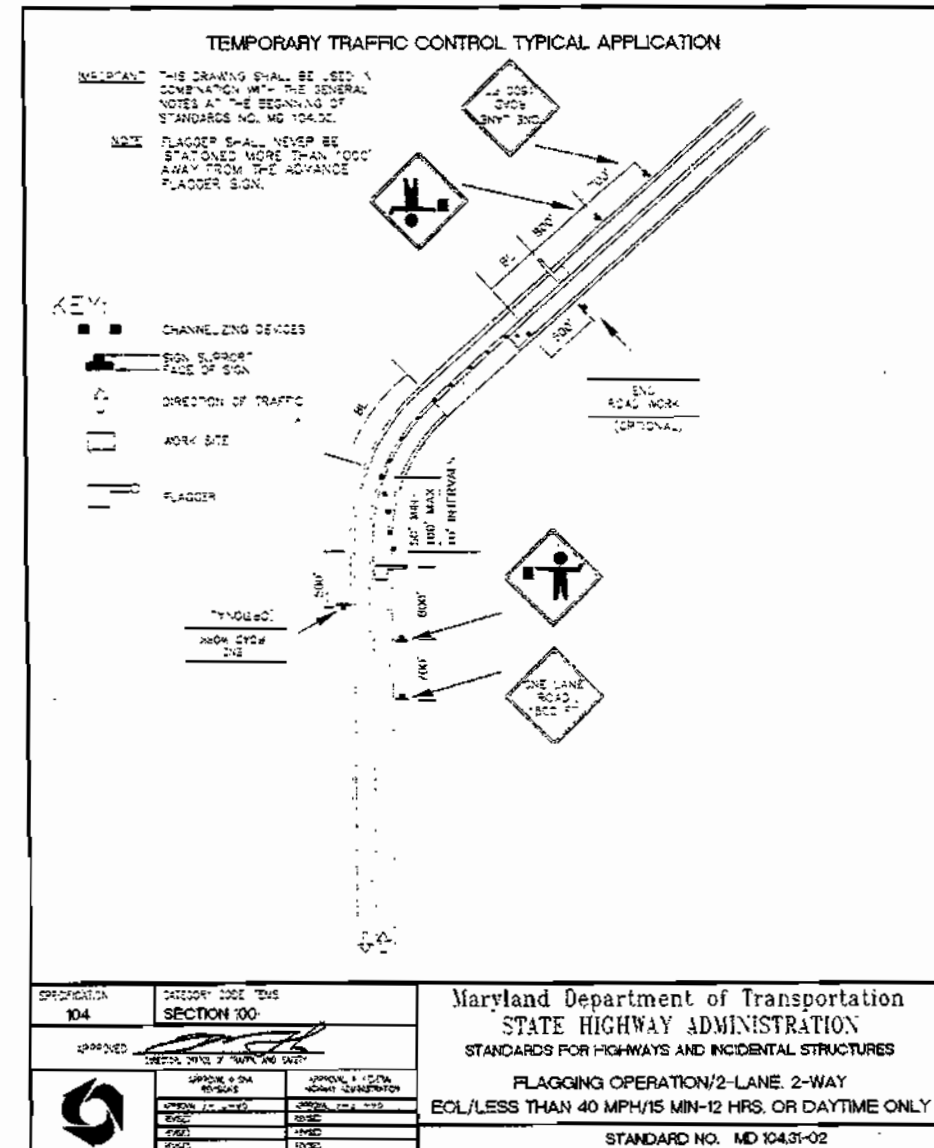
MODIFIED TYPE "A" HEADWALL
TWIN 72" X 44" C.M. PIPE ARCHES
NOT TO SCALE



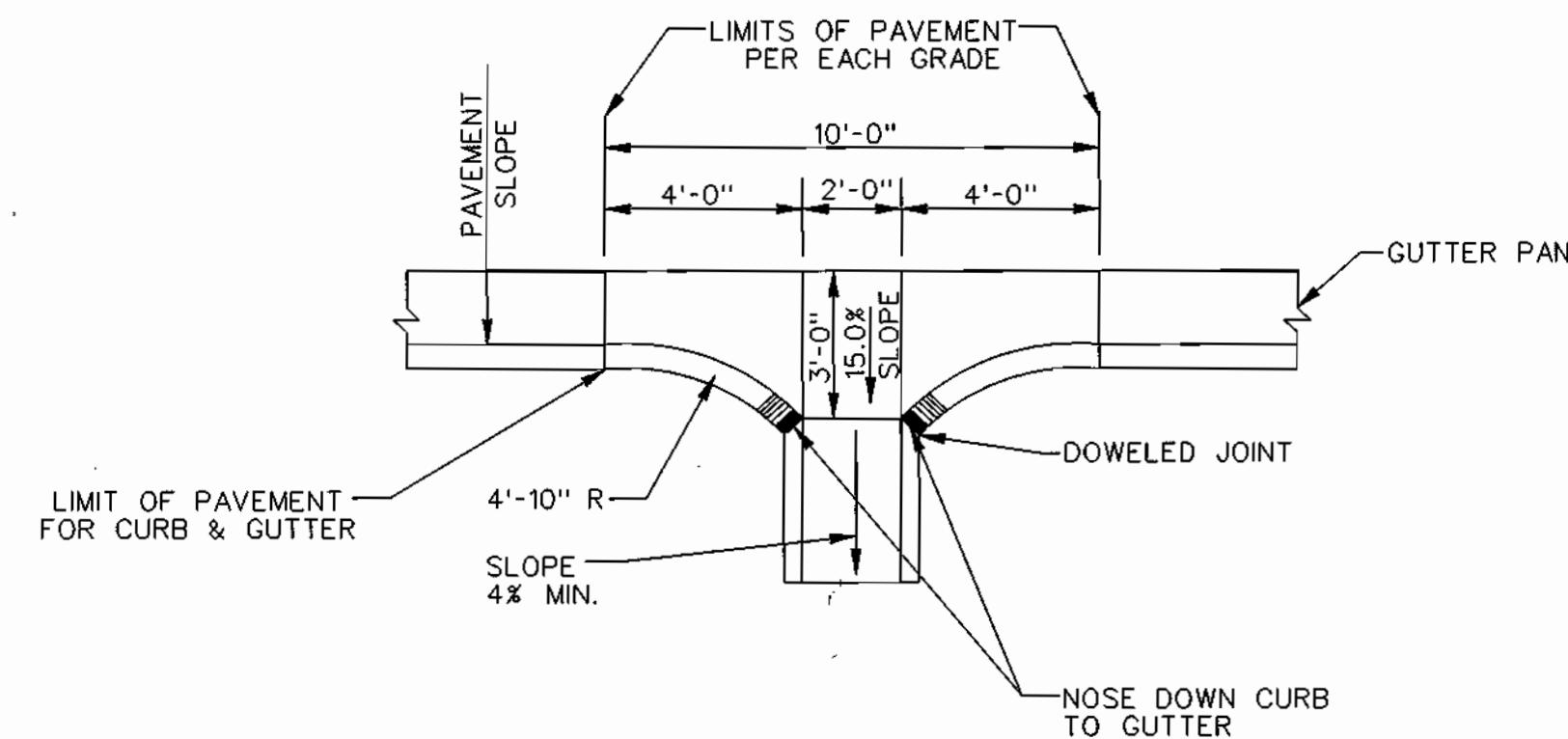
RIP RAP CHANNEL LINING S-1 & S-2
NOT TO SCALE



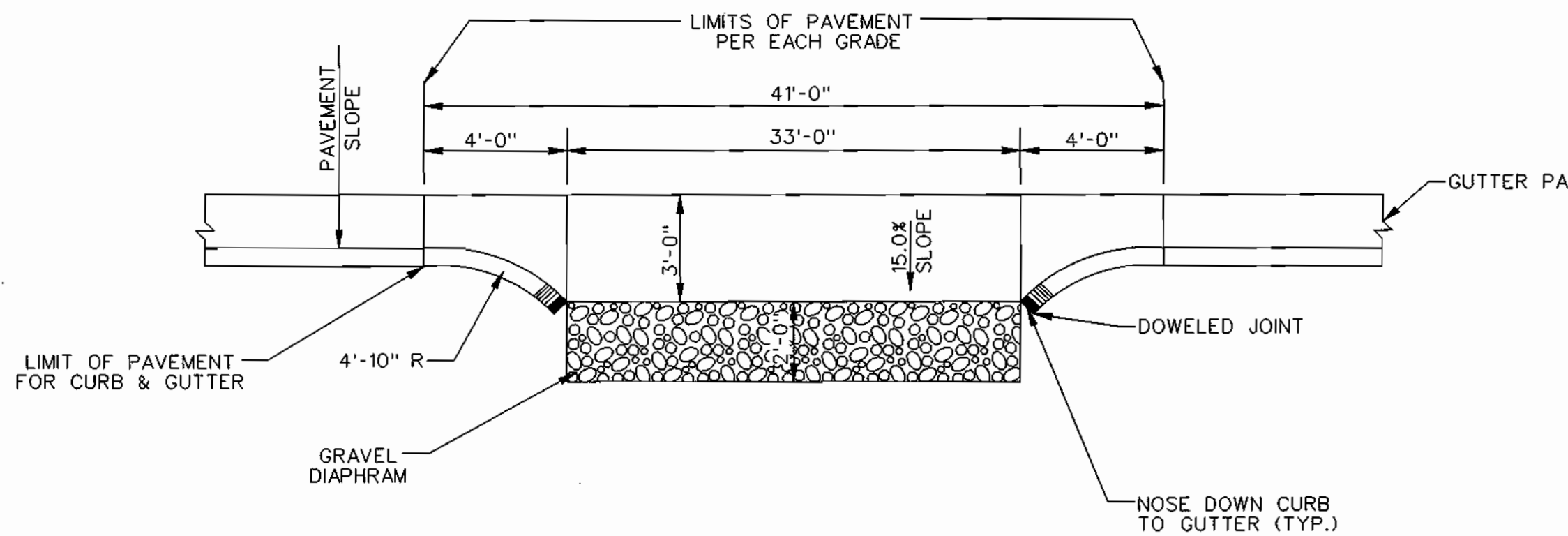
TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHOULDER WORK/2-LANE 2-WAY
EQUALLY LESS THAN 40 MPH/15 MIN-12 HRS. OR DAYTIME ONLY
STANDARD NO. MD 1045-02



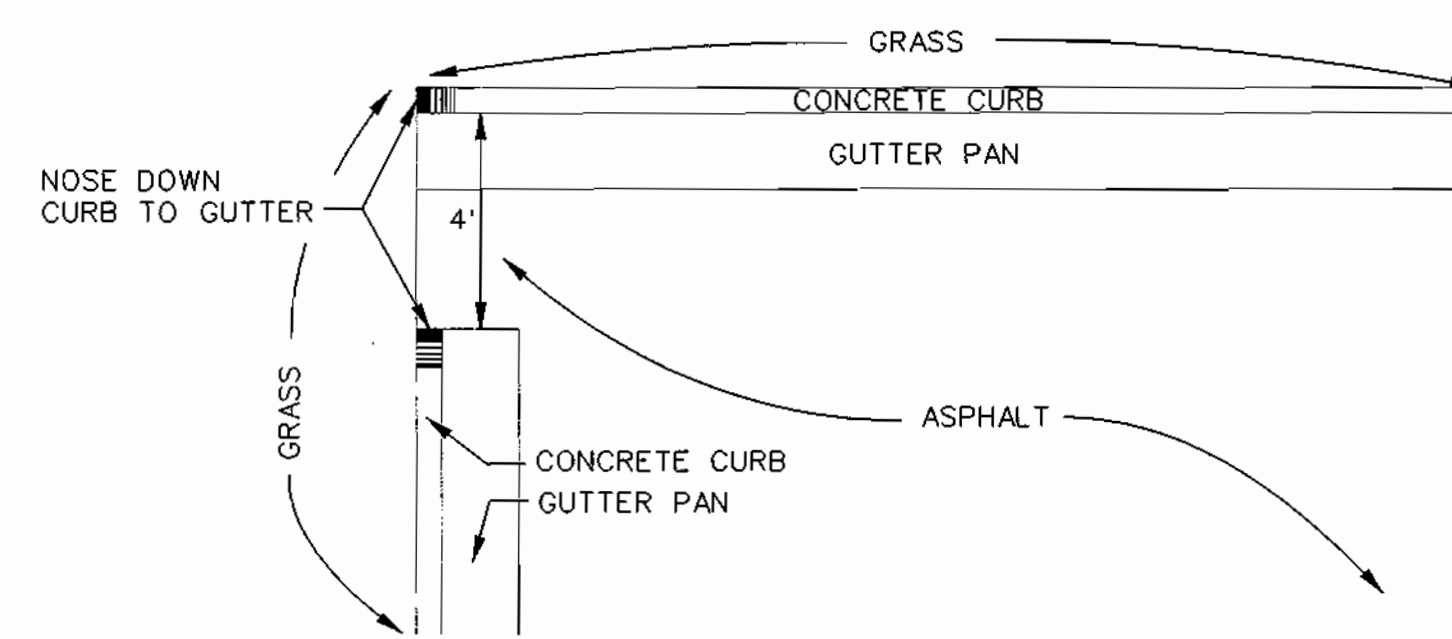
TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION
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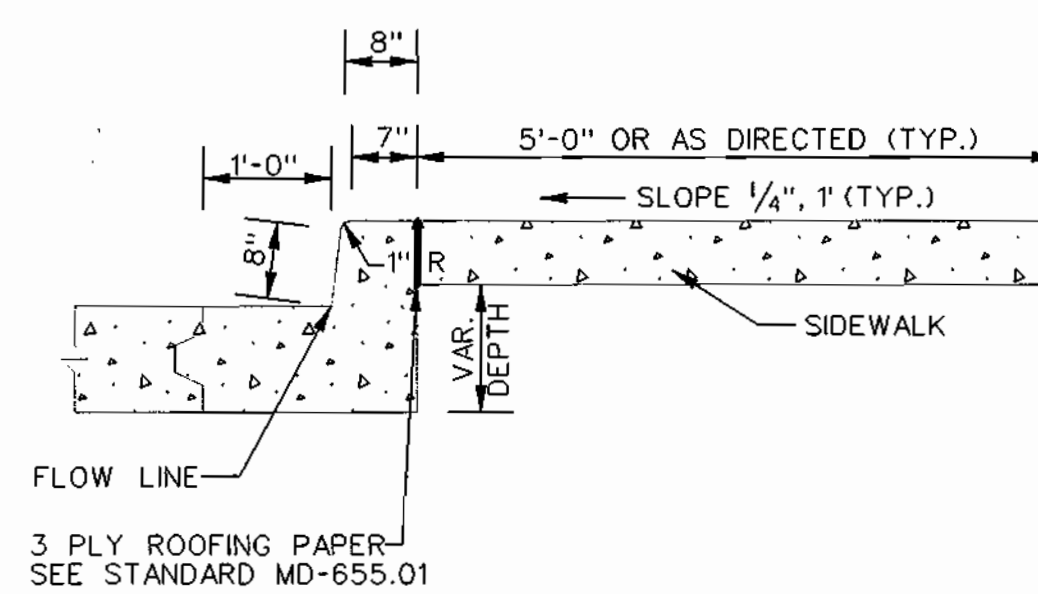
STANDARD CURB & GUTTER
AT LOW POINT
(CURB CUT #1 & 4)
NOT TO SCALE



STANDARD CURB & GUTTER
AT LOW POINT
(CURB CUT #2)
NOT TO SCALE



STANDARD CURB & GUTTER
AT LOW POINT
(CURB CUT #3)
NOT TO SCALE



TYPE 'A' CURB & GUTTER
NOT TO SCALE

* NOTE: PROVIDE 6" HIGH CURB ALONG PERIMETER ACCESS ROAD AND PARKING LOT.

GENERAL STRUCTURAL NOTES:

- GEOTECHNICAL PARAMETERS:
 - ASSUMED INTERNAL FRICTION ANGLE, $\phi = 28^\circ$
 - ASSUMED SOIL DENSITY = 125 PCF
 - ASSUMED ALLOWABLE SOIL PRESSURE = 1500 PSF
 - NO SURCHARGE & LEVEL BACKFILL
- GENERAL
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE LOCATION OF ANY UTILITIES IN THE IMMEDIATE VICINITY OF CONSTRUCTION SO AS TO PREVENT DAMAGE TO THEM. SHOULD ANY DAMAGE TO SUCH UTILITIES OCCUR, THE CONTRACTOR SHALL BE REQUIRED TO REPAIR SUCH DAMAGE AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER.
 - SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE GENERAL CONTRACTOR AND REVIEWED BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO OBTAIN THE ENGINEER'S REVIEW OF THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF ITS PART OF THE PROJECT. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER AS A CONVENIENCE TO THE GENERAL CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT.
 - THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS BEFORE SUBMISSION TO THE ENGINEER AND MAKE ALL CORRECTIONS AS HE DEEMS NECESSARY AND SHALL APPROVE AND INITIAL EACH DRAWING.
 - AT THE TIME OF SHOP DRAWING SUBMISSION, THE GENERAL CONTRACTOR SHALL INFORM THE ENGINEER OF ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS.
 - THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
 - CONSULT THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR VERIFICATION OF LOCATION AND DIMENSIONS OF OPENINGS, SLEEVES, TRENCHES, AND OTHER PROJECT REQUIREMENTS.
- FOUNDATIONS
 - EXCAVATION AND BACKFILL
 - GROUND WATER WAS NOT ASSUMED.
 - EXCAVATED AREA SHALL REMAIN FREE OF WATER UNTIL BACKFILL IS PROPERLY PLACED AND COMPACTED TO FINISH GRADE.
 - FOOTINGS ARE TO BE PLACED ON UNDISTURBED EARTH.
 - ALL BACKFILL SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 90 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY AASHTO T-180.
 - BACKFILL SHALL NOT BE PLACED UNTIL CONCRETE HAS REACHED 80% OF COMPRESSIVE STRENGTH.
 - POROUS BACKFILL SHALL BE ASTM C33, SIZE #57.
 - SPREAD FOOTING FOUNDATIONS
 - BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-6" BELOW FINISHED GRADE, SEE SITE PLANS FOR EXISTING AND FINISHED GRADES.
 - ALL FOOTINGS HAVE BEEN DESIGNED FOR AN ASSUMED NET ALLOWABLE SOIL BEARING PRESSURE OF 1500 P.S.F. CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO PLACING ALL FOOTINGS IF THE BEARING CAPACITY HAS NOT BEEN ACHIEVED.
 - PIPE SLEEVES AND OTHER EMBEDDED ITEMS SHALL BE PLACED PRIOR TO CONCRETE PLACEMENT.
 - CAST-IN-PLACE CONCRETE
 - ALL CONCRETE WORK SHALL CONFORM TO ALL PROVISIONS OF "SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301-89) AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-95).
 - ADDITIONALLY, THE CONCRETE SHALL CONFORM TO ALL PROVISIONS OF THE FOLLOWING PUBLICATIONS:
 - ACI 305R-91: RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING
 - ACI 306R-88: RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING
 - ACI 347R-88: RECOMMENDED PRACTICE FOR CONCRETE FORMWORK
 - ALL CONCRETE UNLESS NOTED OTHERWISE, SHALL BE STONE AGGREGATE CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 3,500 P.S.I. AT 28 DAYS. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF $6\% \pm 1\%$. NO ADMIXTURES CONTAINING CHLORIDES SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE FOR CONCRETE SHALL BE 1". ALL CONCRETE EXCEPT FOOTINGS SHALL CONTAIN A WATER REDUCING ADMIXTURE.
 - ALL CONCRETE MIX DESIGNS AND ADMIXTURES SHALL BE APPROVED BY THE ENGINEER 30 DAYS PRIOR TO INITIATION OF FIRST POUR.
 - ALL REINFORCING BARS SHALL CONFORM TO ASTM A-615, GRADE 60.
 - CONCRETE EXPOSED TO PUBLIC VIEW SHALL MEET THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE (ACI 301).
 - REFER TO SITE PLAN FOR WALL LOCATION.
 - WALL CAN BE CONSTRUCTED UP TO 30'-0" LONG WITHOUT JOINTS.
 - WALLS LONGER THAN 30'-0" REQUIRE CONTROL JOINTS IN THE WALL (NOT THE FOOTING) AT 30'-0" MAXIMUM SPACING.
 - WALLS LONGER THAN 90'-0" REQUIRE EXPANSION JOINTS IN THE WALL AND CONTROL JOINTS IN THE FOOTING AT 90'-0" MAX. SPACING WITH CONTROL JOINTS IN THE WALL AT 30'-0" MAX. SPACING.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 [Signature] DATE 4/1/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] DATE 4/1/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] DATE 5/6/03
 DIRECTOR

Drawing	JAB	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

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Fax: (410) 792-7419
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CONTRACT PURCHASER & DEVELOPER:
C & S MEADOWRIDGE, LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

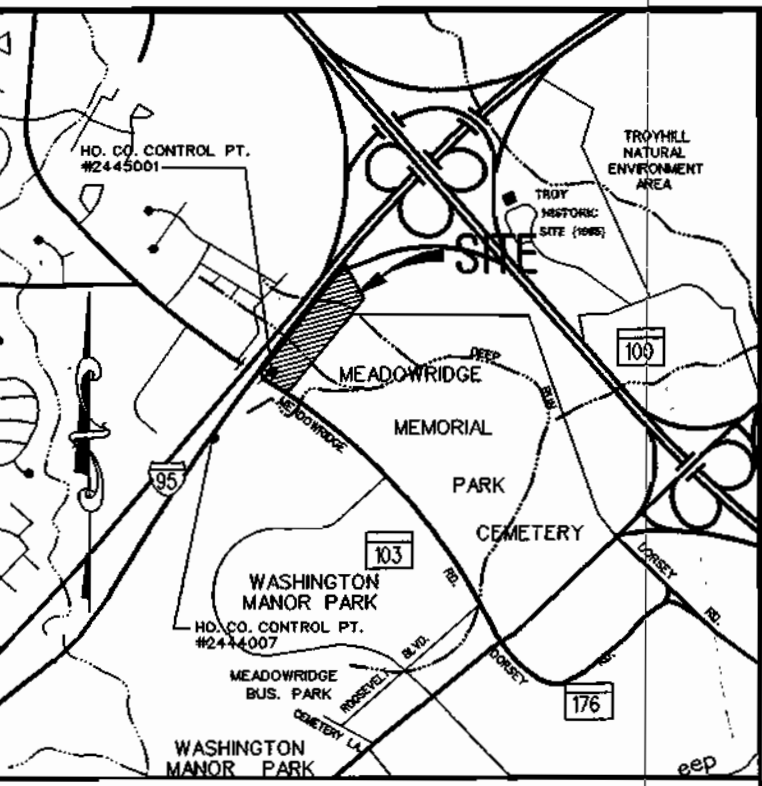
CONTRACTOR:
CREANEY & SMITH GROUP LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

SITE DETAILS

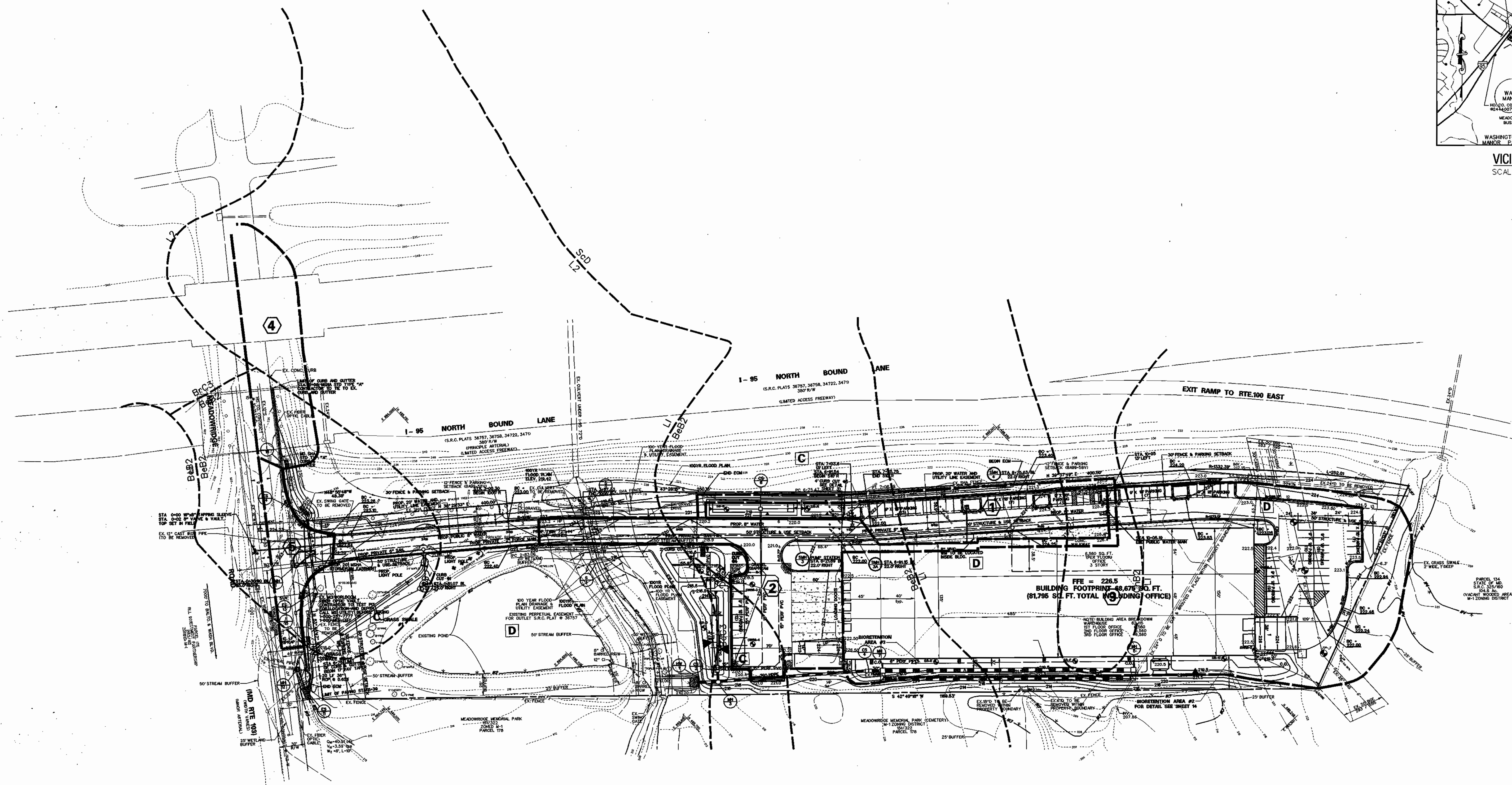
KANE COMPANIES, INC. HEADQUARTERS
PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000

SCALE AS SHOWN
DATE: APRIL 9, 2003
SHEET 3 OF 203

APR 14 2003
1602008\DRAWINGS\SITDETAILS.dgn



VICINITY MAP
SCALE: 1" = 2000'



No.	DRAINAGE AREA (Ac)	% IMPERVIOUS	C FACTOR
(1)	0.50	100%	0.90
(2)	1.15	100%	0.80
(3)	2.36	81%	0.78
(4)	.457	79%	SEE SWIM DA MAP
(5)	.147	100%	

PLAN
SCALE: 1" = 60'

LEGEND

- 90 ——— EX. INDEX CONTOUR
- EX. 2' INTERMEDIATE CONTOUR
- EX. CURB AND GUTTER
- EX. GAS LINE
- EX. STORM DRAIN
- EX. FENCE
- EX. EDGE OF WATER
- EX. OVERHEAD UTILITY LINE
- EX. WATER VALVE
- EX. INLET
- EX. MANHOLE
- EX. TREE
- BeB2 BeC3 EX. SOILS DELINEATION
- C HYDROLOGIC SOILS GROUP
- EX. SOIL BORINGS
- ← TC PATH
- ← TC PATH FLOW TYPE
- 2 DRAINAGE AREA
- DRAINAGE AREA BOUNDARY
- 100-YR FLOOD PLAN
- W WETLANDS

SOIL	HYDROLOGIC SOIL GROUP	DESCRIPTION
BeB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
BeC3	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
L1	D	LEONARDTOWN SILT LOAM
ChB2	C	CHILLUM-FARFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Cindy Hammet 4/8/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
Mark A. Cuyler 5/10/03
 DIRECTOR

Drafting	JAB	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

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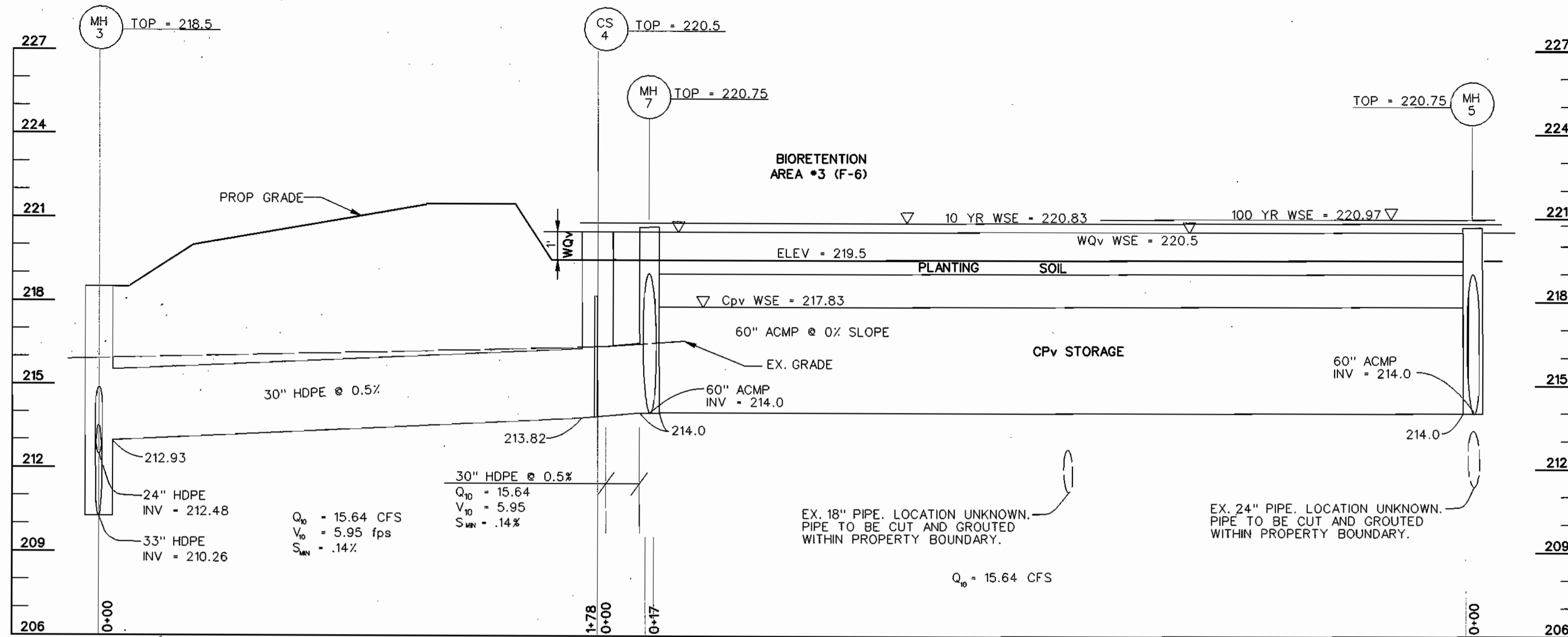
OWNER:
C & S MEADOWRIDGE, LLC
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 (410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
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 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

PROPOSED STORMDRAIN DRAINAGE AREA MAP

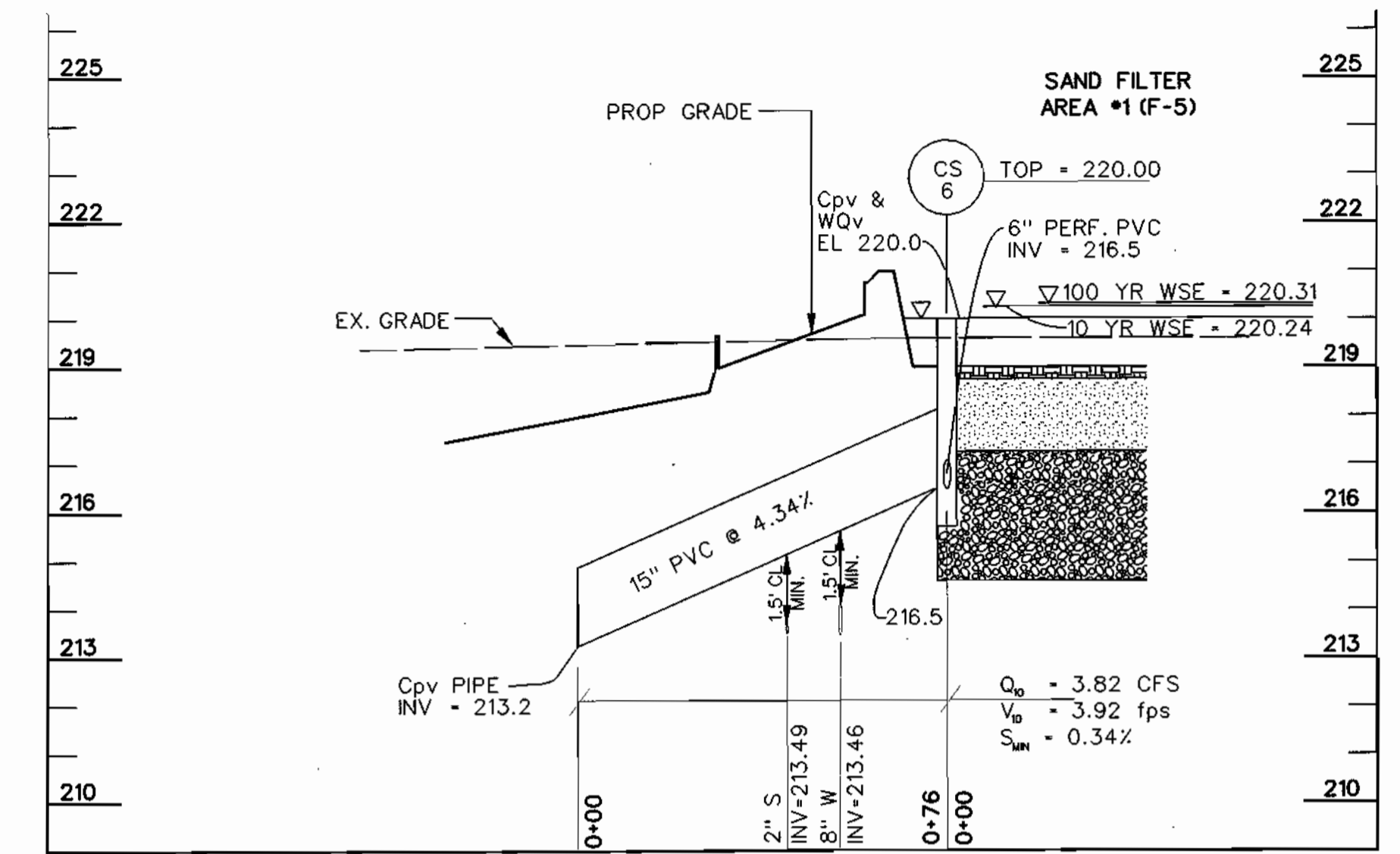


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 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37 PARCEL 174
 L. 8753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 60 0 30 60 120
 (IN FEET)
 1 inch = 60ft.
 DATE: APRIL 9, 2003
 SHEET 4 OF 22
 SDP-02-53



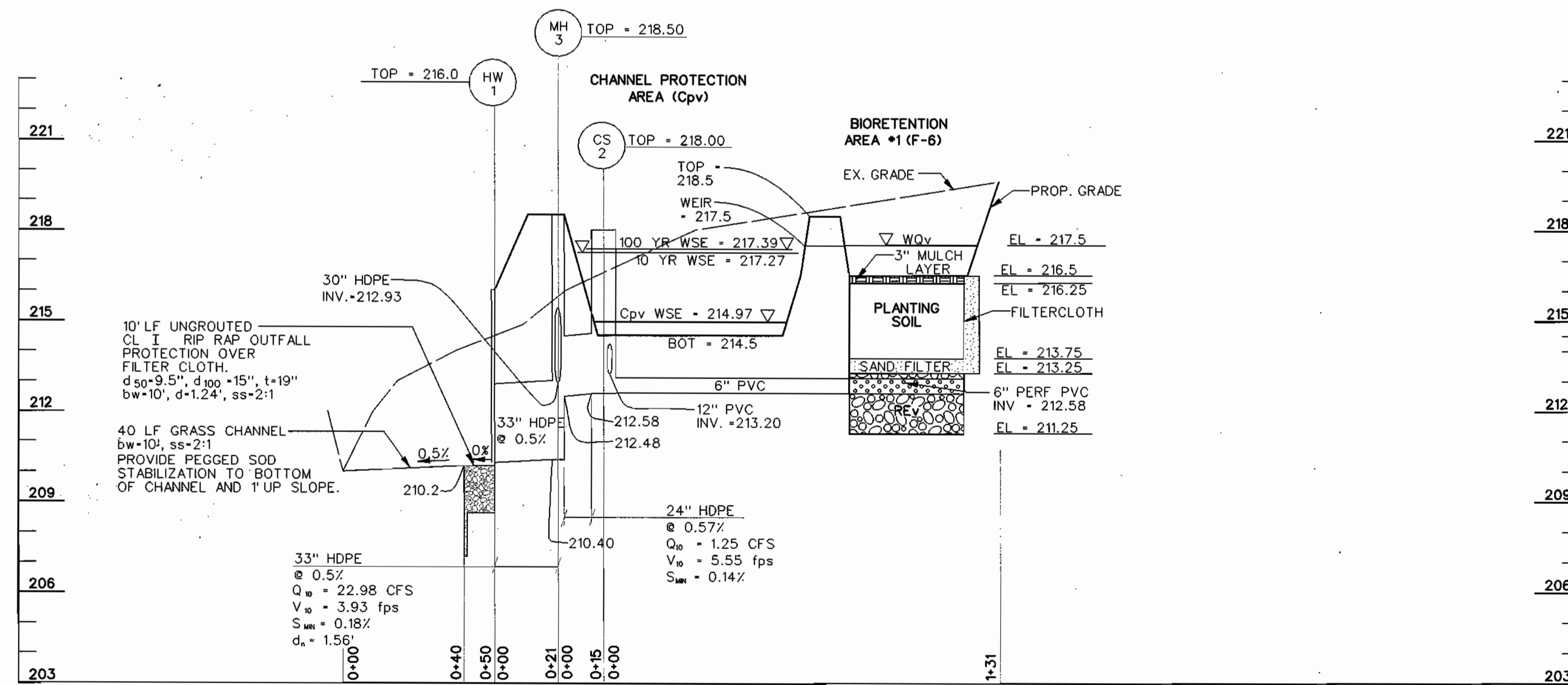
STORM DRAIN PROFILE

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'



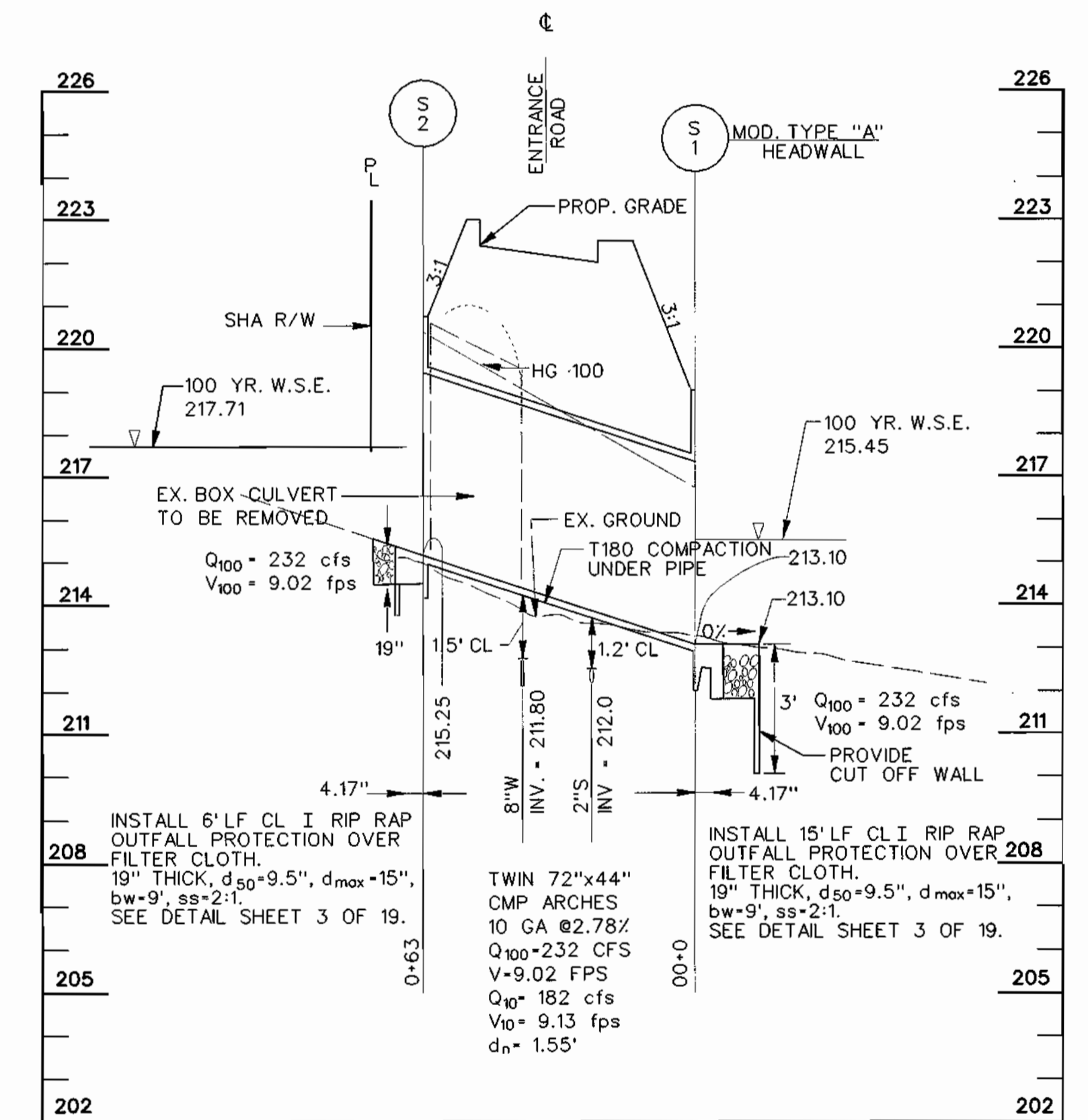
STORM DRAIN PROFILE

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'



STORM DRAIN PROFILE

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'



STORM DRAIN PROFILE

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 4/13/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5/6/03
 DIRECTOR

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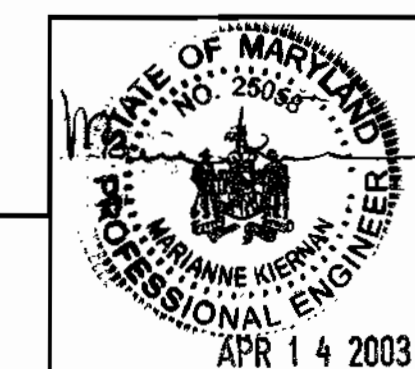
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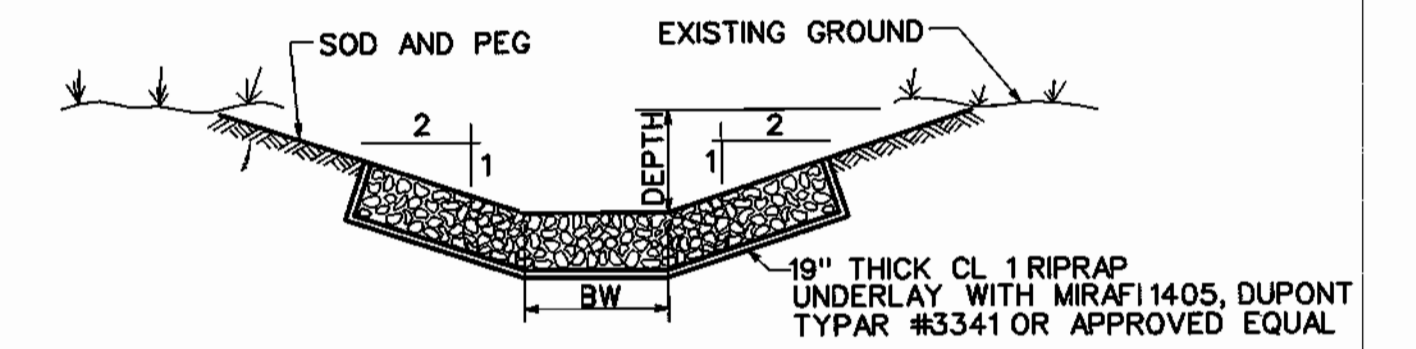
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STORM DRAIN PROFILES



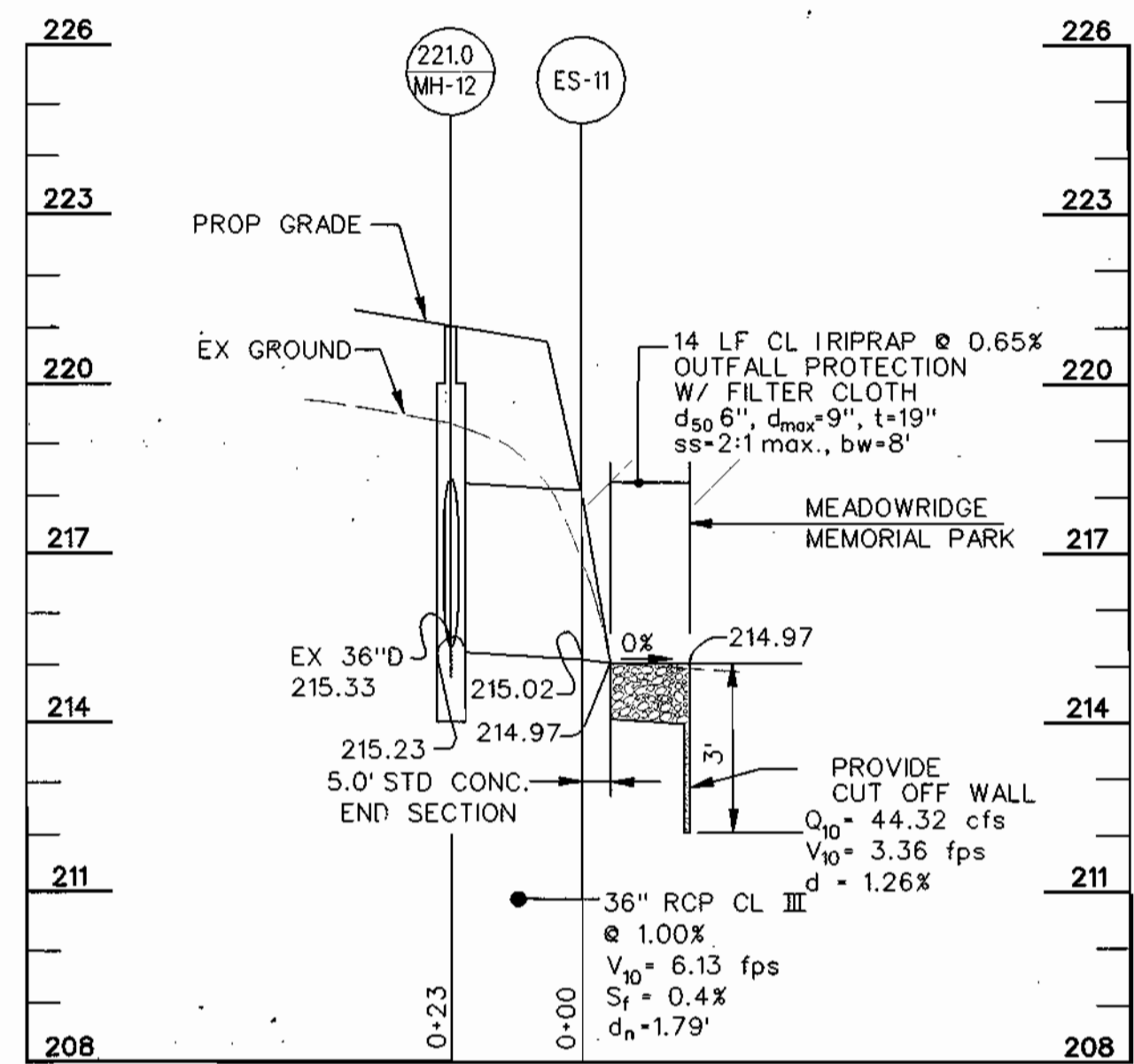
KANE COMPANIES, INC. HEADQUARTERS
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 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 30 0 15 30 60
 (IN FEET)
 1 inch = 30 ft.
 DATE: APRIL 9, 2003
 SHEET 5 OF 22



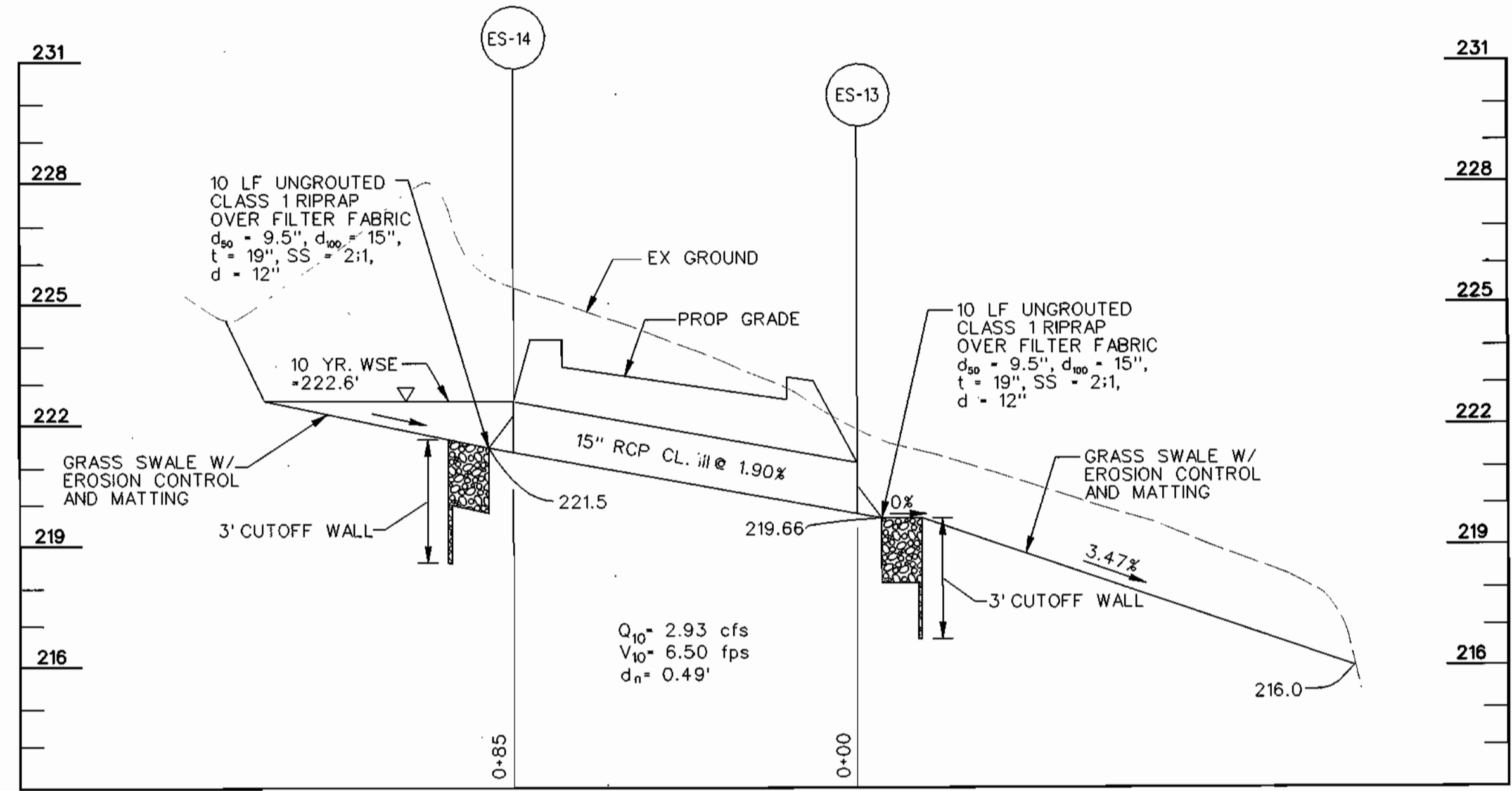
- NOTES:
- ALL RIP-RAP TO BE UNDERLAID WITH ONE COURSE OF THE FOLLOWING NON-WOVEN CLOTH FABRIC OR AN APPROVED EQUAL:
 - MIRAFI 140-N
 - EXXON GEOTEXTILES 130-D
 - TERRATEX SD
 - PROVIDE FILTERCLOTH LINING.

RIPRAP TRAPEZOIDAL CHANNEL DETAIL
NOT TO SCALE

RIPRAP CHANNEL DESIGN TABLE				
STRUCTURE	DESIGN (cfs) Q	BW (ft)	DEPTH (ft)	VELOCITY (ft/s)
HW-1	Q ₀ = 22.98 cfs	10	0.91	2.41
ES-11	Q ₀ = 44.42 cfs	8	0.72	6.58
ES-13	Q ₀ = 2.93 cfs	4	0.45	5.24
ES-14	Q ₀ = 2.93 cfs	4	0.45	1.32
S-1	Q ₀ = 182 cfs	40	0.50	6.79
S-2	Q ₀ = 182 cfs	40	0.50	6.79

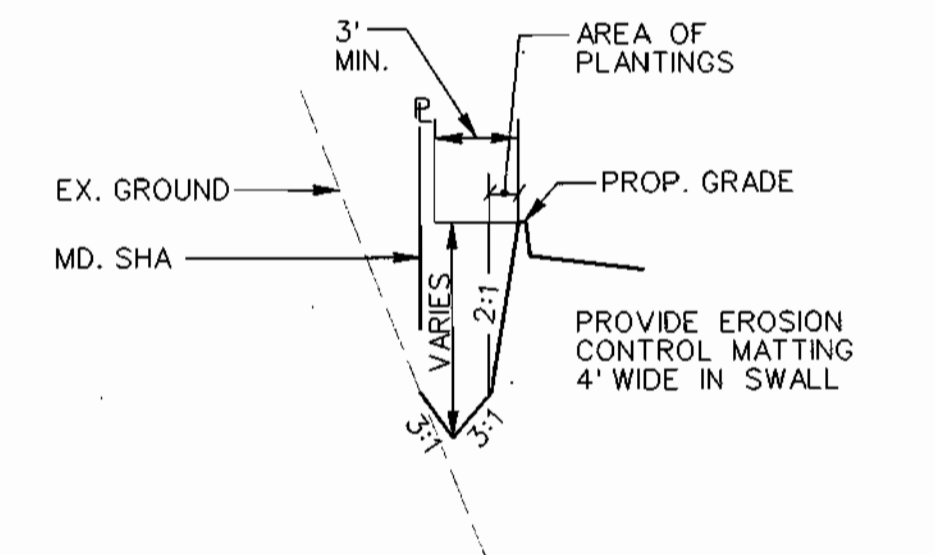


STORM DRAIN PROFILE
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

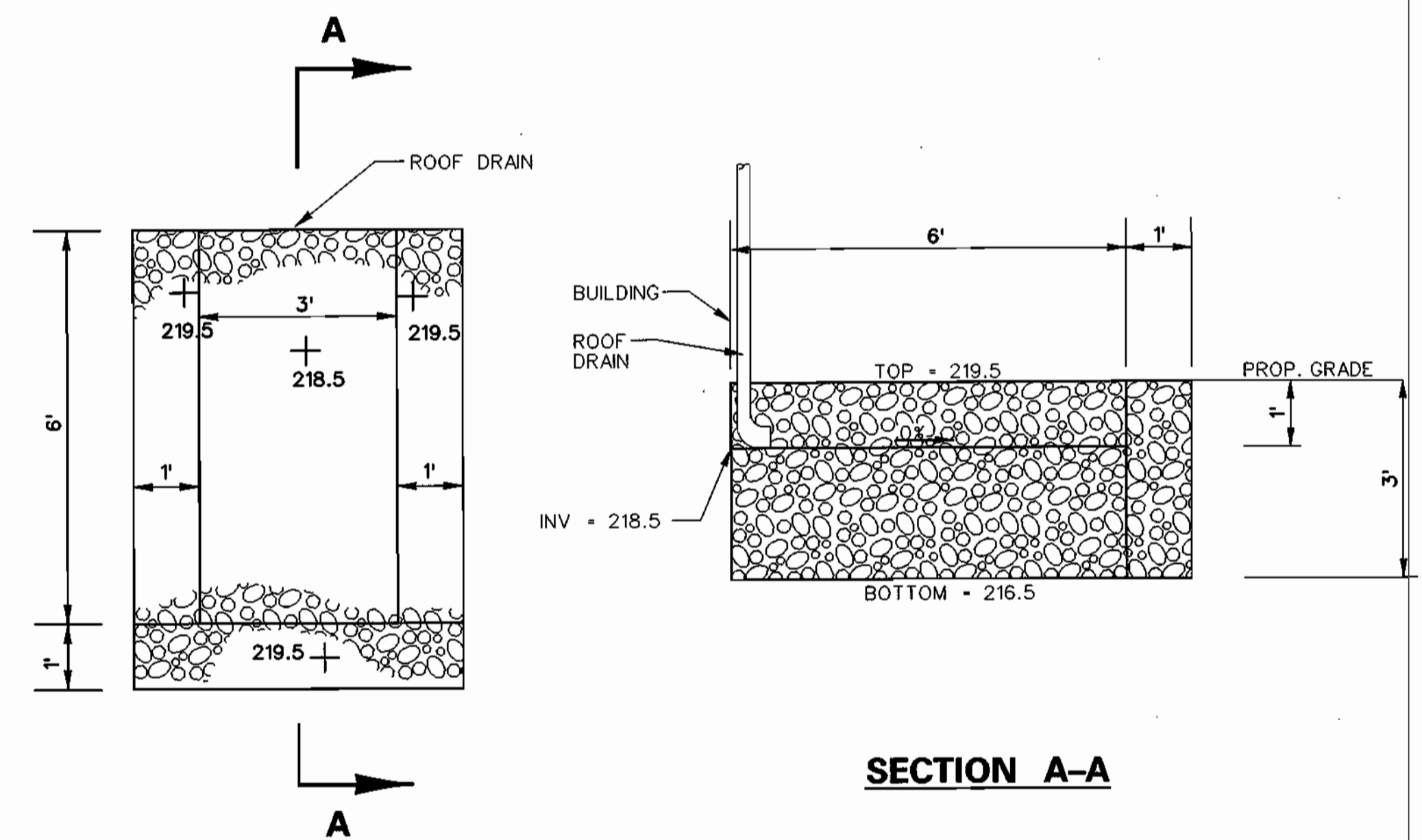


STORM DRAIN PROFILE
SCALE: HORZ. 1" = 30'
VERT. 1" = 3'

STRUCTURE SCHEDULE						
STRUCTURE NUMBER	TYPE	TOP ELEV.	INVERT OUT	INVERT IN	LOCATION	REMARK
HW-1	HEADWALL	216.0	210.2	----	SEE PLAN	HoCo STD SD - 5.21
CS-2	CONTROL STRUCTURE	218.00	212.48	212.58	SEE PLAN	SEE DETAIL SHEET
CS-4	CONTROL STRUCTURE	221.00	214.00	214.00	SEE PLAN	SEE DETAIL SHEET
MH-3	MANHOLE	218.50	210.20	212.40	SEE PLAN	HoCo STD G5.13
MH-5	MANHOLE	220.75	214.0	214.0	SEE PLAN	MD SHA STD 384.07
CS-6	CONTROL STRUCTURE	220.00	216.50	216.50	SEE PLAN	SEE DETAIL SHEET
MH-7	MANHOLE	220.75	214.0	214.0	SEE PLAN	MD SHA STD 384.07
ES-11	END SECTION	----	214.97	----	SEE PLAN	HoCo STD SD - 5.51
MH-12	MANHOLE	221.00	215.23	215.33	SEE PLAN	HoCo STD G5.12
ES-13	END SECTION	----	220.00	----	SEE PLAN	----
ES-14	END SECTION	----	----	221.5	SEE PLAN	----
I-15	SHALLOW INLET	221.67	218.3	----	SEE PLAN	MD SHA STD 374.66
I-16	SHALLOW INLET	224.67	222.5	----	SEE PLAN	MD SHA STD 374.66

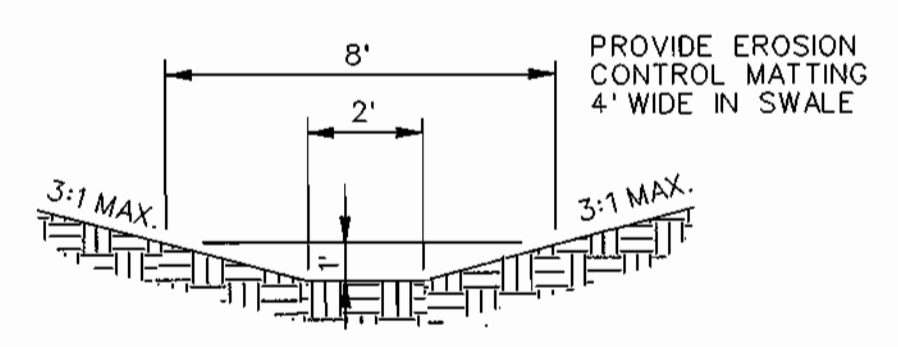


TYPICAL GRASS SWALE DETAIL
ALONG RTE I-95 @ PROPERTY LINE
NOT TO SCALE



GABION OUTFALL DETAIL FOR ROOF DRAIN
IN BIORETENTION AREA #3
SCALE: 1"=2'

PIPE SCHEDULE			
FROM	TO	TYPE	LENGTH
Cpv	CS-6	15" HDPE	55'
CS-2	MH-3	24" HDPE	15'
MH-5	MH-7	60" ACPM GA 14	620'
MH-3	HW-1	33" HDPE	21'
CS-4	MH-3	30" HDPE	178'
MH-12	ES-11	36" RCP - CL. III	23'
ES-13	ES-14	15" RCP - CL. III	85'
I-15	----	23" x 14" CL. V HEP	2'
I-16	----	23" x 14" CL. V HEP	2'



* GRASS SWALE CREDIT FOR W0v & Rev
1" STORM VELOCITY FOR SWALE #1 IS 0.42 FPS
1" STORM VELOCITY FOR SWALE #2 IS 0.82 FPS
SEE COMPUTATIONS PAGE 74
GRASS 1 & 2 SWALE DETAIL
NOT TO SCALE

GRASS SWALE DESIGN TABLE				
STRUCTURE	DESIGN (cfs) Q	BW (ft)	DEPTH (ft)	VELOCITY (ft/s)
HW-1	Q ₀ = 22.98 cfs	10	1.38	1.30
ES-14	Q ₀ = 2.97 cfs	4	0.29	2.19
SWALE #1	Q ₀ = 1.97 cfs	2	0.25	2.86
SWALE #2	Q ₀ = 4.06 cfs	2	0.27	3.69

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

DATE	REVISIONS
4/1/03	
5/1/03	
5/1/03	

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CONTRACT PURCHASER & DEVELOPER: **CREANEY & SMITH GROUP LLC**
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STORMDRAIN PROFILES



KANE COMPANIES, INC. HEADQUARTERS
PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.
DATE: APRIL 9, 2003
SHEET 6 OF 22

REINFORCING: DEFORMED STEEL BARS (1/2" DIA.)
CHAMFER ALL EXPOSED EDGES (1/4") OR AS DIRECTED.
CONC. SHALL BE S.M.A. MIX NO. 2.

OPENINGS	DIMENSIONS										VOLUME/WEIGHT	
D	A	B	C	E	F	H	L	CONC.	C	W	STEEL	W
IN	IN	IN	IN	IN	IN	IN	IN	CU YD	CU YD	CU YD	CU YD	CU YD
12	12	12	12	12	12	12	12	0.15	0.15	0.15	0.15	0.15
18	18	18	18	18	18	18	18	0.25	0.25	0.25	0.25	0.25
24	24	24	24	24	24	24	24	0.40	0.40	0.40	0.40	0.40
30	30	30	30	30	30	30	30	0.60	0.60	0.60	0.60	0.60
36	36	36	36	36	36	36	36	0.90	0.90	0.90	0.90	0.90
42	42	42	42	42	42	42	42	1.35	1.35	1.35	1.35	1.35

REV. MAR. 1986

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

TYPE "C" ENDWALL
CIRCULAR PIPE

DRAWN BY: J.A.S.
CHECKED BY: J.A.S.
SCALE: NONE
SD 4-31

NOTES

- SEE GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES ON DETAIL 65.11.
- FOR PIPE SIZES 42" AND LARGER USE DETAIL 65.03.
- WHERE "A" IS LESS THAN 4.5' USE SHALLOW MANHOLE.

