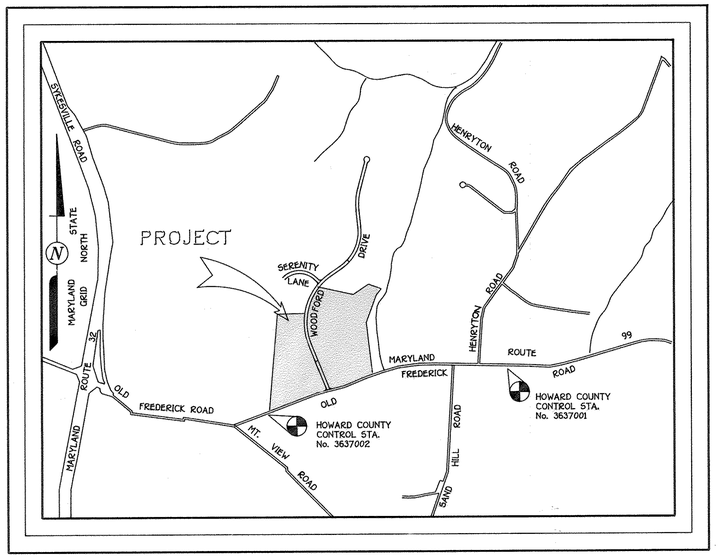
SITE DEVELOPMENT PLAN
WESTERN MIDDLE SCHOOL
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1"= 1200'

SHEET INDEX

LOT NO.	STREET ADDRESS
	ADDRESS CHART
LOT 1	12101 WOODFORD DR.

STATE OF MARYLAND — JAMES M. HELM — 13204 — REGISTERED PROFESSIONAL ENGINEER

5/24/16

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. 33772, Expiration Date: 6/16/17

OWNER AND DEVELOPER
HOWARD COUNTY BOARD OF EDUCATION
10910 MARYLAND ROUTE 97
ELLICOTT CITY, MD. 21043

(F-92-110)

No.	REVISION	DATE
2	REVISE ENTRY CONCRETE SIDEWALK AREA	1/28/2016

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — 2/13/92 DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — 2/4/92 DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

James M. Helm — 7/16/92
U.S. SOIL CONSERVATION SERVICE — DATE

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

John R. Robertson — 7/16/92
DISTRICT HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — 7/22/92 DATE
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 7/21/92 DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER JN — 7-20-92 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS.
FOR PRIVATE STORM DRAINAGE SYSTEMS AND ROADS.

DIRECTOR, PUBLIC WORKS / Acting — 7/17/92 DATE

CHIEF, BUREAU OF ENGINEERING — 7-17-92 DATE

PROPERTY/SUBDIVISION				SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE				N/A	PO PARCEL 119
PLAT NO./L.E.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
10405-10407	19	R	TAX MAP 10	THIRD	6030
WATER CODE N/A			SEWER CODE N/A		

SHEET 1 OF 26 — SDP 92-80

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. 33772, Expiration Date: 6/16/17
3/24/16

STATE OF MARYLAND — CHARLES J. CROVO, SR. — PROFESSIONAL ENGINEER

KILDUFF NAGY • LANDSCAPE ARCHITECTS
10726 Baltimore Avenue Beltsville, MD 20705
(301) 595-4955

NO.	REVISION	DATE
2	REVISED ENTRY CONCRETE SIDEWALK AREA	1/28/16
1	ADDED BASEBALL DUGOUTS	6/18/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

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SIGNATURE OF ENGINEER — DATE 2/13/92

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SIGNATURE OF DEVELOPER — DATE 2/14/92

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — DATE 7/16/92

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

DISTRICT — HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — DATE 7/22/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 7/21/92

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER — DATE 1-20-92

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PRIVATE SYSTEMS AND ROADS. — STORM DRAINAGE

DIRECTOR, PUBLIC WORKS (Acting) — DATE 7/17/92

CHIEF, BUREAU OF ENGINEERING — DATE 7.17.92

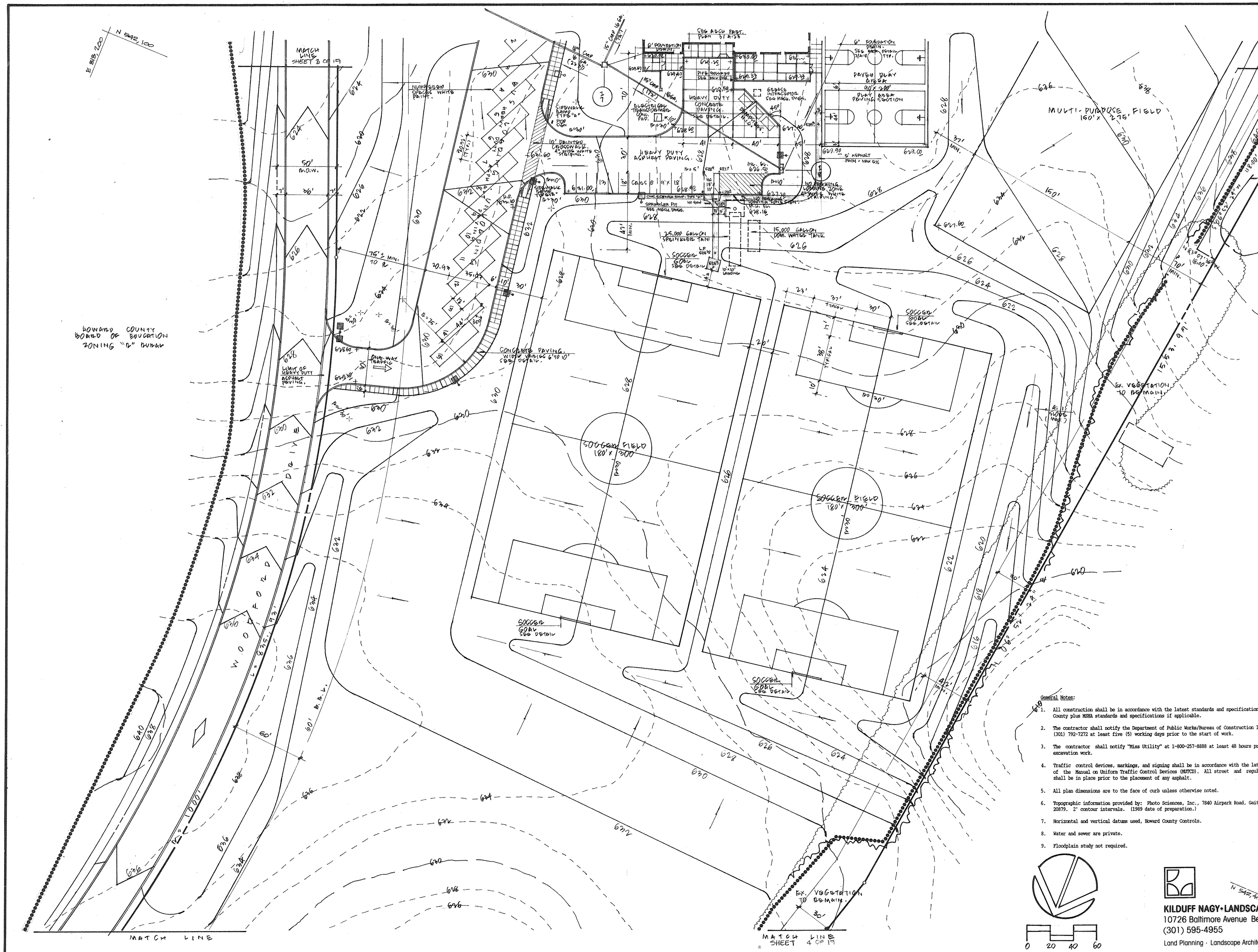
PROPERTY/SUBDIVISION				SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE				N/A	P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE TAX MAP	ELEC. DIST.	CENSUS TR.
	17	R	10	THIRD	6030
WATER CODE N/A			SEWER CODE N/A		

SITE AND GRADING PLAN

WESTERN MIDDLE SCHOOL

THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 13, 1992
SCALE: 1" = 40'
SHEET 2 OF 26

SDP 92-80



SITE INFORMATION:

1.	AREA OF PARCEL	30.053 ACRES · 1,309,108.68 SQ. FT.
2.	ZONING	"R" - RURAL
3.	PROPOSED USE	PUBLIC MIDDLE SCHOOL
4.	FLOOR SPACE	106,736 SQ. FT. (70,309± F.F. · 36,427± S.F.)
5.	BUILDING HEIGHT	2 STORY 30' (PER BOCA)
6.	PARKING REQUIRED.	100 CARS · 15 BUSSES. (HOWARD COUNTY BOARD OF ED. SPECS.)
7.	PARKING PROVIDED.	101 CARS · 7 HANDICAPPED 94 STANDARD.
8.	BUS SPACES PROVIDED.	15 @ 12' x 44'
9.	OPEN SPACE	86.6 % 1,133,688 SQ. FT.
10.	BUILDING COVERAGE	5.4 % or 70,700 SQ. FT.
11.	AREA OF PAVED PARKING.	102,000± SF

GRADING QUANTITIES:

CUT GENERATED (10% SHRINKAGE ASSUMED)	85,000 CUBIC YARDS.
FILL REQUIRED	85,000 CUBIC YARDS.

NOTE: · GRADING QUANTITIES ARE APPROXIMATE AND SHOULD NOT BE USED FOR BIDDING PURPOSES. CONTRACTOR SHALL PERFORM INDEPENDENT EARTHWORK CALCULATIONS FOR BIDDING. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR THE ABOVE FIGURES. ALL ACTUAL EARTHWORK, IMPORTED FILL ETC. REQUIRED TO ACHIEVE FINISHED GRADES SHALL BE INCLUDED IN BASE BID.
· NO TOPSOIL IS TO BE REMOVED FROM SITE.

General Notes:

1. All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
2. The contractor shall notify the Department of Public Works/Bureau of Construction Inspection at (301) 792-7272 at least five (5) working days prior to the start of work.
3. The contractor shall notify "Miss Utility" at 1-800-257-8888 at least 48 hours prior to any excavation work.
4. Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
5. All plan dimensions are to the face of curb unless otherwise noted.
6. Topographic information provided by: Photo Sciences, Inc., 7840 Airpark Road, Gaithersburg, MD 20879. 2' contour intervals. (1989 date of preparation.)
7. Horizontal and vertical datums used, Howard County Controls.
8. Water and sewer are private.
9. Floodplain study not required.
10. Stormwater management extended detention provided.
11. Wetlands delineation study not required.
12. Stormwater management facility will be privately owned and maintained.
13. There are no existing utilities on-site other than utility poles shown. Contractor shall coordinate necessary utility pole relocations with appropriate utility companies. This work shall be performed in conjunction with the improvements to MD Route 99. Contractor shall bear any and all costs or charges associated with the utility pole relocation.
14. Boundary information provided by: Fisher, Collins & Carter, Inc.
15. Building dimensions on this plan are approximate. Refer to architectural drawings for exact dimensions.
16. Building is fully sprinklered.
17. Driveway entrances shall be in accordance with Howard County Design Manual standards.
18. Dumpster location is in accordance with Howard County Design Manual, Volume III, Figure 2.26.
19. All exterior lighting is to be directed away from all adjacent residentially zoned properties and public road rights-of-way.

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Land Planning · Landscape Architecture · Park and Recreation Planning

STATE OF MARYLAND · CHARLES J. CROVO · PROFESSIONAL ENGINEER

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SIGNATURE OF ENGINEER — DATE 2/13/92

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SIGNATURE OF DEVELOPER — DATE 2/14/92

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — DATE 7/16/92

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APPROVED:

DISTRICT HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — DATE 7/22/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 7/31/92

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER — DATE 7-20-92

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PRIVATE SYSTEMS AND ROADS. — STORM DRAINAGE

DIRECTOR, PUBLIC WORKS Acting — DATE 7/17/92

CHIEF, BUREAU OF ENGINEERING M.K. — DATE 7-17-92

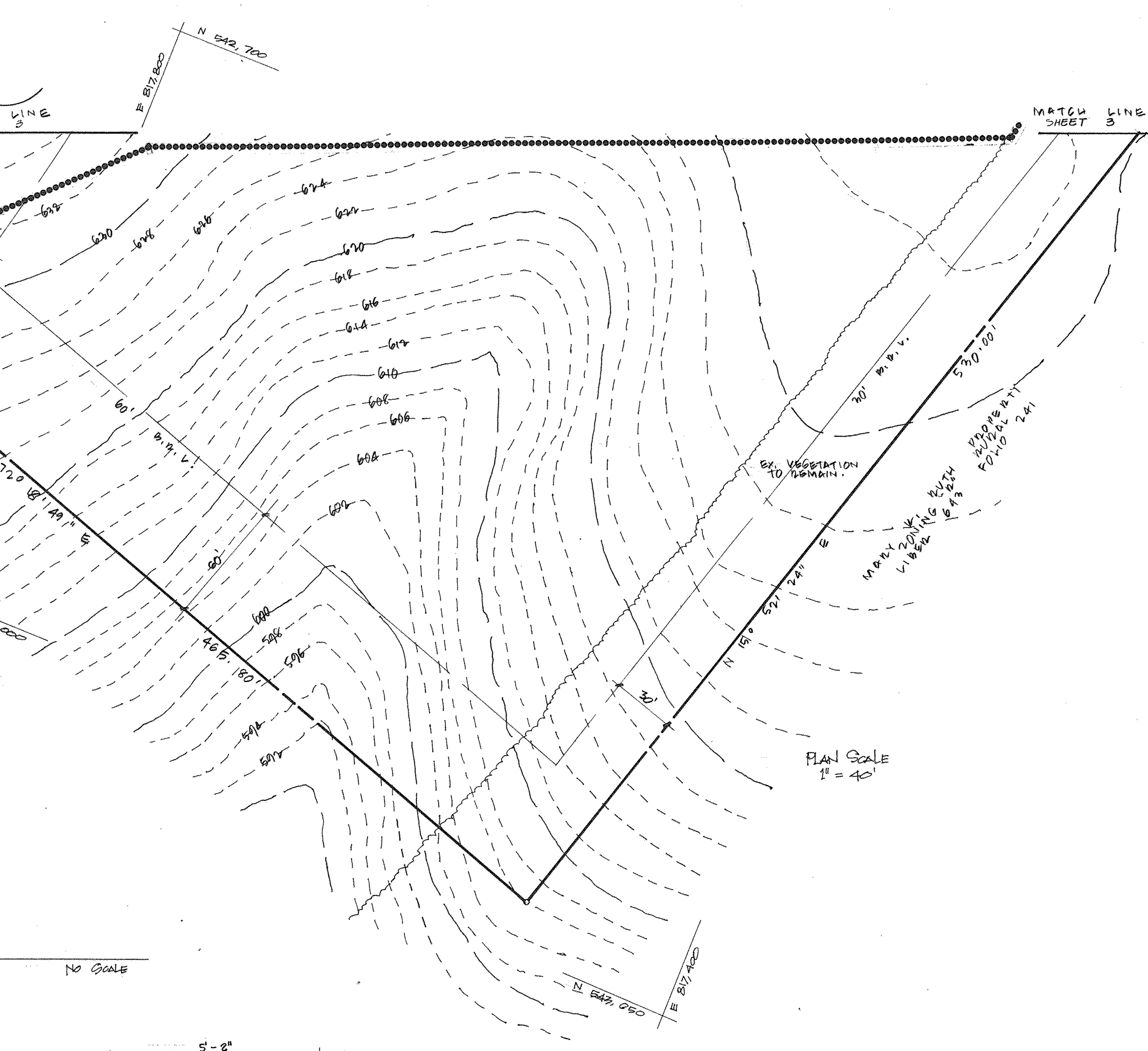
PROPERTY/SUBDIVISION				SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE				N/A	P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
	17	R	TAX MAP 10	THIRD	6030
WATER CODE N/A			SEWER CODE N/A		

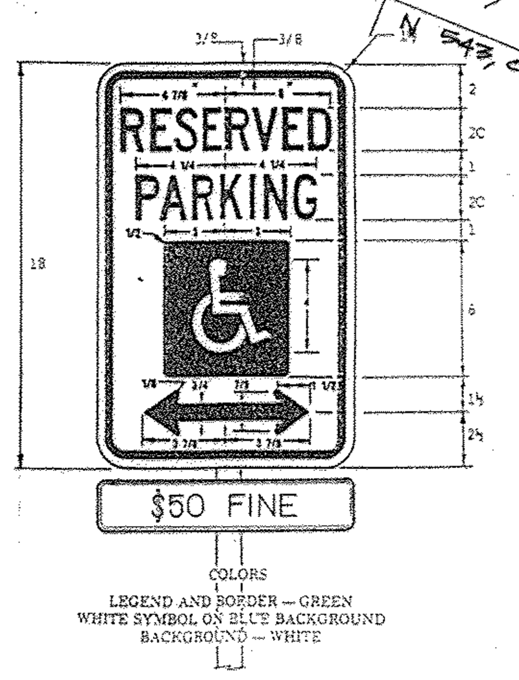
SITE AND GRADING PLAN

WESTERN MIDDLE SCHOOL

THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: 1" = 40'
SHEET 3 OF 26

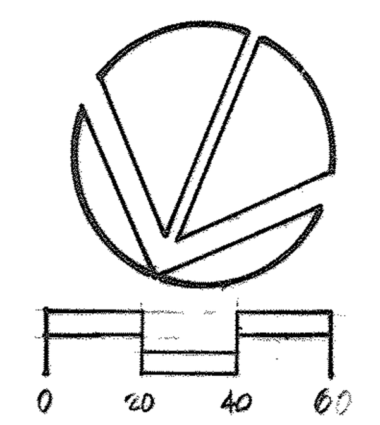
SDP 92-80



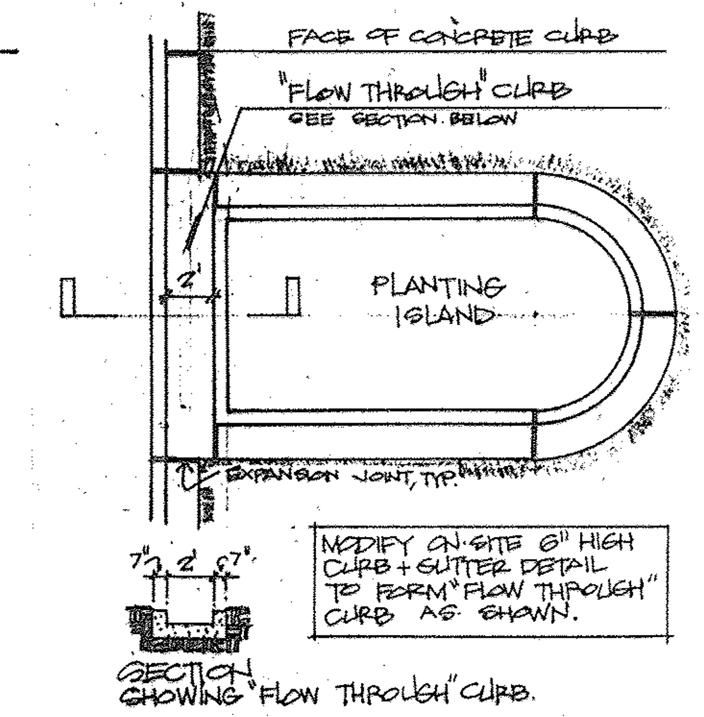


Handicap Sign Detail

NO SCALE

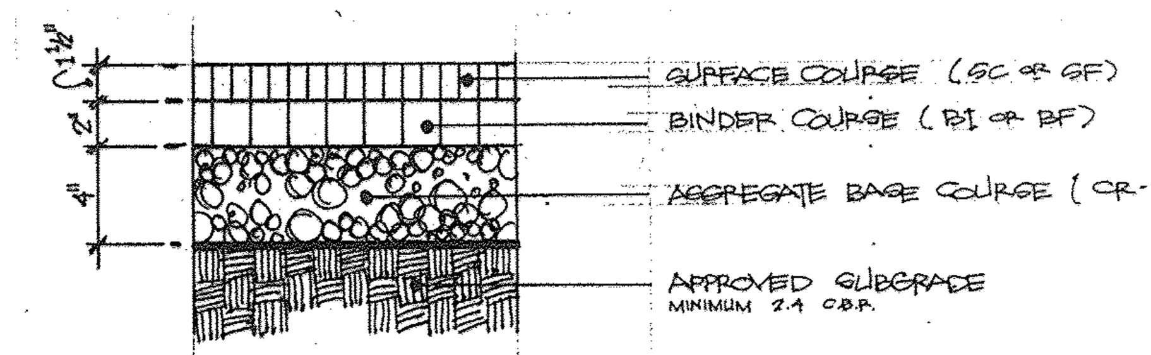


LOT NO.	STREET ADDRESS
	ADDRESS CHART



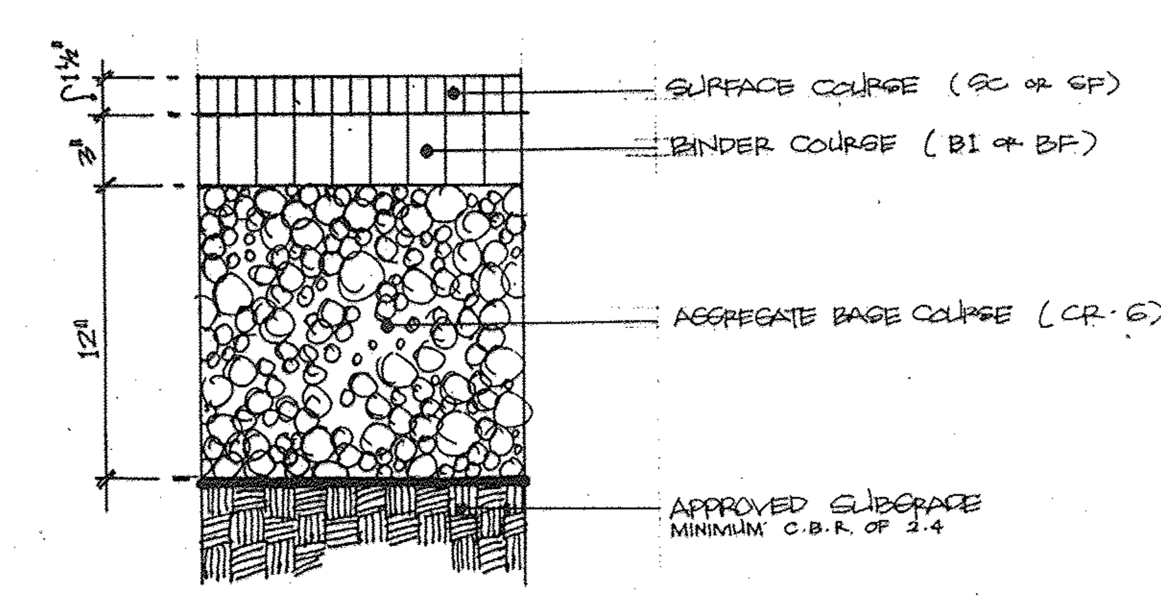
Flow Through Curb

SCALE 1/8" = 1'-0"



Light Duty Asphalt Paving

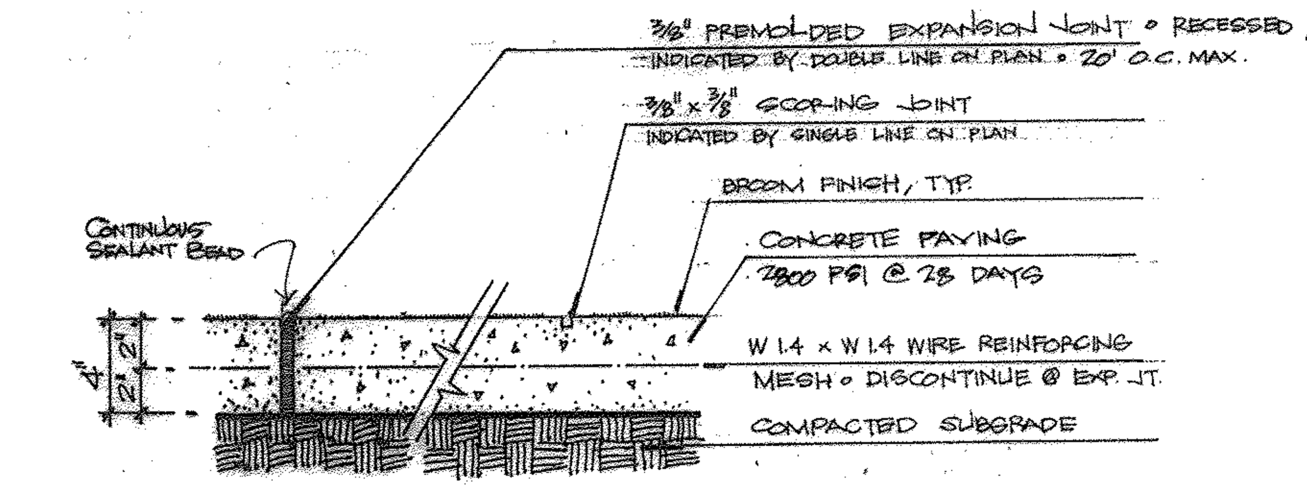
SCALE 1½" = 1'-0"



Heavy Duty Asphalt Paving

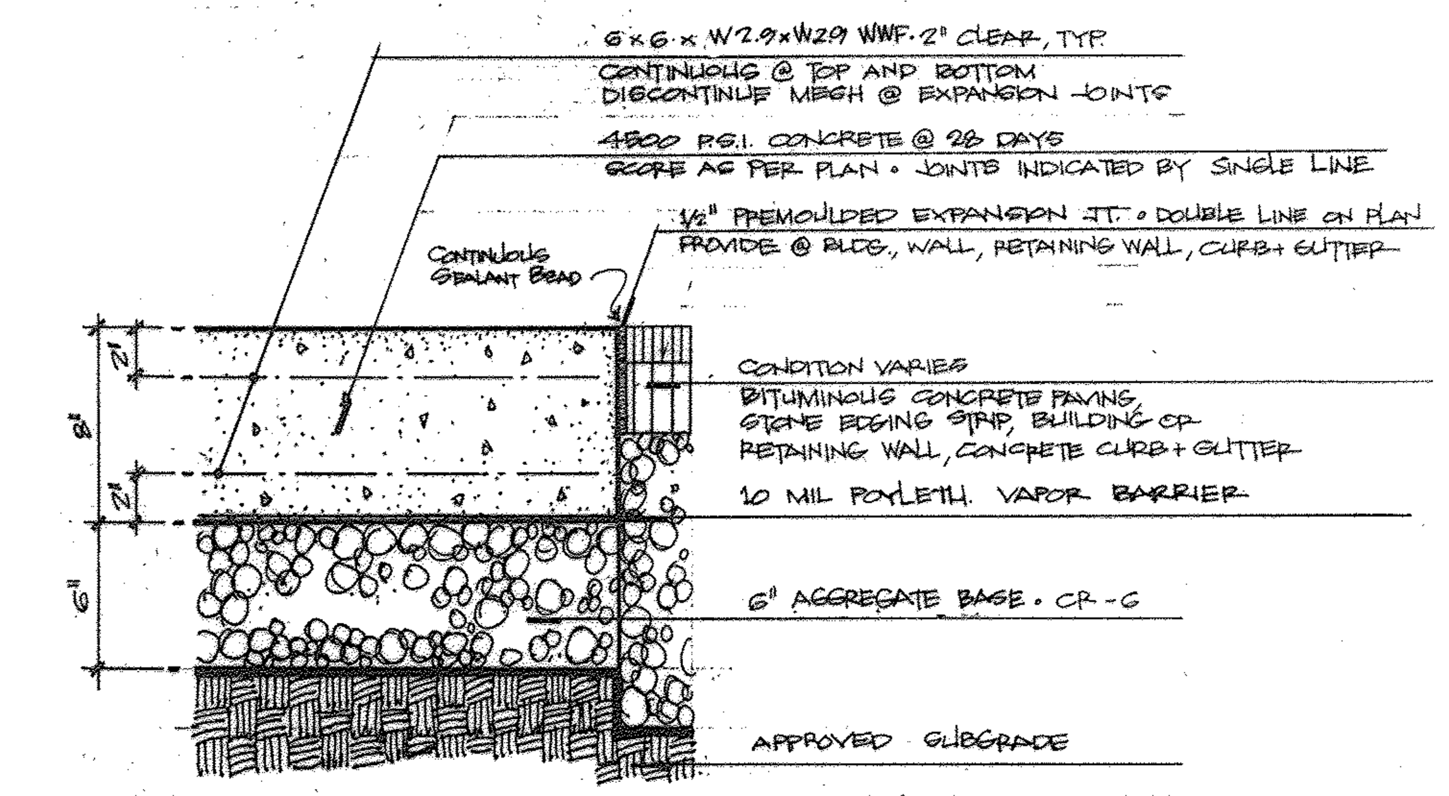
NOTE: CONTRACTOR SHALL FIELD VERIFY C.B.R. VALUES BY ACTUAL C.B.R. TESTING PRIOR TO PAVEMENT INSTALLATION.

SCALE 1½" = 1'-0"



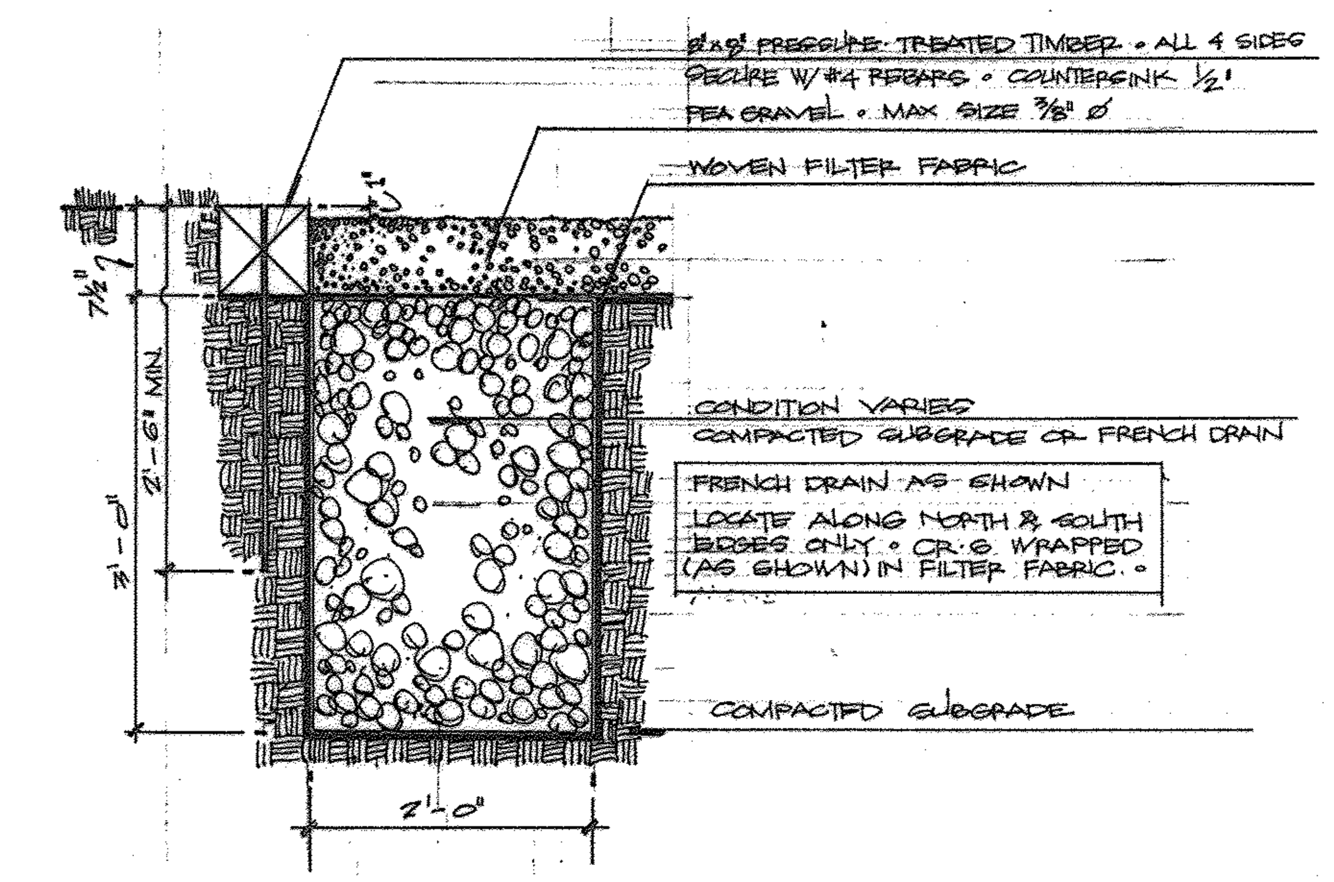
Concrete Paving

SCALE 1½" = 1'-0"



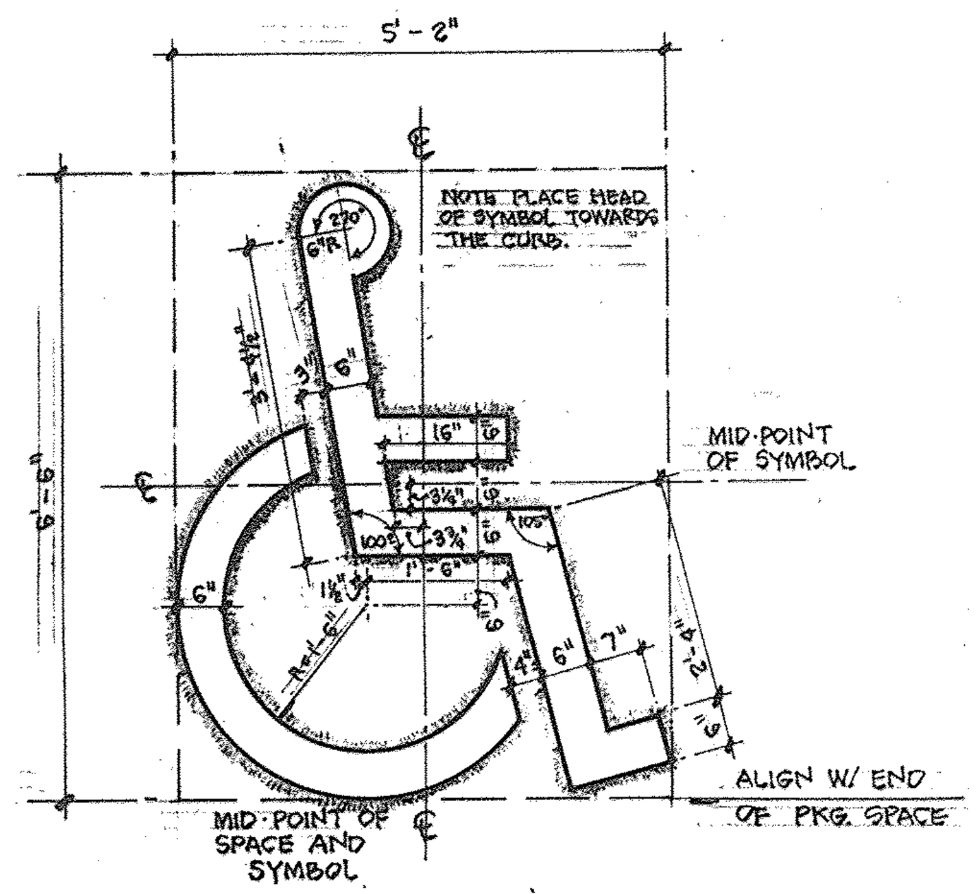
Heavy Duty Concrete Paving

SCALE 1½" = 1'-0"



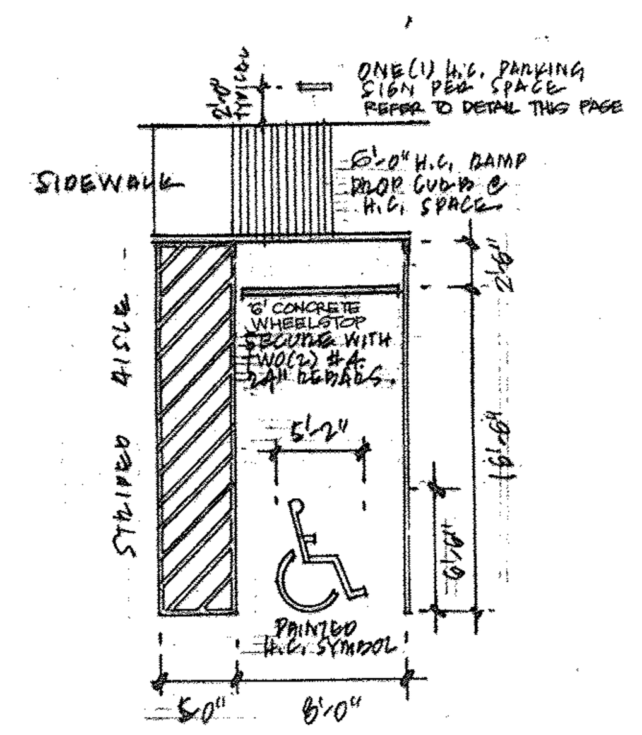
Timber Edge

SCALE 3/4" = 1'-0"



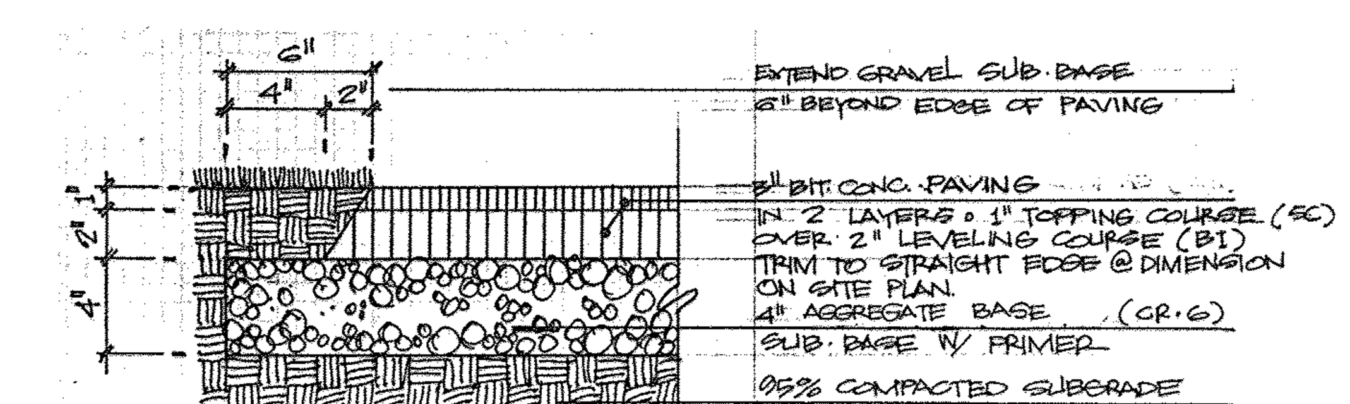
Painted Handicap Symbol

SCALE 1/2" = 1'-0"



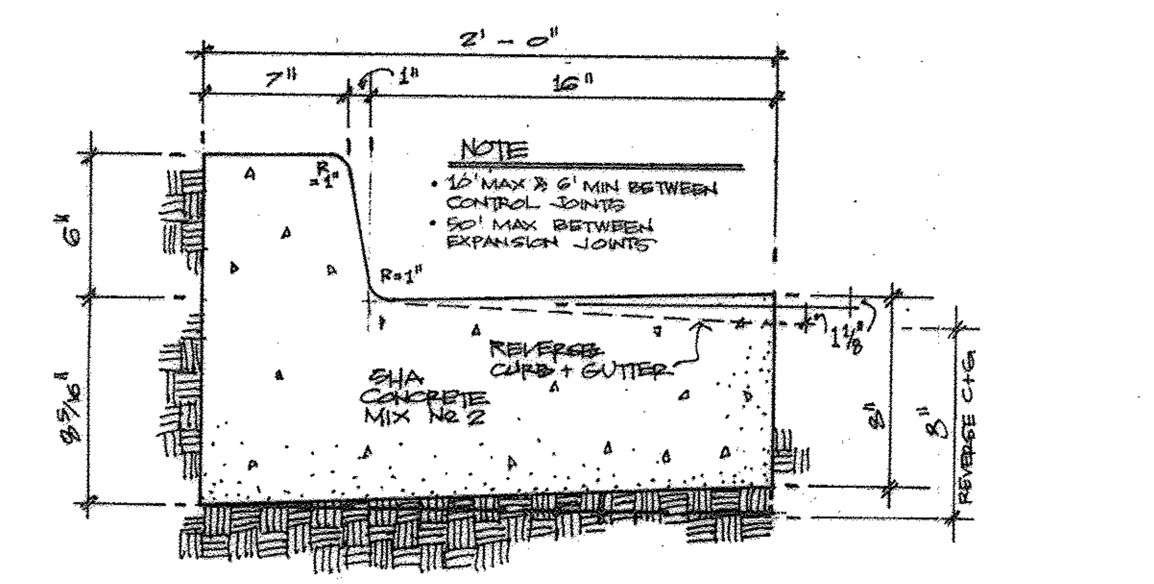
Handicap Space Detail

SCALE 1" = 10'



Play Area Paving Section

SCALE 1½" = 1'-0"



Concrete Curb and Gutter

SCALE 1½" = 1'-0"

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SIGNATURE OF ENGINEER — DATE 2/13/92

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SIGNATURE OF DEVELOPER — DATE 2/14/92

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — DATE 7/16/92

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

APPROVED:

DISTRICT HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — DATE 7/22/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 7/21/92

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER JN — DATE 7.20.92

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PRIVATE SYSTEMS AND ROADS. — STORM DRAINAGE

DIRECTOR, PUBLIC WORKS Acting — DATE 7/17/92

CHIEF, BUREAU OF ENGINEERING M.K. — DATE 7.17.92

PROPERTY/SUBDIVISION				SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE				N/A	P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE TAX MAP	ELEC. DIST.	CENSUS TR.
	19	R	10	THIRD	6030
WATER CODE N/A				SEWER CODE N/A	

SITE AND GRADING PLAN ; SITE DETAILS

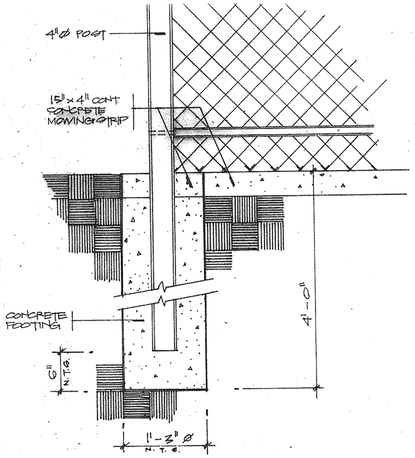
WESTERN MIDDLE SCHOOL

THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
DETAILS: SCALE: AS SHOWN
PLAN: SCALE: 1" = 40'

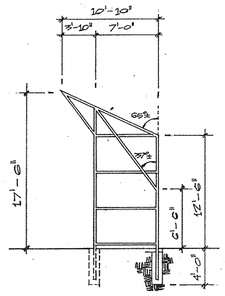
SDP 92-80

Building ◦ East Elevation

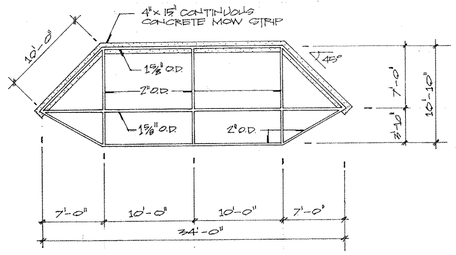
NOT TO SCALE



Backstop ◦ Footing Detail

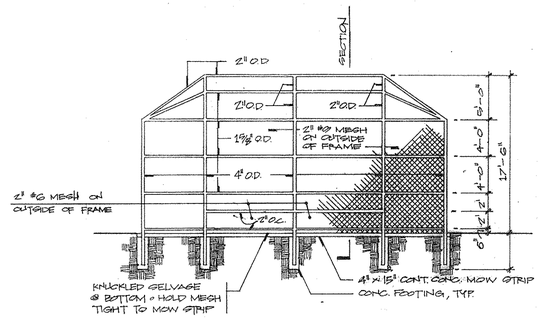


Backstop ◦ Section



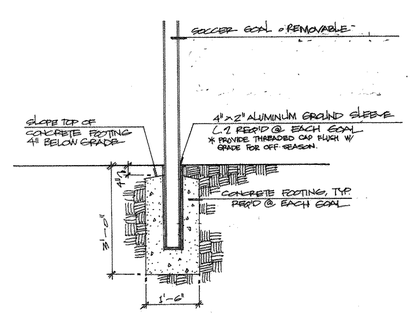
Backstop ◦ Plan

SCALE 1/16" = 1'-0"



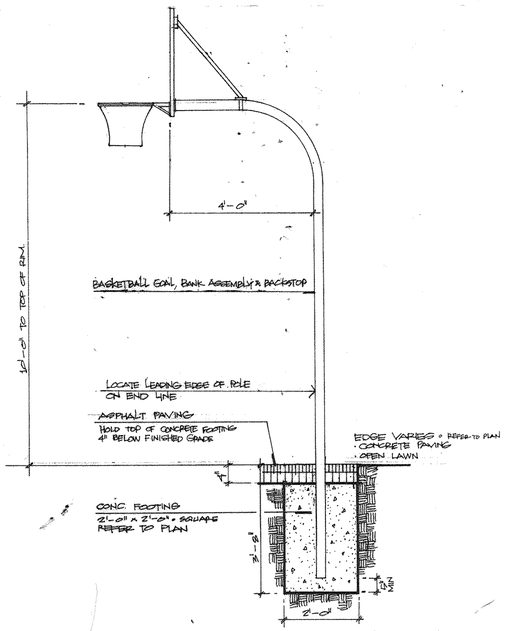
Backstop ◦ Front Elevation

SCALE 1/16" = 1'-0"



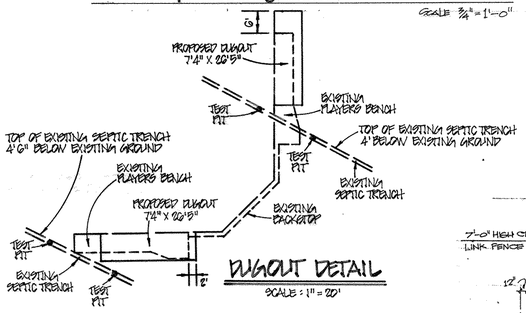
Soccer Goal

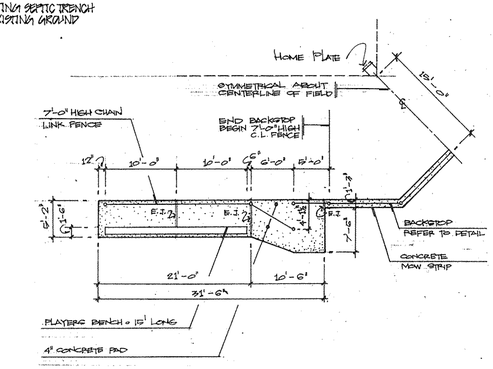
SCALE 1/2" = 1'-0"



Basketball Goal and Standard

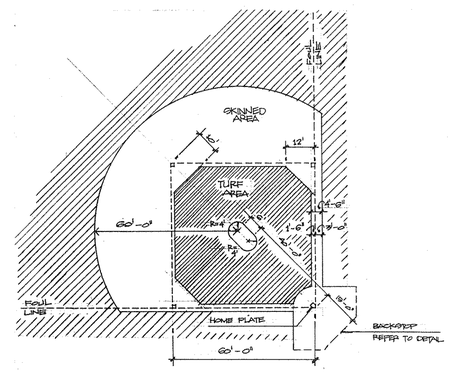
SCALE 1/2" = 1'-0"





Players Bench and Fencing

SCALE 1" = 10'



Skinned Infield

* SKINNED INFIELD MATERIAL SHALL CONSIST OF ⅓ COARSE SAND, ⅓ TOP SOIL AND ⅓ CLAY, WELL MIXED. TOTAL THICKNESS — 6".

SCALE 1" = 30'

LOT NO.	STREET ADDRESS
	ADDRESS CHART

NO.	REVISION	DATE
1	ADDED BASEBALL DUGOUTS	6/16/92

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Land Planning · Landscape Architecture · Park and Recreation Planning

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 2/12/92

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE 2/14/92

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

USDA SOIL CONSERVATION SERVICE — DATE 7/16/92

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

DISTRICT — DATE 7/16/92
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — DATE 7/22/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 7/21/92

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER — DATE 7-20-92

APPROVED: DEPARTMENT OF PUBLIC WORKS.
FOR PRIVATE SYSTEMS AND ROADS. — STORM DRAINAGE

DIRECTOR, PUBLIC WORKS — DATE 7/17/92

CHIEF, BUREAU OF ENGINEERING — DATE 7-17-92

PROPERTY/SUBDIVISION				SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE				N/A	P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE TAX MAP NO.	ELEC. DIST.	CENSUS TR.
	17	R		THIRD	6030
WATER CODE	N/A			SEWER CODE	N/A

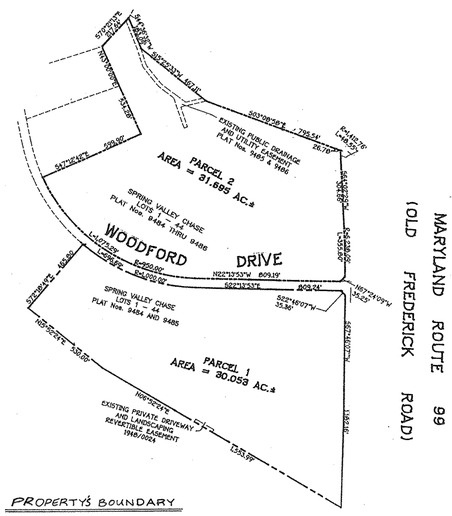
SITE DETAILS
WESTERN MIDDLE SCHOOL
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: AS SHOWN
SHEET 5 OF 26

SDP 92-50

STRUCTURE SCHEDULE

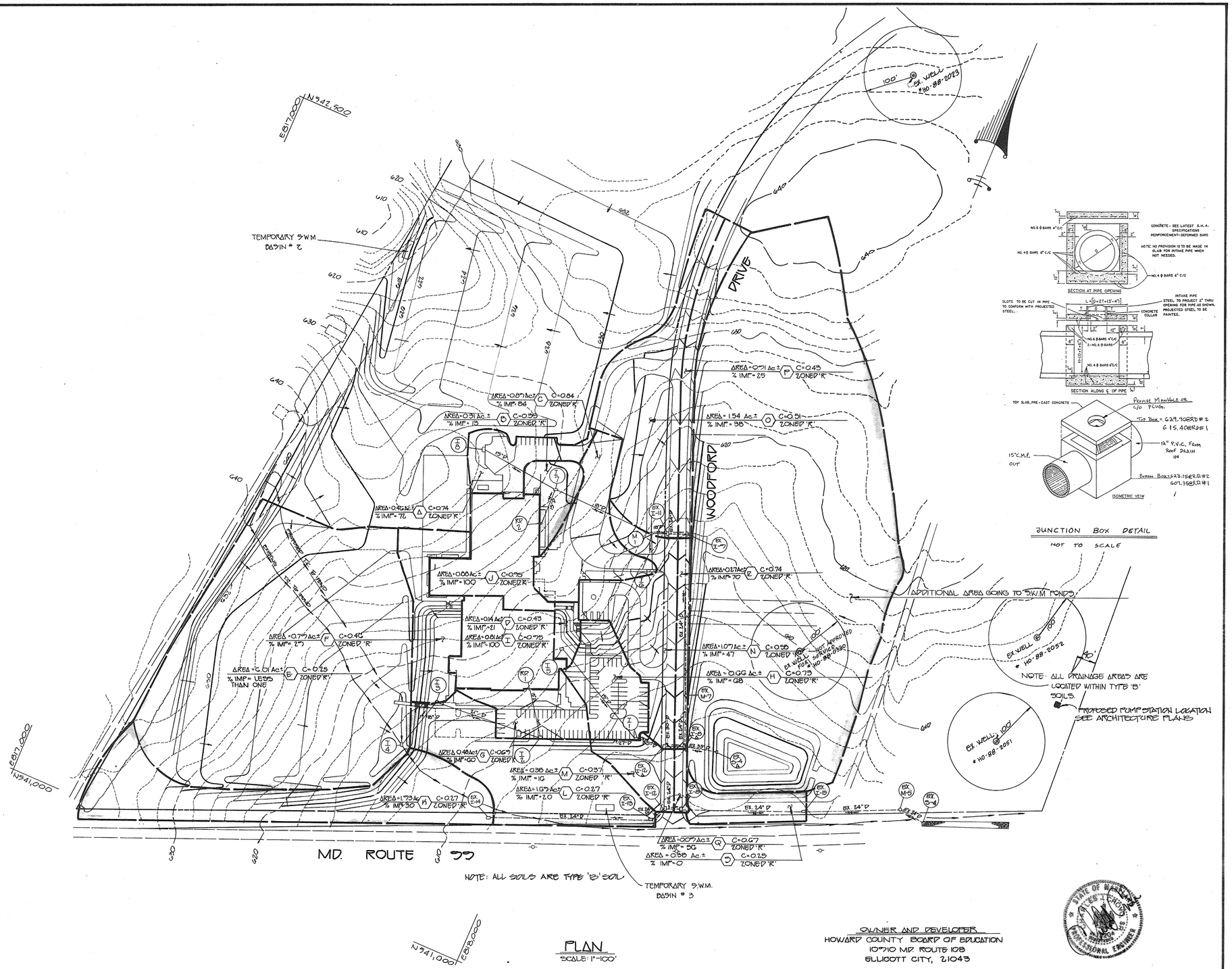
NO.	TOP ELV.	INV.IN	INV.OUT	ROAD	ROAD STATION	OFFSET	TYPE	REMARKS
I-1	611.23	601.60 602.96	601.85	----------	--------	------	A-5	Dwg, SD-4.40 PRIVATE
I-2	611.90	604.70 604.41	603.91	----------	--------	------	A-5	Dwg, SD-4.40 PRIVATE
I-3	618.55	606.00	606.40	----------	--------	------	'D'*** INLET	Dwg, SD-4.39 PRIVATE
I-4	620.83	------	614.90	----------	--------	------	'D'*** INLET	Dwg, SD-4.39 PRIVATE
I-5	614.83	------	610.20	----------	--------	------	'D'*** INLET	Dwg, SD-4.39 PRIVATE
I-6	621.55	------	617.28	----------	--------	------	A-10 W/DEP.	Dwgs,SD-4.41& SD-4.83 PRIVATE
I-7	628.50	620.77 621.39	620.52	----------	--------	------	'D'*** INLET	Dwg, SD-4.39 PRIVATE
I-8	627.00	------	622.50	----------	--------	------	A-5	Dwg, SD-4.40 PRIVATE
EX. I-8	602.42	595.74	595.45	WOODFORD DR.	0+75.00	18'R.	A-5	Dwg, SD-4.40 PUBLIC
EX. I-8A	606.16	600.09 600.09	599.84	WOODFORD DR.	2+00.00	18'R.	A-5 W/DEP.	Dwgs,SD-4.40& SD-4.83 PUBLIC
EX. I-9	621.04	612.95	612.70	WOODFORD DR.	6+27.00	18'R.	A-5 W/DEP.	Dwgs,SD-4.49& SD-4.83 PUBLIC
EX. I-11	621.04	614.52	614.27	WOODFORD DR.	6+27.00	18'L.	A-10 W/DEP.	Dwgs,SD-4.41& SD-4.83 PUBLIC
EX. I-12	602.42	596.56	596.36	WOODFORD DR.	0+75.00	18'L.	A-5	Dwg, SD-4.40 PUBLIC
EX. I-12A	606.16	600.83	600.58	WOODFORD DR.	2+00.00	18'L.	A-10 W/DEP.	Dwgs,SD-4.41& SD-4.83 PUBLIC
EX. I-13	601.25	597.53	597.28	ROUTE 99	0+57	35'R.	'E'* INLET	Dwg, SD-4.13 PUBLIC
EX. I-14	606.43	------	602.36	ROUTE 99	4+02	42'R.	'D'*** INLET	Dwg, SD-4.39 PUBLIC
EX. I-15	600.75	594.22 595.22	593.97	ROUTE 99	2+75	63'L.	'D'** INLET	Dwg, SD-4.13 PUBLIC
M-1	624.00	616.39 616.26	616.01	----------	-------	------	STD. MANHOLE	Dwg, G-5.02 PRIVATE
EX. M-5	603.40	591.71	591.46	ROUTE 99	4+75	63'L	STD. MANHOLE	Dwg, G-5.02 PUBLIC
EX. M-7	609.77	605.02	604.77	WOODFORD DR.	3+00	21'R.	STD. MANHOLE	Dwg, G-5.02 PUBLIC
EX. S-4A	601.85	599.10	599.00	WOODFORD DR.	1+88	82'R.	STD. METAL END SEC.	Dwg, SD-5.61 PUBLIC
EX. S-4	594.63	590.52	590.50	ROUTE 99	5+65	30'L.	STD. METAL END SEC.	Dwg, SD-5.61 PUBLIC

* = OPEN ON 2 SIDES ** = OPEN ON 2 SIDES 90° APART *** = OPEN ON ALL 4 SIDES



PROPERTY'S BOUNDARY

SCALE: 1" = 400'



PLAN

SCALE: 1"=100'

JUNCTION BOX DETAIL

NOT TO SCALE

OWNER AND DEVELOPER
HOWARD COUNTY BOARD OF EDUCATION
10710 MD. ROUTE 108
ELLICOTT CITY, 21043

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301)461-2855

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — 2/13/92 DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — 2/4/92 DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — 7/16/92 DATE

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

DISTRICT HOWARD SOIL CONSERVATION DISTRICT — 7/16/92 DATE

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — 7/22/92 DATE

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 7/21/92 DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER — 7-20-92 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS.
FOR PRIVATE STORM DRAINAGE SYSTEMS AND ROADS.

DIRECTOR, PUBLIC WORKS — 7/17/92 DATE

CHIEF, BUREAU OF ENGINEERING — 7-17-92 DATE

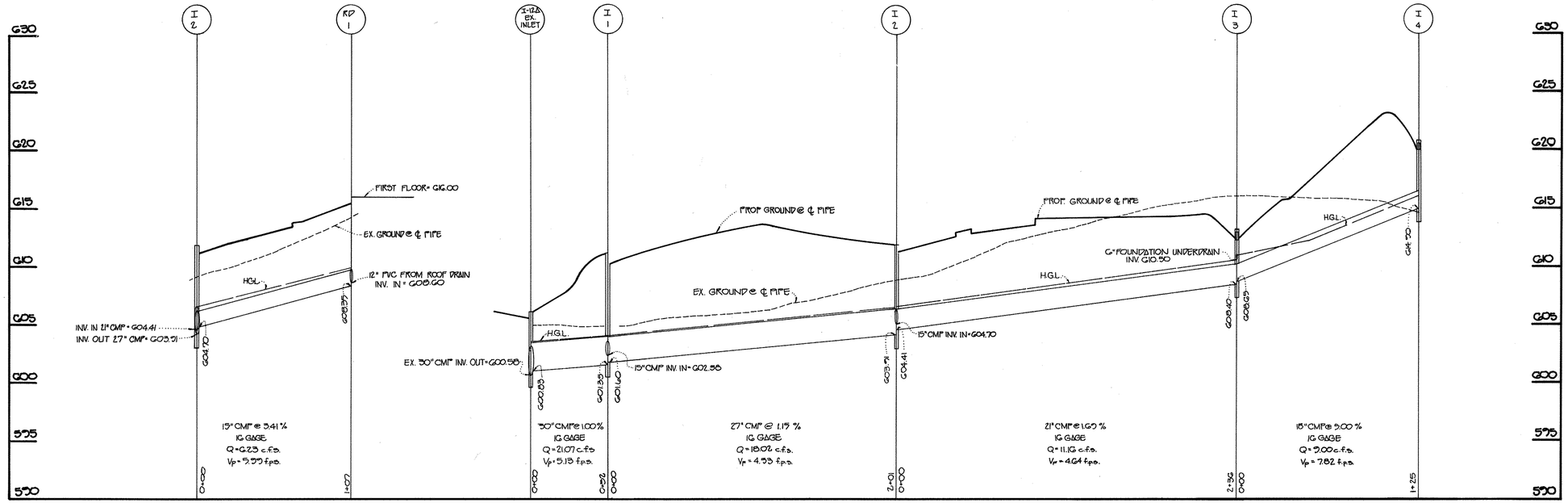
PROPERTY/SUBDIVISION			SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE			N/A	P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE MAP NO.	ELEC. DIST.	CENSUS TR.
	17	R		THIRD	6030
WATER CODE			SEWER CODE	
N/A			N/A	

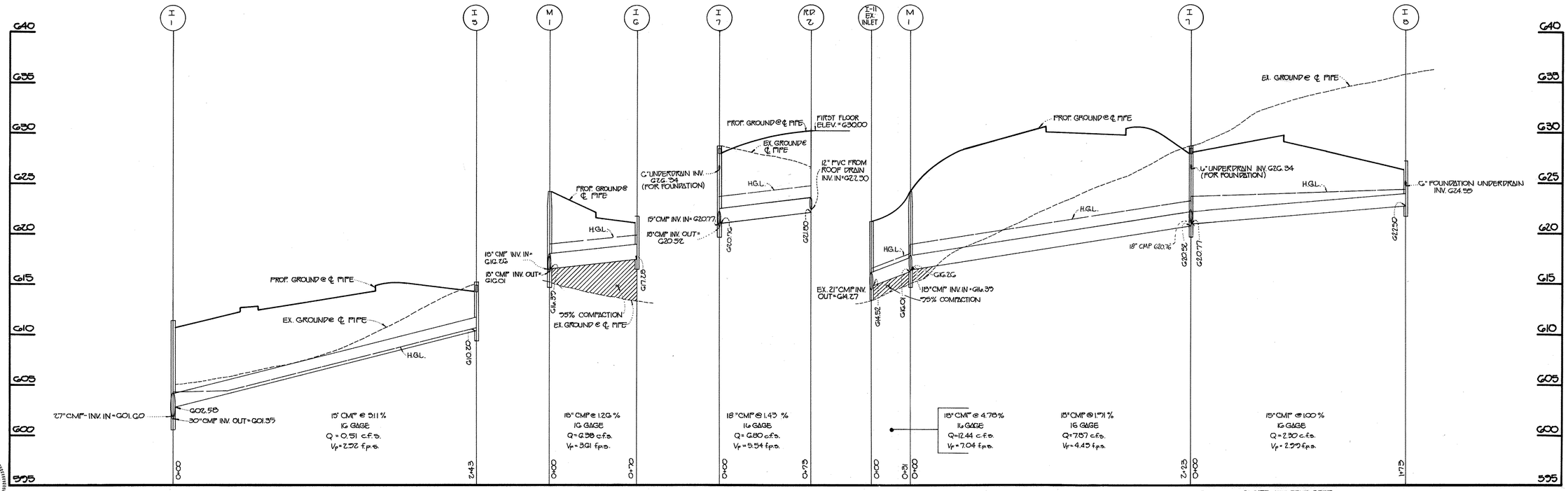
DRAINAGE AREA MAP, STRUCTURE SCHEDULE, BOUNDARY OF PROPERTY AND JUNCTION BOX DETAILS

WESTERN MIDDLE SCHOOL

THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: AS SHOWN
SHEET 6 OF 26

SDP 92-80





PROFILES

SCALE: 1"=40' HOR. 1"=5' VERT.

OWNER AND DEVELOPER
HOWARD COUNTY BOARD OF EDUCATION
10770 MD ROUTE 108
ELLICOTT CITY, 21043

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE

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SIGNATURE OF ENGINEER — 2/13/92 DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — 2/14/92 DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — 7/16/92 DATE

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

APPROVED:

DISTRICT HOWARD SOIL CONSERVATION DISTRICT — 7/16/92 DATE

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — 7/22/92 DATE

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 7/21/92 DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER JN — 7-20-92 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PRIVATE STORM DRAINAGE SYSTEMS AND ROADS.

DIRECTOR, PUBLIC WORKS (Acting) — 7/17/92 DATE

CHIEF, BUREAU OF ENGINEERING M.E. — 7-17-92 DATE

PROPERTY/SUBDIVISION					SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE					N/A	P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.	
	17	R	TAX MAP 10	THIRD	6050	
WATER CODE	N/A			SEWER CODE	N/A	

STORM DRAIN PROFILES

WESTERN MIDDLE SCHOOL

THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: AS SHOWN
SHEET 7 OF 26

SDP 92-80

POND SPECIFICATION

I. *SITE PREPARATION*

Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. *EARTH FILL*
Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 10 percent above the design elevation (including free-board) unless otherwise shown on the plans. All fill materials shall be CL,GC, SC, or CH, as approved by Soils Engineer.

III. *Placement*

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8 inch maxiaus thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the down-stream portions of the embankment.

Core Trench

Where specified, a core trench shall be excavated along or or parallel to the centerline of the embankment, as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being 4-feet. The depth shall be at least 4-feet or as shown on the plans. The side slopes of the trench shall be 1:1 or flatter. The backfill material for the core trench shall be compacted either by equipment or rollers to assure maximum density and minimum permeability. Compact to 95% of AASHTO T-99 density. GC, SC, CH, CL, MH materials only shall be used in the core trench. As approved by Soils Engineers.

IV. *STRUCTURAL BACKFILL*

Backfill material shall be of the type and quality conforming to that specified for the adjoing fill material. The fill shall be placed in horizontal layers not to exceed 4 inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill competely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than 4 feet to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a structure or pipe unless there is a compacted fill of 2 feet or greater over the structure or pipe.

V. *PIPE CONDUITS*

A, *CORRUGATED METAL PIPE*

1. *Materials - Metal Pipe - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211, with water-tight coupling bands.*
2. *Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the control structure shall be mortared all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.*
3. *Bedding - The pipe shall be firmly and uniformly bedded throughout its entire lenght. Where rock or soft, spongy or other unstable soil is encountered, all such macerial shall be removed and replaced with suitable earth compacted to provide adequate support.*
4. *Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.*
5. *Backfilling shall conform to structural backfill as shown above.*
6. *Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.*

VI. *CONCRETE*

Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Mix No. 3.

VII. *STABILIZATION*

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by permanent seeding and applying straw mulch in accordance with 'Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas' immediately after finish grading.

Fertilizer:	*10-10-10*	*@11.5 lbs./1000 sq.ft.*
Seed:	*Crownvetch inoculated*	*@ 0.5 lbs./1000 sq.ft.*
	'KY-31' Tall Fescue	*@ 1.0 lbs./1000 sq.ft.*
Mulch:	*Straw*	*@80 - lbs./1000 sq.ft.*
Asphalt Tie-down: Slopes		*@ 8 gal./1000 sq.ft.*
	Flat areas	*@ 5 gal./1000 sq.ft.*

OPERATION AND MAINTENANCE SPECIFICATIONS

I HEREBY CERTIFY THAT I WILL OPERATE AND MAINTAIN THE COMPLETED POND IN ACCORDANCE WITH THE FOLLOWING:

1. PERIODIC INSPECTIONS OF THE FACILITY WILL BE MADE TO IDENTIFY POTENTIAL PROBLEMS THAT MAY AFFECT ITS SAFETY. THESE INSPECTIONS WILL BE MADE AFTER PERIODS OF HEAVY RAINFALL AND AT LEAST TWICE ANNUALLY. INSPECTION REPORTS SHALL BE KEPT UNTIL THE NEXT SUBSEQUENT INSPECTION. INSPECTIONS ITEMS TO BE LOOKED AT INCLUDE
   a) SPILLWAY AND OUTLET WORKS;
   b) RIP-RAP;
   c) VEGETATIVE COVER;
   d) CRACKS IN THE FILL;
   e) SLOPE FAILURES; AND
   f) SEEPAGE AND OTHER SIGNS OF DISTRESS.
2. PROBLEMS IDENTIFIED DURING INSPECTIONS WILL BE PROMPTLY CORRECTED. MAJOR PROBLEMS WILL BE BROUGHT TO THE ATTENTION OF THE SOIL CONSERVATION DISTRICT AND THE DAM SAFETY DIVISION OF THE MARYLAND WATER RESOURCES ADMINISTRATION. AS A VERY MINIMUM, GRASSY VEGETATION WILL BE MAINTAINED IN A DENSE AND HEALTHY STATE, AND WOODY VEGETATION WILL NOT BE PERMITTED TO GROW ON THE EMBANKMENT.

S-1

TEST DATA

SOIL CLASSIFICATION	STRATUM DEPTH	DEPTH SCALE	SAMPLE No.	SAMPLE TYPE / SAMPLER GRAPHICS / Recovery	GROUND WATER	BLOWS/6 inch Three 6 inch increments or Pocket Penetrometer Qp-tons/square foot	HNU Reading (ppm)	BORING AND SAMPLING NOTES
SURFACE ELEVATION 602.2								
Brown, moist, medium stiff Silty CLAY (CL) (POSSIBLE FILL)			1	SS		3-4-6		Topsoil: 6 in
	3.0							Cave in: 8.5 ft
Brown, moist, medium dense Clayey SAND and Gravel (SC-GC), trace silt. (SANDY LOAM)	4.5	5	2	SS		18-15-13		
Brown, green, moist, medium dense, micaceous Sandy SILT (ML), little gravel in S-3. (SANDY LOAM)			3	SS		12-11-10		
	10.0	10	4	SS		4-6-6		
Terminated at 10 ft								

S-2

TEST DATA

SOIL CLASSIFICATION	STRATUM DEPTH	DEPTH SCALE	SAMPLE No.	SAMPLE TYPE / SAMPLER GRAPHICS / Recovery	GROUND WATER	BLOWS/6 inch Three 6 inch increments or Pocket Penetrometer Qp-tons/square foot	HNU Reading (ppm)	BORING AND SAMPLING NOTES
SURFACE ELEVATION 598.3								
Brown, moist, medium stiff Silty CLAY (CL), trace sand, mica, gravel. (SILTY CLAY)			1	SS		3-4-4		Topsoil: 5 in
	4.0							Cave in: 8.5 ft
Brown, green, moist, medium dense, micaceous Sandy SILT (ML). (SANDY LOAM)		5	2	SS		9-11-10		
			3	SS		13-14-13		
	10.0	10	4	SS		5-5-7		
Terminated at 10 ft								

S-3

TEST DATA

SOIL CLASSIFICATION	STRATUM DEPTH	DEPTH SCALE	SAMPLE No.	SAMPLE TYPE / SAMPLER GRAPHICS / Recovery	GROUND WATER	BLOWS/6 inch Three 6 inch increments or Pocket Penetrometer Qp-tons/square foot	HNU Reading (ppm)	BORING AND SAMPLING NOTES
SURFACE ELEVATION 601.2								
Brown, moist, medium stiff Silty CLAY (CL) (POSSIBLE FILL)			1	SS		4-4-5		Topsoil: 5 in
	4.0							Cave in: 8.3 ft
Brown, moist, medium dense Silty SAND and GRAVEL (SM-GM). (SANDY LOAM)		5	2	SS		12-17-13		
	8.0		3	SS		11-10-13		
Greenish brown, moist, medium dense micaceous Sandy SILT (ML). (SANDY LOAM)								
	10.0	10	4	SS		6-6-8		
Terminated at 10 ft								

S-4

TEST DATA

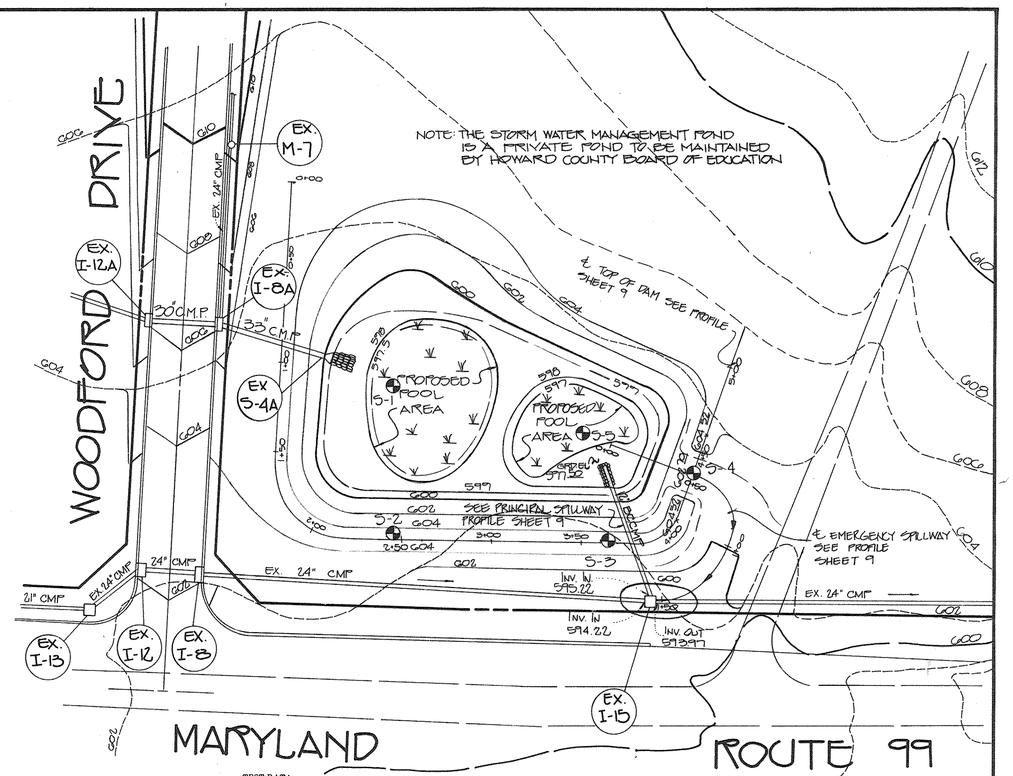
SOIL CLASSIFICATION	STRATUM DEPTH	DEPTH SCALE	SAMPLE No.	SAMPLE TYPE / SAMPLER GRAPHICS / Recovery	GROUND WATER	BLOWS/6 inch Three 6 inch increments or Pocket Penetrometer Qp-tons/square foot	HNU Reading (ppm)	BORING AND SAMPLING NOTES
SURFACE ELEVATION 602.5								
Brown, moist, medium stiff Silty CLAY (CL), little fine sand. (SILTY CLAY)			1	SS		3-3-4		Topsoil: 5 in
								Cave in: 8.5 ft
Brown, green, moist, medium dense, micaceous Sandy SILT (ML). (SANDY LOAM)	4.5	5	2	SS		4-5-6		
			3	SS		6-6-5		
	10.0	10	4	SS		6-6-9		
Terminated at 10 ft								

S-5

TEST DATA

SOIL CLASSIFICATION	STRATUM DEPTH	DEPTH SCALE	SAMPLE No.	SAMPLE TYPE / SAMPLER GRAPHICS / Recovery	GROUND WATER	BLOWS/6 inch Three 6 inch increments or Pocket Penetrometer Qp-tons/square foot	HNU Reading (ppm)	BORING AND SAMPLING NOTES
SURFACE ELEVATION 602.2								
Orange, moist, medium stiff Silty CLAY (CL), little fine sand. (SILTY CLAY)			1	SS		3-3-4		
	3.0							
Orange, brown, green, moist, loose to medium dense, micaceous Sandy SILT (ML). (SANDY LOAM)		5	2	SS		4-6-7		
			3	SS		6-4-6		
	10.0	10	4	SS		6-4-7		
Terminated at 10 ft								

SOIL BORINGS PROFILE
NOT TO SCALE



PLAN
SCALE: 1"=40'

STORM WATER MANAGEMENT POND CERTIFICATION AND APPROVAL

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION"

SIGNATURE OF DEVELOPER — DATE 2/13/92

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION"

SIGNATURE OF ENGINEER — DATE 2/13/92

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

U.S. SOIL CONSERVATION SERVICE — DATE 2/16/92

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT

HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

POND CONSTRUCTION CERTIFICATION

I CERTIFY THAT UPON COMPLETION OF CONSTRUCTION I WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE (O&M) OF THE SMALL POND. O&M WILL BE PERFORMED BY ME IN ACCORDANCE WITH THE SPECIFICATIONS ON THIS PLAN. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS OF THE POND BY SITE AND LOCAL AGENCIES.