SLAB REINFORCING SHALLOW PRECAST MANHOLE

MINIMUM SLAB REINFORCING: $A_1 = 0.23 \text{ SQ. IN. / FT.}^2$

MINIMUM LONGITUDINAL REINFORCING FOR ALL SECTIONS: $A_2 = 0.02 \text{ SQ. IN. / FT.}^2$

MINIMUM CIRCUMFERENTIAL REINFORCING (48" DIA. & TAPER): $A_3 = 20" A_4 = 0.17 \text{ SQ. IN. / FT.}^2$
 $A_3 = 20" A_4 = 0.22 \text{ SQ. IN. / FT.}^2$

MINIMUM CIRCUMFERENTIAL REINFORCING (60" DIA. & TAPER): $A_3 = 20" A_4 = 0.23 \text{ SQ. IN. / FT.}^2$
 $A_3 = 20" A_4 = 0.29 \text{ SQ. IN. / FT.}^2$

MINIMUM SLAB REINFORCING: $A_1 = 0.23 \text{ SQ. IN. / FT.}^2$

MINIMUM LONGITUDINAL REINFORCING FOR ALL SECTIONS: $A_2 = 0.02 \text{ SQ. IN. / FT.}^2$

MINIMUM CIRCUMFERENTIAL REINFORCING (48" DIA. & TAPER): $A_3 = 20" A_4 = 0.17 \text{ SQ. IN. / FT.}^2$
 $A_3 = 20" A_4 = 0.22 \text{ SQ. IN. / FT.}^2$

MINIMUM CIRCUMFERENTIAL REINFORCING (60" DIA. & TAPER): $A_3 = 20" A_4 = 0.23 \text{ SQ. IN. / FT.}^2$
 $A_3 = 20" A_4 = 0.29 \text{ SQ. IN. / FT.}^2$

REV. MAR. 1986

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

5'-0" STANDARD AND SHALLOW PRECAST MANHOLE FOR USE WITH 27 INCH TO 36" PIPES

DRAWN BY: J.A.S.
CHECKED BY: J.A.S.
SCALE: NONE
65.13

PRECAST WR INLET

REV. MAR. 1986

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

PRECAST WR INLET

DRAWN BY: J.A.S.
CHECKED BY: J.A.S.
SCALE: NONE
SD 4-35

CONCRETE END SECTION

REV. MAR. 1986

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

CONCRETE END SECTION
CIRCULAR CONCRETE PIPE

DRAWN BY: J.A.S.
CHECKED BY: J.A.S.
SCALE: NONE
SD 4-31

NOTES

- SEE GENERAL NOTES APPLICABLE TO ALL PRECAST MANHOLES ON DETAIL 65.11.
- FOR PIPE SIZES 42" AND LARGER USE DETAIL 65.03.
- WHERE "A" (COVER) IS MORE THAN 4.5 FEET USE STANDARD PRECAST MANHOLE.

SLAB REINFORCING SHALLOW PRECAST MANHOLE

MINIMUM LONGITUDINAL REINFORCING 0.02 SQ. INCHES PER LINEAR FT.

MINIMUM CIRCUMFERENTIAL REINFORCING (48" DIA. & TAPER): $A_3 = 20" A_4 = 0.17 \text{ SQ. IN. / FT.}^2$
 $A_3 = 20" A_4 = 0.22 \text{ SQ. IN. / FT.}^2$

MINIMUM CIRCUMFERENTIAL REINFORCING (60" DIA. & TAPER): $A_3 = 20" A_4 = 0.23 \text{ SQ. IN. / FT.}^2$
 $A_3 = 20" A_4 = 0.29 \text{ SQ. IN. / FT.}^2$

MINIMUM SLAB REINFORCING: $A_1 = 0.23 \text{ SQ. IN. / FT.}^2$

MINIMUM LONGITUDINAL REINFORCING FOR ALL SECTIONS: $A_2 = 0.02 \text{ SQ. IN. / FT.}^2$

MINIMUM CIRCUMFERENTIAL REINFORCING (48" DIA. & TAPER): $A_3 = 20" A_4 = 0.17 \text{ SQ. IN. / FT.}^2$
 $A_3 = 20" A_4 = 0.22 \text{ SQ. IN. / FT.}^2$

MINIMUM CIRCUMFERENTIAL REINFORCING (60" DIA. & TAPER): $A_3 = 20" A_4 = 0.23 \text{ SQ. IN. / FT.}^2$
 $A_3 = 20" A_4 = 0.29 \text{ SQ. IN. / FT.}^2$

REV. MAR. 1986

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

4'-0" STANDARD AND SHALLOW PRECAST MANHOLE FOR USE WITH 24" AND SMALLER PIPE

DRAWN BY: J.A.S.
CHECKED BY: J.A.S.
SCALE: NONE
65.12

STANDARD PRECAST MANHOLE

REV. MAR. 1986

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

4'-0" STANDARD AND SHALLOW PRECAST MANHOLE FOR USE WITH 24" AND SMALLER PIPE

DRAWN BY: J.A.S.
CHECKED BY: J.A.S.
SCALE: NONE
65.12

STANDARD PRECAST MANHOLE

REV. MAR. 1986

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

4'-0" STANDARD AND SHALLOW PRECAST MANHOLE FOR USE WITH 24" AND SMALLER PIPE

DRAWN BY: J.A.S.
CHECKED BY: J.A.S.
SCALE: NONE
65.12

STANDARD PRECAST MANHOLE

REV. MAR. 1986

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]*
Chief - Bureau of Engineering

4'-0" STANDARD AND SHALLOW PRECAST MANHOLE FOR USE WITH 24" AND SMALLER PIPE

DRAWN BY: J.A.S.
CHECKED BY: J.A.S.
SCALE: NONE
65.12

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

Drafting: CGW
Check: CGW
Design: CGW
Check: THM

DATE: 5/18/03

DATE: 5/18/03

DATE: 5/18/03

DATE: 5/18/03

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

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DATE: 5/18/03

DATE: 5/18/03

KANE COMPANIES, INC.
HEADQUARTERS

PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000

STATE OF MARYLAND
PROFESSIONAL ENGINEER

SCALE AS SHOWN
DATE: APRIL 9, 2003
SHEET 7 OF 22

APR 14 2003 SDP-02-53

1602008\DRAWINGS\WSDDETAILS.dgn

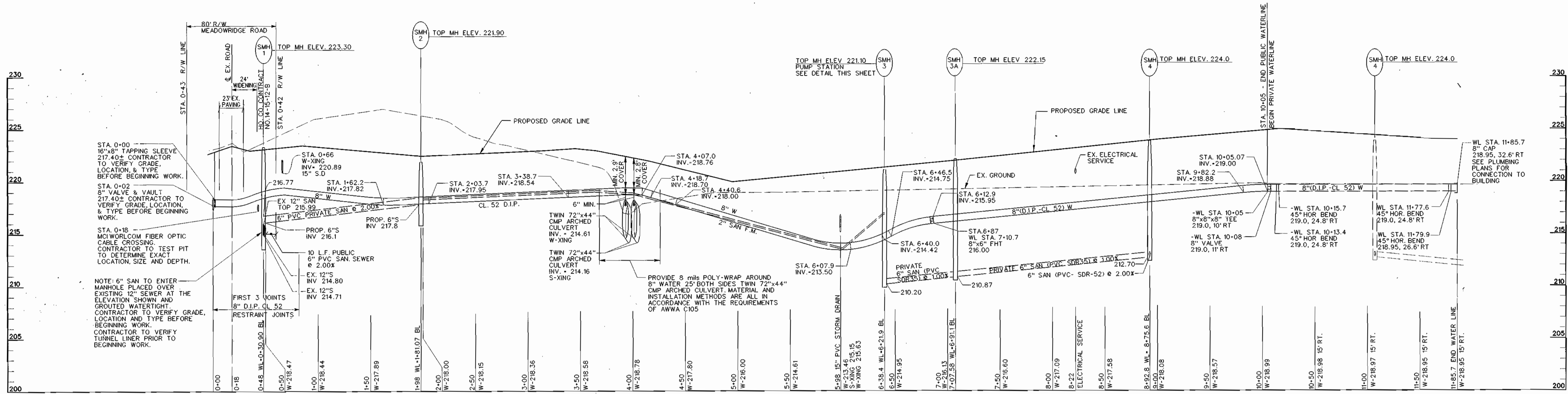
KCI TECHNOLOGIES
ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS

1502 Greenview Drive, Suite 424
Laurel, Maryland 20708
(301) 913-1821 (410) 792-8086
fax: (410) 792-7419
www.kci.com

C & S MEADOWRIDGE, LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

CREANEY & SMITH GROUP LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

STORMDRAIN DETAILS

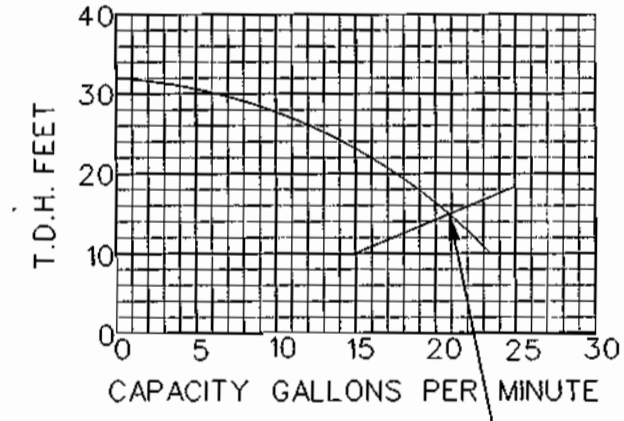


WATER & SANITARY PROFILE
 SCALE: HORZ. 1" = 50'
 VERT. 1" = 5'

SANITARY PUMP STATION DESIGN DATA

AVERAGE DAILY FLOW
 OFFICE : 15,684 SQ. FT. X 0.09GPD=1411GPD
 WAREHOUSE: 70,576 SQ. FT. X 0.03GPD=1371GPD
 WORKSHOP: 8,611 SQ. FT. X 0.018GPD=155GPD
 AVERAGE DAILY FLOW = 4405GPD
 INFILTRATION: 0.8AC * 400GPD=320GPD

DESIGN FLOW: 4162 GPD X 2 = 320 GPD = 9130GPD
 = 0.009MGD
 = 6.3 GPM

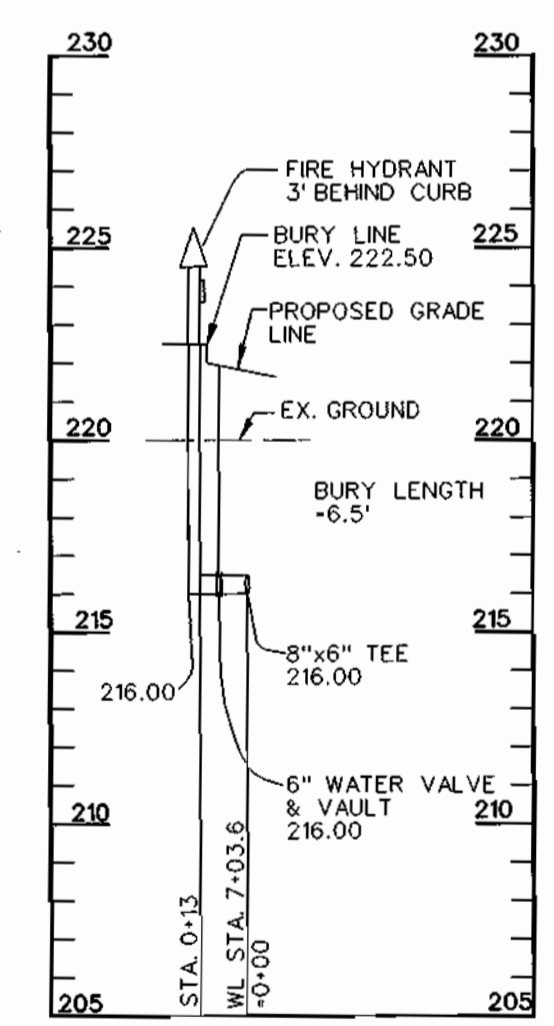


DESIGN POINT
 20.8 GPM V=2.12F.P.S.

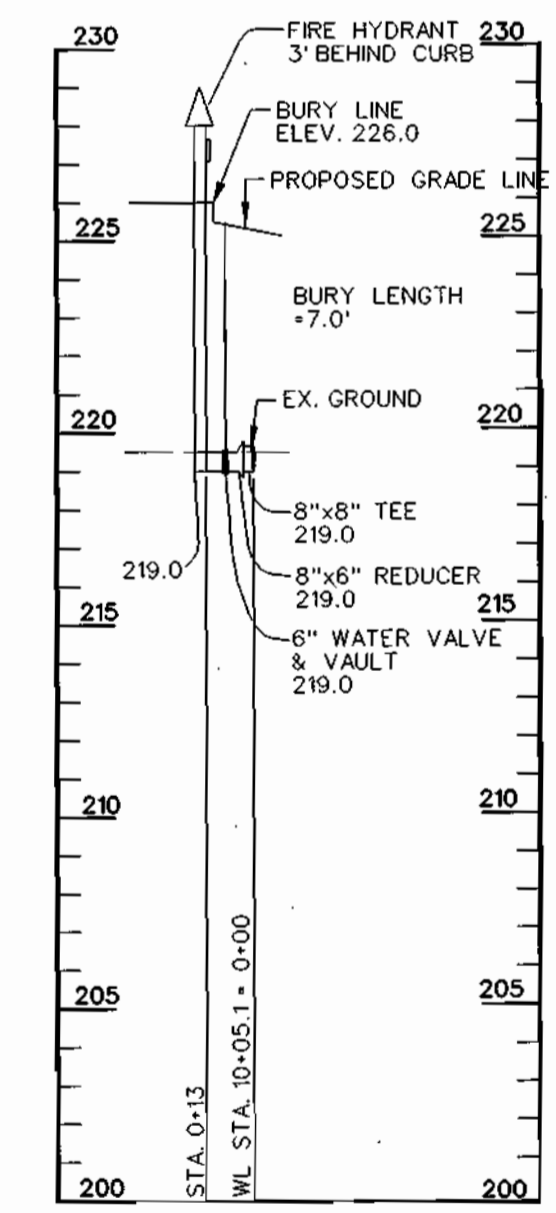
SYSTEM CURVE

(TWIN) MYERS WGL-20
 2HP GRINDER PUMP -3450 RPM
 3 1/8" IMPELLER DIAM.

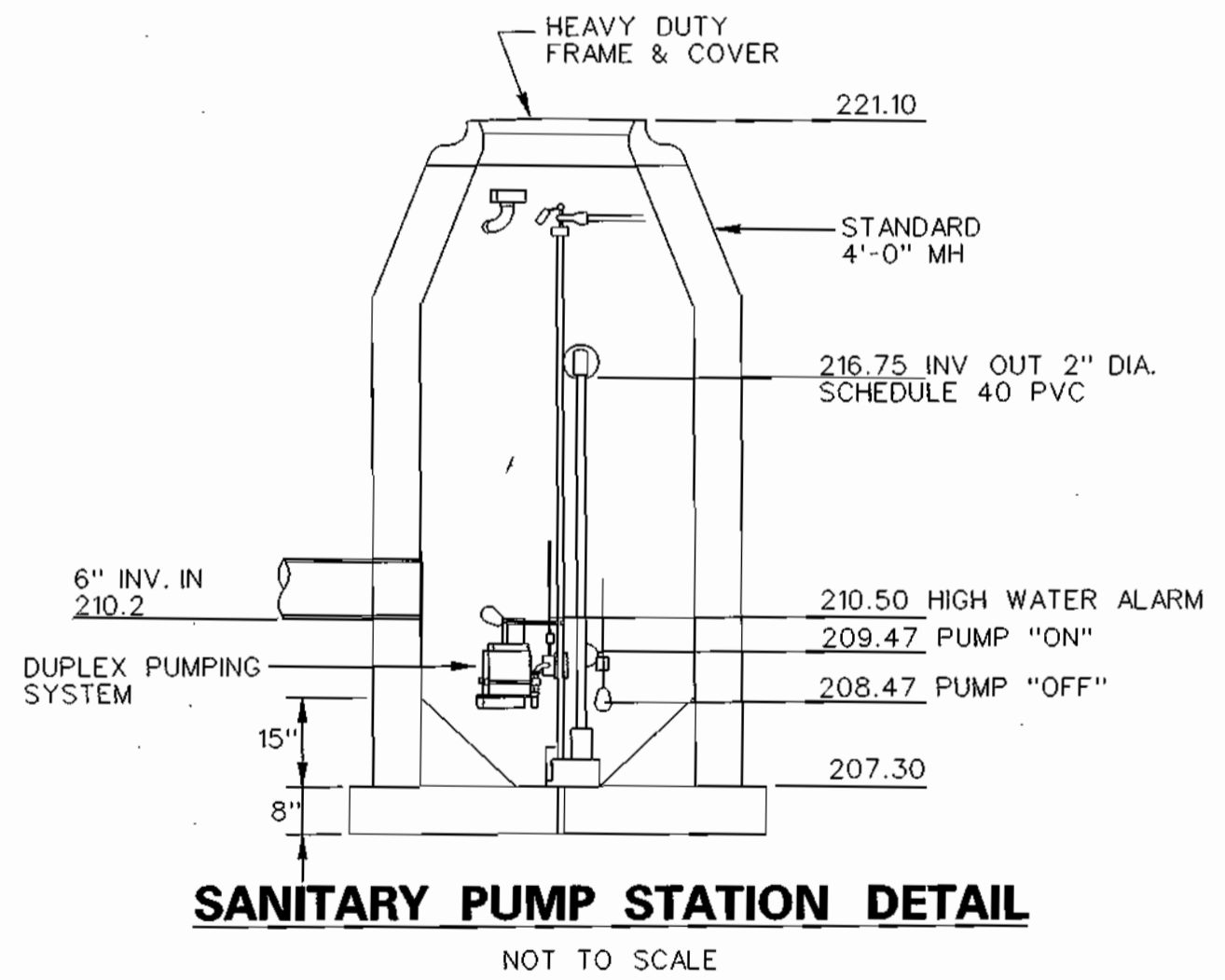
NOTE: SWITCH GEAR SHALL BE PROVIDED FOR ALTERATING OPERATION OF PUMPS.



WATER PROFILE
 SCALE: HORZ. 1" = 30'
 VERT. 1" = 5'



WATER PROFILE
 SCALE: HORZ. 1" = 30'
 VERT. 1" = 5'



SANITARY PUMP STATION DETAIL
 NOT TO SCALE

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/16/03

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5/16/03

DIRECTOR
 DATE: 5/16/03

Drafting	AWW	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

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 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

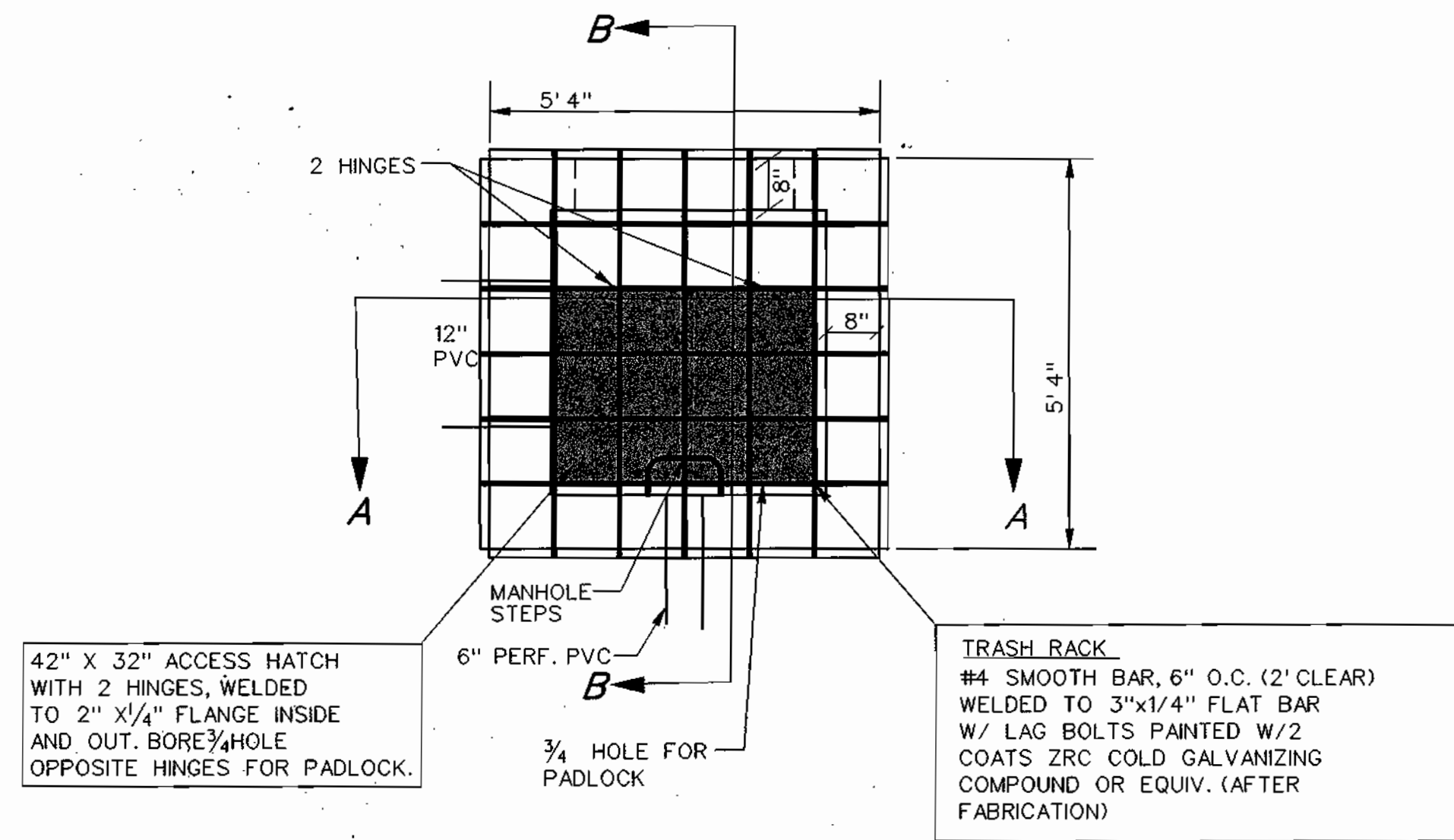
CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

WATER & SEWER PROFILES

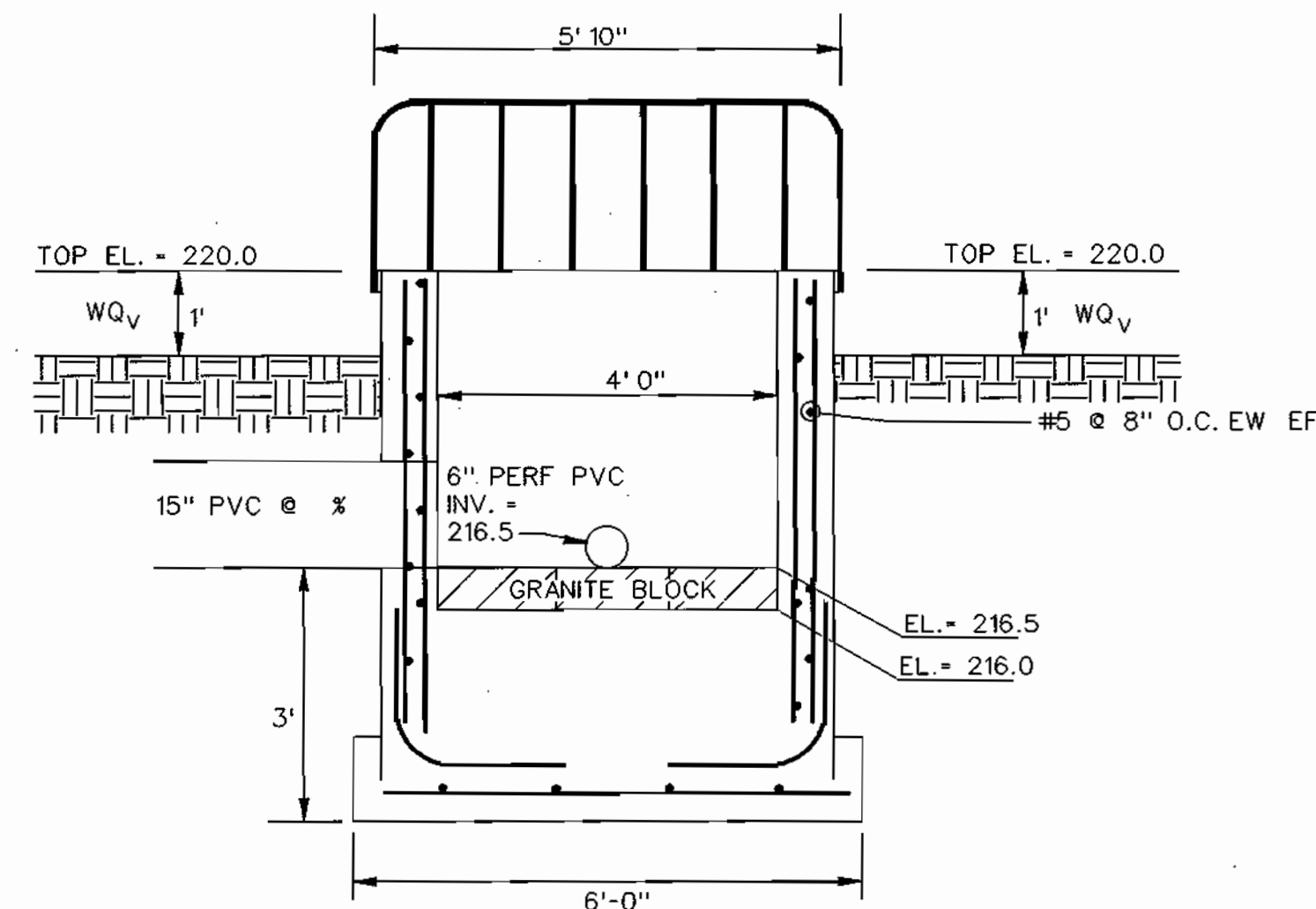


KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000

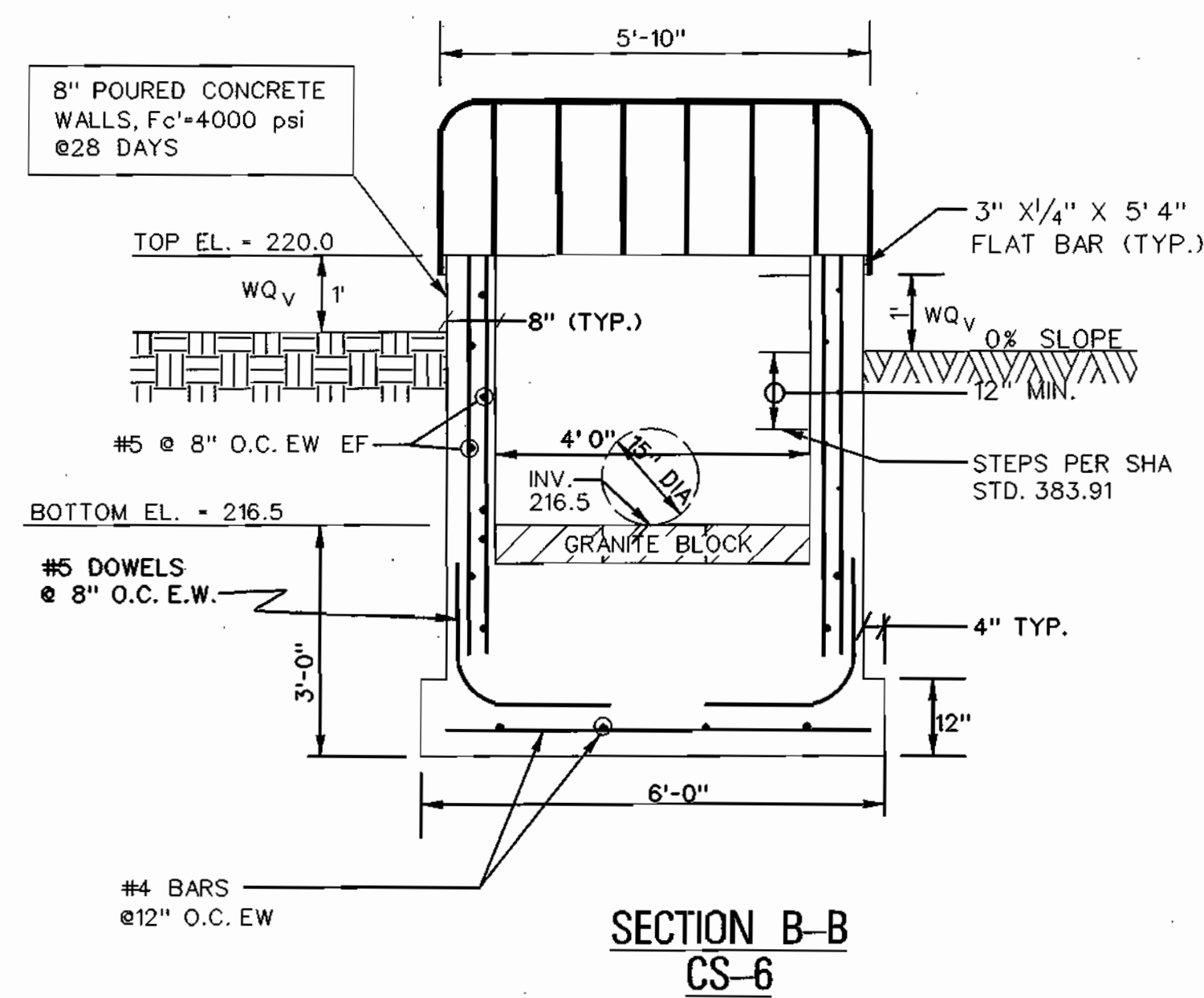
SCALE AS SHOWN
 DATE: APRIL 9, 2003
 SHEET 8 OF 22



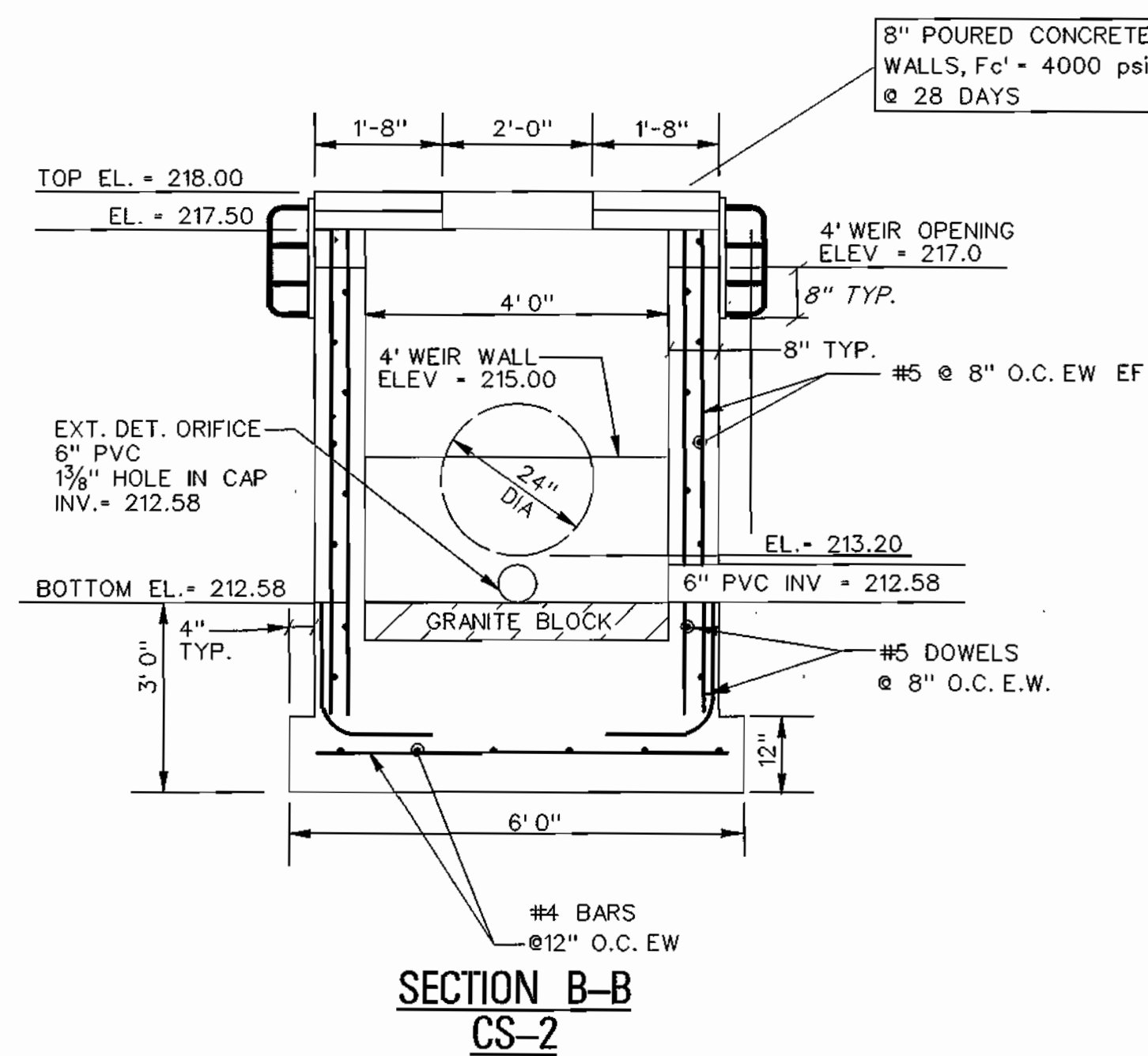
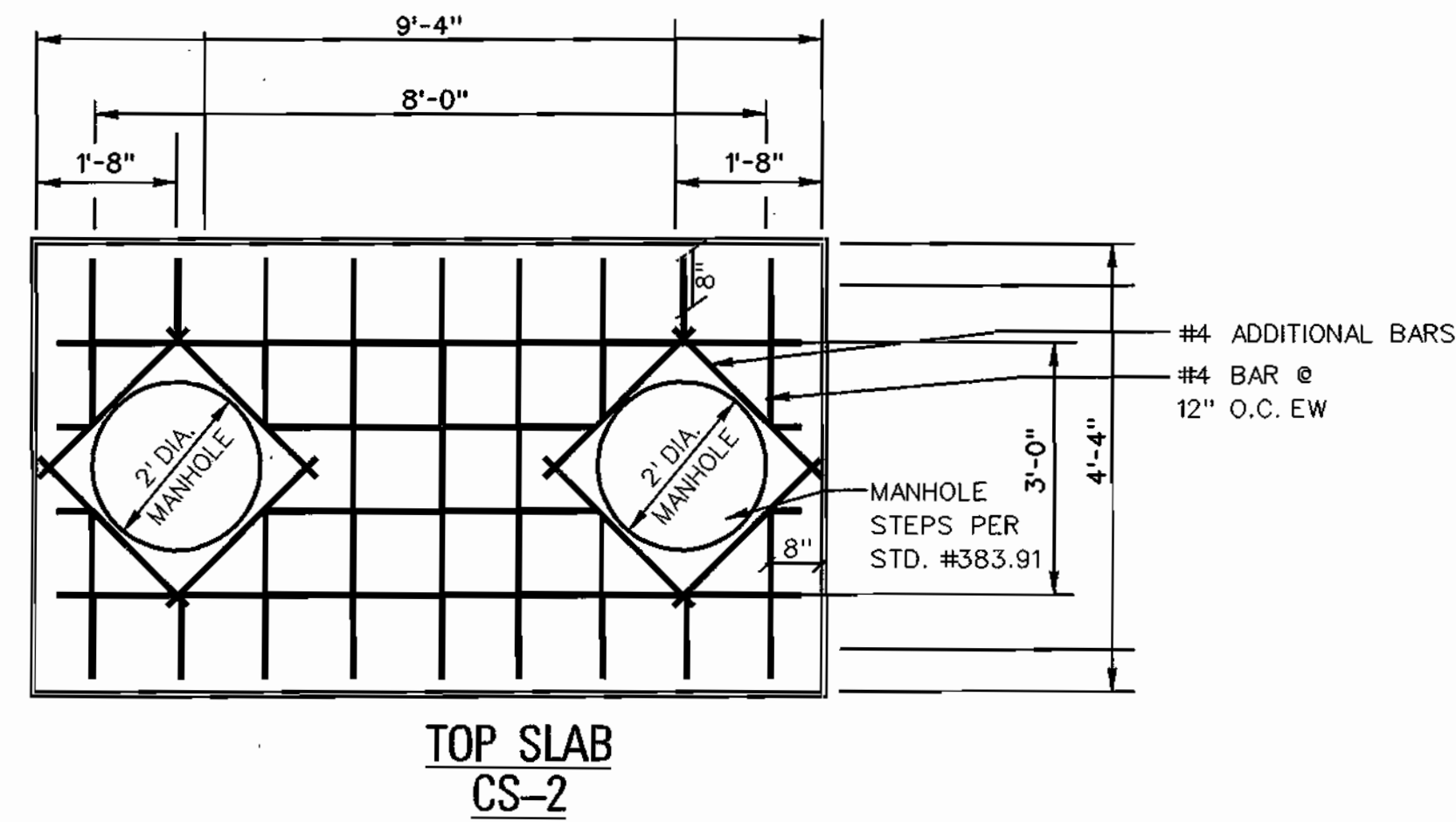
TOP SECTION
CS-6



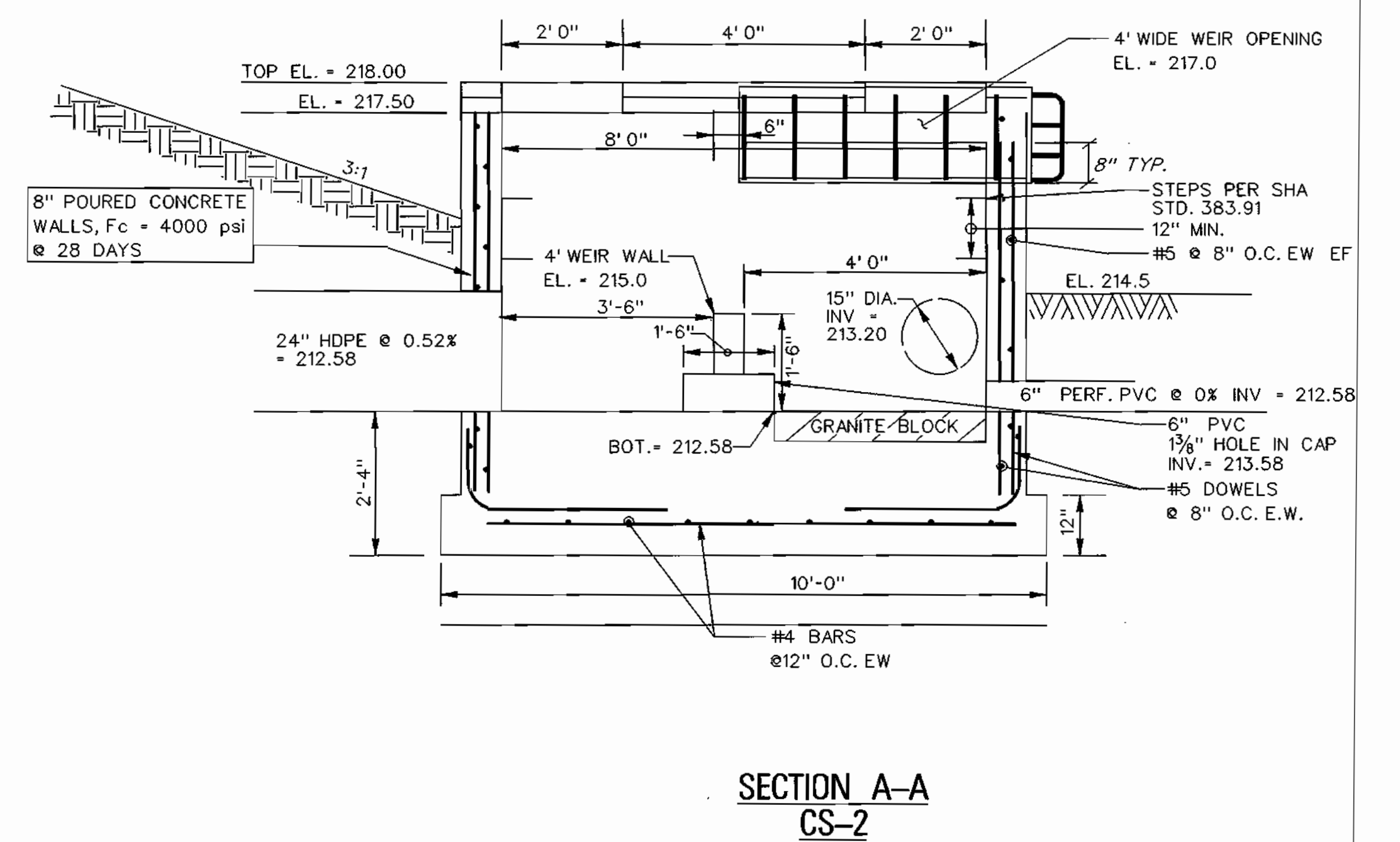
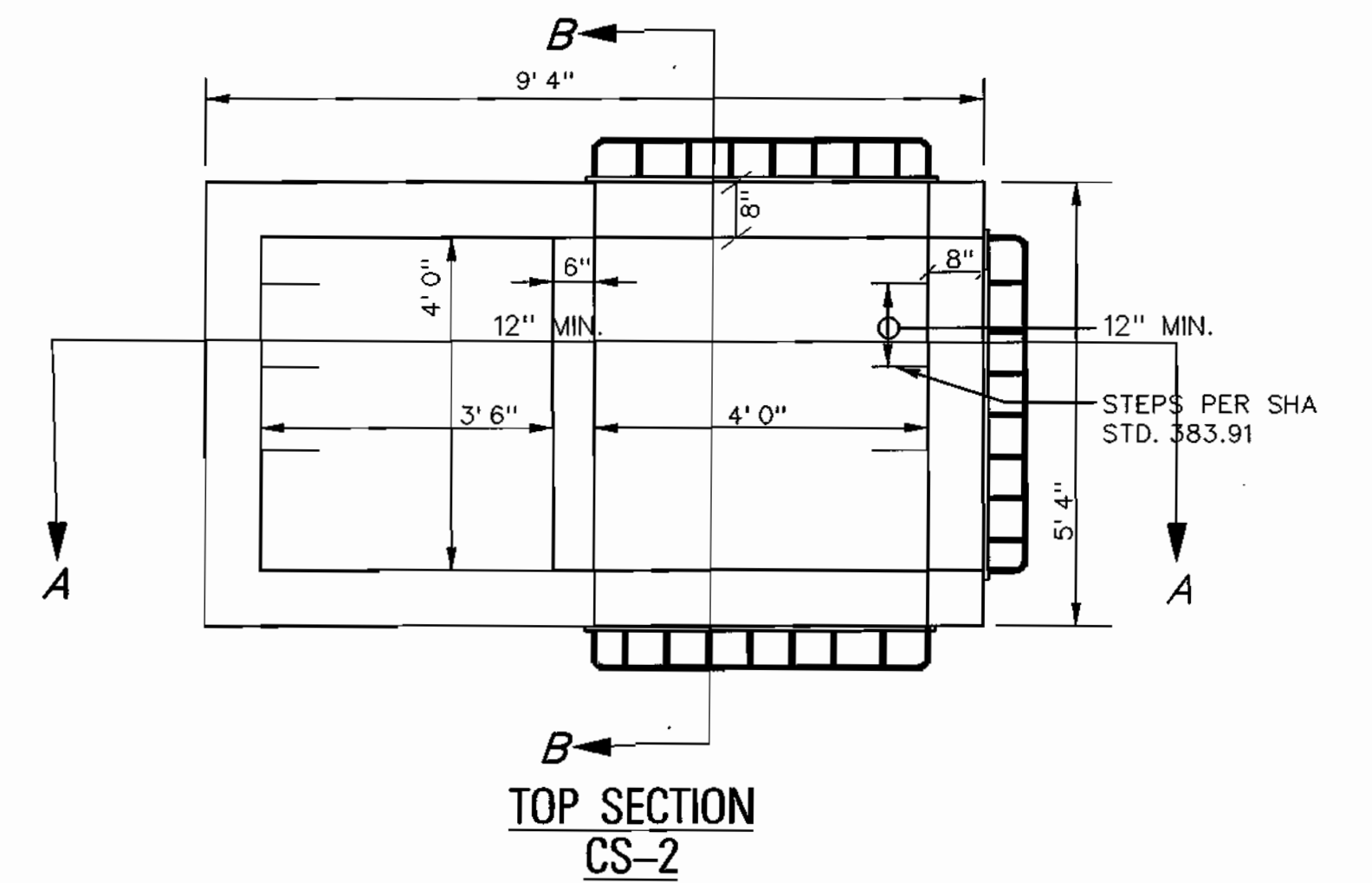
SECTION A-A
CS-6



SECTION B-B
CS-6

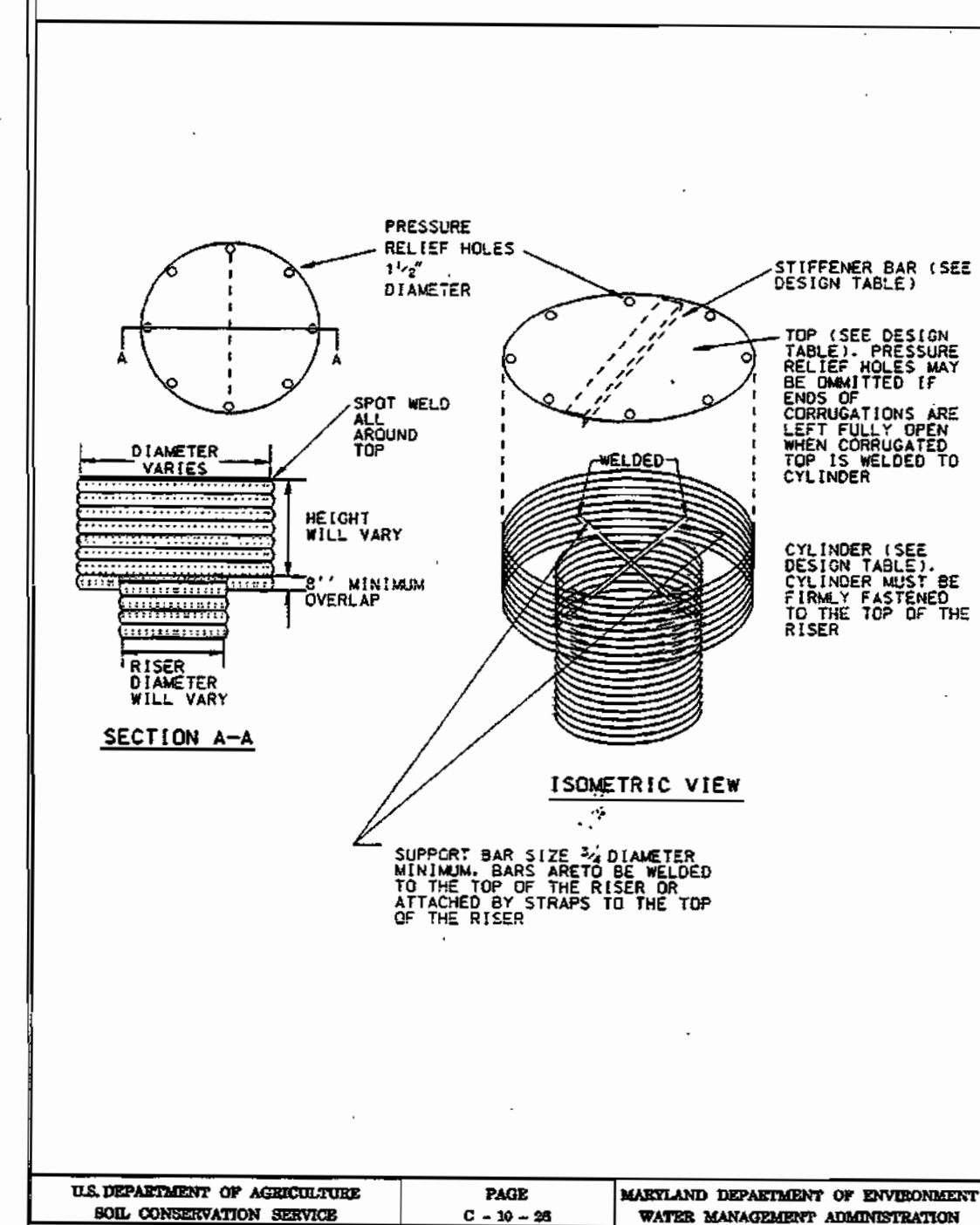


SECTION B-B
CS-2



SECTION A-A
CS-2

DETAIL 16 - CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE



DETAIL 16 CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE (continued)

Riser Diam. In.	Trash Rack Cylinder Dia. In.	Thick. In.	H. In.	Minimum Size Support Bar	Minimum Top Th. Gauge	Stiffener
12	18	16	6	#6 Rebar	16 ga.	---
15	21	16	7	"	"	---
18	27	16	8	"	"	---
21	30	16	11	"	"	---
24	36	16	13	"	"	14 ga.
27	42	16	15	"	"	14 ga.
36	54	14	17	#8 Rebar	12 ga.	---
42	60	14	19	"	"	---
48	72	12	21	1-1/2" pipe or 1-1/2 x 1-1/2 x 1/4 angle	10 ga.	---
54	78	12	25	"	"	---
60	90	12	29	1-1/2" pipe or 1-1/2 x 1-1/2 x 1/4 angle	8 ga.	---
66	96	10	33	2" pipe or 2-1/2 x 1/2 angle	8 ga.	2x2x1/4 w/stiffener
72	102	10	36	"	"	2-1/2x2-1/2 1/4 angle
78	114	10	39	2-1/2" pipe or 2x2x1/4 angle	"	---
84	120	10	42	2-1/2" pipe or 2-1/2x2-1/2x1/4 angle	"	2-1/2 x2-1/2x 1/4 angle

Note: The above trash rack and anti-vortex device information is only for corrugated metal pipe. Concrete risers must meet the requirements of MD 378.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

PAGE C - 30 - 26A

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Andy Hamer 5/8/02 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

David McLaughlin 5/6/02 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

David McLaughlin 5/6/02 DATE
DIRECTOR

Drafting	DATE	REVISIONS
JAB		
CGW		
CGW		
TJM		

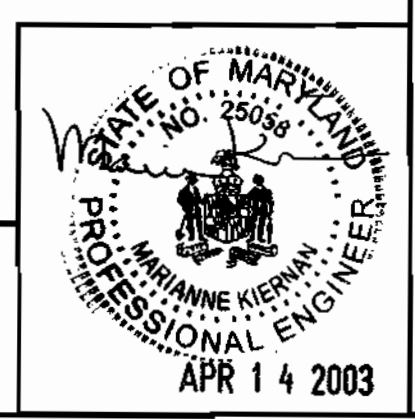
KCI ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS

14502 Greenview Drive, Suite 424
Laurel, Maryland 20708
(301) 953-1821 (410) 792-8086
Fax: (410) 792-7419
www.kci.com

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(410) 534-6350

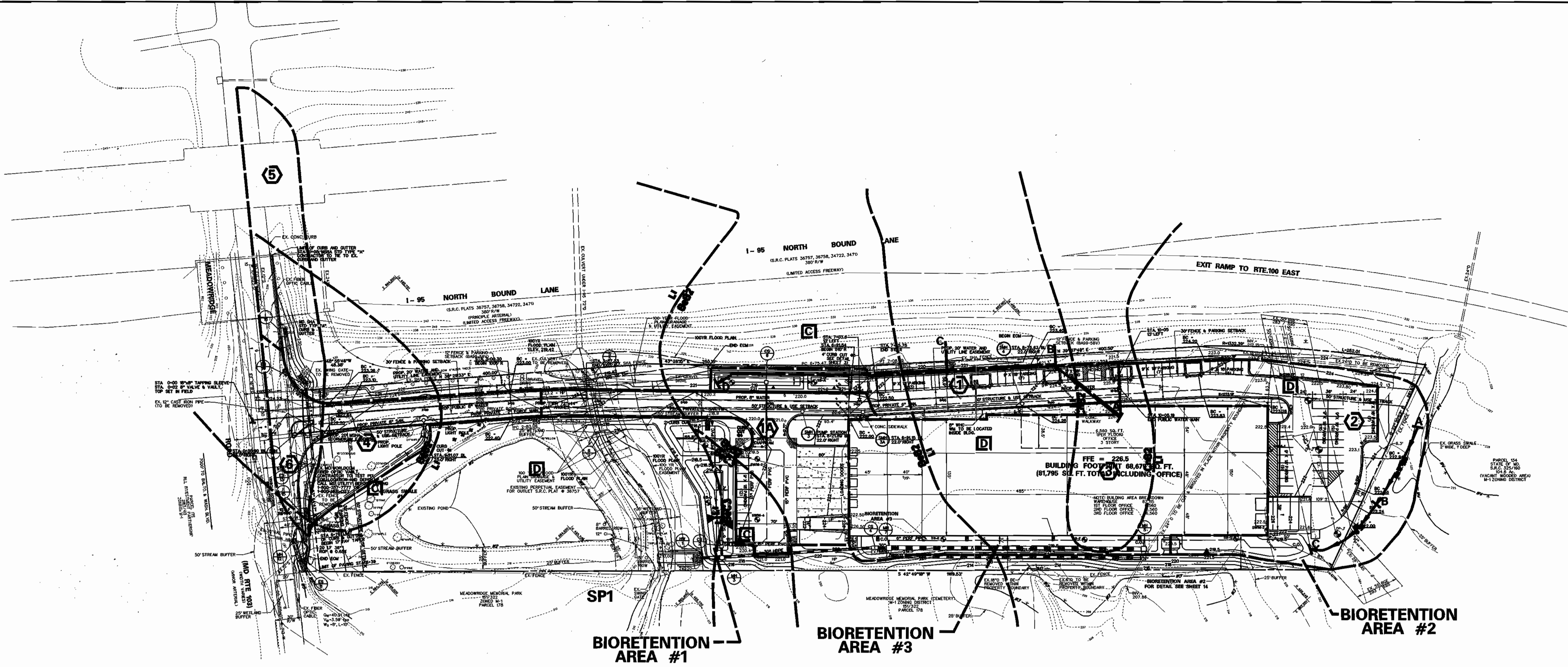
CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

**STORMWATER MANAGEMENT RISER
DETAILS FOR CS-2 & CS-6**



KANE COMPANIES, INC.
HEADQUARTERS
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TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000

1/2 inch = 1ft.
DATE: APRIL 9, 2003
SHEET 9 OF 22



SOIL	HYDROLOGIC GROUP	SOIL DESCRIPTION
BeB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
BeC3	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
L1	D	LEONARDTOWN SILT LOAM
ChB2	C	CHILLUM-FARFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED

CHART			
No.	DRAINAGE AREA (Ac)	% IMPERVIOUS	RcN Tc
(1)	0.50	100%	98 .10
(2)	0.65	100%	98 .10
(3)	0.80	44%	98 .25
(4)	1.56	100%	98 .10
(5)	0.35	51%	86 .10
(6)	0.467	79%	90 .10
(6)	0.147	100%	98 .10

DRAINAGE AREA SUMMARY TABLE							
No.	AREA (Ac)	WQv (CF)	Rev (CF)	Cpv (CF)	Qp (cfs)	Qf (cfs)	BMP
(1)	0.50	1724	261	6470	NA	NA	SAND FILTER F5
(2)	0.65	2242	169	---	NA	NA	BIORETENTION F6
(3)	0.80	1295	78	---	NA	NA	BIORETENTION F6
(4)	1.56	5380	384	8777	NA	NA	BIORETENTION F6
(5)	0.35	847	---	---	NA	NA	* GRASS SWALE
(6)	0.467	1280	---	---	NA	NA	* GRASS SWALE
(6)	0.147	507	---	---	NA	NA	* GRASS SWALE

* GRASS SWALE CREDIT FOR WQv & Rev
 † STORM VELOCITY FOR SWALE #1 IS 0.42 FPS
 † STORM VELOCITY FOR SWALE #2 IS 0.82 FPS
 SEE COMPUTATIONS PAGE 74

LEGEND

- 90 EX. INDEX CONTOUR
- EX. 2' INTERMEDIATE CONTOUR
- EX. CURB AND GUTTER
- EX. GAS LINE
- EX. STORM DRAIN
- EX. FENCE
- EX. EDGE OF WATER
- EX. OVERHEAD UTILITY LINE
- EX. WATER VALVE
- EX. INLET
- EX. MANHOLE
- EX. TREE
- EX. SOILS DELINEATION
- HYDROLOGIC SOILS GROUP
- EX. SOIL BORINGS
- TC PATH
- TC PATH FLOW TYPE
- DRAINAGE AREA
- DRAINAGE AREA BOUNDARY
- 100-YR FLOOD PLAN
- STUDY POINT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 [Signature] DATE 4/10/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] DATE 4/10/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] DATE 5/10/03
 DIRECTOR

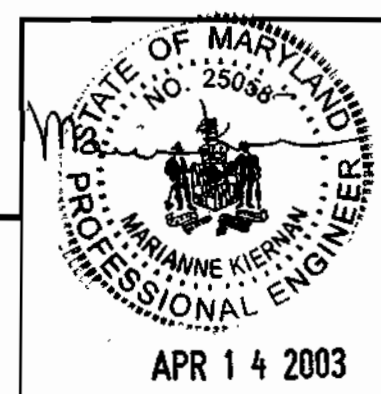
Drafting	JAB	DATE	REVISIONS
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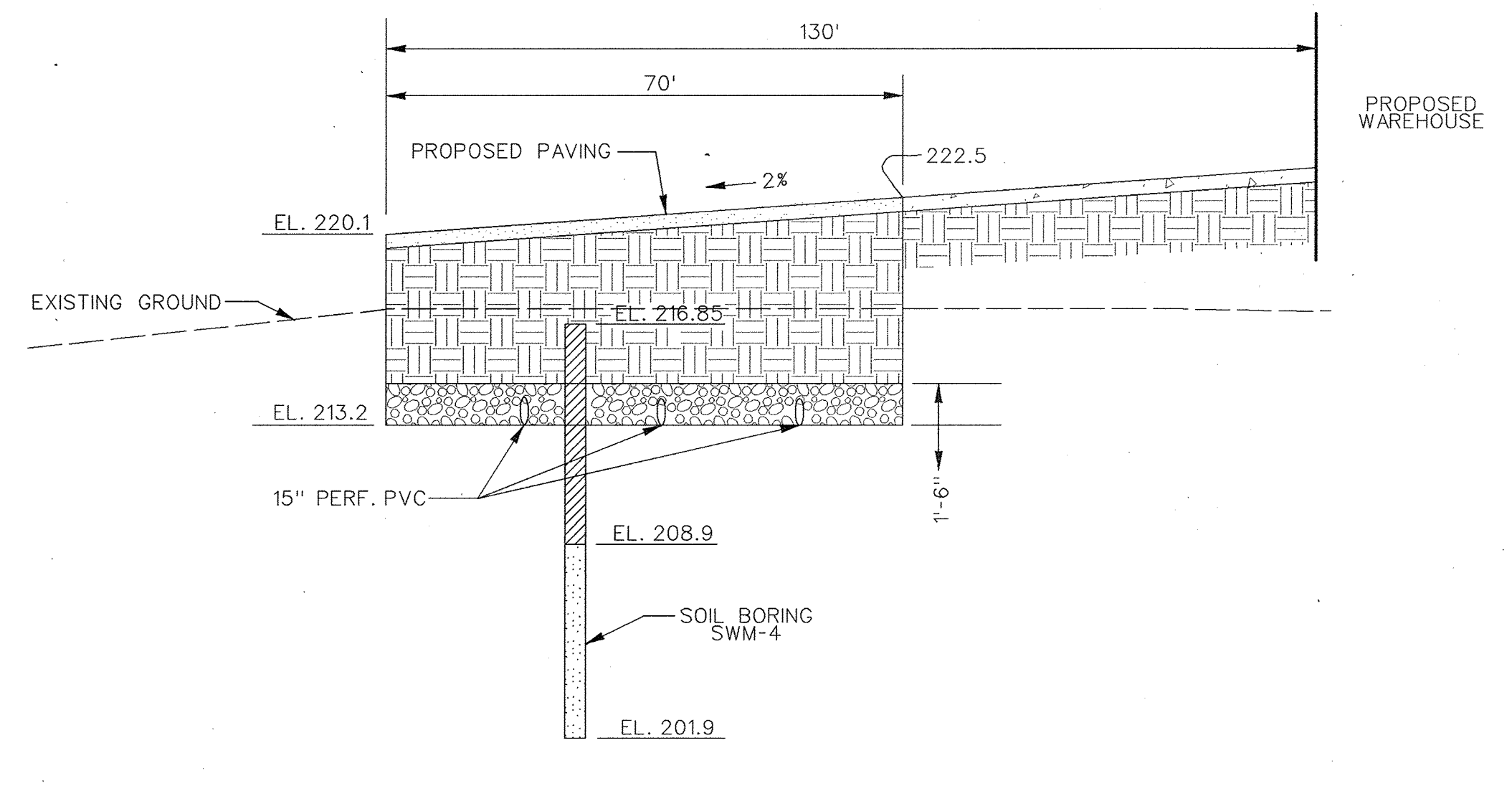
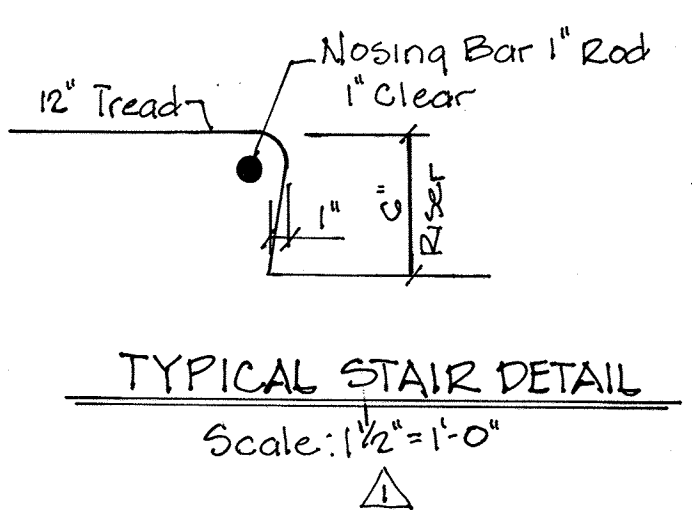
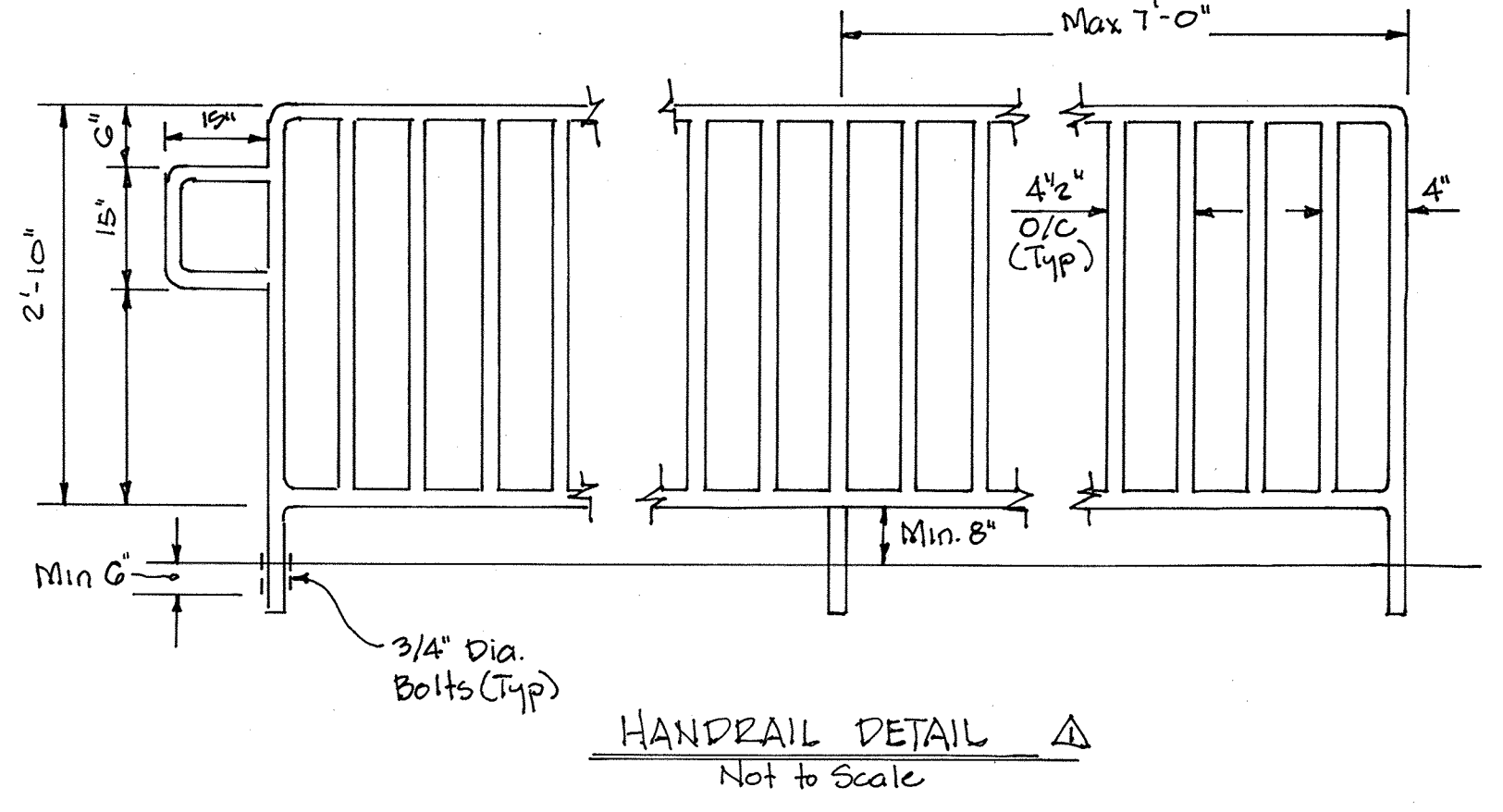
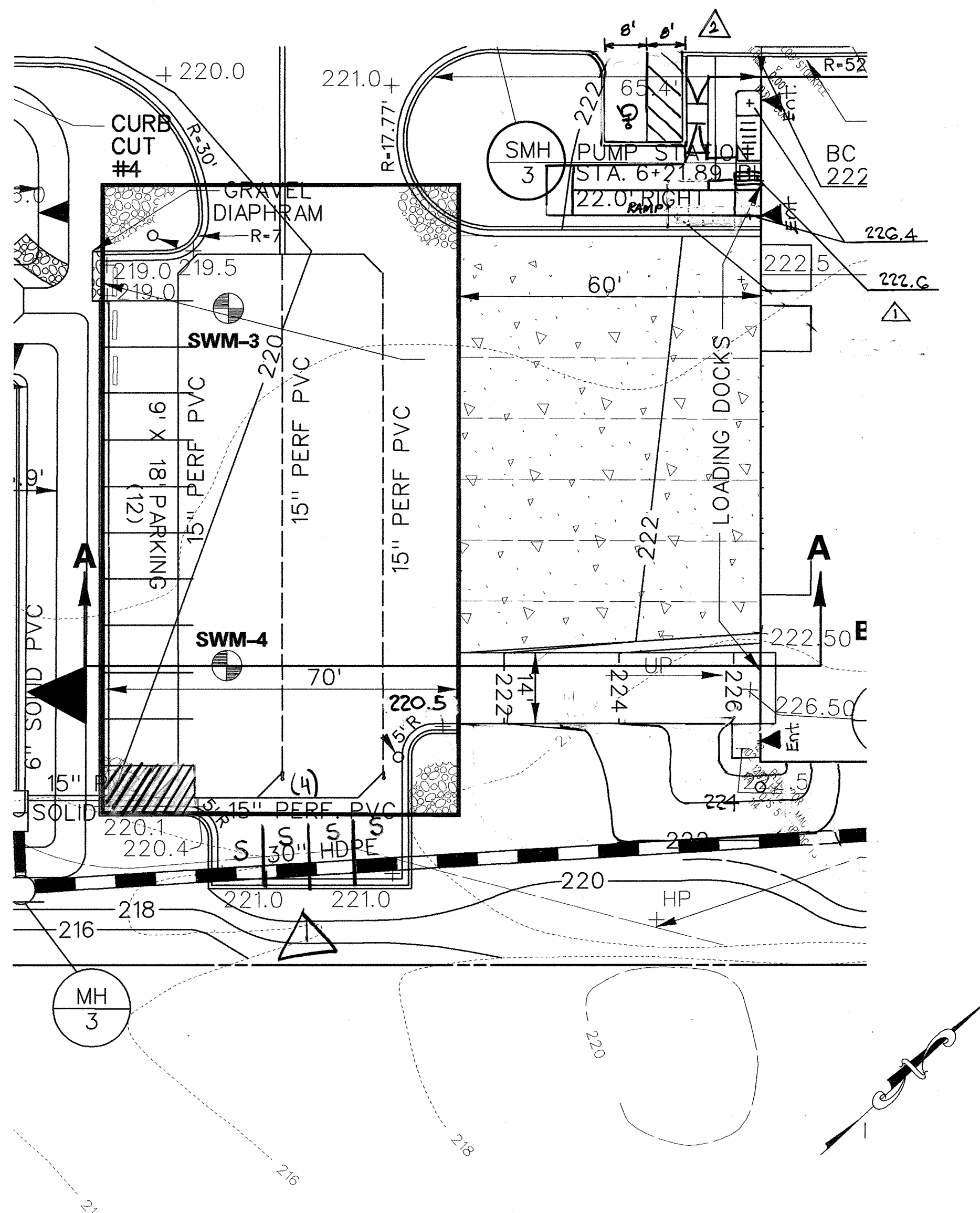
OWNER:
C & S MEADOWRIDGE, LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

STORMWATER MANAGEMENT DRAINAGE PLAN



KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 0 30 60 120
 (IN FEET)
 1 inch = 60ft.
 DATE: APRIL 9, 2003
 SHEET 10 OF 22
 APR 14 2003
 SDP-02-53



DESIGN STORM	FACILITY INFLOW (cfs)	FACILITY OUTFLOW (cfs)	STAGE	STORAGE VOLUME AC. FT.	FACILITY VOLUME 2.5 x S = AC. FT.
1 Year	3.6	0.1	215.88	0.25	0.1

NOTE: ADDITIONAL STORAGE FOR CPV IS HELD ABOVE GROUND @ ELEV. 215.88.

STRUCTURE TYPE: UNDERGROUND STONE STORAGE
 SURFACE AREA: 0.20 AC.
 STRUCTURE CLASSIFICATION: N/A
 STORAGE HEIGHT PRODUCT: N/A
 WATERSHED AREA TO FACILITY (ACRES): 1.15
 LEVEL OF MANAGEMENT REQUIRED AND PROVIDED BY FACILITY: 1 YEAR (QUANTITY)
 WATERSHED: PATAPSCO
 STREAM CLASS: I
 FREEBOARD: N/A
 THIS FACILITY IS PRIVATE. MAINTENANCE IS TO BE PROVIDED BY PROPERTY OWNER.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (P-1, F-4, AND F-5)

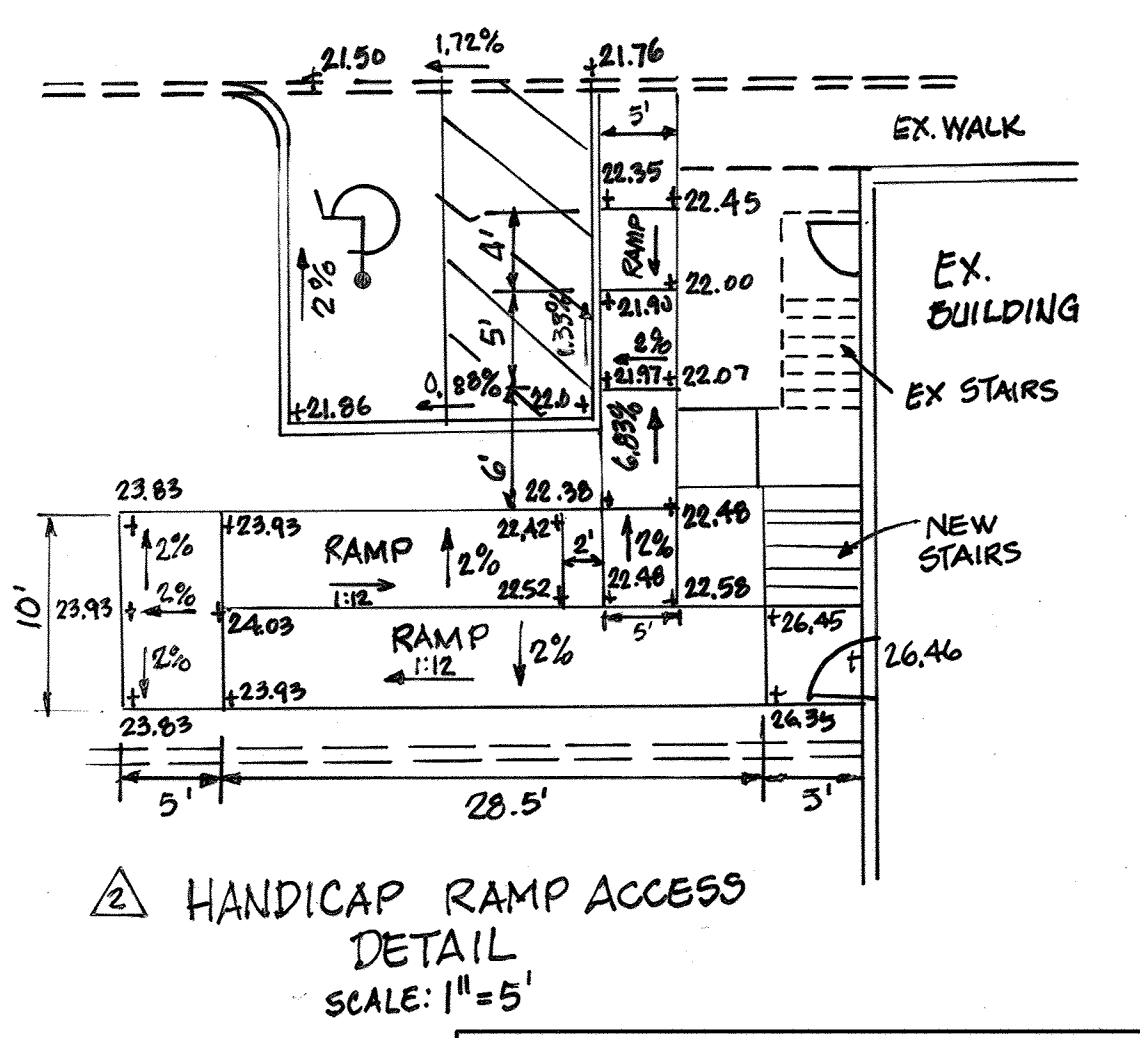
- The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.
- Filters that have a grass cover shall be mowed a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- Remove silt when it exceeds four (4) inches deep in the forebay.
- When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- A log book shall be maintained to determine the rate at which the facility drains.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (R-6)

- Annual maintenance of plant material, mulch layer and soil layer is required. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning.
- Schedule of plant inspection will be twice a year in spring and fall. This inspection will include removal of dead and diseased vegetation considered beyond treatment, treatment of all diseased trees and shrubs and replacement of all deficient stakes and wires.
- Mulch shall be inspected each spring. Remove previous mulch layer before applying new layer once every 2 to 3 years.
- Soil erosion to be addressed on an as needed basis, with a minimum of once per month and after heavy storm events.

OPERATION AND MAINTENANCE SCHEDULE FOR UNDERGROUND FACILITIES

- The underground stormwater management facility is privately owned and it shall be the responsibility of the owner to periodically inspect and clean the facility to maintain its operation and function.
- The underground stormwater management facility shall be inspected yearly at a minimum and after especially severe storm events.
- When sediment accumulation of more than 2" is observed or any debris that might obstruct the outfall is observed, the facility shall be cleaned.
- The facility shall be cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies notifying them of the spill and cleanup operation.
- The sediment and debris shall be removed from the underground stormwater management facility by vacuum truck or other manual means. The owner shall follow proper cleaning and disposal of the removed material and liquid.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six (6) months. If obstructions are found, the owner shall have them removed and properly disposed of.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR



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. 16597, Expiration Date: 8/15/19

Drafting	JAB	DATE	REVISIONS
Check	CGW	4/23/04	Revise slope & steps, add handrail & step detail
Design	CGW	10-9-03	Updated Parking
Check	THM	6/23/02	HC RAMP & SPACE

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 14502 Greenview Drive, Suite 424
 Laurel, Maryland 20708
 (301) 953-1821 (410) 792-8086
 Fax: (410) 792-7419
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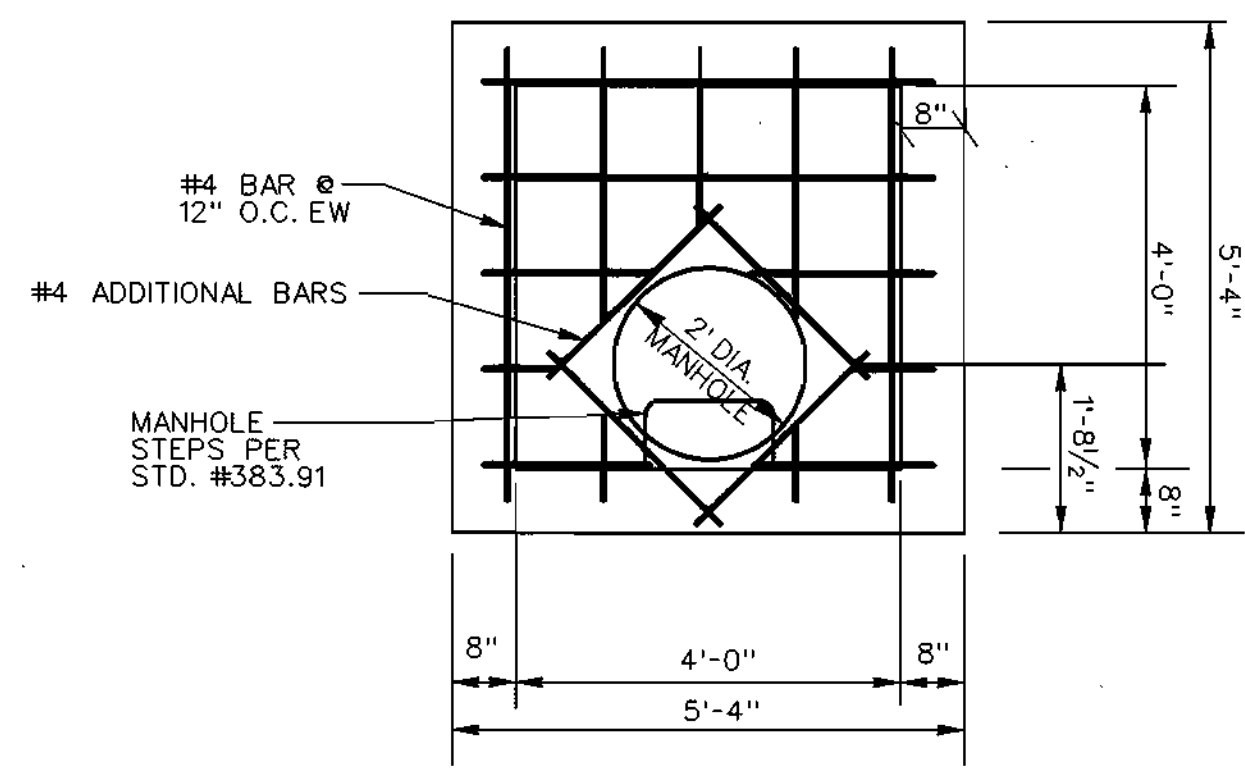
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 BALTIMORE, MD 21231
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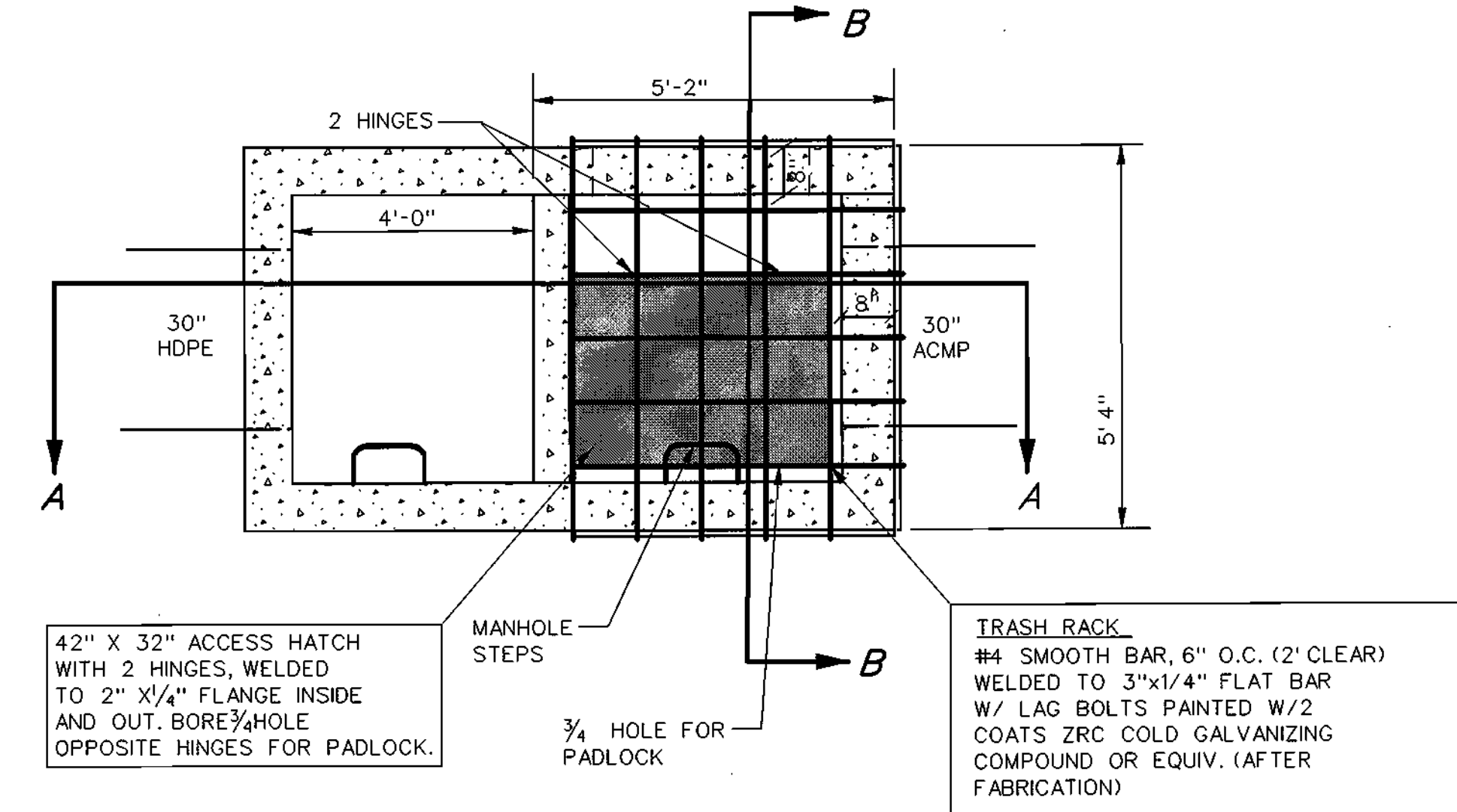
UNDERGROUND STORAGE STORMWATER MANAGEMENT PLAN



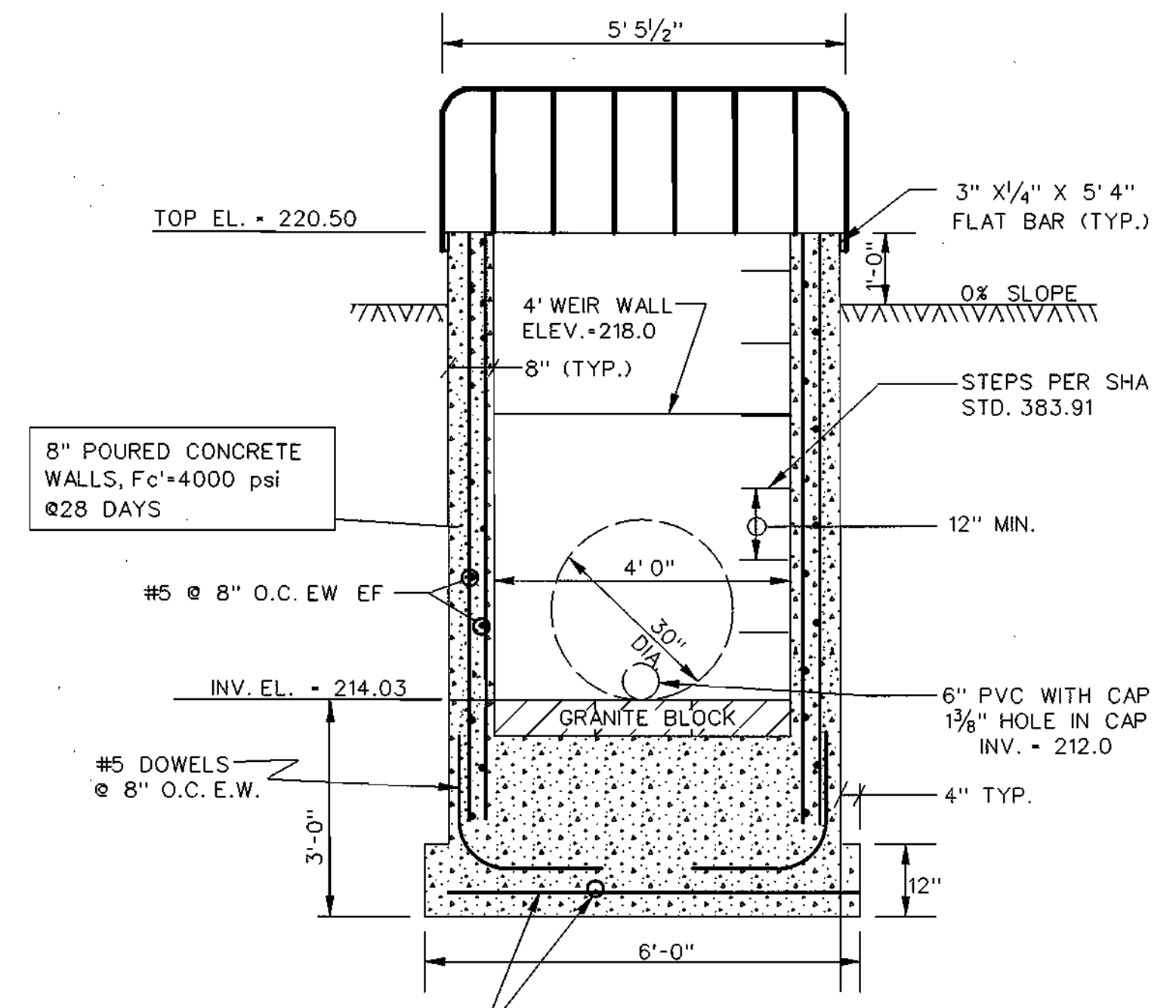
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 HOWARD COUNTY, MARYLAND
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 GRAPHIC SCALE
 20 0 10 20 40
 (IN FEET)
 1 inch = 20ft.
 DATE: APRIL 9, 2003
 SHEET 11 OF 22



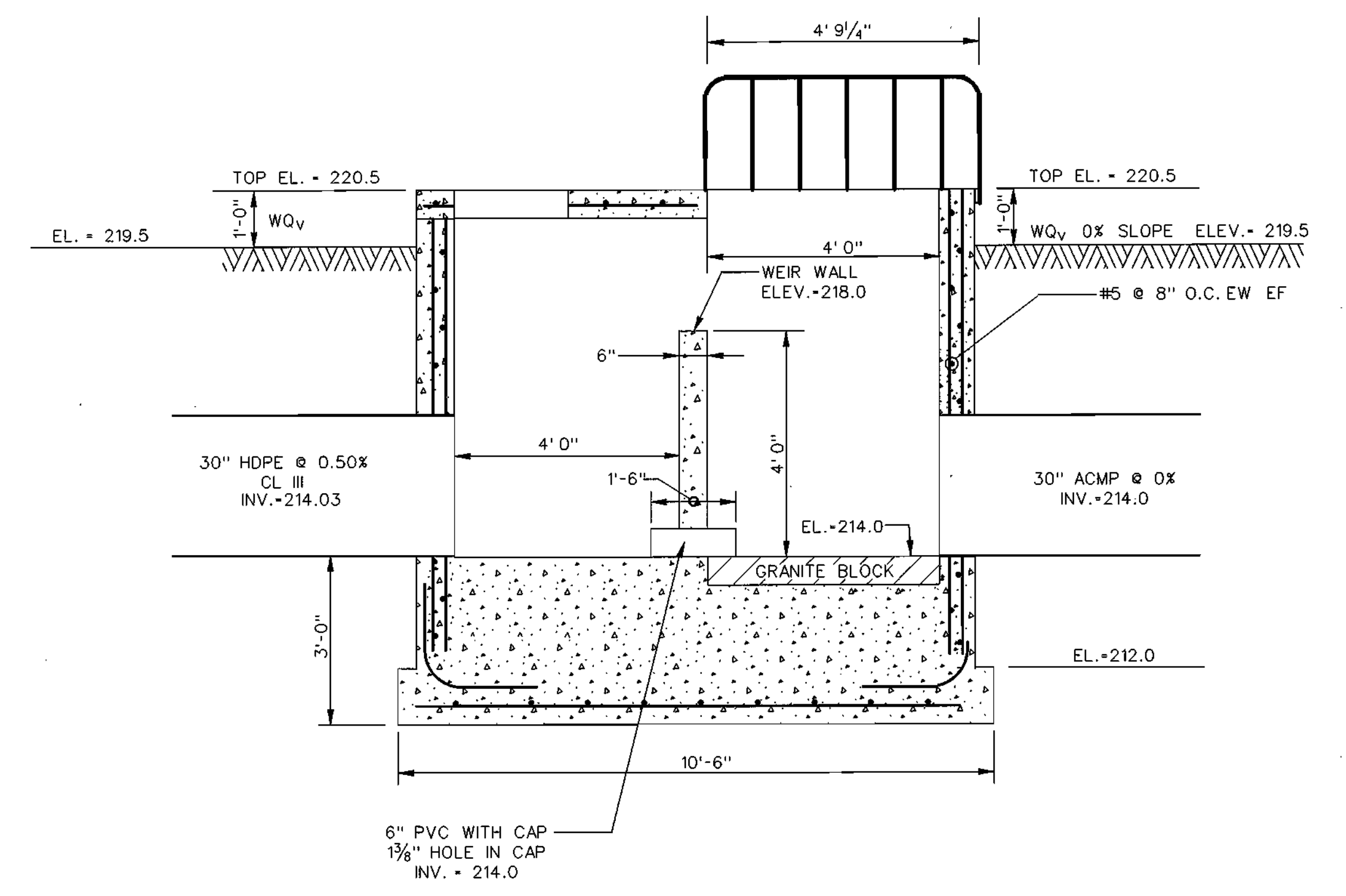
**TOP SLAB
CS-4**
SCALE: 1/2" = 1'-0"



**TOP SECTION
CS-4**
SCALE: 1/2" = 1'-0"



**SECTION B-B
CS-4**
SCALE: 1/2" = 1'-0"



**SECTION A-A
CS-4**
SCALE: 1/2" = 1'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 5/12/03
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 5/10/03
 DIRECTOR DATE:

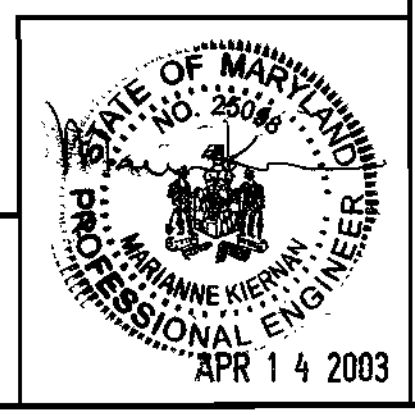
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STORMWATER MANAGEMENT DETAILS

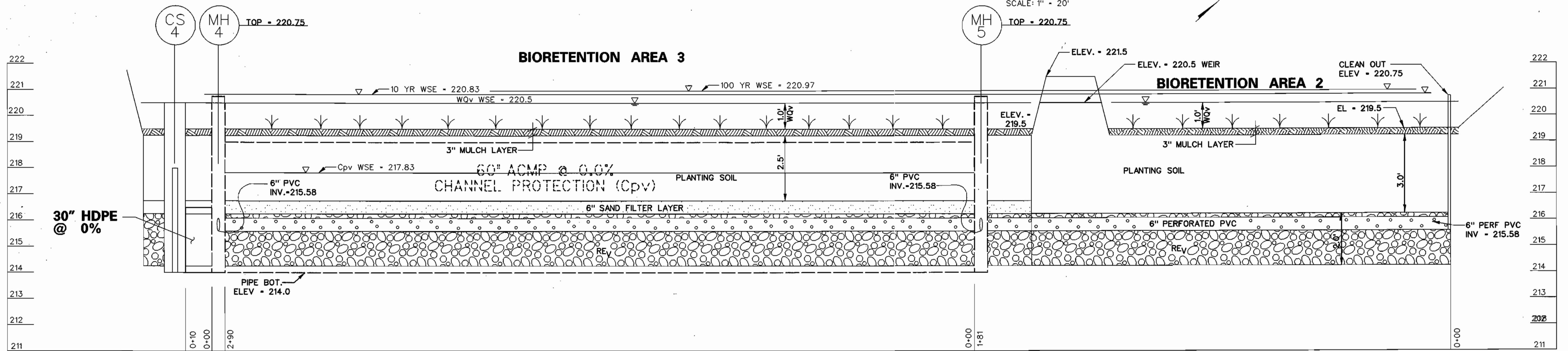
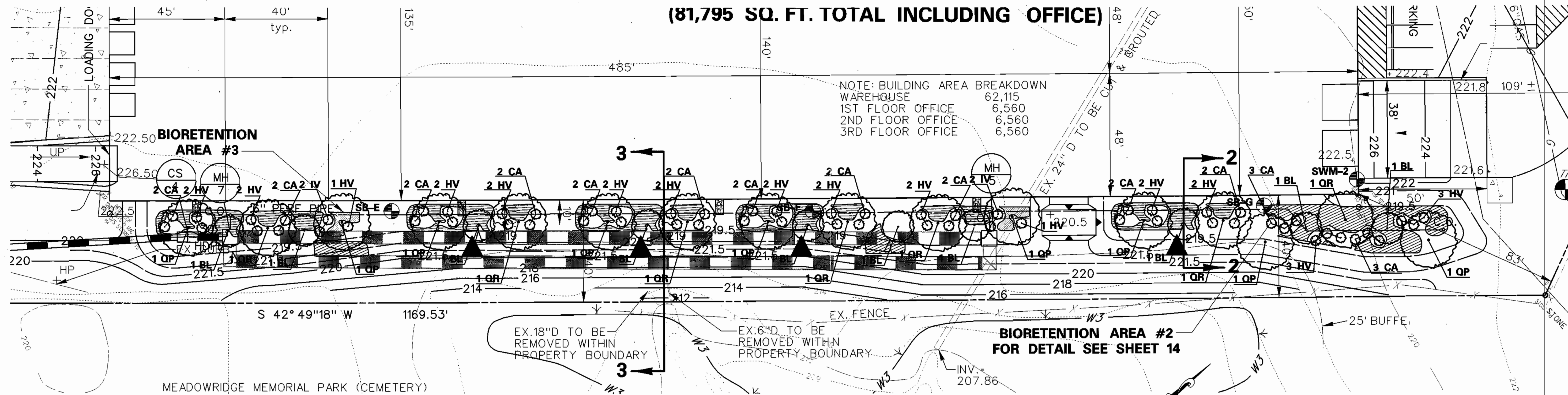


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 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000

SCALE: AS SHOWN
 DATE: APRIL 9, 2003
 SHEET 12 OF 22

SDP-02-53

(81,795 SQ. FT. TOTAL INCLUDING OFFICE)



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 5/1/03

DATE: 5/1/03

Drafting	DATE	REVISIONS
AWW		
CGW		
CGW		
THM		

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 (410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

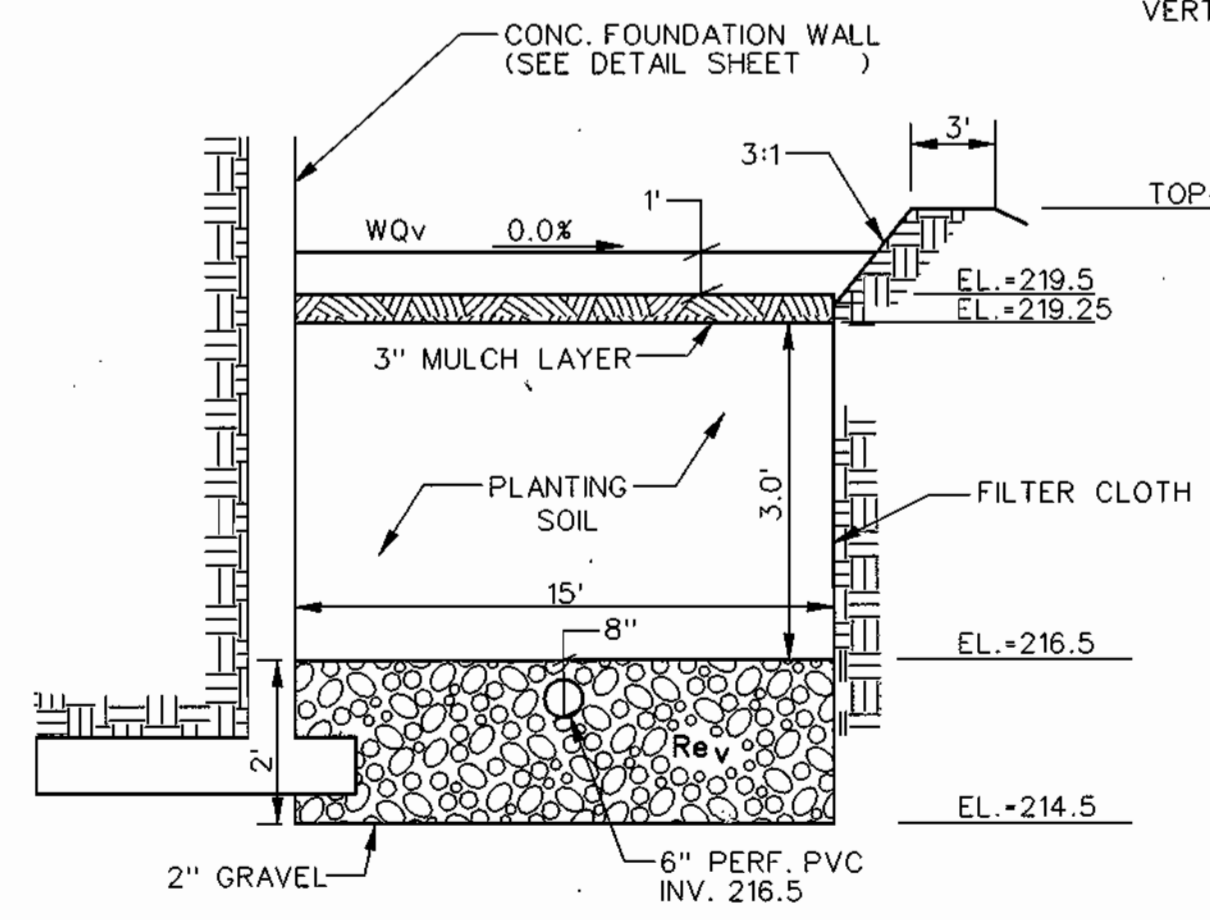
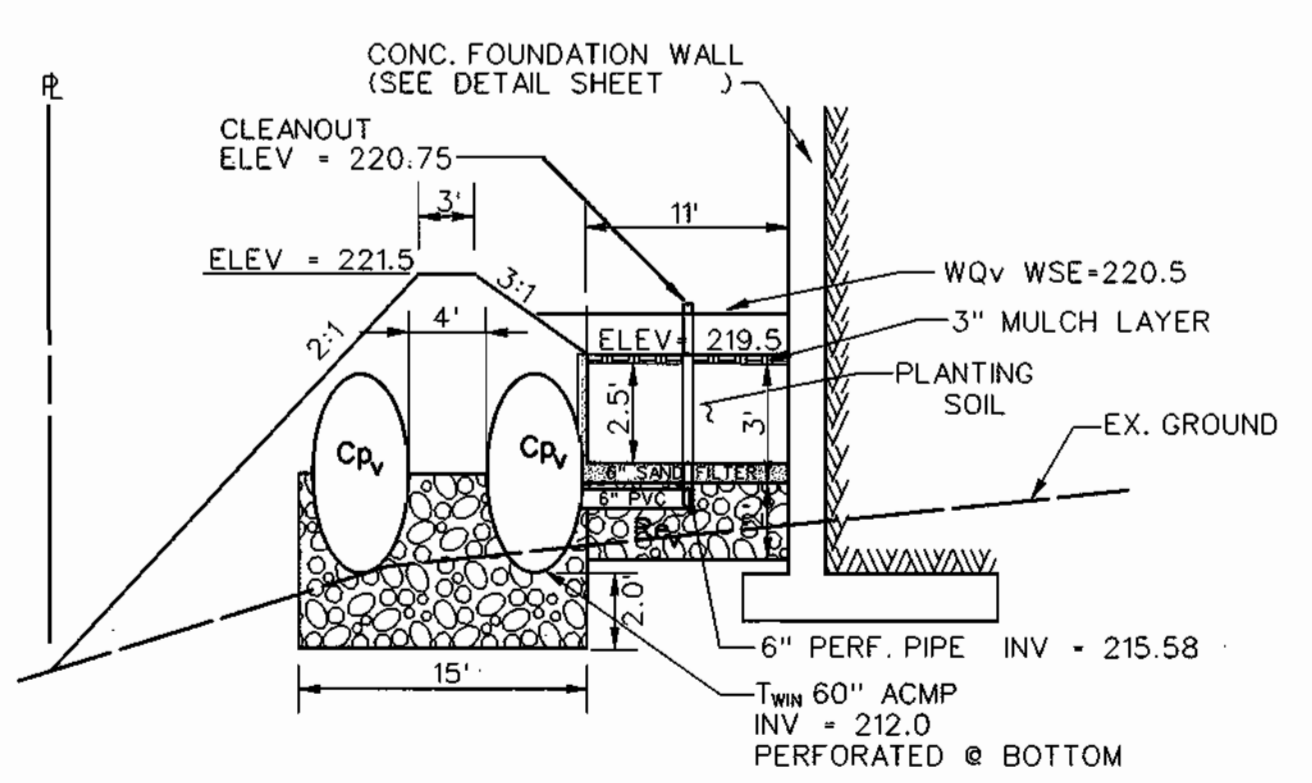
BIORETENTION AREAS 2 AND 3 PLAN

BIORETENTION AREA 2 PLANT SCHEDULE

Qty.	Key	Botanical/Common Name
TREES		
2	QR	Quercus Rubra- Red Oak (2.5" Cal., B&B, Full Crown)
3	QP	Quercus Palustris-Pin Oak (2.5" Cal., B&B, Full Crown)
3	BL	Betula Lenta-Sweet Birch (2.5" Cal., B&B)
SHRUBS		
10	CA	Clethra Ainfolia-Sweet Pepperbush (18"-24" container)
10	HV	Hamamelis Virginica-Witch Hazel (18"-24" container)
1200	JP	Pachysandra terminalis - Japanese pachysandra

BIORETENTION AREA 3 PLANT SCHEDULE

Qty.	Key	Botanical/Common Name
TREES		
6	QR	Quercus Rubra- Red Oak (2.5" Cal., B&B, Full Crown)
6	QP	Quercus Palustris-Pin Oak (2.5" Cal., B&B, Full Crown)
7	BL	Betula Lenta-Sweet Birch (2.5" Cal., B&B)
SHRUBS		
18	CA	Clethra Ainfolia-Sweet Pepperbush (18"-24" container)
20	HV	Hamamelis Virginica-Witch Hazel (18"-24" container)
4	IV	Ilex Verticillata-Winterberry (30" ht., B&B)
3400	JP	Pachysandra terminalis - Japanese pachysandra



KANE COMPANIES, INC.
 HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37 - PARCEL 174
 L. 6763 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CCDE: 215 3000

GRAPHIC SCALE
 1 inch = 20ft.
 DATE: APRIL 9, 2003
 SHEET 14 OF 22

GENERAL NOTES

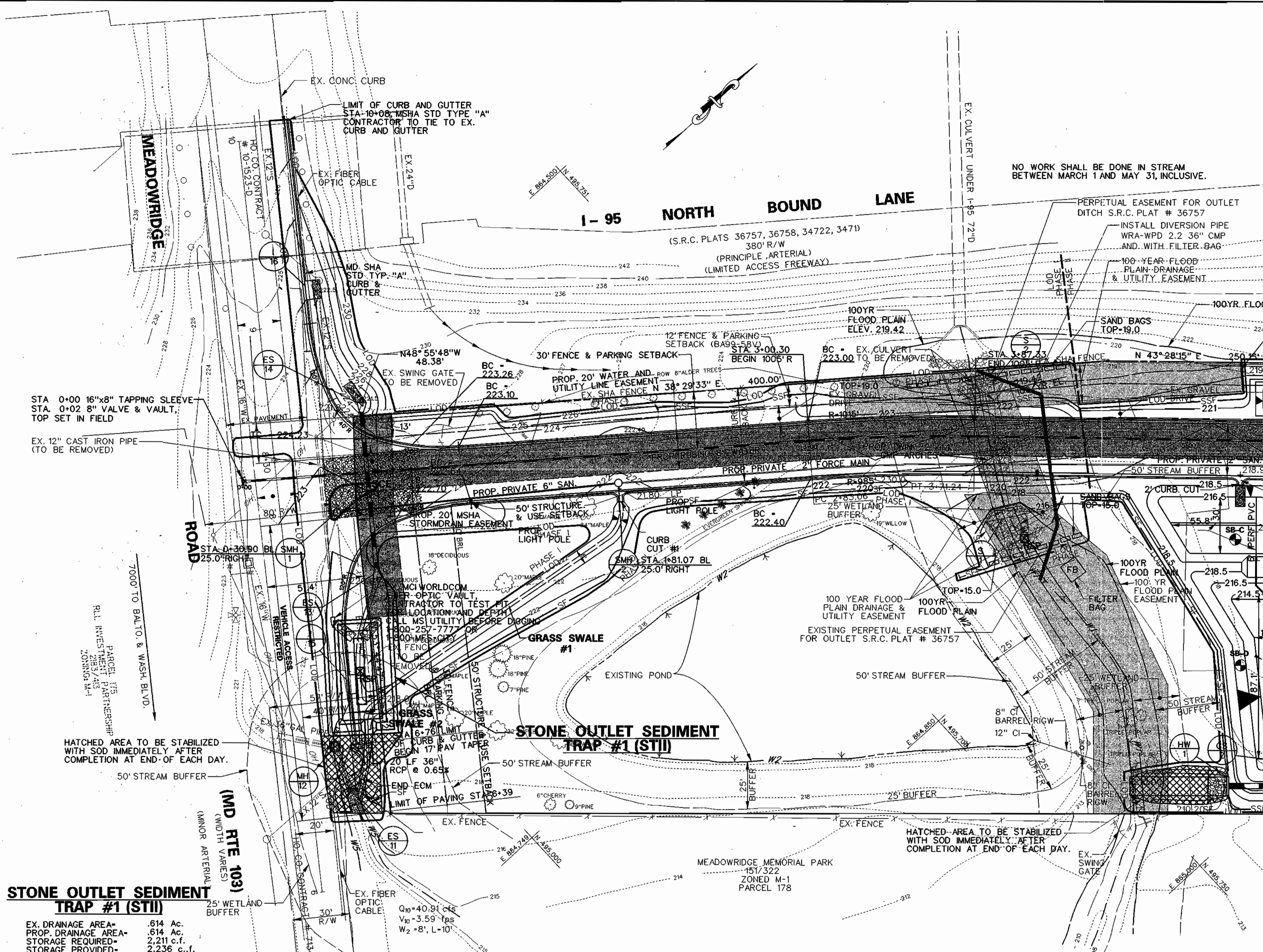
- A minimum of 24 hours notice must be given to the Howard County Sediment Control Division prior to the start of any construction (880-3450).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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, 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 (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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	6.8264 Ac.	Acres
Area Disturbed	5.550 Ac.	Acres
Area to be Roofed or Paved	3.420 Ac.	Acres
Area to be Vegetatively Stabilized	3.55 Ac.	Acres
Total Cut	26,780	Cubic Yards
Total Fill	26,780	Cubic Yards
Stockpile Permit #	400000645	
Offsite Waste/Borrow Location	Borrow material taken from Troy Hill Industrial Park	
- Any sediment control practices 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 Department of Public Works 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 the 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.

SEQUENCE OF CONSTRUCTION

- Obtain grading and MDE Permit **1 DAY**
- Notify Howard County Sediment Control Inspector for pre-construction meetings as required by note number one (No. 1) of the Standard Erosion and Control Notes shown on this sheet. Notify Miss Utility. **1 DAY**
- Install sediment control measures for Phase I construction (i.e. see silt fence installation of ES-11 thru MH-12, only) **1 DAY**
- With silt fence protection install MH-12 thru ES-11 and inclusive pipe. Install riprap outfall. Stabilize site. Contractor shall complete ES-11 to MH-12 in one dry day. **1 DAY**
- Install stone outlet sediment trap #1. Install permanent outfall from trap to riprap outfall ES-11 **1 DAY**
- With inspectors approval grade the Meadowridge Road improvements. Install inlet I-16, structures ES-14 and 13 with inclusive pipe, riprap and grass channels. Do not install glass swale #1. Install glass #2 upto sediment trap #1. All excavation for road base (MD Rt 103) shall be backfilled with stone at the end of each day. **2 WEEKS**
- Install Phase I utilities. Stabilize site. **2 WEEKS**
- Install 36" pipe diversion under Phase I construction around existing culvert across proposed drive. Note: No work permitted within stream between March 1 and May 31, June 15 inclusive. **3 DAYS**
- Install Sanitary Force main and waterline under stream bed at stream crossing where future twin 72"x44" CMP are to be installed. Continue lines to termination in Meadowridge Road. **2 DAYS**
- Install twin culverts in stream crossing. **2 DAYS**
- Remove removable sup pit, add Phase II silt fence across S1, remove diversion pipe and divert water back through proposed culverts. Obtain permission from Inspector before proceeding. **1 DAY**
- With the Howard County Sediment Control Inspector's approval, remove existing drive and culvert. Bring proposed drive up to grade. Grade improvements along Meadowridge Road. **3 DAYS**
- Install sediment control measure for Phase II construction (i.e., silt fence, super silt fence, sediment trap #2). Clear and grub area within LOD with inspector's approval. **2 DAYS**
- Sever and block 24" pipe at the property line before removal of pipe. Remove or grub in place existing 24" pipe within property boundary under building pad. Install 60" storage pipes and block flows from entering same until SWM work is begun later in the sequence. **3 WEEKS**
- With inspectors approval begin grading the western side of the building pad. As pad is constructed in an easterly direction, and approaches sediment trap #2, remove trap. Close super silt fence @ trap #2 outfall. Grade remainder of building pad. **3 WEEKS**
- Install Utilities from Phase I construction through Phase II and tie into existing utilities. **3 DAYS**
- Install paving, curb and gutter for entire site. **7 DAYS**
- Stabilize all disturbed areas. **3 DAYS**
- Construction and water, sewer and storm drains north east of the stone construction entrance only at this time. All storm drain inlets and end sections shall have brick bulkheads installed the same day that flows to the water quantity/quality facilities. **21 DAYS**
- Concurrently fine grade and install curb and gutters. Apply permanent stabilization to all areas fine graded within 48 hours of their completion. Install stone sub-base to all areas to be paved as they are fine graded and proof rolled. **14 DAYS**
- After the site has been stabilized install SWM Facilities (i.e. Bioretention and sand filter areas, CPV areas, grass swales 1 & 2) **14 DAYS**
- Stabilize all disturbed areas. **22**

MATCHLINE SEE SHEET 16



PLAN

SCALE: 1" = 30'

NOTE:

ADD ECM MATTING IN ALL DITCHES, SWALES, AND OTHER AREAS OF CONCENTRATED FLOW PER DETAIL SHEET 18 OF 22.

LEGEND

- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING GRADE
- PROPOSED GRADE
- EXISTING DRAINAGE DIVIDE
- PROPOSED DRAINAGE DIVIDE
- PROPOSED EARTH DIKE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- RIPRAP INFLOW PROTECTION

STONE OUTLET SEDIMENT TRAP #1 (STII)

EX. DRAINAGE AREA-	614 Ac.
PROP. DRAINAGE AREA-	614 Ac.
STORAGE REQUIRED-	2,211 c.f.
STORAGE PROVIDED-	2,236 c.f.
BOTTOM DIMENSIONS-	5' x 35'
BOTTOM ELEVATION-	218.0
WEIR LENGTH-	4'
WEIR STORAGE ELEVATION-	220.0
WEIR CREST ELEVATION-	222.0
TOP OF EMBANKMENT-	223.0
CLEANOUT ELEVATION-	219.0

<p>BY THE DEVELOPER:</p> <p>I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.</p> <p><i>[Signature]</i> DEVELOPER DATE: 3/16/03</p>	<p>BY THE ENGINEER:</p> <p>I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.</p> <p><i>[Signature]</i> ENGINEER DATE: 4/16/03</p>
---	---

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

USDA - NATURAL RESOURCE CONSERVATION SERVICE

[Signature] 4/22/03

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

[Signature] 4/22/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature] 4/23/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 5/2/03
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 5/1/03
DIRECTOR

Drafting	JAB	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

KCI TECHNOLOGIES ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS

14502 Greenview Drive, Suite 424
Laurel, Maryland 20708
(301) 951-1821 (410) 792-8086
Fax: (410) 792-7419
www.kci.com

OWNER: **C & S MEADOWRIDGE, LLC**

925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

CONTRACT PURCHASER & DEVELOPER: **CREANEY & SMITH GROUP LLC**

925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

GRADING AND SEDIMENT CONTROL PLAN - SHEET 1

KANE COMPANIES, INC. HEADQUARTERS

PROPOSED OFFICE WAREHOUSE
TAX MAP 37 - PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000

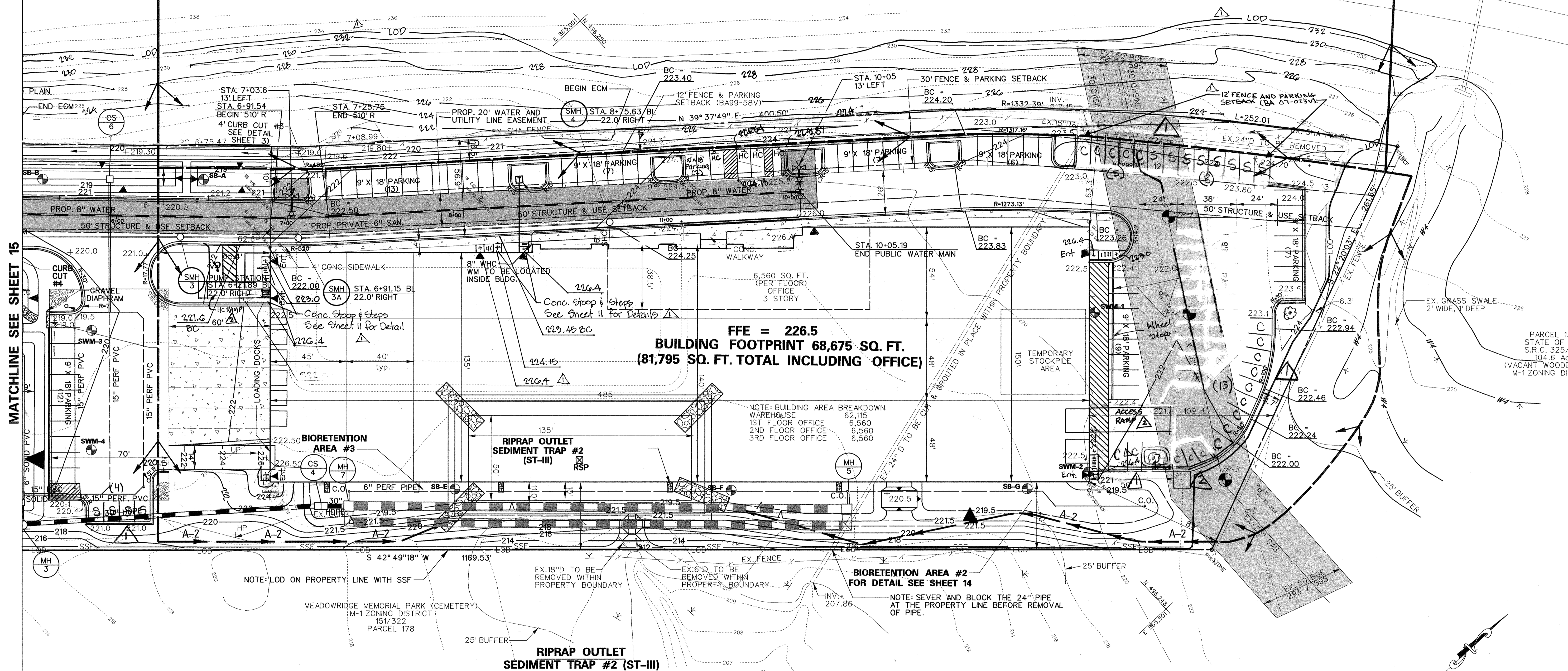
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.
DATE: APRIL 9, 2003
SHEET 15 OF 22

STATE OF MARYLAND PROFESSIONAL ENGINEER
KANE COMPANIES, INC. 4/2003

SDP-02-53

I-95 NORTH BOUND LANE
(LIMITED ACCESS FREEWAY)
(S.R.C. PLATS 36757, 36758, 34722, 3471)
380' R/W

EXIT RAMP TO RTE.100 EAST



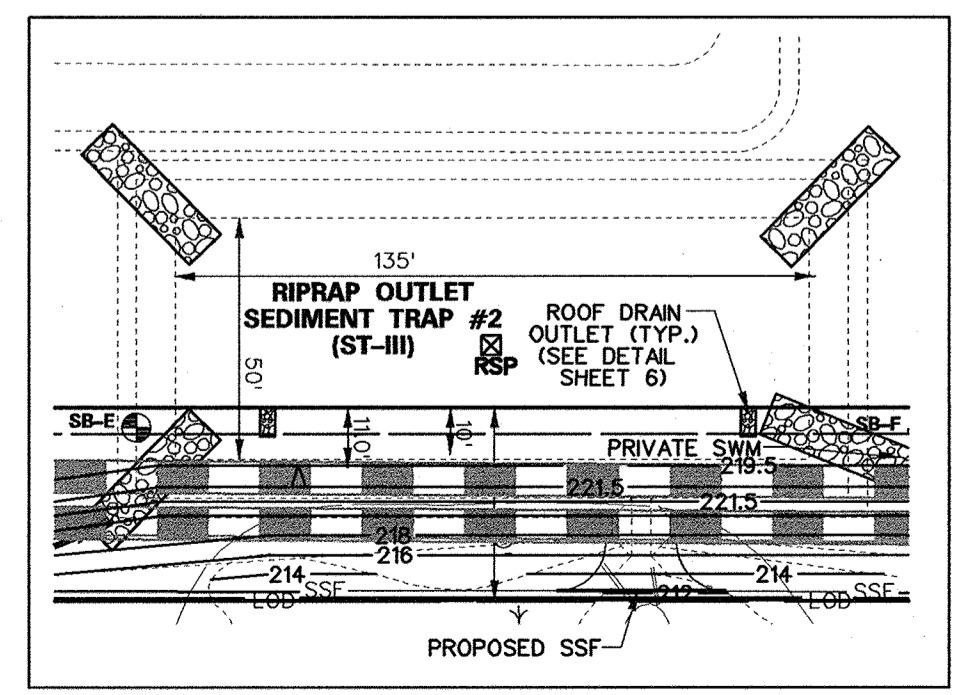
FFE = 226.5
BUILDING FOOTPRINT 68,675 SQ. FT.
(81,795 SQ. FT. TOTAL INCLUDING OFFICE)

NOTE: BUILDING AREA BREAKDOWN
WAREHOUSE 62,115
1ST FLOOR OFFICE 6,560
2ND FLOOR OFFICE 6,560
3RD FLOOR OFFICE 6,560

RIPRAP OUTLET SEDIMENT TRAP #2 (ST-III)

EXISTING D.A. = 6.10 AC
PROPOSED D.A. = 3.53 AC
STORAGE REQUIRED = 32,940 CF
STORAGE PROVIDED = 33,176 CF
STORAGE DEPTH = 4'
BOTTOM ELEVATION = 208.0
OUTFALL LENGTH = 10'
CLEANOUT ELEV. = 209.0
WEIR LENGTH = 14'
WEIR CREST ELEVATION = 212.0'
WEIR DEPTH = 1.5'
EMBANKMENT ELEVATION = 216.0'

PLAN
SCALE: 1" = 30'



SEDIMENT TRAP #2 INSET
SCALE: 1" = 40'

LEGEND

- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING GRADE
- PROPOSED GRADE
- EXISTING DRAINAGE DIVIDE
- PROPOSED DRAINAGE DIVIDE
- PROPOSED EARTH DIKE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- RIPRAP INFLOW PROTECTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DATE: 5/8/03
DATE: 5/10/03

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ALL 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 INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 COUNTY SOIL CONSERVATION DISTRICT.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
USDA - NATURAL RESOURCES CONSERVATION SERVICE
DATE: 4/22/03
DATE: 4/22/03

DATE	REVISIONS
6/25/18	HANDICAP RAMP & ACCESS RAMP
11/21/04	Revise off-site grading & LOD
11/23/04	Revise stoop & steps per revised architectural
11-9-07	Updated Parking & Altered Island

KCI TECHNOLOGIES
ENGINEERS PLANNERS SCIENTISTS
CONSTRUCTION MANAGERS

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Laurel, Maryland 20708
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BALTIMORE, MD 21231
(410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

GRADING AND SEDIMENT CONTROL PLAN - 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. 16597, Expiration Date: 8/15/19

Professional Engineer
6/25/18
FOR REV 2 ONLY

KANE COMPANIES, INC. HEADQUARTERS
PROPOSED OFFICE WAREHOUSE
TAX MAP 37 - PARCEL 174
L 8753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.
DATE: APRIL 9, 2003
SHEET 16 OF 22