SIGNATURE OF DEVELOPER — DATE 2/13/92

OWNER AND DEVELOPER
HOWARD COUNTY BOARD OF EDUCATION
10910 MD ROUTE 108
ELLICOTT CITY, 21043

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
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(301) 461-2855

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 2/13/92

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE 2/14/92

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — DATE 7/16/92

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

APPROVED:

DISTRICT
HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — DATE 7/22/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 7/21/92

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER — DATE 7-20-92

APPROVED: DEPARTMENT OF PUBLIC WORKS.
FOR PRIVATE SYSTEMS AND ROADS. STORM DRAINAGE

DIRECTOR, PUBLIC WORKS — DATE 7/17/92

CHIEF, BUREAU OF ENGINEERING — DATE 7-17-92

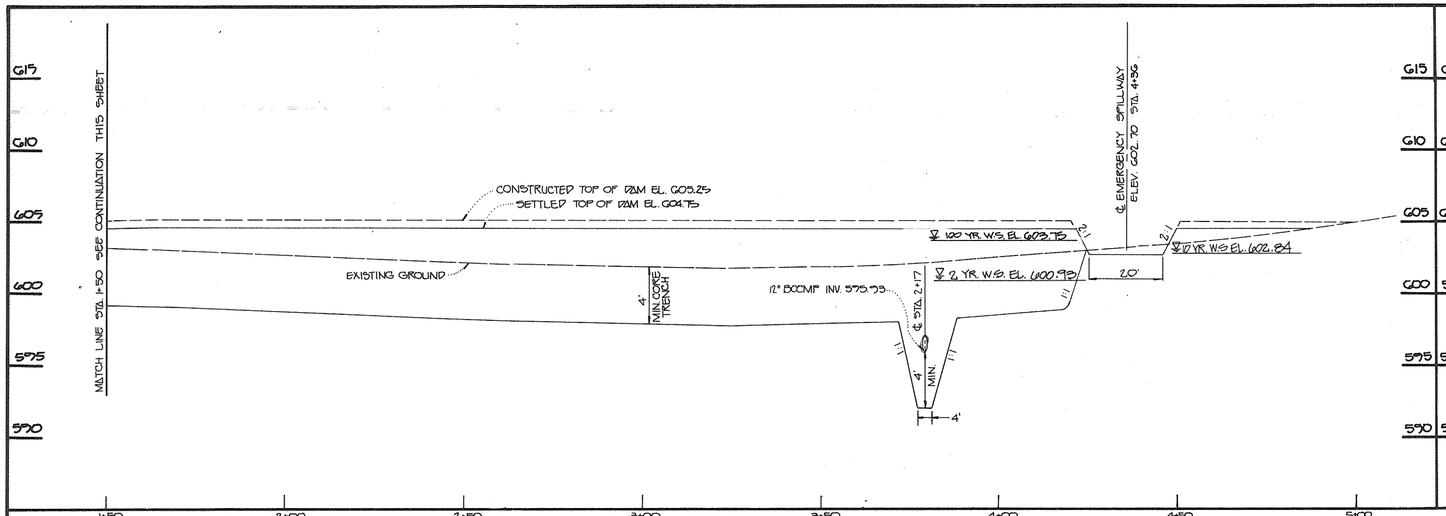
PROPERTY/SUBDIVISION				SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE				N/A	P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE TAX MAP NO.	ELEC. DIST.	CENSUS TR.
	17	R	THIRD		6030
WATER CODE			SEWER CODE		
N/A			N/A		

SWM POND AND SOIL BORING PROFILES

WESTERN MIDDLE SCHOOL

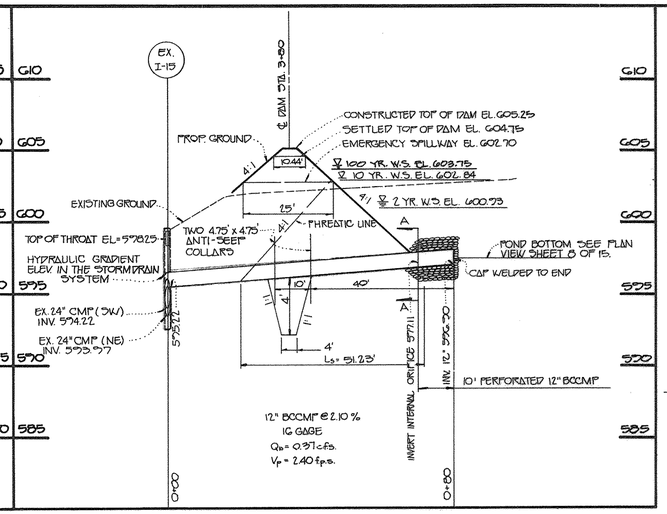
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: AS SHOWN
SHEET 8 OF 26

SDP 92-80



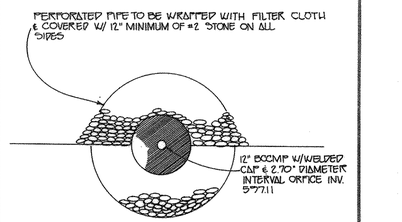
TOP OF DAM PROFILE

SCALE: 1" = 20' HORIZ.
1" = 5' VERT.



PRINCIPAL SPILLWAY PROFILE

SCALE: 1" = 20' HORIZ.
1" = 5' VERT.

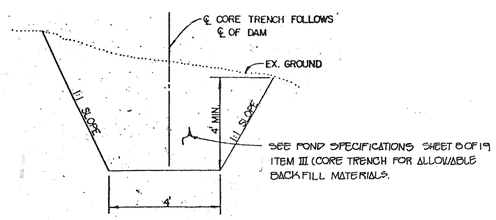


SECTION A-A

NO SCALE

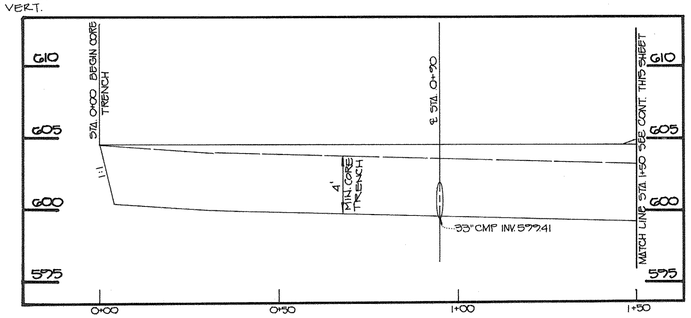
HAZZARD CLASS:

THE POND IS MOSTLY IN CUT AND IS CONSIDERED AN EXCAVATION POND THEREFORE IT IS DESIGNATED AS A HAZZARD CLASS 'A' POND



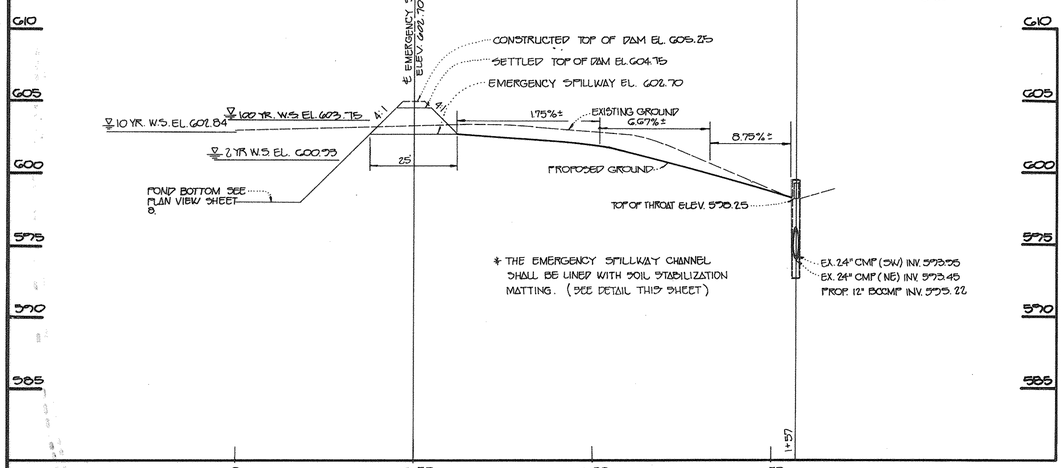
CORE TRENCH DETAIL

NO SCALE



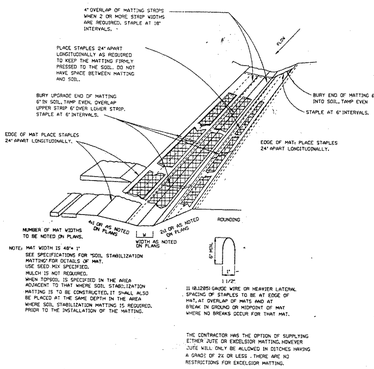
TOP OF DAM PROFILE

SCALE: 1" = 20' HORIZ.
1" = 5' VERT.

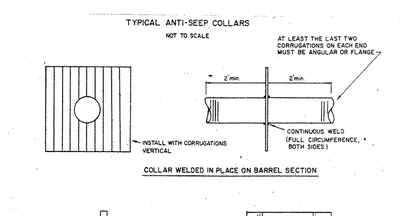


EMERGENCY SPILLWAY PROFILE

SCALE: 1" = 20' HORIZ.
1" = 5' VERT.



SOIL STABILIZATION MATTING PLACEMENT



OWNER AND DEVELOPER
HOWARD COUNTY BOARD OF EDUCATION
10770 M.P. ROUTE 108
ELLICOTT CITY 21043

STORM WATER MANAGEMENT POND CERTIFICATION AND APPROVAL

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION".

SIGNATURE OF DEVELOPER — DATE 2/17/92

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION".

SIGNATURE OF ENGINEER — DATE 2/13/92

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION. SOIL EROSION AND SEDIMENT CONTROL

U.S. SOIL CONSERVATION SERVICE — DATE 7/16/92

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

POND CONSTRUCTION CERTIFICATION

I CERTIFY THAT UPON COMPLETION OF CONSTRUCTION I WILL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE (O&M) OF THE SMALL POND. O&M WILL BE PERFORMED BY ME IN ACCORDANCE WITH THE SPECIFICATIONS ON THIS PLAN. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS OF THE POND BY SITE AND LOCAL AGENCIES.

SIGNATURE OF DEVELOPER — DATE 2/14/92

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 2/13/92

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE 2/14/92

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — DATE 7/14/92

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

APPROVED:

DISTRICT, HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — DATE 7/22/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 7/24/92

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER — DATE 7-20-92

APPROVED: DEPARTMENT OF PUBLIC WORKS.

FOR PRIVATE SYSTEMS AND ROADS.	STORM DRAINAGE
DIRECTOR, PUBLIC WORKS Acting	7/17/92 DATE
CHIEF, BUREAU OF ENGINEERING MLK	7-17-92 DATE

7/17/92

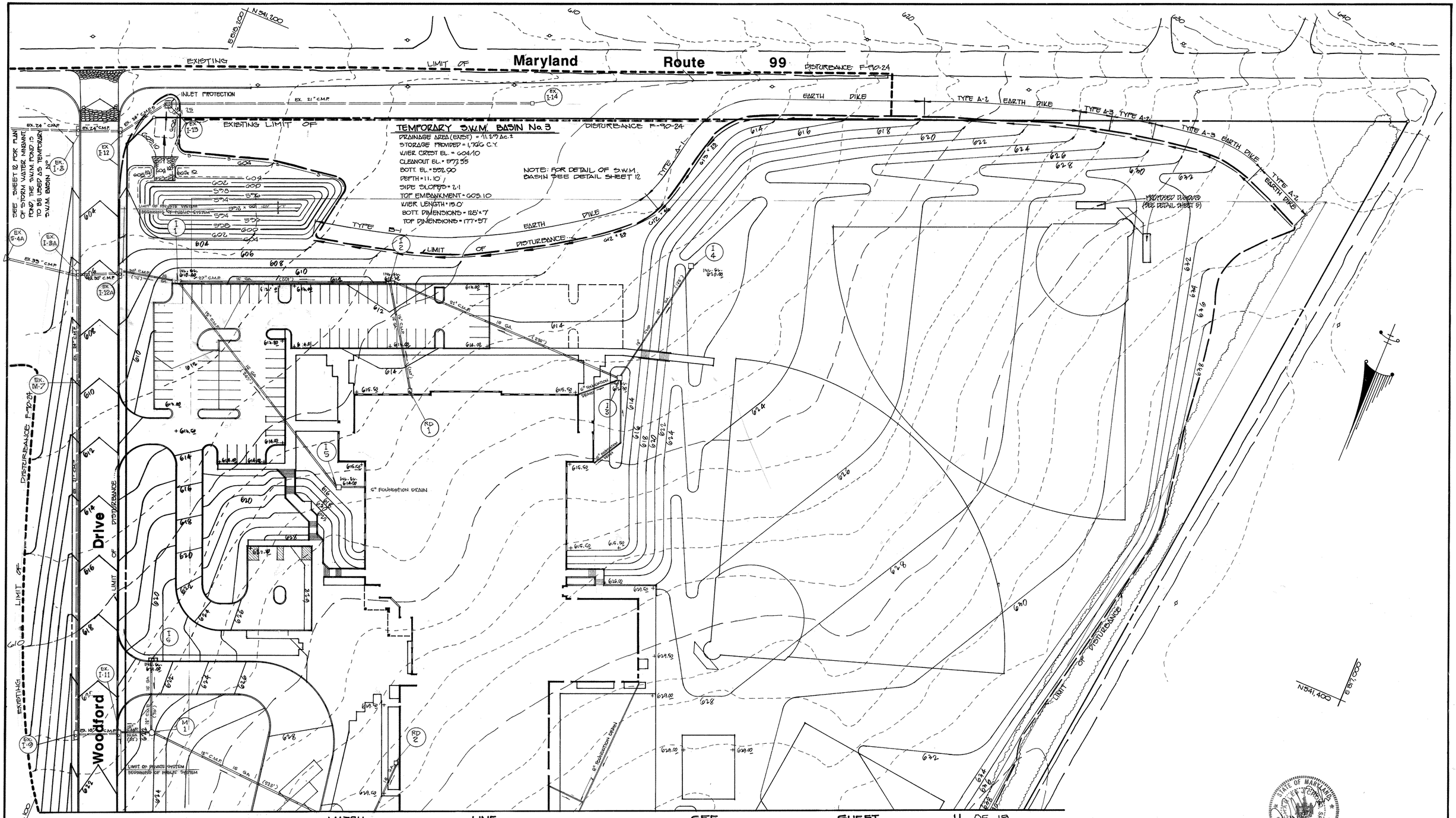
PROPERTY/SUBDIVISION		SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE		N/A	P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE MAP NO.	ELEC. DIST.	CENSUS TR.
	17	R		THIRD	6080
WATER CODE	N/A	SEWER CODE	N/A		

D.S./M. POND DETAILS AND PROFILES

WESTERN MIDDLE SCHOOL

THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: AS SHOWN
SHEET 9 OF 19 Z6

SDP 92-80



PLAN
SCALE: 1"=40'

NO.	REVISION	DATE
1	ADDED BASEBALL BUGOUTS	6/10/19

OWNER AND DEVELOPER
HOWARD COUNTY BOARD OF EDUCATION
10710 MD. ROUTE 108
ELLICOTT CITY 21043

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE 2/13/92

DEVELOPER'S CERTIFICATE

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SIGNATURE OF DEVELOPER — DATE 2/14/92

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
U.S. SOIL CONSERVATION SERVICE — DATE 7/16/92
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED:
DISTRICT HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED: DEPT. OF PLANNING AND ZONING
PLANNING DIRECTOR — DATE 7/22/92
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 7/21/92

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS.
HEALTH OFFICER JN — DATE 7-20-92

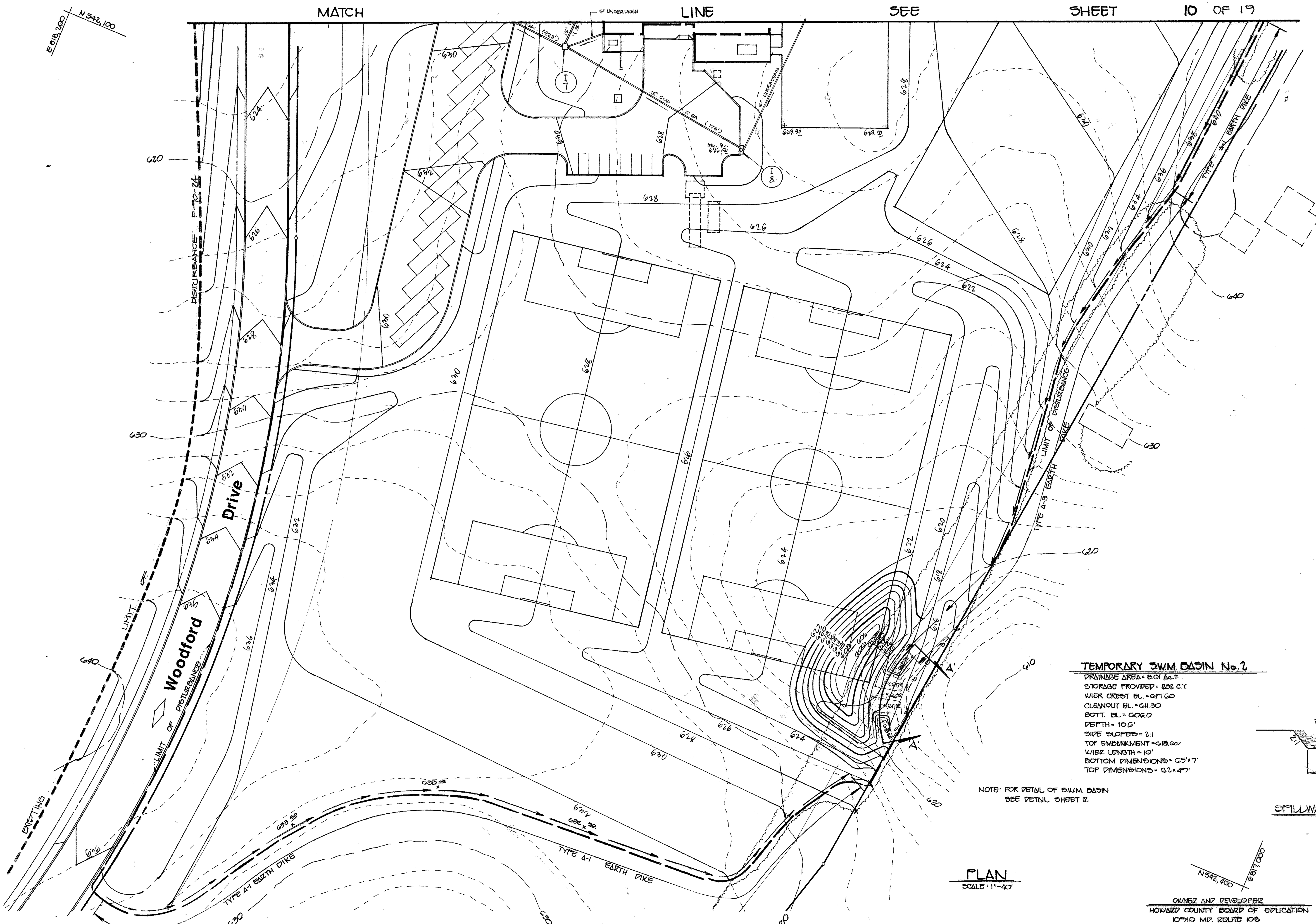
APPROVED: DEPARTMENT OF PUBLIC WORKS.
FOR PRIVATE STORM DRAINAGE SYSTEMS AND ROADS.
DIRECTOR, PUBLIC WORKS Acting — DATE 7/17/92
CHIEF, BUREAU OF ENGINEERING M.K. — DATE 7-17-92

PROPERTY/SUBDIVISION				SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE				N/A	P/O PARCEL 179
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE MAP NO.	ELEC. DIST.	CENSUS TR.
17	R			THIRD	6030
WATER CODE				SEWER CODE	
N/A				N/A	

GRADING AND SEDIMENT CONTROL
WESTERN MIDDLE SCHOOL
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: AS SHOWN
SHEET 10 OF 19

SDP 92-80

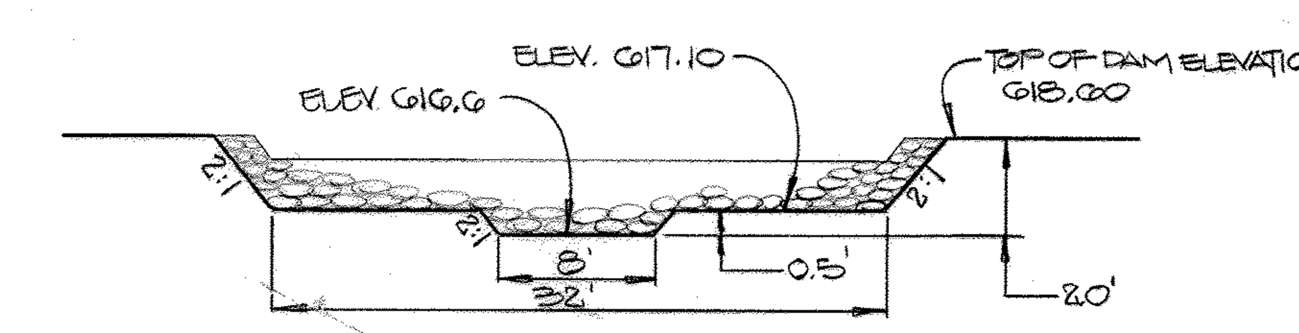
MATCH LINE SEE SHEET 10 OF 19



PLAN
SCALE: 1"=40'

TEMPORARY S.W.M. BASIN No. 2
DRAINAGE AREA = 8.01 Ac.±
STORAGE PROVIDED = 1252 C.Y.
WIER CREST EL. = 617.60
CLEANOUT EL. = 611.30
BOTT. EL = 606.0
DEPTH = 10.6'
SIDE SLOPES = 2:1
TOP EMBANKMENT = 618.60
WIER LENGTH = 10'
BOTTOM DIMENSIONS = 65'x7'
TOP DIMENSIONS = 122x47'

NOTE: FOR DETAIL OF S.W.M. BASIN SEE DETAIL SHEET 12



SECTION 'A'-'A'
SPILLWAY DETAIL, SEDIMENT BASIN N°. 2
NO SCALE

OWNER AND DEVELOPER
HOWARD COUNTY BOARD OF EDUCATION
10910 MD. ROUTE 108
ELLICOTT CITY, 21043

STATE OF MARYLAND
PROFESSIONAL ENGINEER

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE
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[illegible] 2/13/92
SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."
[illegible] 2/14/92
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
[illegible] 7/16/92
U.S. SOIL CONSERVATION SERVICE DATE
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED:
[illegible] 7/16/92
DISTRICT DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPT. OF PLANNING AND ZONING
[illegible] 7/22/92
PLANNING DIRECTOR DATE
[illegible] 7/21/92
CHIEF, DIVISION COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS
[illegible] 7-20-92
HEALTH OFFICER JN DATE

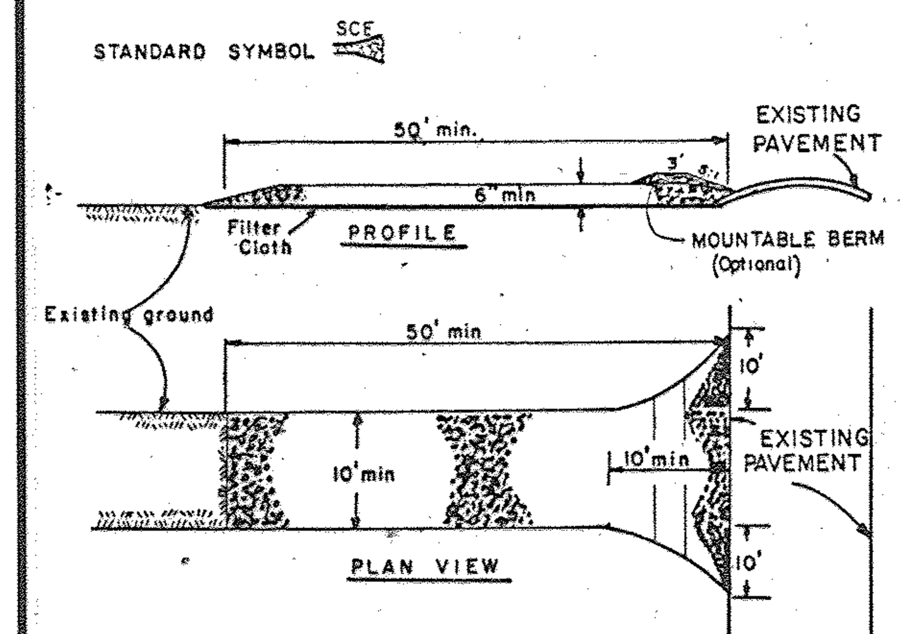
APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PRIVATE SYSTEMS AND ROADS. STORM DRAINAGE
[illegible] Acting 7/17/92
DIRECTOR, PUBLIC WORKS DATE
[illegible] 7-17-92
CHIEF, BUREAU OF ENGINEERING M.K. DATE

PROPERTY/SUBDIVISION			SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE			N/A	P/O PARCEL 119
PLAT NO./L.F.	BLOCK NO. 17	ZONE R	TAX/ZONE TAX MAP 10	ELEC. DIST. THIRD	CENSUS TR. 6030
WATER CODE N/A			SEWER CODE N/A	

GRADING AND SEDIMENT CONTROL
WESTERN MIDDLE SCHOOL
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: AS SHOWN
SHEET 11 OF 19 26

SDP 92-80

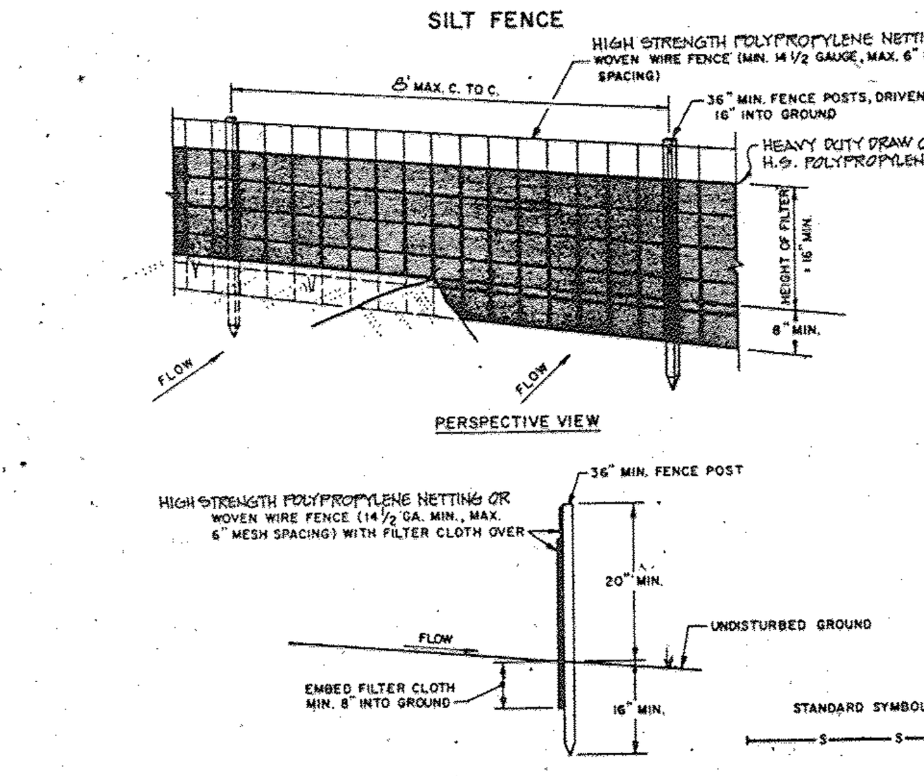
STABILIZED CONSTRUCTION ENTRANCE
not to scale



CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 60 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Periodic inspection and needed maintenance shall be provided after each rain.

SILT FENCE



SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. HIGH STRENGTH POLYPROPYLENE NETTING OR WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

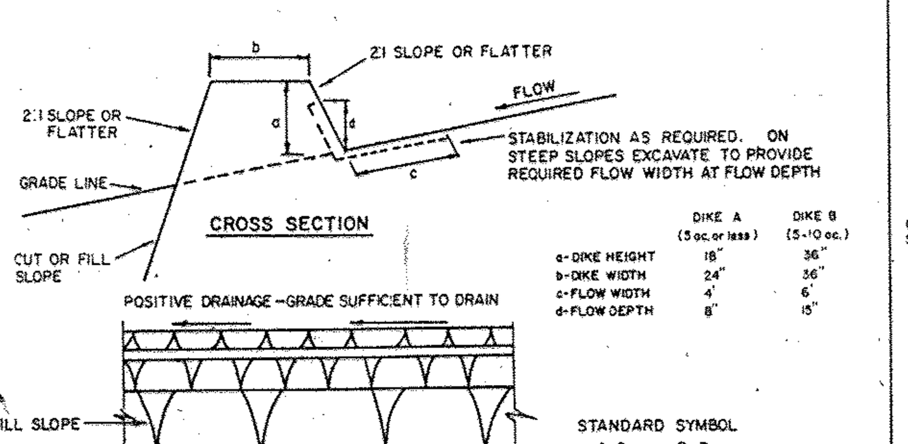
POSTS: STEEL EITHER T OR U TYPE OR 1¼" x 1¼" Min. (Actual) HARDWOOD

FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING OR HIGH STRENGTH POLYPROPYLENE NETTING

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

EARTH DIKE
not to scale



CONSTRUCTION SPECIFICATIONS

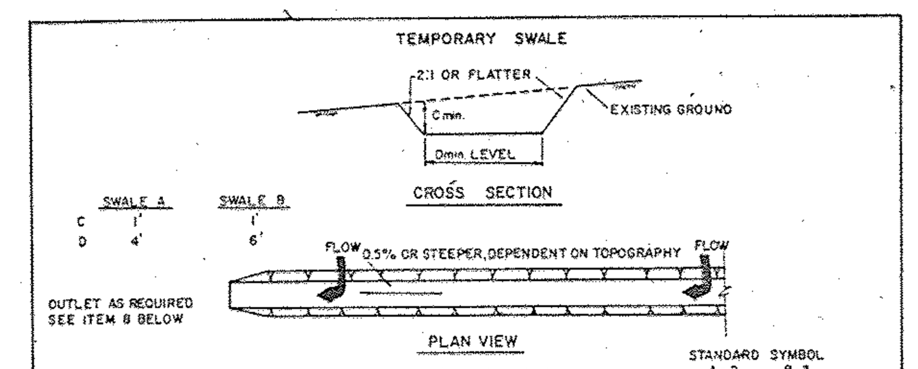
1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSIOR; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

TEMPORARY SWALE



CONSTRUCTION SPECIFICATIONS

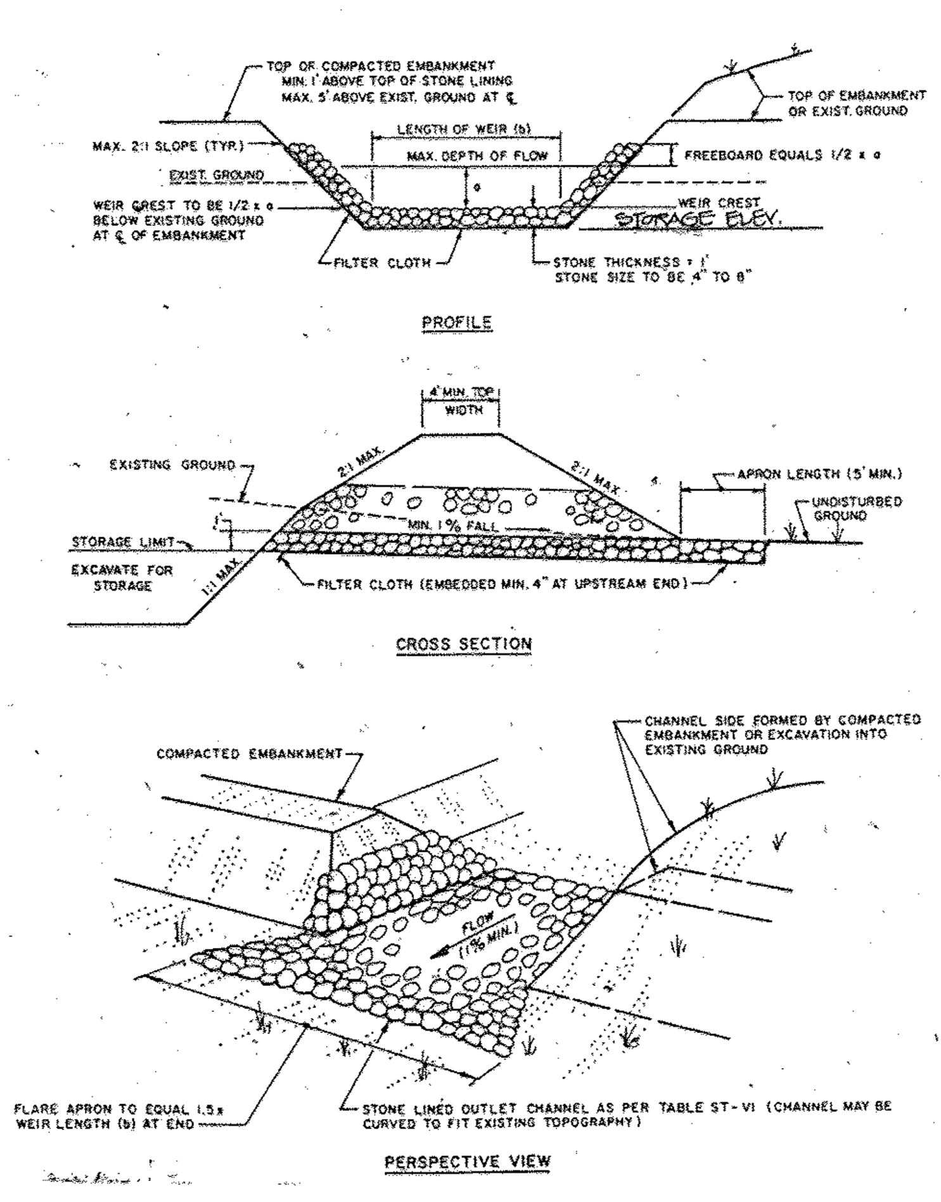
1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. STABILIZATION SHALL BE AS PER THE CHART BELOW:

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC OR LESS)	B (5 AC - 10 AC)
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
3	5.1-8.0%	SEED WITH JUTE OR EXCELSIOR; SOD	LINED RIP-RAP 4-8" RECYCLED CONCRETE EQUIVALENT
4	8.1-20%	LINED 4-8" RIP-RAP	ENGINEERED DESIGN

9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

TEMPORARY SEDIMENT BASIN 2 & 3



PERSPECTIVE VIEW

CONSTRUCTION SEQUENCE FOR TEMP. SEDIMENT BASIN

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 five (5) feet, measured at centerline of embankment.
3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
7. Stone used in the outlet channel shall be four (4) to eight (8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
9. The structure shall be inspected after each rain and repaired as needed.
10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

PERMANENT SEEDING NOTES:

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

SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULE.
1) PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ.FT.)
2) ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE-INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS/1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WILL ANCHORED STRAW.
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OR UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHTER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.
MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES:

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

SEEDBED PREPARATION: LOOSEN UPPER THREE-INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.)
SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.
MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

NOTE: THIS SEQUENCE OF CONSTRUCTION WILL BE IN CONJUNCTION WITH THE CONSTRUCTION SEQUENCE FOR SPRING VALLEY CHASE APPROVED UNDER F 90-24.