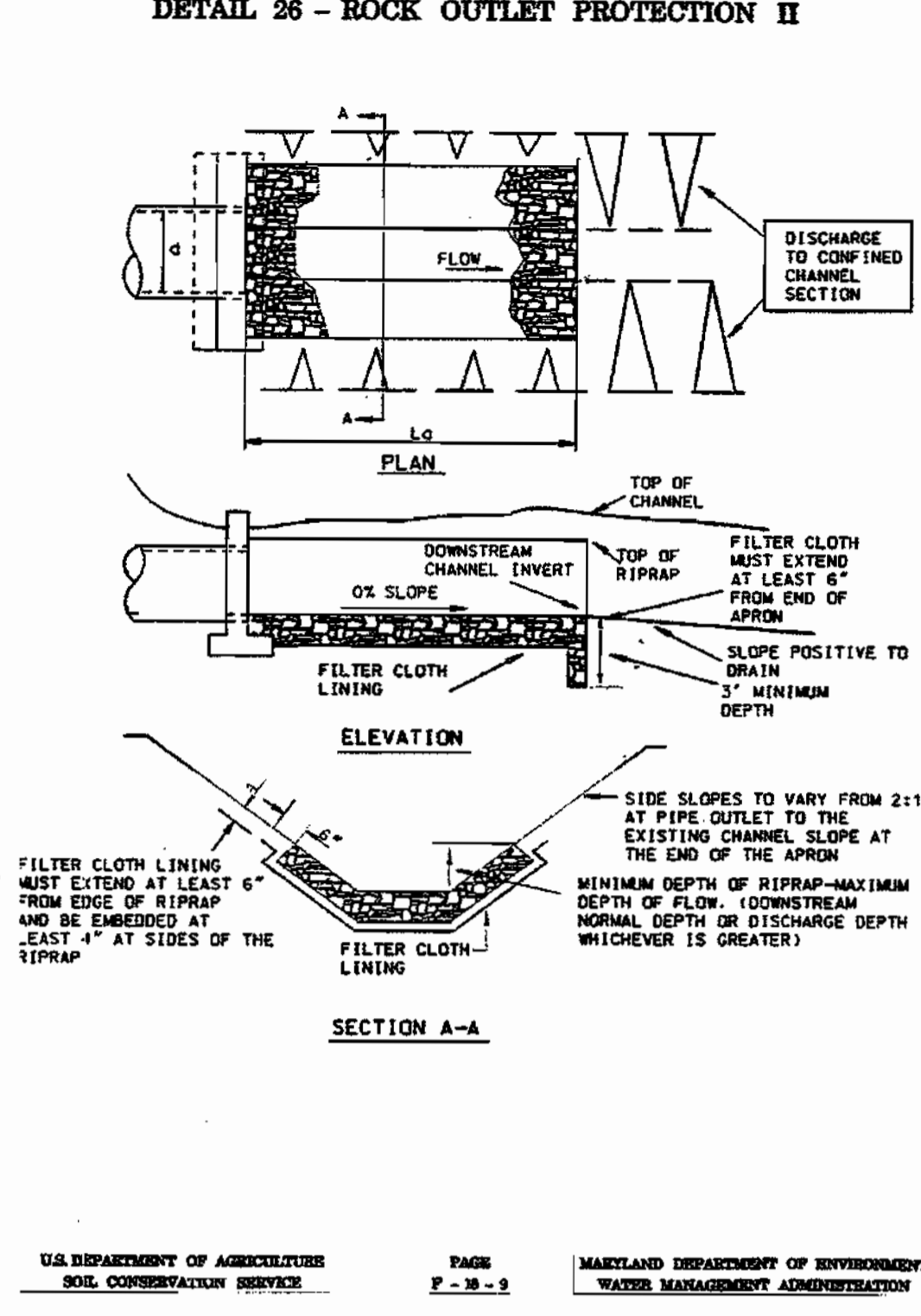
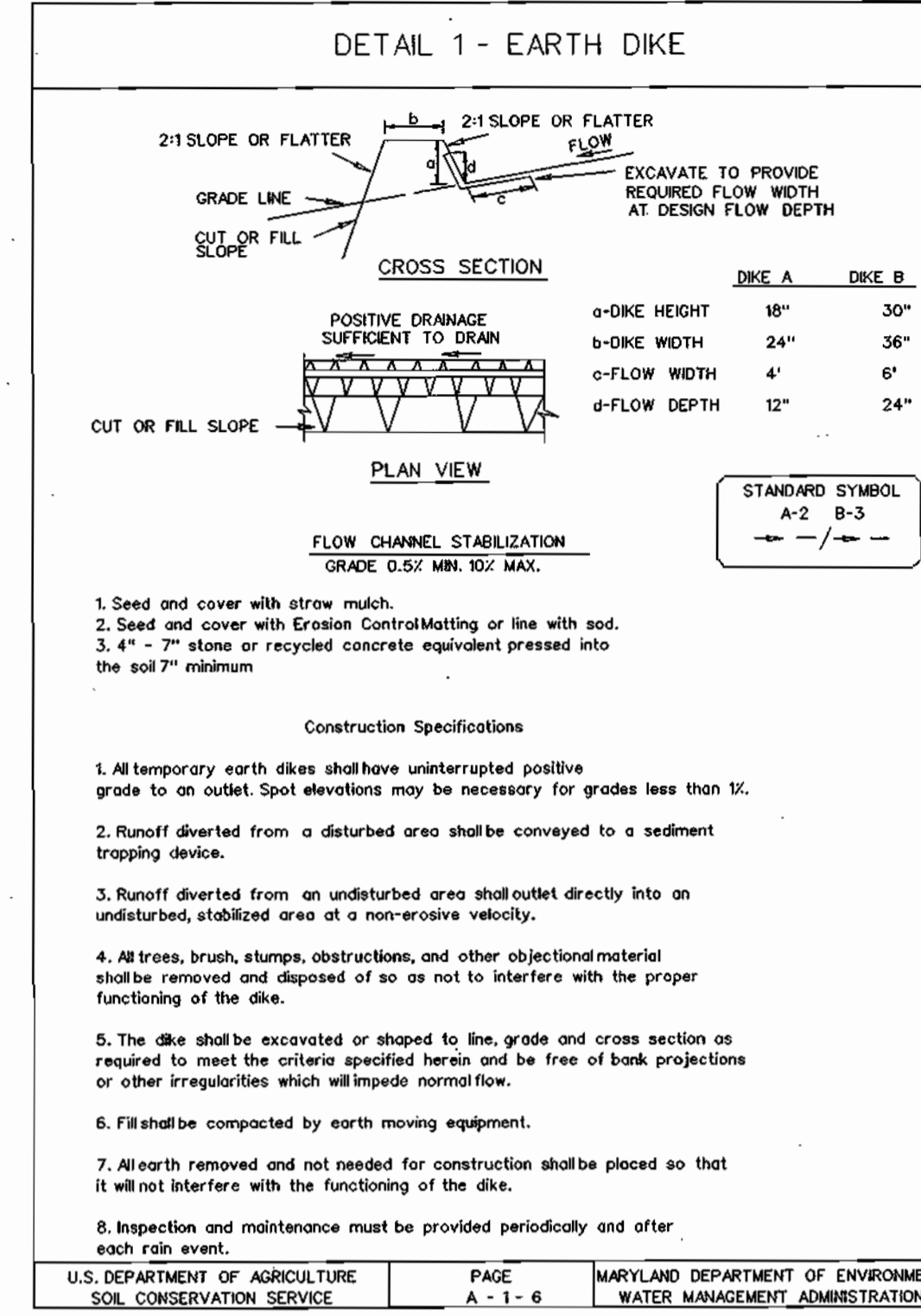
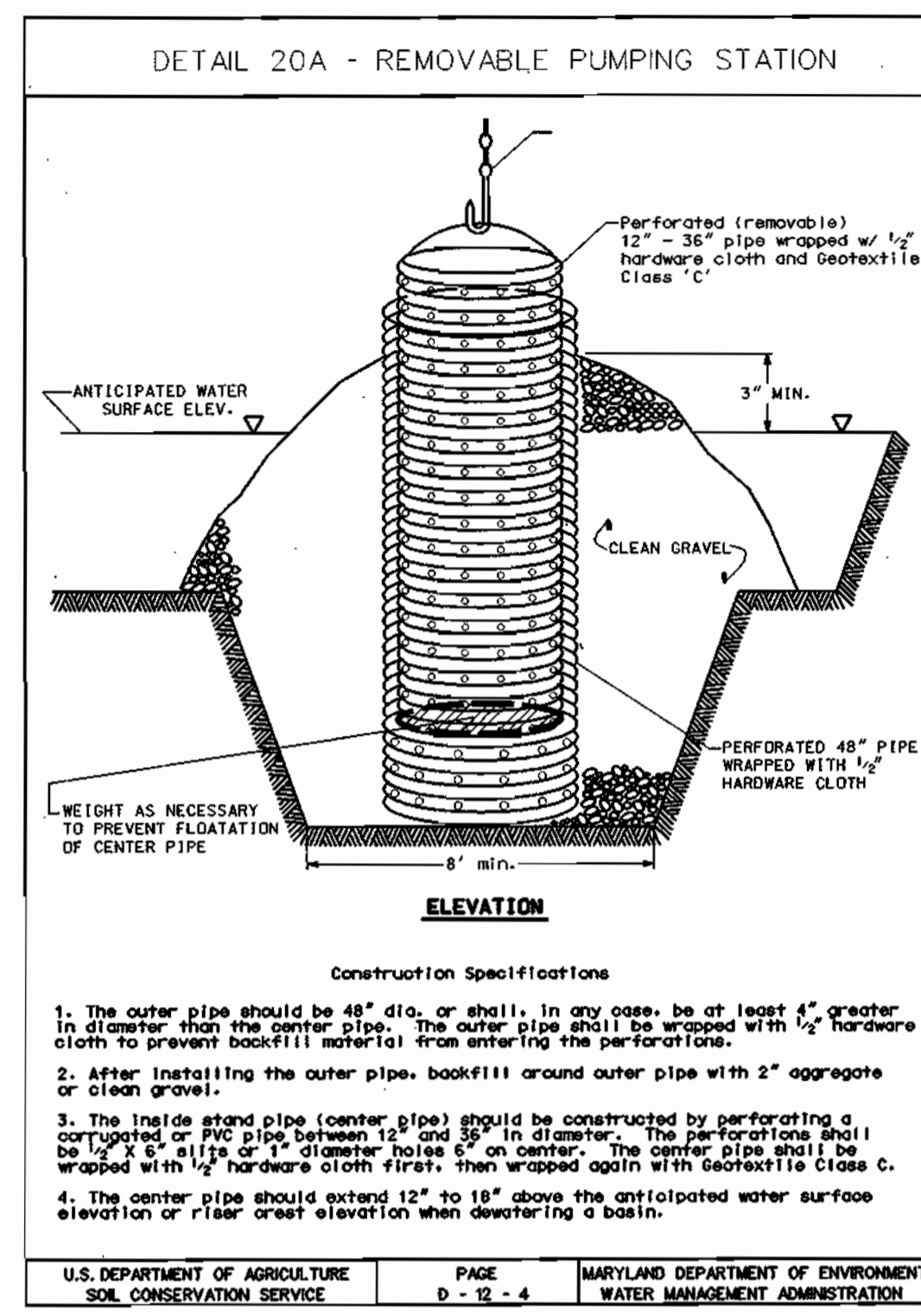
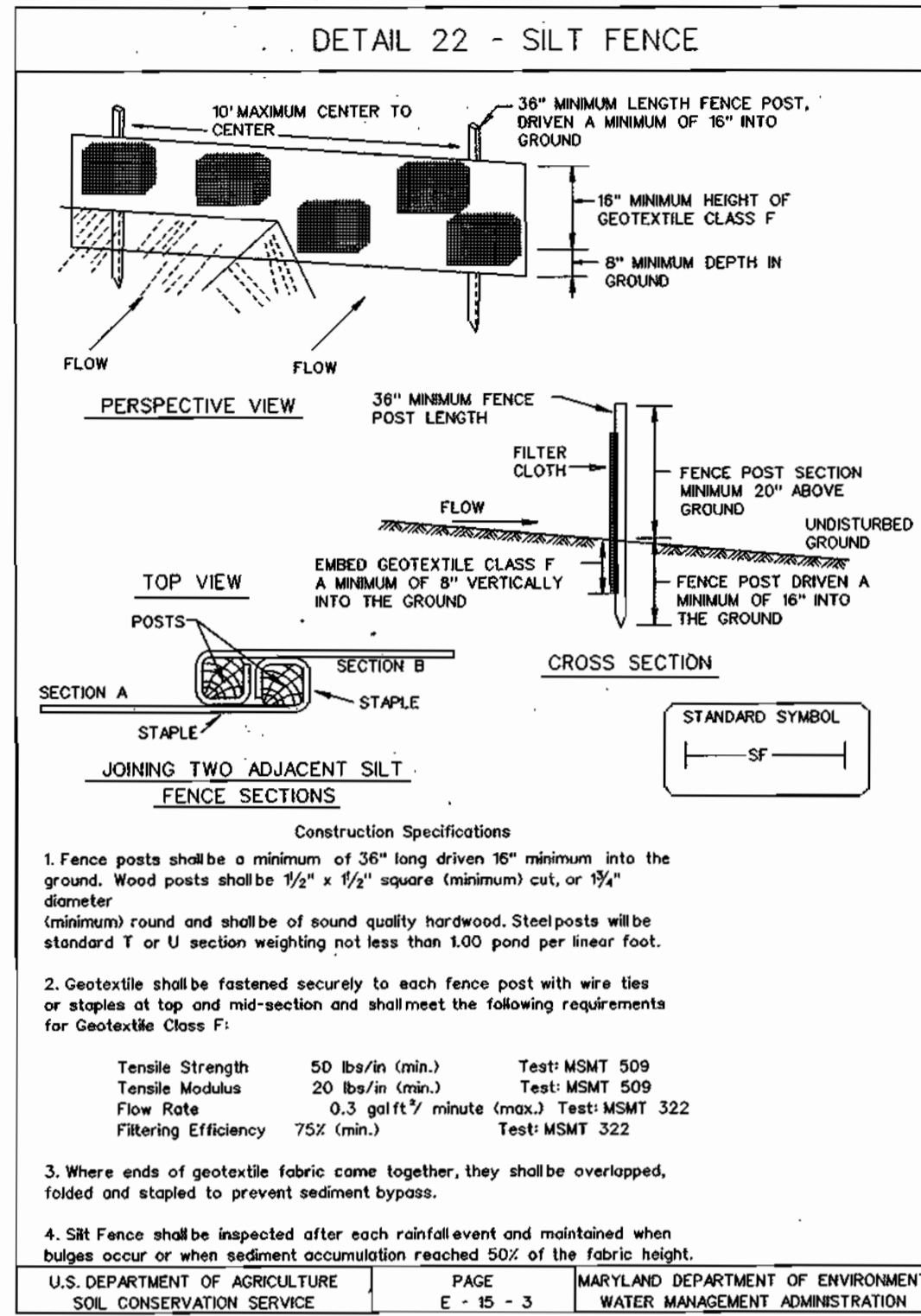
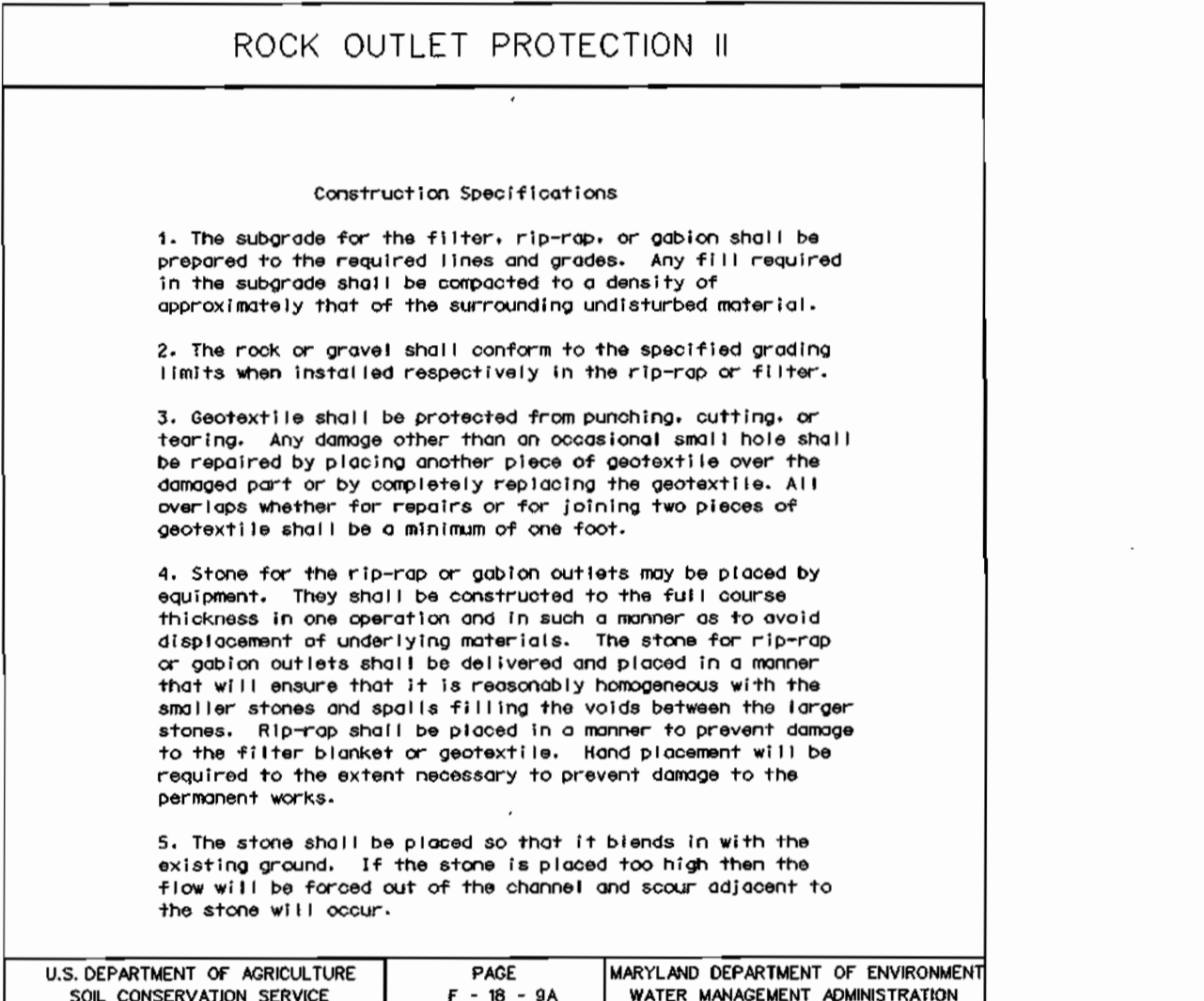
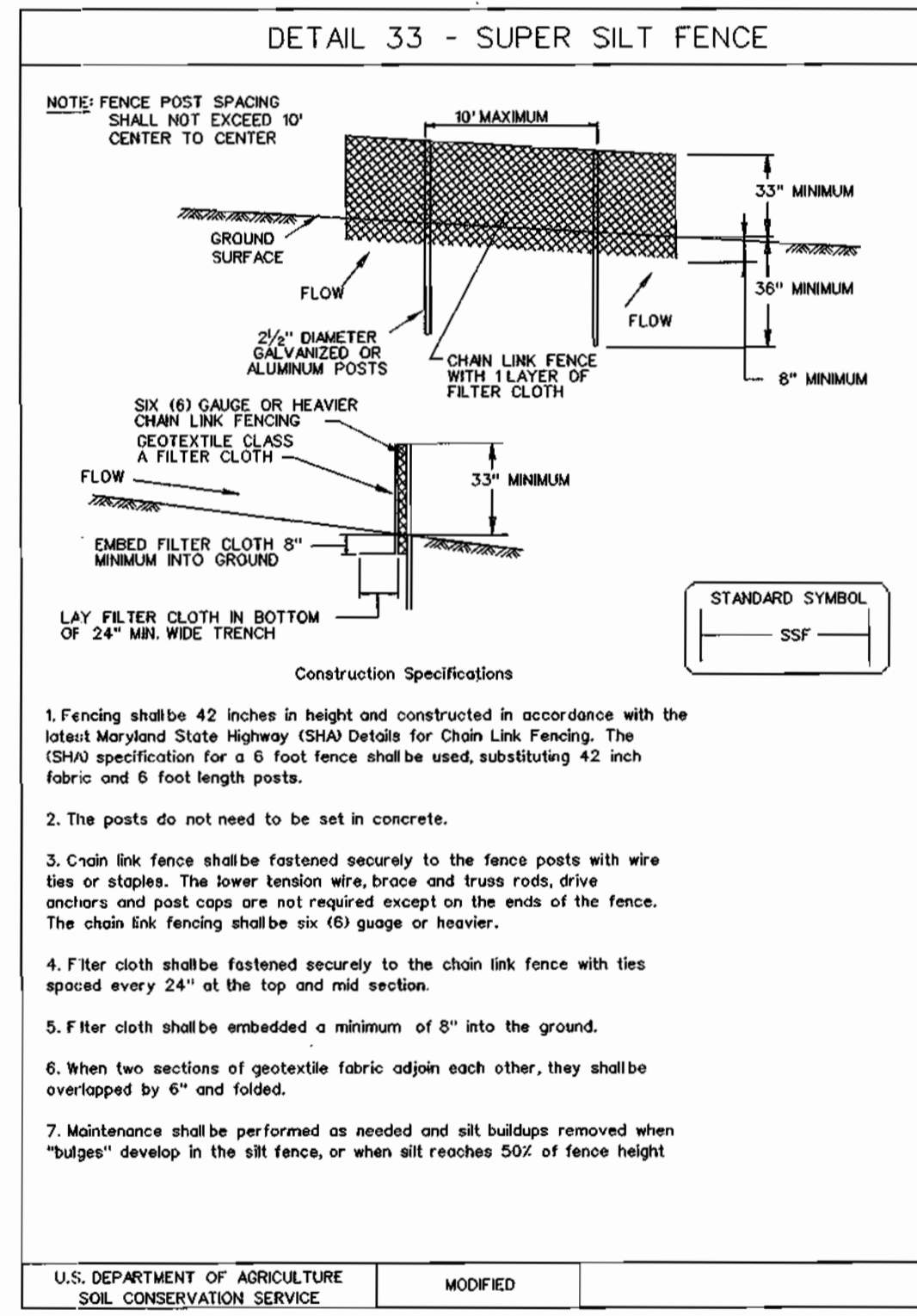
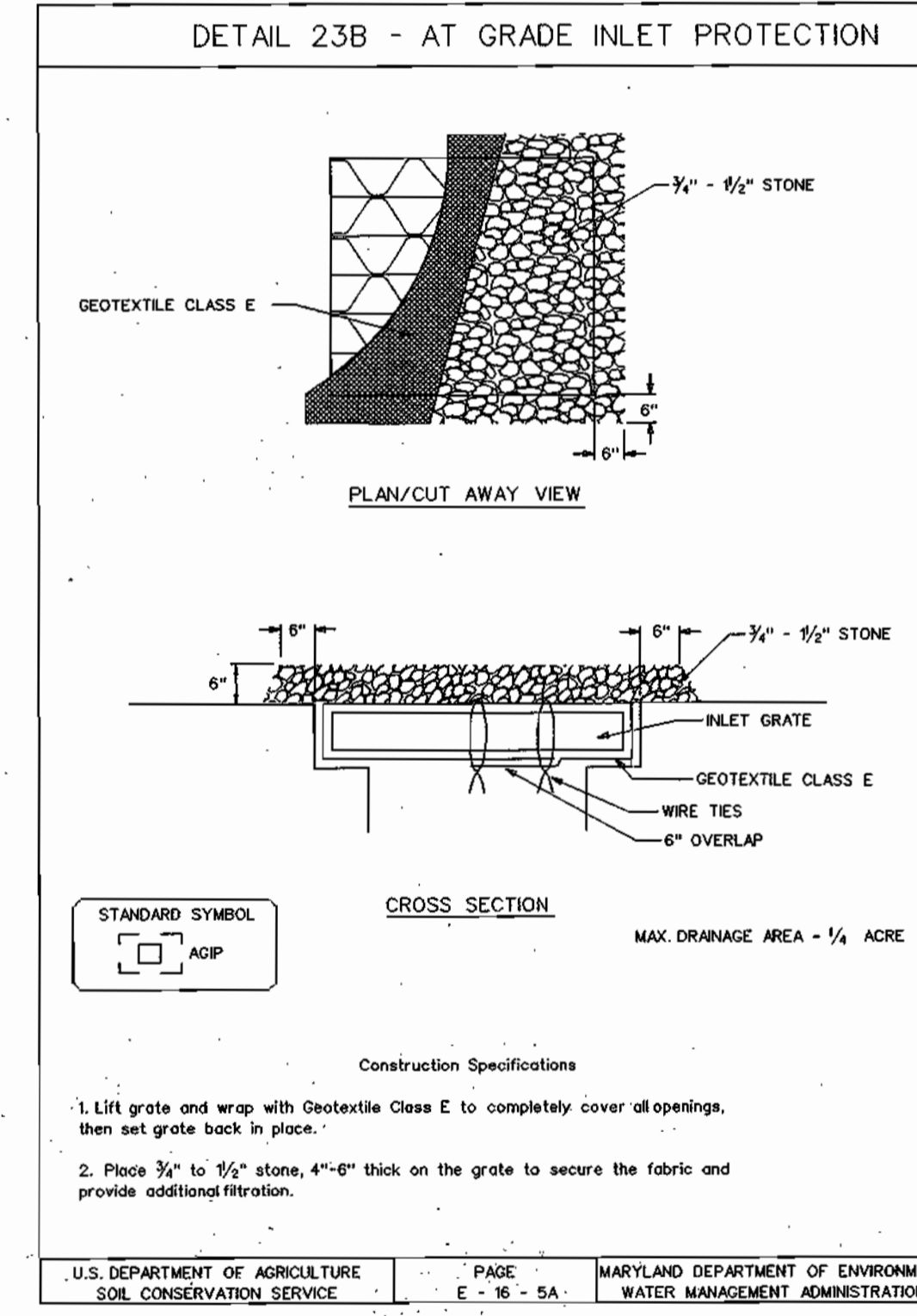
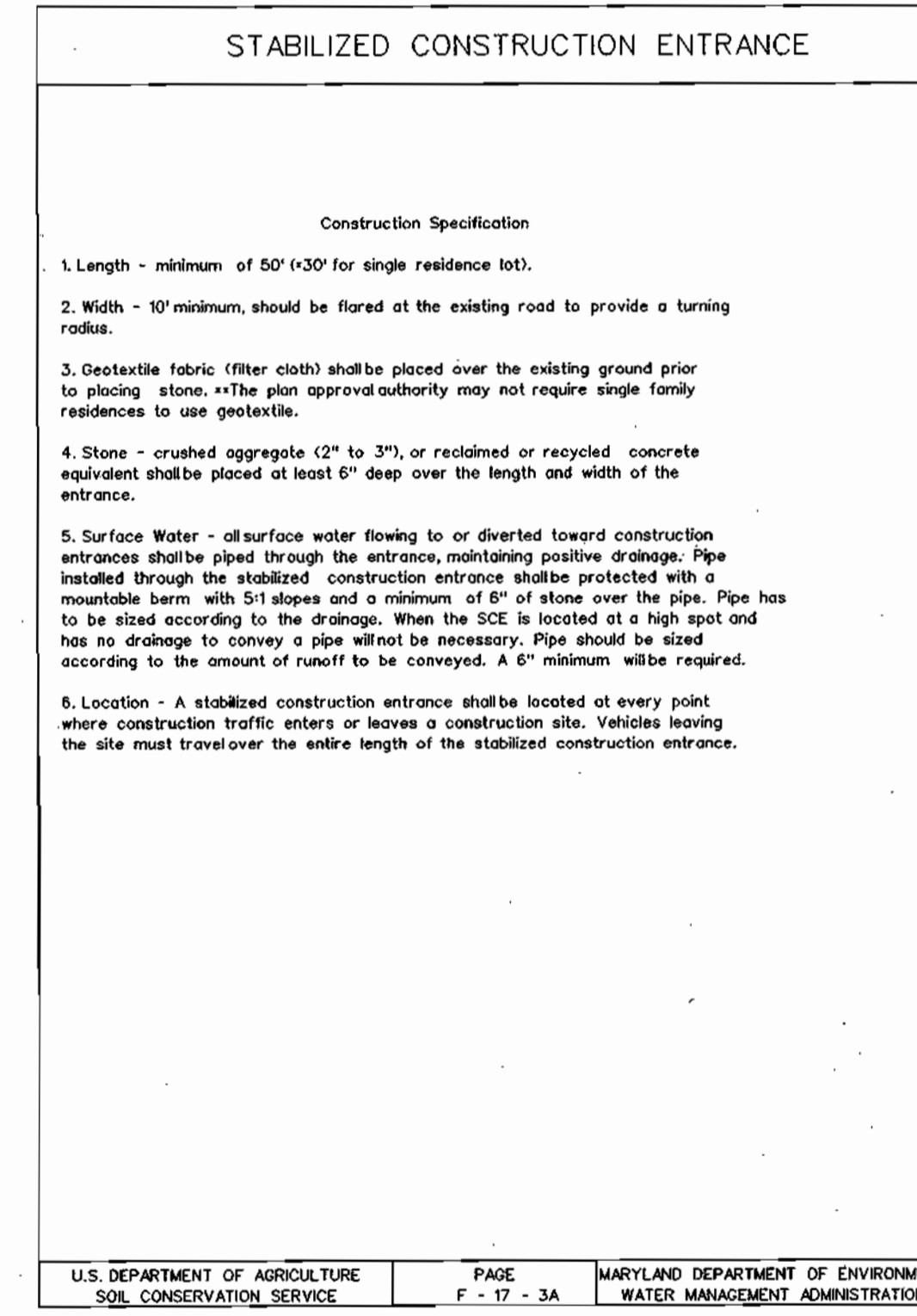
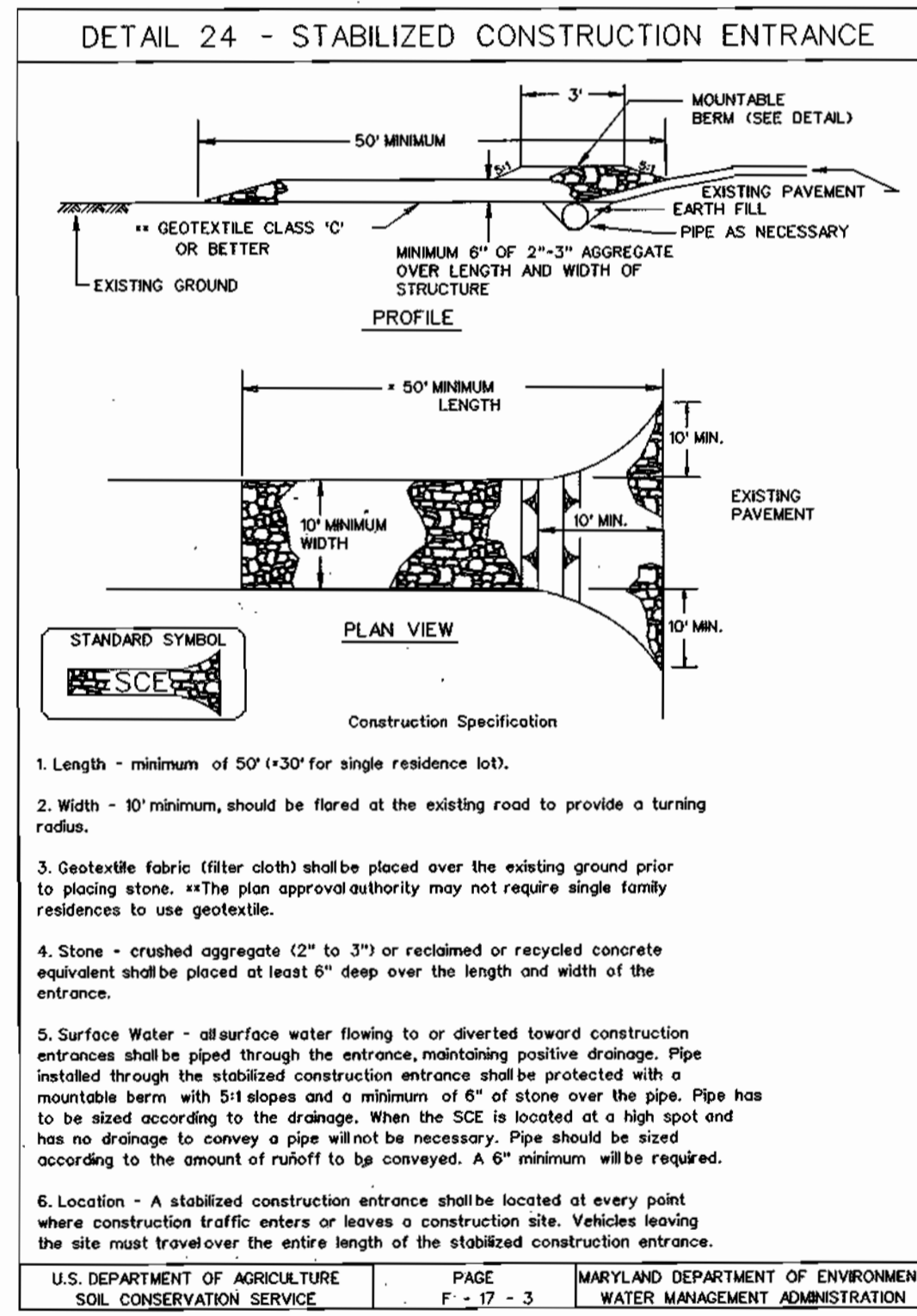


Table VI.1. Example Maintenance Schedule for Bioretention Areas

Description	Method	Frequency	Time of the year
SOIL			
Inspect and Repair Erosion	Visual	Monthly	Monthly
ORGANIC LAYER			
Remove any void areas	By hand	Whenever needed	Whenever needed
Remove previous mulch layer before applying new layer (optional)	By hand	Once every two to three years	Spring
Any additional mulch added (optional)	By hand	Once a year	Spring
PLANTS			
Removal and replacement of all dead and diseased vegetation considered beyond treatment	See planting specifications	Twice a year	3/15 to 4/30 and 10/1 to 11/30
Treat all diseased trees and shrubs	Mechanical or by hand	N/A	Varies, depends on insect or disease infestation
Watering of plant material shall take place at the end of each day for fourteen consecutive days after planting has been completed	By hand	Immediately after completion of project	N/A
Replace stakes after one year	By hand	Once a year	Only remove stakes in the spring
Replace any deficient stakes or wires	By hand	N/A	Whenever needed



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DATE: 4/10/03

DATE: 5/14/03

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL 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 INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

DATE: 4/10/03

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 COUNTY SOIL CONSERVATION DISTRICT.

DATE: 4/10/03

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

DATE: 4/22/03

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

DATE: 4/22/03

SUPER SILT FENCE

Design Criteria

Slope	Slope Steepness	Slope Length (minimum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

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

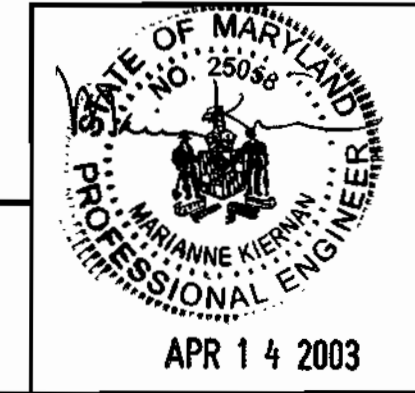
SILT FENCE

Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2:1 slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

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



KANE COMPANIES, INC. HEADQUARTERS

PROPOSED OFFICE WAREHOUSE
TAX MAP 37 - PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000

Drafting	DATE	AB	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

KCI TECHNOLOGIES

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CREANEY & SMITH GROUP LLC

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BALTIMORE, MD 21231
(410) 534-6350

GRADING AND SEDIMENT CONTROL DETAILS

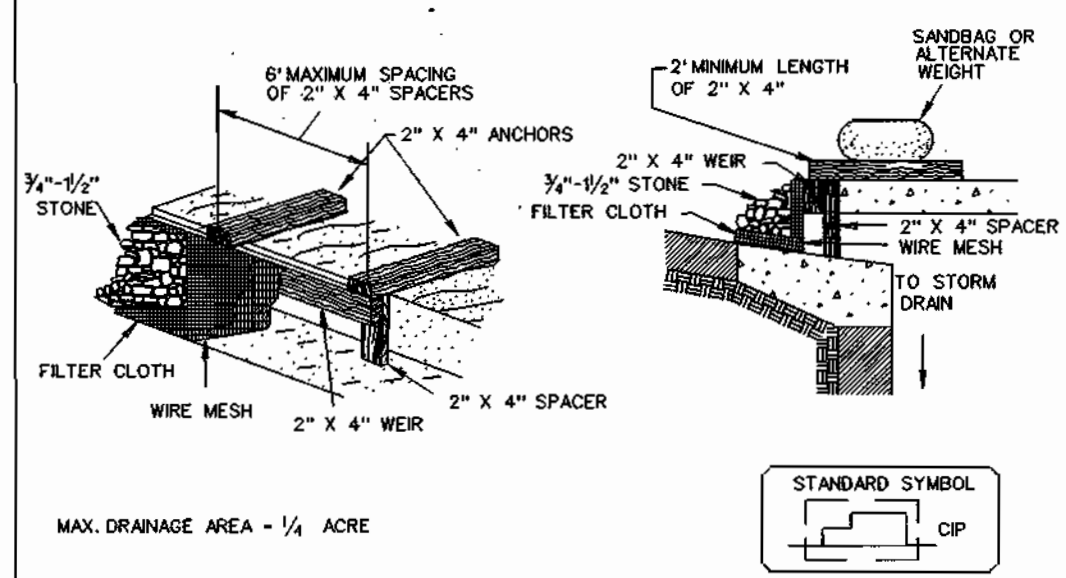
DATE: APRIL 9, 2003
SHEET 17 OF 22

APR 14 2003

SDP-02-53

1602008\DRAWINGS\SEDDETS.DGN

DETAIL 23C-CURB INLET PROTECTION (COG OR COS INLETS)



1. Attach a continuous piece of wire mesh (30\"/>

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE E-18-58 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EROSION CONTROL MATTING

Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6\"/>

Note: If flow will enter from the edge of the matting then the area affected by the flow must be keyed-in.

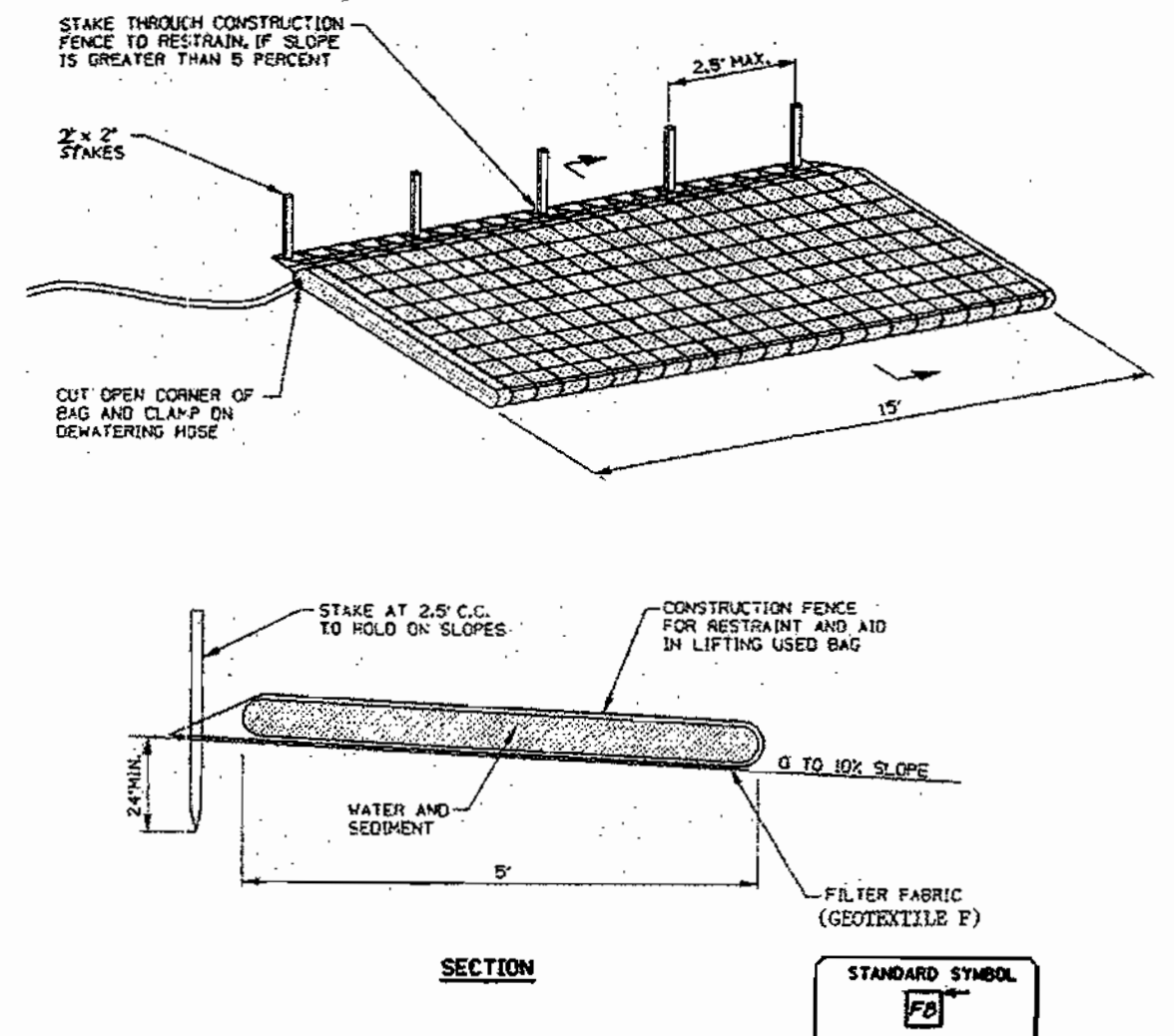
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE G-22-2A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ROCK OUTLET PROTECTION II

Construction Specifications

1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

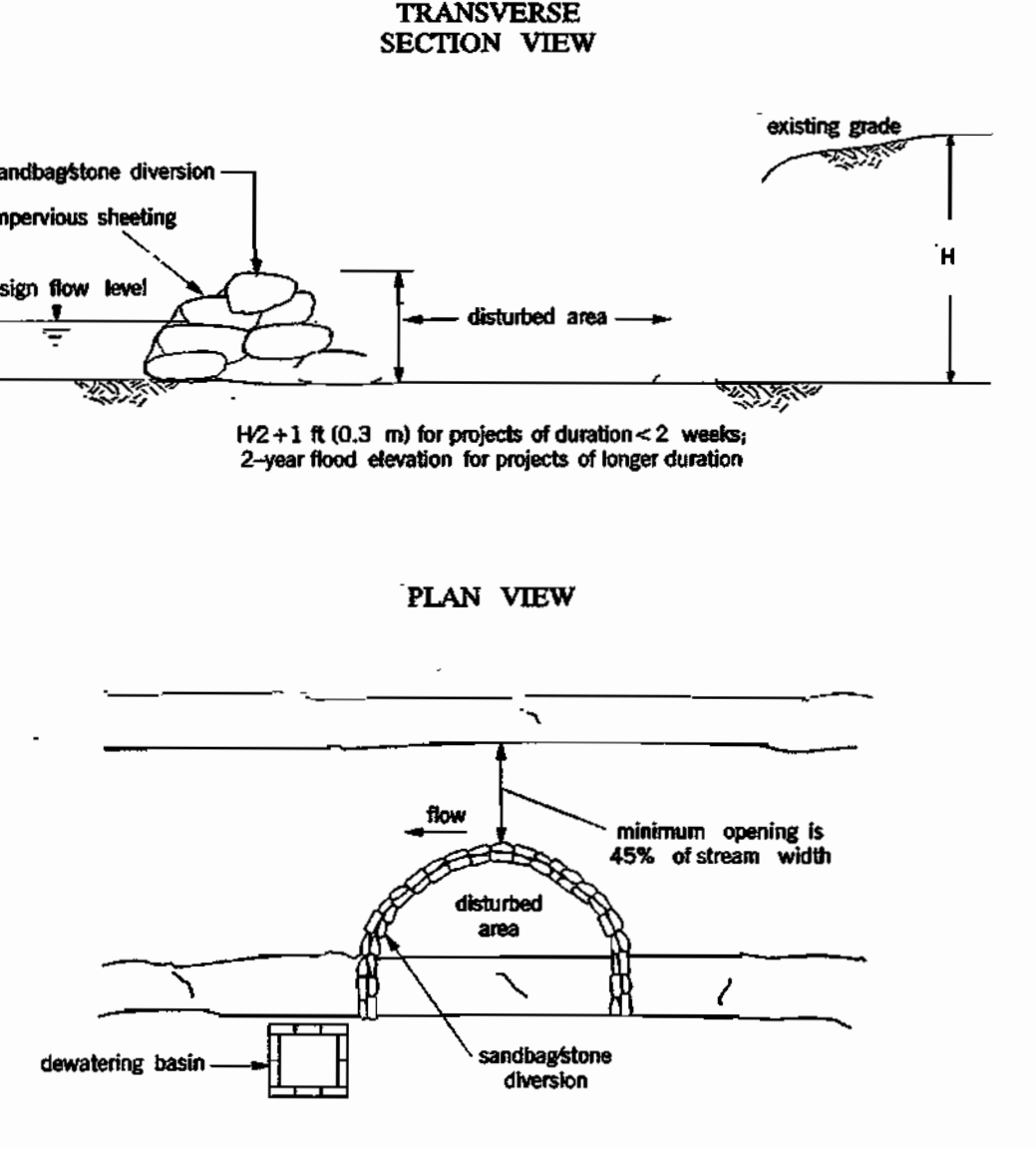
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-18-8A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



- NOTES:
1. FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.
 2. WIDTH AND LENGTH SHALL BE AS SHOWN.
 3. THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.
 4. FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 300 GPM.
 5. DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.
 6. FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE

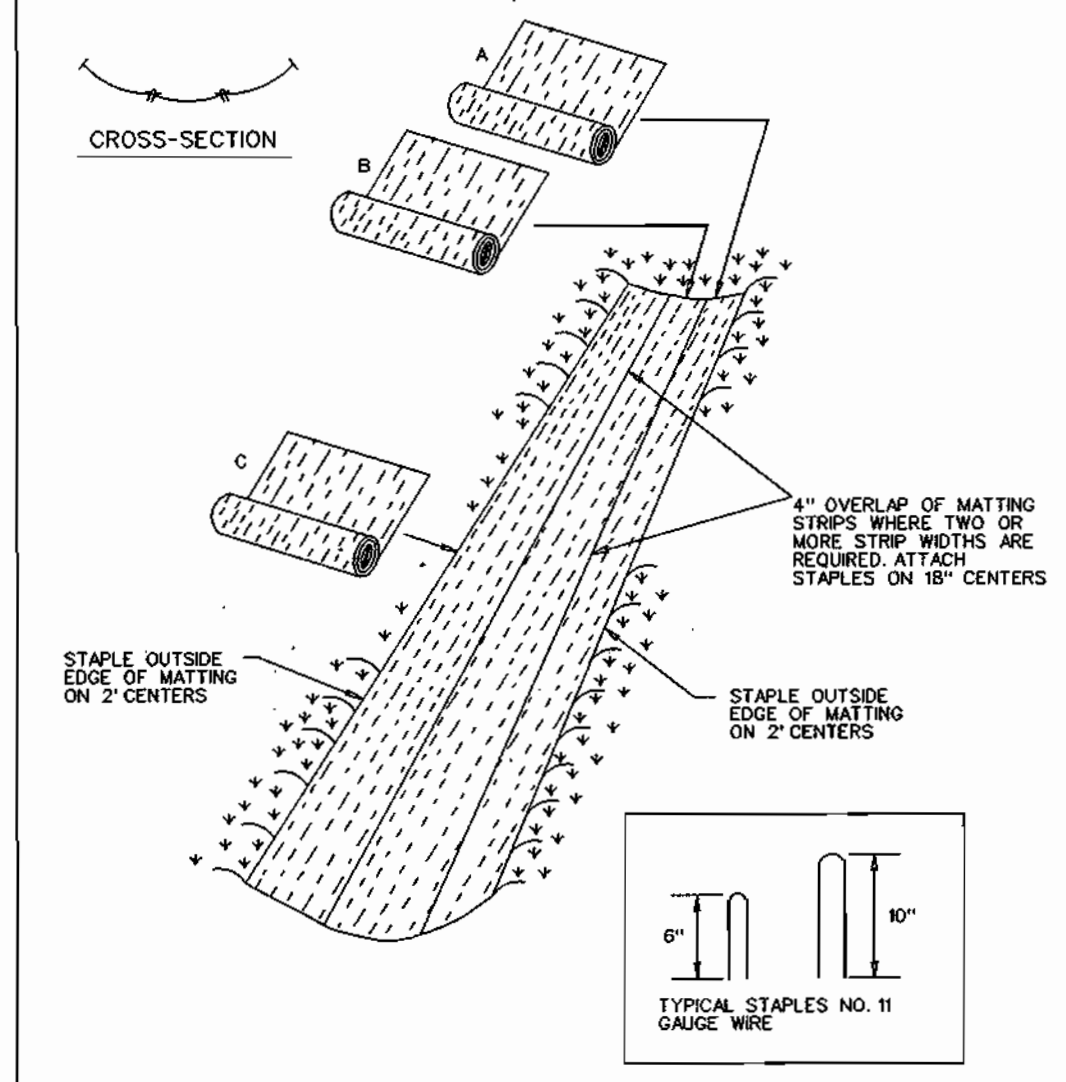
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-18-8A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Maryland's Guidelines To Waterway Construction
DETAIL 15: SANDBAG/STONE DIVERSION



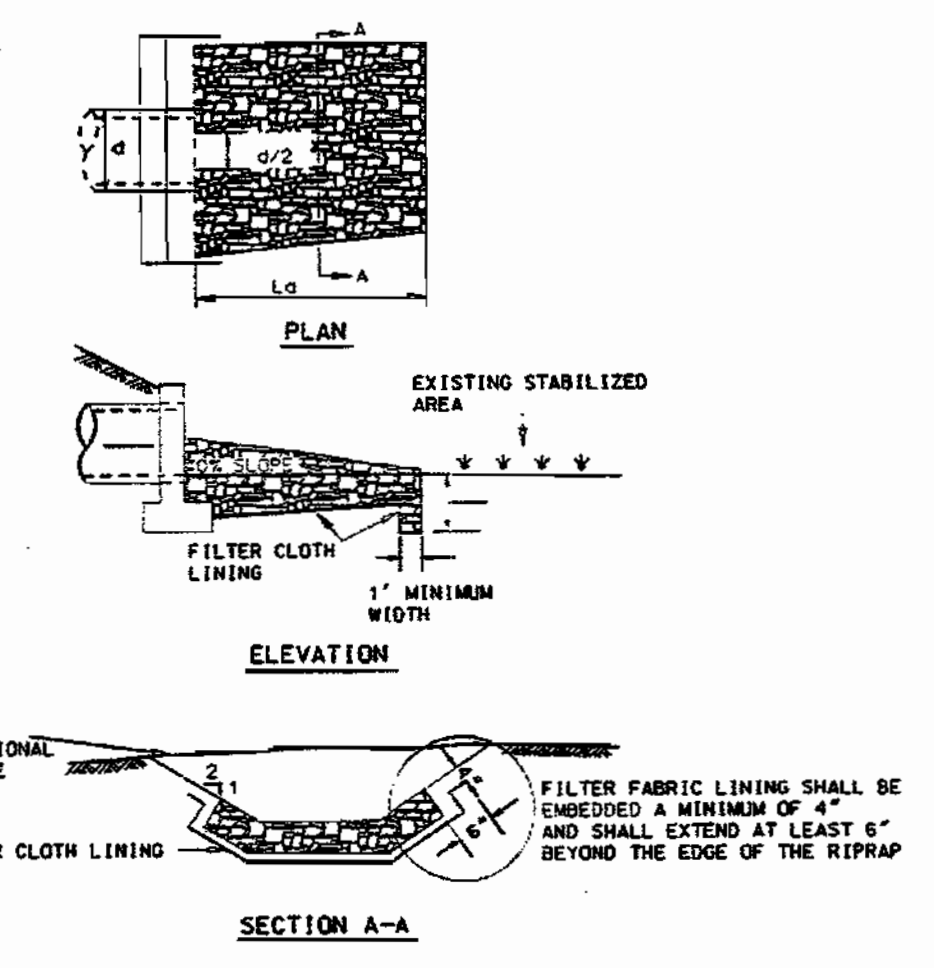
TEMPORARY DISTURBANCE CONSTRUCTION MEASURES REVISED NOVEMBER 2003 PAGE 12-3 MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



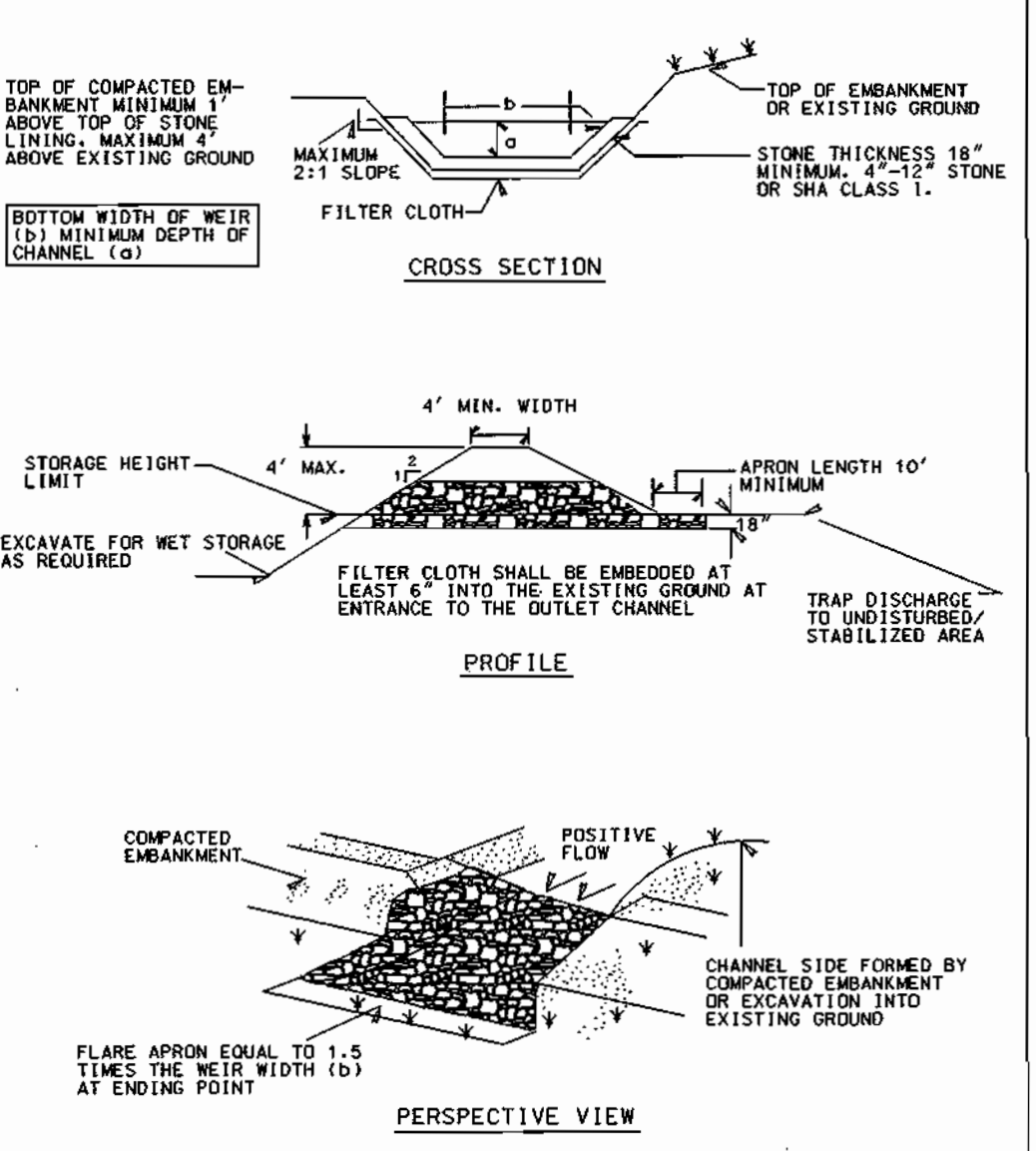
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE G-22-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 27 - ROCK OUTLET PROTECTION III



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-18-30 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

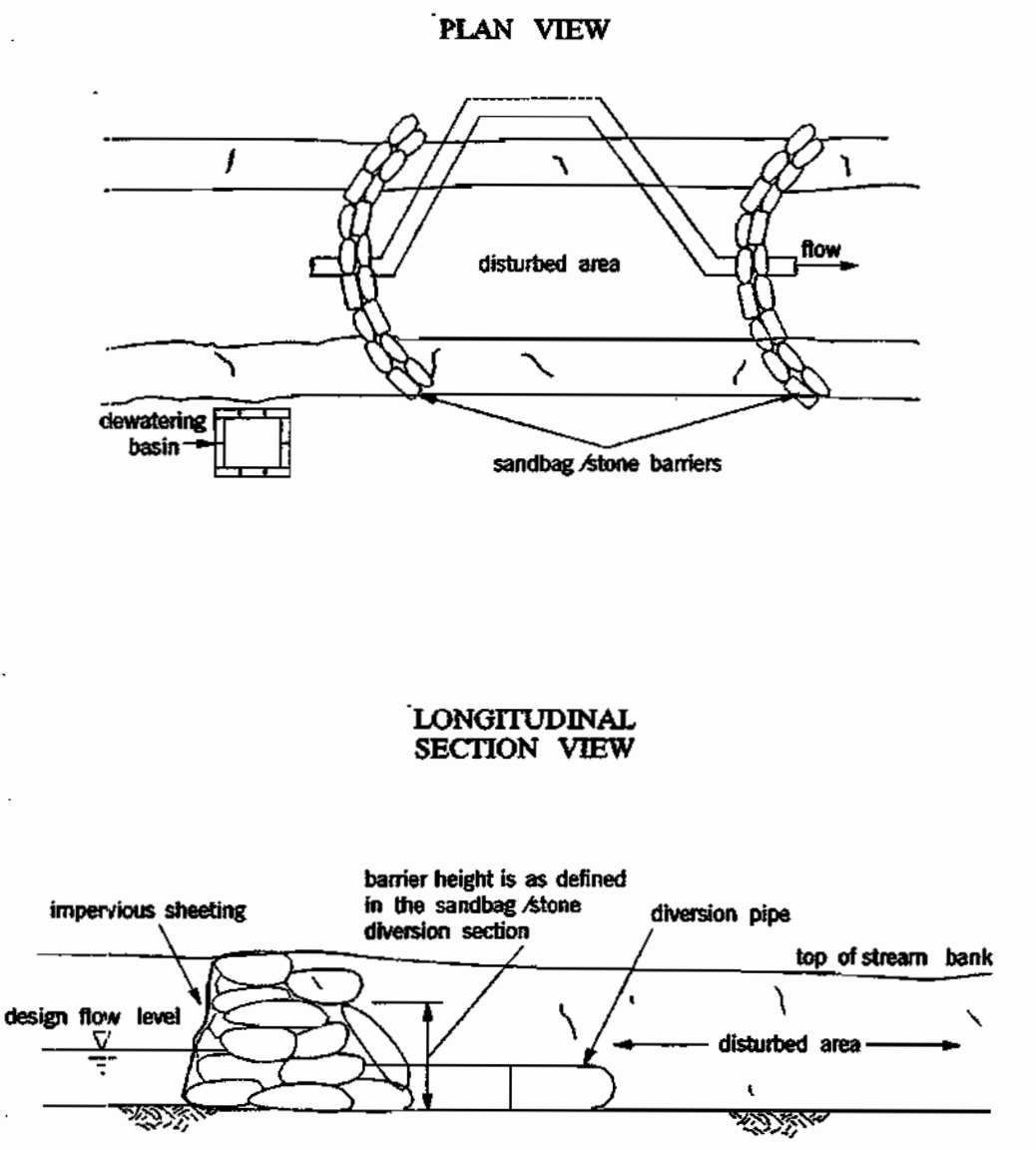
DETAIL 10 - RIP-RAP OUTLET SEDIMENT TRAP - ST III



NOTE: MAXIMUM DRAINAGE AREA= 10 ac.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-9-13 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Maryland's Guidelines To Waterway Construction
DETAIL 14: DIVERSION PIPE



TEMPORARY DISTURBANCE CONSTRUCTION MEASURES REVISED NOVEMBER 2003 PAGE 14-7 MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

RIP-RAP OUTLET SEDIMENT TRAP - ST III

- Construction Specifications
1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. 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.
 3. All cut and fill slopes shall be 2:1 or flatter.
 4. Elevation of the top of any dike directing water into trap must equal or exceed the height of trap embankment.
 5. Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 10).
 6. Filter cloth 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.
 7. Stone used in the outlet channel shall be 4" - 7" placed 18" thick.
 8. Outlet - An outlet shall be provided, which includes a means of conveying the discharge in an erosion free manner to an existing stable channel. Protection against scour at the discharge and shall be provided as necessary.
 9. Outlet channel must have positive drainage from the trap.
 10. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/4 of the wet storage depth of the trap (1350 cu/ft). Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 11. The structure shall be inspected periodically after each rain and repaired as needed.
 12. Construction of traps shall be carried out in such a manner that sediment position is located. 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.
 13. 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 PAGE C-9-13A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *Chad Hamrick* 5/8/03
 CHIEF, DIVISION OF LAND DEVELOPMENT: *David K. Cagle* 5/6/03
 DIRECTOR

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL 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 INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 DEVELOPER: *Jim Meyer* DATE: *4/22/03*

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 COUNTY SOIL CONSERVATION DISTRICT.
 ENGINEER: *Marin Kern* DATE: *4/14/03*

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 USDA - NATURAL RESOURCES CONSERVATION SERVICE: *Jim Meyer* DATE: *4/22/03*

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SCD: *John Smith* DATE: *4/22/03*

Drafting	JAB	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

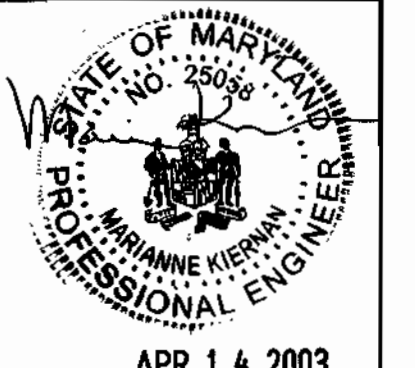
KCI TECHNOLOGIES
 ENGINEERS, PLANNERS, SCIENTISTS, CONSTRUCTION MANAGERS
 14502 Greenview Drive, Suite 424
 Laurel, Maryland 20708
 (301) 953-8221 (410) 792-8086
 fax: (410) 792-7419
 www.kci.com

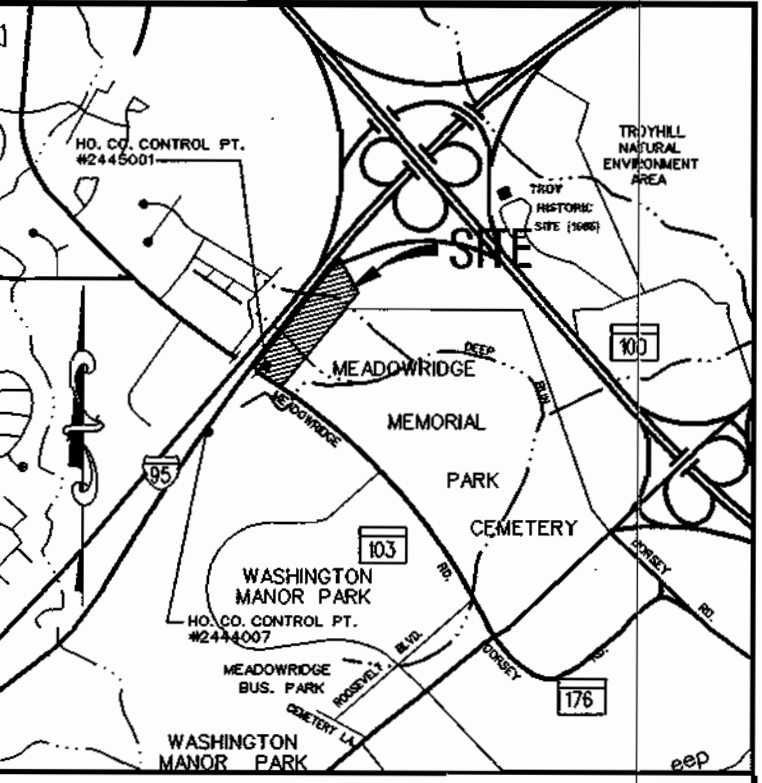
OWNER:
C & S MEADOWRIDGE, LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

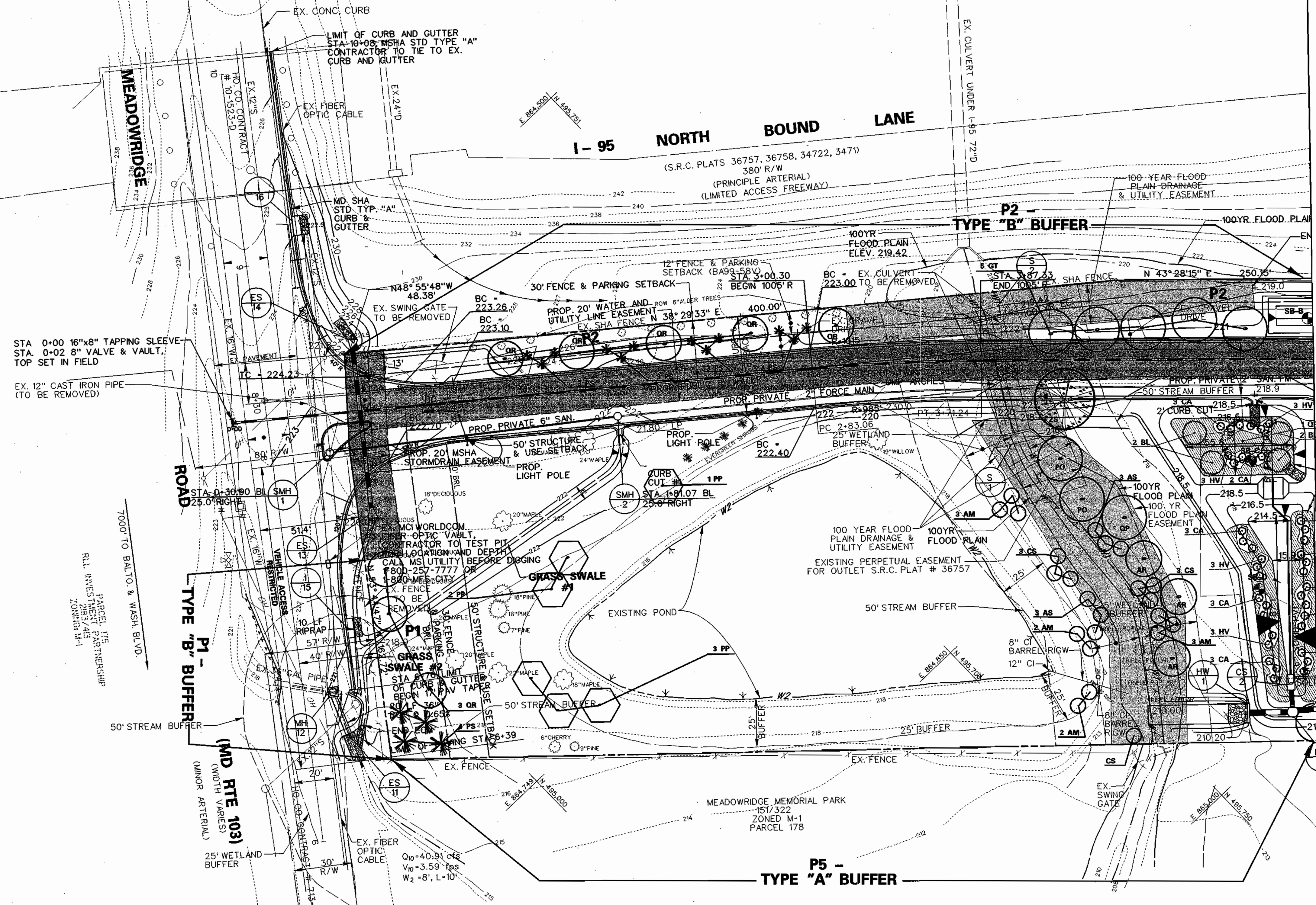
GRADING AND SEDIMENT CONTROL DETAILS
 APR 14 2003

KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000





VICINITY MAP
SCALE: 1" = 2000'



- RED OAK
- LOCUST
- ZELKOVA
- WEEPING CHERRY
- DOGWOOD
- EUONYMUS
- EX TREE
- EX PINE TREE

MATCHLINE SEE SHEET 2

PLANT SCHEDULE					
SYMBOL	KEY	BOTANICAL /COMMON NAME	QUANTITY	SIZE/CONDITION	SPACING
GT		Gleditsia Triacanthos - Skyline Honeylocust	9	2 1/2"-3" Cal.	B-B
PP		Prunus Subhirtella Pendula - Weeping Higan Cherry	6	2 1/2"-3" Cal.	B-B
ZS		Zelkova Serata - Japanese Zelkova	7	2 1/2"-3" Cal.	B-B
PS		Pinus Strobus - Eastern White Pine	34	6" Ht.	2" Cal.
QR		Quercus Rubra - Red Oak	34	2.5" Cal.	B-B
AR		Acer Rubrum - Red Maple	3	2.5" Cal.	B-B
PO		Platanus Occidentalis - American Sycamore	2	2.5" Cal.	B-B
QP		Quercus Palustris - Pin Oak	1	2.5" Cal.	B-B
CS		Cornus Serices - Redosier Dogwood	7	18"-24" Ht.	Cont.
AM		Aronia Melanocarpa - Black Chokeberry	10	18"-24" Ht.	Cont.
AS		Alnus Serrulata - Smooth Alder	6	18"-24" Ht.	Cont.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5/8/03

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 5/1/03

DIRECTOR
DATE: 5/1/03

DEVELOPER'S / BUILDERS 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 executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name: *[Signature]* Date: *[Signature]*

KANE COMPANIES, INC. HEADQUARTERS

PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

WATER CODE: D04 SEWER CODE: 215 3000

GRAPHIC SCALE
0 15 30 60
(IN FEET)
1 inch = 30ft.

DATE: APRIL 9, 2003
SHEET 20 OF 22



Drafting	JAB	DATE	REVISIONS
Check	CGW		
Design	CGW		
Check	THM		

KCI ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
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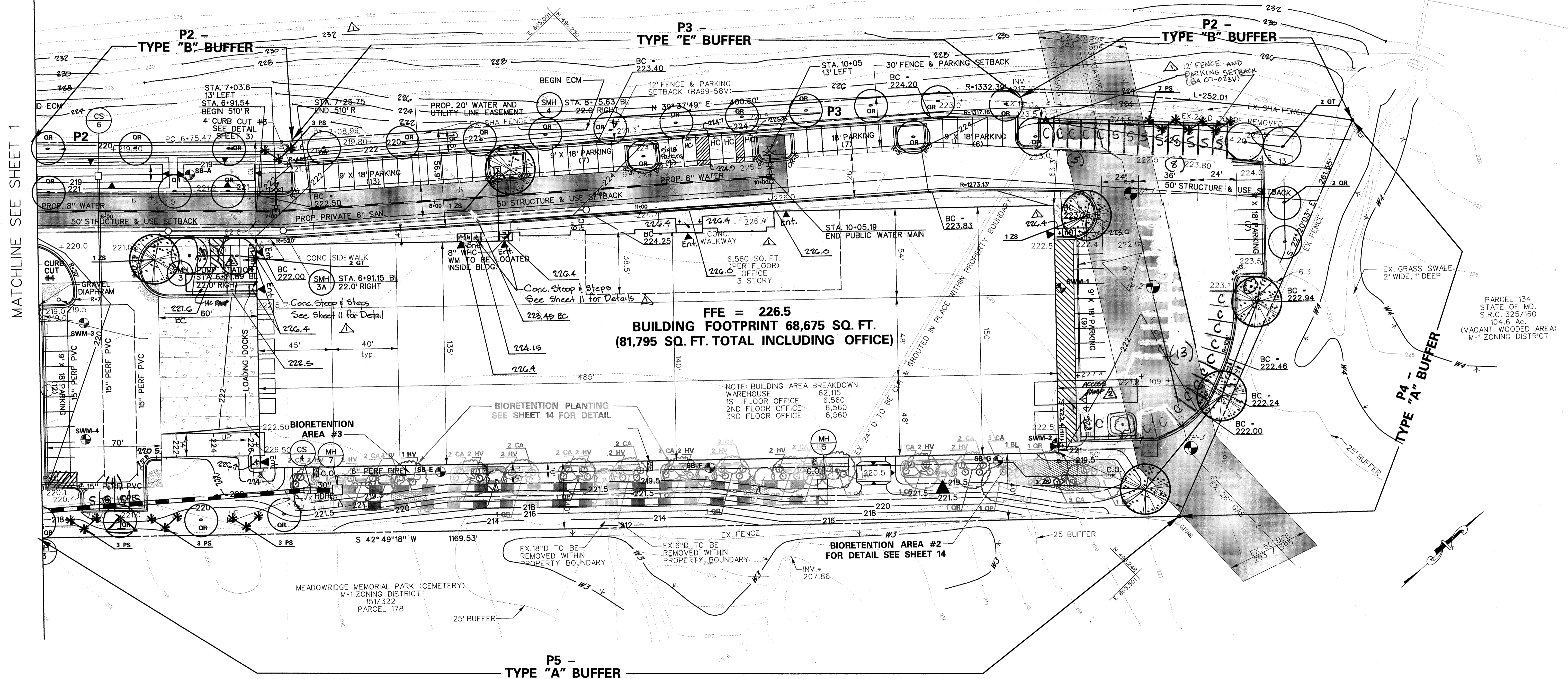
LANDSCAPE PLAN - SHEET 1

I-95 NORTH BOUND LANE

(S.R.C. PLATS 36757, 36758, 34722, 3471)
380' R/W

(LIMITED ACCESS FREEWAY)

EXIT RAMP TO RTE.100 EAST

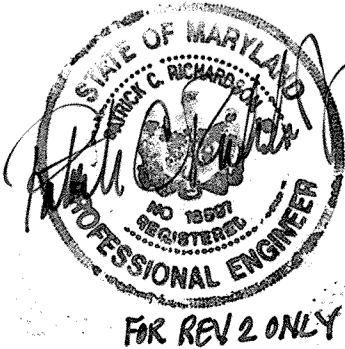


FFE = 226.5
BUILDING FOOTPRINT 68,675 SQ. FT.
(81,795 SQ. FT. TOTAL INCLUDING OFFICE)

NOTE: BUILDING AREA BREAKDOWN
WAREHOUSE 62,115
1ST FLOOR OFFICE 6,560
2ND FLOOR OFFICE 6,560
3RD FLOOR OFFICE 6,560

PLAN
SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
DATE: 5/8/03
DATE: 5/14/03



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. 16597, Expiration Date: 8/15/19

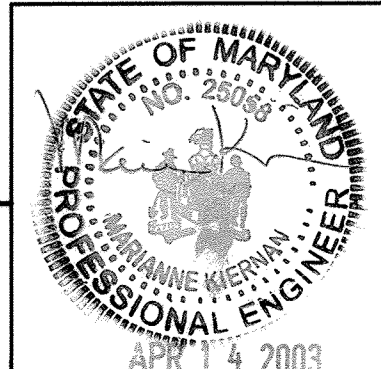
DATE	REVISIONS
6/25/18	HANDICAP RAMP & ACCESS RAMP
11/29/04	Revise offsite grading
11/29/04	Revise stoop & steps per revised architectural
10-9-07	Updated Parking 3 Added Island

KCI TECHNOLOGIES
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LANDSCAPE PLAN - SHEET 2



KANE COMPANIES, INC. HEADQUARTERS
PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.
DATE: APRIL 9, 2003
SHEET 21 OF 22

SDP-02-53

1602008\DRAWINGS\1and2.dgn

PLANTING SPECIFICATIONS

1. DESCRIPTION

The Contractor shall furnish and install all plant materials, labor and other materials necessary to complete the work as shown on the plans and details.