SEQUENCE OF CONSTRUCTION

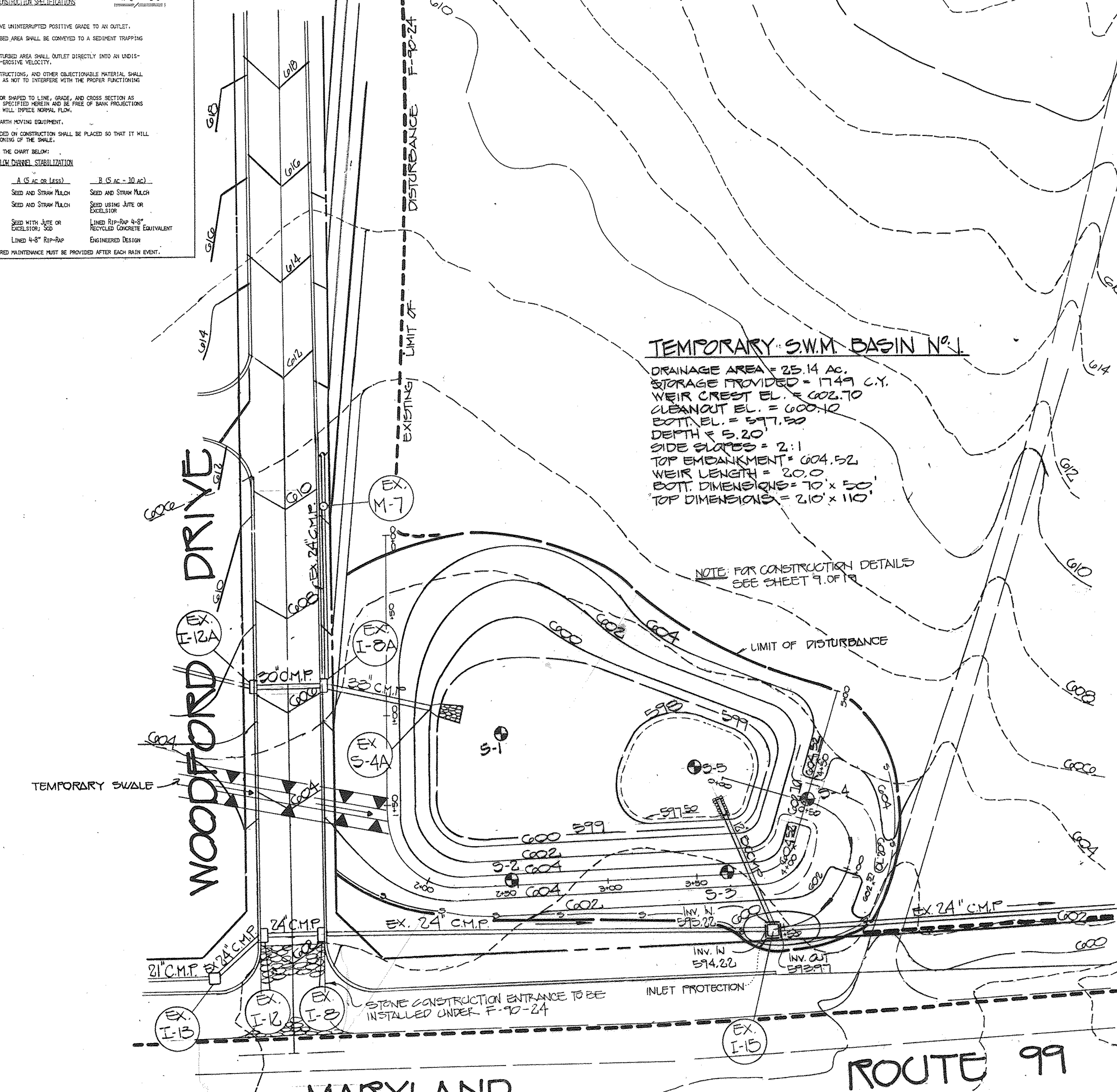
1) OBTAIN GRADING PERMIT.
2) NOTIFY HOWARD COUNTY OFFICE OF PERMITS AND INSPECTION (992-2437) 24 HOURS BEFORE STARTING WORK.
3) INSTALL SEDIMENT CONTROL MEASURES, TEMPORARY S.W.M. BASINS, EARTH DIKES AND SILT FENCE. TEMPORARY S.W.M. BASIN NO. 1 TO BE BUILT ACCORDING TO STORM WATER MANAGEMENT POND PROFILES AND DETAILS.
4) CLEAR AND GRUB SITE.
5) FINE GRADE SITE AND STABILIZE, GRADE ROADS AND PARKING AREAS TO SUBGRADE, AND INSTALL STORM DRAINS.
6) THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS.
7) SEDIMENT SHALL BE REMOVED FROM THE TEMPORARY S.W.M. BASINS WHEN THE CLEANOUT ELEVATIONS HAVE BEEN REACHED. SEDIMENT MUST BE PLACED UP HILL FROM THE TRAPS AND PONDS.
8) INSTALL CURB AND GUTTER AND SUB-BASE ON ROADS AND PARKING AREAS.
9) APPLY TACK COAT TO SUB-BASE AND LAY SURFACE COURSE.
10) CONVERT TEMPORARY S.W.M. BASIN NO. 1 INTO A STORM WATER MANAGEMENT POND. DRESS UP STRUCTURE, CONSTRUCT PROPOSED POOL AREAS, AND STABILIZE USING PERMANENT SEEDING. UPON SEDIMENT CONTROL INSPECTORS APPROVAL.
11) REMOVE ALL SEDIMENT CONTROL MEASURES, UPON SEDIMENT CONTROL INSPECTORS APPROVAL.
12) ALL DISTURBED AREAS DUE TO REMOVAL OF SEDIMENT CONTROL MEASURES SHALL BE GRADED AND STABILIZED BY PERMANENT SEEDING.

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).
2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL GREATER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (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.
6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7) SITE ANALYSIS:

TOTAL AREA OF SITE	61.748	ACRES
AREA DISTURBED	23.750	ACRES
AREA TO BE ROOFED OR PAVED	4.369	ACRES
AREA TO BE VEGETATIVELY STABILIZED	19.381	ACRES
TOTAL CUT	85,000	CU.YDS.
TOTAL FILL	85,000	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A	CU.YDS.

8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.



PLAN
SCALE: 1"-40'

STATE OF MARYLAND
PROFESSIONAL ENGINEER

OWNER AND DEVELOPER
HOWARD COUNTY BOARD OF EDUCATION
10910 MD. ROUTE 108
ELLICOTT CITY, 21043

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE

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

[illegible] 2/13/92
SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

[illegible] 4/14/92
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

James M. Helm / JMR 7/16/92
U.S. SOIL CONSERVATION SERVICE DATE

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

John R. Robertson 7/16/92
DISTRICT DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPT. OF PLANNING AND ZONING

[illegible] 7/22/92
PLANNING DIRECTOR DATE

[illegible] 7/21/92
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

[illegible] 7-20-92
HEALTH OFFICER JN DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PRIVATE SYSTEMS AND ROADS. STORM DRAINAGE

[illegible] Acting 7/17/92
DIRECTOR, PUBLIC WORKS DATE

[illegible] 7-17-92
CHIEF, BUREAU OF ENGINEERING M.K. DATE

PROPERTY/SUBDIVISION			SECTION/AREA		PARCEL/LOT NO.
SPRING VALLEY CHASE			N/A		P/O PARCEL 117
PLAT NO./L.F.	BLOCK NO. 17	ZONE R	TAX/ZONE TAX MAP 10	ELEC. DIST. THIRD	CENSUS TR. 6030
WATER CODE N/A			SEWER CODE N/A		

GRADING AND SEDIMENT CONTROL DETAILS
WESTERN MIDDLE SCHOOL
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: AS SHOWN
SHEET 12 OF 26

SDP 92-80

NO.	REVISION	DATE
1	ADDED BASEBALL DUGOUTS	6/18/13

KILDUFF NAGY · LANDSCAPE ARCHITECTS
10726 BALTIMORE AVENUE BELTSVILLE, MD 20705
(301) 595-4955
LAND PLANNING · LANDSCAPE ARCHITECTURE · PARK & RECREATION PLANNING

FISHER, COLLINS & CARTER, INC.
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[illegible] 2/13/92
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[illegible] 2/14/92
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

[illegible] 7/16/92
U.S. SOIL CONSERVATION SERVICE DATE

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APPROVED:

[illegible] 7/16/92
DISTRICT DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPT. OF PLANNING AND ZONING

[illegible] 7/22/92
PLANNING DIRECTOR DATE

[illegible] 7/21/92
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

[illegible] 7-20-92
HEALTH OFFICER JN DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PRIVATE SYSTEMS AND ROADS. STORM DRAINAGE

[illegible] Acting 7/17/92
DIRECTOR, PUBLIC WORKS DATE

[illegible] 7-17-92
CHIEF, BUREAU OF ENGINEERING M.K. DATE
7/17/92

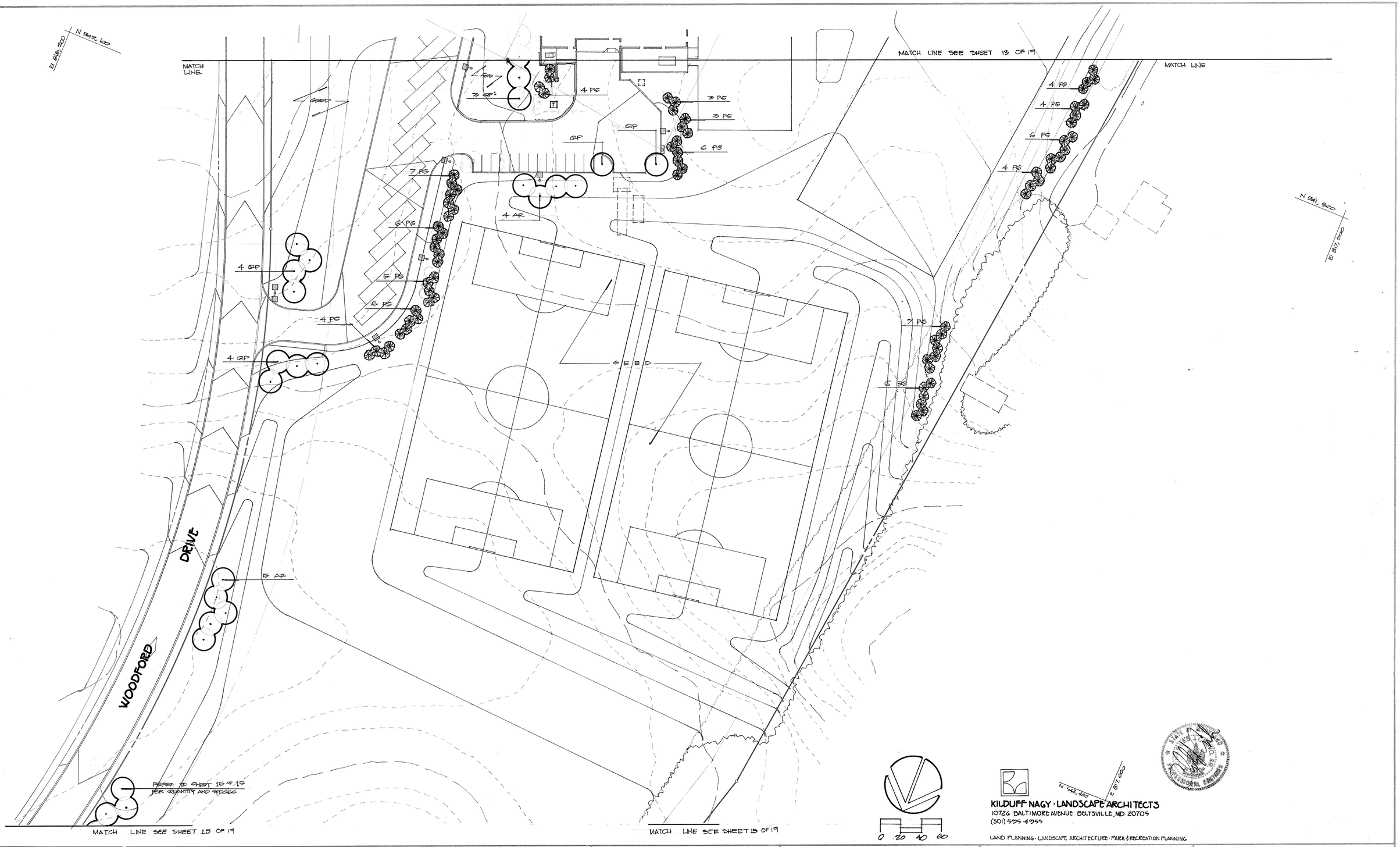
PROPERTY/SUBDIVISION	SECTION/AREA	PARCEL NO.
SPRING VALLEY CHASE	N/A	P/O PARCEL 119

PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
	19	R	TAX MAP 10	THIRD	6030

WATER CODE	SEWER CODE
N/A	N/A

PLANTING PLAN
WESTERN MIDDLE SCHOOL
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: 1" = 40'
SHEET 13 OF 18 26

SDP 92-80



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SIGNATURE OF ENGINEER — DATE 2/13/92

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SIGNATURE OF DEVELOPER — DATE 7/14/92

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE — DATE 7/16/92

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

APPROVED:

DISTRICT HOWARD SOIL CONSERVATION DISTRICT — DATE 7/16/92

APPROVED DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — DATE 7/22/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 7/21/92

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER — DATE 7-20-92

APPROVED: DEPARTMENT OF PUBLIC WORKS
FOR PRIVATE SYSTEM OF ROADS AND STORM DRAINAGE

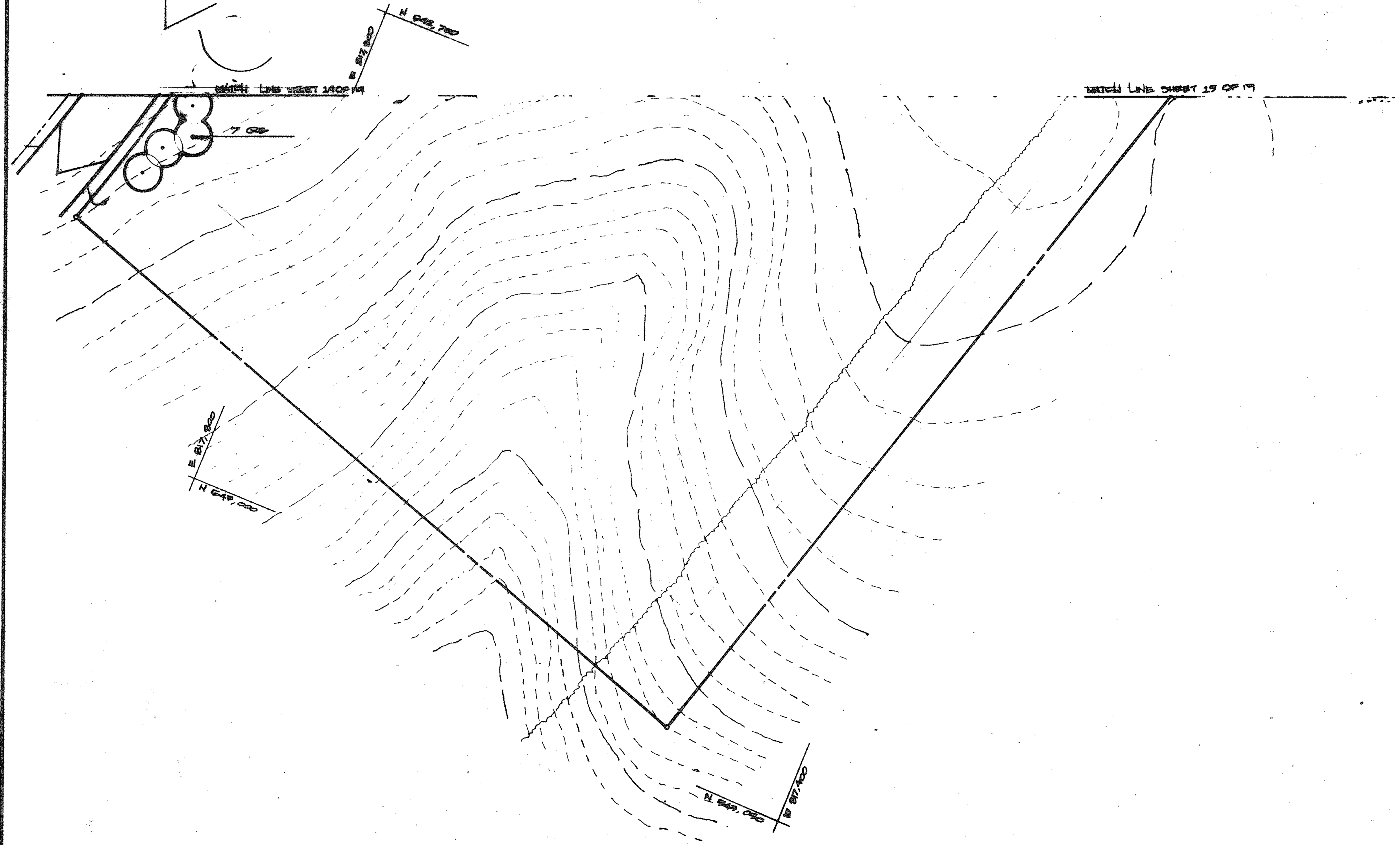
DIRECTOR, PUBLIC WORKS — DATE 7/17/92

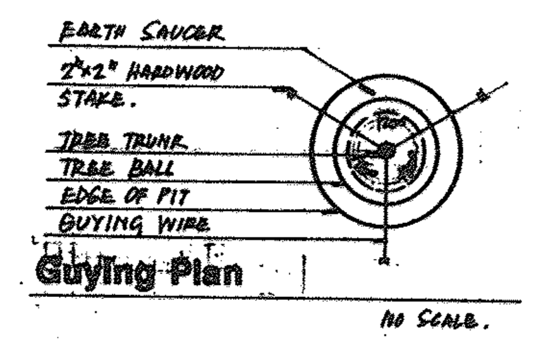
CHIEF, BUREAU OF ENGINEERING — DATE 7-17-92

PROPERTY/SUBDIVISION: STRING VALLEY CHASE				SECTION/AREA: N/A		PARCEL/LOT NO.: TO PARCEL 117
PLAT NO./L.F.	BLOCK NO.: 17	ZONE: R	TAX/ZONE: TAX MAP 13	ELEC DIST: THIRD	CENSUS TR: 6030	
WATER CODE: N/A				SEWER CODE: N/A		

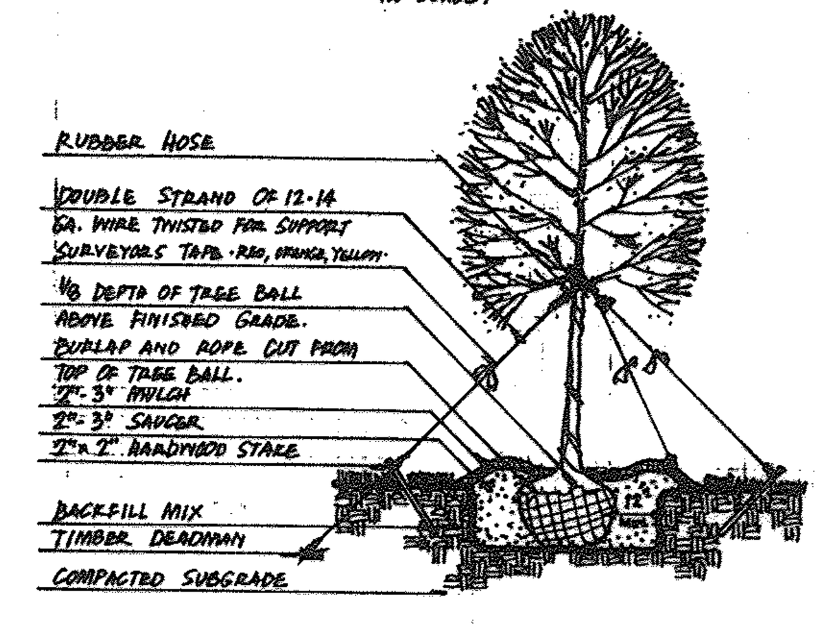
PLANTING PLAN
WESTERN MIDDLE SCHOOL
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: 1" = 40'
SHEET 14 OF 19 26

SDP 92-80





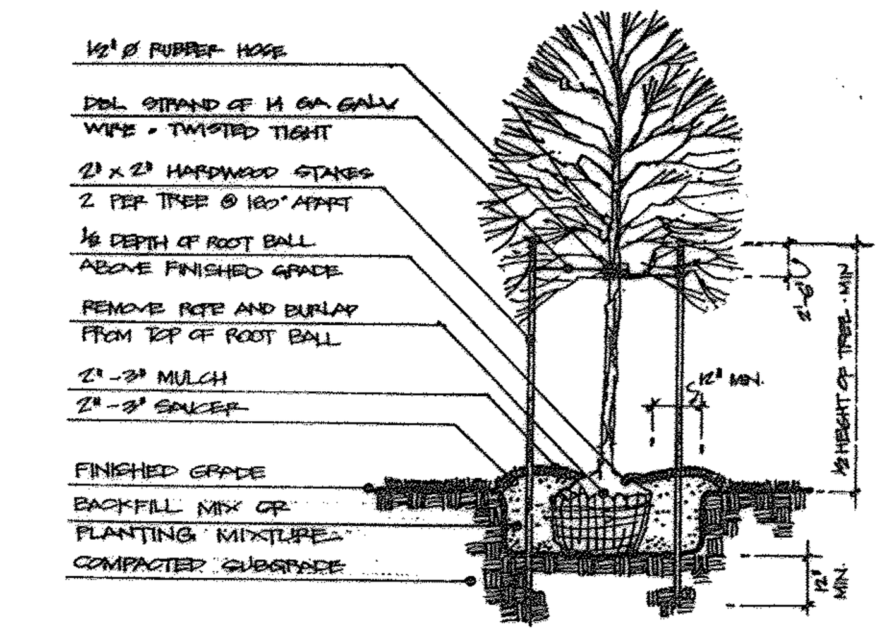
Guying Plan



TREE SUPPORT SCHEDULE

SIZE		SUPPORT
12'-14',	2½"-3" CAL.,	3 REQ'D, 12 GA. WIRE, ½" HOSE.
14'-16',	3"-4" CAL.,	3 REQ'D, 12 GA. WIRE, ½" HOSE.
16'-20',	4"-6" CAL.,	3 REQ'D, 12 GA. WIRE, ½" HOSE.
20'+,	6"+ CAL.	DEADMEN 3 REQ'D, 3/16" CABLE, 3/4" HOSE, AND 3/8" x 6" GALVANIZED TURNBUCKLE.

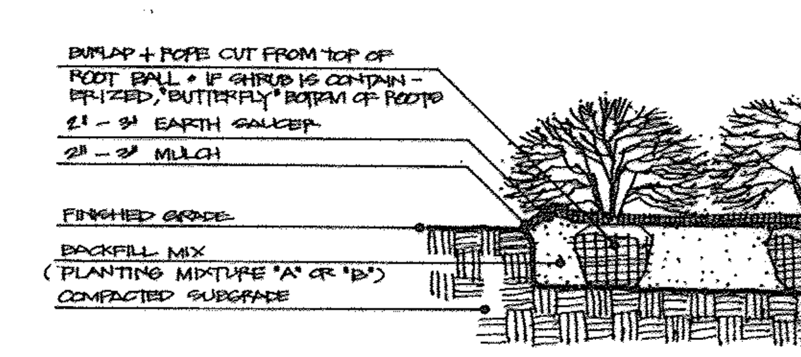
Tree Guying Detail



TREE SUPPORT SCHEDULE

SIZE	SUPPORT
6'-8'; 1"-1½" CAL.	6' STAKE; 2 REQ'D; 14 GA. WIRE; ½" HOSE
8'-10'; 1½"-2" CAL.	6' OR 8' STAKE; 2 REQ'D; 14 GA. WIRE; ½" HOSE
10'-12'; 2"-2½" CAL.	8' STAKE; 2 REQ'D; 14 GA. WIRE; ½" HOSE

Tree Staking Detail



Shrub Planting Detail

Plant List

KEY	QUAN.	BOTANICAL NAME ◦ COMMON NAME	SIZE & CONDITION		REMARKS
AR	33	ACER RUBRUM 'OCTOBER GLORY' ◦ OCTOBER GLORY RED MAPLE	2½"-3" CALIPER	B&B	
CSR	46	COTONEASTER SALICIFOLIA 'REPANDENS' ◦ WILLOWLEAF COTONEASTER	24"-30" SPREAD	CONT.	@ 3'-0" O.C.
ICH	28	ILEX CRENATA 'HELLERI' ◦ HELLER HOLLY	18"-24" SPREAD	CONT.	@ 2'-0" O.C.
JCS	36	JUNIPERUS CHINENSIS 'SARGENTII' ◦ SARGENT'S JUNIPER	18"-24" SPREAD	CONT.	@ 2'-6" O.C.
JC	30	JUNIPERUS CONFERTA ◦ SHORE JUNIPER	18"-24" SPREAD	CONT.	@ 2'-6" O.C.; PLANT UPPERMOST ROW 8" FROM EDGE OF WALL MAX.
PS	118	PINUS STROBUS ◦ EASTERN WHITE PINE	6'-8' HEIGHT	B&B	PLANT @ APPROX 8' O.C.; MAX 18" BETWEEN WHORLS
PCT	23	PRUNUS CERASIFERA 'THUNDERCLOUD' ◦ PURPLE LEAF PLUM	8'-10' HEIGHT	B&B	
PCR	8	PYRUS CALLERYANA 'REDSPIRE' ◦ REDSPIRE PEAR	10'-12' HEIGHT	B&B	
QB	10	QUERCUS BOREALIS ◦ NORTHERN RED OAK	2½"-3" CALIPER	B&B	
QP	25	QUERCUS PALUSTRIS ◦ PIN OAK	2½"-3" CALIPER	B&B	
QP[1]	12	QUERCUS PALUSTRIS ◦ PIN OAK	4½"-5" CALIPER	B&B	
TMD	40	TAXUS MEDIA 'DENSIFORMIS' ◦ JAPANESE SPREADING YEW	30"-36" SPREAD	B&B	@ 3'-0"; SHEAR AS HEDGE
JCS	19	JUNIPERUS CHINENSIS 'SARGENTII' ◦ SARGENT'S JUNIPER	24" SPREAD MIN.	CONT.	@ 2'-6" O.C.

LOT NO.	STREET ADDRESS
	ADDRESS CHART

Planting Notes

1. All plant material shall be in conformance with the project specifications. Shade and flowering trees shall be matched in groups.
2. All areas disturbed in construction not receiving paving or plant material shall be seeded or sodded as shown on the Plan with the specified seed mix.
3. Plant quantities are provided for the contractor's convenience only. If discrepancies exist between the Plan and the Plant List quantities, the quantities as shown on the Plan shall take precedence.
4. Any proposed substitutions shall be made prior to bidding. Refer to project specifications.
5. This Plan to be used for planting, seeding, and sodding only.
6. The contractor is to verify the locations of underground utilities prior to plant material installation.
7. A minimum of 18' has been provided between the building and shade trees in order to maintain fire access around the building.

0 20 40 60

KILDUFF NAGY·LANDSCAPE ARCHITECTS
10726 Baltimore Avenue Beltsville, MD 20705
(301) 595-4955
Land Planning · Landscape Architecture · Park and Recreation Planning

STATE OF MARYLAND
PROFESSIONAL ENGINEER

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE

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

[illegible] 2/13/92
SIGNATURE OF ENGINEER — DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

[illegible] 2/14/92
SIGNATURE OF DEVELOPER — DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

[illegible] 7/16/92
U.S. SOIL CONSERVATION SERVICE — DATE

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

[illegible] 7/16/92
DISTRICT HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: DEPT. OF PLANNING AND ZONING

[illegible] 7/22/92
PLANNING DIRECTOR — DATE

[illegible] 7/21/92
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

[illegible] 7-20-92
HEALTH OFFICER JN — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PRIVATE SYSTEMS AND ROADS. STORM DRAINAGE

[illegible] Acting 7/17/92
DIRECTOR, PUBLIC WORKS — DATE

[illegible] 7-17-92
CHIEF, BUREAU OF ENGINEERING M.K. — DATE

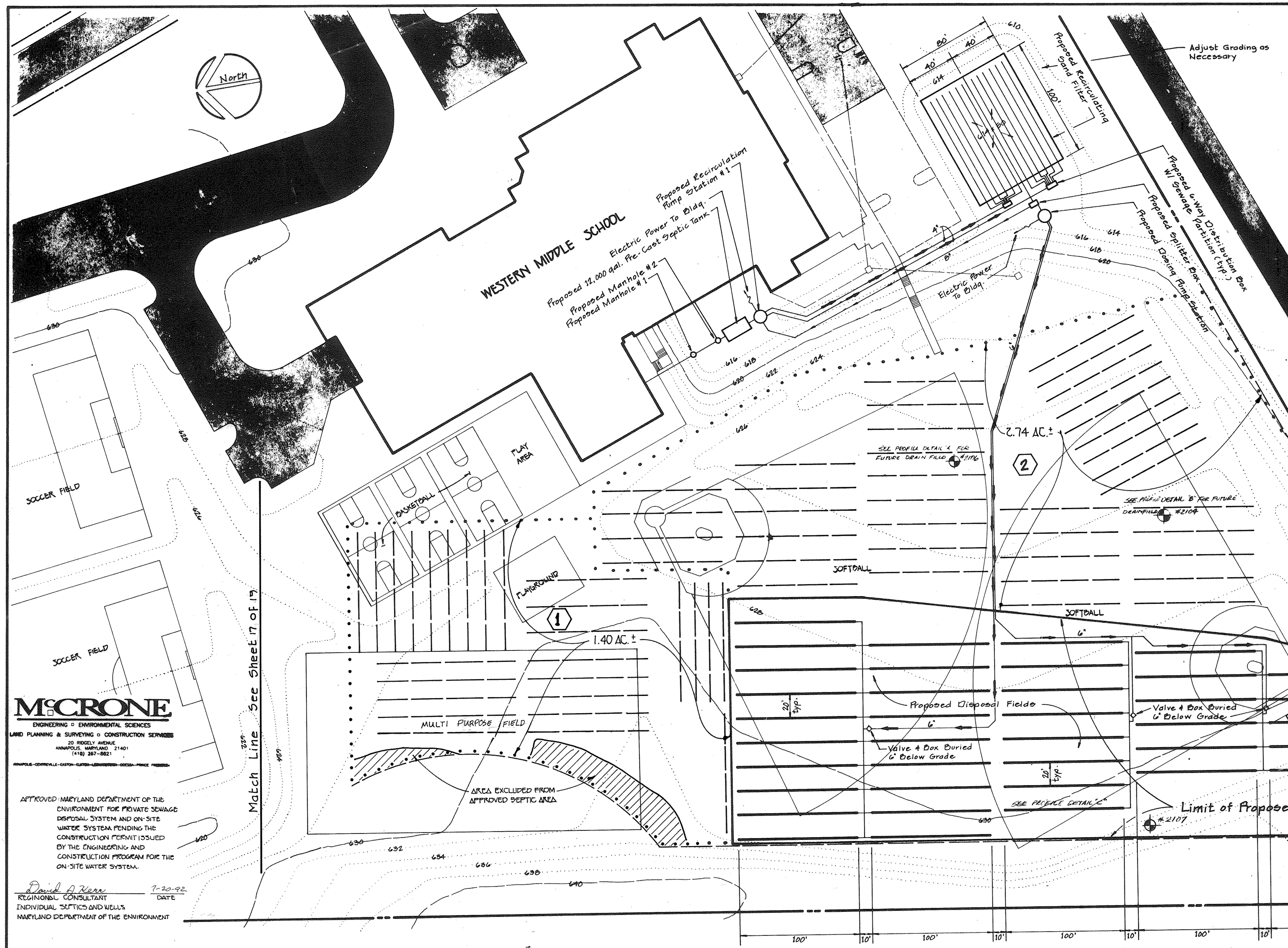
PROPERTY/SUBDIVISION			SECTION/AREA	PARCEL/LOT NO.
SPRING VALLEY CHASE			N/A	P/O PARCEL 17

PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
	17	R	TAX MAP 10	THIRD	6030

WATER CODE	SEWER CODE
N/A	N/A

PLANTING PLAN
WESTERN MIDDLE SCHOOL
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: FEBRUARY 12, 1992
SCALE: 1" = 40'
SHEET 15 OF 26

SDP 92-80



General Notes :

1. Daily generated flows, percolation test notes, strata and locations, disposal trench loading factor, and private sewage easement areas have been furnished on a previously approved "Percolation Certification Plan" and site, topography, grading, drainage and boundary information have been furnished on a current SDP 92-80, both prepared by Fisher, Collins and Carter, Inc.
2. Proposed septic system and future disposal areas have been engineered by: McCrone, Inc. 20 Ridgely Ave. Annapolis, Maryland 21401; Attn. Jack Pickwood, project manager or Rob Sell, P.E.

[illegible] 7.10.92
Robert M. Sell, P.E. Date

STATE OF MARYLAND ROBERT MICHAEL SELL NO. 17737 REGISTERED PROFESSIONAL ENGINEER

Legend :

Force Main	
Gravity Line	
Proposed Drainfield	
Future Drainfield	
Final Contours	·····630·····
Future Disposal Drainfield #1 and #2	1

McCRONE
ENGINEERING ▫ ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING ▫ CONSTRUCTION SERVICES
20 RIDGELY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-8621
ANNAPOLIS–CENTREVILLE–EASTON–ELKTON–LEONARDTOWN–ODESSA–PRINCE FREDERICK

APPROVED: MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR PRIVATE SEWAGE DISPOSAL SYSTEM AND ON-SITE WATER SYSTEM PENDING THE CONSTRUCTION PERMIT ISSUED BY THE ENGINEERING AND CONSTRUCTION PROGRAM FOR THE ON-SITE WATER SYSTEM.

David A. Kerr 7-20-92
REGIONAL CONSULTANT DATE
INDIVIDUAL SEPTICS AND WELLS
MARYLAND DEPARTMENT OF THE ENVIRONMENT

NO.	REVISION	DATE
1	ADDED BASEBALL DUGOUTS	6/18/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043
(301) 461-2855

ENGINEER'S CERTIFICATE

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[illegible] 2/13/12
SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE

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[illegible] 2/14/12
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

[illegible] 7/16/92
U.S. SOIL CONSERVATION SERVICE DATE

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APPROVED:

[illegible] 7/16/92
DISTRICT DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPT. OF PLANNING AND ZONING

[illegible] 7/22/92
PLANNING DIRECTOR DATE

[illegible] 7/31/92
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

[illegible] 7-21-92
HEALTH OFFICER JN DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PUBLIC WATER & SEWER AND STORM DRAINAGE SYSTEMS AND ROADS.

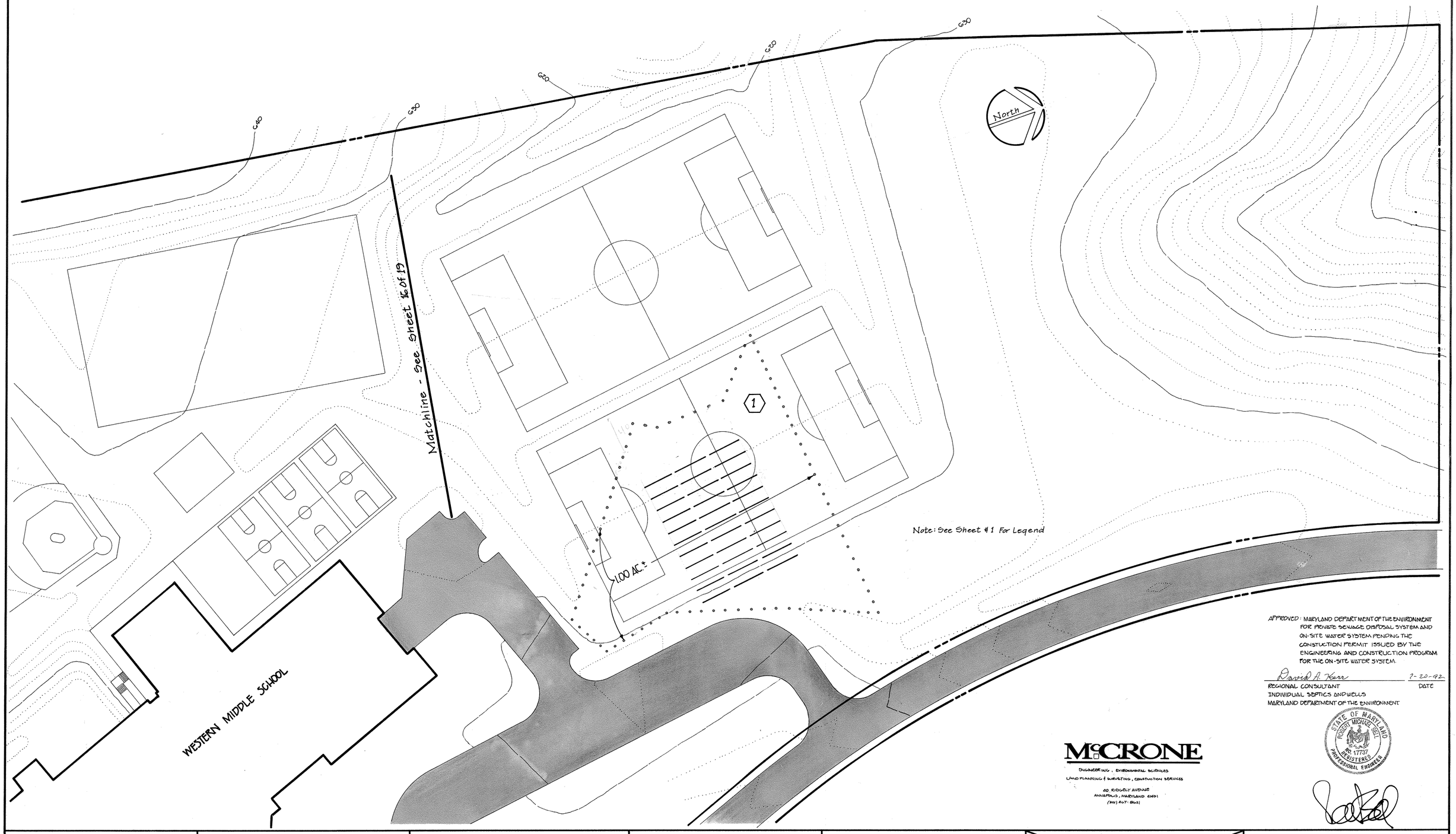
DIRECTOR, PUBLIC WORKS DATE

CHIEF, BUREAU OF ENGINEERING DATE

PROPERTY/SUBDIVISION			SECTION/AREA		PARCEL/LOT NO.
Spring Valley Chase			n/a		P/o Parcel 119
PLAT NO./L.F.	BLOCK NO. 19	ZONE R	TAX/ZONE T.M. 10	ELEC. DIST. Third	CENSUS TR. 6030
WATER CODE n/a			SEWER CODE n/a		

Site Plan
Sewage Treatment and Disposal System
Western Middle School
Third Election District
Howard County, Maryland
Date: June 25, 1992
Scale: 1"=40'
Sheet 16 of 26

SDP 92-80



APPROVED: MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR PRIVATE SEWAGE DISPOSAL SYSTEM AND ON-SITE WATER SYSTEM PENDING THE CONSTUCTION PERMIT ISSUED BY THE ENGINEERING AND CONSTRUCTION PROGRAM FOR THE ON-SITE WATER SYSTEM.

David A. Karr — 7-20-92
REGIONAL CONSULTANT — DATE
INDIVIDUAL SEPTICS AND WELLS
MARYLAND DEPARTMENT OF THE ENVIRONMENT

STATE OF MARYLAND — ROBERT MICHAEL GILL — NO. 17737 — REGISTERED PROFESSIONAL ENGINEER

McCRONE
ENGINEERING, ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING, CONSTUCTION SERVICES
80 RIDGELY AVENUE
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U.S. SOIL CONSERVATION SERVICE — 7/16/92 DATE

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APPROVED:

DISTRICT HOWARD SOIL CONSERVATION DISTRICT — 7/16/92 DATE

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR — 7/22/92 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — 7/31/92 DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER JN — 7-20-92 DATE

~~APPROVED: DEPARTMENT OF PUBLIC WORKS. FOR PUBLIC WATER & SEWER AND STORM DRAINAGE SYSTEMS AND ROADS.~~

~~DIRECTOR, PUBLIC WORKS — DATE~~

~~CHIEF, BUREAU OF ENGINEERING — DATE~~

PROPERTY/SUBDIVISION: Spring Valley Chase			SECTION/AREA: n/a		PARCEL/LOT NO.: Pt. Parcel 119
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE T.M. 10	ELEC. DIST. Third	CENSUS TR. 6030
WATER CODE: n/a			SEWER CODE: n/a		

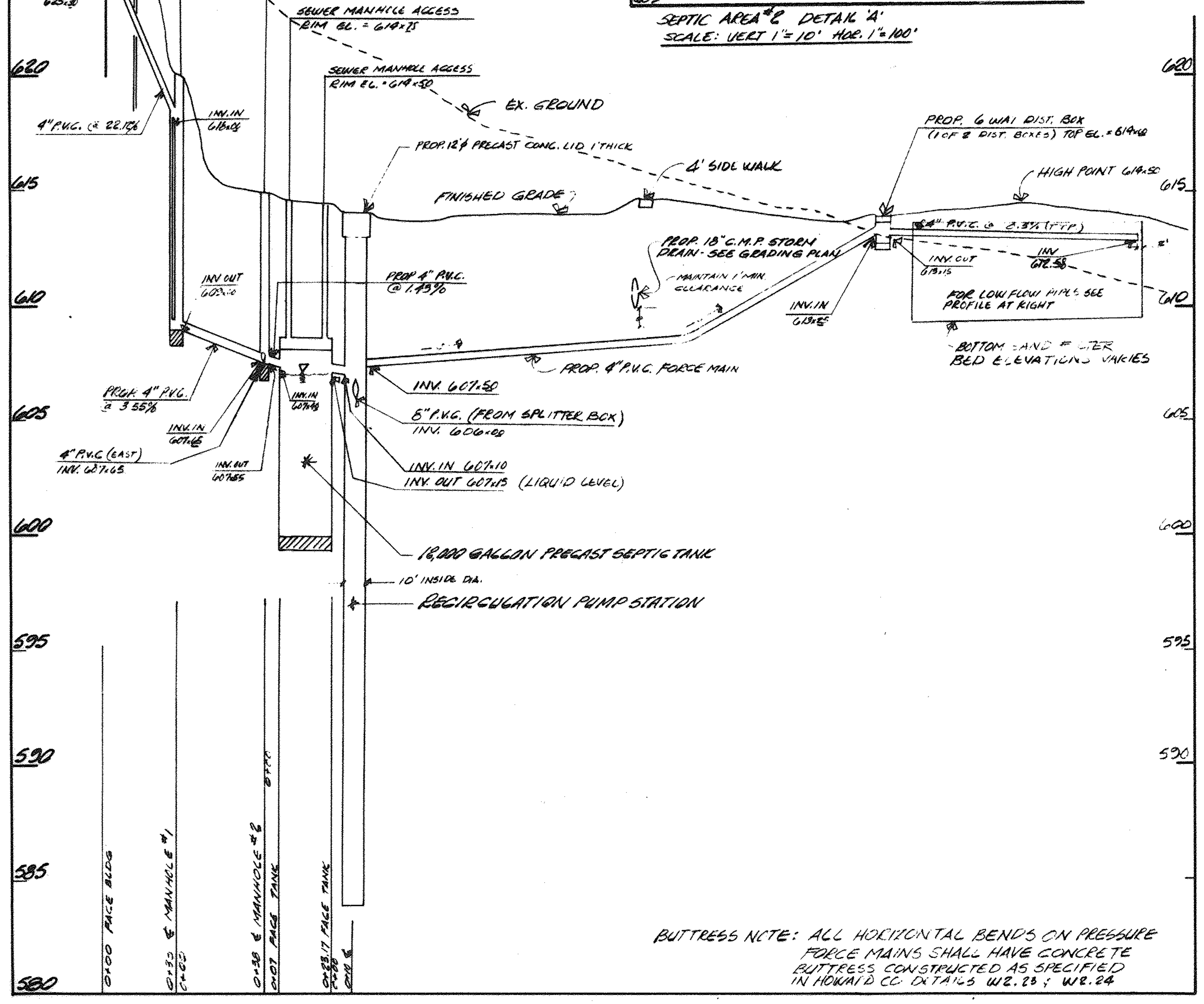
Site Plan

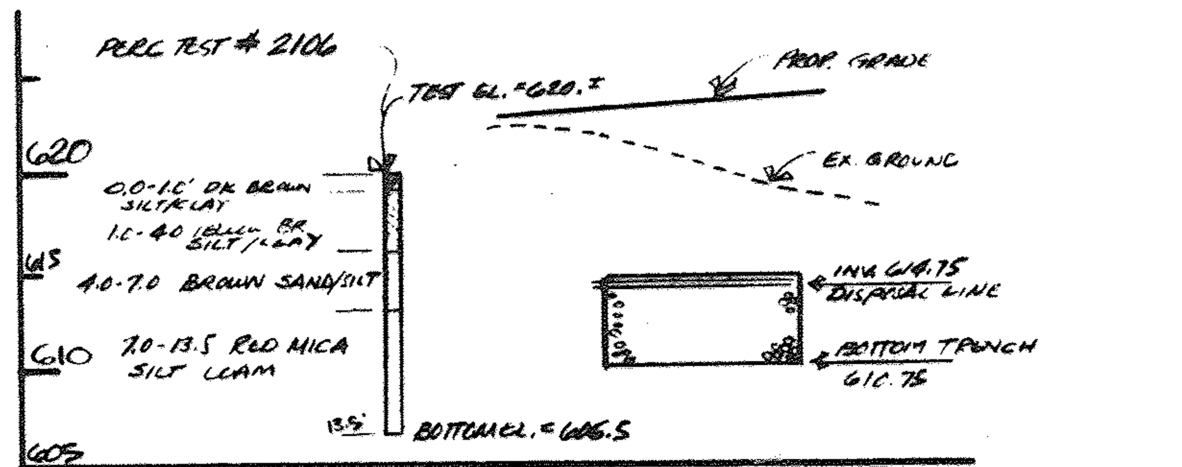
Sewage Treatment and Disposal System

Western Middle School

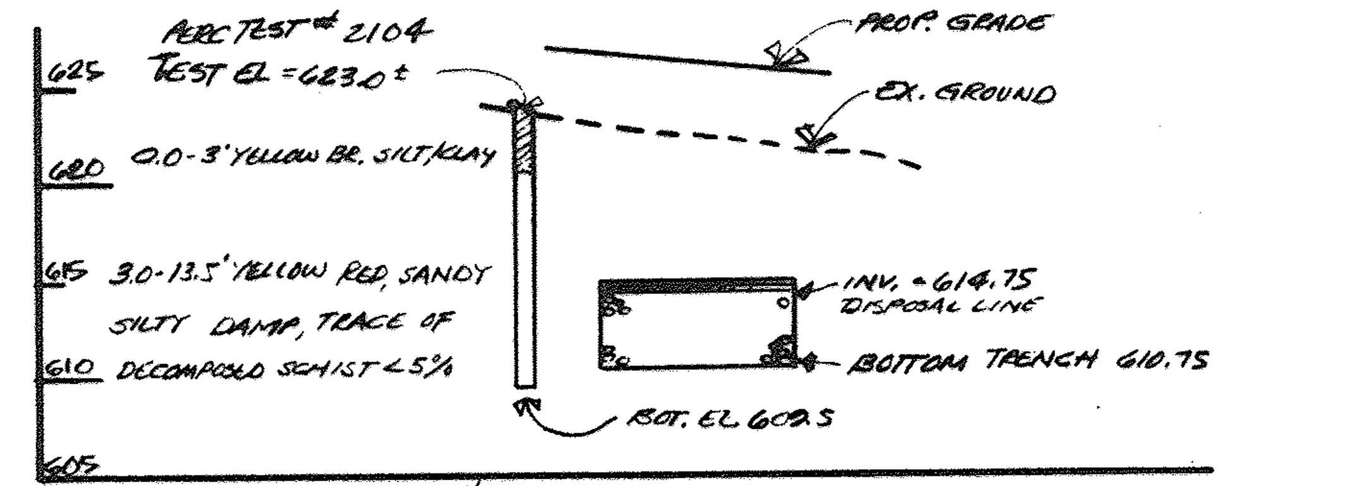
Third Election District
Howard County, Maryland
Date: June 25, 1992
Scale: 1" = 40'
Sheet 17 of 1826

SDP 92-80

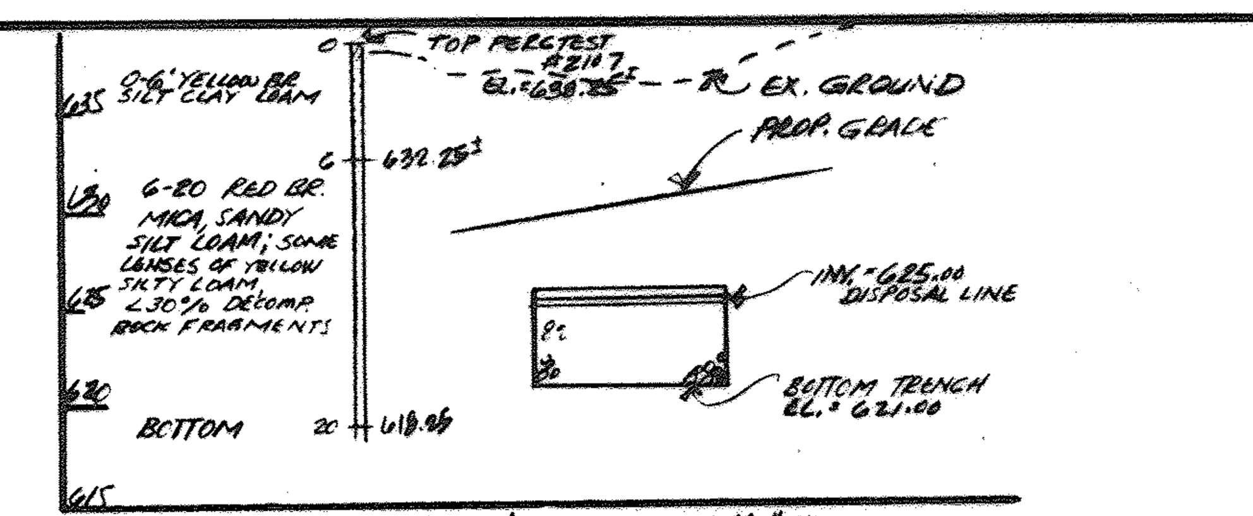




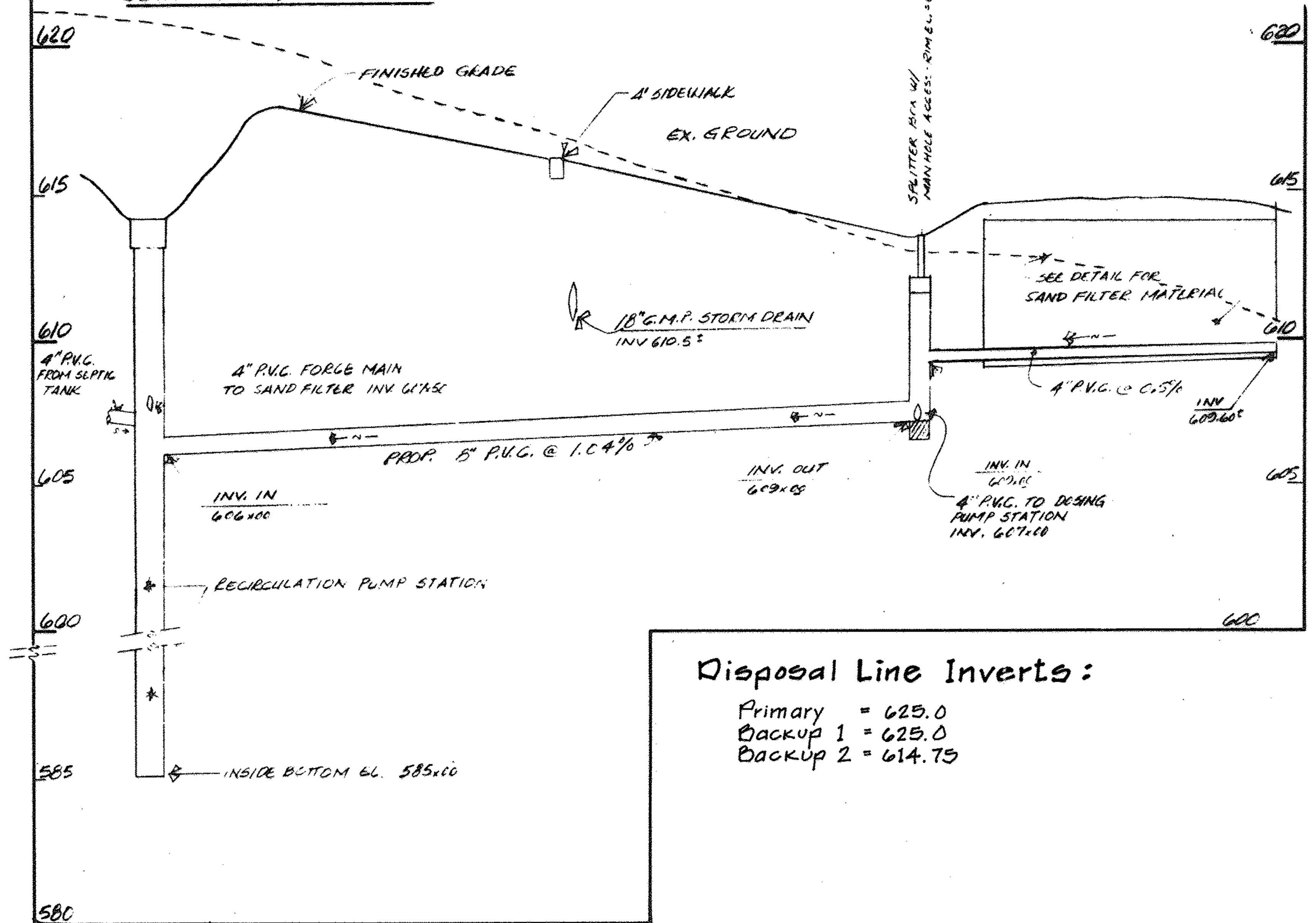
SEPTIC AREA #2 DETAIL 'A'
SCALE: VERT 1" = 10' HOR. 1" = 100'



SEPTIC AREA #2 DETAIL 'B'
SCALE: VERT. 1" = 10' HOR. 1" = 100'



PRIMARY SEPTIC AREA DETAIL "C"
SCALE: VERT: 1" = 10' HORIZONTAL 1" = 100'



SEPTIC PROFILE
SCALE: VERT. 1" = 4'
HORIZ. 1" = 40'

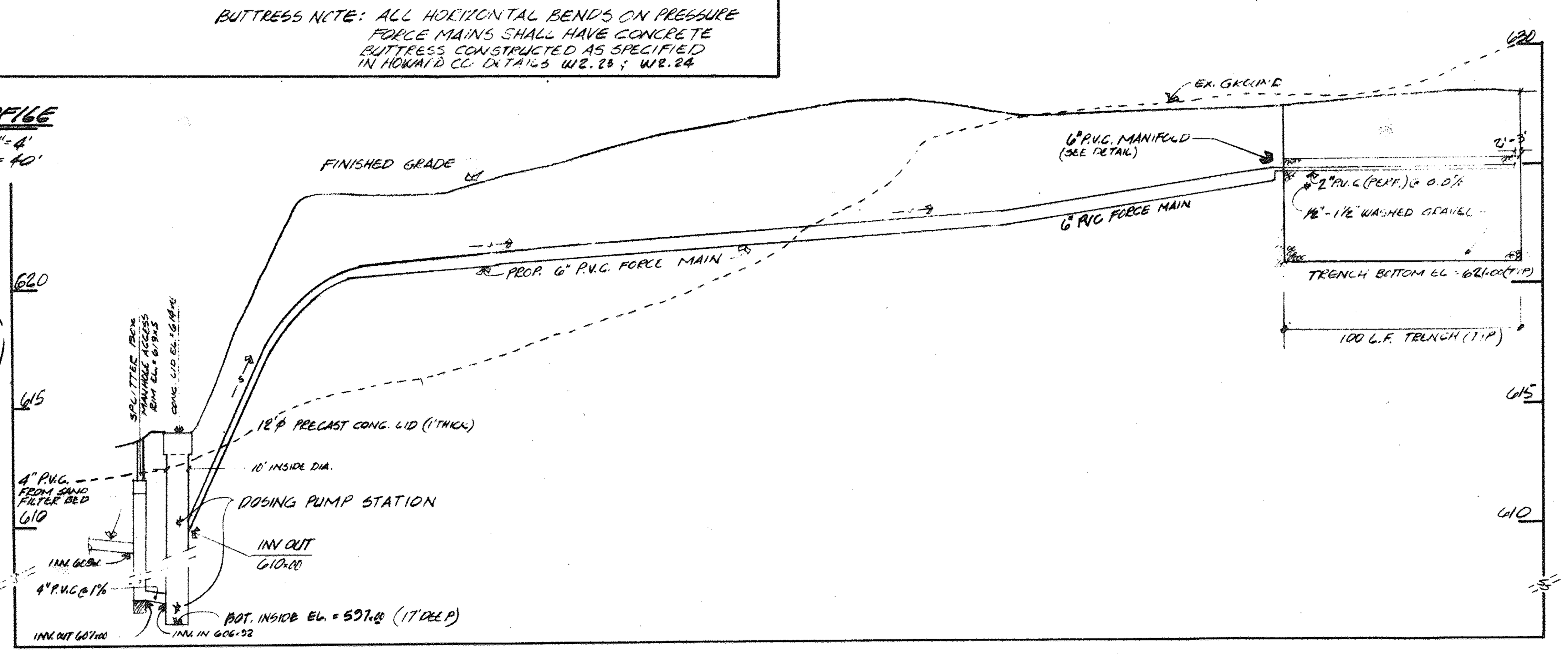
*Soil cover varies for the force main & manifolds with a minimun cover of 2 feet except in areas with standing waters which will have a minimun of 3 feet of cover.

BUTTRESS NOTE: ALL HORIZONTAL BENDS ON PRESSURE FORCE MAINS SHALL HAVE CONCRETE BUTTRESS CONSTRUCTED AS SPECIFIED IN HOWARD CO. DETAILS W2.23 & W2.24

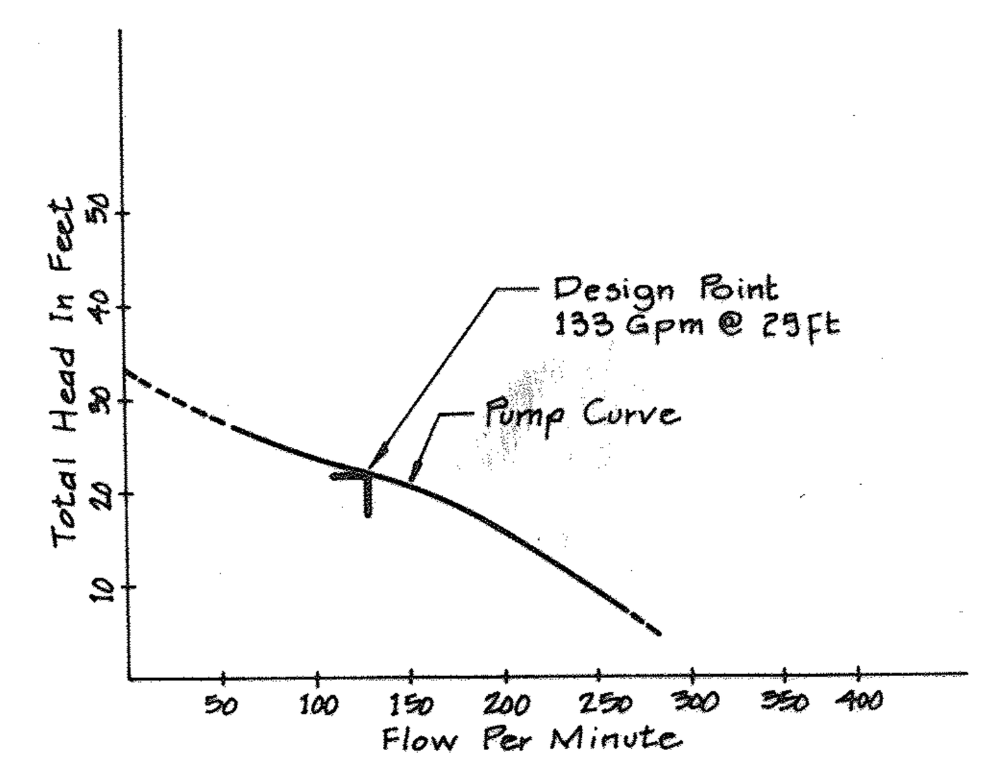
SEPTIC PROFILE
SCALE: VERT. 1" = 4'
HORIZ. 1" = 40'

Disposal Line Inverts:

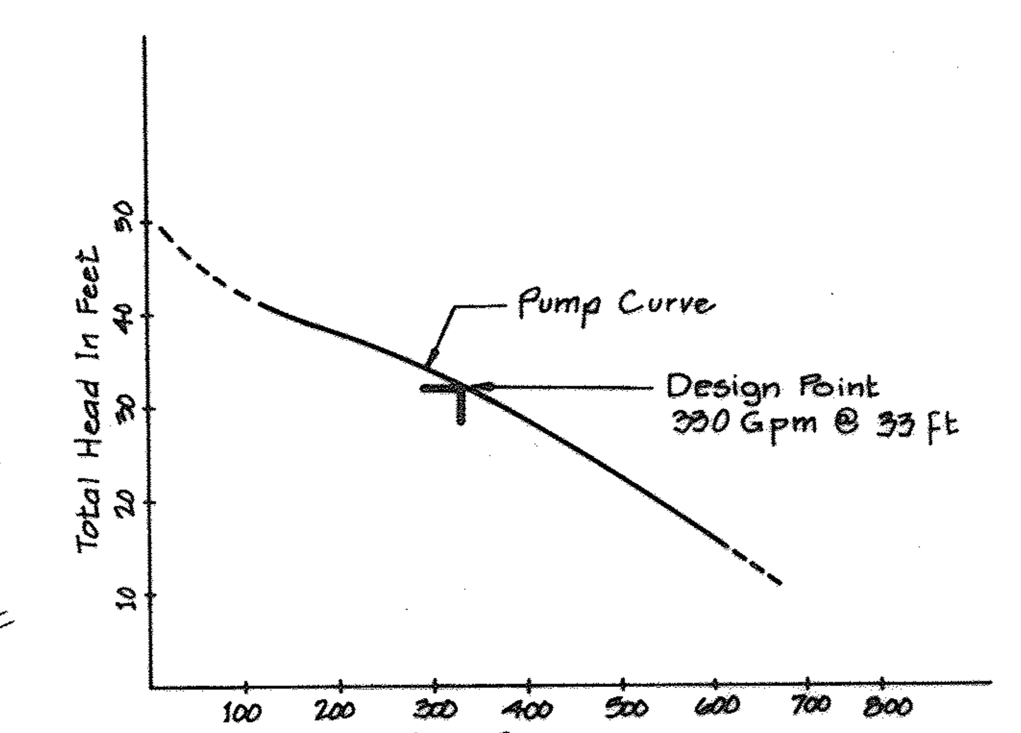
Primary = 625.0
Backup 1 = 625.0
Backup 2 = 614.75



SEPTIC PROFILE
SCALE: VERT. 1" = 4'
HORIZ. 1" = 40'



Pump Curve - Recirculation Pump
n.t.s.



Pump Curve - Dosing Pump
n.t.s.

CONTROL LOGIC

The front panel of each control panel for each pump station shall include the following:

- Eagle Signal HQ9 percentage timer, or equal
- Alternate/Pump #1 only/Pump #2 only 3 position selector switch
- Hand/Off/Automatic 3 position selector switch for each pump
- Green run light for each pump with push to test feature
- Running time meter for each pump
- Amber light for seal failure indication for each pump with push to test feature
- Red light for high water indication with push to test feature
- Amber light for overheat indication of sensor in submersible motor for each pump
- Acknowledge pushbutton to turn off red high water alarm light
- Permanent engraved labels for every switch, pushbutton and light
- Eagle Model PCC - 14/15 electronic counter, or equal (one each pump, Dosing Station only)

The control panel for each pump station shall contain the necessary relays, timers and other electrical components to make the pumps perform as follows:

A pump shall run for an adjustable period of the total cycle time (between 0% and 99% of the total cycle time). The total cycle time for the Recirculation Pump Station is 2 hours with a pumping time of 30 minutes at 133 gpm. The total cycle time for the Dosing Pumps Station is 4 hours with a pumping time of 5 minutes at 200 gpm. The pumps shall be controlled by an Eagle Signal HQ9 percentage timer, or equal. The control logic shall contain an alternator to alternate the pumps every time cycle. Each pump shall run once every other time cycle. Only one pump shall run in each time cycle. If the water level in the wet well is below the low water cut off, the float in the wetwell shall override the timer and not allow the pump to run until the water level in the wetwell is above the low water cut off restart elevation. The float shall only interrupt power to the pumps, not to the percentage timer.

If the water level in the wet well is above the high water elevation, the float in the wet well shall start the next pump in sequence and the pump shall continue to run until the water level drops to the high water alarm pump stop elevation and the timer times out.

The high water alarm float shall also light an exterior red flashing light and the red light on the control panel. Neither light shall go out until the operator pushes the acknowledge button and the level is below the high water alarm elevation.

In order to maintain an oxygen level in the wet well of the recirculation pump station, a blower shall be installed in the school with an air diffuser in the wet well. The percentage timer, or equa

MAINTENANCE

- Septic tank to be inspected and maintained on a regular basis, no less than twice annually.
- Septic tank shall be pumped out every 2 to 5 years by a licensed scavenger.
- Pump stations shall be maintained per manufacturer's recommendation.

Material Specification

Pipe:
Gravity - PVC; ASTM D-3034, SDR 35
Force Main - PVC; Schedule 40

Manhole
Howard County Standard G5.11
Drop Manhole -
Howard County Standard S1.32

Septic Tank -
12,000 Gallon
Model ST 8 x 10-12 w/Baffle;
Rotunda & Sons, Inc. or equal

Distribution Box -
6 Way precast concrete with surge partition

Splitter Box -
4' x 6' Precast

1/4" aluminum weir plates, alloy 6061-T6 with aluminum angles, alloy 6061 T6 and stainless steel hardware

Solid block, field constructed interior walls

All aluminum, where in contact with concrete shall receive a coating of heavy bodied bituminous paint.

Pumping Station -
10' diameter precast concrete, ASTM C478

Sandbeds -
Perforated pipe; ASTM D2729
Vent - PVC ASTM D-3034; SDR 35
Sand - Effective size 1.0 to 1.5 mm
Uniformity Coefficient <3.5
Gravel - 3/4" to 2 1/2"
Filter Fabric - Mirafi 140, or equal
Observation Pipe - PVC ASTM D-3034; SDR 35

Pumps -
Recirculation Pump Station
Hydromatic Model S3HX, or equal
1750 RPM
5.62" diameter impeller
2 Horsepower

Dosing Pump Station -
Hydromatic Model S4F, or equal
1750 RPM
7.25" diameter impeller
7.5 Horsepower

Blower
Recirculation Pump Station
Thomas Industries, Inc.
Pneumotive Division
Motor Operated Oil-less Rotary Pump
1/2 Horsepower
Model TA-0075-P, or equal

Distribution Trenches -
Pipe - PVC Schedule 40
Perforations 1/4" diameter holes at 6' o/c
Trench Backfill - 1/2" to 1 1/2" washed gravel
Filter Fabric - Mirafi 140, or equal

SHEETING AND SHORING

- The contractor shall provide materials for sheeting and shoring as may be required for safety of personnel, compliance with requirements of governmental agencies having jurisdiction or as necessary to complete the required work.
- The contractor shall maintain sheeting and shoring in excavations regardless of the time period excavations will be open.
- After State inspection all sheeting and shoring in excavations shall be withdrawn as the refilling is being done
- The contractor shall have no claim for extra compensation for the use of required sheeting and shoring.

GENERAL NOTES

- Maximum total design sewage flow allocation
722 Students x 15.3 GPD = 11,047 GPD
60 Staff x 15.3 GPD = 918 GPD
782 Staff x 15.3 GPD = 11,965 GPD Say: 12,000 GPD
- Trench design loading rate = 0.8 gallons per square foot per day
- No installation shall be started until approval has been obtained from the appropriate State and County agencies.
- The Contractor shall give a minimum of one week notice to the owner prior to start of construction.

McCRONE
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LAND PLANNING & SURVEYING ▫ CONSTRUCTION SERVICES
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ANNAPOLIS - CENTREVILLE - EASTON - ELKTON - ... - ODESSA - PRINCE FREDERICK

STATE OF MARYLAND
ROBERT MICHAEL SELL
NO. 17737
REGISTERED
PROFESSIONAL ENGINEER

APPROVED: MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR PRIVATE SEWAGE DISPOSAL SYSTEM PENDING THE CONSTRUCTION PERMIT ISSUED BY THE ENGINEERING AND CONSTRUCTION PROGRAM FOR THE ON-SITE WATER SYSTEM.

David A. Kerr 7-20-92
REGIONAL CONSULTANT DATE
INDIVIDUAL SEPTICS AND WELLS
MARYLAND DEPARTMENT OF THE ENVIRONMENT

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461-2855

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[illegible] 2/13/92
SIGNATURE OF ENGINEER DATE

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[illegible] 2/4/92
SIGNATURE OF DEVELOPER DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

James M. Helm 7/16/92
U.S. SOIL CONSERVATION SERVICE DATE

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

John R. Robertson 7/16/92
DISTRICT DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPT. OF PLANNING AND ZONING

[illegible] 7/22/92
PLANNING DIRECTOR DATE

[illegible] 7/21/92
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

[illegible] 7-21-92
HEALTH OFFICER JN DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS.
FOR PRIVATE STORM DRAINAGE SYSTEMS AND ROADS.