MATERIALS AND METHODS

A. The materials and methods shall comply with all the requirements of the current edition of the "American Standard for Nursery Stock" as prepared by the American Association of Nurserymen or as modified herein.

B. Substitutions

- If a plant is found not to be suitable or available, the Landscape Contractor shall notify the Owner's Representative before bidding.
- The Owner or Owner's Representative will select a reasonable alternate, or to inform all Landscape Contractors of the source of availability of the original.

C. Utilities

The Landscape Contractor shall verify the correct location of any existing underground utilities prior to any excavation or plant installation. The Landscape Contractor shall call Miss Utility (1-800-257-7777) a minimum of 48 hours prior to construction.

D. Plant Material Sources

The Landscape Contractor shall, at least ten (10) days before beginning planting operations submit a list of planting material sources giving the nursery address and phone number for each plant material required on the job.

E. The total number of plants shall be as shown on the landscape plan. If this total differs from the plant schedule, the Landscape Contractor shall notify the Owner's Representative before the plant schedule, the Landscape Contractor shall notify the Owner's Representative before

F. Time of Planting:

Planting season schedule shall be in accordance with the "American Standard for Nursery Stock" as prepared by the American Association of Nurserymen. Plant pines and oaks shall be during spring planting season only.

G. Mulch:

Mulch shall be shredded hardwood bark. The Landscape Contractor shall provide a one (1) lb. sample to the Owner's Representative for his approval. Mulch shall be applied to a depth of three (3) inches within 24 hours of installation of plant materials.

H. Tree wrap shall not be utilized.

I. The Landscape Contractor shall prune plant material within two (2) days of installation in accordance with the details and as directed by the Owner's Representative.

J. Topsoil

ASTM D 5268, pH range 5.5 to 7.4 percent organic material minimum, free of stones 1 inch (25 mm) or larger in any dimension, and other extraneous materials harmful to plant growth.

- Topsoil Source: Reuse surface soil stockpiled on the site. Verify suitability of surface soil to produce topsoil meeting requirements and amend when necessary. Supplement with imported topsoil when quantities are insufficient. Clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.
- Spread topsoil 4" min. depth over all landscape areas.

K. Soil Preparation:

- Spread agricultural lime on sod and seed areas at a rate of 92 lbs/1000 s.f.
- Fertilize sod and seed areas with (10-2-22) at a rate of 23 lbs/1000 s.f.

L. All disturbed areas within the limit of contract which are not paved, sodded or otherwise planted shall be seeded. The following seed mixture and rate of application will be used: 50% Kentucky Bluegrass, 40% Chewings or Red Fescue, 10% Red Top. This mixture shall be applied at the rate of two and a half to five (2.5-5) lbs/s.f. sown in two (2) directions at right angles.

M. Clean-Up and Restoration:

- During the course of planting, excess and waste materials shall be continuously and promptly removed, lawn areas kept clear, and all reasonable precautions taken to avoid damage of existing lawns, paving, etc.
- The Landscape Contractor shall restore to their original condition all pavements, sodded and planted areas, structures and substructures, not specifically provided for in the Contract, which are disturbed by the Landscape Contractor during planting operations. Such restoration shall be in a manner satisfactory to the Owner's Representative and at no additional cost to the Owner.

N. Water:

Water for planting and maintenance purposes, will be supplied by the Owner. The Landscape contractor shall provide all equipment necessary to transport the water from source to required locations. The Landscape Contractor shall water all plants promptly, adequately and as often as necessary to insure proper plant growth and to keep the soil moist and in a condition satisfactory to the Owner's Representative. The Landscape Contractor is responsible for watering all plants from the time of planting until the final inspection.

O. Final Inspection:

The Owner's Representative shall make a final inspection and notify the Landscape Contractor in writing, when all work is satisfactorily completed. If the work is not satisfactorily completed, the Owner's Representative will notify the Landscape Contractor, in writing, as to the deficiencies in the work and the necessary corrective measures. A reasonable amount of time will be given and another final inspection will be scheduled by the Owner's Representative.

P. Owner Maintenance:

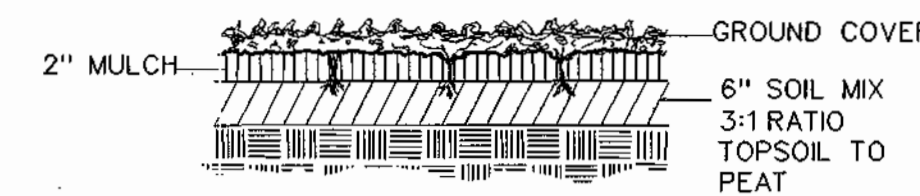
After the planting has been approved by the Owner's Representative and the Owner, the maintenance of watering and weeding of such plants and planted area shall be provided by the Owner. Since the plants are to be guaranteed by the Landscape Contractor for one year from final inspection, he should check the maintenance conducted by the Owner. The Landscape Contractor shall also make monthly site inspections after installation of trees during the guarantee period and shall right any trees that are not vertically true. If the Landscape Contractor is not satisfied with the maintenance of the plants, a written report, in triplicate, stating appropriate changes shall be given immediately to the Owner's Representative; two copies will be forwarded to the Owner.

Q. Guarantee:

All plant material shall be guarantee to be in a vigorous growing condition one year from the date of final inspection. Any plants infected with disease or insects, as well as all dead or unacceptable plants will be replaced by the same plants shall be planted, mulched and gayed as specified herein and without extra compensation to the contractor. At the completion of all such work and with the approval of the Owner's Representative, the Contract will be considered complete.

R. Payment:

Terms of payment shall be as specified in the bid package.



ALL GROUND COVERS SHALL BE PLANTED IN ACCORDANCE WITH PLANTING SCHEDULE

GROUND COVER PLANTING DETAIL
NOT TO SCALE

SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO I-95		ADJACENT TO MEADOWRIDGE	ADJACENT TO CEMETARY	ADJACENT TO STATE PROPERTY
	P2 NO PARKING TYPE B	P3 WITH PARKING TYPE E	P1 TYPE B	P5 TYPE A	P4 TYPE A
LANDSCAPE TYPE					
LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	859	443	150	1430	260
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 11 ALDER	NO	NO	NO	NO
CREDIT FOR BIORETENTION PLANT MATERIAL (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	27 SHADE TREES	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES* BERM, 20' ELEV DIFF	NO	NO	NO
NUMBER OF PLANTS REQUIRED					
SHADE TREES	7	11	3	0	5
EVERGREEN TREES	22	0	4	0	0
SHRUBS	0	0	0	0	0
NUMBER OF PLANTS PROVIDED					
SHADE TREES	19	11	3	4	5
EVERGREEN TREES	22	0	4	9	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)				SUB 27 SHADE TREES OF BIORETENTION PLANTINGS FOR P5 TYPE A PLANTINGS	

* THE BERM ONLY IS CREDITED TOWARD REQUIRED SHRUBS.

SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	790 FEET
NUMBER OF TREES REQUIRED	M-1 ZONING, LANDSCAPING IS NOT REQUIRED PER LANDSCAPE MANUAL PG. 30
SHADE TREES	
EVERGREEN TREES	
CREDIT FOR EXISTING VEGETATION (NO, YES, AND %)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES, AND %)	NO
NUMBER OF TREES PROVIDED	
SHADE TREES	0
EVERGREEN TREES	0
SHRUBS	0

SEE SHEETS #13-14 FOR BIORETENTION PLANTING PLANS.

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	87
NUMBER OF TREES REQUIRED	5
NUMBER OF TREES PROVIDED	
SHADE TREES	7
EVERGREEN TREES	0
OTHER TREES (2:1 SUBSTITUTION)	0
NUMBER OF ISLANDS REQUIRED	5
NUMBER OF ISLANDS PROVIDED	5

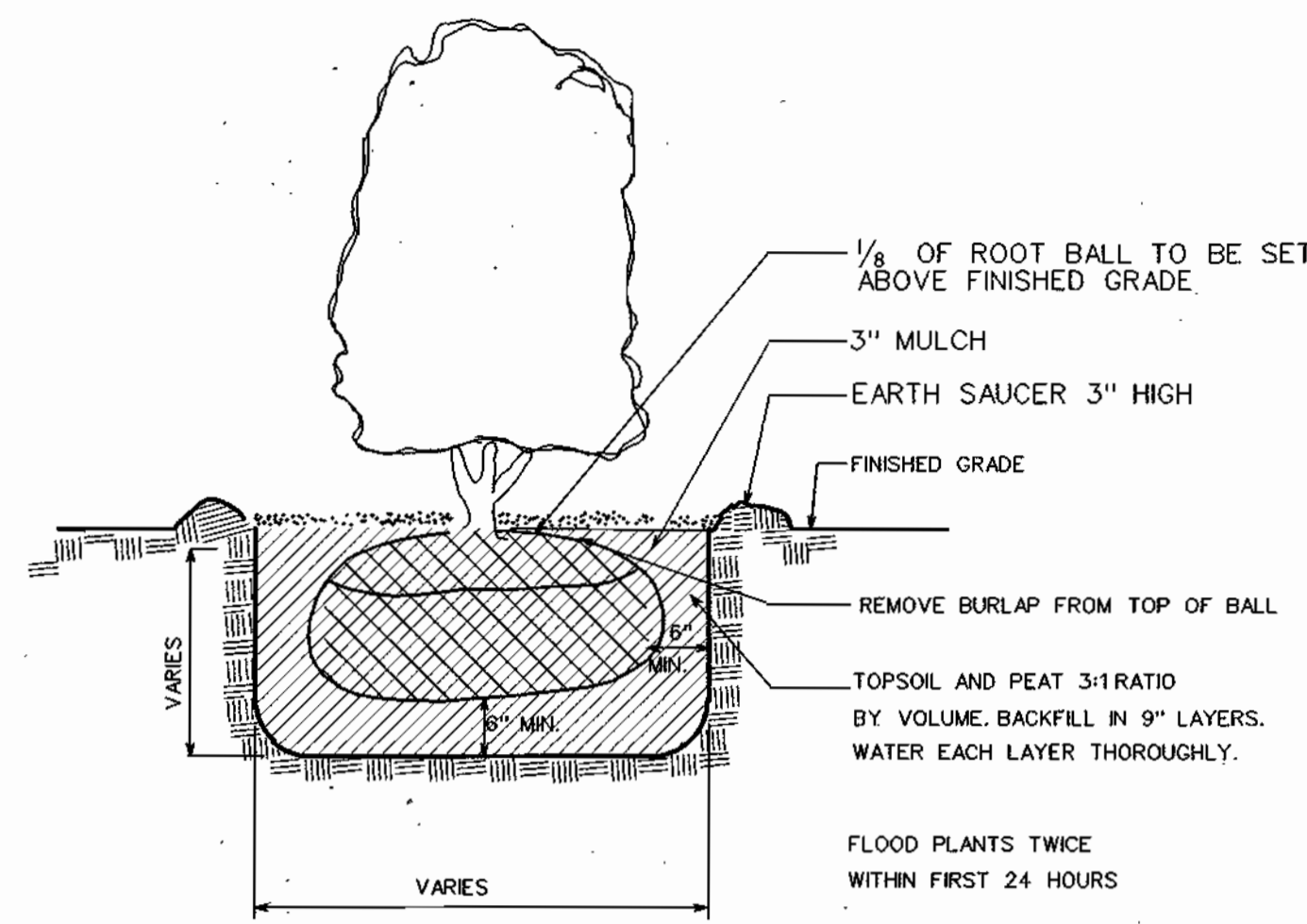
LANDSCAPE NOTE

- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.
- Financial surety for the required landscaping has been posted as part of the DPW developers agreement in the amount of \$13,200.00 for 31 shade trees and 26 evergreens.

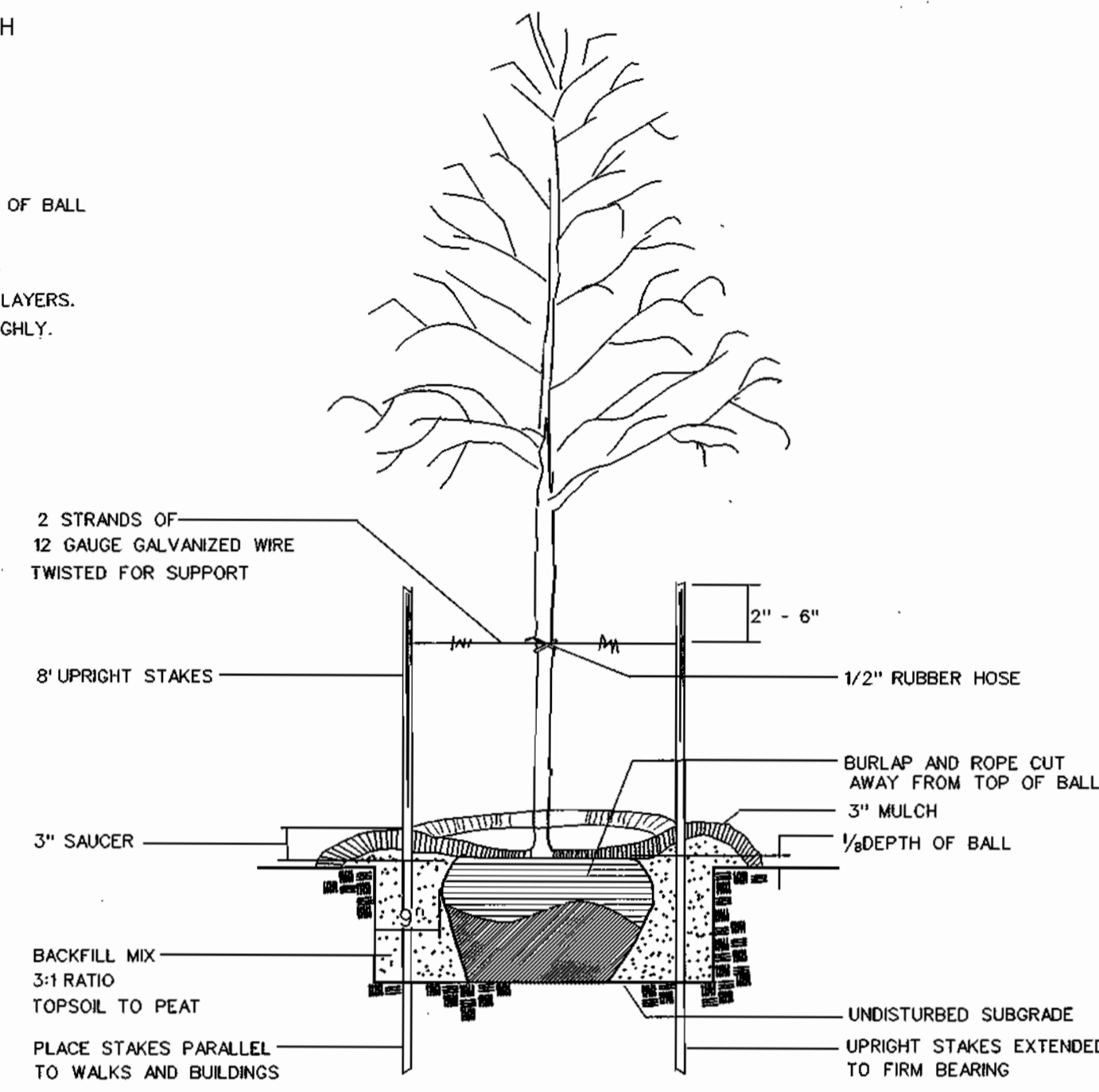
DEVELOPER'S / BUILDERS CERTIFICATE

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 executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

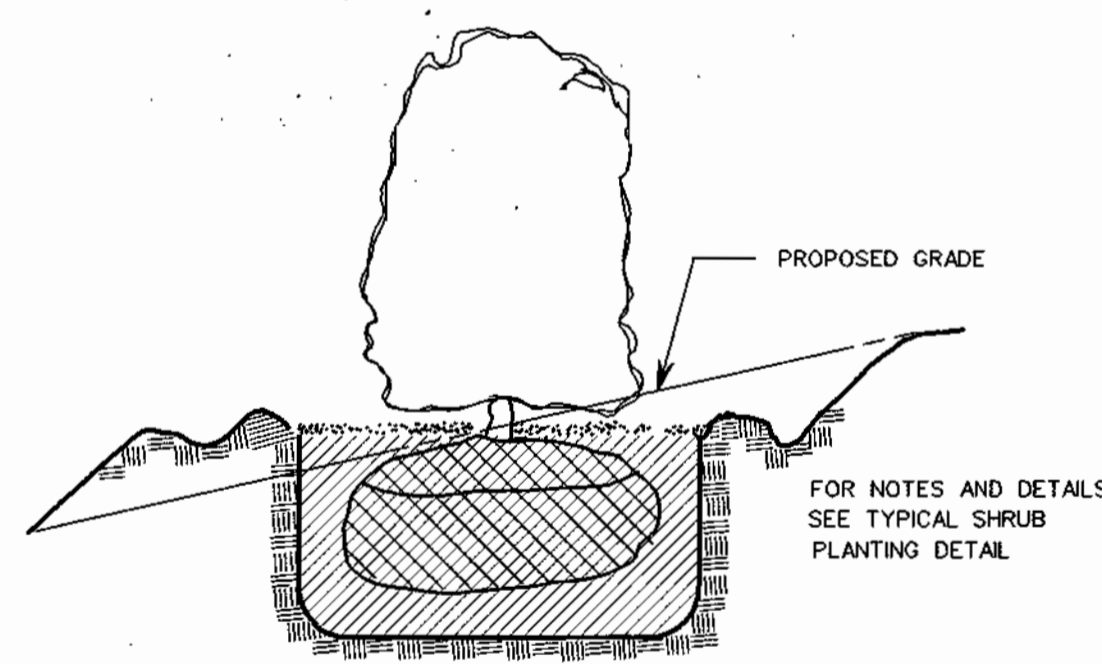
Name: *[Signature]* Date: *[Signature]*



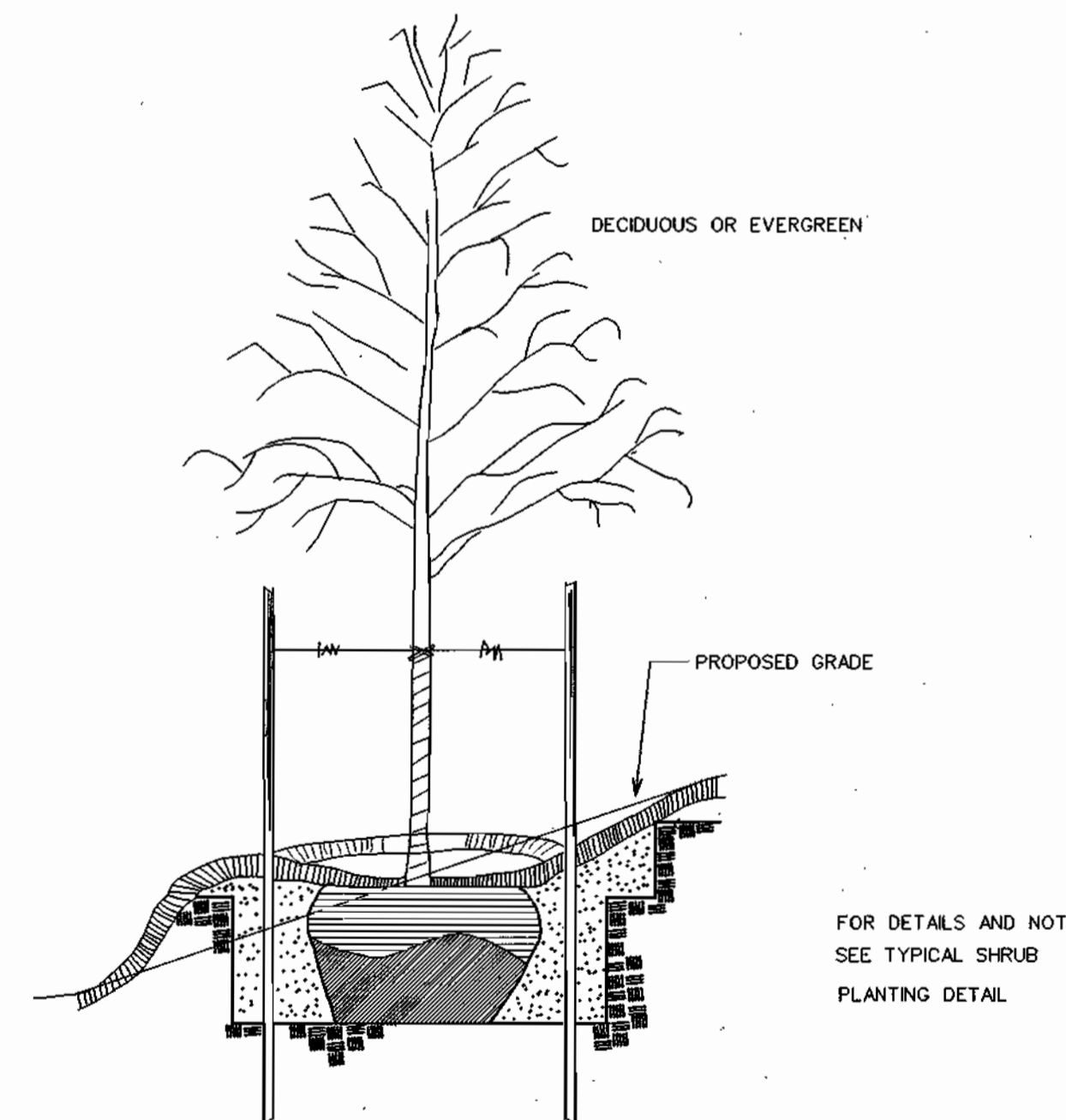
SHRUB PLANTING DETAIL
B&B AND CONTAINER GROWN
NOT TO SCALE



TREE PLANTING DETAIL
B & B
NOT TO SCALE



SLOPE PLANTING DETAIL
FOR ALL SHRUBS
NOT TO SCALE



SLOPE PLANTING DETAIL
FOR ALL TREES
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
[Signature] DATE: 4/2/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] DATE: 4/2/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] DATE: 4/2/03
 DIRECTOR

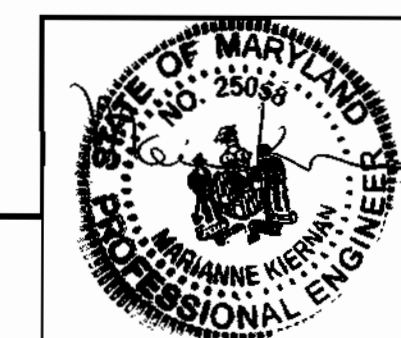
Drafting	AWW	DATE	REVISIONS
Check	CGW		
Design	CGW		
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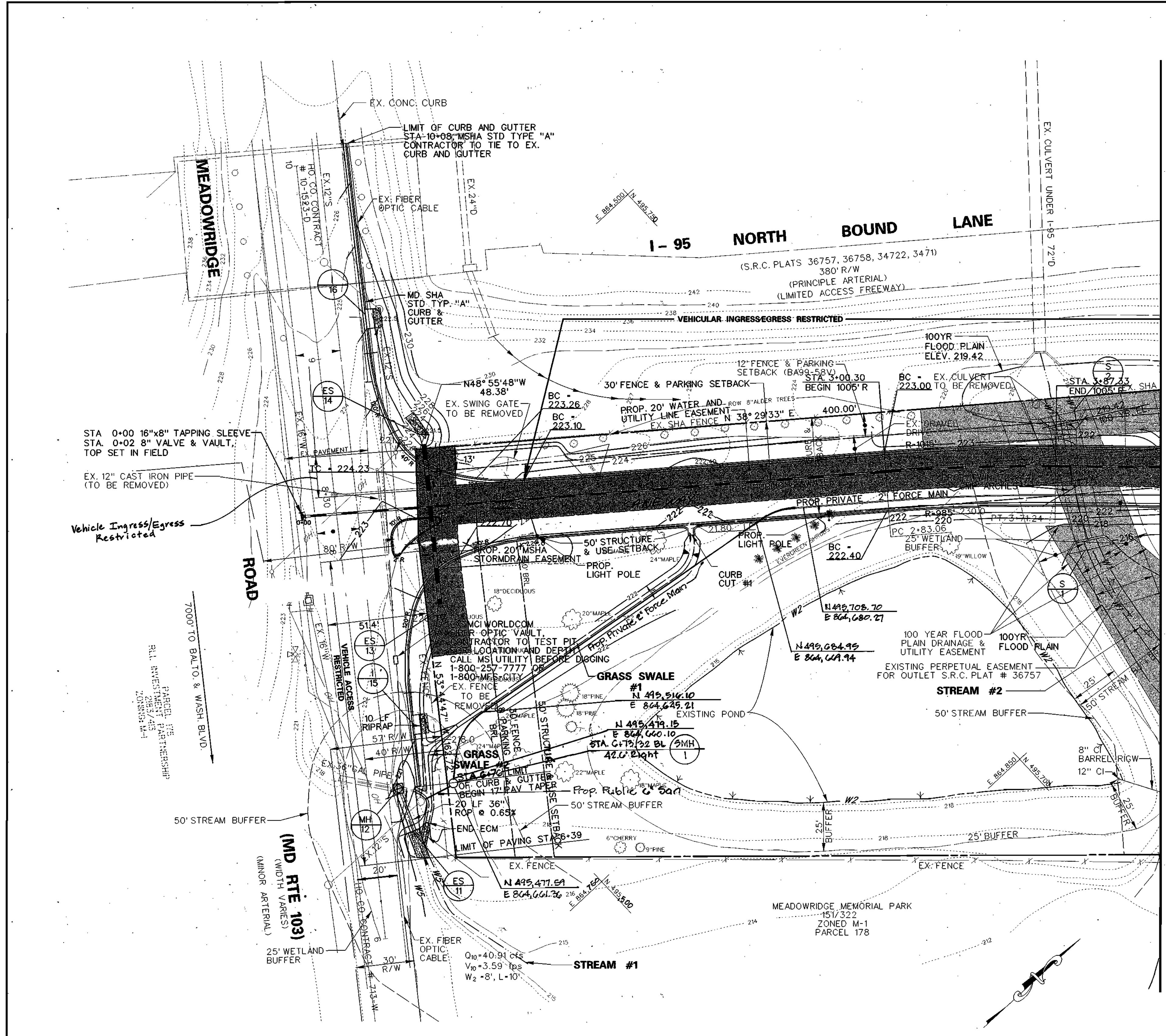
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LANDSCAPE DETAILS



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 GRAPHIC SCALE
 1 inch = 30ft.
 DATE: APRIL 9, 2003
 SHEET 22 OF 22



MATCH LINE - SHEET 2

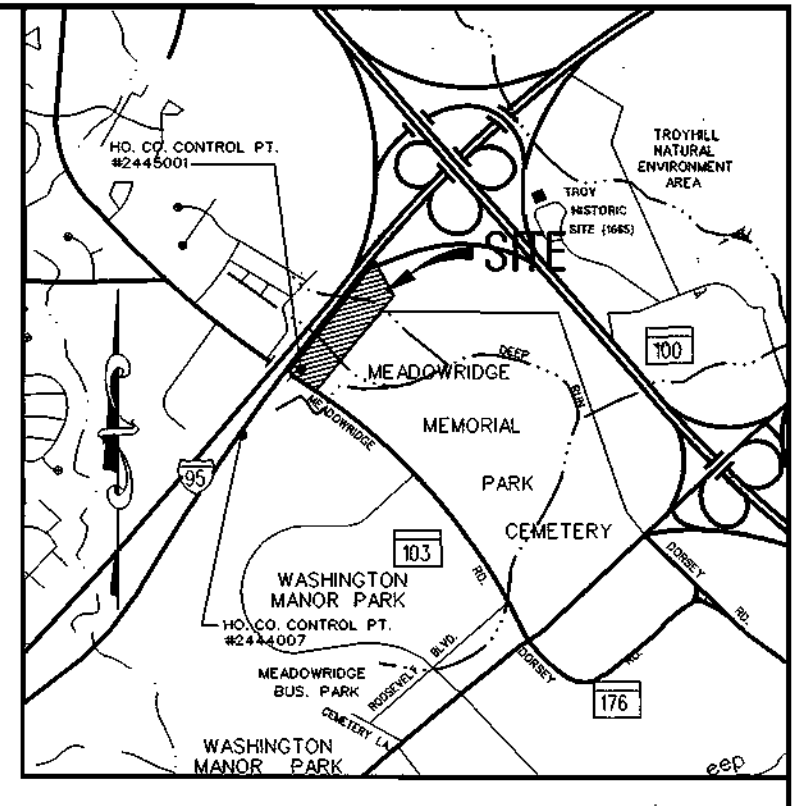
GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. 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.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

MISS UTILITY	1-800-257-7777
VERIZON TELEPHONE COMPANY	752-9976
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS & ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	231-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION/SURVEY DIVISION	792-7272
(24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	313-1880
- TOPO TAKEN FROM FIELD SURVEY DATED APRIL 1989 BY KCI.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHT-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- ALL COORDINATES ARE BASED ON HOWARD COUNTY GEODETIC CONTROL TRAVERSE WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM REFERENCE HOWARD COUNTY CONTROL POINTS 2445001 (ELEV. 245.095) & 2444007 (ELEV. 252.125).
- INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ALL ON-SITE ROADS PARKING AND DRAINAGE STRUCTURES (INCLUDING STORM DRAINS, WATER QUALITY BASINS, TWIN CULVERTS) SHALL BE PRIVATELY OWNED & MAINTAINED.
- GRAVITY SEWER SERVICE TO THE PROPOSED BUILDING CANNOT BE PHYSICALLY PROVIDED; A PRIVATELY OWNED AND MAINTAINED PUMP STATION SHALL BE PROVIDED AS PER THESE PLANS AND SPECIFICATIONS. THE PUMPS AND ASSOCIATED APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY PLUMBING CODE.
- REFER TO "MARYLAND'S GUIDELINES FOR WATERWAY CONSTRUCTION" BY THE WATER RESOURCES ADMINISTRATION (WRA) DATED SEPTEMBER 1999 REVISED NOVEMBER 2000 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE, SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3' COVER.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- INSTREAM CONSTRUCTION WILL NOT BE PERMITTED FROM MARCH 1ST THROUGH MAY 15TH INCLUSIVE.
- THE WATER PRESSURE ZONE FOR THIS CONTRACT IS 550.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATIONS C-153. DUCTILE IRON COMPACT FITTINGS 3"-12" FOR WATER AND OTHER LIQUIDS.
- GRAVITY SEWER LINE WILL BE 6" PVC.
- 2" SANITARY FORCE MAIN WILL BE PVC.
- NO GRADING OR REMOVAL OF VEGETATIVE COVER IS PERMITTED WITHIN 25 FT OF A WETLAND UNLESS APPROVED BY THIS PLAN. THIS SITE IS SUBJECT TO MDE/ACOE PERMIT NO. 2002-64709.
- THIS PLAN IS SUBJECT TO THE FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND THE NEW ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 50-2001.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DRW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$13,200.00 FOR 31 SHADE TREES OR SUBSTITUTIONS.
- THIS SITE IS SUBJECT TO SHA ACCESS PERMIT NO. B-HO-8208-02, ISSUED DECEMBER 31, 2002.
- STORMWATER MANAGEMENT WILL BE PROVIDED THROUGH 2 UNDERGROUND DETENTION AREAS, 3 BIORETENTION AREAS (F-6), 1 SAND FILTER (F-5), AND 2 GRASS SWALES. THESE FACILITIES ARE PRIVATE SWM FACILITIES AND WILL BE MAINTAINED BY THE OWNER.
- THE APPROVED APFO STUDY WAS PREPARED BY KCI TECHNOLOGIES, INC. AND APPROVED, SEPT. 5, 2002. THE MITIGATION REQUIREMENTS ARE AS FOLLOWS: NONE.
- WATER LINE WILL BE PUBLIC AND THE SANITARY SEWER WILL BE PRIVATE. THE EXISTING 16" WATER IS CONTRACT NO. 713-W AND THE EXISTING 8" SANITARY SEWER IS CONTRACT NO. 14-15-12-10. THE PROPOSED METER WILL BE LOCATED INSIDE AN EASEMENT ON-SITE AND WILL BE PUBLIC.
- BA-99-58V APPROVED MAY 11, 2000. VARIANCE TO PERMIT A PARKING SETBACK OF 12' FROM AN EXTERNAL PUBLIC STREET RIGHT-OF-WAY IN LIEU OF THE REQUIRED 30' MINIMUM SETBACK. REAPPLIED BA-02-50C APPROVED December 18, 2002.
- "BIORETENTION AREAS DO NOT REQUIRE LANDSCAPE BUFFERING BECAUSE PLANTINGS WILL BE PLACED IN THOSE FACILITIES (SEE SHEET #13 - 14 FOR PLANT LIST AND DETAILS)."
- DESIGN MANUAL WAIVER DATED MARCH 19, 2002 GRANTED FOR THE USE OF PRESSURE SEWER BY HOWARD COUNTY BUREAU OF ENGINEERING.
- THIS SITE IS IN THE DEEP RUN TRIBUTARY WHICH FLOWS INTO THE PATAPSCO RIVER WATERSHED #02-13-09 AND IS CLASSIFIED AS A USE I. THE STREAM CLOSURE DATES ARE MARCH 1 THROUGH JUNE 15.
- THIS PROJECT IS CONDITIONALLY EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH THE FILING OF A DECLARATION OF INTENT FOR LESS THAN 40,000 SQUARE FEET OF CLEARING.
- WP-02-107 WAIVER TO PERMIT STOCKPILE AND ROUGH GRADING ON SITE PRIOR TO APPROVAL OF THE SDP WAS APPROVED ON JUNE 05, 2002 AND EXPIRES 1 YEAR AFTER ISSUANCE.

LEGEND

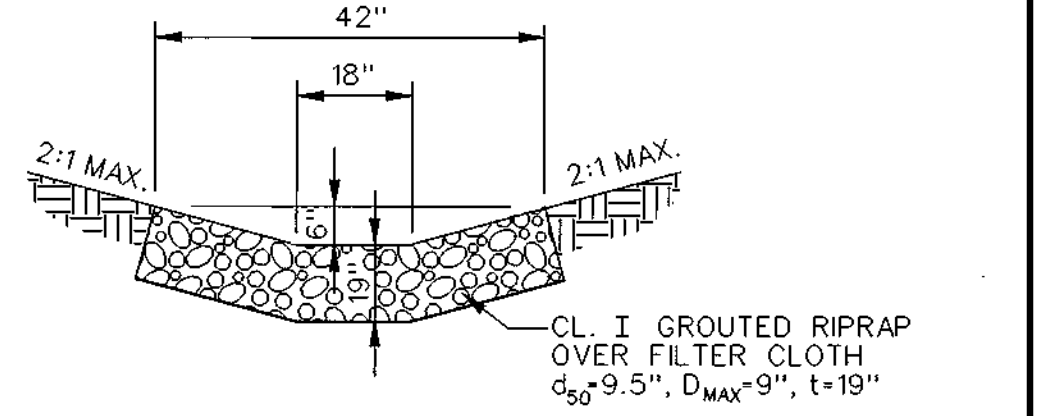
- PROP. TREE LINE
- EX. TREE LINE
- FIRE HYDRANT
- POLE
- POLE WITH LIGHT
- EVERGREEN TREE
- OAK
- EX. FENCE
- PROP. FENCE
- EX. CONTOURS
- PROP. CONTOURS
- BUILDING RESTRICTION LINE
- INDICATES SURFACE FLOW
- RAILROAD LINE
- SPOT ELEVATION
- STREET LIGHT
- WETLANDS
- PROP. 15' POLE WITH LIGHT
- SB-A
- STREAM



VICINITY MAP
SCALE: 1" = 2000'

SITE ANALYSIS

1. GROSS AREA OF SITE:	6.8264 AC	6.6041 AC
2. NET AREA OF SITE:		
3. PRESENT ZONING - PER SEPT. 19, 1993:	ZONING M-1	OFFICE/WAREHOUSE
4. PROPOSED USE:		
5. FLOOR AREA:	19,680 SF	62,115 SF
6. NUMBER OF EMPLOYEES (MAX):	62 PERSONS	17 PERSONS
7. PARKING SPACES REQUIRED:	62 SPACES	17 SPACES
OFFICE SPACE - 62 SPACES		
WAREHOUSE SPACE - 17 SPACES		
* PARKING REQUIREMENT MODIFICATION WAS APPROVED BY THE DEPARTMENT OF PLANNING & ZONING TO BE BASED ON 1 SPACE PER EMPLOYEE.		
8. PARKING SPACES PROPOSED:	87 PS	
9. GREEN SPACE AREA:	3.1503 AC	
10. GREEN SPACE AS % OF NET AREA:	47.7%	
11. BUILDING COVERAGE:	1.57 AC	
12. BUILDING COVERAGE AS % OF GROSS AREA:	23.0%	
13. HANDICAP PARKING SPACES PROVIDED:	5	
14. TOTAL DISTURBED AREA:	5.550 AC OR 241,769 s.f.	
15. DPZ FILES:	SDP90-81, BA99-58V	WP-02-107, BA02-50C



RIPRAP CHANNEL LINING FROM CURB TO ES-11
NOT TO SCALE

SHEET INDEX	
SHEET NO.	TITLE
1	SITE DEVELOPMENT PLAN - SHEET 1
2	SITE DEVELOPMENT PLAN - SHEET 2
3	SITE DETAILS
4	PROP. STORMDRAIN DRAINAGE AREA MAP
5	STORMDRAIN PROFILES
6	STORMDRAIN PROFILES
7	STORMDRAIN DETAILS
8	WATER AND SANITARY PROFILES
9	SWM RISER DETAILS (CS-2, CS-4, CS-6)
10	SWM DRAINAGE PLAN
11	UNDERGROUND STORAGE SWM PLAN
12	SWM DETAILS
13	BIORETENTION AREA 1 PLAN
14	BIORETENTION AREAS 2 & 3 PLAN
15	GRADING & SEDIMENT CONTROL PLAN 1
16	GRADING & SEDIMENT CONTROL PLAN 2
17	GRADING & SEDIMENT CONTROL DETAILS
18	GRADING & SEDIMENT CONTROL DETAILS
19	SEDIMENT CONTROL NOTES
20	LANDSCAPE PLAN - SHEET 1
21	LANDSCAPE PLAN - SHEET 2
22	LANDSCAPE DETAILS

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

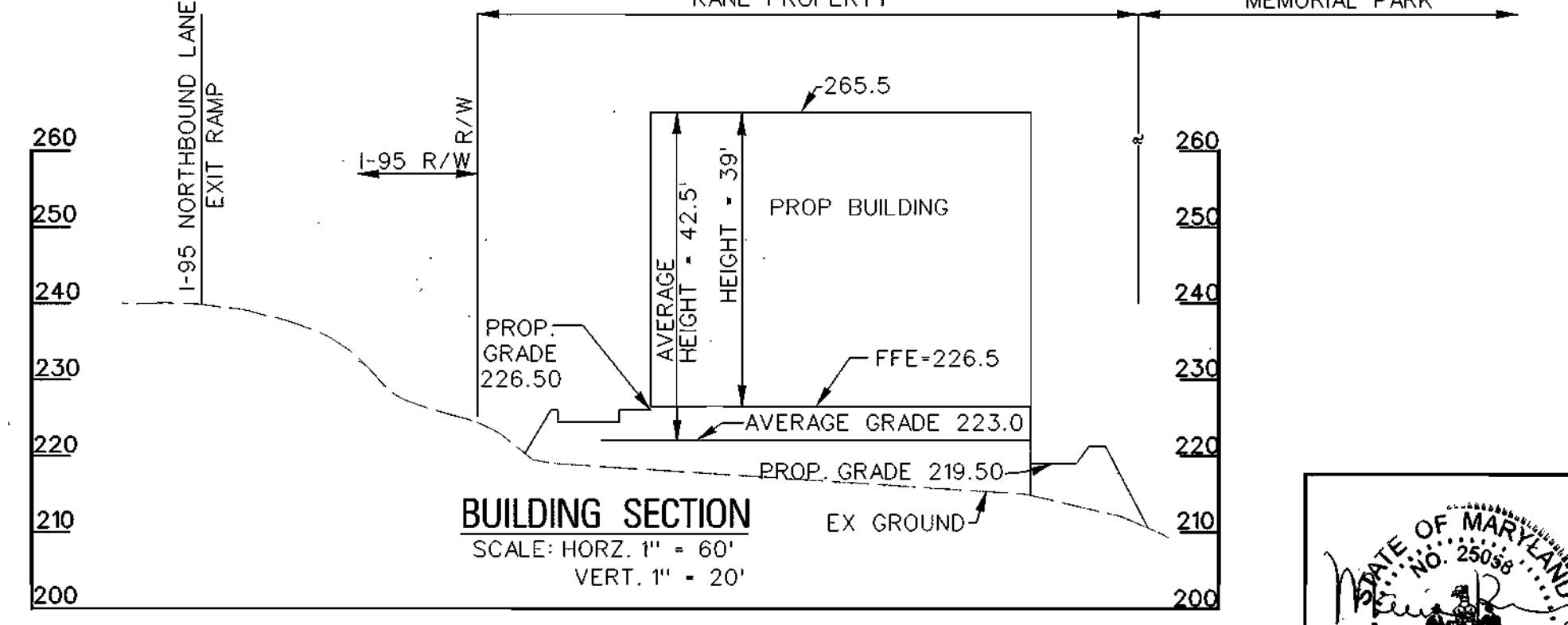
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

PERMIT INFORMATION CHART					
Subdivision Name:	Section/Area:	Lot/Parcel No.:			
NA	NA	174			
Plat # or L/F:	Grid #	Zoning:	Tax Map No.:	Elect Distr.:	Census Tract.:
NA	NA	M-1	37	1	6012
Water Code:	Sewer Code:				
D04	2153000				
ADDRESS CHART					
LOT/PARCEL #	STREET ADDRESS				
174	6500 Kane Way				



BUILDING SECTION
SCALE: HORIZ. 1" = 60'
VERT. 1" = 20'

KANE COMPANIES, INC. HEADQUARTERS

PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

WATER CODE: D04 SEWER CODE: 215 3000

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30ft.

DATE: APRIL 9, 2003
SHEET 1 OF 22

Drafting	DATE	REVISIONS
JAB	10-30-03	Revised San. Sewer line
CGW		
CGW		
THM		

KCI TECHNOLOGIES

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

14502 Greenview Drive, Suite 424
Laurel, Maryland 20708
(301) 953-1821 (410) 792-8086
Fax: (410) 792-7419
www.kci.com

OWNER:

C & S MEADOWRIDGE, LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

CONTRACT PURCHASER & DEVELOPER:

CREANEY & SMITH GROUP LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

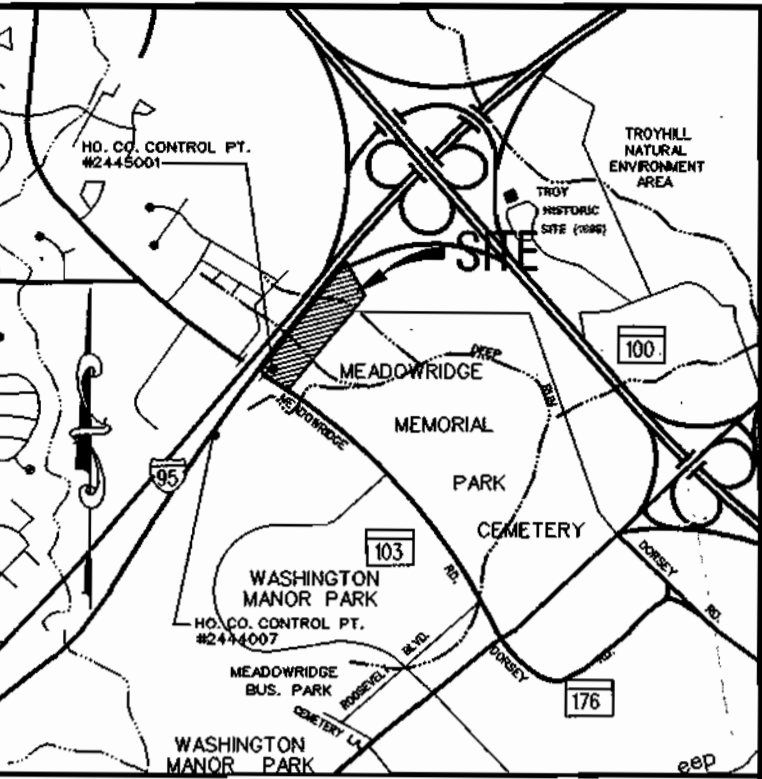
SITE DEVELOPMENT PLAN - SHEET 1

APR 14 2003

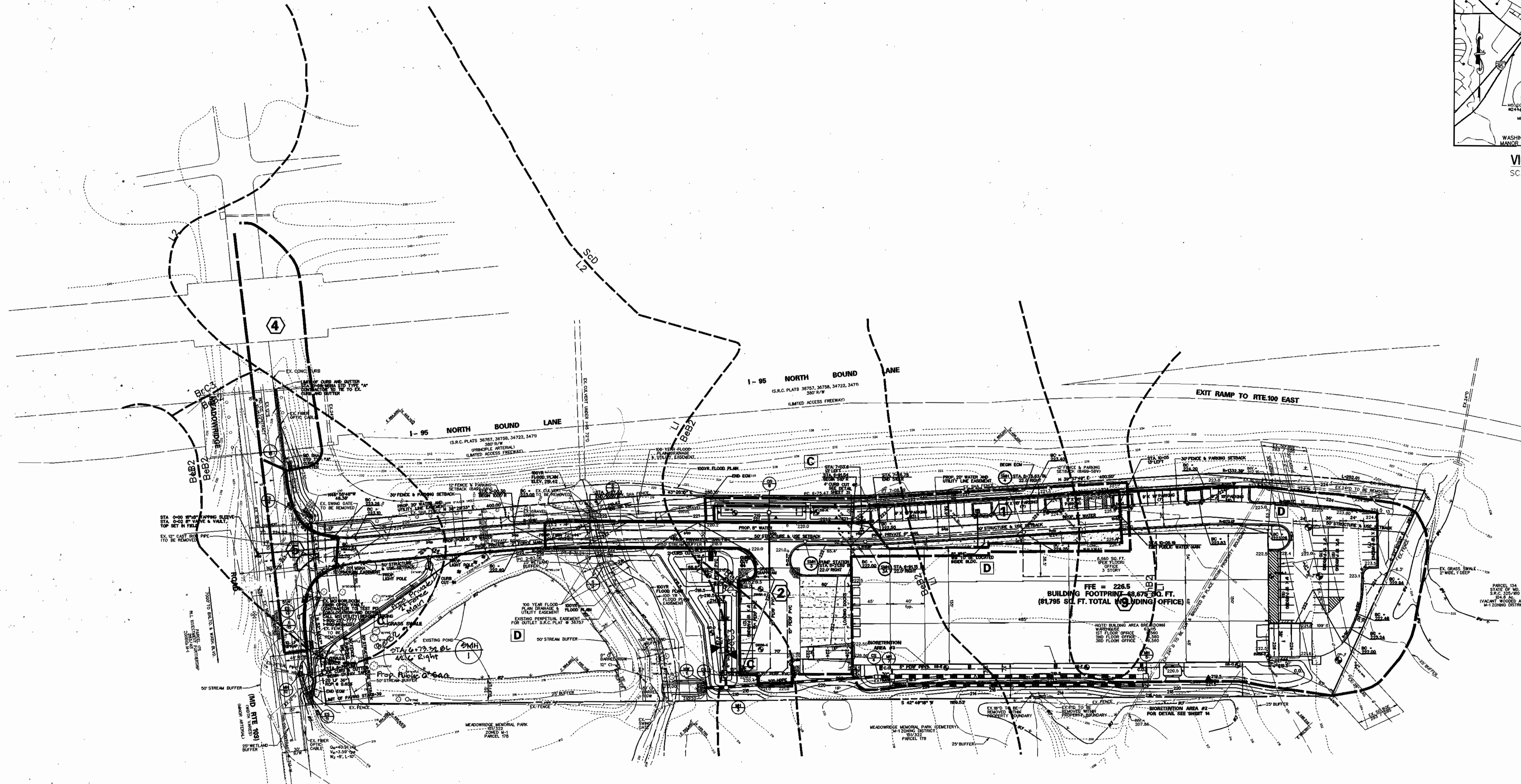
STATE OF MARYLAND
MARSHANNE K. HARRIS
PROFESSIONAL ENGINEER

SDP-02-53

1602008\DRAWINGS\SHEET1.dgn



VICINITY MAP
SCALE: 1" = 2000'



No.	DRAINAGE AREA (Ac)	% IMPERVIOUS	C FACTOR
(1)	0.50	100%	0.90
(2)	1.15	100%	0.90
(3)	2.36	81%	0.78
(4)	4.87	79%	SEE SWM DA MAP
(5)	.147	100%	

PLAN
SCALE: 1" = 60'

LEGEND

- 90 ——— EX. INDEX CONTOUR
- EX. 2' INTERMEDIATE CONTOUR
- EX. CURB AND GUTTER
- G—G— EX. GAS LINE
- S—S— EX. STORM DRAIN
- X—X— EX. FENCE
- W—W— EX. EDGE OF WATER
- OH— EX. OVERHEAD UTILITY LINE
- EX. WATER VALVE
- EX. INLET
- EX. MANHOLE
- EX. TREE
- BeB2 BeC3 EX. SOILS DELINEATION
- C HYDROLOGIC SOILS GROUP
- EX. SOIL BORINGS
- TC PATH
- A-B TC PATH FLOW TYPE
- ② DRAINAGE AREA
- DRAINAGE AREA BOUNDARY
- 100-YR FLOOD PLAN
- W WETLANDS

SOIL	HYDROLOGIC GROUP	SOIL DESCRIPTION
BeB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
BeC3	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
L1	D	LEONARDTOWN SILT LOAM
ChB2	C	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 Chief, Development Engineering Division: *Cindy Hammet* 4/8/03
 Chief, Division of Land Development: *David D. Cuyler* 5/14/03
 Director

Drafting	JAB	DATE	REVISIONS
Check	CGW	10-30-02	Revised San Sewer Line
Design	CGW		
Check	THM		

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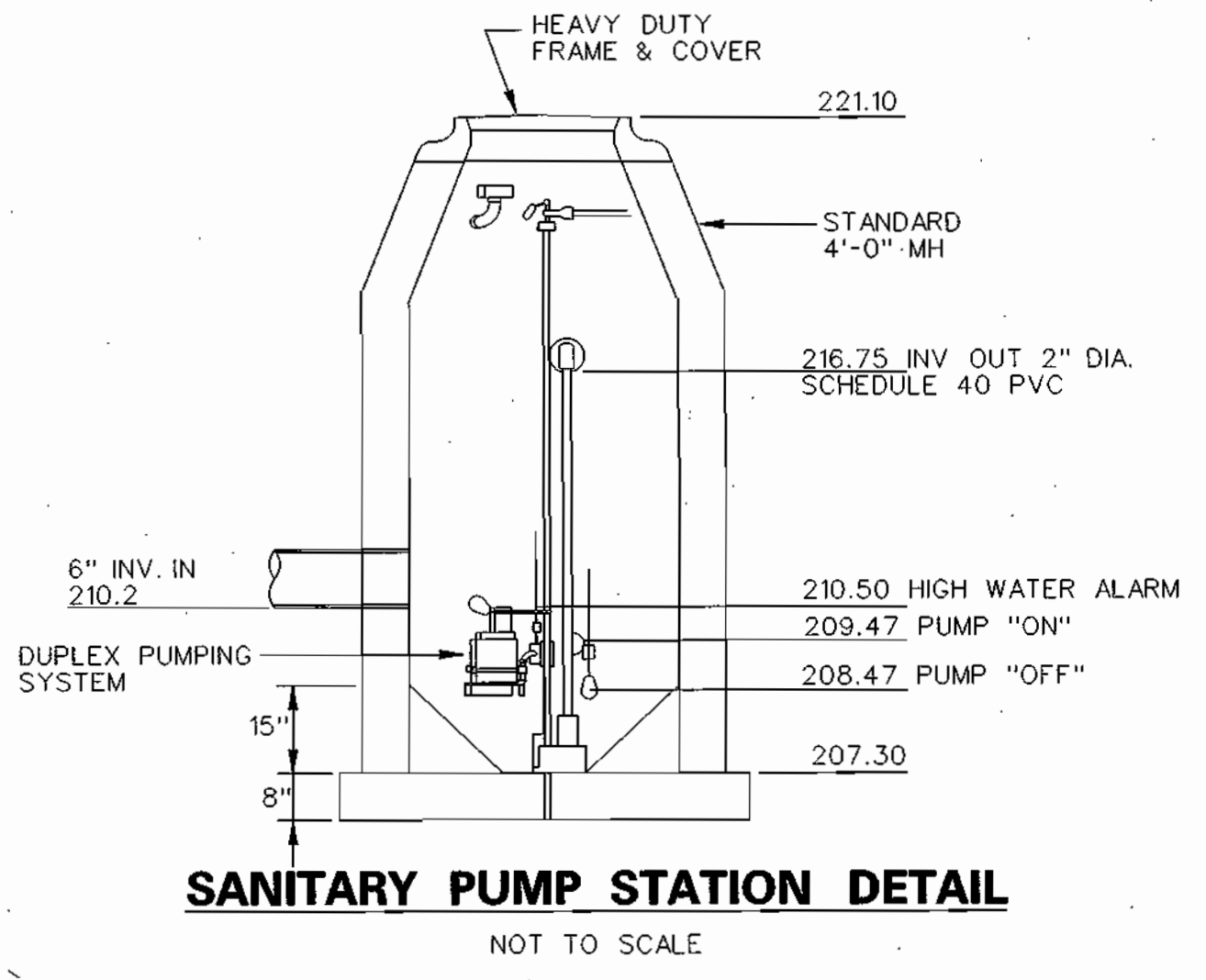
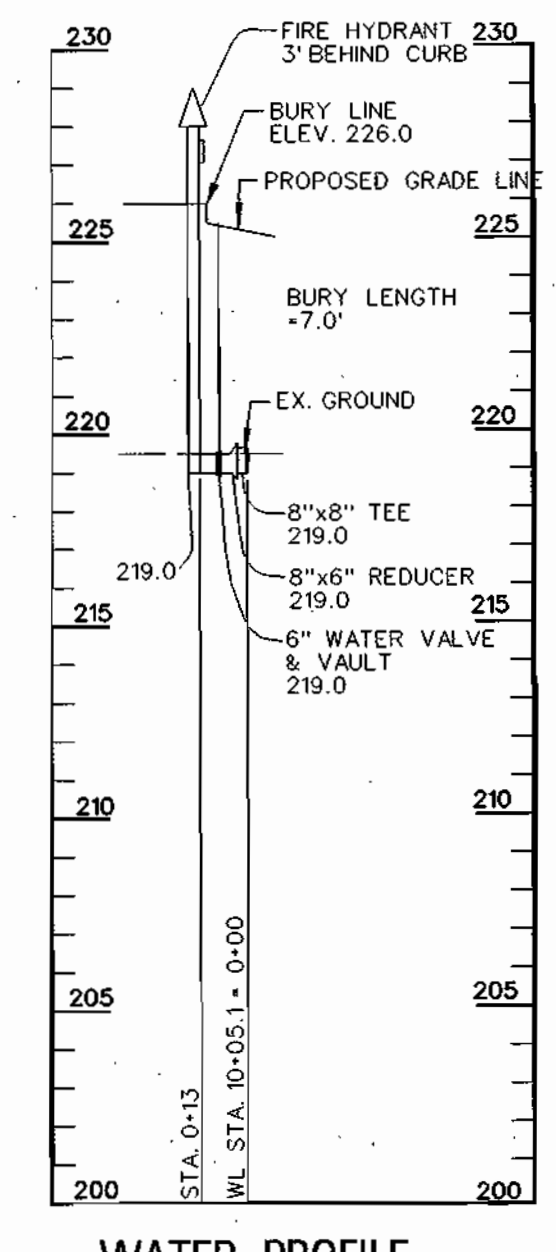
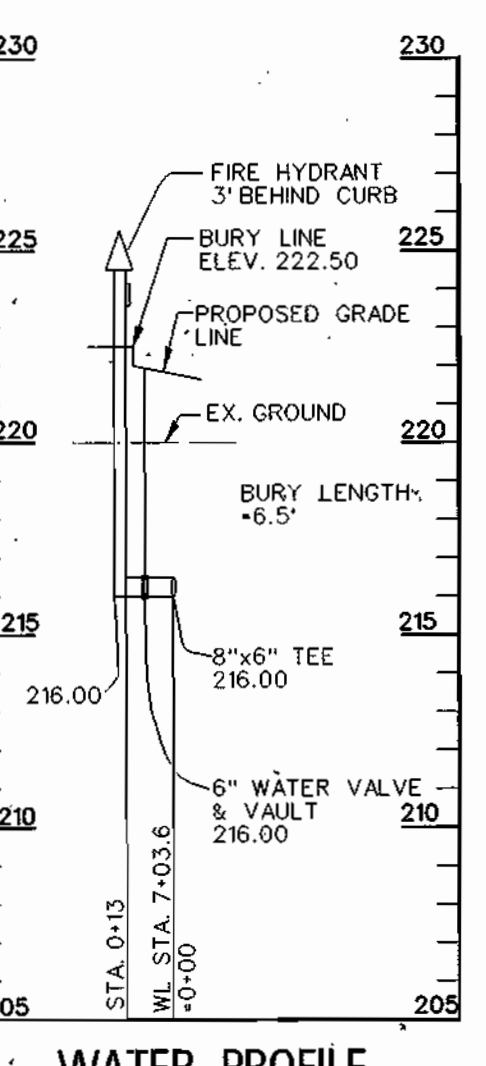
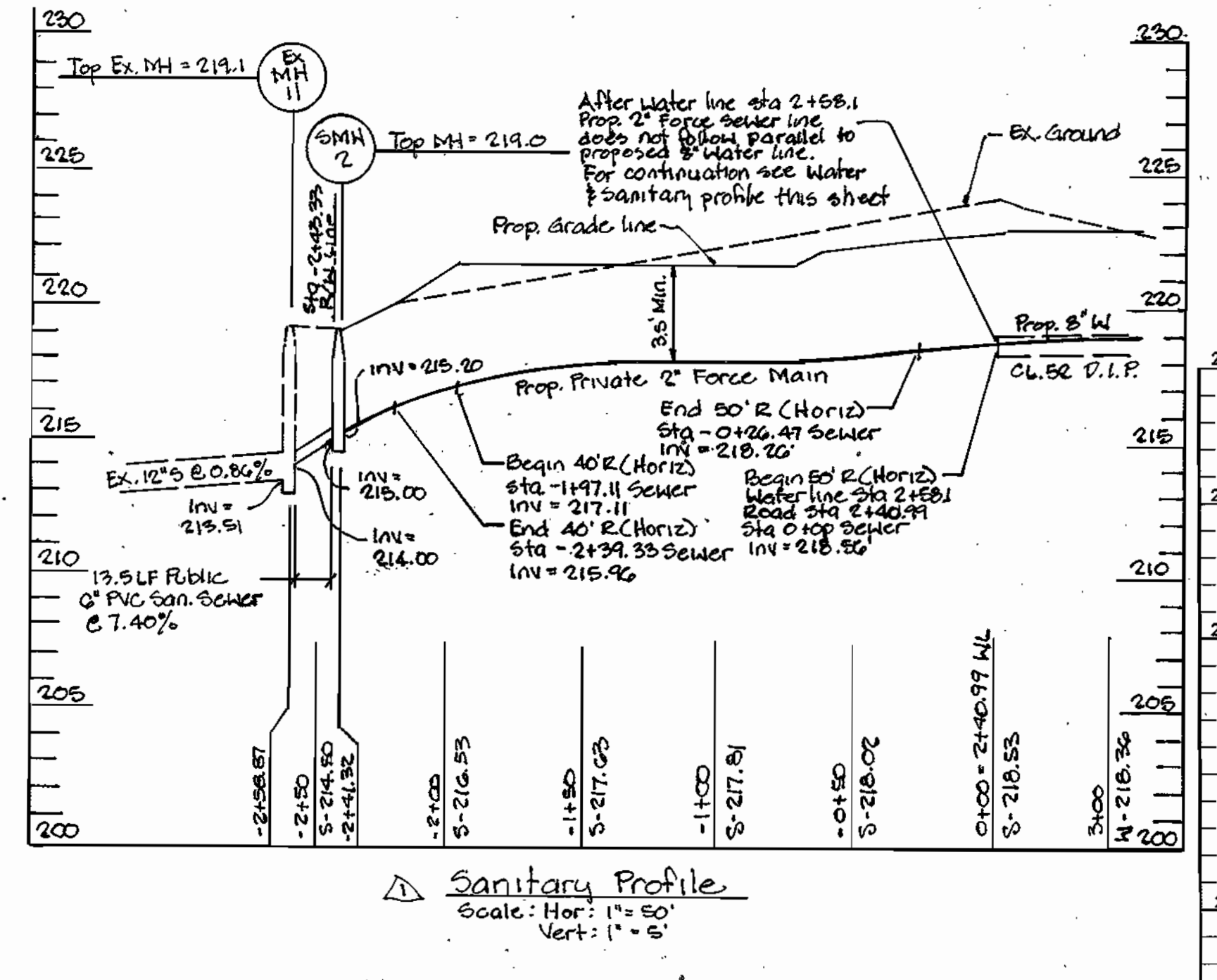
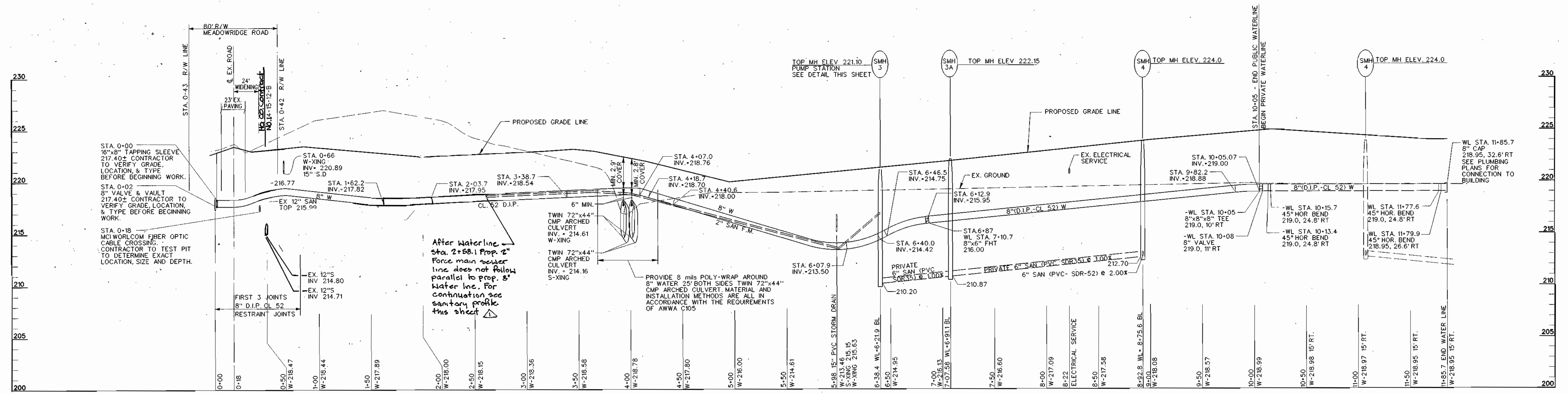
OWNER:
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 (410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
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 BALTIMORE, MD 21231
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PROPOSED STORMDRAIN DRAINAGE AREA MAP



KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 60 0 30 60 120
 (IN FEET)
 1 inch = 60ft.
 DATE: APRIL 9, 2003
 SHEET 4 OF 22
 APR 14 2003
 SDP-02-53



SANITARY PUMP STATION DESIGN DATA

AVERAGE DAILY FLOW

OFFICE :	15,684 SQ. FT. X 0.09GPD=1411GPD
WAREHOUSE :	70,576 SQ. FT. X 0.03GPD=1371GPD
WORKSHOP :	8,611 SQ. FT. X 0.018GPD=155GPD
AVERAGE DAILY FLOW :	4405GPD
INFILTRATION: 0.8AC :	400GPD=320GPD

DESIGN FLOW: 4162 GPD X 2 = 320 GPD = 9130CPD
 = 0.009MCD
 = 6.3 GPM

SYSTEM CURVE
 (TWIN) MYERS WGL-20
 2HP GRINDER PUMP -3450 RPM
 3 1/8" IMPELLER DIAM.

NOTE: SWITCH GEAR SHALL BE PROVIDED FOR ALTERATING OPERATION OF PUMPS.