DIRECTOR, PUBLIC WORKS DATE

CHIEF, BUREAU OF ENGINEERING DATE

PROPERTY/SUBDIVISION				SECTION/AREA	PARCEL/LOT NO.
Spring Valley Chase				n/a	P/o Parcel 119
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
	19	R	T.M. 10	Third	6030
WATER CODE n/a			SEWER CODE n/a		

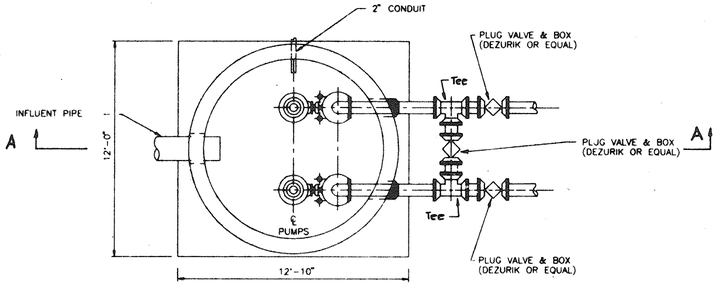
Profiles

Sewage Treatment and Disposal System

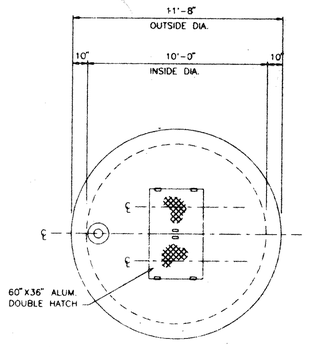
Western Middle School

Third Election District
Howard County, Maryland
Date: June 25, 1992
Scale: As Shown
Sheet 18 of 26

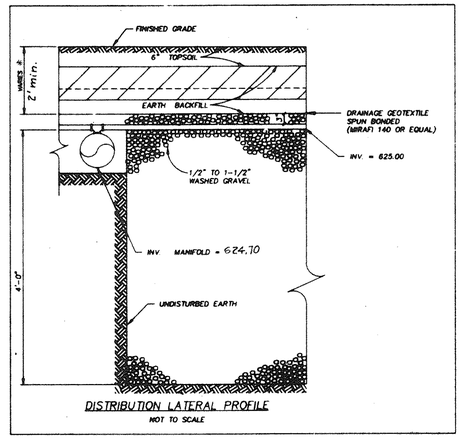
SDP 92-80



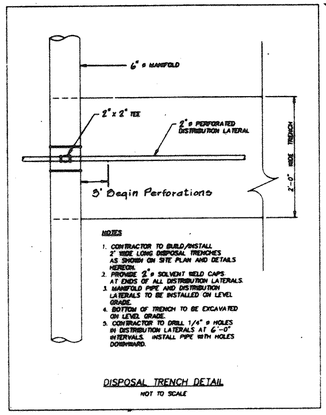
Plan - Pump Station
Top Slab Removed
Not To Scale



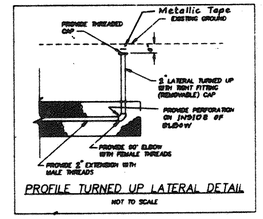
Plan - Pump Station Top Slab
Not To Scale



DISTRIBUTION LATERAL PROFILE
NOT TO SCALE

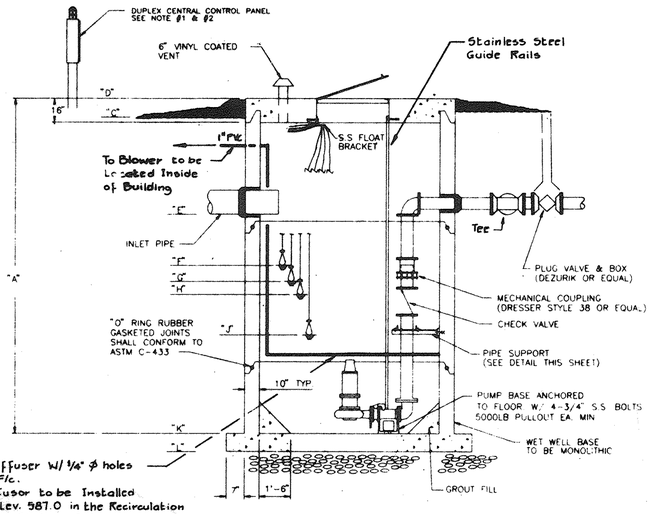


DISPOSAL TRENCH DETAIL
NOT TO SCALE

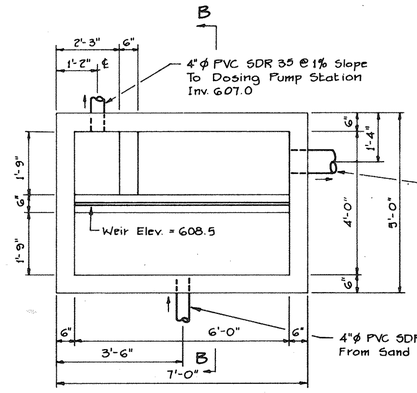


PROFILE TURNED UP LATERAL DETAIL
NOT TO SCALE

Installation of trench System in backup #2 involves deep trench construction, 14' maximum. Contractor retained to this job in the future should be alerted to this situation. Turned up Lateral at end of each lateral should be extended to 6 inches from the ground surface to facilitate water level measurements during start-up



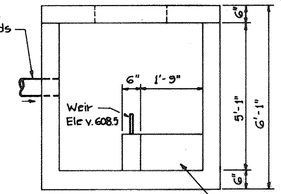
Section A-A
Not To Scale



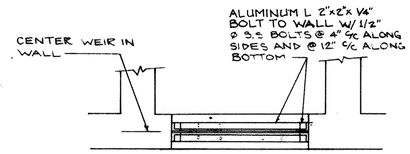
Plan - Splitter Box
Not To Scale

* TOP SOIL COVER VARIES FOR each lateral with a minimum cover of 2 feet except in areas with Standing waters which will have a minimum of 3 feet of cover.

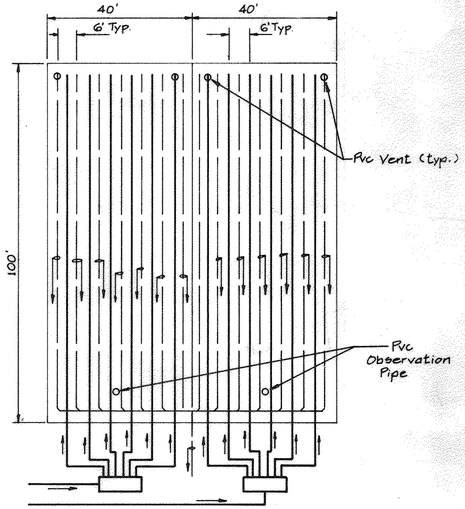
Maintain a minimum 6 feet undisturbed soil between bottom of trench and ground water



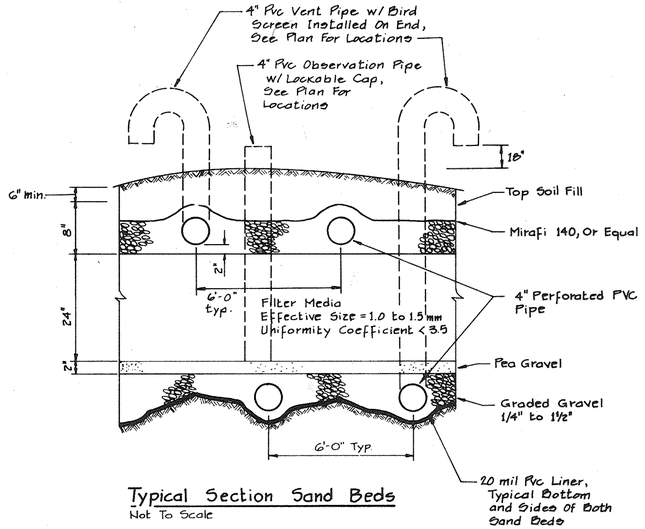
Section B-B
Not To Scale



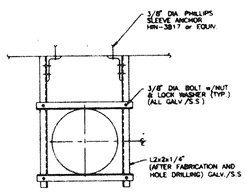
PLAN - TYPICAL WEIR DETAIL
NTS



Plan - Sand Beds
Scale: 1"= 20'



Typical Section Sand Beds
Not To Scale



PLAN - PIPE SUPPORT DETAIL
N.T.S.

DIMENSIONAL DATA		Recirc. Pump Station	Dosing Pump Station
"A" - STATION HEIGHT		29'	17'
		—	—
"C" - FINISHED GRADE ELEVATION		619.5	619.5
"D" - TOP OF WET WELL ELEVATION		614.0	614.0
"E" - INVERT OF INFLUENT ELEVATION		607.0	607.0
"F" - HIGH WATER ALARM/PUMP START		606.8	606.0
"G" - HIGH WATER PUMP STOP		599.0	602.5
"H" - LOW WATER CUT-OFF/RESTART		594.0	607.5
"J" - LOW WATER CUT-OFF		591.0	595.0
"K" - WET WELL FLOOR ELEVATION		589.0	591.0
"L" - BOTTOM ELEVATION		586.0	596.0
"M" - PIPE AND VALVE SIZE		4"	6"
"N" - ℄ DISCHARGE ELEVATION		—	—

NOTES
1. CONTROL PANEL SHALL BE MOUNTED REMOTE FROM WET WELL INSIDE BUILDING. PUMP DISCONNECT TO BE MOUNTED ON TOP OF WET WELL.
2. ALL FIELD WIRING AND CONNECTIONS BETWEEN PUMPS AND FLOAT SWITCHES, AND CONTROL PANEL BY OTHERS
3. FLOAT, POWER, AND CONTROL CABLES MAY BE RUN TO PANEL THROUGH CONDUIT OR THROUGH OPTIONAL PEDESTAL PANEL MOUNT ATTACHED DIRECTLY TO WET WELL TOP

McCRONE
ENGINEERING ◻ ENVIRONMENTAL SCIENCES
LAND PLANNING & SURVEYING ◻ CONSTRUCTION SERVICES
20 RIDGELY AVENUE
ANNAPOLIS, MARYLAND 21401
(410) 267-8822
ANNAPOLIS-CENTREVILLE-EASTON-CLIFTON-LEXINGTON PARK-OCEAN CITY-PRINCE FREDERICK

APPROVED: MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR PRIVATE SEWAGE DISPOSAL SYSTEM PENDING THE CONSTRUCTION PERMIT ISSUED BY THE ENGINEERING AND CONSTRUCTION PROGRAM FOR THE ON-SITE WATER SYTEM.

David A Kerr 7-20-92
REGIONAL CONSULTANT DATE
INDIVIDUAL SEPTICS AND WELLS
MARYLAND DEPARTMENT OF THE ENVIRONMENT

STATE OF MARYLAND ROBERT MICHAEL GELT REG. 17737 REGISTERED PROFESSIONAL ENGINEER

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461-2855

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER 2/13/92 DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT 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 ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER 2/14/92 DATE

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

U.S. SOIL CONSERVATION SERVICE 7/16/92 DATE

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

DISTRICT 7/16/92 DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPT. OF PLANNING AND ZONING

PLANNING DIRECTOR 7/22/92 DATE

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT 7/21/92 DATE

APPROVED: HOWARD COUNTY HEALTH DEPARTMENT FOR ON-SITE WATER AND PRIVATE SEWERAGE SYSTEMS

HEALTH OFFICER JN 7-20-92 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS FOR PRIVATE STORM DRAINAGE SYSTEMS AND ROADS.

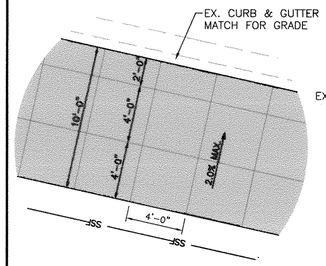
DIRECTOR, PUBLIC WORKS DATE

CHIEF, BUREAU OF ENGINEERING DATE

Detail Sheet
Sewage Treatment and Disposal System
Western Middle School
Third Election District
Howard County, Maryland
Date: June 28, 1992
Scale: As Shown
Sheet 10 Of 10 26

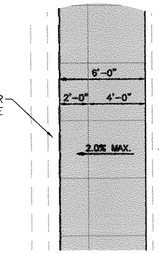
PROPERTY/SUBDIVISION			SECTION/AREA	PARCEL/LOT NO.
Spring Valley Chase			n/a	Pt Parcel 119
PLAT NO./L.F.	BLOCK NO.	ZONE	TAX/ZONE T.M. 10	ELEC. DIST.	CENSUS TR.
	19	R		Third	6030
WATER CODE	n/a		SEWER CODE	n/a	

SDP 92-80



10' SIDEWALK PANEL DETAIL

SCALE: 1"=5'

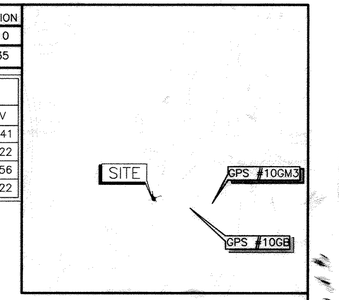


6' SIDEWALK PANEL DETAIL

SCALE: 1"=5'

POINT	NORTHING	EASTING	ELEVATION
#10GM3	602417.69	1331204.42	595.10
#10GB	602275.95	1331069.41	597.35

BENCHMARK DATA			
No.	NORTHING	EASTING	ELEV
1	602538.34	1330423.56	626.41
2	602365.95	1330415.89	614.22
3	302646.15	1330363.43	626.56
4	602572.90	1330304.74	628.22



VICINITY MAP

SCALE: 1"=2000'

ADC MAP: 10/13

SITE NOTES

1. PROPERTY OWNER/APPLICANT:
   HOWARD COUNTY PUBLIC SCHOOL SYSTEM
   8045 HARRIET TUBMAN LANE
   COLUMBIA, MD 21044
2. SITE DATA:
   TAX MAP/GRID: 10/13
   ELECTION DISTRICT: 02
   ADC MAP: 4693-K9, 4694-A9
   PROJECT LOCATION: 12101 WOODFORD DRIVE
   SITE AREA: 30.05 AC.
   LIBER/FOLIO: 2522/341
   PARCEL: 119
   LIMIT OF DISTURBANCE = 19,834sqft. OR 0.455 ACRES
   EX. IMPERVIOUS: 16,169sqft. OR 0.371 ACRES
   PROP. IMPERVIOUS: 11,537sqft. OR 0.265 ACRES
   NET REDUCTION IN IMPERVIOUS AREA = 29%
3. WATER AND SANITARY UTILITIES ARE NOT REQUIRED FOR THESE FACILITIES.
4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" (1-800-257-7777) AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK.
5. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY CONDUCTED BY KCI TECHNOLOGIES, INC. DATE JULY 2015.
6. THE PROJECT AREA LIES WITHIN ZONE C, AN AREA OF MINIMAL FLOODING AS SHOWN ON FEMA FLOOD MAP No. 24520800 010C, EFFECTIVE DATE 06/19/1987.
7. EXISTING UTILITY INFORMATION SHOWN HEREON IS BASED ON THE BEST AVAILABLE INFORMATION, WHICH INCLUDES A FIELD SURVEY CONDUCTED BY KCI TECHNOLOGIES, INC. DATED JULY 2015.
8. OBSTRUCTIONS SHOWN ON THESE DRAWINGS ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. KCI TECHNOLOGIES, INC. DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR THE COMPLETENESS OF THE INFORMATION GIVEN. THE CONTRACTOR MUST VERIFY ALL SUCH INFORMATION TO HIS OWN SATISFACTION. IN THE EVENT THAT INFORMATION IS IN CONFLICT WITH INFORMATION OUTLINED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER PRIOR TO STARTING ANY WORK.
9. SAW CUT EXISTING PAVING AS NEEDED TO INSTALL NEW CONSTRUCTION.
10. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE INSPECTOR IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE INSPECTOR, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN PRIOR TO ANY CHANGE BEING MADE. ANY DEVIATION FROM THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO COMPLETE SUCH WORK.
13. ALL WORK IS SUBJECT TO CITY INSPECTION. THE DEPARTMENT OF PUBLIC WORKS REQUIRES A 24-HOUR ADVANCE NOTICE TO SCHEDULE AN INSPECTION.
14. FILL IN STRUCTURAL AND PAVEMENT AREAS SHALL BE PLACED IN HORIZONTAL EIGHT-INCH MAXIMUM LOOSE LIFTS AND COMPACTED TO AT LEAST 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY PER ASTM D-698. IN BUILDING AREAS FILL SHALL EXTEND A SHALL BE USED. SEE THE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.
15. THE CONTRACTOR SHALL NOTE THAT IN CASE OF ANY DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE PLANS THE FIGURED DIMENSIONS SHALL GOVERN.
16. ALL CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST MONTGOMERY COUNTY AND CITY OF ROCKVILLE STANDARD DETAILS AND SPECIFICATIONS AND ALL REVISIONS THERETO, UNLESS OTHERWISE NOTED.
17. THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE TO SWALES AND/OR STORM DRAIN SYSTEMS AT ALL TIMES.
18. PLACE 4" MINIMUM TOPSOIL, SEED AND MULCH ON ALL DISTURBED AREAS
19. SHOULD THE CONTRACTOR DISRUPT ANY UTILITY THE FIRST CALL SHOULD BE TO THE WEST FRIENDSHIP FIRE DEPARTMENT, THEN THE COUNTY DEPARTMENT OF PUBLIC WORKS, AND THEN THE AFFECTED UTILITY.
    WEST FRIENDSHIP VOLUNTEER FIRE DEPARTMENT: 911 (410-313-5403)
    HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 410-313-4401

SITE PLAN

1"=20' SCALE

STORMWATER MANAGEMENT NARRATIVE

THE EXISTING CONCRETE SIDEWALK SURROUNDING THE EXISTING ENTRANCE TO THE MIDDLE SCHOOL WILL BE REMOVED AND REPLACED WITH NEW CONCRETE. UNDER THE PROPOSED CONSTRUCTION, APPROXIMATELY 4,632 SQUARE FEET OF IMPERVIOUS AREA WILL BE ELIMINATED RESULTING IN A 29% REDUCTION WITHIN THE LIMITS OF WORK. ACCELERATED DEGRADATION OF THE EXISTING SIDEWALK RESULTED FROM THE PRESENCE OF GROUNDWATER AND INADEQUATE DRAINAGE. UNDER DRAINS WILL BE INSTALLED UNDER THE NEW CONCRETE SIDEWALKS AND SMALL YARD INLETS WILL BE PLACED WITHIN THE NEW GRASS AREAS TO PROMOTE DRAINAGE.

SINCE THE SITE IS GREATER THAN 40% IMPERVIOUS, THE SITE FALLS WITHIN REDEVELOPMENT CRITERIA. TO MEET THE STORMWATER REQUIREMENT, THE REDUCTION OF IMPERVIOUS COMBINED WITH (N-2) NON-ROOFTOP DISCONNECTION OF THE NEW SIDEWALK MEETS THE REQUIREMENT.

LEGEND

- EX. CONTOUR
- EX. EDGE OF CURB
- EX. SIDEWALK
- EX. BUILDING
- PROP. STORM DRAIN PIPE
- PROP. STORM DRAIN INLET
- PROP. CONCRETE SIDEWALK
- PROP. GRASS

GRAPHICAL SCALE

20' 0' 20' 40'

SCALE: 1"= 20'

KCI TECHNOLOGIES

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

11850 WEST MARKET PLACE
SUITE A
FULTON, MD 20759
TELEPHONE: (410) 792-8086
FAX: (410) 792-7419

REVISIONS			
NO.	DATE		BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-21-16

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4.13.16

APPROVED: Howard County Department of Planning & Zoning

Director — Date 4-21-16

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33772 EXP. DATE: 06/16/2017

STATE OF MARYLAND — NICHOLAS A. BARONE — 33772 — PROFESSIONAL ENGINEER — 3/24/16

OWNER:
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
8045 HARRIET TUBMAN LN
COLUMBIA, MD 21044
(410)-313-6600

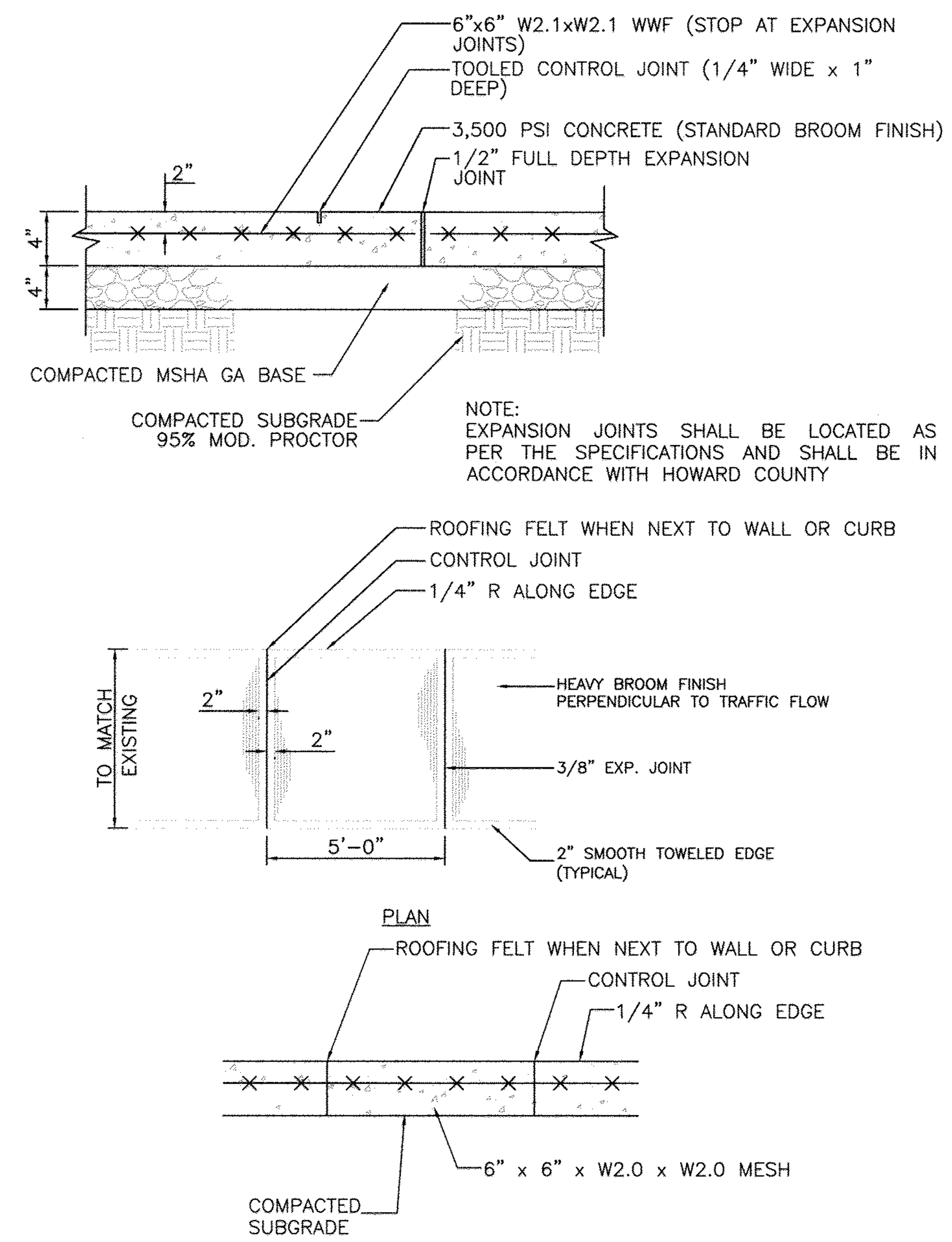
MOUNT VIEW MIDDLE SCHOOL

REVISED SIDEWALK SITE PLAN

TAX MAP: 10 GRID: 13 PARCEL: 119
ZONED: RR-DEO
ELECTION DISTRICT NO. 03 - HOWARD COUNTY MARYLAND

DESIGN	DATE	KCI PROJECT NO. 27158272	SHEET NO.
NAB	3/01/16		C-1.01
DRAWN BRA	SCALE 1"=20"	SHEET NO. 20 OF 26	

SDP-92-080



6"x6" W2.1xW2.1 WWF (STOP AT EXPANSION JOINTS)
TOOLED CONTROL JOINT (1/4" WIDE x 1" DEEP)
3,500 PSI CONCRETE (STANDARD BROOM FINISH)
1/2" FULL DEPTH EXPANSION JOINT
2"
4"
4"
COMPACTED MSHA GA BASE
COMPACTED SUBGRADE 95% MOD. PROCTOR
ROOFING FELT WHEN NEXT TO WALL OR CURB
CONTROL JOINT
1/4" R ALONG EDGE
TO MATCH EXISTING
2"
2"
HEAVY BROOM FINISH PERPENDICULAR TO TRAFFIC FLOW
3/8" EXP. JOINT
5'-0"
2" SMOOTH TOWELED EDGE (TYPICAL)
PLAN
ROOFING FELT WHEN NEXT TO WALL OR CURB
CONTROL JOINT
1/4" R ALONG EDGE
6" x 6" x W2.0 x W2.0 MESH
COMPACTED SUBGRADE

NOTE:
EXPANSION JOINTS SHALL BE LOCATED AS PER THE SPECIFICATIONS AND SHALL BE IN ACCORDANCE WITH HOWARD COUNTY

NOTE: PROVIDE 2% CROSS-SLOPE FOR POSITIVE DRAINAGE AS REQUIRED

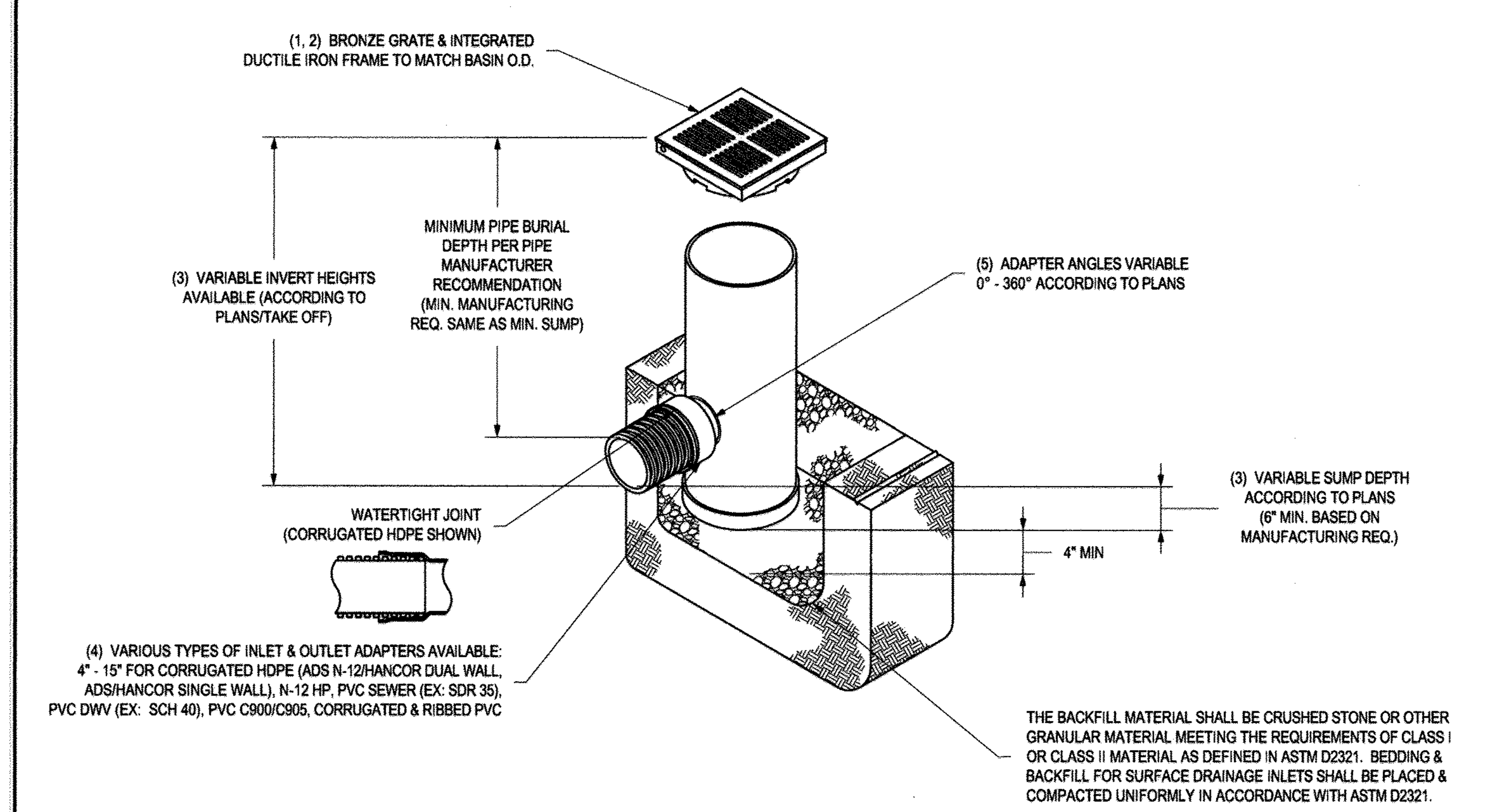
SECTION

GENERAL NOTES

1. PROVIDE EXPANSION JOINTS 20' C.C. MAX AND SCORE JOINTS 5' C.C (UNLESS OTHERWISE NOTED). EXPANSION JOINTS SHALL BE ZIP STRIP CONTROL JOINTS MANUFACTURED BY SUPERIOR FEATHERWEIGHT TOOLS (OR APPROVED EQUIVALENT) WITH 1/2" PREMOLDED BITUMINOUS JOINT MATERIAL. ALL CONTROL JOINTS SHALL BE SEALED WITH A POLYURETHANE SEALANT.
2. WHEN SIDEWALK ABUTS CURB, SIDEWALK SHALL BE 1/4" ABOVE CURB WITH ROOFING FELT SATURATED ON BOTH SIDES WITH ASPHALTIC MATERIAL BETWEEN THEM. ROOFING PAPER SHALL NOT WEIGH LESS THAN 39.8 POUNDS PER SQUARE FOOT.

(1) CONCRETE SIDEWALK DETAIL — NOT TO SCALE

8" - 15" NYLOPLAST DRAIN BASIN WITH BRONZE GRATE



(1, 2) BRONZE GRATE & INTEGRATED DUCTILE IRON FRAME TO MATCH BASIN O.D.
MINIMUM PIPE BURIAL DEPTH PER PIPE MANUFACTURER RECOMMENDATION (MIN. MANUFACTURING REQ. SAME AS MIN. SUMP)
(3) VARIABLE INVERT HEIGHTS AVAILABLE (ACCORDING TO PLANS/TAKE OFF)
(5) ADAPTER ANGLES VARIABLE 0° - 360° ACCORDING TO PLANS
WATERTIGHT JOINT (CORRUGATED HDPE SHOWN)
(3) VARIABLE SUMP DEPTH ACCORDING TO PLANS (6" MIN. BASED ON MANUFACTURING REQ.)
4" MIN
(4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE: 4" - 15" FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL, ADS/HANCOR SINGLE WALL), N-12 HP, PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC
THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I OR CLASS II MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

1 - 8" - 15" GRATES SHALL BE SOLID BRASS METAL.
2 - 12" & 15" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05. 8" & 10" BRONZE GRATES FIT DIRECTLY ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 8" - 15" BRONZE GRATES HAVE NO LOAD RATING.

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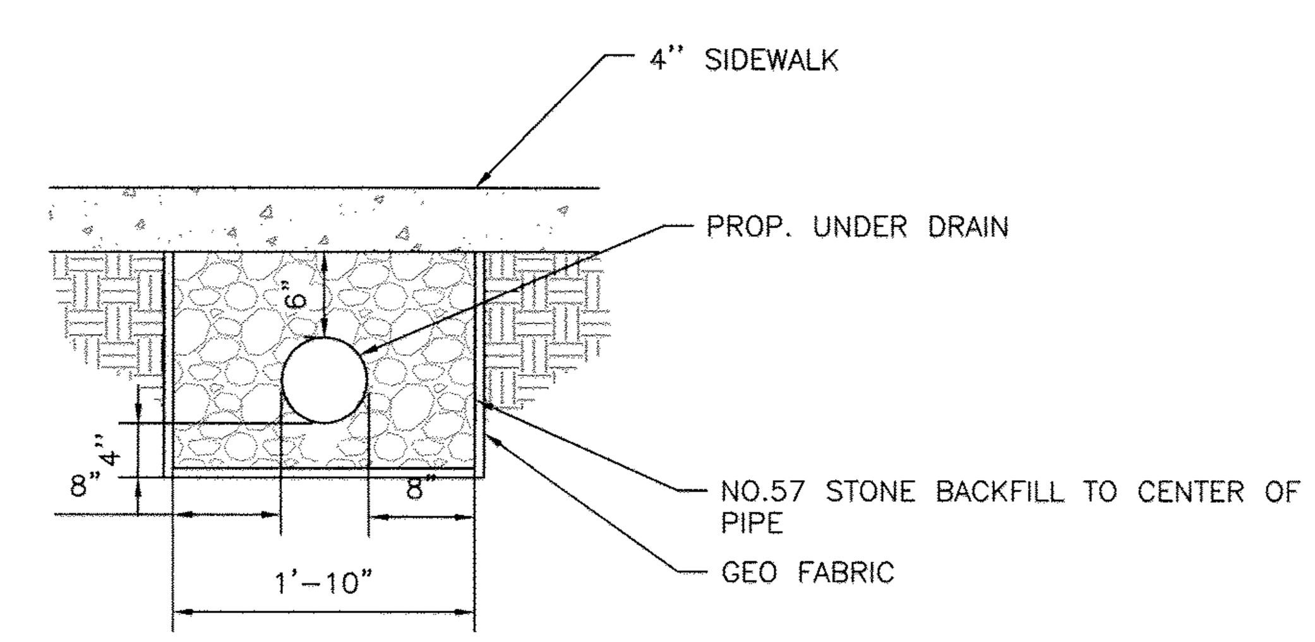
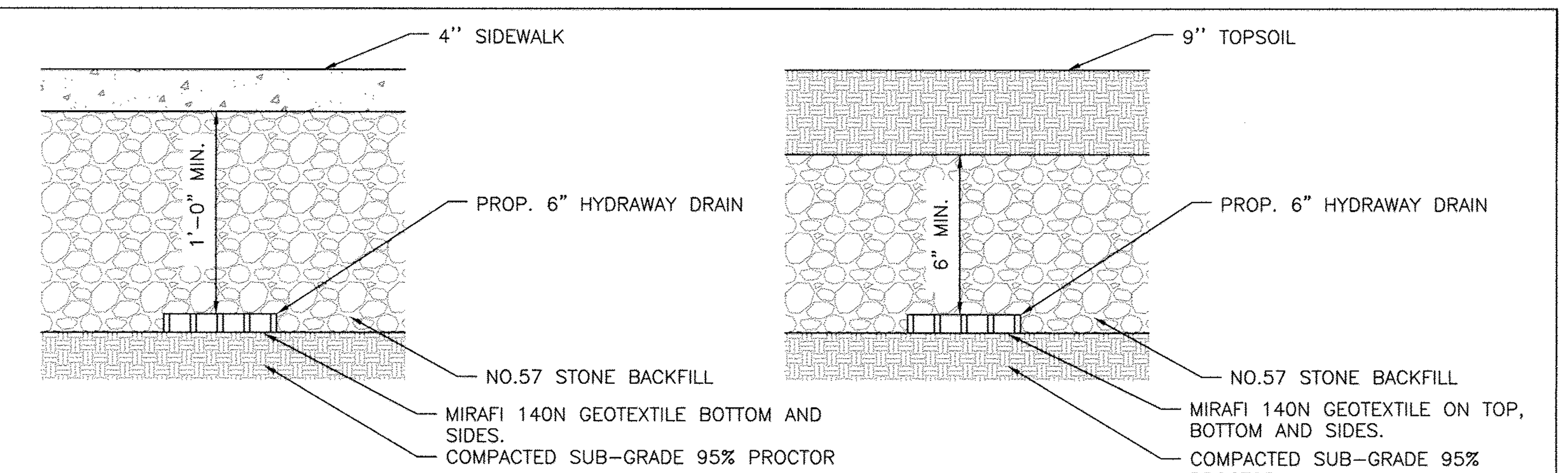
DRAWN BY	EBC	MATERIAL	Nyloplast — 3130 VERONA AVE, BUFORD, GA 30518, PHN (770) 932-2443, FAX (770) 932-2490, www.nyloplast-us.com
DATE	03-25-10		
APPD BY	CCA	PROJECT NO./NAME	TITLE: DRAIN BASIN WITH BRONZE GRATE QUICK SPEC INSTALLATION DETAIL
DATE	09-05-13		
DWG SIZE	A	SCALE 1:20 SHEET 1 OF 1	DWG NO. 7001-110-396 REV B