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 4/26/03

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5/16/03

DIRECTOR
 DATE: 5/18/03

Drafting	AWW	DATE	REVISIONS
Check	CGW	10-30-02	Revised san sewer line
Design	CGW		
Check	THM		

KCI TECHNOLOGIES
 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS

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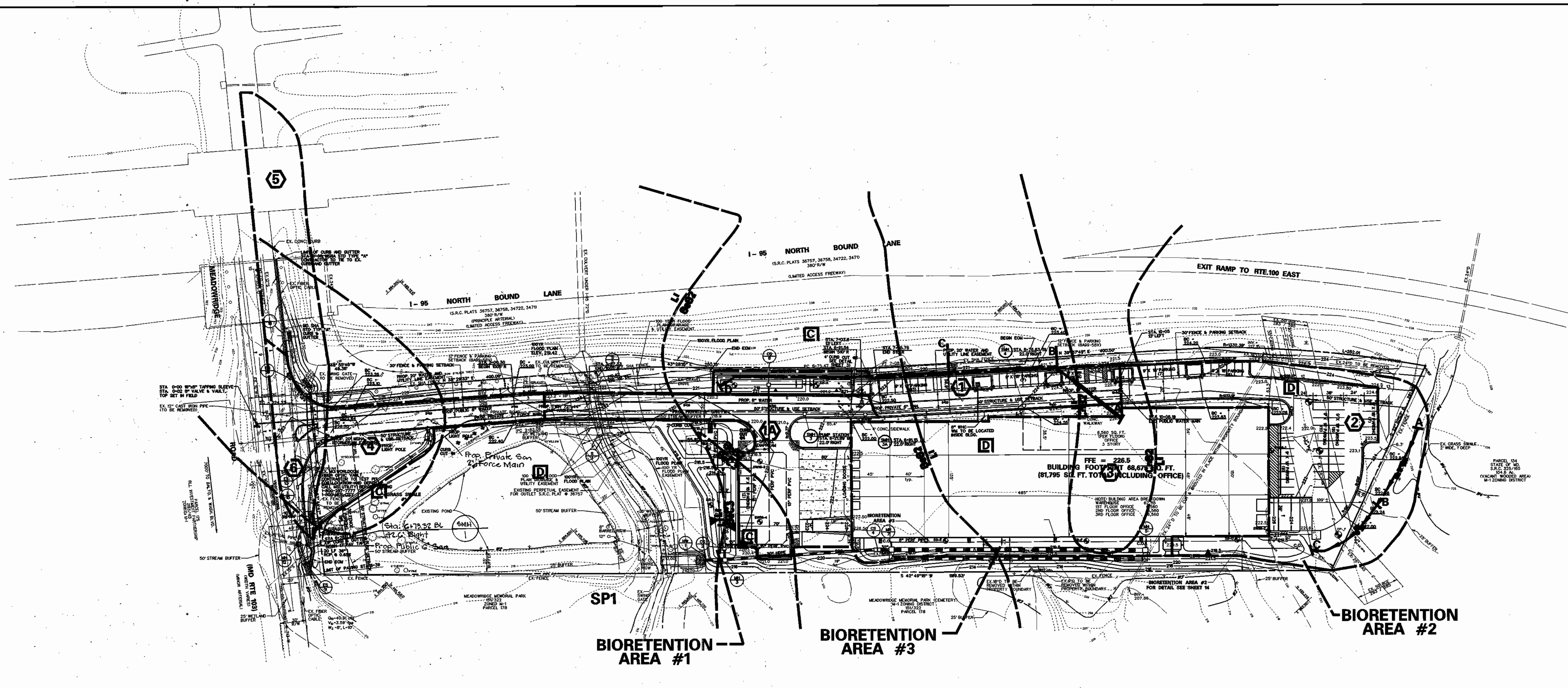
WATER & SEWER PROFILES

KANE COMPANIES, INC. HEADQUARTERS
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 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000

SCALE AS SHOWN
 DATE: APRIL 9, 2003
 SHEET 8 OF 22

APR 14 2003

SDP-02-53



SOIL	HYDROLOGIC SOIL GROUP	DESCRIPTION
BeB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
BeC3	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
L1	D	LEONARDTOWN SILT LOAM
CnB2	C	CHILLUM-FARFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED

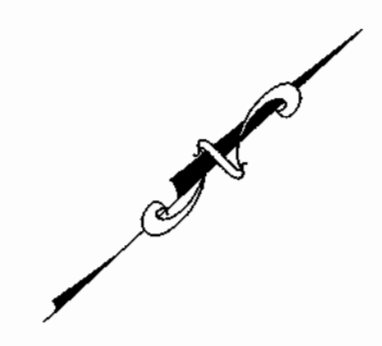
CHART			
No.	DRAINAGE AREA (Ac)	% IMPERVIOUS	RcN Tc
(1)	0.50	100%	98 .10
(A)	0.65	100%	98 .10
(2)	0.80	44%	88 .25
(3)	1.56	100%	98 .10
(4)	0.35	51%	86 .10
(5)	0.467	79%	90 .10
(6)	0.147	100%	98 .10

DRAINAGE AREA SUMMARY TABLE						
No.	AREA (Ac)	WQv (CF)	Rev (CF)	Cov (CF)	Qp (cfs)	Qf (cfs)
(1)	0.50	1724	261	6470	NA	NA
(A)	0.65	2242	169	---	NA	NA
(2)	0.80	1295	78	---	NA	NA
(3)	1.56	5380	384	8777	NA	NA
(4)	0.35	647	---	---	NA	NA
(5)	0.467	1290	---	---	NA	NA
(6)	0.147	507	---	---	NA	NA

* GRASS SWALE CREDIT FOR WQv & Rev
 1" STORM VELOCITY FOR SWALE #1 IS 0.42 FPS
 1" STORM VELOCITY FOR SWALE #2 IS 0.82 FPS
 SEE COMPUTATIONS PAGE 74

LEGEND

- 90 --- EX. INDEX CONTOUR
- EX. 2' INTERMEDIATE CONTOUR
- EX. CURB AND GUTTER
- G--- EX. GAS LINE
- EX. STORM DRAIN
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- o--- EX. WATER VALVE
- o--- EX. INLET
- o--- EX. MANHOLE
- EX. TREE
- EX. SOILS DELINEATION
- EX. SOIL BORINGS
- TC PATH
- TC PATH FLOW TYPE
- DRAINAGE AREA
- DRAINAGE AREA BOUNDARY
- 100-YR FLOOD PLAN
- STUDY POINT



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 C. HANSON 5/1/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 M. L. LAYNE 5/1/03
 DIRECTOR

Drafting	JAB	DATE	REVISIONS
Check	CGW	10-30-02	Revised San. Sewer line.
Design	CGW		
Check	THM		

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 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
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 BALTIMORE, MD 21231
 (410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
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 (410) 534-6350

STORMWATER MANAGEMENT DRAINAGE PLAN



KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
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 1 inch = 60ft.
 DATE: APRIL 9, 2003
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GENERAL NOTES

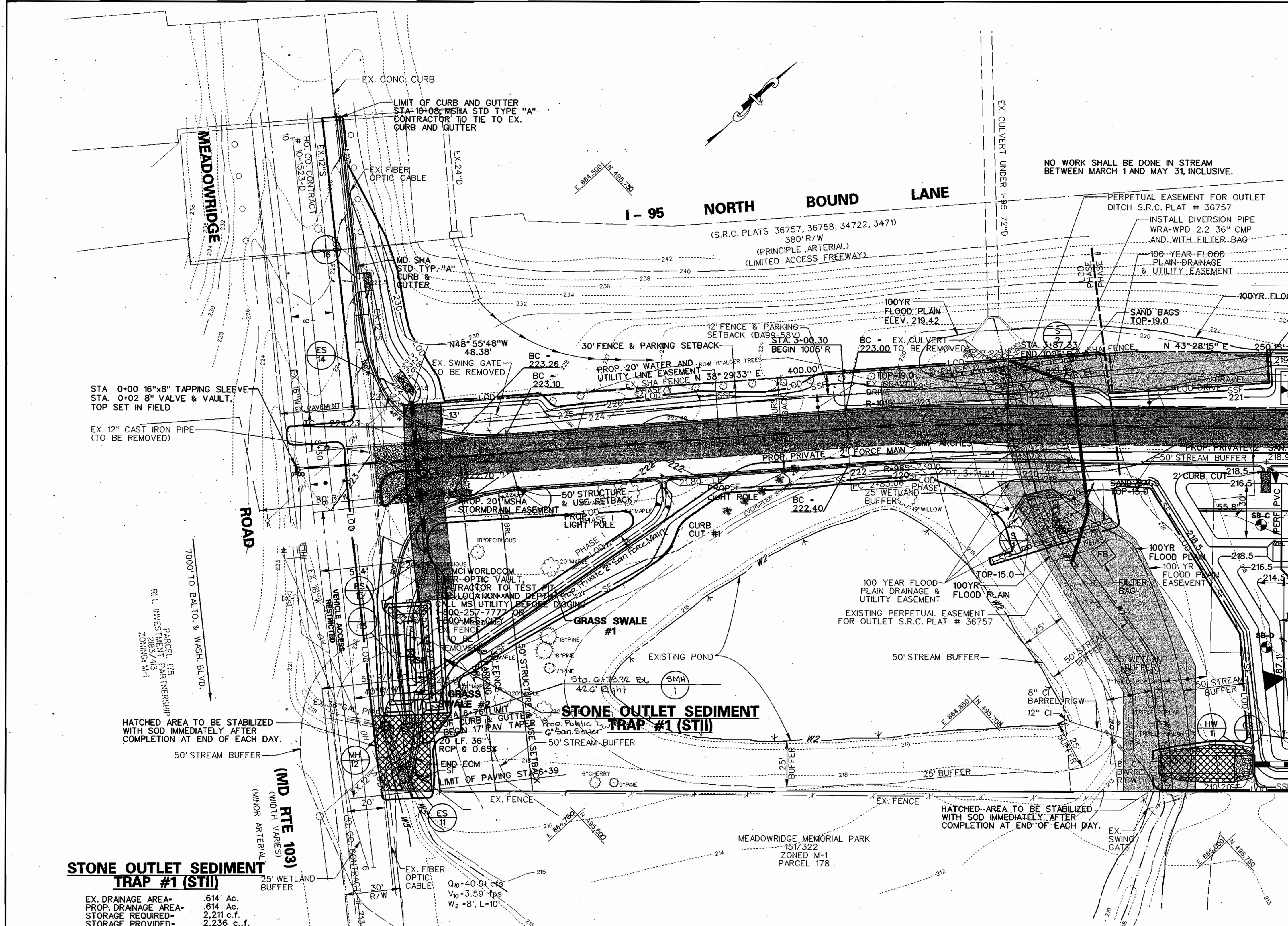
- A minimum of 24 hours notice must be given to the Howard County Sediment Control Division prior to the start of any construction (880-3450).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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, 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 (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 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	6.8264 Ac.	Acres
Area Disturbed	5.550 Ac.	Acres
Area to be Roofed or Paved	3.420 Ac.	Acres
Area to be Vegetatively Stabilized	3.55 Ac.	Acres
Total Cut	26,780	Cubic Yards
Total Fill	26,780	Cubic Yards
Stockpile Permit #	00000845	
Borrow material taken from:	Troy Hill Industrial Park	
- Any sediment control practices 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 Department of Public Works 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 the 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.

SEQUENCE OF CONSTRUCTION

- Obtain grading and MDE Permit **1 DAY**
- Notify Howard County Sediment Control Inspector for pre-construction meetings as required by note number one (No. 1) of the Standard Erosion and Control Notes shown on this sheet. Notify Miss Utility. **1 DAY**
- Install sediment control measures for Phase I Construction (i.e. see silt fence installation of ES-11 thru MH-12, only) **1 DAY**
- With silt fence protection install MH-12 thru ES-11 and inclusive pipe. Install riprap outfall. Stabilize site. Contractor shall complete ES-11 to MH-12 in one dry day. **1 DAY**
- Install stone outlet sediment trap #1. Install permanent outfall from trap to riprap outfall ES-11 **1 DAY**
- With inspectors approval grade the Meadowridge Road improvements. Install inlet I-16, structures ES-14 and 13 with inclusive pipe, riprap and grass channels. Do not install glass swale #1. Install glass #2 upto sediment trap #1. All excavation or road base (MD Rt 103) shall be backfilled with stone at the end of each day. **2 WEEKS**
- Install Phase I utilities. Stabilize site. **2 WEEKS**
- Install 36" pipe diversion under Phase I Construction around existing culvert across proposed drive. Note: No work permitted within stream between March 1 and June 31, inclusive. **3 DAYS**
- Install Sanitary Force main and waterline under stream bed at stream crossing where future twin 72"x44" CMP are to be installed. Continue lines to termination in Meadowridge Road. **2 DAYS**
- Install twin culverts in stream crossing. **2 DAYS**
- Remove removable sup pit, add Phase II silt fence across S1, remove diversion pipe and divert water back through proposed culverts. Obtain permission from Inspector before proceeding. **1 DAY**
- With the Howard County Sediment Control Inspector's approval, remove existing drive and culvert. Bring proposed drive up to grade. Grade improvements along Meadowridge Road. **3 DAYS**
- Install sediment control measure for Phase II Construction (i.e., silt fence, super silt fence, sediment trap #2). Clear and grub area within LOD with inspector's approval. **2 DAYS**
- Sever and block 24" pipe at the property line before removal of pipe. Remove or grub in place existing 24" pipe within property boundary under building pad. Install 60" storage pipes and block flows from entering same until SWM work is begun later in the sequence. **3 WEEKS**
- With inspectors approval begin grading the western side of the building pad. As pad is constructed in an easterly direction, and approaches sediment trap #2, remove trap. Close super silt fence @ trap #2 outfall. Grade remainder of building pad. **3 WEEKS**
- Install Utilities from Phase I construction through Phase II and tie into existing utilities. **3 DAYS**
- Install paving, curb, gutter and storm drain at culvert across Meadowridge Road. Install paving, curb and gutter for entire site. **7 DAYS**
- Stabilize all disturbed areas. **3 DAYS**
- Construction and water, sewer and storm drains north east of the stone construction entrance only at this time. All storm drain inlets and end sections shall have brick bulkheads installed the same day that flows to the water quantity/quality facilities. **21 DAYS**
- Concurrently fine grade and install curb and gutters. Apply permanent stabilization to all areas fine graded within 48 hours of their completion. Install stone sub-base to all areas to be paved as they are fine graded and proof rolled. **14 DAYS**
- After the site has been stabilized install SWM Facilities (i.e. Bioretention and sand filter areas, CPV areas, grass swales 1 & 2) **14 DAYS**
- Stabilize all disturbed areas. **22**

MATCHLINE SEE SHEET 16



PLAN

SCALE: 1" = 30'

NOTE:
ADD ECM MATTING IN ALL DITCHES, SWALES, AND OTHER AREAS OF CONCENTRATED FLOW PER DETAIL SHEET 18 OF 22.

LEGEND

- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING GRADE
- PROPOSED GRADE
- EXISTING DRAINAGE DIVIDE
- PROPOSED DRAINAGE DIVIDE
- PROPOSED EARTH DIKE
- LIMIT OF DISTURBANCE
- SILT FENCE
- SUPER SILT FENCE
- RIPRAP INFLOW PROTECTION

STONE OUTLET SEDIMENT TRAP #1 (STII)

EX. DRAINAGE AREA-	.614 Ac.
PROP. DRAINAGE AREA-	.614 Ac.
STORAGE REQUIRED-	2,211 c.f.
STORAGE PROVIDED-	2,236 c.f.
BOTTOM DIMENSIONS-	5' x 35'
BOTTOM ELEVATION-	218.0
WEIR LENGTH-	4'
WEIR STORAGE ELEVATION-	220.0
WEIR CREST ELEVATION-	222.0
TOP OF EMBANKMENT-	223.0
CLEANOUT ELEVATION-	219.0

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 4/24/03
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 5/2/03
 DIRECTOR *[Signature]* 5/1/03

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL 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 INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 DEVELOPER *[Signature]* DATE 3/16/03

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.
 ENGINEER *[Signature]* DATE 4/16/03

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS:
 USDA - NATURAL RESOURCE CONSERVATION SERVICE *[Signature]* DATE 4/22/03
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 HOWARD SCD *[Signature]* DATE 4/22/03

Drafting	JAB	DATE	REVISIONS
Check	CGW	10-30-03	Revised San. Sewer Line
Design	CGW		
Check	THM		

KCI TECHNOLOGIES
 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
 14502 Greenview Drive, Suite 424 Laurel, Maryland 20708
 (301) 953-8821 (410) 792-8086
 Fax: (410) 792-7419 www.kci.com

OWNER: **C & S MEADOWRIDGE, LLC**
 925 FELL STREET BALTIMORE, MD 21231 (410) 534-6350

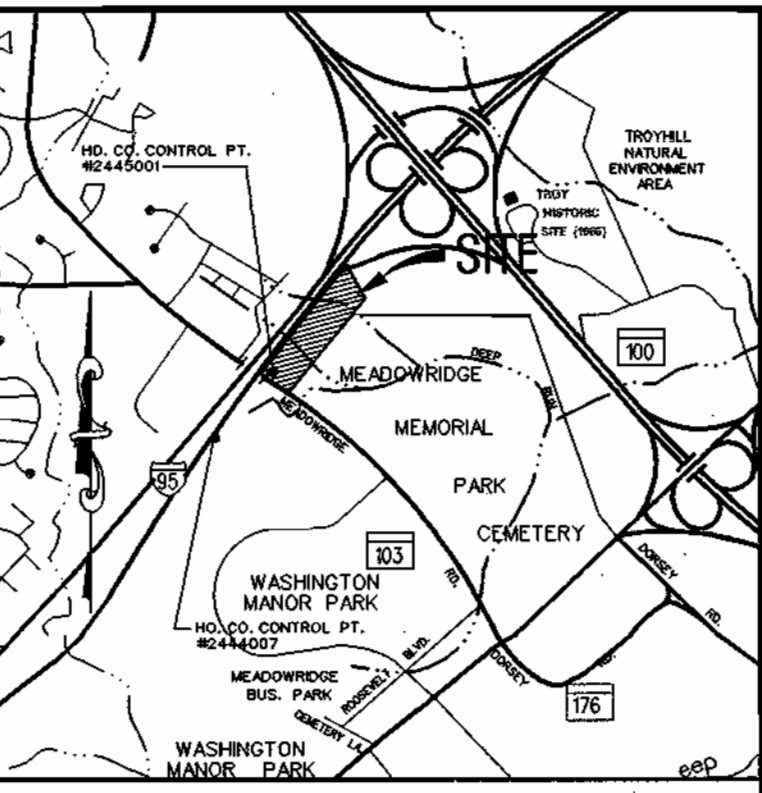
CONTRACT PURCHASER & DEVELOPER: **CREANEY & SMITH GROUP LLC**
 925 FELL STREET BALTIMORE, MD 21231 (410) 534-6350

GRADING AND SEDIMENT CONTROL PLAN - SHEET 1

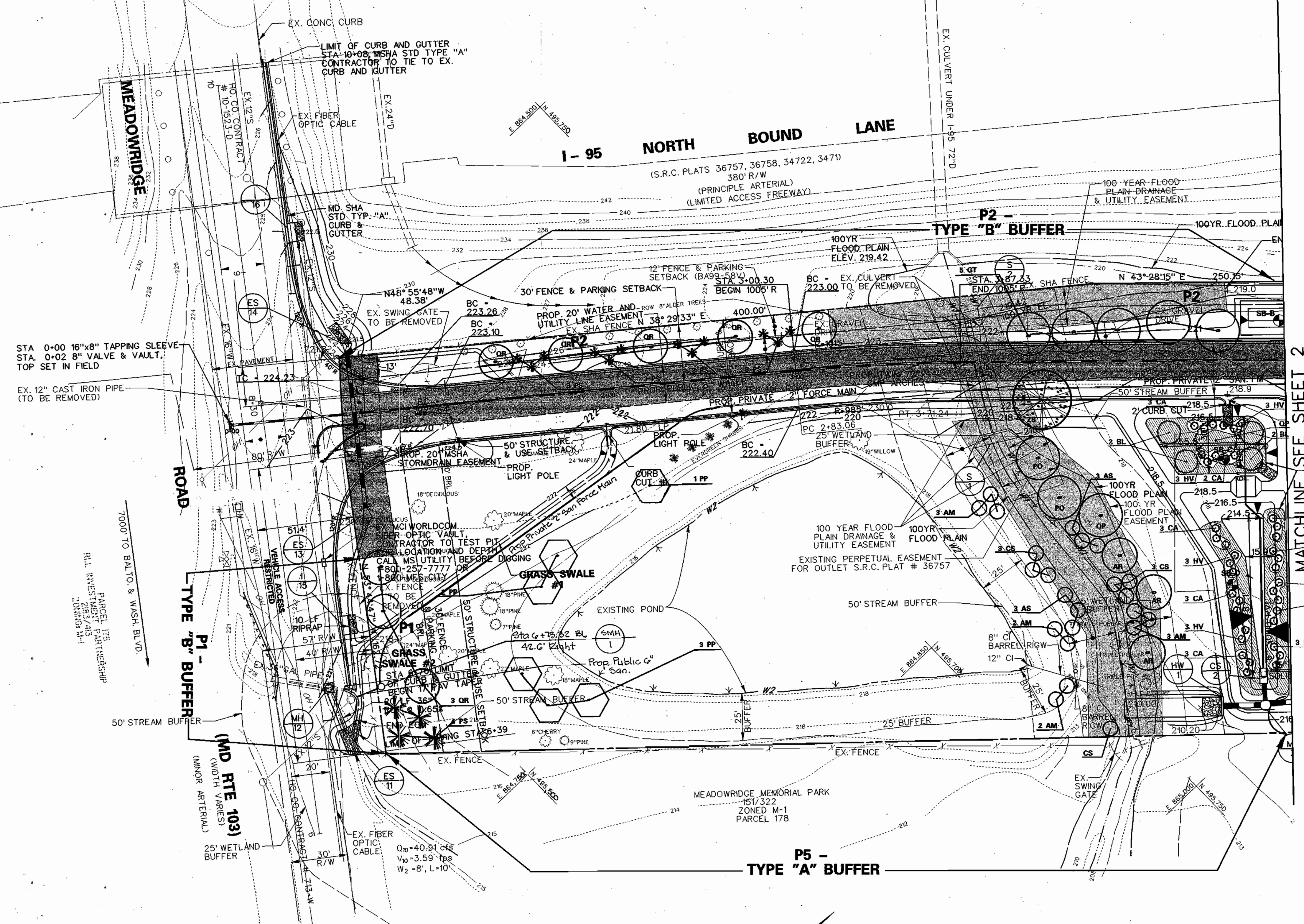
KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000

GRAPHIC SCALE
 30 0 15 30 60
 (IN FEET)
 1 inch = 30ft.
 DATE: APRIL 9, 2003
 SHEET 15 OF 22

STATE OF MARYLAND PROFESSIONAL ENGINEER
 4 2003



VICINITY MAP
SCALE: 1" = 2000'



- RED OAK
- LOCUST
- ZELKOVA
- WEeping CHERRY
- DOGWOOD
- EUONYMUS
- EX TREE
- EX PINE TREE

BIORETENTION AREA #1 AND CPV AREA PLANTINGS FOR DETAIL SEE SHEET 13.

MATCHLINE SEE SHEET 2

PLANT SCHEDULE

SYMBOL	KEY	BOTANICAL /COMMON NAME	QUANTITY	SIZE/CONDITION	SPACING
GT	GT	Gleditsia Triacanthos - Skyline Honeylocust	9	2 1/2"-3" Cal.	B+B
PP	PP	Prunus Subhirtella Pendula - Weeping Higan Cherry	6	2 1/2"-3" Cal.	B+B
ZS	ZS	Zelkova Serata - Japanese Zelkova	7	2 1/2"-3" Cal.	B+B
PS	PS	Pinus Strobus - Eastern White Pine	34	6' Ht.	2" Cal.
QR	QR	Quercus Rubra - Red Oak	34	2.5" Cal.	B+B
AR	AR	Acer Rubrum - Red Maple	3	2.5" Cal.	B+B
PO	PO	Platanus Occidentalis - American Sycamore	2	2.5" Cal.	B+B
QP	QP	Quercus Palustris - Pin Oak	1	2.5" Cal.	B+B
CS	CS	Cornus Sericea - Redosier Dogwood	7	18"-24" Ht.	Cont.
AM	AM	Aronia Melanocarpa - Black Chokeberry	10	18"-24" Ht.	Cont.
AS	AS	Alnus Serrulata - Smooth Alder	6	18"-24" Ht.	Cont.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
Chris Hammett 5/15/12
CHIEF, DIVISION OF LAND DEVELOPMENT
Frank DeLuca 5/15/12
DIRECTOR

Drafting	JAB	DATE	REVISIONS
Check	CGW	10-30-09	Revised San Setter Line
Design	CGW		
Check	THM		

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(410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

DEVELOPER'S /BUILDERS 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 executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

[Signature]
Name Date

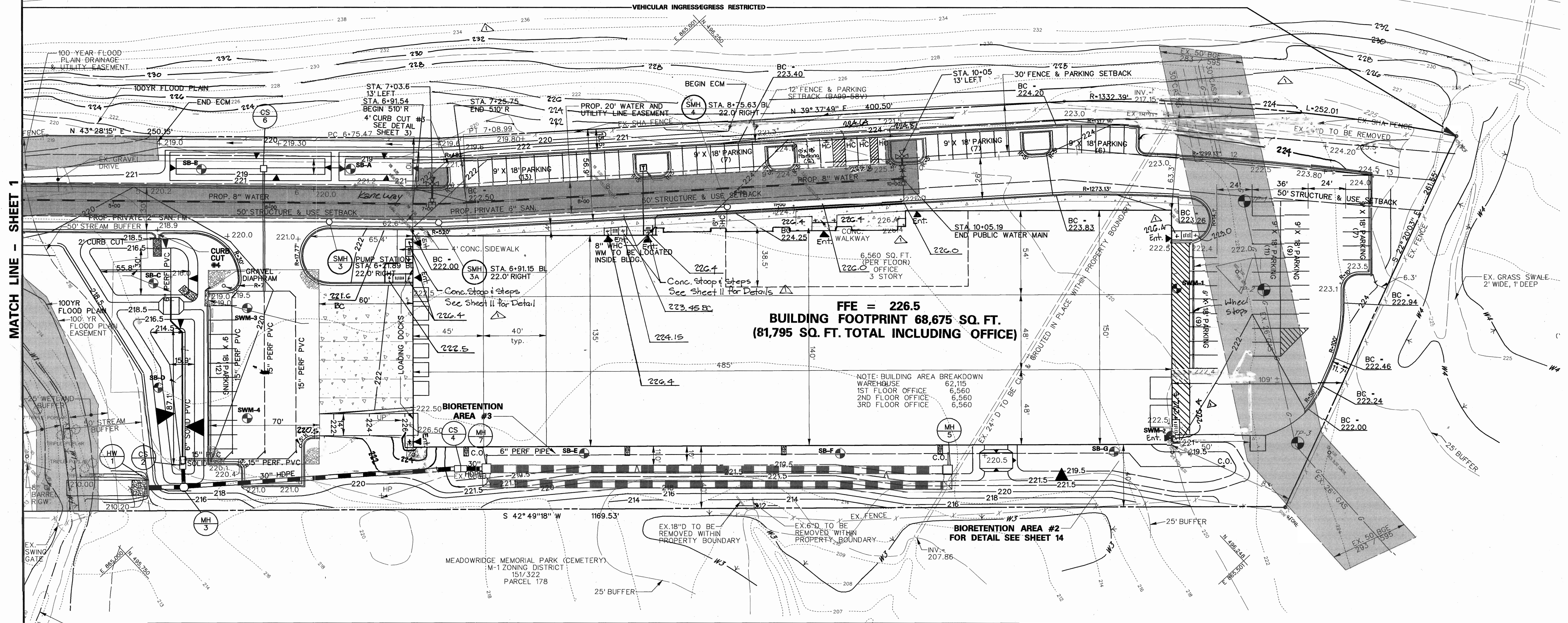


KANE COMPANIES, INC. HEADQUARTERS
PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.
DATE: APRIL 9, 2003
SHEET 20 OF 22

I-95 NORTH BOUND LANE
 (S.R.C. PLATS 36757, 36758, 34722, 3471)
 380' R/W
 (LIMITED ACCESS FREEWAY)

EXIT RAMP TO RTE.100 EAST

VEHICULAR INGRESS RESTRICTED



**FFE = 226.5
 BUILDING FOOTPRINT 68,675 SQ. FT.
 (81,795 SQ. FT. TOTAL INCLUDING OFFICE)**

NOTE: BUILDING AREA BREAKDOWN

WAREHOUSE	62,115
1ST FLOOR OFFICE	6,560
2ND FLOOR OFFICE	6,560
3RD FLOOR OFFICE	6,560

STREAM #2

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

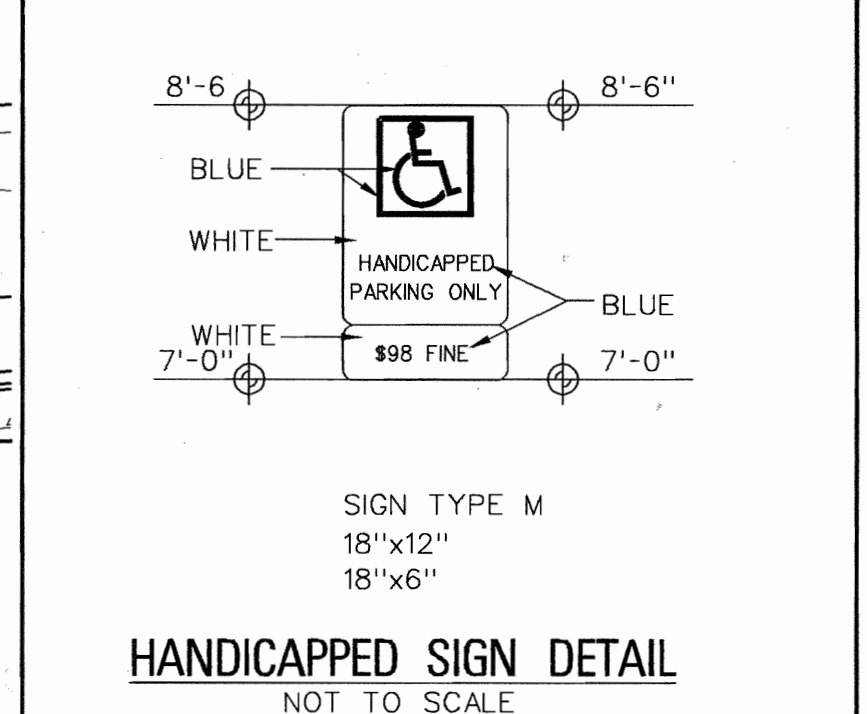
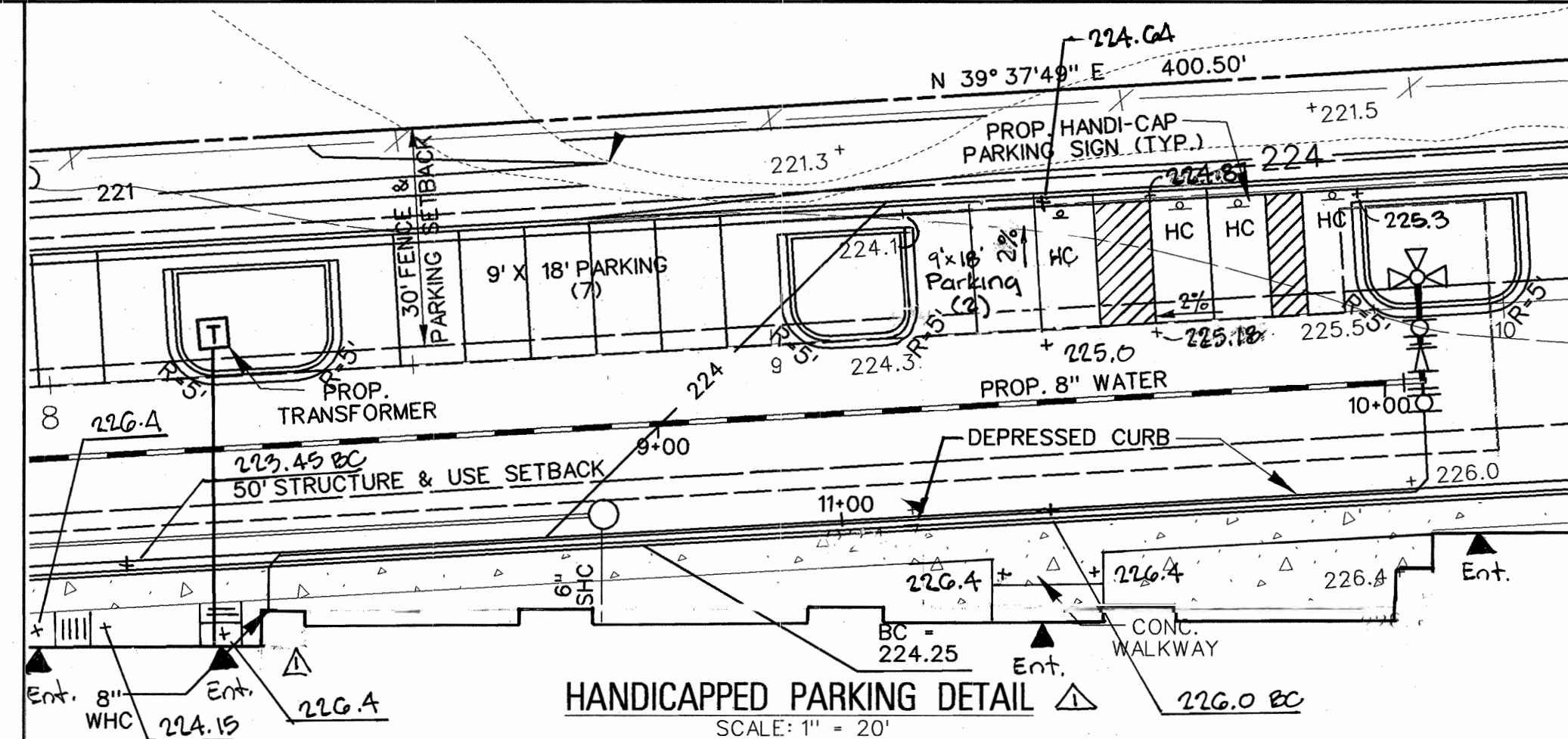
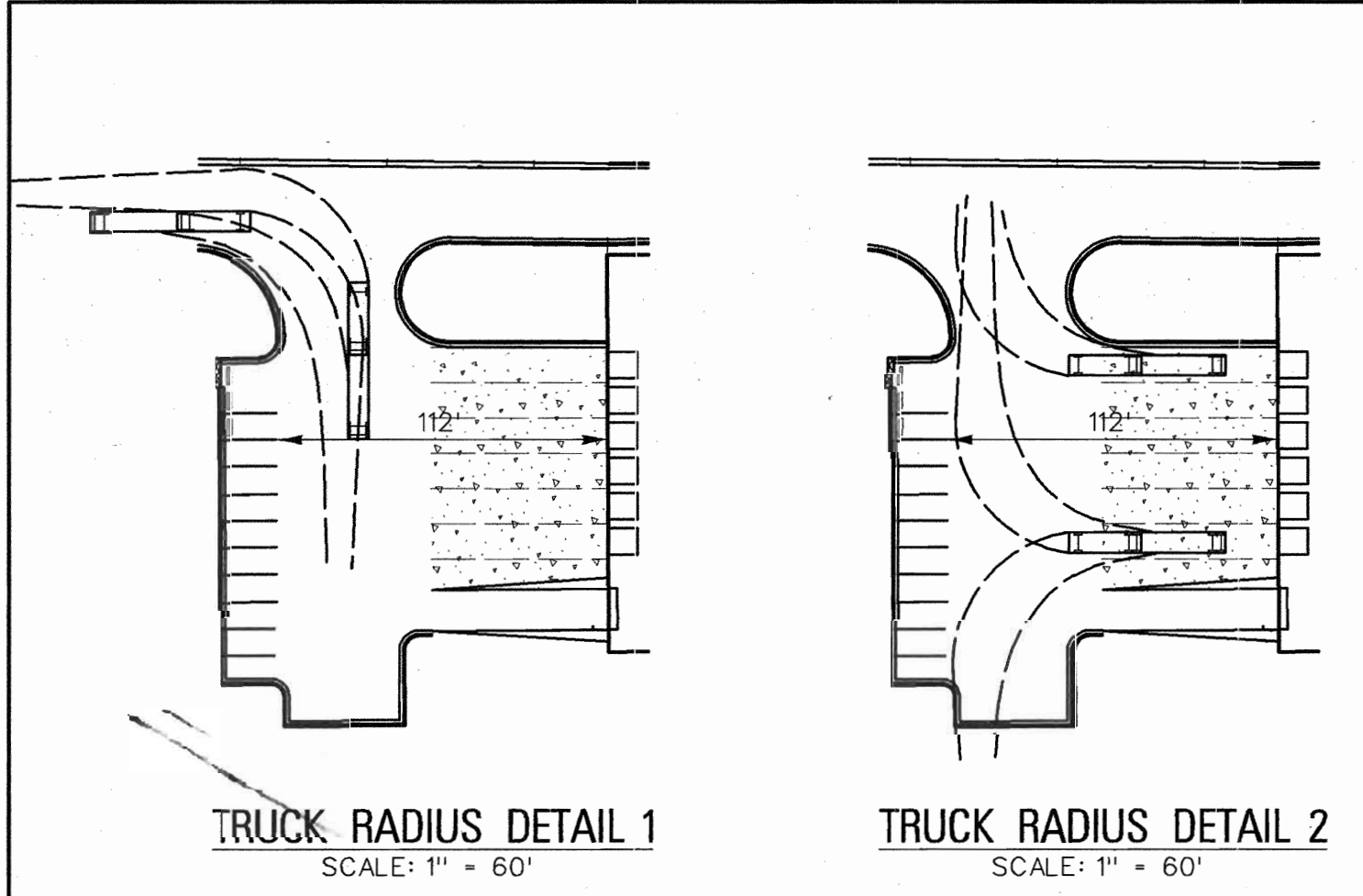
COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/8/03

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5/8/03

DIRECTOR
 DATE: 5/8/03



KANE COMPANIES, INC. HEADQUARTERS

PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
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 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000

GRAPHIC SCALE
 30 0 15 30 60
 (IN FEET)
 1 inch = 30ft.
 DATE: APRIL 9, 2003
 SHEET 2 OF 22

Drafting JAB	DATE	REVISIONS
Check CGW	11/23/04	Revise off-site grading
Design CGW	11/23/04	Revise stoop & steps per revised architectural.
Check THM		

KCI TECHNOLOGIES
 ENGINEERS PLANNERS SCIENTISTS
 CONSTRUCTION MANAGERS

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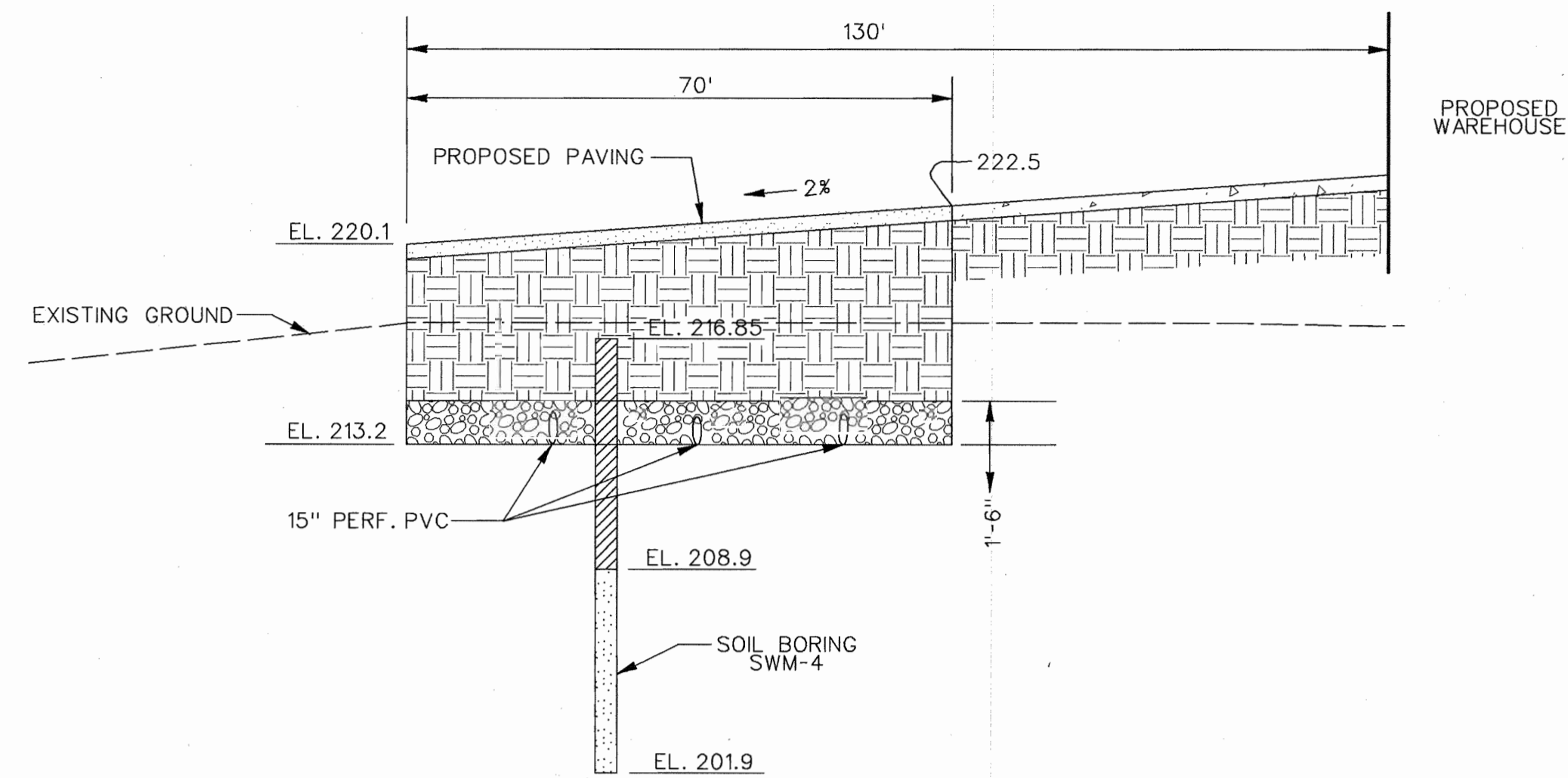
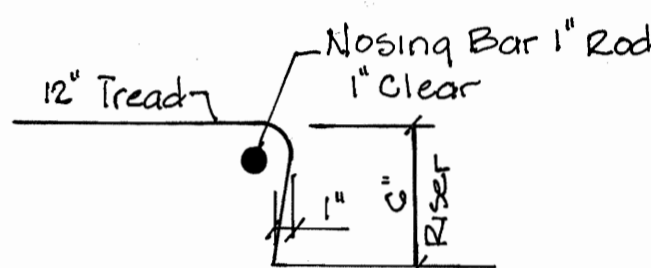
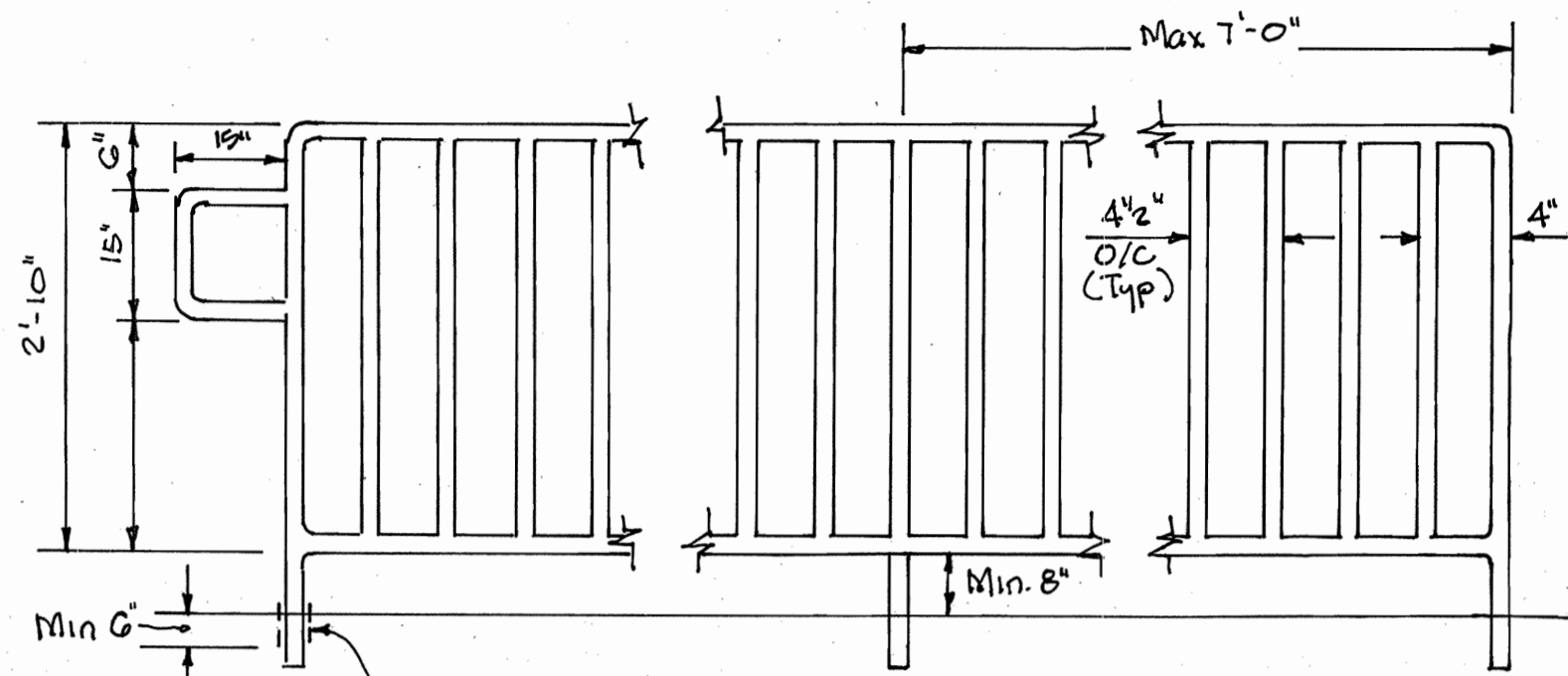
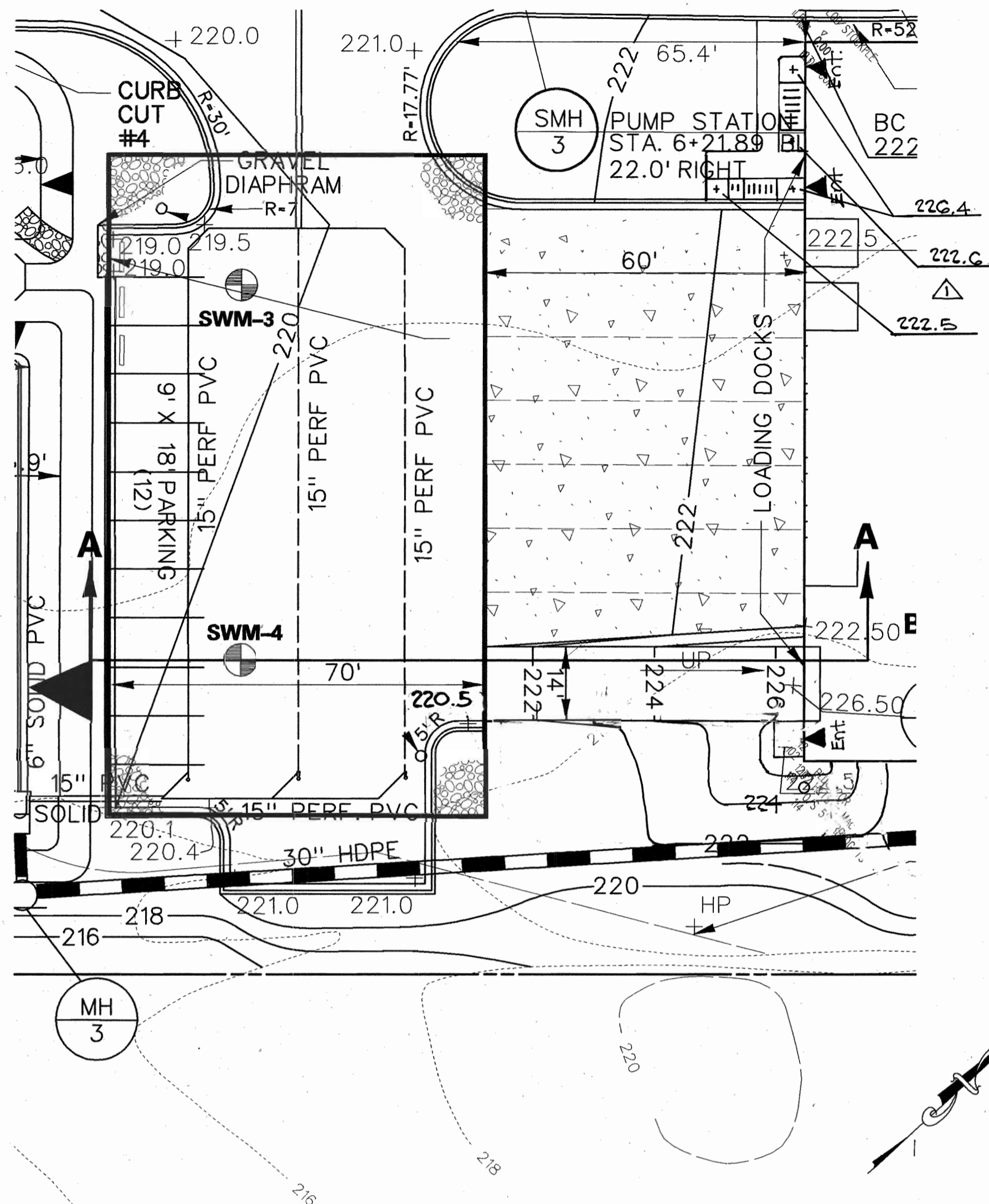
CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

SITE DEVELOPMENT PLAN - SHEET 2

APR 14 2003

MIRIANNE KRENN
 PROFESSIONAL ENGINEER
 APR 14 2003

SDP-02-53 1602008\DRAWINGS\SHEET2.dgn



S.W.M. DESIGN SUMMARY - FACILITY NO. 1

DESIGN STORM	FACILITY INFLOW (cfs)	FACILITY OUTFLOW (cfs)	STAGE	STORAGE VOLUME AC. FT.	FACILITY VOLUME 2.5 x S - AC. FT.
1 Year	3.6	0.1	215.88	0.25	0.1

NOTE: ADDITIONAL STORAGE FOR CPV IS HELD ABOVE GROUND @ ELEV. 215.88.

STRUCTURE TYPE: UNDERGROUND STONE STORAGE
 SURFACE AREA: 0.20 AC.
 STRUCTURE CLASSIFICATION: N/A
 STORAGE-HEIGHT PRODUCT: N/A
 WATERSHED AREA TO FACILITY (ACRES): 1.15
 LEVEL OF MANAGEMENT REQUIRED AND PROVIDED BY FACILITY: 1 YEAR (QUANTITY)
 WATERSHED: PATAPSCO
 STREAM CLASS: 1
 FREEBOARD: N/A
 THIS FACILITY IS PRIVATE. MAINTENANCE IS TO BE PROVIDED BY PROPERTY OWNER.

STORMWATER MANAGEMENT FACILITY
SCALE: 1" = 20'

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (F-1, F-4, AND F-5)

- The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.
- Filters that have a grass cover shall be mowed a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- Remove silt when it exceeds four (4) inches deep in the forebay.
- When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- A log book shall be maintained to determine the rate at which the facility drains.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (F-6)

- Annual maintenance of plant material, mulch layer and soil layer is required. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning.
- Schedule of plant inspection will be twice a year in spring and fall. This inspection will include removal of dead and diseased vegetation considered beyond treatment, treatment of all diseased trees and shrubs and replacement of all deficient stakes and wires.
- Mulch shall be inspected each spring. Remove previous mulch layer before applying new layer once every 2 to 3 years.
- Soil erosion to be addressed on an as needed basis, with a minimum of once per month and after heavy storm events.

OPERATION AND MAINTENANCE SCHEDULE FOR UNDERGROUND FACILITIES

- The underground stormwater management facility is privately owned and it shall be the responsibility of the owner to periodically inspect and clean the facility to maintain its operation and function.
- The underground stormwater management facility shall be inspected yearly at a minimum and after especially severe storm events.
- When sediment accumulation of more than 2" is observed or any debris that might obstruct the outfall is observed, the facility shall be cleaned.
- The facility shall be cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies notifying them of the spill and cleanup operation.
- The sediment and debris shall be removed from the underground stormwater management facility by vacuum truck or other manual means. The owner shall follow proper cleaning and disposal of the removed material and liquid.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six (6) months. If obstructions are found, the owner shall have them removed and properly disposed of.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 Cindy Hancock 5/10/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 Mark A. Lytle 5/14/03
 DIRECTOR

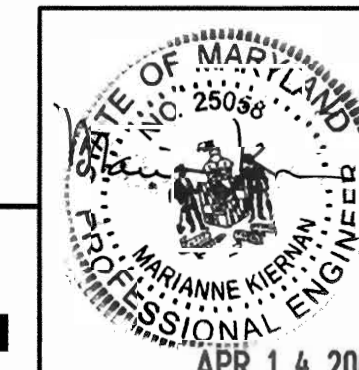
Drafting	JAB	DATE	REVISIONS
Check	CGW	4/29/03	Revise slop & steps, add handrail & step detail
Design	CGW		
Check	THM		

KCI TECHNOLOGIES
 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
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 Laurel, Maryland 20708
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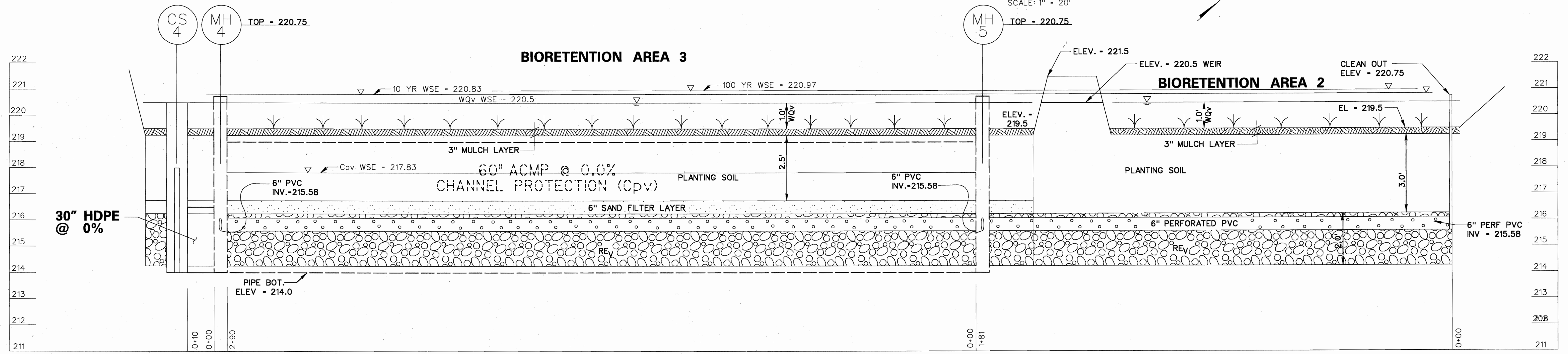
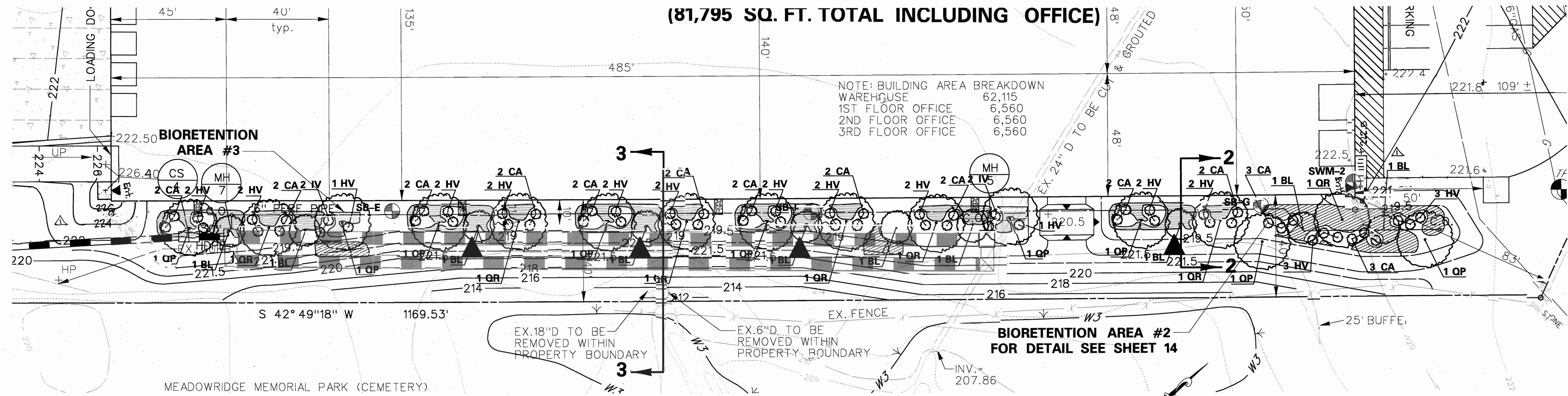
CONTRACT PURCHASER & DEVELOPER: **CREANEY & SMITH GROUP LLC**
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

UNDERGROUND STORAGE STORMWATER MANAGEMENT PLAN

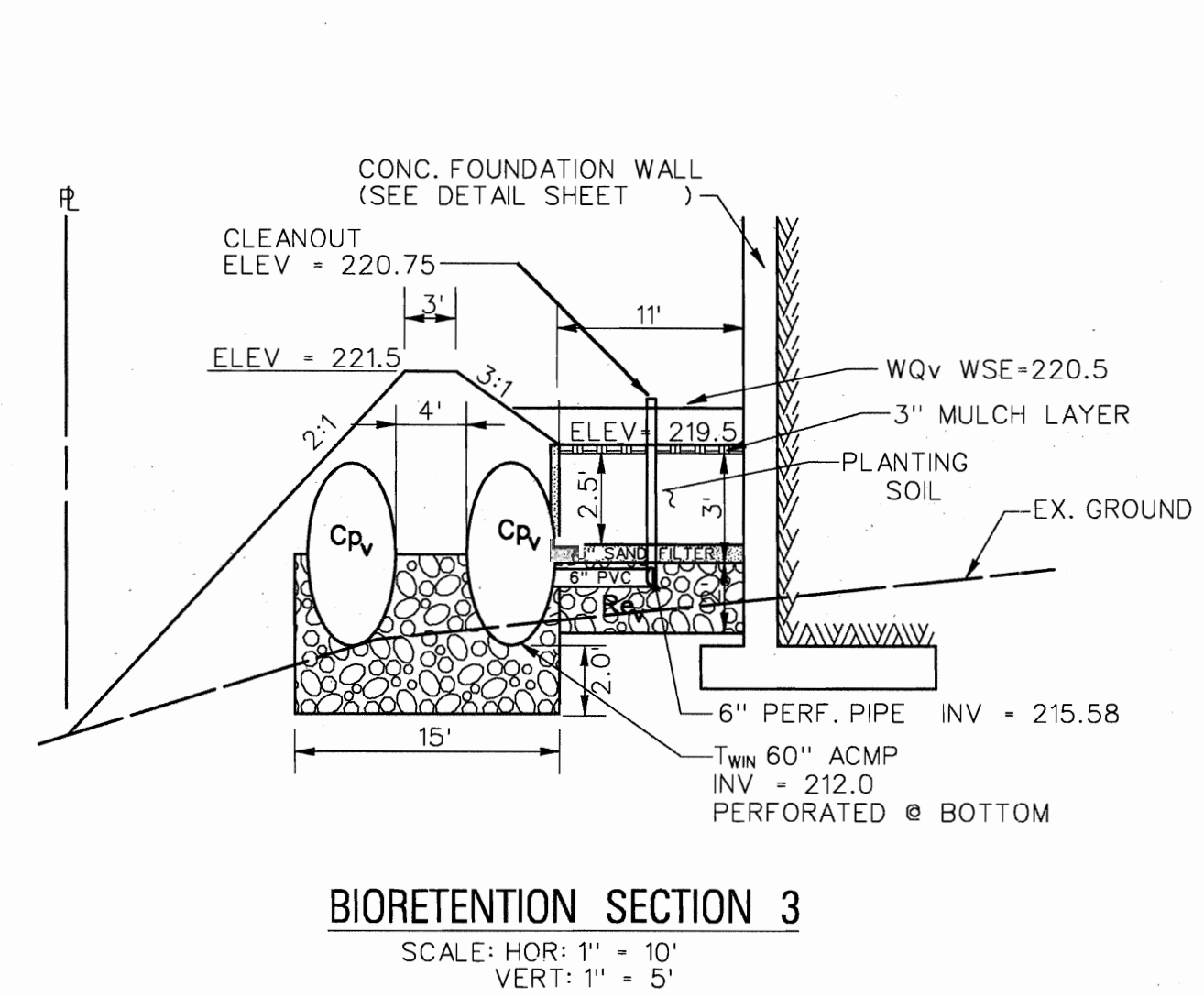


KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 20 0 10 20 40
 (IN FEET)
 1 inch = 20ft.
 DATE: APRIL 9, 2003
 SHEET 11 OF 22

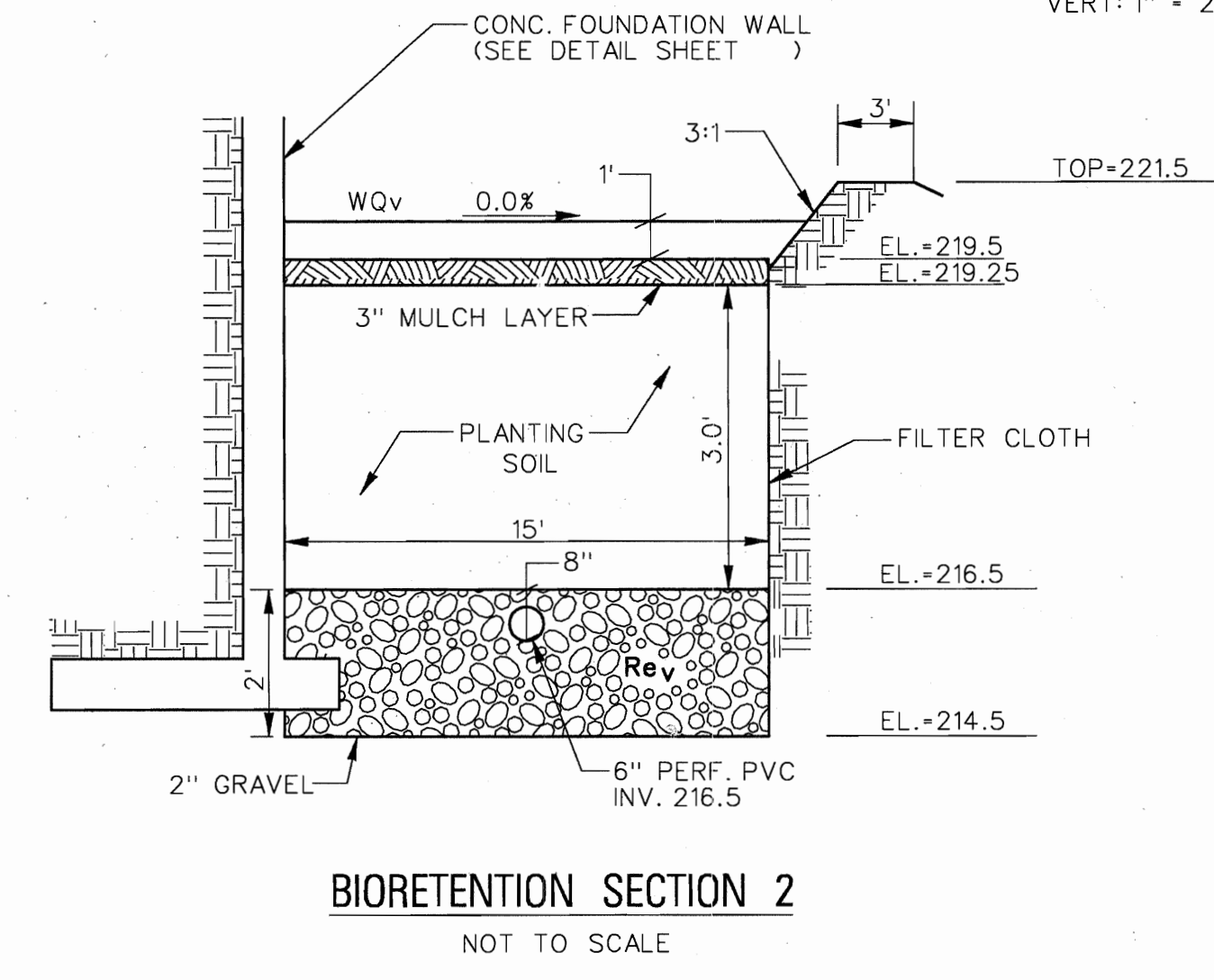
(81,795 SQ. FT. TOTAL INCLUDING OFFICE)



BIORETENTION AREAS 2 AND 3 PROFILE



BIORETENTION SECTION 3



BIORETENTION SECTION 2

BIORETENTION AREA 3 PLANT SCHEDULE

Qty.	Key	Botanical/Common Name
TREES		
6	QR	Quercus Rubra - Red Oak (2.5" Cal., B&B, Full Crown)
6	QP	Quercus Palustris-Pin Oak (2.5" Cal., B&B, Full Crown)
7	BL	Betula Lenta-Sweet Birch (2.5" Cal., B&B)
SHRUBS		
18	CA	Clethra Aifolia-Sweet Pepperbush (18"-24" container)
20	HV	Hamamelis Virginica-Witch Hazel (18"-24" container)
4	IV	Ilex Verticillata-Winterberry (30" ht., B&B)
3400	JP	Psychisandra terminalis - Japanese psychisandra

BIORETENTION AREA 2 PLANT SCHEDULE

Qty.	Key	Botanical/Common Name
TREES		
2	QR	Quercus Rubra - Red Oak (2.5" Cal., B&B, Full Crown)
3	QP	Quercus Palustris-Pin Oak (2.5" Cal., B&B, Full Crown)
3	BL	Betula Lenta-Sweet Birch (2.5" Cal., B&B)
SHRUBS		
10	CA	Clethra Aifolia-Sweet Pepperbush (18"-24" container)
10	HV	Hamamelis Virginica-Witch Hazel (18"-24" container)
1200	JP	Psychisandra terminalis - Japanese psychisandra

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

Drafting	AWW	DATE	REVISIONS
Check	CGW	11/23/03	Revise stoop & steps per revised architectural
Design	CGW		
Check	THM		

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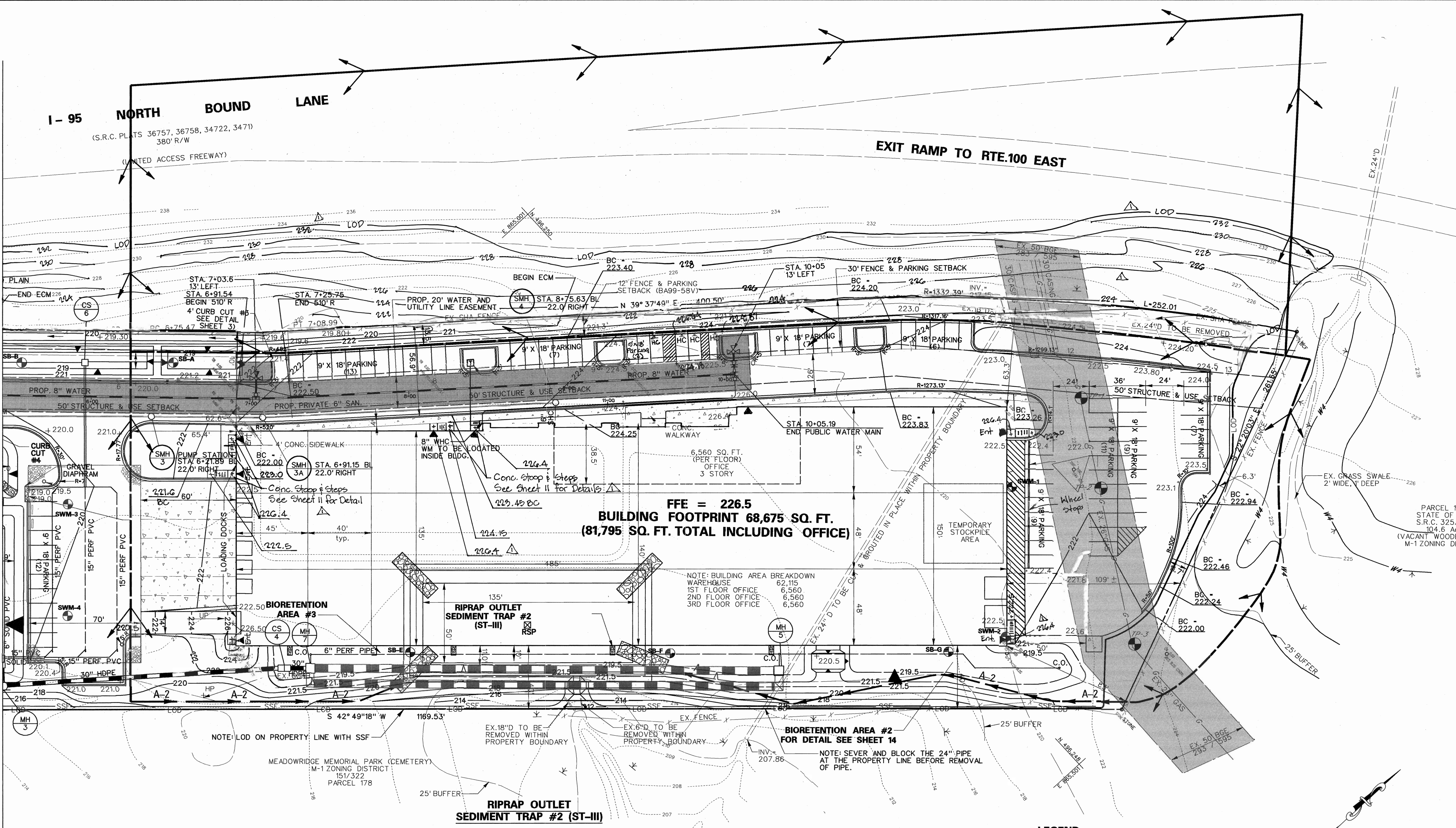
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BIORETENTION AREAS 2 AND 3 PLAN



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 HOWARD COUNTY, MARYLAND
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 (IN FEET)
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 DATE: APRIL 9, 2003
 SHEET 14 OF 22

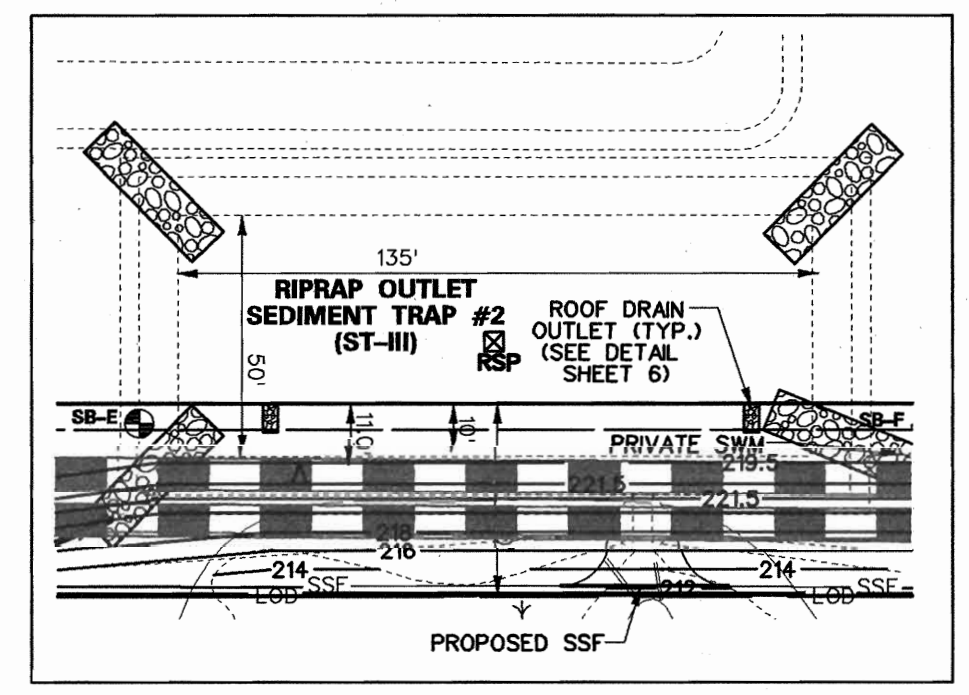
SDP-02-53



FFE = 226.5
BUILDING FOOTPRINT 68,675 SQ. FT.
(81,795 SQ. FT. TOTAL INCLUDING OFFICE)

NOTE: BUILDING AREA BREAKDOWN
 WAREHOUSE 62,115
 1ST FLOOR OFFICE 6,560
 2ND FLOOR OFFICE 6,560
 3RD FLOOR OFFICE 6,560

EXISTING D.A. = 6.10 AC.
PROPOSED D.A. = 2.53 AC
STORAGE REQUIRED = 32,940 CF
STORAGE PROVIDED = 33,176 CF
STORAGE DEPTH = 4'
BOTTOM ELEVATION = 208.0
OUTFALL LENGTH = 10'
CLEANOUT ELEV. = 209.0
WEIR LENGTH = 14'
WEIR CREST ELEVATION = 212.0'
WEIR DEPTH = 15'
EMBANKMENT ELEVATION = 216.0'



SEDIMENT TRAP #2 INSET
 SCALE: 1" = 40'

LEGEND

EXISTING TREE LINE	
PROPOSED TREE LINE	
EXISTING GRADE	
PROPOSED GRADE	
EXISTING DRAINAGE DIVIDE	
PROPOSED DRAINAGE DIVIDE	
PROPOSED EARTH DIKE	
LIMIT OF DISTURBANCE	
SILT FENCE	
SUPER SILT FENCE	
RIPRAP INFLOW PROTECTION	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION, DATE 4/14/03
 CHIEF, DIVISION OF LAND DEVELOPMENT, DATE 5/8/03
 DIRECTOR, DATE 5/10/03

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL AND THAT ALL 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 INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 DEVELOPER, DATE

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 COUNTY SOIL CONSERVATION DISTRICT.
 ENGINEER, DATE 4/14/03

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 USDA - NATURAL RESOURCES CONSERVATION SERVICE, DATE 4/22/03
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 HOWARD SCD, DATE 4/22/03

Drafting	JAB	DATE	REVISIONS
Check	CGW	11/21/04	Revise off site grading & LOD
Design	CGW	11/23/04	Revise stoop & steps per revised architectural
Check	THM		

KCI TECHNOLOGIES
 ENGINEERS, PLANNERS, SCIENTISTS, CONSTRUCTION MANAGERS
 14502 Greenview Drive, Suite 424
 Laurel, Maryland 20708
 (301) 953-1821 (410) 792-8086
 fax: (410) 792-7419
 www.kci.com

OWNER:
C & S MEADOWRIDGE, LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

GRADING AND SEDIMENT CONTROL PLAN - SHEET 2

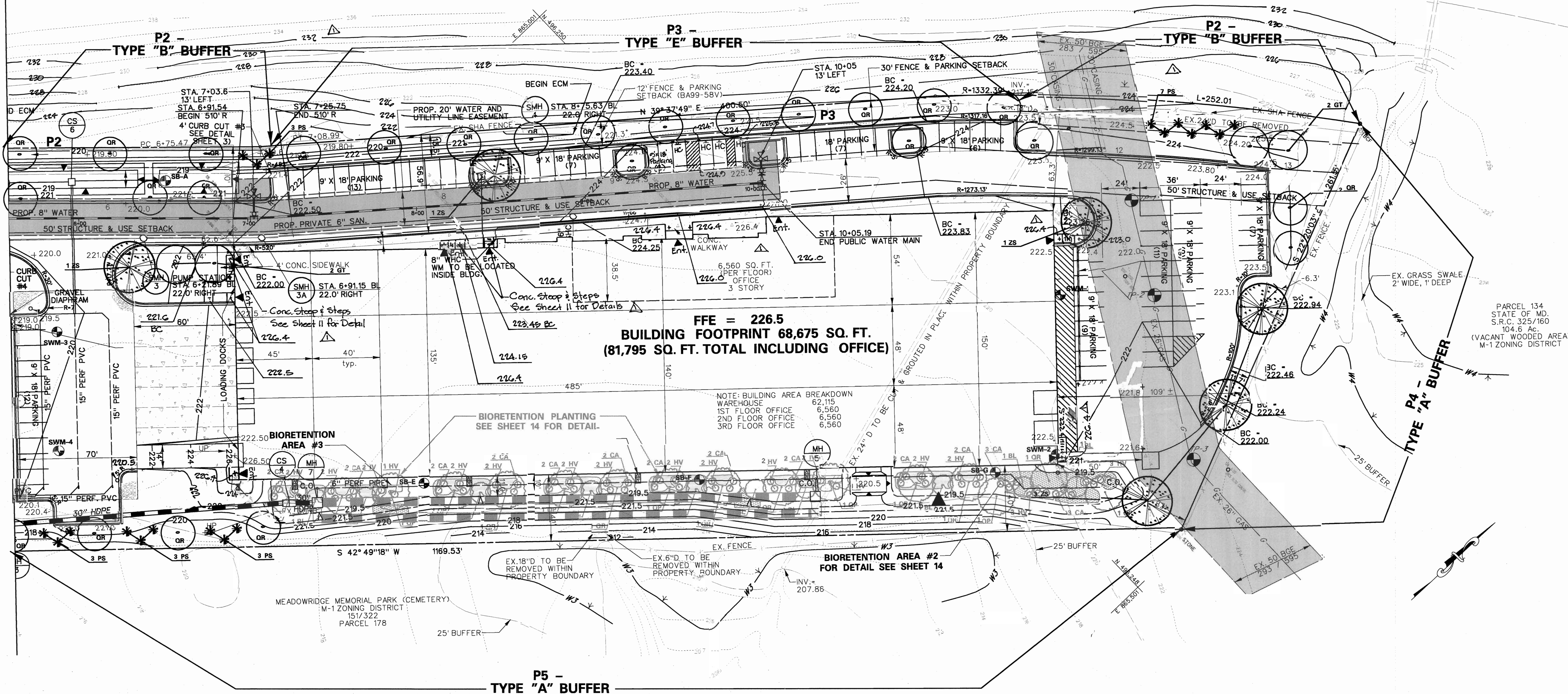


KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L: 6753 F: 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 1 inch = 30ft
 DATE: APRIL 9, 2003
 SHEET 16 OF 22

I-95 NORTH BOUND LANE
 (S.R.C. PLATS 36757, 36758, 34722, 3471)
 380' R/W
 (LIMITED ACCESS FREEWAY)

EXIT RAMP TO RTE.100 EAST

MATCHLINE SEE SHEET 1



FFE = 226.5
BUILDING FOOTPRINT 68,675 SQ. FT.
(81,795 SQ. FT. TOTAL INCLUDING OFFICE)

NOTE: BUILDING AREA BREAKDOWN
 WAREHOUSE 62,115
 1ST FLOOR OFFICE 6,560
 2ND FLOOR OFFICE 6,560
 3RD FLOOR OFFICE 6,560

PLAN
 SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Candy Armistead 5/8/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR
Dan Ingle 5/14/03

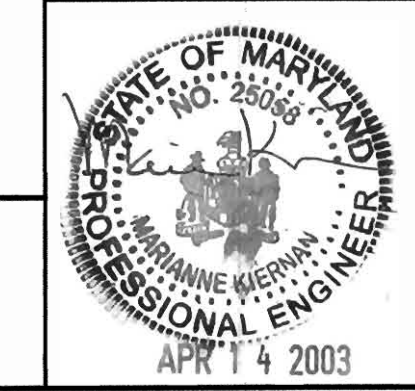
Drafting	DATE	REVISIONS
JAB	11/23/02	Revise off-site grading
CGW	11/23/02	Revise stoop & steps per revised architectural
CGW		
THM		

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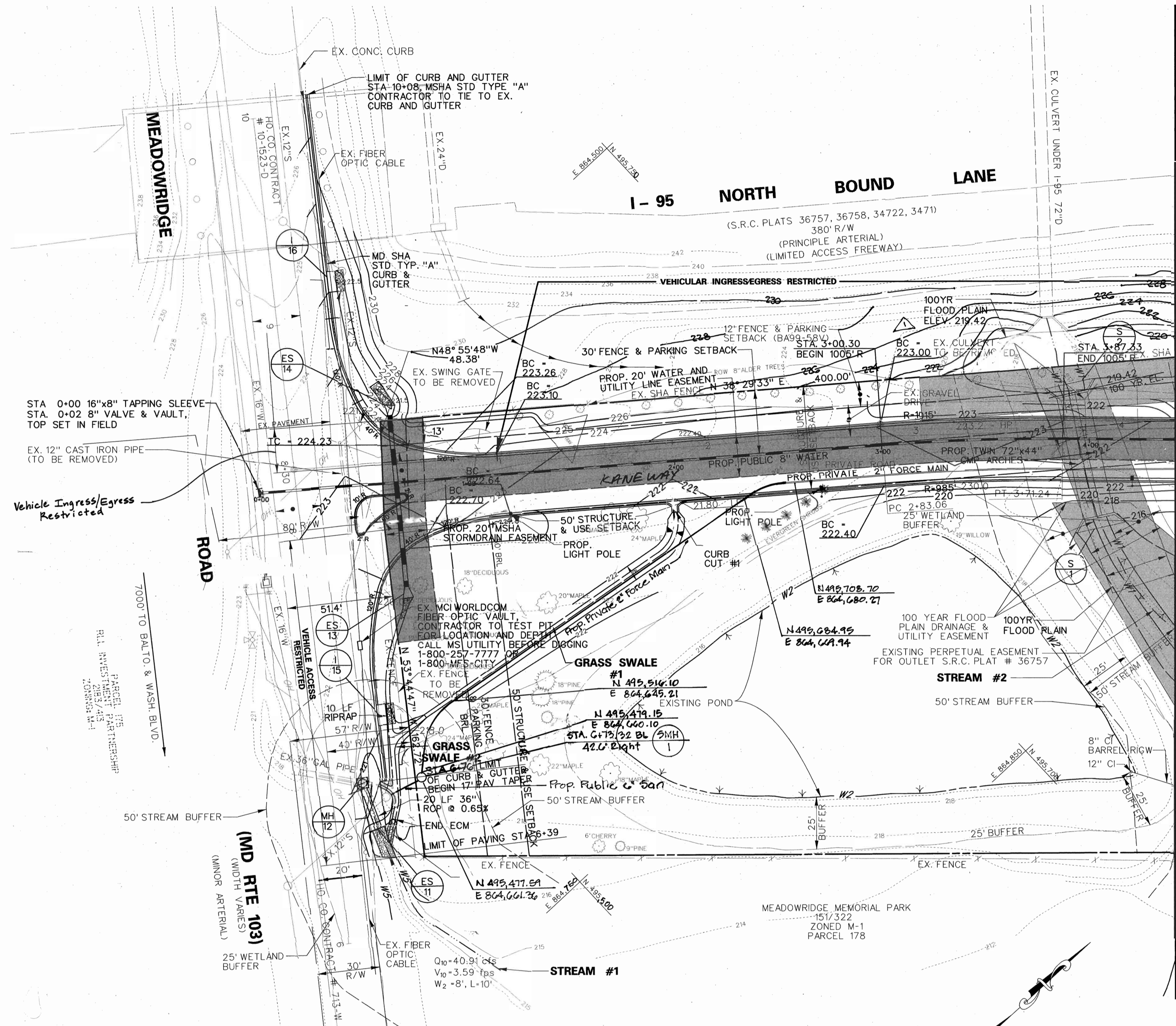
CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

LANDSCAPE PLAN - SHEET 2



KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37 - PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 30 0 15 30 60
 (IN FEET)
 1 inch = 30ft.
 DATE: APRIL 9, 2003
 SHEET 21 OF 22

SDP-02-53



MATCH LINE - SHEET 2

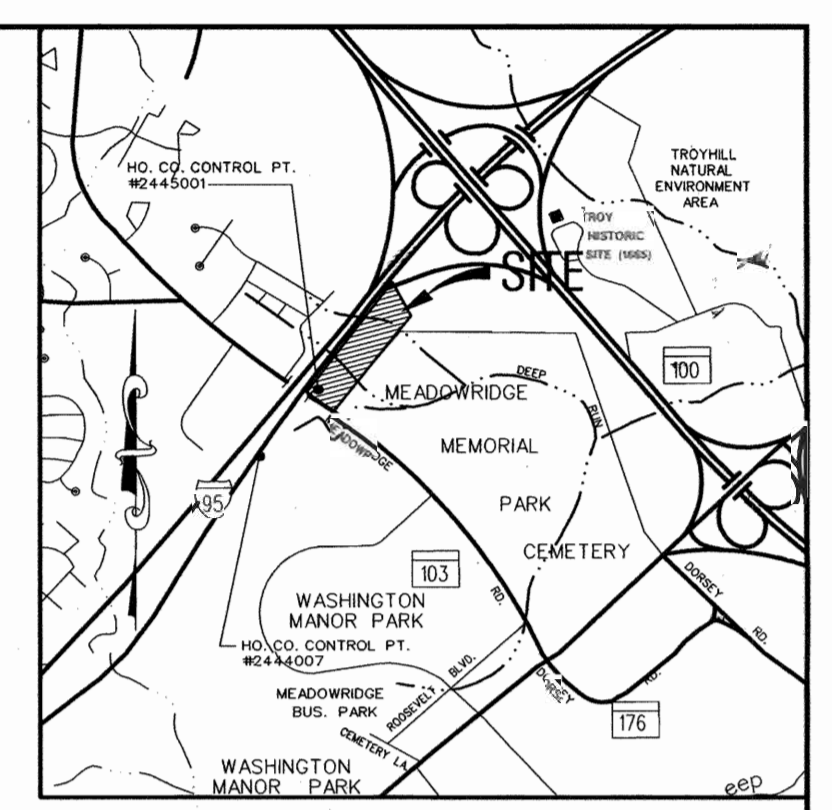
GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV.I.E. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. 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.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

MISS UTILITY	1-800-257-7777
VERIZON TELEPHONE COMPANY	752-9976
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS & ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION/SURVEY DIVISION	792-7272
(24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	313-1880
- TOPO TAKEN FROM FIELD SURVEY DATED APRIL 1989 BY KCI.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- ALL COORDINATES ARE BASED ON HOWARD COUNTY GEODETIC CONTROL TRAVERSE WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. REFERENCE HOWARD COUNTY CONTROL POINTS 2445001 (ELEV. 245.095) & 2444007 (ELEV. 252.125).
- INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ALL ON-SITE ROADS PARKING AND DRAINAGE STRUCTURES (INCLUDING STORM DRAINS, WATER QUALITY BASINS, TWIN CULVERTS) SHALL BE PRIVATELY OWNED & MAINTAINED.
- GRAVITY SEWER SERVICE TO THE PROPOSED BUILDING CANNOT BE PHYSICALLY PROVIDED. A PRIVATELY OWNED AND MAINTAINED PUMP STATION SHALL BE PROVIDED AS PER THESE PLANS AND SPECIFICATIONS. THE PUMPS AND ASSOCIATED APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY PLUMBING CODE.
- REFER TO "MARYLAND'S GUIDELINES FOR WATERWAY CONSTRUCTION" BY THE WATER RESOURCES ADMINISTRATION (WRA) DATED SEPTEMBER 1999 REVISED NOVEMBER 2000 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE, SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3' COVER.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- INSTREAM CONSTRUCTION WILL NOT BE PERMITTED FROM MARCH 1ST THROUGH MAY 15TH INCLUSIVE.
- THE WATER PRESSURE ZONE FOR THIS CONTRACT IS 550.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATIONS C-153. DUCTILE IRON COMPACT FITTINGS 3"-12" FOR WATER AND OTHER LIQUIDS.
- GRAVITY SEWER LINE WILL BE 6" PVC.
- 2" SANITARY FORCE MAIN WILL BE PVC.
- NO GRADING OR REMOVAL OF VEGETATIVE COVER IS PERMITTED WITHIN 25 FT OF A WETLAND UNLESS APPROVED BY THIS PLAN. THIS SITE IS SUBJECT TO MDE/ACOE PERMIT NO. 2002-64709.
- THIS PLAN IS SUBJECT TO THE FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND THE NEW ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 50-2001.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$13,200.00 FOR 31 SHADE TREES OR SUBSTITUTIONS.
- THIS SITE IS SUBJECT TO SHA ACCESS PERMIT NO. B-HO-8208-02, ISSUED DECEMBER 31, 2002.
- STORMWATER MANAGEMENT WILL BE PROVIDED THROUGH 2 UNDERGROUND DETENTION AREAS, 3 BIORETENTION AREAS (F-6), 1 SAND FILTER (F-5), AND 2 GRASS SWALES. THESE FACILITIES ARE PRIVATE SWM FACILITIES AND WILL BE MAINTAINED BY THE OWNER.
- THE APPROVED APFO STUDY WAS PREPARED BY KCI TECHNOLOGIES, INC. AND APPROVED, SEPT. 5, 2002. THE MITIGATION REQUIREMENTS ARE AS FOLLOWS: NONE.
- WATER LINE WILL BE PUBLIC AND THE SANITARY SEWER WILL BE PRIVATE. THE EXISTING 16" WATER IS CONTRACT NO. 713-W AND THE EXISTING 8" SANITARY SEWER IS CONTRACT NO. 14-15-12-10. THE PROPOSED METER WILL BE LOCATED INSIDE AN EASEMENT ON-SITE AND WILL BE PUBLIC.
- BA-99-58V APPROVED MAY 11, 2000. VARIANCE TO PERMIT A PARKING SETBACK OF 12' FROM AN EXTERNAL PUBLIC STREET RIGHT-OF-WAY IN LIEU OF THE REQUIRED 30' MINIMUM SETBACK. REAPPLIED BA-02-50C APPROVED December 18, 2002.
- "BIORETENTION AREAS DO NOT REQUIRE LANDSCAPE BUFFERING BECAUSE PLANTINGS WILL BE PLACED IN THOSE FACILITIES (SEE SHEET #13 - 14 FOR PLANT LIST AND DETAILS)."
- DESIGN MANUAL WAIVER DATED MARCH 19, 2002 GRANTED FOR THE USE OF PRESSURE SEWER BY HOWARD COUNTY BUREAU OF ENGINEERING.
- THIS SITE IS IN THE DEEP RUN TRIBUTARY WHICH FLOWS INTO THE PATAPSCO RIVER WATERSHED #02-13-09 AND IS CLASSIFIED AS A USE I. THE STREAM CLOSURE DATES ARE MARCH 1 THROUGH JUNE 15.
- THIS PROJECT IS CONDITIONALLY EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH THE FILING OF A DECLARATION OF INTENT FOR LESS THAN 40,000 SQUARE FEET OF CLEARING.
- WP-02-107 WAIVER TO PERMIT STOCKPILE AND ROUGH GRADING ON SITE PRIOR TO APPROVAL OF THE SDP WAS APPROVED ON JUNE 05, 2002 AND EXPIRES 1 YEAR AFTER ISSUANCE.

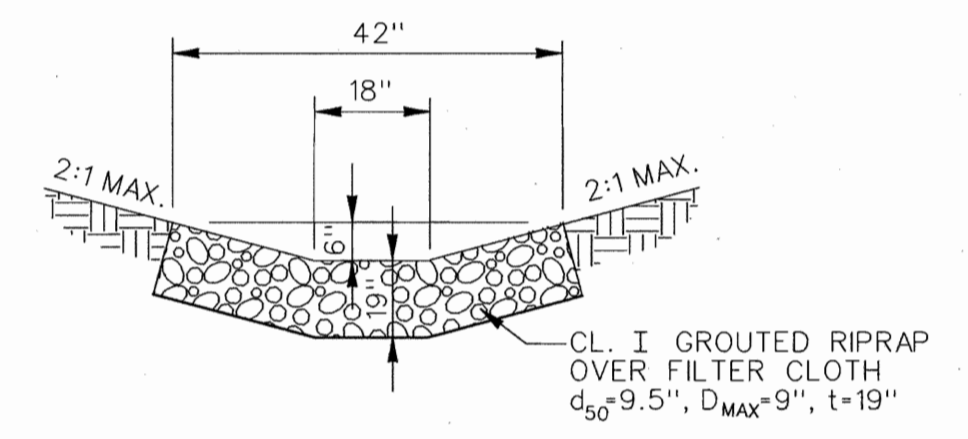
LEGEND

- PROF. TREE LINE
- EX. TREE LINE
- FIRE HYDRANT
- POLE
- POLE WITH LIGHT
- EVERGREEN TREE
- OAK
- EX. FENCE
- PROP. FENCE
- EX. CONTOURS
- PROP. CONTOURS
- BUILDING RESTRICTION LINE
- INDICATES SURFACE FLOW
- RAILROAD LINE
- SPOT ELEVATION
- STREET LIGHT
- WETLANDS
- PROP. 15' POLE WITH LIGHT
- SOIL BORING - A
- STREAM



SITE ANALYSIS

- GROSS AREA OF SITE: 6.8264 AC
- NET AREA OF SITE: 6.6041 AC
- PRESENT ZONING - PER SEPT. 19, 1993: ZONING M-1 OFFICE/WAREHOUSE
- PROPOSED USE: OFFICE (3 STY.) WAREHOUSE 19,680 SF, 62,115 SF
- FLOOR AREA: 82,795 SF
- NUMBER OF EMPLOYEES (MAX): 62 PERSONS OFFICE, 17 PERSONS WAREHOUSE
- PARKING SPACES REQUIRED: 62 SPACES OFFICE SPACE, 17 SPACES WAREHOUSE SPACE. TOTAL 79 PS - 4 HC - 83
- PARKING REQUIREMENT MODIFICATION WAS APPROVED BY THE DEPARTMENT OF PLANNING & ZONING TO BE BASED ON 1 SPACE PER EMPLOYEE.
- PARKING SPACES PROPOSED: 87 PS
- GREEN SPACE AREA: 3,150.3 AC
- GREEN SPACE AS % OF NET AREA: 47.7%
- BUILDING COVERAGE: 1.57 AC
- BUILDING COVERAGE AS % OF GROSS AREA: 23.0%
- HANDICAP PARKING SPACES PROVIDED: 5
- TOTAL DISTURBED AREA: 5,550 AC. OR 241,769 s.f. SDP90-81, BA99-58V
- DPZ FILES: WP-02-107, BA02-50C



RIPRAP CHANNEL LINING FROM CURB TO ES-11 NOT TO SCALE

SHEET INDEX	
SHEET NO.	TITLE
1	SITE DEVELOPMENT PLAN - SHEET 1
2	SITE DEVELOPMENT PLAN - SHEET 2
3	SITE DETAILS
4	PROP. STORMDRAIN DRAINAGE AREA MAP
5	STORMDRAIN PROFILES
6	STORMDRAIN PROFILES
7	STORMDRAIN DETAILS
8	WATER AND SANITARY PROFILES
9	SWM RISER DETAILS (CS-2, CS-4, CS-6)
10	SWM DRAINAGE PLAN
11	UNDERGROUND STORAGE SWM PLAN
12	SWM DETAILS
13	BIORETENTION AREA 1 PLAN
14	BIORETENTION AREAS 2 & 3 PLAN
15	GRADING & SEDIMENT CONTROL PLAN 1
16	GRADING & SEDIMENT CONTROL PLAN 2
17	GRADING & SEDIMENT CONTROL DETAILS
18	GRADING & SEDIMENT CONTROL DETAILS
19	SEDIMENT CONTROL NOTES
20	LANDSCAPE PLAN - SHEET 1
21	LANDSCAPE PLAN - SHEET 2
22	LANDSCAPE DETAILS

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

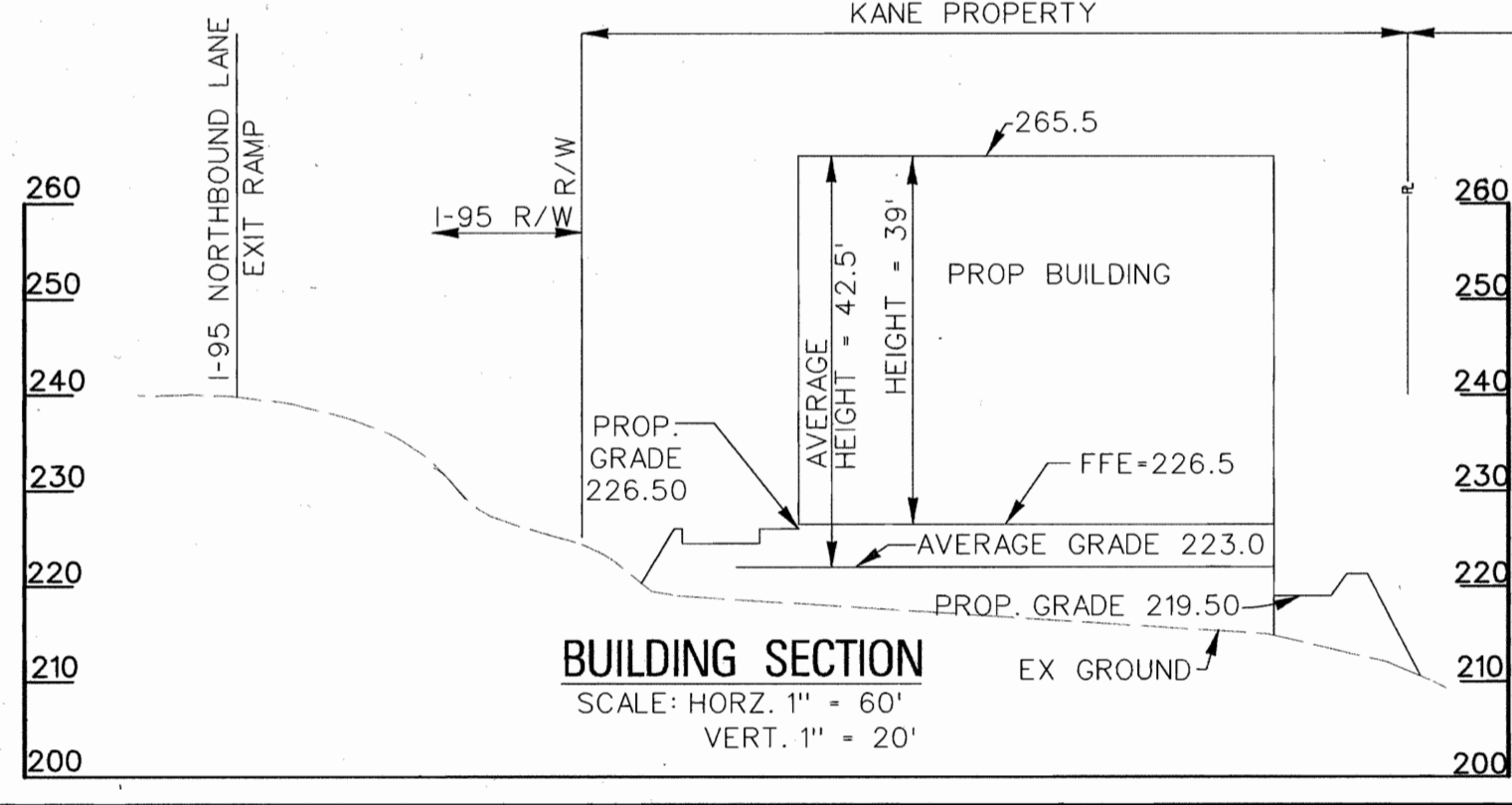
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
Cindy Hammett 5/16/03

CHIEF, DIVISION OF LAND DEVELOPMENT
Danika D. Coyle 5/16/03

DIRECTOR

PERMIT INFORMATION CHART				
Subdivision Name: NA	Section/Area: NA	Lot/Parcel No.: 174		
Plot # or L/F: NA	Grid #: NA	Zoning: M-1	Tax Map No.: 37	Elect Distr: 1
Water Code: D04	Sewer Code: 2153000	Census Tract: 6012		
ADDRESS CHART				
LOT/PARCEL #	STREET ADDRESS			
174	6500 Kane Way			



BUILDING SECTION SCALE: HORIZ. 1" = 60' VERT. 1" = 20'



KANE COMPANIES, INC. HEADQUARTERS

PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.
DATE: APRIL 9, 2003
SHEET 1 OF 22

Drafting	JAB	DATE	REVISIONS
Check	CGW	10-30-06	Revised san. sewer line
Design	CGW	11-29-06	Revise offset grading
Check	THM		

KCI TECHNOLOGIES
ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS

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OWNER: **C & S MEADOWRIDGE, LLC**
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(410) 534-6350

CONTRACT PURCHASER & DEVELOPER: **CREANEY & SMITH GROUP LLC**
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SITE DEVELOPMENT PLAN - SHEET 1

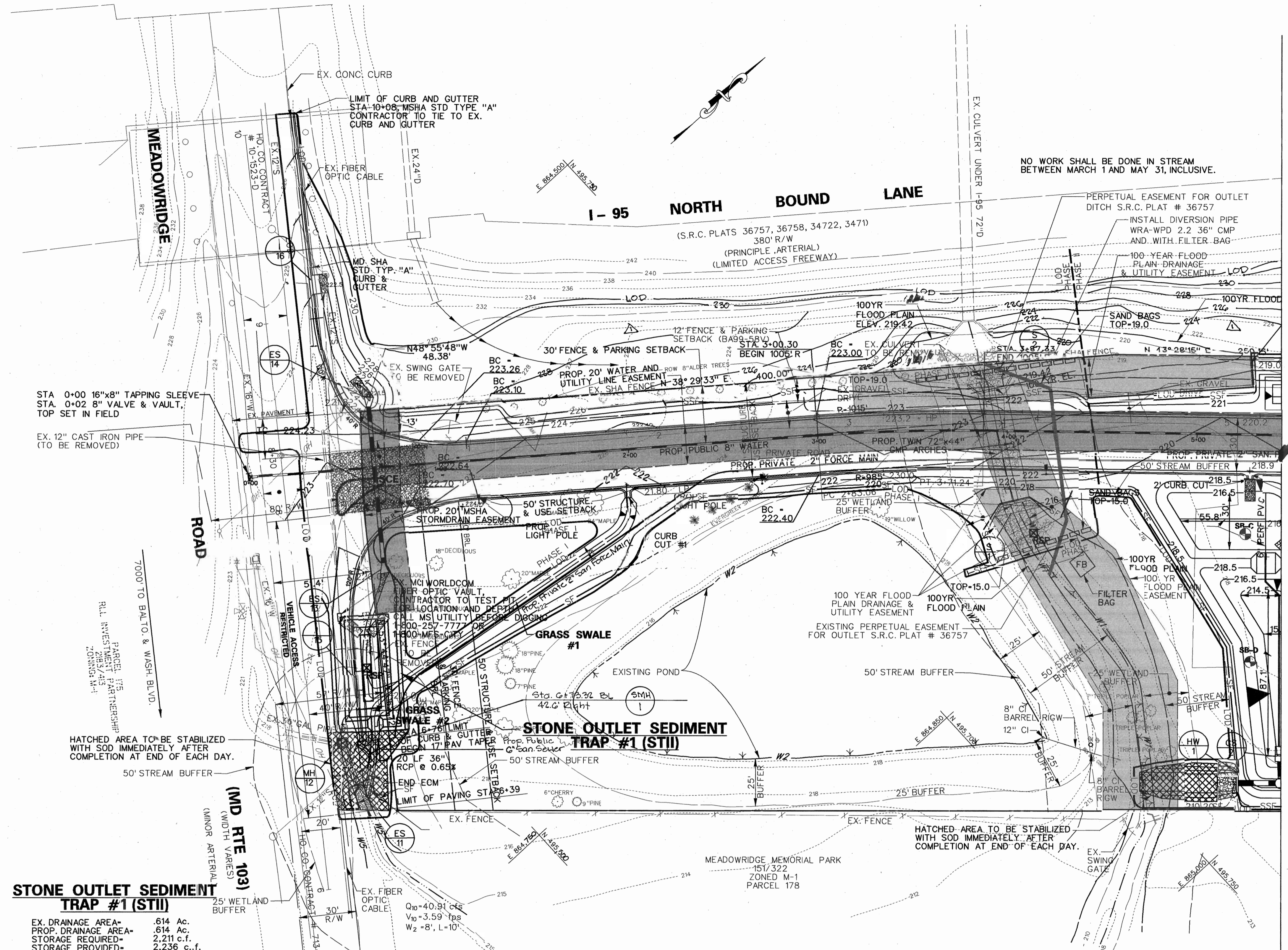
GENERAL NOTES

- A minimum of 24 hours notice must be given to the Howard County Sediment Control Division prior to the start of any construction (880-3450).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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, 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 (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding rates 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	6,826.4	Acres
Area Disturbed	3,550	Acres
Area to be Roofed or Paved	3,420	Acres
Area to be Vegetatively Stabilized	3.55	Acres
Total Cut	26,780	Cubic Yards
Offsite Waste/Borrow Location	Stockpile Permit #0008045	Cubic Yards
	Borrow material taken from: Troy Hill Industrial Park	
- Any sediment control practices 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 Department of Public Works 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 the 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.

SEQUENCE OF CONSTRUCTION

- Obtain grading and MDE Permit **1 DAY**
- Notify Howard County Sediment Control Inspector for pre-construction meetings as required by note number one (No. 1) of the Standard Erosion and Control Notes shown on this sheet. Notify Miss Utility. **1 DAY**
- Install sediment control measures for Phase I Construction (i.e. see silt fence installation of ES-11 thru MH-12, only) **1 DAY**
- With silt fence protection install MH-12 thru ES-11 and inclusive pipe. Install riprap outfall. Stabilize site. Contractor shall complete ES-11 to MH-12 in one dry day. **1 DAY**
- Install stone outlet sediment trap #1. Install permanent outfall from trap to riprap outfall @ ES-11 **1 DAY**
- With inspectors approval grade the Meadowridge Road improvements. Install inlet I-16, structures ES-14 and 13 with inclusive pipe, riprap and grass channels. Do not install glass swale #1. Install glass #2 upto sediment trap #1. All excavation for road base (MD RT 103) shall be backfilled with stone at the end of each day. **2 WEEKS**
- Install Phase 1 utilities. Stabilize site. **2 WEEKS**
- Install 36" pipe diversion under Phase I Construction around existing culvert across proposed drive. Note: No work permitted within stream between March 1 and June 15th inclusive. **3 DAYS**
- Install Sanitary Force main and waterline under stream bed at stream crossing where future twin 72"x44" CMP are to be installed. Continue lines to termination in Meadowridge Road. **2 DAYS**
- Install twin culverts in stream crossing. **2 DAYS**
- Remove removable sup pit, add Phase II silt fence across S1, remove diversion pipe and divert water back through proposed culverts. Obtain permission from inspector before proceeding. **1 DAY**
- With the Howard County Sediment Control Inspector's approval, remove existing drive and culvert. Bring proposed drive up to grade. Grade improvements along Meadowridge Road. **3 DAYS**
- Install sediment control measure for Phase II Construction (i.e., silt fence, super silt fence, sediment trap #2). Clear and grub area within LOD with inspector's approval. **2 DAYS**
- Sever and block 24" pipe at the property line before removal of pipe. Remove or grub in place existing 24" pipe within property boundary under building pad. Install 60" storage pipes and block flows from entering same until SWM work is begun later in the sequence. **3 WEEKS**
- With inspectors approval begin grading the western side of the building pad. As pad is constructed in an easterly direction, and approaches sediment trap #2, remove trap. Close super silt fence @ trap #2 outfall. Grade remainder of building pad. **3 WEEKS**
- Install Utilities from Phase I construction through Phase II and tie into existing utilities. **3 DAYS**
- Install paving, curb, gutter and storm drain at culvert across Meadowridge Road. Install paving, curb and gutter for entire site. **7 DAYS**
- Stabilize all disturbed areas. **3 DAYS**
- Construction and water, sewer and storm drains north east of the stone construction entrance only at this time. All storm drain inlets and end sections shall have brick bulkheads installed the same day that flows to the water quantity/quality facilities. **21 DAYS**
- Concurrently fine grade and install curb and gutters. Apply permanent stabilization to all areas fine graded within 48 hours of their completion. Install stone sub-base to all areas to be paved as they are fine graded and proof rolled. **14 DAYS**
- After the site has been stabilized install SWM Facilities (i.e. Bioretention and sand filter areas, CPV areas, grass swales 1 & 2) **14 DAYS**
- Stabilize all disturbed areas.



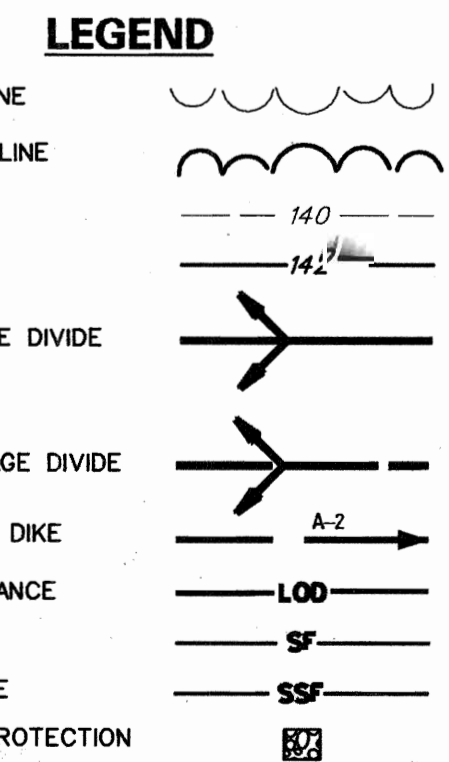
STONE OUTLET SEDIMENT TRAP #1 (STI1)

EX. DRAINAGE AREA-	.614	Ac.
PROP. DRAINAGE AREA-	.614	Ac.
STORAGE REQUIRED-	2,211	c.f.
BOTTOM DIMENSIONS-	5' x 35'	
BOTTOM ELEVATION-	218.0	
WEIR LENGTH-	4'	
WET STORAGE ELEVATION-	220.0	
WEIR CREST ELEVATION-	222.0	
TOP OF EMBANKMENT-	223.0	
CLEANOUT ELEVATION-	219.0	

Q₁₀ = 40.91 cfs
V₁₀ = 3.59 fps
W₂ = 8', L = 10'

PLAN
SCALE: 1" = 30'

NOTE:
ADD ECM MATTING IN ALL DITCHES, SWALES, AND OTHER AREAS OF CONCENTRATED FLOW PER DETAIL SHEET 18 OF 22.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] 4/24/03
 CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] 5/15/03
 DIRECTOR: [Signature] 5/16/03

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL 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 INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

DEVELOPER: [Signature] DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.

ENGINEER: [Signature] DATE

REVIEWED FOR HOWARD SOIL AND MEETS TECHNICAL REQUIREMENTS:

USDA - NATURAL RESOURCES CONSERVATION SERVICE: [Signature] DATE

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

HOWARD SOIL CONSERVATION DISTRICT: [Signature] DATE

Drafting	JAB	DATE	REVISIONS
Check	CGW	10/20/03	Revised San Sewer Line
Design	CGW	11/29/04	Δ Revise offsite grading & LOD
Check	THM		

KCI TECHNOLOGIES

ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS

14502 Greenview Drive, Suite 424
Laurel, Maryland 20708
(301) 953-1831 (410) 792-8086
Fax: (410) 792-7419
www.kci.com

OWNER: **C & S MEADOWRIDGE, LLC**

925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

CONTRACT PURCHASER & DEVELOPER: **CREANEY & SMITH GROUP LLC**

925 FELL STREET
BALTIMORE, MD 21231
(410) 534-6350

GRADING AND SEDIMENT CONTROL PLAN - SHEET 1

KANE COMPANIES, INC. HEADQUARTERS

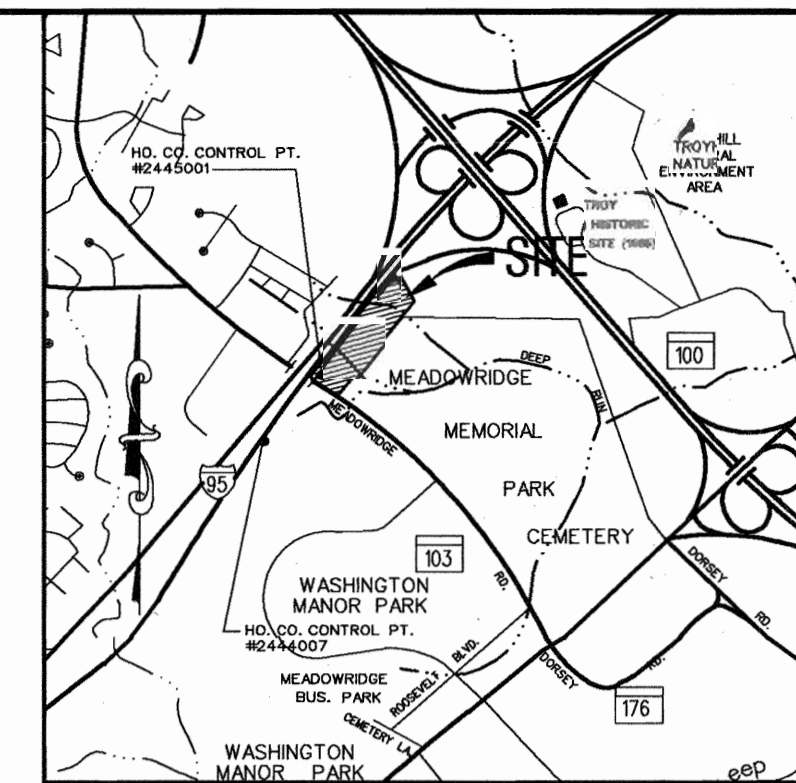
PROPOSED OFFICE WAREHOUSE
TAX MAP 37 - PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

WATER CODE: D04 SEWER CODE: 215 3000

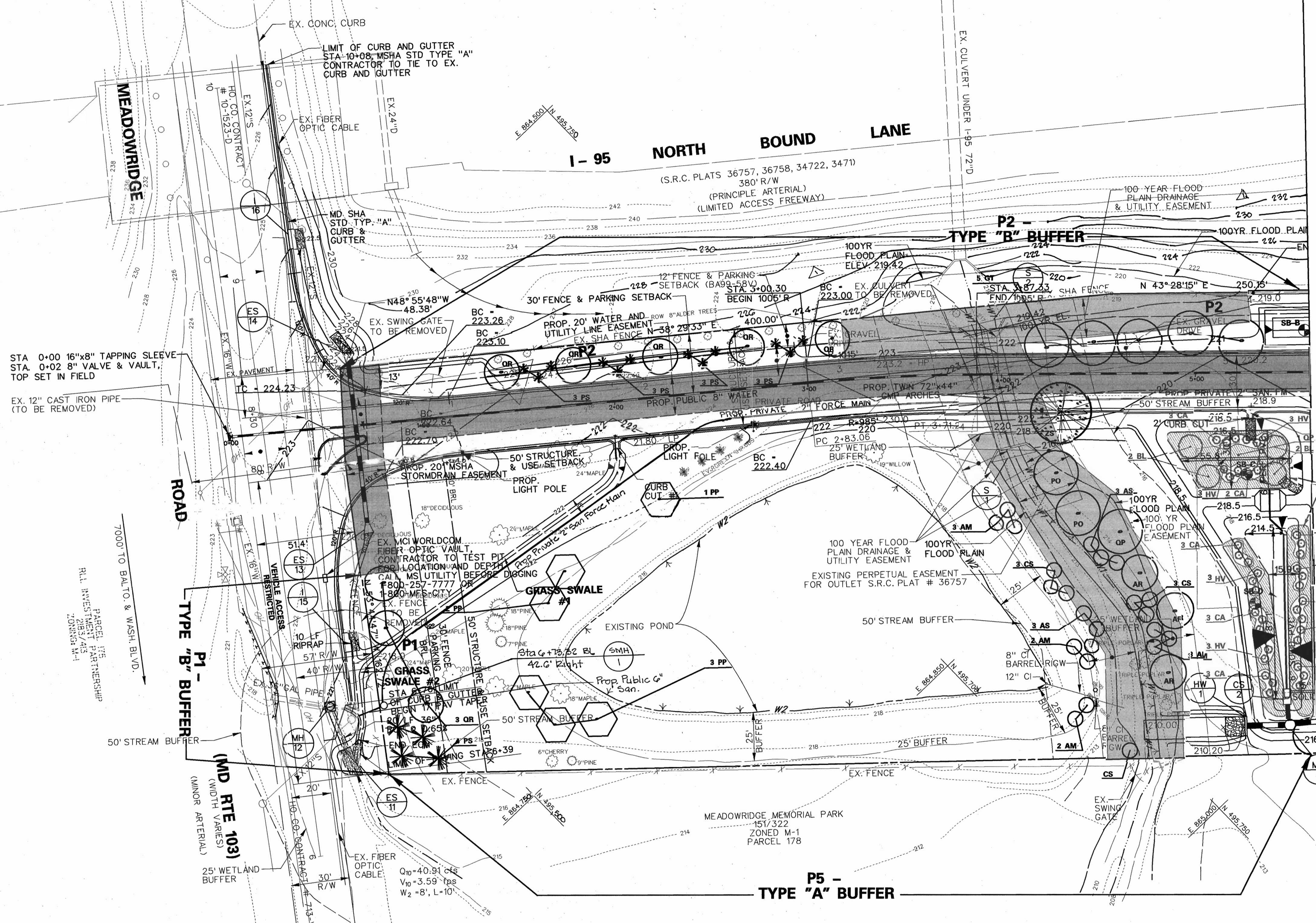
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30ft.
DATE: APRIL 9, 2003
SHEET 15 OF 22

PROFESSIONAL ENGINEER
STATE OF MARYLAND
No. 25066
KANE COMPANIES, INC.

SDP-02-55



VICINITY MAP
SCALE: 1" = 2000'



- RED OAK
- LOCUST
- ZELKOVA
- WEeping CHERRY
- DOGWOOD
- EUONYMUS
- EX TREE
- EX PINE TREE

MATCHLINE SEE SHEET 2

BIORETENTION AREA #1
AND CPV AREA PLANTINGS
FOR DETAIL SEE SHEET 13.

PLANT SCHEDULE

SYMBOL	KEY	BOTANICAL /COMMON NAME	QUANTITY	SIZE/CONDITION	SPACING
GT	Gleditsia Tricacanthos - Skyline Honeylocust	9	2 1/2"-3" Cal.	B-B	
PP	Prunus Subhirtella Pendula - Weeping Higan Cherry	6	2 1/2"-3" Cal.	B-B	
ZS	Zelkova Serata - Japanese Zelkova	7	2 1/2"-3" Cal.	B-B	
PS	Pinus Strobus - Eastern White Pine	34	6' Ht.	2" Cal.	
QR	Quercus Rubra - Red Oak	34	2.5" Cal.	B-B	
AR	Acer Rubrum - Red Maple	3	2.5" Cal.	B-B	
PO	Platanus Occidentalis - American Sycamore	2	2.5" Cal.	B-B	
QP	Quercus Palustris - Pin Oak	1	2.5" Cal.	B-B	
CS	Cornus Sericea - Redosier Dogwood	7	18"-24" Ht.	Cont.	
AM	Aronia Melanocarpa - Black Chokeberry	10	18"-24" Ht.	Cont.	
AS	Alnus Serrulata - Smooth Alder	6	18"-24" Ht.	Cont.	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 5/18/03

DATE: 5/16/03

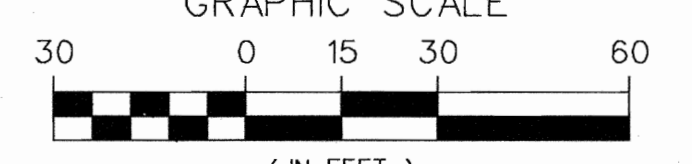
DEVELOPER'S / BUILDERS CERTIFICATE

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 executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Name: _____ Date: _____

KANE COMPANIES, INC. HEADQUARTERS

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GRAPHIC SCALE
(IN FEET)
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DATE: APRIL 9, 2003
SHEET 20 OF 22

Drafting	JAB	DATE	REVISIONS
Check	CGW	10-30-03	Revised San. Sewer line
Design	CGW	11/29/04	Reverse offsite grading
Check	THM		

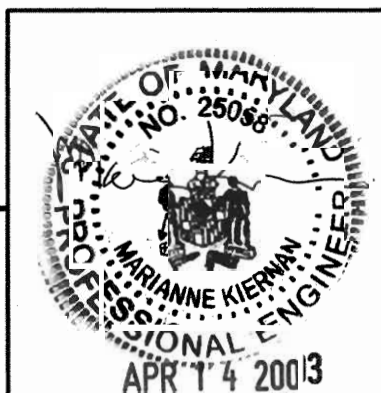
KCI TECHNOLOGIES
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LANDSCAPE PLAN - SHEET 1

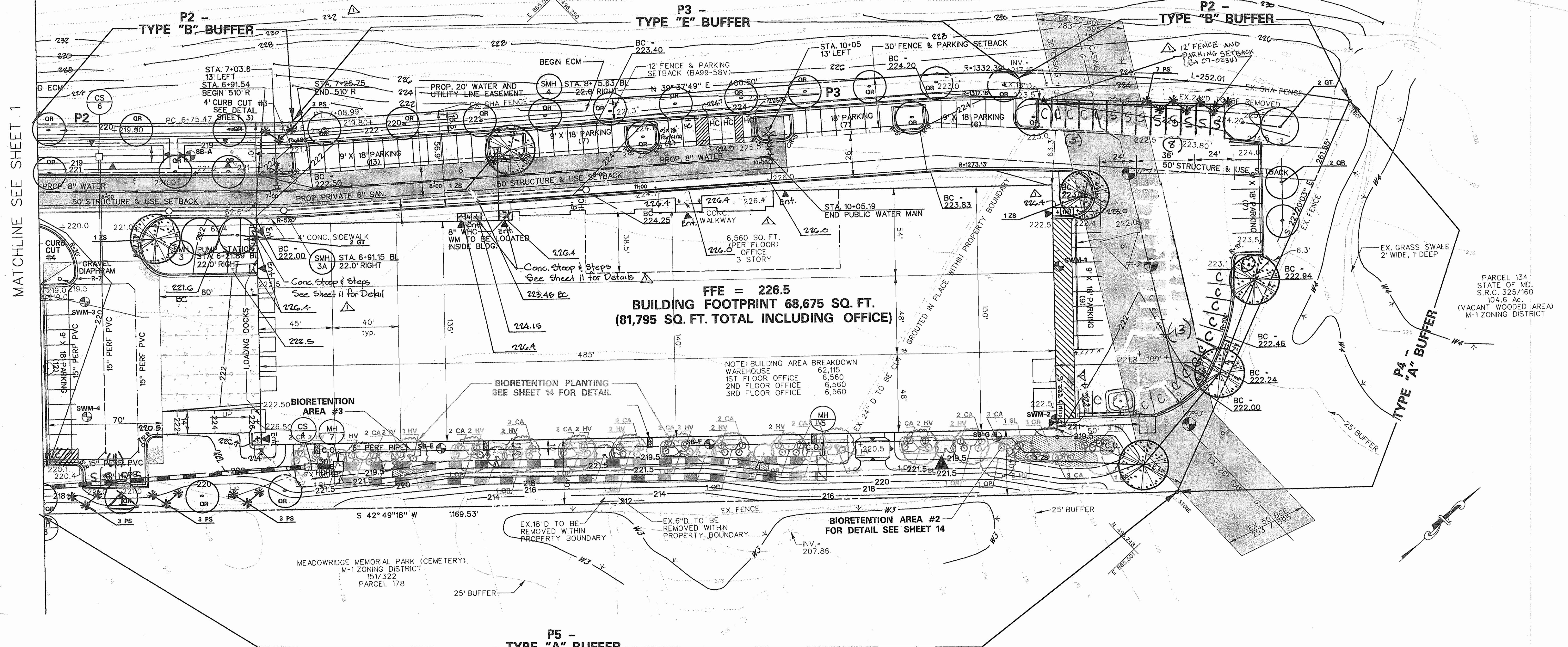


SDP-02-53

1602008.DRAWINGS.land1.dgn

I-95 NORTH BOUND LANE
 (S.R.C. PLATS 36757, 36758, 34722, 3471)
 380' R/W
 (LIMITED ACCESS FREEWAY)

EXIT RAMP TO RTE.100 EAST



FFE = 226.5
BUILDING FOOTPRINT 68,675 SQ. FT.
(81,795 SQ. FT. TOTAL INCLUDING OFFICE)

NOTE: BUILDING AREA BREAKDOWN
 WAREHOUSE 62,115
 1ST FLOOR OFFICE 6,560
 2ND FLOOR OFFICE 6,560
 3RD FLOOR OFFICE 6,560

PLAN
 SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 Chief, Division of Land Development
 Director

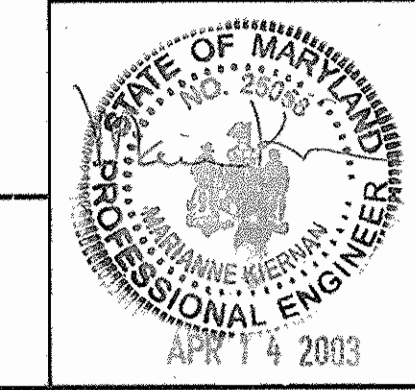
Drafting	DATE	REVISIONS
JAB	11/23/04	Revise offsite grading
CGW	11/23/04	Revise stoop & steps per revised architectural
THM	10-9-07	Updated Parking 3 Added Island

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LANDSCAPE PLAN - SHEET 2

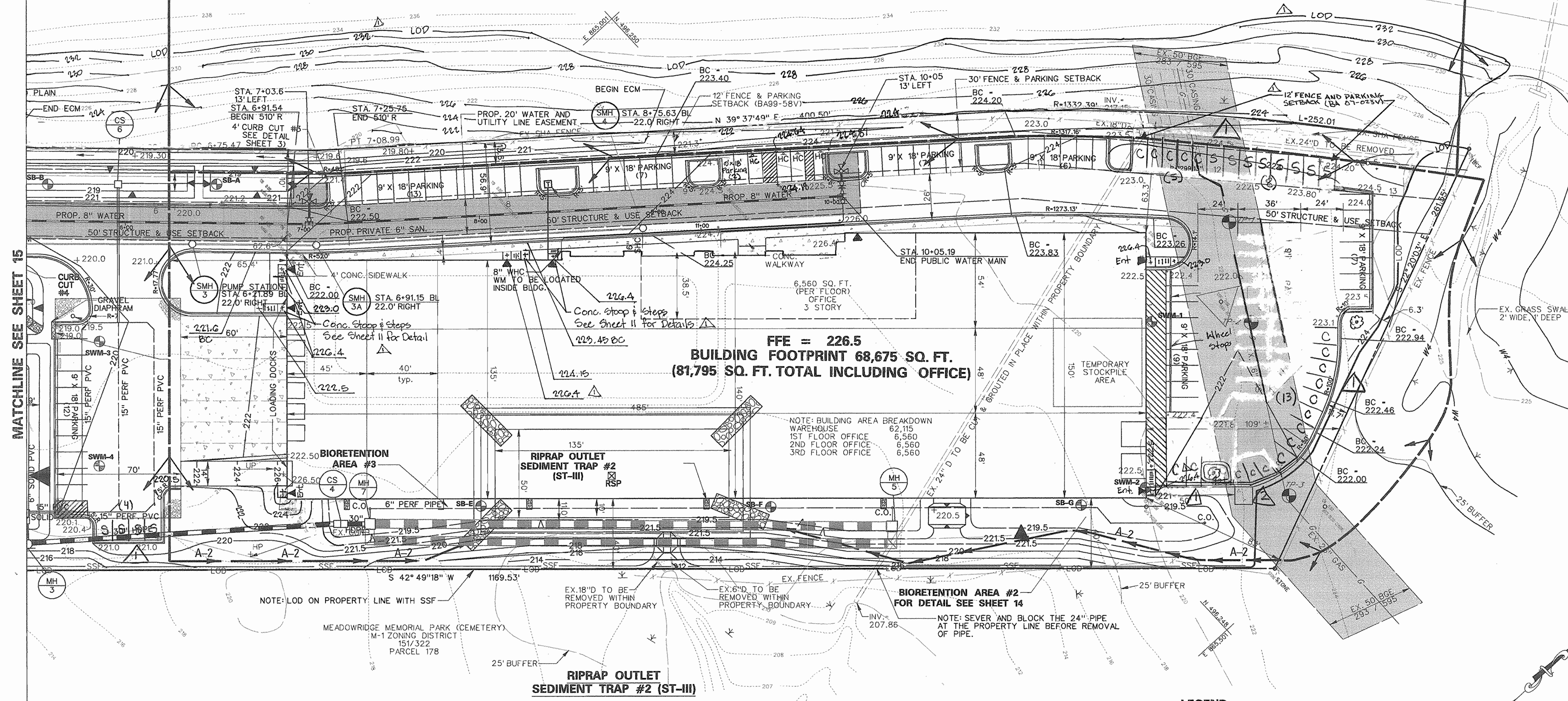


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 L. 6753 F. 684, ZONE M-1
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 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 30 0 15 30 60
 (IN FEET)
 1 inch = 30ft.
 DATE: APRIL 9, 2003
 SHEET 21 OF 22

SDP-02-53

I-95 NORTH BOUND LANE
 (S.R.C. PLATS 36757, 36758, 34722, 3471)
 380' R/W
 (LIMITED ACCESS FREEWAY)

EXIT RAMP TO RTE.100 EAST



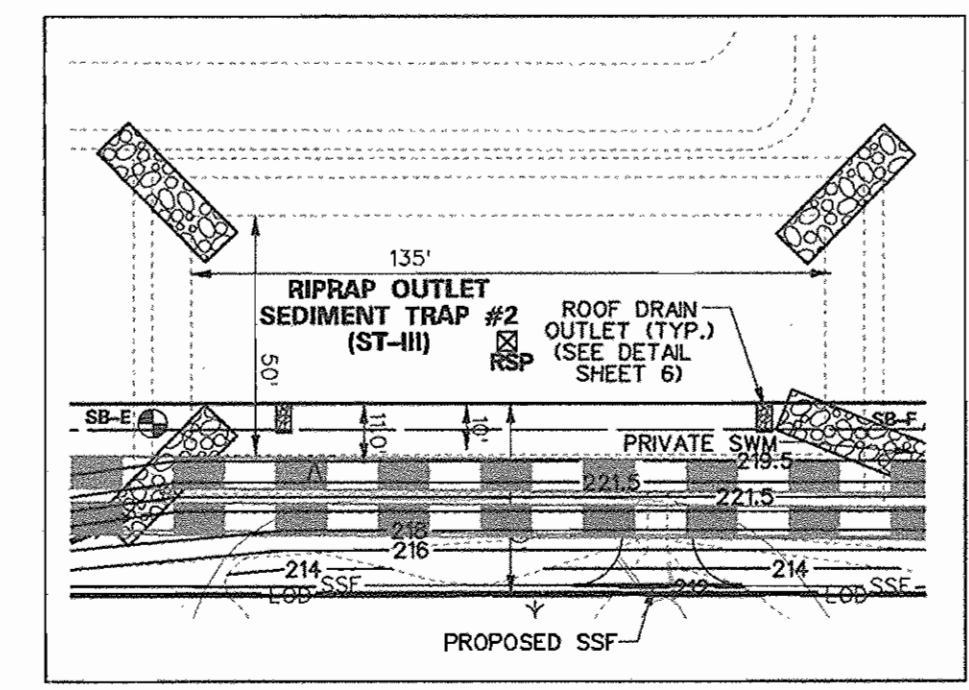
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(81,795 SQ. FT. TOTAL INCLUDING OFFICE)

NOTE: BUILDING AREA BREAKDOWN
 WAREHOUSE 62,115
 1ST FLOOR OFFICE 6,560
 2ND FLOOR OFFICE 6,560
 3RD FLOOR OFFICE 6,560

RIPRAP OUTLET SEDIMENT TRAP #2 (ST-III)

EXISTING D.A. = 6.10 AC.
 PROPOSED D.A. = 3.53 AC
 STORAGE REQUIRED = 32,940 CF
 STORAGE PROVIDED = 33,176 CF
 STORAGE DEPTH = 4'
 BOTTOM ELEVATION = 208.0'
 OUTFALL LENGTH = 10'
 CLEANOUT ELEV. = 209.0'
 WEIR LENGTH = 14'
 WEIR CREST ELEVATION = 212.0'
 WEIR DEPTH = 15'
 EMBANKMENT ELEVATION = 216.0'

PLAN
 SCALE: 1" = 30'



SEDIMENT TRAP #2 INSET
 SCALE: 1" = 40'

LEGEND

EXISTING TREE LINE	
PROPOSED TREE LINE	
EXISTING GRADE	
PROPOSED GRADE	
EXISTING DRAINAGE DIVIDE	
PROPOSED DRAINAGE DIVIDE	
PROPOSED EARTH DIKE	
LIMIT OF DISTURBANCE	
SILT FENCE	
SUPER SILT FENCE	
RIPRAP INFLOW PROTECTION	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5/8/03
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5/8/03
 DIRECTOR