(2) INLET DRAIN BASIN DETAIL — NOT TO SCALE

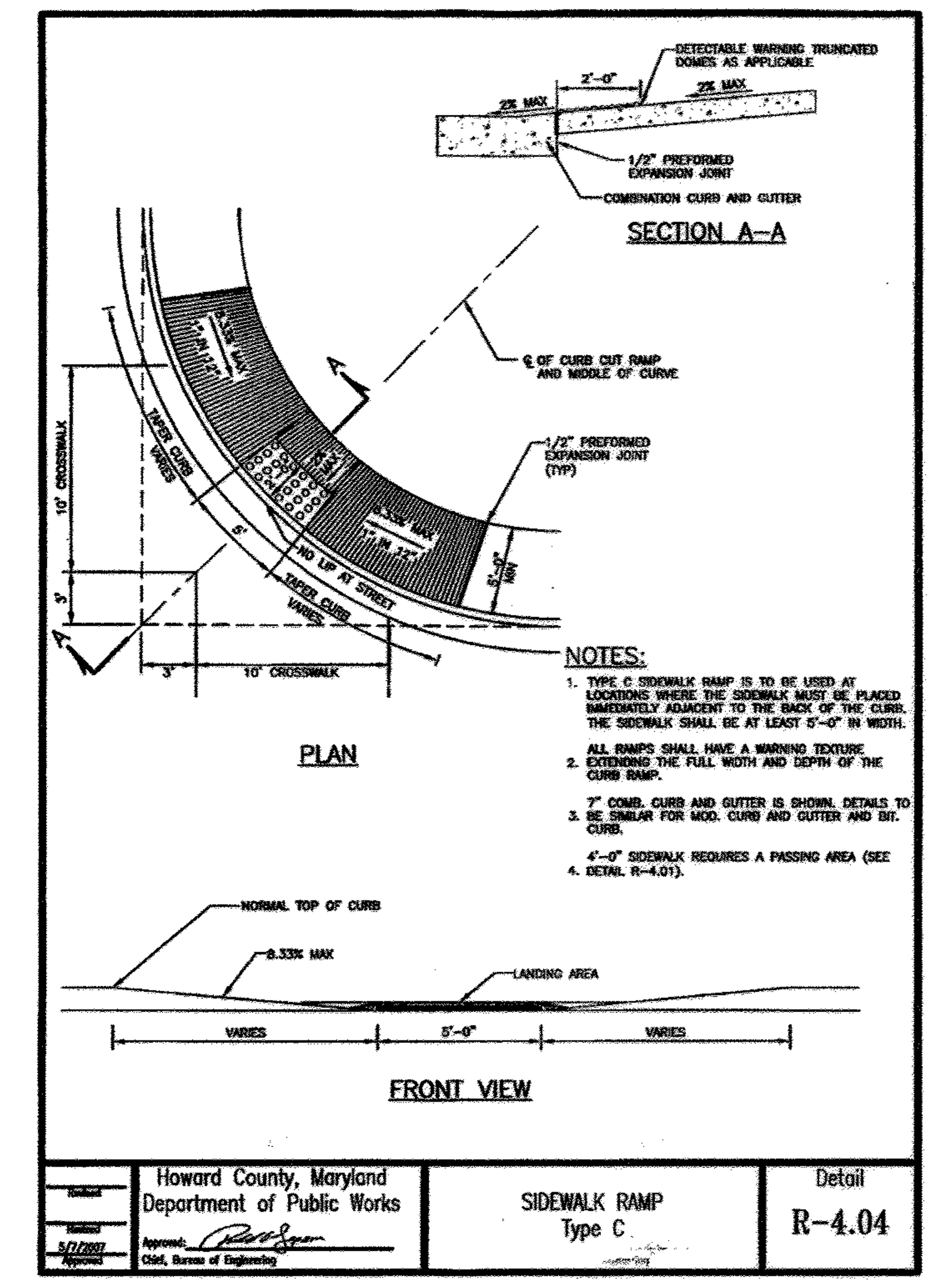


(3) HDPE PIPE BEDDING DETAIL — NOT TO SCALE

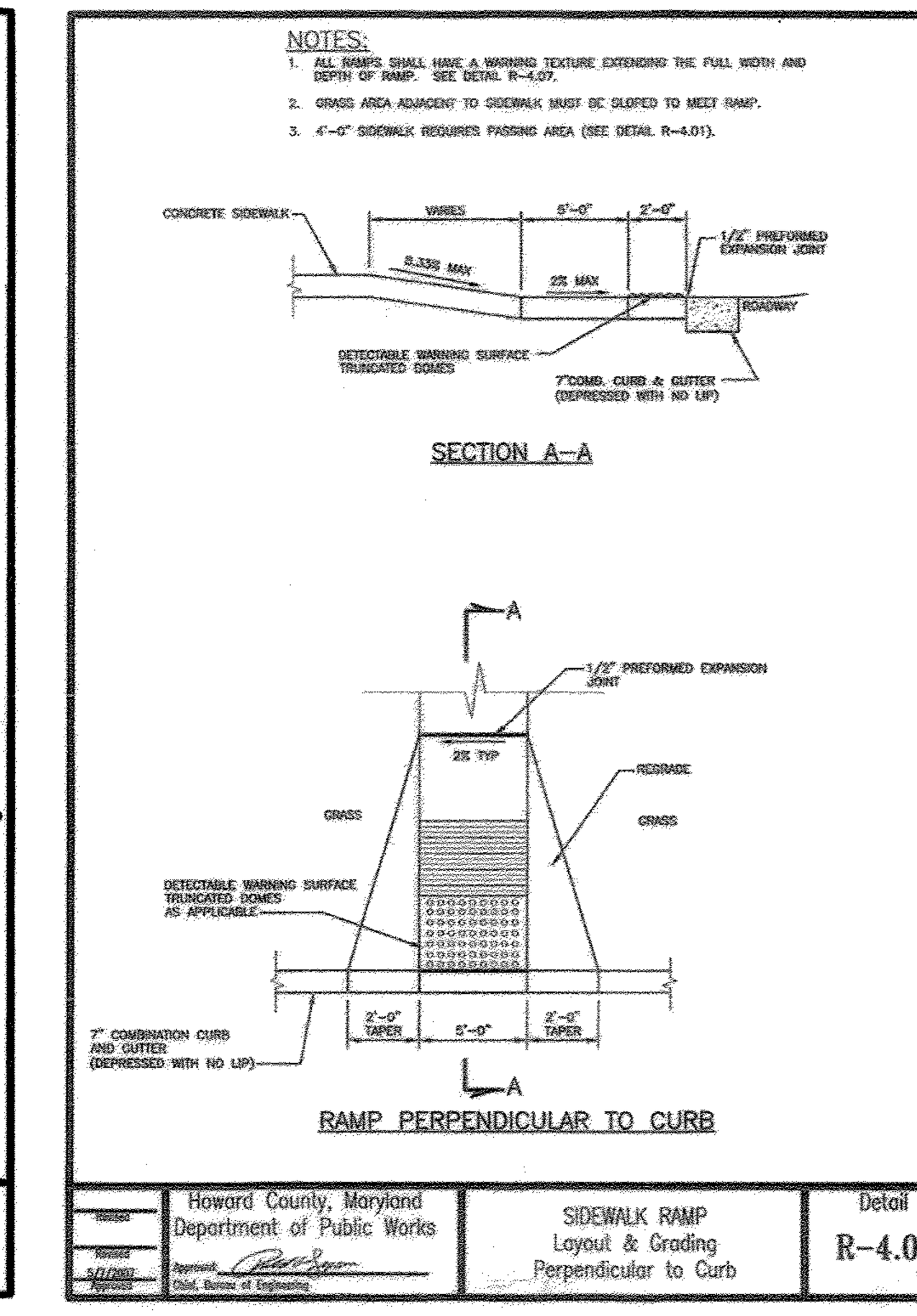


4'' SIDEWALK
1'-0" MIN.
PROP. 6" HYDRAWAY DRAIN
NO.57 STONE BACKFILL
MIRAFI 140N GEOTEXTILE BOTTOM AND SIDES.
COMPACTED SUB-GRADE 95% PROCTOR
9'' TOPSOIL
6" MIN.
PROP. 6" HYDRAWAY DRAIN
NO.57 STONE BACKFILL
MIRAFI 140N GEOTEXTILE ON TOP, BOTTOM AND SIDES.
COMPACTED SUB-GRADE 95% PROCTOR

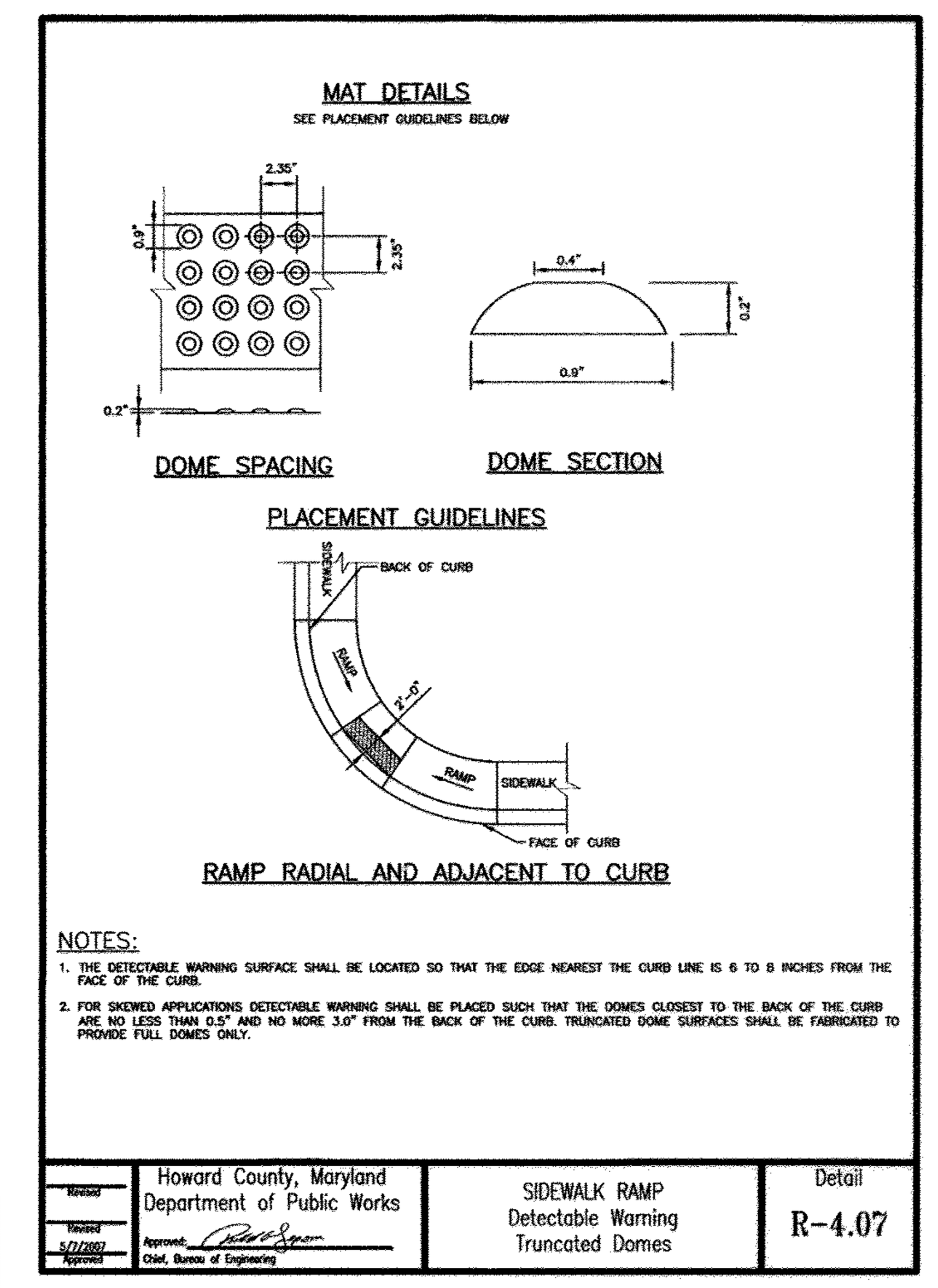
(4) HYDRAWAY 2000 — NOT TO SCALE



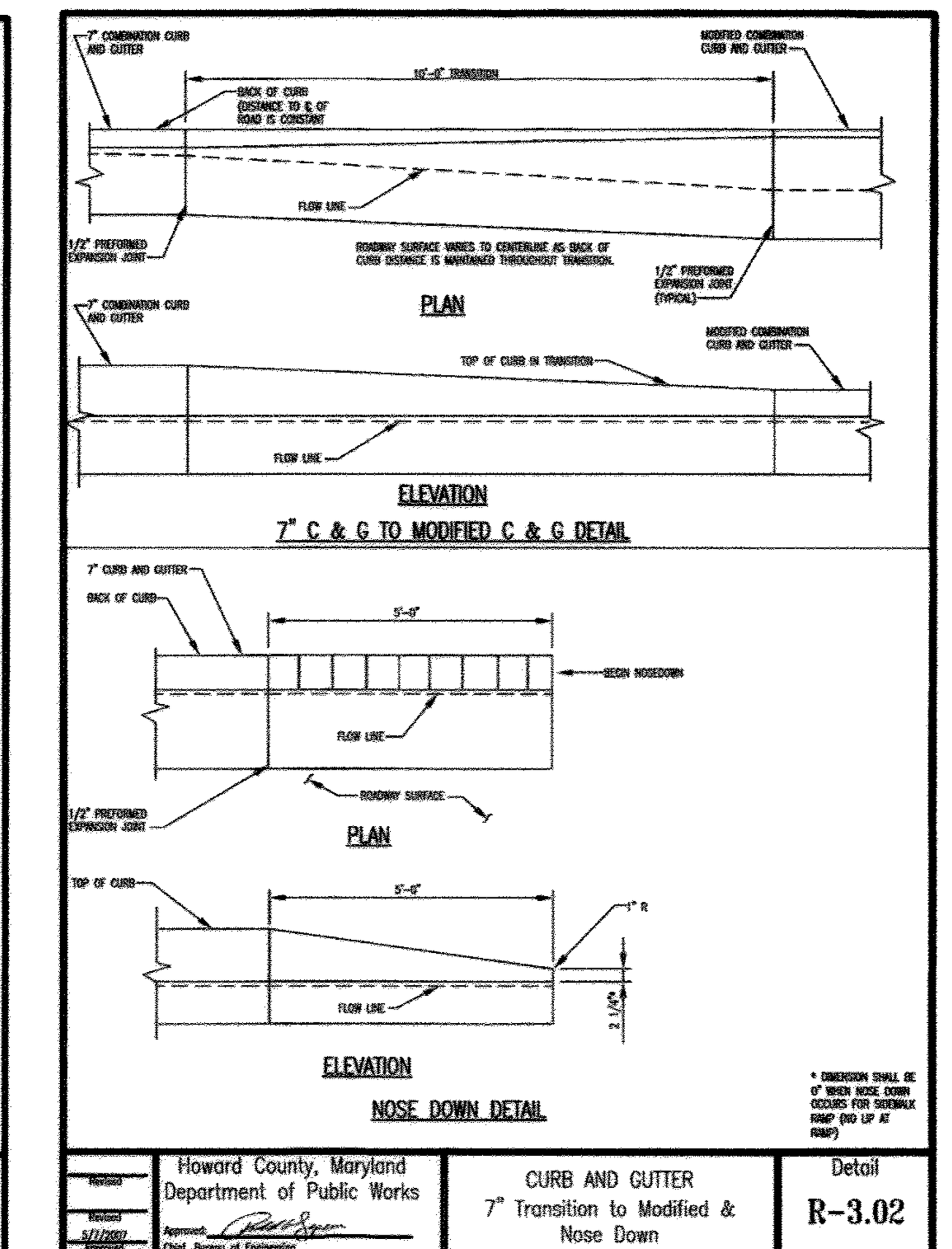
DETECTABLE WARNING TRUNCATED DOMES AS APPLICABLE
2'-0"
2% MAX
2% MAX
1/2" PREFORMED EXPANSION JOINT
COMBINATION CURB AND GUTTER
SECTION A-A
℄ OF CURB CUT RAMP AND MIDDLE OF CURVE
1/2" PREFORMED EXPANSION JOINT (TYP)
10' CROSSWALK
TAPER CURB VARIES
NO LIP AT STREET
8.33% MAX
5'-0" MIN
3'
10' CROSSWALK
PLAN
NOTES:
1. TYPE C SIDEWALK RAMP IS TO BE USED AT LOCATIONS WHERE THE SIDEWALK MUST BE PLACED IMMEDIATELY ADJACENT TO THE BACK OF THE CURB. THE SIDEWALK SHALL BE AT LEAST 5'-0" IN WIDTH.
2. ALL RAMPS SHALL HAVE A WARNING TEXTURE EXTENDING THE FULL WIDTH AND DEPTH OF THE CURB RAMP.
3. 7" COMB. CURB AND GUTTER IS SHOWN. DETAILS TO BE SIMILAR FOR MOD. CURB AND GUTTER AND BIT. CURB.
4. 4'-0" SIDEWALK REQUIRES A PASSING AREA (SEE DETAIL R-4.01).
NORMAL TOP OF CURB
8.33% MAX
LANDING AREA
VARIES
5'-0"
VARIES
FRONT VIEW
Howard County, Maryland Department of Public Works
Chief, Bureau of Engineering
SIDEWALK RAMP Type C
Detail R-4.04



NOTES:
1. ALL RAMPS SHALL HAVE A WARNING TEXTURE EXTENDING THE FULL WIDTH AND DEPTH OF RAMP. SEE DETAIL R-4.07.
2. GRASS AREA ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.
3. 4'-0" SIDEWALK REQUIRES PASSING AREA (SEE DETAIL R-4.01).
CONCRETE SIDEWALK
VARIES
5'-0"
2'-0"
8.33% MAX
2% MAX
1/2" PREFORMED EXPANSION JOINT
ROADWAY
DETECTABLE WARNING SURFACE TRUNCATED DOMES
7"COMB. CURB & GUTTER (DEPRESSED WITH NO LIP)
SECTION A-A
1/2" PREFORMED EXPANSION JOINT
2% TYP
REGRADE
GRASS
GRASS
DETECTABLE WARNING SURFACE TRUNCATED DOMES AS APPLICABLE
7" COMBINATION CURB AND GUTTER (DEPRESSED WITH NO LIP)
2'-0" TAPER
5'-0"
2'-0" TAPER
RAMP PERPENDICULAR TO CURB
Howard County, Maryland Department of Public Works
Chief, Bureau of Engineering
SIDEWALK RAMP Layout & Grading Perpendicular to Curb
Detail R-4.05



MAT DETAILS
SEE PLACEMENT GUIDELINES BELOW
2.35"
0.9"
2.35"
0.4"
0.2"
0.9"
0.2"
DOME SPACING
DOME SECTION
PLACEMENT GUIDELINES
SIDEWALK
BACK OF CURB
RAMP
2'-0"
RAMP
SIDEWALK
FACE OF CURB
RAMP RADIAL AND ADJACENT TO CURB
NOTES:
1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF THE CURB ARE NO LESS THAN 0.5" AND NO MORE 3.0" FROM THE BACK OF THE CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
Howard County, Maryland Department of Public Works
Chief, Bureau of Engineering
SIDEWALK RAMP Detectable Warning Truncated Domes
Detail R-4.07



7" COMBINATION CURB AND GUTTER
MODIFIED COMBINATION CURB AND GUTTER
10'-0" TRANSITION
BACK OF CURB (DISTANCE TO ℄ OF ROAD IS CONSTANT
FLOW LINE
1/2" PREFORMED EXPANSION JOINT
ROADWAY SURFACE VARIES TO CENTERLINE AS BACK OF CURB DISTANCE IS MAINTAINED THROUGHOUT TRANSITION.
1/2" PREFORMED EXPANSION JOINT (TYPICAL)
PLAN
TOP OF CURB IN TRANSITION
ELEVATION
7" C & G TO MODIFIED C & G DETAIL
7" CURB AND GUTTER
BACK OF CURB
5'-0"
BEGIN NOSEDOWN
FLOW LINE
ROADWAY SURFACE
PLAN
TOP OF CURB
5'-0"
1" R
2 1/4"*
ELEVATION
NOSE DOWN DETAIL
* DIMENSION SHALL BE 0" WHEN NOSE DOWN OCCURS FOR SIDEWALK RAMP (NO LIP AT RAMP)
Howard County, Maryland Department of Public Works
Chief, Bureau of Engineering
CURB AND GUTTER 7" Transition to Modified & Nose Down
Detail R-3.02

KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
11850 WEST MARKET PLACE
SUITE A
FULTON, MD 20759
TELEPHONE: (410) 792-8086
FAX: (410) 792-7419

REVISIONS

NO.	DATE		BY

STATE OF MARYLAND
NICHOLAS A. BARRICK
33772
PROFESSIONAL ENGINEER
3/24/16

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33772 EXP. DATE: 06/16/2017

OWNER:
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
8045 HARRIET TUBMAN LN
COLUMBIA, MD 21044
(410)-313-6600

MOUNT VIEW MIDDLE SCHOOL
REVISED
DETAIL SHEET

TAX MAP: 10 GRID: 13 PARCEL: 119
ZONED: RR-DEO
ELECTION DISTRICT NO. 03 - HOWARD COUNTY MARYLAND

DESIGN NAB	DATE 3/01/16	KCI PROJECT NO. 27158272	SHEET NO.
DRAWN BRA	SCALE AS SHOWN	SHEET NO. 21 OF 26	C-1.02

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[illegible] 4-21-16
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE
[illegible] 4.13.16
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

APPROVED: Howard County Department of Planning & Zoning
[illegible] 4-21-16
Director — Date

SDP-92-080

SEQUENCE OF CONSTRUCTION

CONTRACTOR TO NOTIFY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, FIVE (5) DAYS PRIOR TO CONTRACTOR'S ANTICIPATED DATE TO BEGIN CONSTRUCTION.
FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERMANENT PERIMETER CONTROLS. DIKES, SWALES, DITCHES, PERIMETER SLOPES GREATER THAN 3:1, AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREA ON THE PROJECT SITE.

1. NOTIFY MISS UTILITY AT LEAST 48 HOURS IN ADVANCE OF BEGINNING WORK ON SITE. — 1 DAYS
2. CLEAR FOR AND INSTALL PERIMETER SEDIMENT CONTROL MEASURES (IE. SILT FENCE, SUPER SILT FENCE, TREE PROTECTION FENCING). CONTRACTOR SHALL NOTIFY INSPECTOR UPON COMPLETION OF SEDIMENT CONTROL MEASURES INSTALLATION. — 1 DAYS
3. UPON INSTALLATION OF THE SEDIMENT CONTROL DEVICES, CONTRACTOR SHALL BEGIN TO DEMO/CLEAR AND ROUGH GRADE THE SITE. — 3 DAYS
4. AFTER EXISTING SIDEWALK IS REMOVED CONTRACTOR IS TO EXCAVATE FOR STORM DRAIN AND INSTALL THE STORM DRAIN. — 7 DAYS
5. BEGIN FORMING AND POURING NEW CONCRETE SIDEWALK. — 10 DAYS
6. EROSION AND SEDIMENT CONTROL PRACTICES AND SITE IN GENERAL MUST BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT BY THE CONTRACTOR OR OTHER RESPONSIBLE PERSON AND ANY NEEDED MAINTENANCE PERFORMED IMMEDIATELY. — ON-GOING
7. ONCE 95% GRASS COVER IA ATTAINED, REMOVE SEDIMENT CONTROLS — 3 DAYS
8. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION. ONCE VEGETATION HAS BEEN ESTABLISHED, THE SITE SHALL HAVE 95% GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED AND THE SEDIMENT CONTROL INSPECTOR HAVE APPROVED SUCH REMOVAL. ALL AREAS WHERE SEDIMENT AND EROSION CONTROL DEVICES HAVE BEEN REMOVED SHALL BE STABILIZED IMMEDIATELY WITH SEED AND MULCH. — 1 DAY

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
   A. PRIOR TO THE START OF EARTH DISTURBANCE,
   B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,
   C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
   D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
   OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15'OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
5. 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 CID.
6. SITE ANALYSIS:
   TOTAL AREA OF SITE: 30.05 ACRES
   AREA DISTURBED: 0.455 ACRES
   AREA TO BE ROOFED OR PAVED: 0.265 ACRES
   AREA TO BE VEGETATIVELY STABILIZED: 0.19 ACRES
   TOTAL CUT: 0 CU. YDS.
   TOTAL FILL: 0 CU. YDS.
   OFFSITE WASTE/BORROW AREA LOCATION: N/A
7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
   - INSPECTION DATE
   - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
   - NAME AND TITLE OF INSPECTOR
   - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
   - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
   - EVIDENCE OF SEDIMENT DISCHARGES
   - IDENTIFICATION OF PLAN DEFICIENCIES
   - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
   - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
   - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
   - PHOTOGRAPHS
   - MONITORING/SAMPLING
   - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
   - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25'MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2'IN ELEVATION.
15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
   - USE I AND IP MARCH 1 – JUNE 15
   - USE III AND IIIP OCTOBER 1 – APRIL 30
   - USE IV MARCH 1 – MAY 31
16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Kent Sheubrooks — 4-21-16
CHIEF, DIVISION OF LAND DEVELOPMENT — EB — DATE

Chad Edmondson — 4.13.16
CHIEF, DEVELOPMENT ENGINEERING DIVISION — JP — DATE

APPROVED: Howard County Department of Planning & Zoning
Valdis Lazdins — 4-21-16
Director — Date

STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

PURPOSE

TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL.

CONDITIONS WHERE PRACTICE APPLIES

ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

EFFECTS ON WATER QUALITY AND QUANTITY

STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS. PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH. VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE. SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT

INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

1. ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUNDCOVER.
2. IF AN AREA HAS LESS THAN 40 PERCENT GROUNDCOVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND SEEDING.
3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUNDCOVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.
4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6.

STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

PURPOSE

TO PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES.

CONDITIONS WHERE PRACTICE APPLIES

ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES.

CRITERIA

1. INCREMENTAL STABILIZATION – CUT SLOPES
   A. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE WORK PROGRESSES.
   B. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):
      a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
      b. PERFORM PHASE 1 EXCAVATION, PREPARE SEEDBED, AND STABILIZE.
      c. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
      d. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

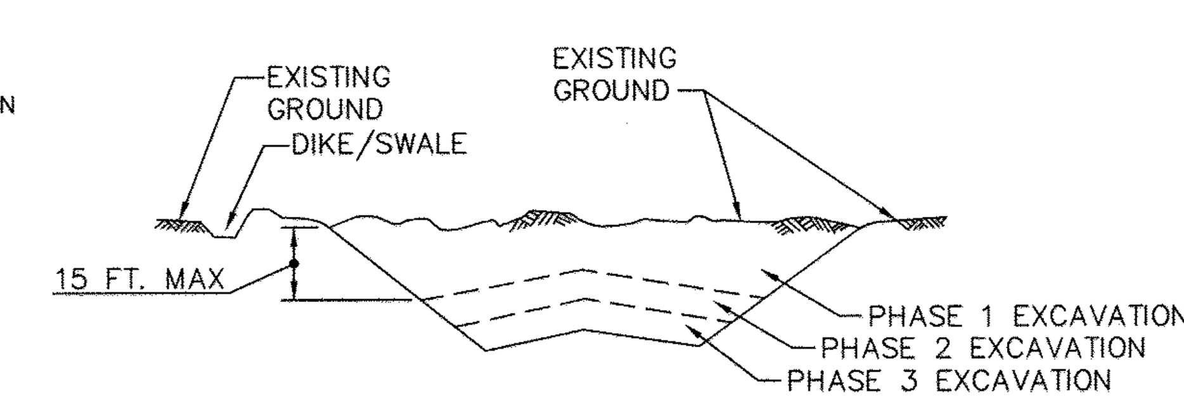
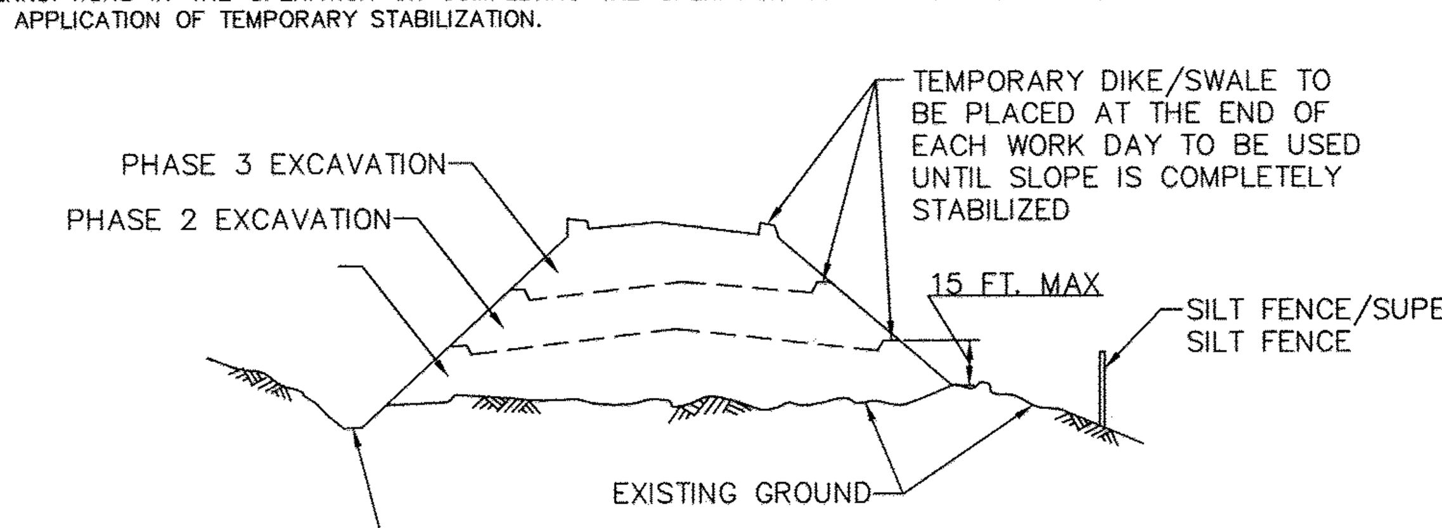


FIGURE B.1: INCREMENTAL STABILIZATION – CUT

1. INCREMENTAL STABILIZATION – FILL SLOPES
   A. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE WORK PROGRESSES.
   B. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
   C. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
   D. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2):
      a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
      b. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER.
      c. PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
      d. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE.
      e. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.



PHASE 1 EXCAVATION
FIGURE B.2: INCREMENTAL STABILIZATION – FILL

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CRITERIA

1. SOIL PREPARATION
   A. TEMPORARY STABILIZATION
      a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
      b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
      c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
2. PERMANENT STABILIZATION
   A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
      a. SOIL PH BETWEEN 6.0 AND 7.0.
      b. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
      c. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
      d. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
      e. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
   B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.
   C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
   D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.

      f. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

2. TOPSOILING
   A. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.
   B. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS.
   C. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
      a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
      e. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
      f. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
      g. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
   D. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
   E. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
      a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.
      b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
      c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
   F. TOPSOIL APPLICATION
      a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
      b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
      c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADINGAND SEEDBED PREPARATION.
3. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
   A. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
   B. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER.
   C. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
   D. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
   E. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE
   F. RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.
   G.

STANDARDS AND SPECIFICATIONS FOR LAND GRADING

DESIGN CRITERIA

THE GRADING PLAN SHOULD BE BASED ON THE INCORPORATION OF BUILDING DESIGNS AND STREET LAYOUTS THAT FIT AND UTILIZE EXISTING TOPOGRAPHY AND DESIRABLE NATURAL SURROUNDINGS TO AVOID EXTREME GRADE MODIFICATIONS. INFORMATION SUBMITTED MUST PROVIDE SUFFICIENT TOPOGRAPHIC SURVEYS AND SOIL INVESTIGATIONS TO DETERMINE LIMITATIONS THAT MUST BE IMPOSED ON THE GRADING OPERATION RELATED TO SLOPE STABILITY, ADJACENT PROPERTIES, DRAINAGE PATTERNS, MEASURES FOR WATER REMOVAL, AND VEGETATIVE TREATMENT, ETC.

MANY JURISDICTIONS HAVE REGULATIONS AND DESIGN PROCEDURES ALREADY ESTABLISHED FOR LAND GRADING THAT MUST BE FOLLOWED. THE PLAN MUST SHOW EXISTING AND PROPOSED CONTOURS FOR THE AREA(S) TO BE GRADED INCLUDING PRACTICES FOR EROSION CONTROL, SLOPE STABILIZATION, AND SAFE CONVEYANCE OF RUNOFF (E.G., WATERWAYS, LINED CHANNELS, REVERSE BENCHES, GRADE STABILIZATION STRUCTURES). THE GRADING/CONSTRUCTION PLANS ARE TO INCLUDE THE PHASING OF THESE PRACTICES AND CONSIDERATION OF THE FOLLOWING:

1. PROVISIONS TO SAFELY CONVEY SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS OR STABLE WATER COURSES TO ENSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER GRADED AREAS.
2. CUT AND FILL SLOPES, STABILIZED WITH GRASSES, NO STEEPER THAN 2:L. (WHERE THE SLOPE IS TO BE MOWED, THE SLOPE SHOULD BE NO STEEPER THAN 3:L, BUT 4:L IS PREFERRED BECAUSE OF SAFETY FACTORS RELATED TO MOWING STEEP SLOPES.) SLOPES STEEPER THAN 2:L REQUIRE SPECIAL DESIGN AND STABILIZATION CONSIDERATIONS TO BE SHOWN ON THE PLANS.
3. BENCHING PER DETAIL B-3-1 WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:L SLOPE EXCEEDS 20 FEET; FOR 3:L SLOPES, WHEN IT EXCEEDS 30 FEET; AND FOR 4:L SLOPES, WHEN IT EXCEEDS 40 FEET. LOCATE BENCHES TO DIVIDE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND TO CONVEY THE WATER TO A STABLE OUTLET. SOILS, SEEPS, ROCK OUTCROPS, ETC. ARE TO BE TAKEN INTO CONSIDERATION WHEN DESIGNING BENCHES.
   A. PROVIDE BENCHES WITH A MINIMUM WIDTH OF SIX FEET FOR EASE OF MAINTENANCE.
   B. DESIGN BENCHES WITH A REVERSE SLOPE OF 6:L OR FLATTER TO THE TOE OF THE UPPER SLOPE AND WITH A MINIMUM OF ONE FOOT IN DEPTH. GRADE THE LONGITUDINAL SLOPE OF THE BENCH BETWEEN 2 PERCENT AND 3 PERCENT, UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.
   C. THE MAXIMUM ALLOWABLE FLOW LENGTH WITHIN A BENCH IS 800 FEET UNLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.
4. DIVERSION OF SURFACE WATER FROM THE FACE OF ALL CUT AND FILL SLOPES USING EARTH DIKES OR SWALES. CONVEY SURFACE WATER DOWN SLOPE USING A DESIGNED STRUCTURE, AND:
   A. PROTECT THE FACE OF ALL GRADED SLOPES FROM SURFACE RUNOFF UNTIL THEY ARE STABILIZED.
   B. DO NOT SUBJECT THE SLOPE'S FACE TO ANY CONCENTRATED FLOW OF SURFACE WATER SUCH AS FROM NATURAL DRAINAGE WAYS, GRADED SWALES, DOWNSPOUTS, ETC.
   C. PROTECT THE FACE OF THE SLOPE BY SPECIAL EROSION CONTROL MATERIALS TO INCLUDE, BUT NOT BE LIMITED TO, APPROVED VEGETATIVE STABILIZATION PRACTICES, RIPRAP OR OTHER APPROVED STABILIZATION METHODS.
5. SERRATED SLOPE AS SHOWN IN DETAIL B-3-2. THE STEEPEST ALLOWABLE SLOPE FOR RIPABLE ROCK IS 1.5:1. FOR NON ROCK SURFACES, THE SLOPES ARE TO BE 2:1 OR FLATTER. THESE STEPS WILL WEATHER AND ACT TO HOLD MOISTURE, LIME, FERTILIZER AND SEED THUS PRODUCING A MUCH QUICKER AND LONGER LIVED VEGETATIVE COVER AND BETTER SLOPE STABILIZATION.
6. SUBSURFACE DRAINAGE PROVISIONS. PROVIDE SUBSURFACE DRAINAGE WHERE NECESSARY TO INTERCEPT SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE CONDITIONS.
7. PROXIMITY TO ADJACENT PROPERTY. SLOPES MUST NOT BE CREATED CLOSE TO PROPERTY LINES WITHOUT ADEQUATE PROTECTION AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE, OR OTHER RELATED DAMAGES.
8. QUALITY OF FILL MATERIAL. FILL MATERIAL MUST BE FREE OF BRUSH, RUBBISH, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER OBJECTIONABLE MATERIAL. DO NOT PLACE FROZEN MATERIALS IN THE FILL NOR PLACE THE FILL MATERIAL ON A FROZEN FOUNDATION.
9. STABILIZATION. STABILIZE ALL DISTURBED AREAS STRUCTURALLY OR VEGETATIVELY IN COMPLIANCE WITH SECTION B-4 STANDARDS AND SPECIFICATIONS FOR STABILIZATION PRACTICES.

MAINTENANCE

THE LINE, GRADE, AND CROSS SECTION OF BENCHING AND SERRATED SLOPES MUST BE MAINTAINED. BENCHES AND SERRATED SLOPES MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

This plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
John R Robertson — 4/19/16
Howard Soil Conservation District — Date

ENGINEER'S CERTIFICATE
"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations and standards, that it represents a practical and workable plan based on my personal knowledge of the site and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
Nicholas A. Barrick — 3/24/16
Signature of Engineer (print name below signature) — Date

DEVELOPER'S CERTIFICATE
"I/We hereby certify that any clearing, grading, construction or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control of erosion and sediment prior to beginning the project. I certify right of entry for periodic onsite evaluation by Howard County, the Howard Soil Conservation District and/or MDE."
ALAN HANSEN — 3-24-16
Signature of Developer (print name below signature) — Date

KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
11850 WEST MARKET PLACE
SUITE A
FULTON, MD 20759
TELEPHONE: (410) 792-8086
FAX: (410) 792-7419

REVISIONS			
NO.	DATE		BY

STATE OF MARYLAND — NICHOLAS A. BARRICK — 33772 — PROFESSIONAL ENGINEER
3/24/16

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33772 EXP. DATE: 06/16/2017

OWNER:
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
8045 HARRIET TUBMAN LN
COLUMBIA, MD 21044
(410)-313-6600

MOUNT VIEW MIDDLE SCHOOL
SEDIMENT & EROSION CONTROL NOTES & DETAILS
REVISED
TAX MAP: 10 GRID: 13 PARCEL: 119
ZONED: RR-DEO
ELECTION DISTRICT NO. 03 – HOWARD COUNTY MARYLAND

DESIGN	DATE	KCI PROJECT NO. 27158272	SHEET NO.
NAB	3/01/16		C-2.00
DRAWN	SCALE	SHEET NO. 22 OF 26	
BRA	AS SHOWN		

SDP-92-080

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

1. SEEDING
   - A. SPECIFICATIONS
     - a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE.
     - b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS.
     - c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
     - d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
   - B. APPLICATION
     - a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
     - i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
     - ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
     - b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
     - i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.
     - ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
     - c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
     - i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P2O5 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE.
     - ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
     - iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
     - iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.
2. MULCHING
   - A. MULCH MATERIALS (IN ORDER OF PREFERENCE)
     - a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
     - b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
     - i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
     - ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
     - iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
     - iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
     - v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM.
   - B. APPLICATION
     - a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
     - b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
     - c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
   - C. ANCHORING
     - a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
     - i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
     - ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
     - iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
     - iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

PURPOSE

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TEMPORARY SEEDING TABLE

HARDINESS ZONE (FROM FIGURE B.3): 6B						
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)	LIME RATE
1	BARLEY	96	3/1-5/31 8/1-10/15	1.0"	436 LB/AC (10LB/1000SF)	2 TONS/AC (90LB/1000SF)
2	CEREAL RYE	112	3/1-5/15 8/1-11/15	1.0"		
3	FOXTAIL MILLET	30	5/16-7/31	0.5"		

STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

PURPOSE

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

CRITERIA

1. SEED MIXTURES
   - A. GENERAL USE
     - a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
     - b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
     - c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY.
     - d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
   - B. TURFGRASS MIXTURES
     - a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
     - b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
     - i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
     - ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
     - iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
     - iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.

     NOTES:

     SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

     - c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

       WESTERN MD.: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)

       CENTRAL MD.: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)

       SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)
     - d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1½ INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY.
     - e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (½ TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING TABLE

HARDINESS ZONE (FROM FIGURE B.3): 6B								
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20) N	FERTILIZER RATE (10-20-20) P2O5	FERTILIZER RATE (10-20-20) K2O	LIME RATE
4	DEERTONGUE CREEPING RED FESCUE VIRGINIA WILD RYE	15 20 5	3/1-5/15 5/16-6/15	0.5"	45LB/AC (1LB/1000SF)	90LB/AC (2LB/1000SF)	90LB/AC (2LB/1000SF)	2 TONS/AC (90LB/1000SF)
6	TALL FESCUE PERENNIAL RYEGRASS WHITE CLOVER	40 25 5	3/1-5/15 8/1-10/15	0.5"				
9	TALL FESCUE KENTUCKY BLUEGRASS	60 40	3/1-5/15 8/1-10/15	0.5"				

2. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
   - A. GENERAL SPECIFICATIONS
     - a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
     - b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF ¾ INCH, PLUS OR MINUS ¼ INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
     - c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
     - d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
     - e. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
   - B. SOD INSTALLATION
     - a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
     - b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.
     - c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
     - d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
   - C. SOD MAINTENANCE
     - a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
     - b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.
     - c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN ⅓ OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

GEOTEXTILE FABRICS

		WOVEN SILT FILM GEOTEXTILE		WOVEN MONOFILAMENT GEOTEXTILE		NONWOVEN GEOTEXTILE	
		MINIMUM AVERAGE ROLL VALUE[1]					
PROPERTY	TEST METHOD	MD	CD	MD	CD	MD	CD
GRAB TENSILE STRENGTH	ASTM D-4632	200 LB	200 LB	370 LB	250 LB	200 LB	200 LB
GRAB TENSILE ELONGATION	ASTM D-4632	15%	10%	15%	15%	50%	50%
TRAPEZOIDAL TEAR STRENGTH	ASTM D-4533	75 LB	75 LB	100 LB	60 LB	80 LB	80 LB
PUNCTURE STRENGTH	ASTM D-6241	450 LB		900 LB		450 LB	
APPARENT OPENING SIZE	ASTM D-4751	U.S. SIEVE 30 (0.59 mm)		U.S. SIEVE 70 (0.21 mm)		U.S. SIEVE 70 (0.21 mm)	
PERMITTIVITY	ASTM D-4491	0.05 SEC^{-1}		0.28 SEC^{-1}		1.1 SEC^{-1}	
ULTRAVIOLET RESISTEANCE RETAINED AT 500 HOURS	ASTM D-4355	70% STRENGTH		70% STRENGTH			

ALL NUMERIC VALUES EXCEPT APPARENT OPENING SIZE (AOS) REPRESENT MINIMUM AVERAGE ROLL VALUES (MARV). MARV IS CALCULATED AS THE TYPICAL MINUS TWO STANDARD DEVIATIONS. MD IS MACHINE DIRECTION; CD IS CROSS DIRECTION.

VALUES FOR AOS REPRESENT THE AVERAGE MAXIMUM OPENING.

GEOTEXTILES MUST BE EVALUATED BY THE NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM (NTPEP) AND CONFORM TO THE VALUES IN TABLE H.1.

THE GEOTEXTILE MUST BE INERT TO COMMONLY ENCOUNTERED CHEMICALS AND HYDROCARBONS AND MUST BE ROT AND MILDEW RESISTANT. THE GEOTEXTILE MUST BE MANUFACTURED FROM FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS AND COMPOSED OF A MINIMUM OF 95 PERCENT BY WEIGHT OF POLYOLEFINS OR POLYESTERS, AND FORMED INTO A STABLE NETWORK SO THE FILAMENTS OR YARNS RETAIN THEIR DIMENSIONAL STABILITY RELATIVE TO EACH OTHER, INCLUDING SELVAGES.

WHEN MORE THAN ONE SECTION OF GEOTEXTILE IS NECESSARY, OVERLAP THE SECTIONS BY AT LEAST ONE FOOT. THE GEOTEXTILE MUST BE PULLED TAUT OVER THE APPLIED SURFACE. EQUIPMENT MUST NOT RUN OVER EXPOSED FABRIC. WHEN PLACING RIPRAP ON GEOTEXTILE, DO NOT EXCEED A ONE FOOT DROP HEIGHT.

TABLE H.2: STONE SIZE

TYPE	SIZE RANGE	D_{50}	D_{100}
NUMBER 57[1]	3/8 TO 1-1/2 INCH	1/2 IN	1-1/2 IN
NUMBER 1	2 TO 3 INCH	2-1/2 IN	3 IN
RIPRAP[2] (CLASS 0)	4 TO 7 INCH	5-1/2 IN	7 IN
CLASS I	N/A	9-1/2 IN	15 IN
CLASS II	N/A	16 IN	24 IN
CLASS III	N/A	23 IN	34 IN

1 THIS CLASSIFICATION IS TO BE USED ON THE UPSTREAM FACE OF STONE OUTLETS AND CHECK DAMS.

2 THIS CLASSIFICATION IS TO BE USED FOR GABIONS.

3 OPTIMUM GRADATION IS 50 PERCENT OF THE STONE BEING ABOVE AND 50 PERCENT BELOW THE MIDSIZE.

STONE MUST BE COMPOSED OF A WELL GRADED MIXTURE OF STONE SIZED SO THAT FIFTY (50) PERCENT OF THE PIECES BY WEIGHT ARE LARGER THAN THE SIZE DETERMINED BY USING THE CHARTS. A WELL GRADED MIXTURE, AS USED HEREIN, IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF LARGER STONE SIZES BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE IN SUCH A MIXTURE MUST NOT EXCEED THE RESPECTIVE D100 SELECTED FROM TABLE H.2. THE D50 REFERS TO THE MEDIAN DIAMETER OF THE STONE. THIS IS THE SIZE FOR WHICH 50 PERCENT, BY WEIGHT, WILL BE SMALLER AND 50 PERCENT WILL BE LARGER.

NOTE: RECYCLED CONCRETE EQUIVALENT MAY BE SUBSTITUTED FOR ALL STONE CLASSIFICATIONS FOR TEMPORARY CONTROL MEASURES ONLY. CONCRETE BROKEN INTO THE SIZES MEETING THE APPROPRIATE CLASSIFICATION, CONTAINING NO STEEL REINFORCEMENT, AND HAVING A MINIMUM DENSITY OF 150 POUNDS PER CUBIC FOOT MAY BE USED AS AN EQUIVALENT.

This plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard Soil Conservation District — Date 4/19/16

ENGINEER 'S CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation Distrct."

Richard A. Bancroft, P.E. — Date 3/24/16

Signature of Engineer (print name below signature)

DEVELOPER 'S CERTIFICATE

"We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation Distrct and/or MDE."

ALAN HANSEN — Date 3-24-16

Signature of Developer (print name below signature)

KCI TECHNOLOGIES

ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS

11850 WEST MARKET PLACE
SUITE A
FULTON, MD 20759
TELEPHONE: (410) 792-8086
FAX: (410) 792-7419

REVISIONS

NO.	DATE		BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-21-16

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/13/16

APPROVED: Howard County Department of Planning & Zoning

Director — Date 4-21-16

STATE OF MARYLAND — RICHARD A. BANCROFT — 33772 — PROFESSIONAL ENGINEER — 3/24/16

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33772 EXP. DATE: 06/16/2017

OWNER:
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
8045 HARRIET TUBMAN LN
COLUMBIA, MD 21044
(410)-313-6600

MOUNT VIEW MIDDLE SCHOOL
SEDIMENT & EROSION CONTROL NOTES & DETAILS
REVISED

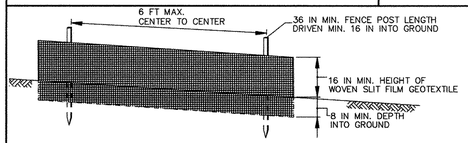
TAX MAP: 10 GRID: 13 PARCEL: 119
ZONED: RR-DEO
ELECTION DISTRICT NO. 03 - HOWARD COUNTY MARYLAND

DESIGN	DATE	KCI PROJECT NO. 27158272	SHEET NO.
NAB	3/01/16		C-2.01
DRAWN BRA	SCALE AS SHOWN	SHEET NO. 23 OF 28	

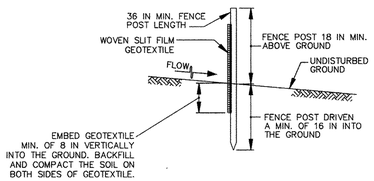
SDP-92-080

DETAIL E-1 SILT FENCE

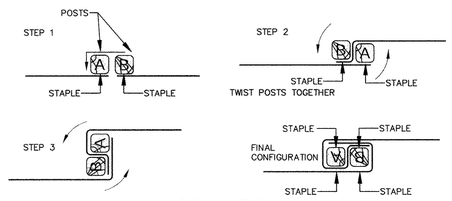
STANDARD SYMBOL: SF



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/16 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

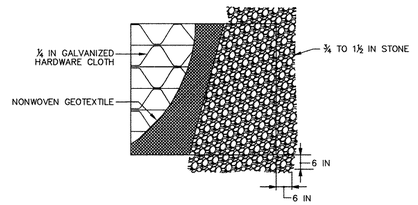
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

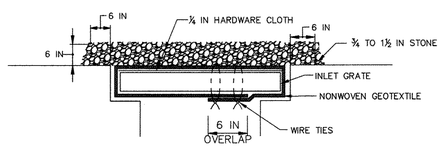
DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



PLAN / CUT AWAY VIEW



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

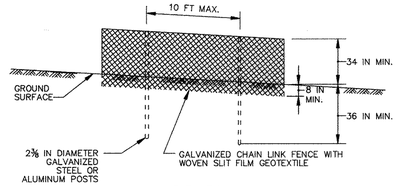
1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

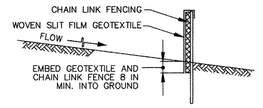
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



ELEVATION



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

This plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard Soil Conservation District — Date: 4/19/16

ENGINEER 'S CERTIFICATE

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Nicholas A. Barracle, P.E. — Signature of Engineer (print name below signature) — Date: 3/24/16

DEVELOPER 'S CERTIFICATE

"We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

ALAN HANSEN — Signature of Developer (print name below signature) — Date: 3-24-16

KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
11850 WEST MARKET PLACE
SUITE A
FULTON, MD 20759
TELEPHONE: (410) 792-8086
FAX: (410) 792-7419

REVISIONS

NO.	DATE		BY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-21-16

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4.13.16

APPROVED: Howard County Department of Planning & Zoning

Director — Date 4-21-16

STATE OF MARYLAND — NICHOLAS A. BARRACLE — 33772 — PROFESSIONAL ENGINEER — 3/24/16

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 33772 EXP. DATE: 06/16/2017

OWNER:
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
8045 HARRIET TUBMAN LN
COLUMBIA, MD 21044
(410)-313-6600

MOUNT VIEW MIDDLE SCHOOL

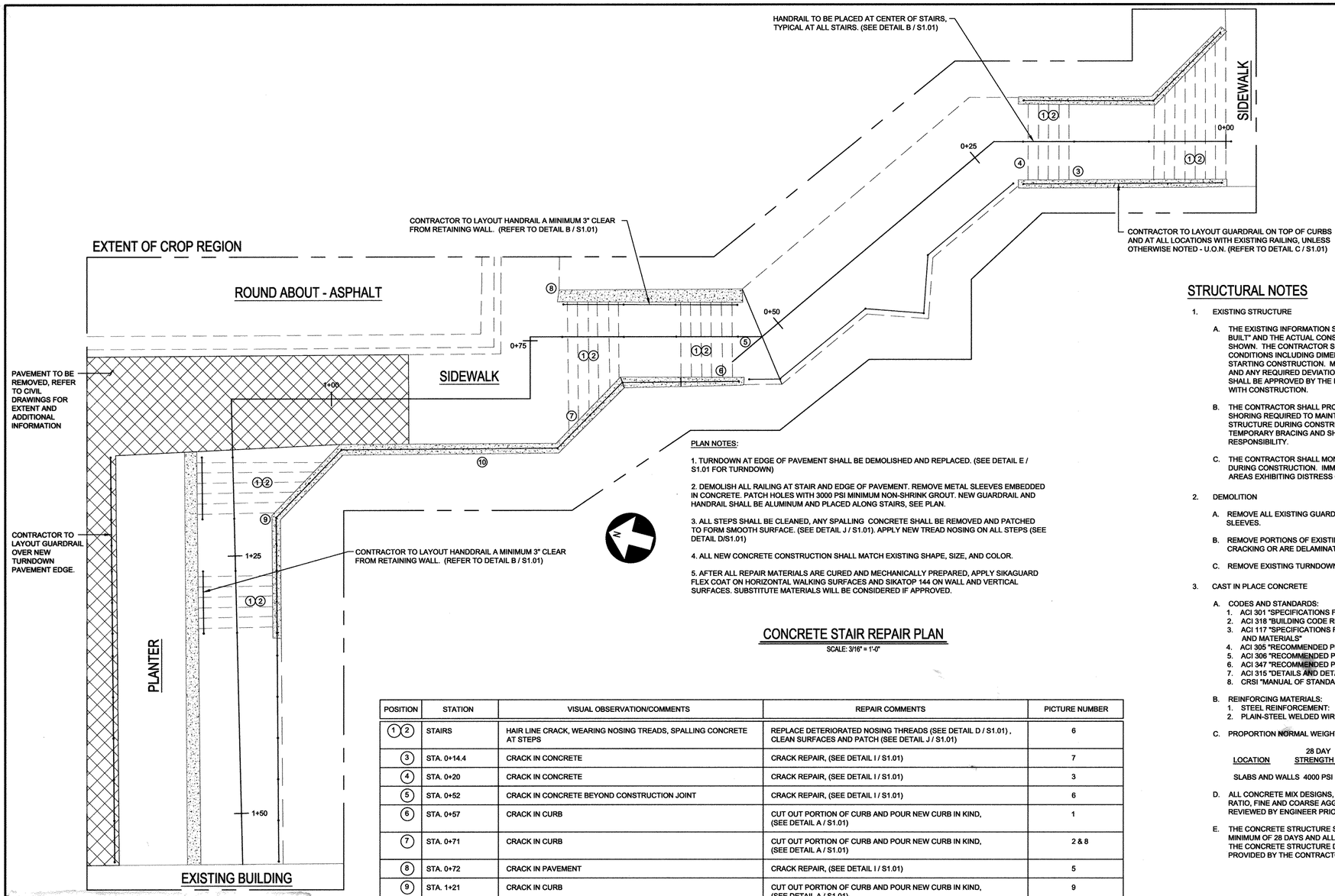
SEDIMENT & EROSION CONTROL DETAILS

REVISED

TAX MAP: 10 GRID: 13 PARCEL: 119
ZONED: RR-DEO
ELECTION DISTRICT NO. 03 – HOWARD COUNTY MARYLAND

DESIGN	DATE	KCI PROJECT NO. 27158272	SHEET NO.
NAB	3/01/16		C-2.02
DRAWN	SCALE	SHEET NO. 24 OF 26	
BRA	AS SHOWN		

SDP-92-080



PLAN NOTES:

1. TURNDOWN AT EDGE OF PAVEMENT SHALL BE DEMOLISHED AND REPLACED. (SEE DETAIL E / S1.01 FOR TURNDOWN)

2. DEMOLISH ALL RAILING AT STAIR AND EDGE OF PAVEMENT. REMOVE METAL SLEEVES EMBEDDED IN CONCRETE. PATCH HOLES WITH 3000 PSI MINIMUM NON-SHRINK GROUT. NEW GUARDRAIL AND HANDRAIL SHALL BE ALUMINUM AND PLACED ALONG STAIRS, SEE PLAN.

3. ALL STEPS SHALL BE CLEANED, ANY SPALLING CONCRETE SHALL BE REMOVED AND PATCHED TO FORM SMOOTH SURFACE. (SEE DETAIL J / S1.01). APPLY NEW TREAD NOSING ON ALL STEPS (SEE DETAIL D/S1.01)

4. ALL NEW CONCRETE CONSTRUCTION SHALL MATCH EXISTING SHAPE, SIZE, AND COLOR.

5. AFTER ALL REPAIR MATERIALS ARE CURED AND MECHANICALLY PREPARED, APPLY SIKAGUARD FLEX COAT ON HORIZONTAL WALKING SURFACES AND SIKATOP 144 ON WALL AND VERTICAL SURFACES. SUBSTITUTE MATERIALS WILL BE CONSIDERED IF APPROVED.

CONCRETE STAIR REPAIR PLAN

SCALE: 3/16" = 1'-0"

POSITION	STATION	VISUAL OBSERVATION/COMMENTS	REPAIR COMMENTS	PICTURE NUMBER
1 2	STAIRS	HAIR LINE CRACK, WEARING NOSING TREADS, SPALLING CONCRETE AT STEPS	REPLACE DETERIORATED NOSING THREADS (SEE DETAIL D / S1.01) , CLEAN SURFACES AND PATCH (SEE DETAIL J / S1.01)	6
3	STA. 0+14.4	CRACK IN CONCRETE	CRACK REPAIR, (SEE DETAIL I / S1.01)	7
4	STA. 0+20	CRACK IN CONCRETE	CRACK REPAIR, (SEE DETAIL I / S1.01)	3
5	STA. 0+52	CRACK IN CONCRETE BEYOND CONSTRUCTION JOINT	CRACK REPAIR, (SEE DETAIL I / S1.01)	6
6	STA. 0+57	CRACK IN CURB	CUT OUT PORTION OF CURB AND POUR NEW CURB IN KIND, (SEE DETAIL A / S1.01)	1
7	STA. 0+71	CRACK IN CURB	CUT OUT PORTION OF CURB AND POUR NEW CURB IN KIND, (SEE DETAIL A / S1.01)	2 & 8
8	STA. 0+72	CRACK IN PAVEMENT	CRACK REPAIR, (SEE DETAIL I / S1.01)	5
9	STA. 1+21	CRACK IN CURB	CUT OUT PORTION OF CURB AND POUR NEW CURB IN KIND, (SEE DETAIL A / S1.01)	9
10	STA. 0+85.4	CRACK IN CURB	CUT OUT PORTION OF CURB AND POUR NEW CURB IN KIND, (SEE DETAIL A / S1.01)	4

STRUCTURAL NOTES

1. EXISTING STRUCTURE
   - A. THE EXISTING INFORMATION SHOWN IS NOT INTENDED TO BE "AS BUILT" AND THE ACTUAL CONSTRUCTION MAY DIFFER FROM THAT SHOWN. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING DIMENSIONS AND ELEVATIONS PRIOR TO STARTING CONSTRUCTION. MINOR VARIATIONS CAN BE EXPECTED AND ANY REQUIRED DEVIATION FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
   - B. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING REQUIRED TO MAINTAIN THE STABILITY OF THE EXISTING STRUCTURE DURING CONSTRUCTION. THE DESIGN OF ALL TEMPORARY BRACING AND SHORING IS THE CONTRACTORS RESPONSIBILITY.
   - C. THE CONTRACTOR SHALL MONITOR THE EXISTING STRUCTURE DURING CONSTRUCTION. IMMEDIATELY NOTIFY THE ENGINEER OF AREAS EXHIBITING DISTRESS OR FAILURE.
2. DEMOLITION
   - A. REMOVE ALL EXISTING GUARDRAIL, HANDRAIL, AND EMBEDDED SLEEVES.
   - B. REMOVE PORTIONS OF EXISTING CURB THAT SHOW SIGNS OF CRACKING OR ARE DELAMINATING.
   - C. REMOVE EXISTING TURNDOWN AT PAVEMENT EDGE.
3. CAST IN PLACE CONCRETE
   - A. CODES AND STANDARDS:
     1. ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
     2. ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
     3. ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS"
     4. ACI 305 "RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING"
     5. ACI 306 "RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING"
     6. ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORM WORK"
     7. ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
     8. CRSI "MANUAL OF STANDARD PRACTICE"
   - B. REINFORCING MATERIALS:
     1. STEEL REINFORCEMENT: ASTM A 615, GRADE 60, DEFORMED
     2. PLAIN-STEEL WELDED WIRE REINFORCEMENT: ASTM A 185
   - C. PROPORTION NORMAL WEIGHT CONCRETE MIXES AS FOLLOWS:

LOCATION	28 DAY STRENGTH (f'c)	WATER-CEMENTIOUS RATIO	SLUMP LIMIT	AIR CONTENT
SLABS AND WALLS	4000 PSI	0.50	4" ± 1"	4.5% ± 1.5%

   - D. ALL CONCRETE MIX DESIGNS, INCLUDING CEMENT CONTENT, WATER CEMENT RATIO, FINE AND COARSE AGGREGATE CONTENT AND ALL ADMIXTURES, SHALL BE REVIEWED BY ENGINEER PRIOR TO PLACING FIRST CONCRETE.
   - E. THE CONCRETE STRUCTURE SHALL NOT SUPPORT THE DESIGN LIVE LOAD FOR A MINIMUM OF 28 DAYS AND ALL SHORING AND RESHORING REQUIRED TO SUPPORT THE CONCRETE STRUCTURE DURING CONSTRUCTION SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR.
4. MISCELLANEOUS
   - A. THE CONTRACTOR SHALL LOCATE ALL UTILITIES IN THE AREA OF CONSTRUCTION AND PREVENT DAMAGE TO THEM. SHOULD DAMAGE OCCUR TO ANY UTILITIES, THE CONTRACTOR IS REQUIRED TO REPAIR THE DAMAGE TO THE SATISFACTION OF THE OWNER AT HIS OWN EXPENSE.
   - B. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY THE CONTRACTOR OR OWNER FOR REVIEW BY THE ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.
   - C. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION.
   - D. THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONTRACT DOCUMENTS AS SHOP DRAWINGS.
   - E. SCALES SHOWN ON THE STRUCTURAL CONTRACT DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
   - F. REPAIR MATERIALS ARE BY FOX INDUSTRIES, SIKA OR EQUAL. FOLLOW MANUFACTURER'S DIRECTIONS FOR PREPARATION AND APPLICATION.
   - G. REFER TO CIVIL DRAWINGS AND GEOTECH REPORT BY KCI FOR ADDITIONAL INFORMATION.

5. ALUMINUM
   - A. A COMPONENT RAIL SYSTEM UTILIZING HOLLAENDER "INTERNAL-RAIL" COMPONENT SHALL BE SUPPLIED BY FABRICATOR.
   - B. ALL HANDRAIL DIMENSIONS ARE TO CENTER LINE OF PIPE.
     ALL MACHINE BOLTS TO BE SS304; CONCRETE ANCHORS TO SS316.
     POST SHALL BE:
     1 1/2"Ø SCH. 80 - 6061-T6 - ANODIZED CLEAR
     RAIL SHALL BE:
     1 1/2"Ø SCH. 40 - 6063-T6 - ANODIZED CLEAR
     RAILS TO BE SHIPPED LOOSE AND ASSEMBLED ON SITE.
   - C. ALL ALUMINUM COMING IN CONTACT WITH CONCRETE SHALL BE COATED WITH BITUMASTIC; ALUMINUM IN CONTACT WITH DISSIMULAR METALS TO BE COATED WITH A ZINC RICH PRIMER.
   - D. ACCURATE FIELD DIMENSIONS ARE REQUIRED FOR ALL RAILING AND POST LOCATIONS PRIOR TO ANY FABRICATION.
   - E. MOISTURE DRAINAGE ON POST BASE MOUNTED APPLICATIONS IS PROVIDED NATURALLY DUE TO SYSTEM CONSTRUCTION AND DOES NOT REQUIRE EXTERIOR "WEEP HOLES" TO BE DRILLED, (U.N.O.).
   - F. GUARDRAIL AND HANDRAIL DESIGN CRITERIA:
     IBC - THE HANDRAIL ASSEMBLY SHALL BE DESIGNED TO WITHSTAND A LOAD OF 50plf APPLIED IN ANY DIRECTION ALONG THE TOP OF THE RAIL.
     OR,
     A 200lb CONCENTRATED LOAD APPLIED TO THE TOP OF THE RAIL, AT ANY POINT, AND IN ANY DIRECTION. A 100lb/FT. LOAD IS TO BE APPLIED VERTICALLY DOWNWARD ON POST.
     THESE LOADS ARE NOT CONSIDERED TO ACT CONCURRENTLY.
   - G. WHEN ATTACHING TO STRUCTURAL MEMBERS (U.N.O.):
     USE 1/2"Ø BOLTS (2 HOLE); USE 3/8"Ø BOLTS (4 HOLE)
     WHEN ATTACHING TO CONCRETE (U.N.O.):

	TOP MOUNT	SIDE MOUNT
(2 HOLE)	1/2"Ø ADH. ANCHORS	1/2"Ø ADH. ANCHORS - 4 1/2" EMBED
(4 HOLE)	3/8"Ø ADH. ANCHORS	3/8"Ø ADH. ANCHORS - 4 1/2" EMBED

     MAXIMUM POST SPACING TO BE 5'-0" O.C. FOR TOP MOUNT.
   - H. GUARDRAIL AND HANDRAIL TO BE PLASTIC WRAPPED PRIOR TO SHIPMENT, AND THE PLASTIC IS TO BE REMOVED AFTER ERECTION IS COMPLETED.

REVIEWED BY HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-28-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4-13-16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
DIRECTOR — DATE 4-21-16

KCI TECHNOLOGIES
ENGINEERS
PLANNERS
SCIENTISTS
CONSTRUCTION MANAGERS
11850 WEST MARKET PLACE
SUITE A
FULTON, MD 20759
TELEPHONE: (410) 792-9086
FAX: (410) 792-7419

REVISIONS			
NO.	DATE		BY

OWNER:
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
8045 HARRIET TUBMAN LN
COLUMBIA, MD 21044
(410)-313-6600

MOUNT VIEW MIDDLE SCHOOL
REVISED
PLANS AND NOTES

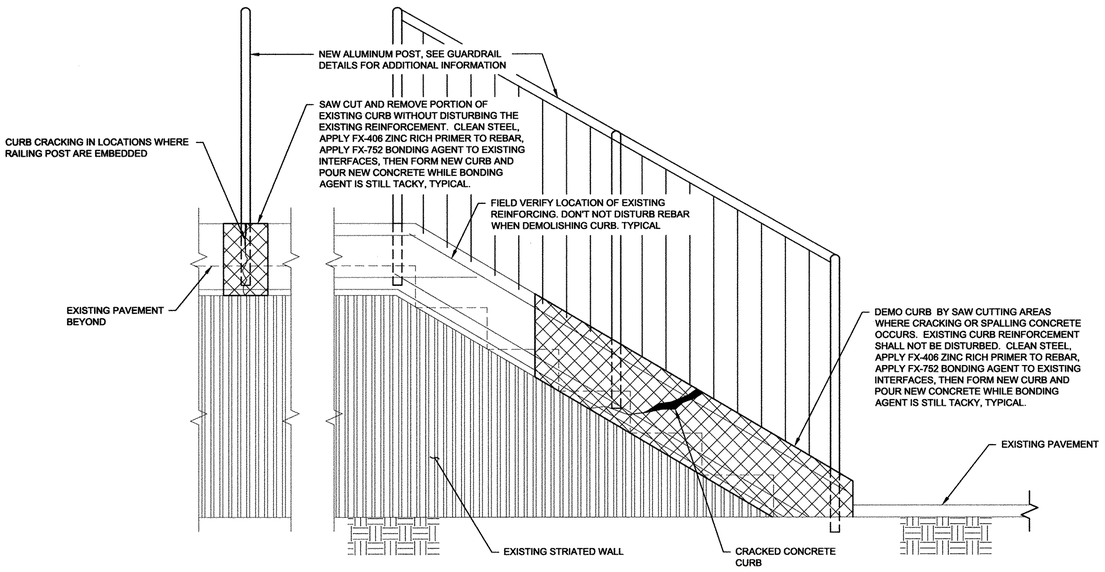
TAX MAP: 10 GRID: 13 PARCEL: 119
ZONED: RR-DEO
ELECTION DISTRICT NO. 03 - HOWARD COUNTY MARYLAND

License # 18323
Exp Date 07-05-17

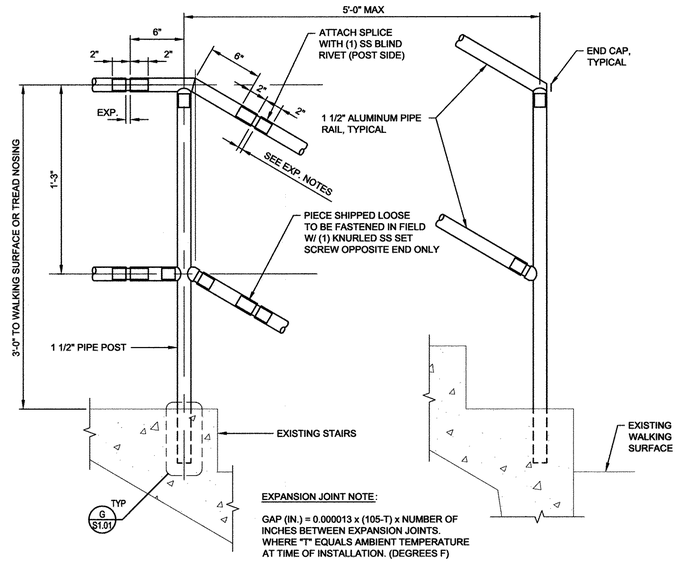
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. ~~17372~~ EXP. DATE: ~~06/03/2017~~

DESIGN	DATE	KCI PROJECT NO. 27158272	SHEET NO.
LH	11/23/15		S-1.00
DRAWN PDB	SCALE AS SHOWN	SHEET NO. 25 OF 26	

SDP-92-080



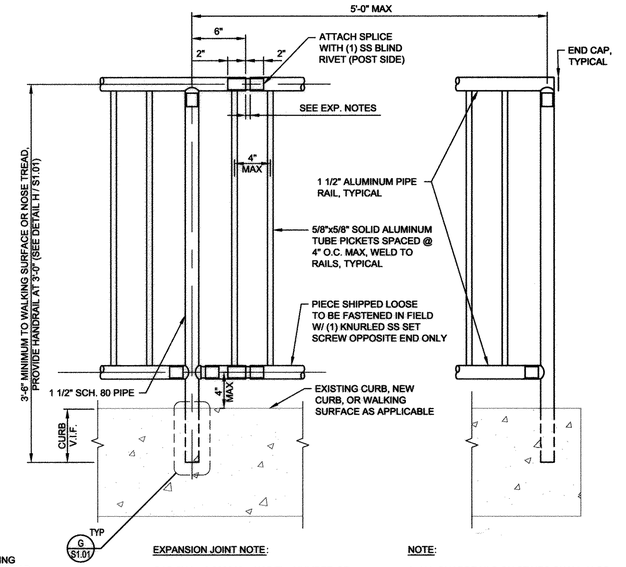
A TYPICAL CONCRETE CURB REPAIR DETAIL
SCALE: 1"=1'-0"



EXPANSION JOINT NOTE:

GAP (IN.) = 0.000013 x (105-T) x NUMBER OF INCHES BETWEEN EXPANSION JOINTS. WHERE "T" EQUALS AMBIENT TEMPERATURE AT TIME OF INSTALLATION. (DEGREES F)

B TYPICAL ALUMINUM MIDDLE HANDRAIL DETAIL AT STAIRS
SCALE: 1 1/2"=1'-0"



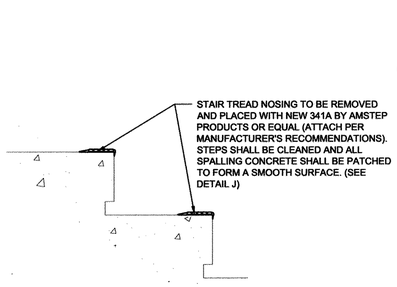
EXPANSION JOINT NOTE:

GAP (IN.) = 0.000013 x (105-T) x NUMBER OF INCHES BETWEEN EXPANSION JOINTS. WHERE "T" EQUALS AMBIENT TEMPERATURE AT TIME OF INSTALLATION. (DEGREES F)

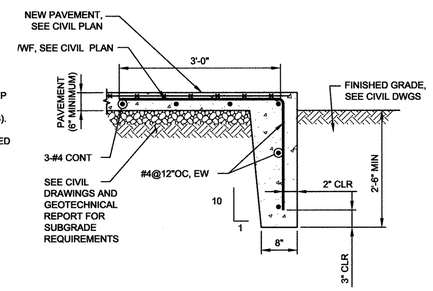
NOTE:

1. ALL GUARDRAILS ON STAIRS SHALL ALSO HAVE HANDRAIL

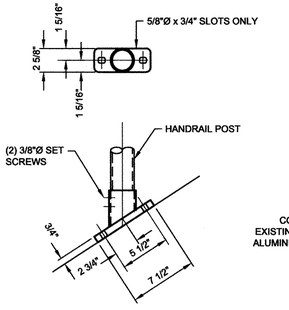
C TYPICAL GUARDRAIL DETAIL
SCALE: 1 1/2"=1'-0"



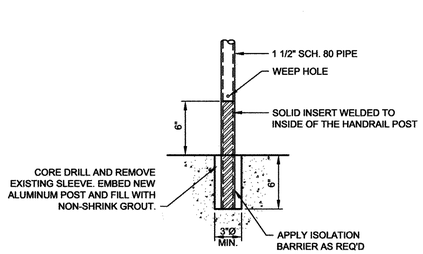
D TREAD NOSING DETAIL
SCALE: 1 1/2"=1'-0"



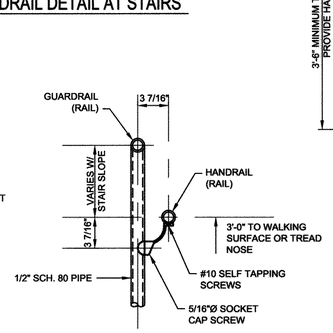
E TYPICAL TURNDOWN AT EDGE OF PAVEMENT SECTION
SCALE: 3/4"=1'-0"



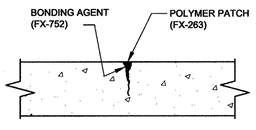
F BASE PLATE OPTION DETAIL
SCALE: 1 1/2"=1'-0"



G CORE DRILLED POST EMBEDMENT DETAIL
SCALE: 1 1/2"=1'-0"

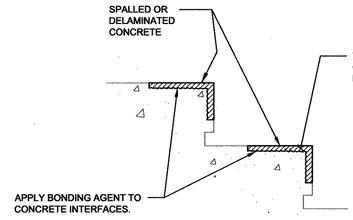


H HANDRAIL MOUNTING BRACKET DETAIL
SCALE: 1 1/2"=1'-0"



1. ROUT OR SAW CUT CRACK ¼" WIDE x 1" DEEP, MIN.
2. REMOVE DETERIORATED CONCRETE.
3. APPLY FX-752 BONDING AGENT.
4. WHILE BONDING AGENT IS STILL TACKY, REPAIR WITH FX-263 RAPID HARDENING TROWELABLE MORTAR.

I CRACK REPAIR DETAIL
SCALE: 1 1/2"=1'-0"



SECTION

REPAIR NOTES:

1. REMOVE DETERIORATED CONCRETE.
2. APPLY BONDING AGENT.
3. WHILE BONDING AGENT IS STILL TACKY, REPAIR WITH FX-263 RAPID HARDENING TROWELABLE MORTAR.

J SPALLING REPAIR DETAIL AT STEPS
SCALE: 1 1/2"=1'-0"

REVISED BY HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-29-16

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4.13.16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

DIRECTOR — DATE 4-21-16

KCI TECHNOLOGIES
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FAX: (410) 792-7419

REVISIONS			
NO.	DATE		BY

STATE OF MARYLAND — KENNETH B. DOLL — No. 18323 — PROFESSIONAL ENGINEER

License # 18323
Exp. Date 07-05-17

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. ~~12372~~ EXP. DATE: ~~06/03/2017~~

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MOUNT VIEW MIDDLE SCHOOL
REVISED DETAILS

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ELECTION DISTRICT NO. 03 – HOWARD COUNTY MARYLAND

DESIGN	DATE	KCI PROJECT NO. 27158272	SHEET NO.
LH	11/23/15		S-1.01
DRAWN PDB	SCALE AS SHOWN	SHEET NO. 26 OF 26	

SDP-92-080