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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/ASO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 DEVELOPER: [Signature] DATE: [Date]

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 COUNTY SOIL CONSERVATION DISTRICT.
 ENGINEER: [Signature] DATE: 4/14/03

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 USDA - NATURAL RESOURCES CONSERVATION SERVICE
 DATE: 4/22/03
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 DATE: 4/22/03

Drafting	JAB	DATE	REVISIONS
Check	CGW	11/21/04	Revise off-site grading & LOD
Design	CGW	11/21/04	Revise stoop & steps per revised architect's drawings
Check	THM	11-9-07	Updated parking & Added Island

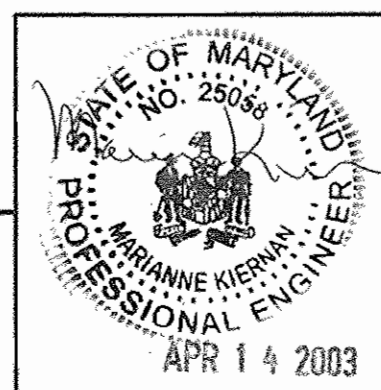
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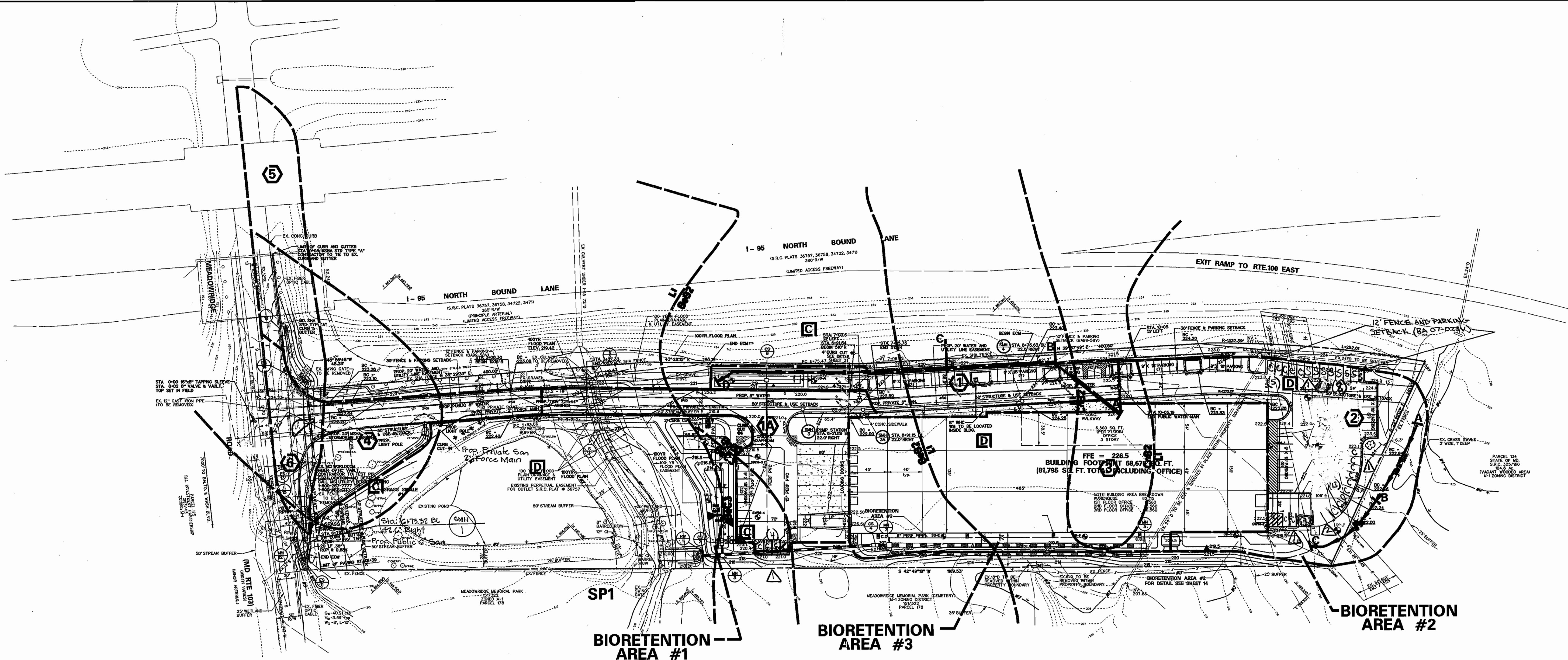
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CREANEY & SMITH GROUP LLC
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GRADING AND SEDIMENT CONTROL PLAN - SHEET 2

KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 6753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 (IN FEET)
 1 inch = 30 ft.
 DATE: APRIL 9, 2003
 SHEET 16 OF 22





SOIL	HYDROLOGIC SOIL GROUP	DESCRIPTION
BeB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
BeC3	C	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
L1	D	LEONARDTOWN SILT LOAM
CnB2	C	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED

DRAINAGE AREA CHART				
No.	AREA (Ac)	% IMPERVIOUS	RCN	Tc
(1)	0.50	100%	98	.10
(A)	0.65	100%	98	.10
(2)	0.80	44%	88	.25
(3)	1.56	100%	98	.10
(4)	0.35	51%	86	.10
(5)	0.467	79%	90	.10
(6)	0.147	100%	98	.10

DRAINAGE AREA SUMMARY TABLE						
No.	AREA (Ac)	WQv (CF)	Rev (CF)	Cpv (CF)	Op (cfs)	Of (cfs)
(1)	0.50	1724	261	6470	NA	NA
(A)	0.65	2242	169	NA	NA	SAND FILTER F5
(2)	0.80	1295	78	NA	NA	BIORETENTION F6
(3)	1.56	5360	384	8777	NA	BIORETENTION F6
(4)	0.35	647	---	---	NA	NA
(5)	0.467	1290	---	---	NA	NA
(6)	0.147	507	---	---	NA	NA

* GRASS SWALE CREDIT FOR WQv & Rev
 1" STORM VELOCITY FOR SWALE #1 IS 0.42 FPS
 1" STORM VELOCITY FOR SWALE #2 IS 0.82 FPS
 SEE COMPUTATIONS PAGE 74

LEGEND

- 90 EX. INDEX CONTOUR
- EX. 2' INTERMEDIATE CONTOUR
- EX. CURB AND GUTTER
- EX. GAS LINE
- EX. STORM DRAIN
- EX. FENCE
- EX. EDGE OF WATER
- EX. OVERHEAD UTILITY LINE
- EX. WATER VALVE
- EX. INLET
- EX. MANHOLE
- EX. TREE
- BeB2 BeC3 EX. SOILS DELINEATION
- C HYDROLOGIC SOILS GROUP
- EX. SOIL BORINGS
- TC PATH
- TC PATH FLOW TYPE
- A-B DRAINAGE AREA
- (2) DRAINAGE AREA
- DRAINAGE AREA BOUNDARY
- 100-YR FLOOD PLAN
- SP STUDY POINT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] DATE 5/18/02
 [Signature] DATE 5/18/02
 [Signature] DATE 5/18/02

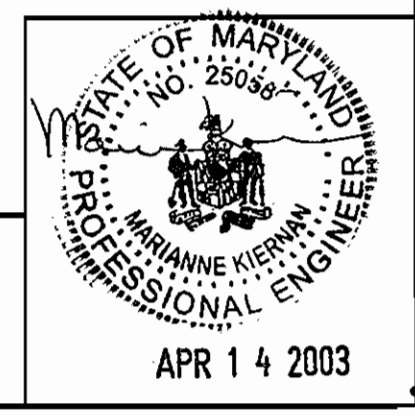
Drafting	JAB	DATE	REVISIONS
Check	CGW	10-30-01	Revised San. Sewer line.
Design	CGW	10-9-01	Updated Parking
Check	THM	10-9-01	Added Island

KCI TECHNOLOGIES
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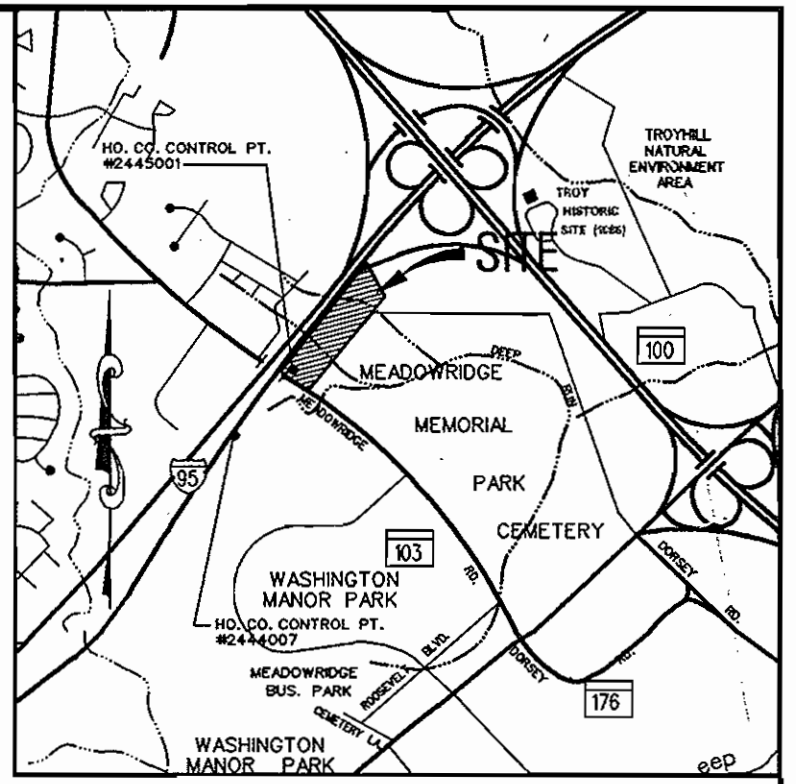
OWNER:
C & S MEADOWRIDGE, LLC
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 BALTIMORE, MD 21231
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CONTRACT PURCHASER & DEVELOPER:
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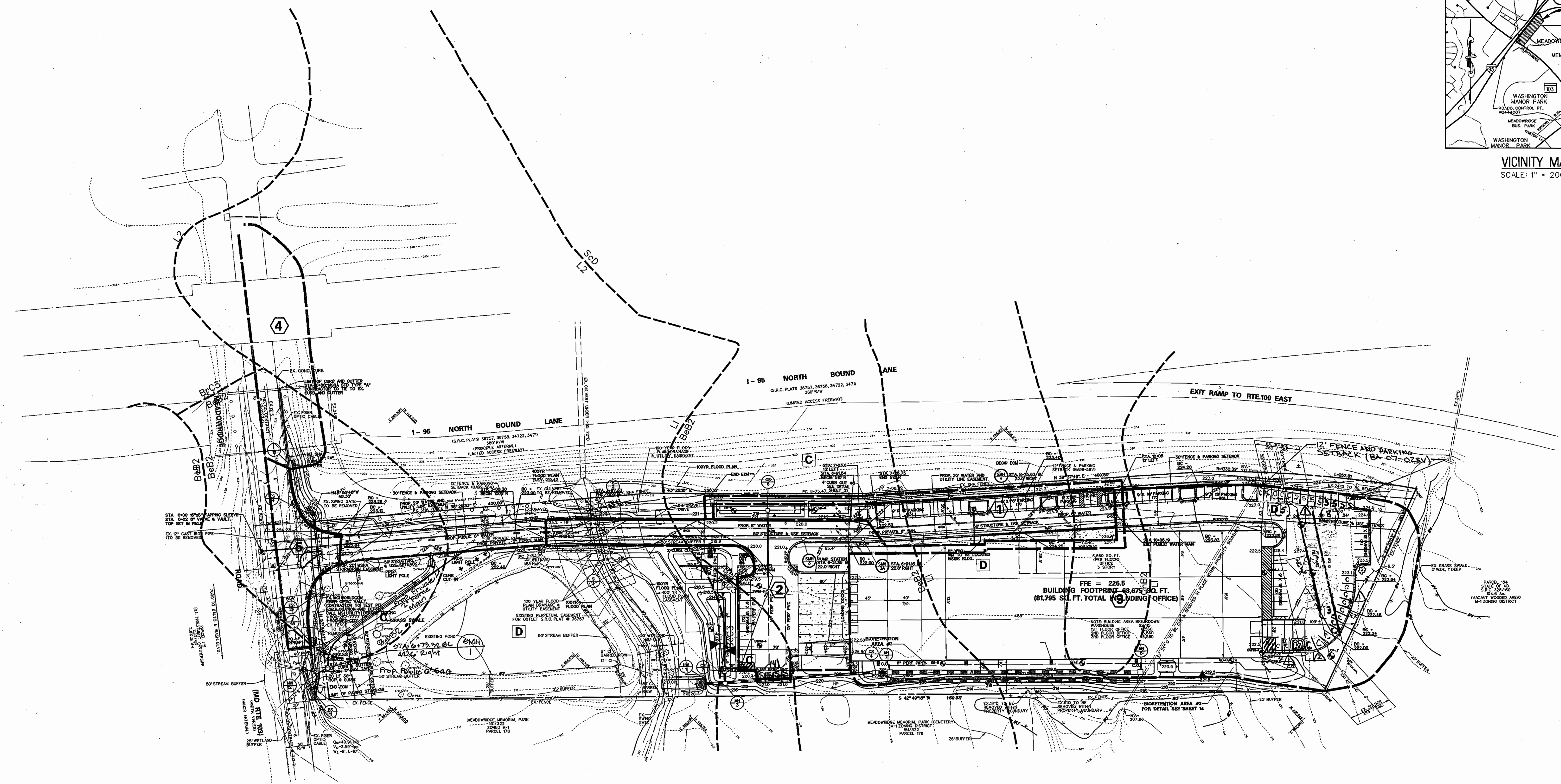
STORMWATER MANAGEMENT DRAINAGE PLAN



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 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L. 8753 F. 684, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
 GRAPHIC SCALE
 60 0 30 60 120
 (IN FEET)
 1 inch = 60ft.
 DATE: APRIL 9, 2003
 SHEET 10 OF 22
 APR 14 2003
 SDP-02-53



VICINITY MAP
SCALE: 1" = 2000'



No.	DRAINAGE AREA (Ac)	% IMPERVIOUS	C FACTOR
(1)	0.50	100%	0.90
(2)	1.15	100%	0.90
(3)	2.36	81%	0.78
(4)	.487	79%	SEE SWM DA MAP
(5)	.147	100%	

PLAN
SCALE: 1" = 60'

LEGEND

- 90 ——— EX. INDEX CONTOUR
- EX. 2' INTERMEDIATE CONTOUR
- EX. CURB AND GUTTER
- G----- EX. GAS LINE
- EX. STORM DRAIN
- X----- EX. FENCE
- W----- EX. EDGE OF WATER
- OH----- EX. OVERHEAD UTILITY LINE
- o----- EX. WATER VALVE
- o----- EX. INLET
- o----- EX. MANHOLE
- EX. TREE
- BeB2
BeC3 ----- EX. SOILS DELINEATION
- [C]----- HYDROLOGIC SOILS GROUP
- EX. SOIL BORINGS
- TC----- TC PATH
- TC----- TC PATH FLOW TYPE
- DRAINAGE AREA BOUNDARY
- 100-YR FLOOD PLAN
- W----- WETLANDS

SOILS CHART

SOIL	HYDROLOGIC SOIL GROUP	DESCRIPTION
BeB2	[C]	BELTSVILLE SILT LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
BeC3	[C]	BELTSVILLE SILT LOAM, 5 TO 10 PERCENT SLOPES, SEVERELY ERODED
L1	[D]	LEONARDTOWN SILT LOAM
ChB2	[C]	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT, ENGINEERING DIVISION
DATE: 5/8/03

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 5/14/03

DIRECTOR
DATE: 5/14/03

Drafting	JAB	DATE	REVISIONS
Check	CGW	10-30-02	Revised san sewer line
Design	CGW	10-5-02	Updated Parking
Check	THM	10-9-02	Added Island

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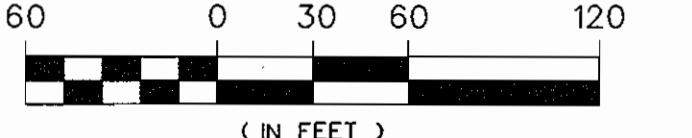
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PROPOSED STORMDRAIN DRAINAGE AREA MAP



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GRAPHIC SCALE



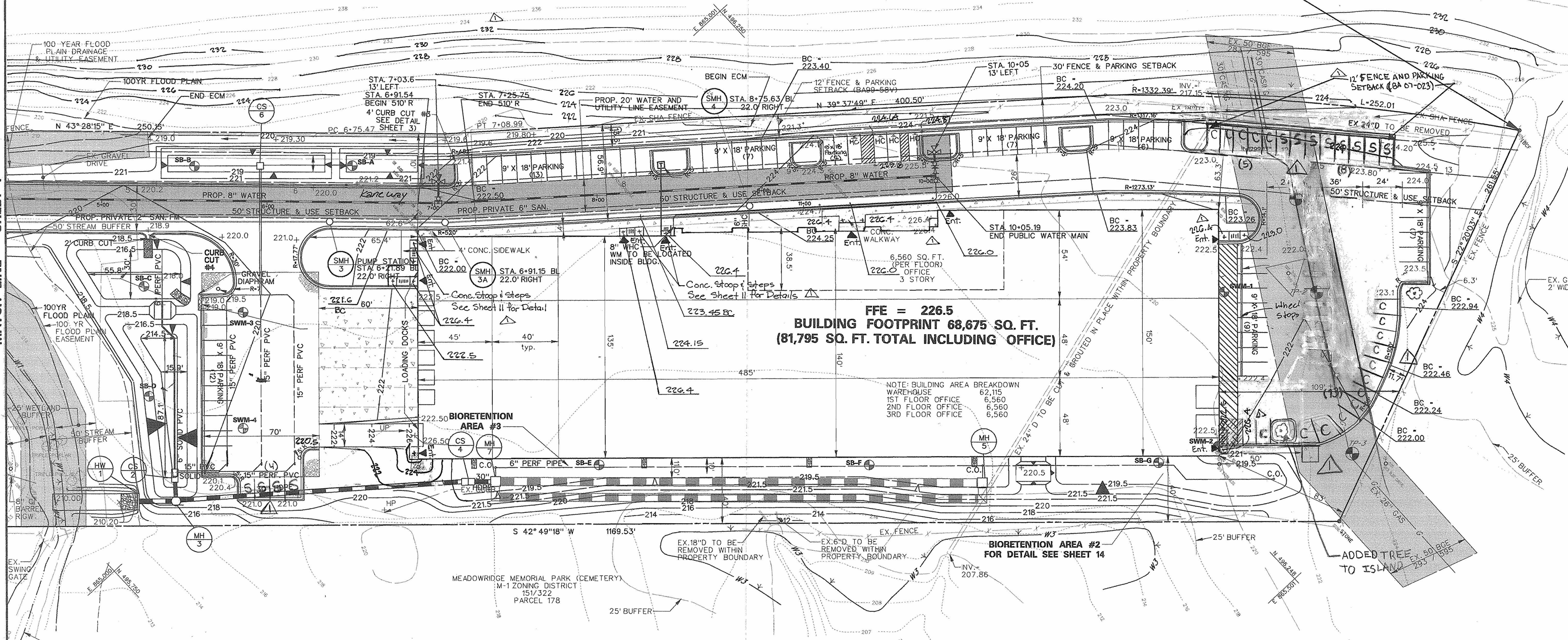
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 380' R/W
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EXIT RAMP TO RTE.100 EAST

VEHICULAR INGRESS/EGRESS RESTRICTED

MATCH LINE - SHEET 1



FFE = 226.5
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(81,795 SQ. FT. TOTAL INCLUDING OFFICE)

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 3RD FLOOR OFFICE 6,560

STREAM #2

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

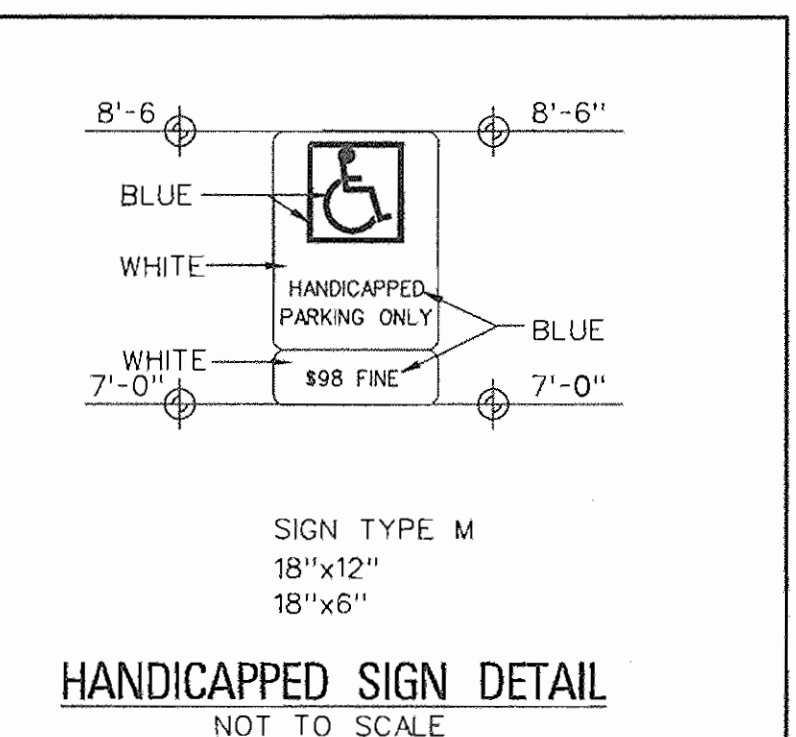
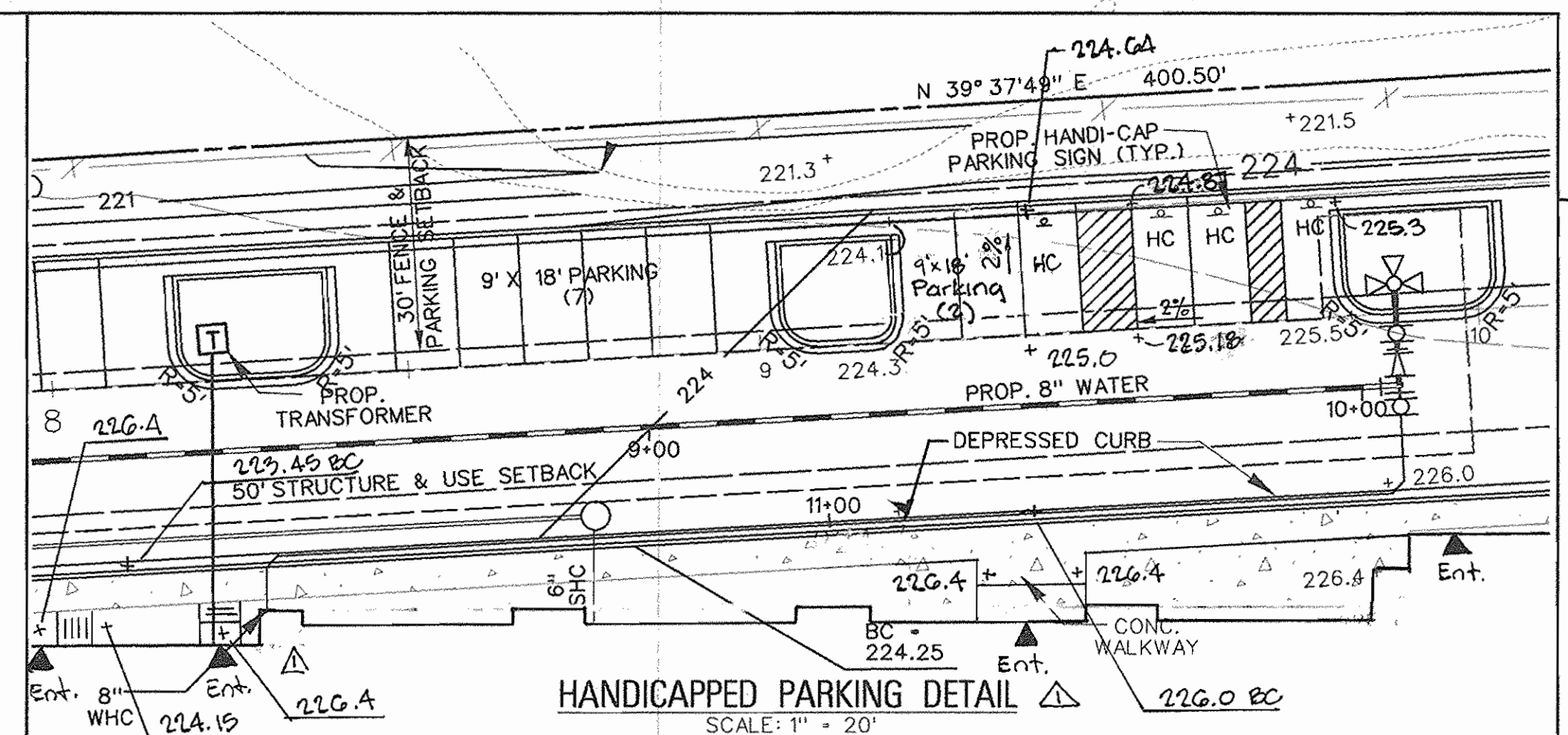
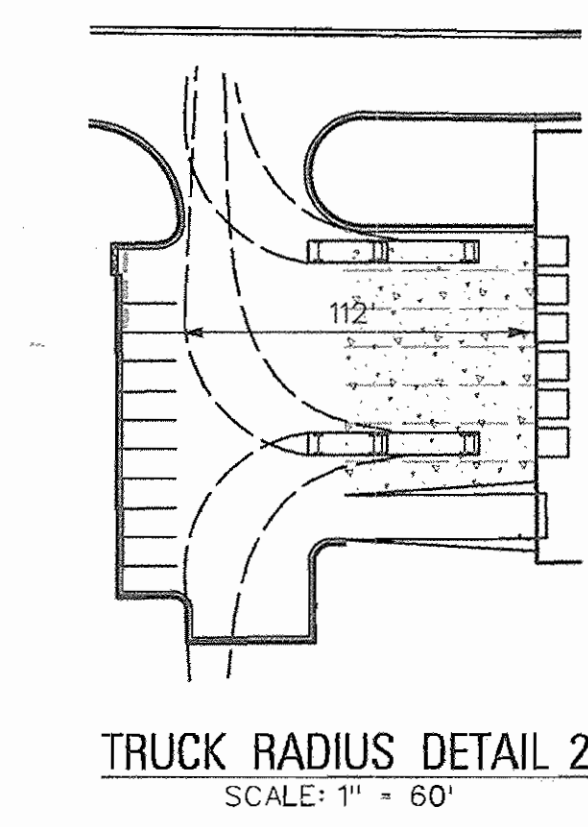
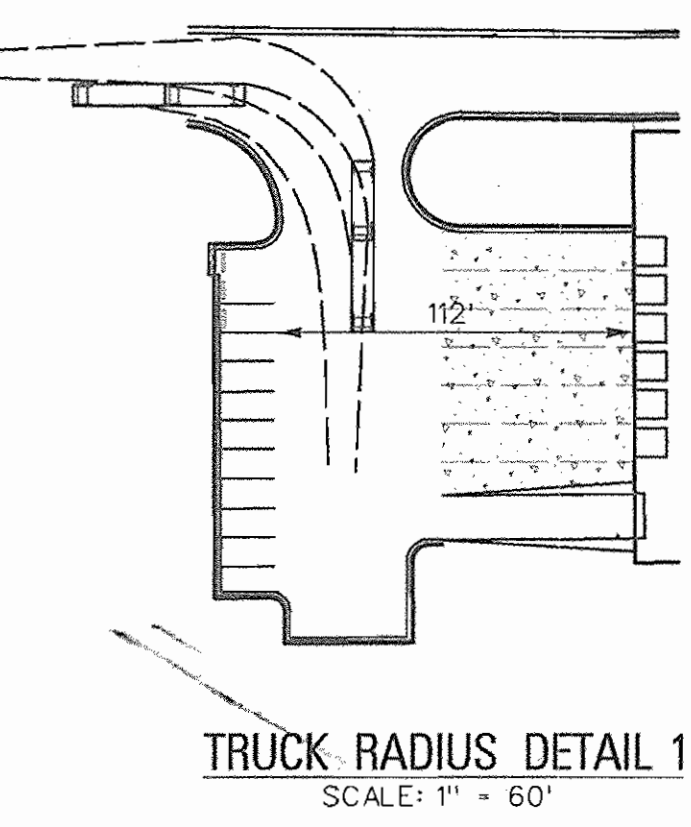
COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

DIRECTOR
 DATE



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 SHEET 2 OF 22

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Design	CGW	11/23/02	Revise stoop & steps per revised architectural
Check	THM	04-07-03	Updated Parking Added Island

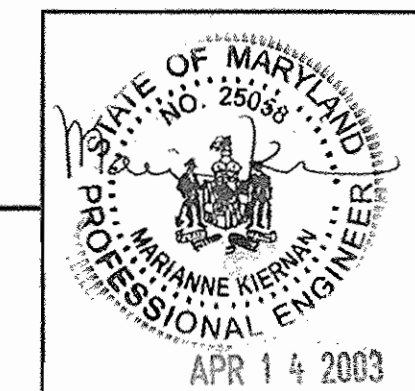
KCI TECHNOLOGIES
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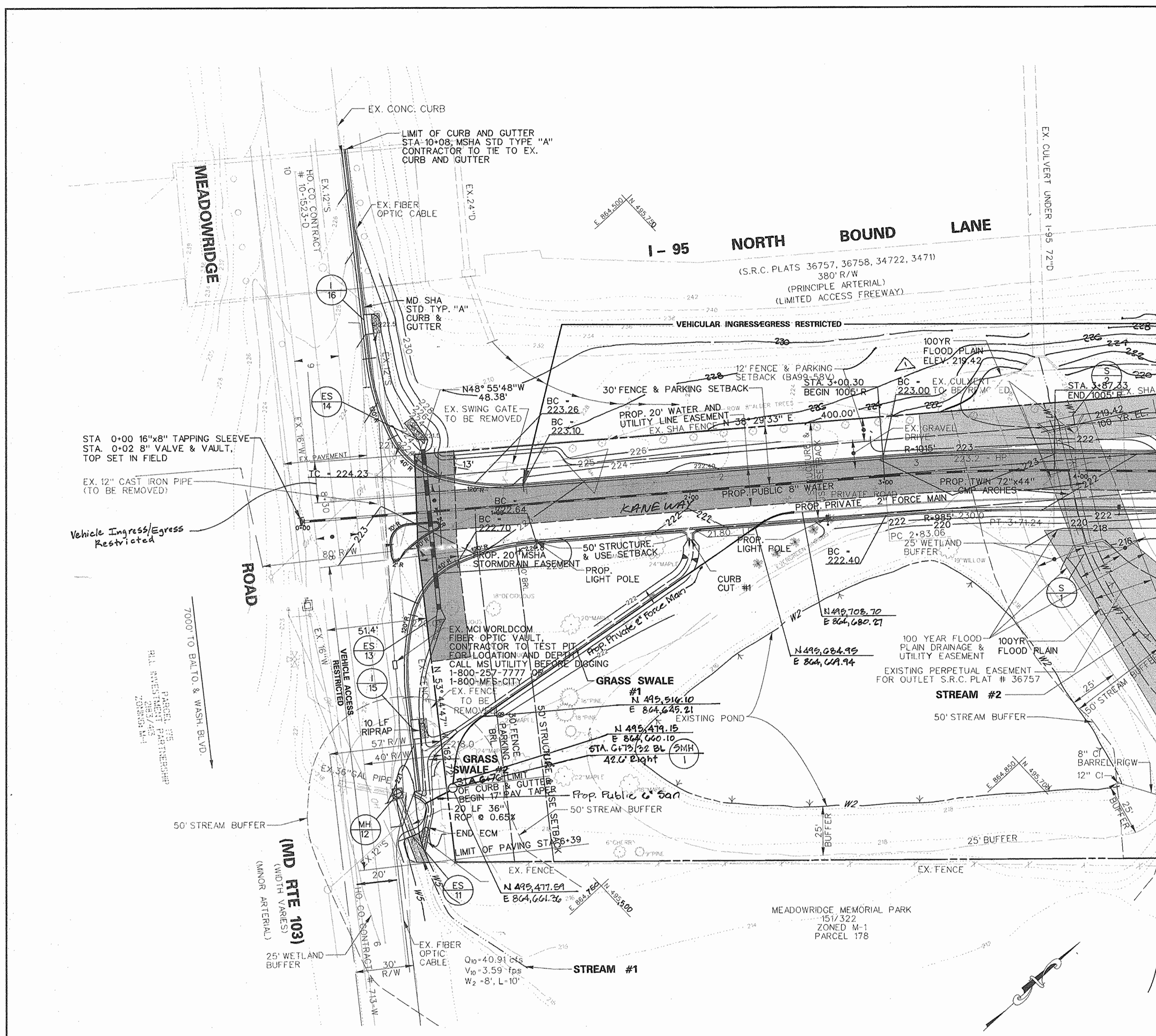
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SITE DEVELOPMENT PLAN - SHEET 2





MATCH LINE - SHEET 2

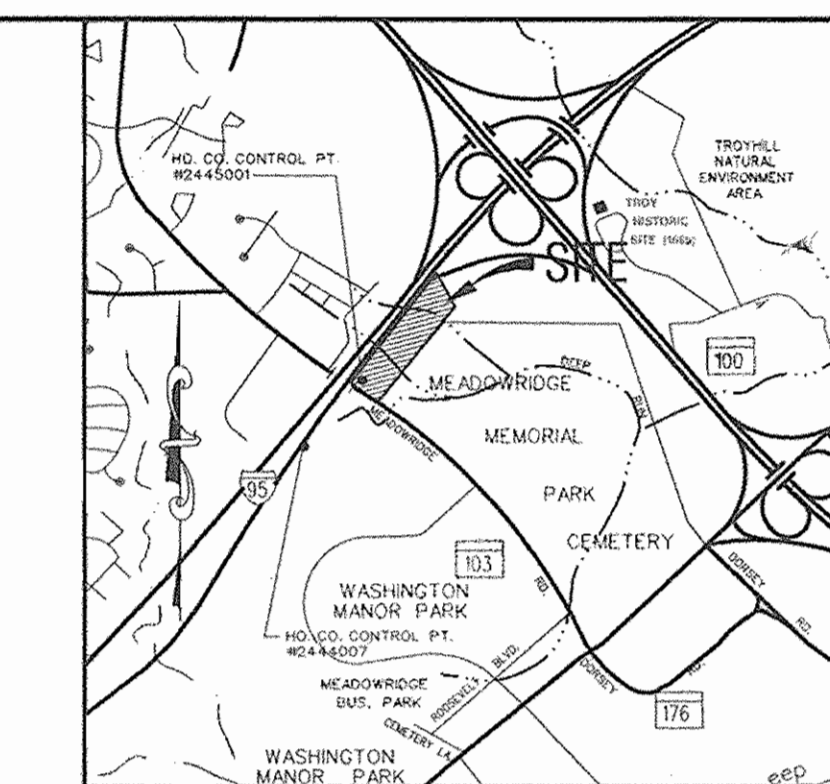
GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV, I.E. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. 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.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

MSS UTILITY	1-800-257-7777
VERIZON TELEPHONE COMPANY	782-9976
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS & ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION/SURVEY DIVISION	792-7272
(24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	313-1880
- TOPO TAKEN FROM FIELD SURVEY DATED APRIL 1989 BY KCI.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORM WATER MANAGEMENT PRACTICES AND THE DISCHARGE OF STORM WATER ONTO OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- ALL COORDINATES ARE BASED ON HOWARD COUNTY GEODETIC CONTROL TRAVERSE WHICH IS BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. REFERENCE HOWARD COUNTY CONTROL POINTS 2445001 (ELEV. 245.095) & 2444007 (ELEV. 252.125).
- INSTALLATION OF TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- ALL ON-SITE ROADS PARKING AND DRAINAGE STRUCTURES INCLUDING STORM DRAINS, WATER QUALITY BASINS, TWIN CULVERTS) SHALL BE PRIVATELY OWNED & MAINTAINED.
- GRAVITY SEWER SERVICE TO THE PROPOSED BUILDING CANNOT BE PHYSICALLY PROVIDED. A PRIVATELY OWNED AND MAINTAINED PUMP STATION SHALL BE PROVIDED AS PER THESE PLANS AND SPECIFICATIONS. THE PUMPS AND ASSOCIATED APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY PLUMBING CODE.
- REFER TO "MARYLAND'S GUIDELINES FOR WATERWAY CONSTRUCTION" BY THE WATER RESOURCES ADMINISTRATION (WRA) DATED SEPTEMBER 1999 REVISED NOVEMBER 2000 FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE, SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3' COVER.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- INSTREAM CONSTRUCTION WILL NOT BE PERMITTED FROM MARCH 1ST THROUGH MAY 15TH 2002 INCLUSIVE.
- THE WATER PRESSURE ZONE FOR THIS CONTRACT IS 550.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH A.W.W.A. SPECIFICATIONS C-153. DUCTILE IRON COMPACT FITTINGS 3"-12" FOR WATER AND OTHER LIQUIDS.
- GRAVITY SEWER LINE WILL BE 6" PVC.
- 2" SANITARY FORCE MAIN WILL BE PVC.
- NO GRADING OR REMOVAL OF VEGETATIVE COVER IS PERMITTED WITHIN 25 FT OF A WETLAND UNLESS APPROVED BY THIS PLAN. THIS SITE IS SUBJECT TO MDE/ACOE PERMIT NO. 2002-64709.
- THIS PLAN IS SUBJECT TO THE FIFTH EDITION OF THE SUBDIVISION REGULATIONS AND THE NEW ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 50-2001.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$13,200.00 FOR 31 SHADE TREES OR SUBSTITUTIONS.
- THIS SITE IS SUBJECT TO SHA ACCESS PERMIT NO. B-HO-8208-02, ISSUED DECEMBER 31, 2002.
- STORMWATER MANAGEMENT WILL BE PROVIDED THROUGH 2 UNDERGROUND DETENTION AREAS, 3 BIORETENTION AREAS (1-6), 1 SAND FILTER (1-5), AND 2 GRASS SWALES. THESE FACILITIES ARE PRIVATE SWM FACILITIES AND WILL BE MAINTAINED BY THE OWNER.
- THE APPROVED APFO STUDY WAS PREPARED BY KCI TECHNOLOGIES, INC. AND APPROVED, SEPT. 5, 2002. THE MITIGATION REQUIREMENTS ARE AS FOLLOWS: NONE.
- WATER LINE WILL BE PUBLIC AND THE SANITARY SEWER WILL BE PRIVATE. THE EXISTING 16" WATER IS CONTRACT NO. 713-W AND THE EXISTING 8" SANITARY SEWER IS CONTRACT NO. 14-15-12-10. THE PROPOSED METER WILL BE LOCATED INSIDE AN EASEMENT ON-SITE AND WILL BE PUBLIC.
- BA-99-58V APPROVED MAY 11, 2000. VARIANCE TO PERMIT A PARKING SETBACK OF 12' FROM AN EXTERNAL PUBLIC STREET RIGHT-OF-WAY IN LIEU OF THE REQUIRED 30' MINIMUM SETBACK. REAPPLIED BA-02-50C APPROVED DECEMBER 18, 2002.
- "BIORETENTION AREAS DO NOT REQUIRE LANDSCAPE BUFFERING BECAUSE PLANTINGS WILL BE PLACED IN THOSE FACILITIES (SEE SHEET #13 - 14 FOR PLANT LIST AND DETAILS)."
- DESIGN MANUAL WAIVER DATED MARCH 19, 2002 GRANTED FOR THE USE OF PRESSURE SEWER BY HOWARD COUNTY BUREAU OF ENGINEERING.
- THIS SITE IS IN THE DEEP RUN TRIBUTARY WHICH FLOWS INTO THE PATAPSCO RIVER WATERSHED #02-13-09 AND IS CLASSIFIED AS A USE I. THE STREAM CLOSURE DATES ARE MARCH 1 THROUGH JUNE 15.
- THIS PROJECT IS CONDITIONALLY EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH THE FILING OF A DECLARATION OF INTENT FOR LESS THAN 40,000 SQUARE FEET OF CLEARING.
- WP-02-107 WAIVER TO PERMIT STOCKPILE AND ROUGH GRADING ON SITE PRIOR TO APPROVAL OF THE SDP WAS APPROVED ON JUNE 05, 2002 AND EXPIRES 1 YEAR AFTER ISSUANCE.

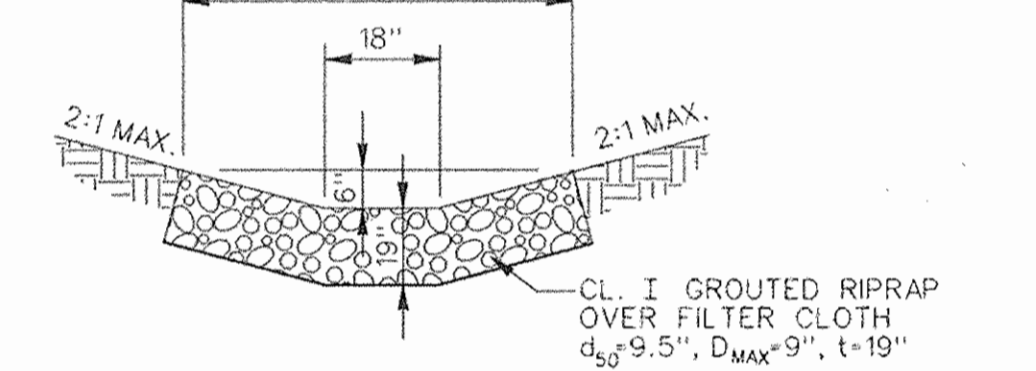
LEGEND

- PROP. TREE LINE
- EX. TREE LINE
- FIRE HYDRANT
- POLE
- POLE WITH LIGHT
- EVERGREEN TREE
- OAK
- EX. FENCE
- PROP. FENCE
- EX. CONTOURS
- PROP. CONTOURS
- BUILDING RESTRICTION LINE
- INDICATES SURFACE FLOW
- RAILROAD LINE
- SPOT ELEVATION
- STREET LIGHT
- WETLANDS
- PROP. 15' POLE WITH LIGHT
- SB-A
- STREAM



SITE ANALYSIS

1. GROSS AREA OF SITE:	6.8264 AC	6.6041 AC
2. NET AREA OF SITE:		
3. PRESENT ZONING - PER SEPT. 19, 1993:	ZONING M-1	OFFICE/WAREHOUSE
4. PROPOSED USE:		
5. FLOOR AREA:	OFFICE (3 STY.) 19,680 SF	WAREHOUSE 62,115 SF
6. NUMBER OF EMPLOYEES (MAX):	OFFICE 62 PERSONS	WAREHOUSE 17 PERSONS
7. PARKING SPACES REQUIRED:	OFFICE SPACE - 62 SPACES	WAREHOUSE SPACE - 17 SPACES
		TOTAL 79 PS - 4 HC 97
8. PARKING REQUIREMENT MODIFICATION WAS APPROVED BY THE DEPARTMENT OF PLANNING & ZONING TO BE BASED ON 1 SPACE PER EMPLOYEE.		
8. PARKING SPACES PROPOSED:	18 COMPACT 75 STANDARD	93 TOTAL
9. GREEN SPACE AREA:		30,953 AC
10. GREEN SPACE AS % OF NET AREA:		46.9%
11. BUILDING COVERAGE:		1.57 AC
12. BUILDING COVERAGE AS % OF GROSS AREA:		23.0%
13. HANDICAP PARKING SPACES PROVIDED:		4
14. TOTAL DISTURBED AREA:		5,550 AC. OR 241,769 s.f.
15. DPZ FILES:		SDP90-81, BA99-58V, WP-02-107, BA02-50C
16. NUMBER OF COMPACT SPACES PERMITTED:		24
17. NUMBER OF COMPACT SPACES PROPOSED:		18



SHEET INDEX

SHEET NO.	TITLE
1	SITE DEVELOPMENT PLAN - SHEET 1
2	SITE DEVELOPMENT PLAN - SHEET 2
3	SITE DETAILS
4	PROP. STORMDRAIN DRAINAGE AREA MAP
5	STORMDRAIN PROFILES
6	STORMDRAIN PROFILES
7	STORMDRAIN DETAILS
8	WATER AND SANITARY PROFILES
9	SWM RISER DETAILS (CS-2, CS-4, CS-6)
10	SWM DRAINAGE PLAN
11	UNDERGROUND STORAGE SWM PLAN
12	SWM DETAILS
13	BIORETENTION AREA 1 PLAN
14	BIORETENTION AREAS 2 & 3 PLAN
15	GRADING & SEDIMENT CONTROL PLAN 1
16	GRADING & SEDIMENT CONTROL PLAN 2
17	GRADING & SEDIMENT CONTROL DETAILS
18	GRADING & SEDIMENT CONTROL DETAILS
19	SEDIMENT CONTROL NOTES
20	LANDSCAPE PLAN - SHEET 1
21	LANDSCAPE PLAN - SHEET 2
22	LANDSCAPE DETAILS

APPROVED FOR PUBLIC (OR PRIVATE) WATER AND PUBLIC (OR PRIVATE) SEWAGE SYSTEMS

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

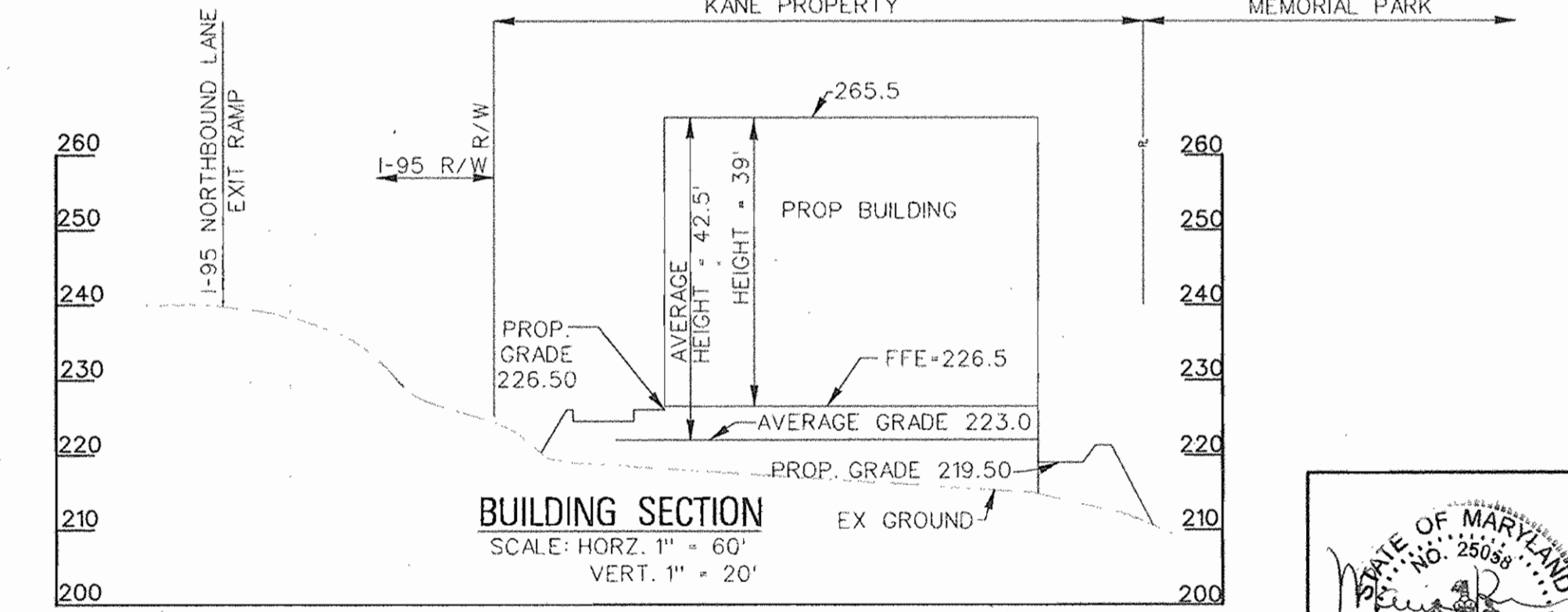
CHEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5/16/03

CHEF, DIVISION OF LAND DEVELOPMENT
DATE: 5/16/03

DIRECTOR
DATE: 5/16/03

PERMIT INFORMATION CHART

Subdivision Name: NA	Section/Area: NA	Lot/Parcel No.: 174
Plot # or L/F: NA	Grid #: NA	Zoning: M-1
Water Code: D04	Sewer Code: 2153000	Tax Map No.: 37
ADDRESS CHART		Elect Distr.: 1
LOT/PARCEL #		Census Tract: 6012
174		STREET ADDRESS
		6500 Kane Way

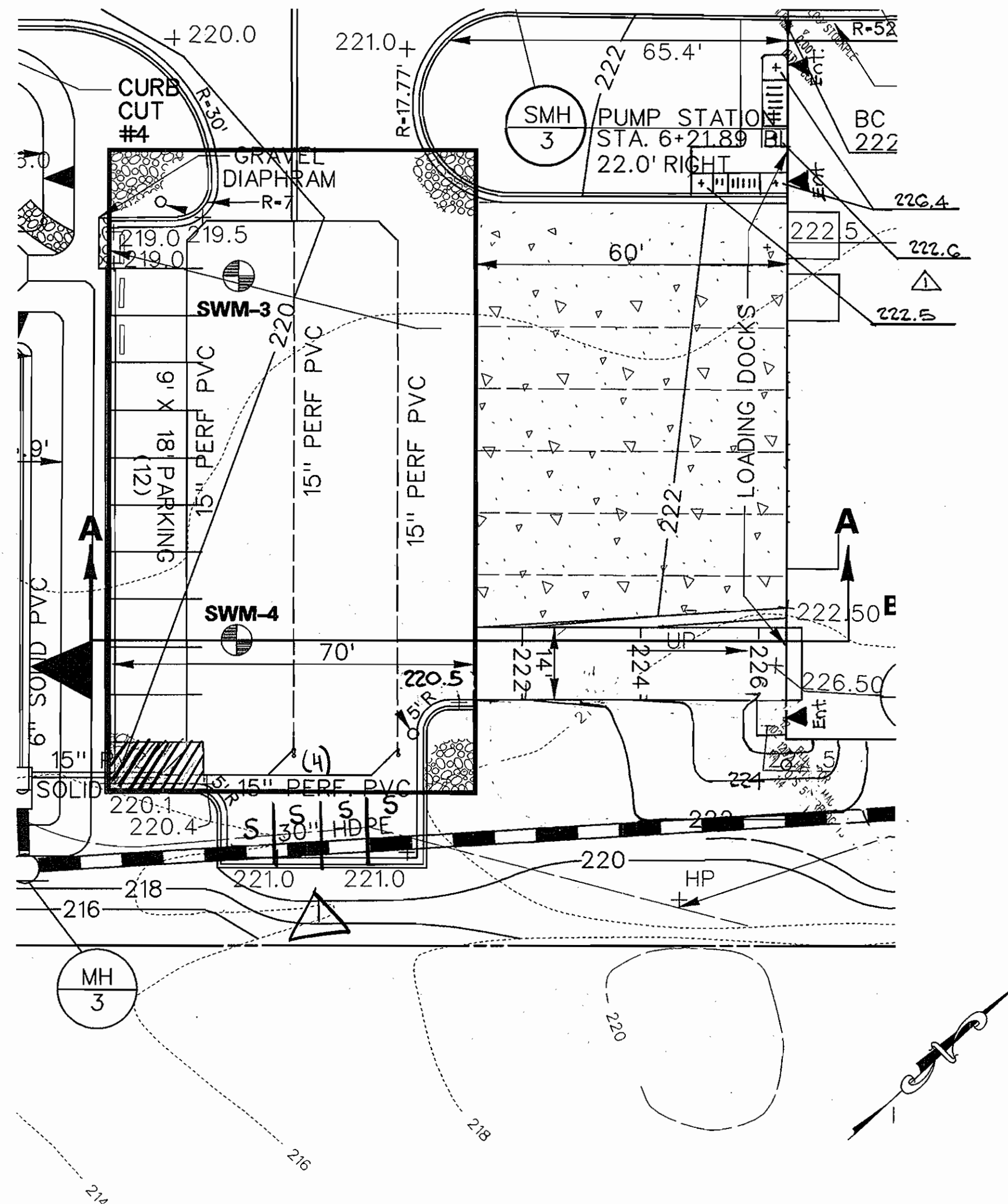


KANE COMPANIES, INC.
HEADQUARTERS

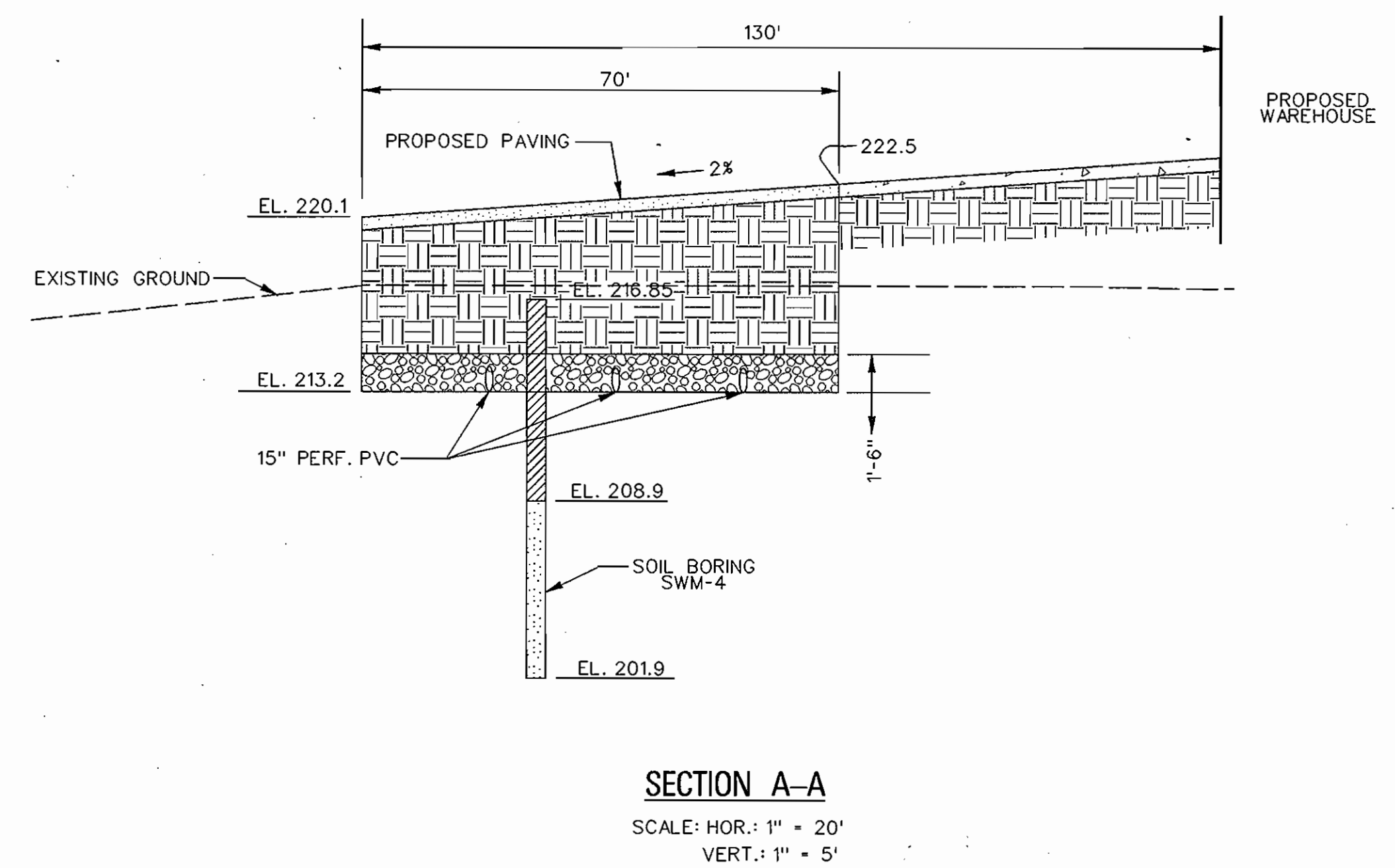
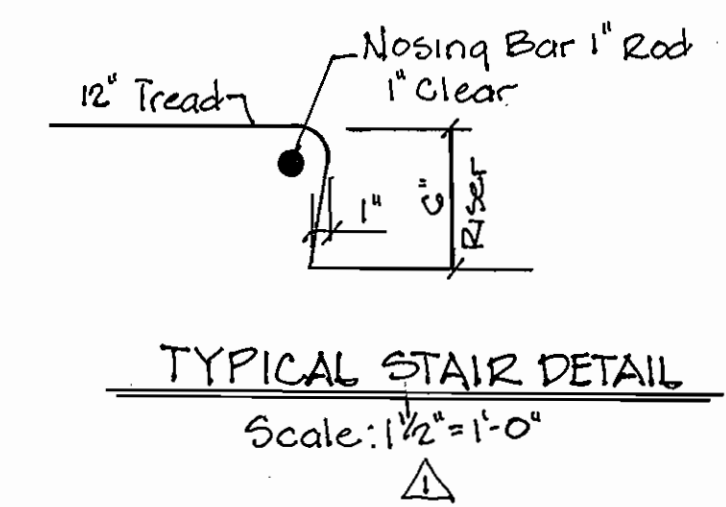
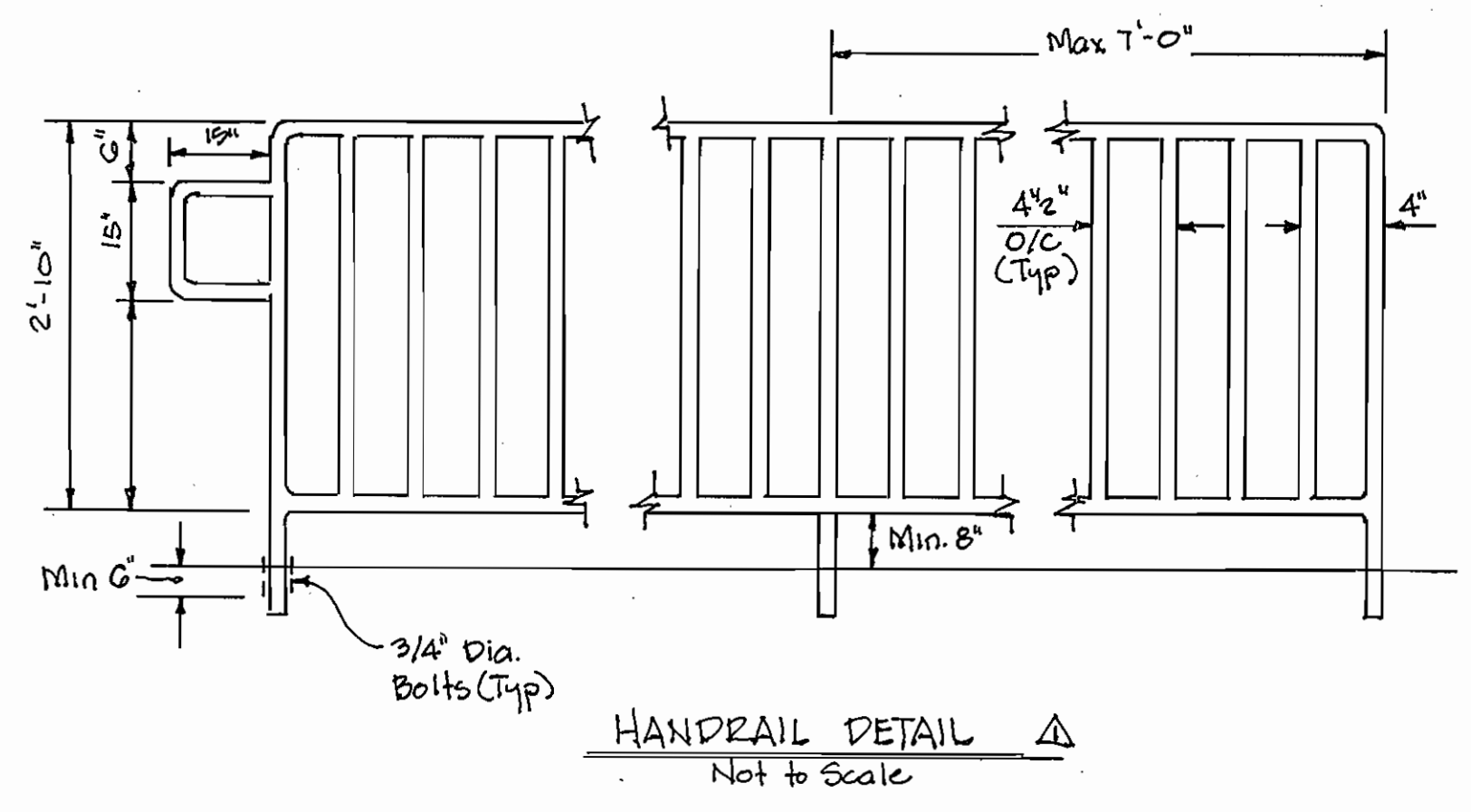
PROPOSED OFFICE WAREHOUSE
TAX MAP 37, PARCEL 174
L. 6753 F. 684, ZONE M-1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
WATER CODE: D04 SEWER CODE: 215 3000

GRAPHIC SCALE
1 inch = 30ft
DATE: APRIL 9, 2003
SHEET 1 OF 22

APR 14 2003
PROFESSIONAL ENGINEER



STORMWATER MANAGEMENT FACILITY
SCALE: 1" = 20'



S.W.M. DESIGN SUMMARY - FACILITY NO. 1					
DESIGN STORM	FACILITY INFLOW (cfs)	FACILITY OUTFLOW (cfs)	STAGE	STORAGE VOLUME AC. FT.	FACILITY VOLUME 2.5 x S - AC. FT.
1 Year	3.6	0.1	215.88	0.25	0.1

NOTE: ADDITIONAL STORAGE FOR CPV IS HELD ABOVE GROUND @ ELEV. 215.88.

STRUCTURE TYPE: UNDERGROUND STONE STORAGE
 SURFACE AREA: 0.20 AC.
 STRUCTURE CLASSIFICATION: N/A
 STORAGE-HEIGHT PRODUCT: N/A
 WATERSHED AREA TO FACILITY (ACRES): 1.15
 LEVEL OF MANAGEMENT REQUIRED AND PROVIDED BY FACILITY: 1 YEAR (QUANTITY)
 WATERSHED: PATAPSCO
 STREAM CLASS: 1
 FREEBOARD: N/A
 THIS FACILITY IS PRIVATE. MAINTENANCE IS TO BE PROVIDED BY PROPERTY OWNER.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS (F-1, F-4, AND F-5)

- The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.
- Filters that have a grass cover shall be mowed a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- Remove silt when it exceeds four (4) inches deep in the forebay.
- When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- A log book shall be maintained to determine the rate at which the facility drains.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

OPERATION AND MAINTENANCE SCHEDULE FOR NO-RETENTION AREAS (F-6)

- Annual maintenance of plant material, mulch layer and soil layer is required. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning.
- Schedule of plant inspection will be twice a year in spring and fall. This inspection will include removal of dead and diseased vegetation considered beyond treatment, treatment of all diseased trees and shrubs and replacement of all deficient stakes and wires.
- Mulch shall be inspected each spring. Remove previous mulch layer before applying new layer once every 2 to 3 years.
- Soil erosion to be addressed on an as needed basis, with a minimum of once per month and after heavy storm events.

OPERATION AND MAINTENANCE SCHEDULE FOR UNDERGROUND FACILITIES

- The underground stormwater management facility is privately owned and it shall be the responsibility of the owner to periodically inspect and clean the facility to maintain its operation and function.
- The underground stormwater management facility shall be inspected yearly at a minimum and after especially severe storm events.
- When sediment accumulation of more than 2" is observed or any debris that might obstruct the outfall is observed, the facility shall be cleaned.
- The facility shall be cleaned immediately after petroleum spills. The owner shall contact the appropriate regulatory agencies notifying them of the spill and cleanup operation.
- The sediment and debris shall be removed from the underground stormwater management facility by vacuum truck or other manual means. The owner shall follow proper cleaning and disposal of the removed material and liquid.
- The inlet and outlet pipes shall be checked for any obstructions at least once every six (6) months. If obstructions are found, the owner shall have them removed and properly disposed of.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

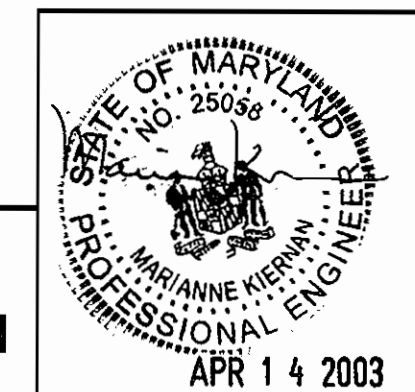
Drafting	JAB	DATE	REVISIONS
Check	CGW	11/20/04	Δ Revise slope & steps, add handrail & step detail
Design	CGW	10-4-07	Δ Updated Parking
Check	THM		

KCI ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS
 14502 Greenview Drive, Suite 424
 Laurel, Maryland 20708
 (301) 953-1821 (410) 792-8086
 fax: (410) 792-7419
 www.kci.com

OWNER:
C & S MEADOWRIDGE, LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

CONTRACT PURCHASER & DEVELOPER:
CREANEY & SMITH GROUP LLC
 925 FELL STREET
 BALTIMORE, MD 21231
 (410) 534-6350

UNDERGROUND STORAGE STORMWATER MANAGEMENT PLAN



KANE COMPANIES, INC. HEADQUARTERS
 PROPOSED OFFICE WAREHOUSE
 TAX MAP 37, PARCEL 174
 L 6753 F. 884, ZONE M-1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 WATER CODE: D04 SEWER CODE: 215 3000
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 0 10 20 40
 (IN FEET)
 1 inch = 20ft.
 DATE: APRIL 9, 2003
 SHEET 11 OF 22