

GENERAL NOTES

- 1. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" (800-257-7777) AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK.
2. TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON PLANS DATED JUNE 1989, TITLED "WESTERN ELEMENTARY SCHOOL VILLAGE OF RIVER HILL" COMPLETED BY THOMAS CLARK ASSOCIATES ARCHITECTS & KILLDUFF NAGY LANDSCAPE ARCHITECTS, AND A "PROJECT AREA" FIELD SURVEY DATED AUGUST 1999, COMPLETED BY KCI TECHNOLOGIES, INC.
3. BOUNDARY INFORMATION SHOWN HEREON IS BASED ON PLANS DATED JUNE 1989, TITLED "WESTERN ELEMENTARY SCHOOL VILLAGE OF RIVER HILL" COMPLETED BY THOMAS CLARK ASSOCIATES ARCHITECTS & KILLDUFF NAGY LANDSCAPE ARCHITECTS, AND A "PROJECT AREA" FIELD SURVEY DATED AUGUST 1999, COMPLETED BY KCI TECHNOLOGIES, INC.
4. EXISTING UTILITY INFORMATION SHOWN HEREON IS BASED ON THE BEST AVAILABLE INFORMATION (A "PROJECT AREA" FIELD SURVEY CONDUCTED BY KCI TECHNOLOGIES, INC. DATED AUGUST 1999, AND PLANS DATED JUNE 1989, TITLED "WESTERN ELEMENTARY SCHOOL VILLAGE OF RIVER HILL" COMPLETED BY THOMAS CLARK ASSOCIATES ARCHITECTS & KILLDUFF NAGY LANDSCAPE ARCHITECTS.
5. OBSTRUCTIONS SHOWN ON THIS DRAWING 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.
6. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES SHOWN HEREON BEFORE STARTING ANY WORK ON THESE PLANS.
7. CONTRACTOR TO REMOVE EXISTING FOUNDATIONS AND SUPPORTING WALLS TO A UNIFORM DEPTH OF 12 INCHES BELOW LOWEST FOUNDATION ELEVATION.
8. CONTRACTOR SHALL REMOVE DRIVEWAY ENTRANCES, STRUCTURES, AND CONCRETE WALK TO LIMITS INDICATED ON THE DRAWING.
9. CONTRACTOR SHALL NOT PROCEED WITH ANY DEMOLITION WORK UNTIL ALL UTILITY DISCONNECTIONS ARE COMPLETED AND VERIFIED IN WRITING.
10. BURNING OF COMBUSTIBLE MATERIALS FROM DEMOLISHED STRUCTURES WILL NOT BE PERMITTED ON SITE.
11. CONTRACTOR SHALL INSURE THAT ALL MATERIAL REMOVED FROM DEMOLISHED STRUCTURES ARE LEGALLY DISPOSED OF OFF SITE.
12. SEE SITE PLAN FOR LIMITS OF APPROXIMATE SIDEWALK, CURB AND GUTTER AND PAVING REMOVAL.
13. EXISTING CURB AND GUTTER & CONCRETE SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT. NO PATCHING SHALL BE PERMITTED.
14. A GEOTECHNICAL STUDY WAS PREPARED BY ENGINEERING CONSULTING SERVICES, LTD. DATED JANUARY, 2000.
15. REFER TO ARCHITECTURAL AND MECHANICAL/ELECTRICAL PLANS FOR BUILDING DEMOLITION.
16. 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.
17. 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.
18. SEE ARCHITECTURAL PLANS FOR ADDITIONAL BUILDING INFORMATION.
19. SEE MECHANICAL/ELECTRICAL/PLUMBING PLANS FOR ADDITIONAL MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION INFORMATION.
20. THE EXISTING BUILDING IS CURRENTLY SPRINKLERED FOR NEW SPRINKLER SYSTEM LAYOUT SEE SHEET FP-1.
21. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
22. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/ BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
23. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
24. ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
25. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 3552 AND 3554 WERE USED FOR THIS PROJECT.
26. WATER IS PUBLIC CONTRACT NO. 34-3356-D.
27. SEWER IS PUBLIC CONTRACT NO. 34-3356-D. DRAINAGE AREA: MIDDLE PATUXENT TREATMENT PLANT LITTLE PATUXENT.
28. THERE IS NO FLOODPLAIN ON THIS SITE.
29. THERE ARE NO WETLANDS ON THIS SITE.
30. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
31. ADJUST TOP OF CURB GRADES AS NECESSARY TO PROVIDE SMOOTH TRANSITION TO EXISTING.
32. SAW CUT EXISTING PAVEMENT AS NEEDED TO INSTALL NEW CONSTRUCTION.
33. STRIP AND RESURFACE EXISTING PAVING AS NEEDED TO PROVIDE SMOOTH TRANSITION TO EXISTING GRADES. SEE PAVING TIE IN DETAIL THIS SHEET.
34. THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
35. TRENCH BACKFILL IN GRASS AREAS SHALL BE COMPACTED TO A MINIMUM 90 % OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH A.A.S.H.T.O. VERIFY DESIGNATION T-100, METHOD C. TRENCH BACKFILL IN STRUCTURAL AREAS SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557). IN PAVED AREAS, FILL BELOW THE TOP 12 INCHES SHOULD BE COMPACTED TO 97%.
36. CONTRACTOR SHALL ADJUST ALL EXISTING UTILITIES, I.E. MANHOLE FRAMES AND COVERS, ETC. TO FINISHED GRADE.
37. UNLESS OTHERWISE NOTED, PIPE ELEVATIONS REFER TO THE INVERT.
38. UNLESS OTHERWISE NOTED, ALL SEWER PIPE SHALL BE PVC SDR-35 CONFORMING TO THE REQUIREMENTS OF A.S.T.M. SPECIFICATION D-3024. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE & FITTINGS SHALL BE HANCOCK SURE-LOC W/ CORRUGATED POLYETHYLENE PIPE (H.D.P.E.) OR APPROVE AS MANUFACTURED BY: HANCOCK INCORPORATED ONE WILLIAM DONNELLY INDUSTRIAL PARKWAY WAVERLY, NY, 14552 1-800-647-5800
39. ALL UTILITIES STRUCTURES DIMENSIONS SHALL REFER TO THE CENTERLINE OF THE "STRUCTURES".
40. SEE MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR CONTINUATION OF UTILITY CONNECTIONS TO BUILDING AND SITE LIGHTING INFORMATION.
41. THIS SITE PLAN IS EXEMPT FROM THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16-1202 (B)(1)(V) OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL.
42. WATER SERVICE CONNECTION TO THE NEW ADDITION(S) WILL BE COMPLETED WITHIN THE EXISTING SCHOOL FACILITY. SEE MECHANICAL PLAN M-3 FOR DETAILS.
43. VEHICULAR INGRESS AND EGRESS ONTO SOUTH TROTTER ROAD AND MD RTE. 302 (GULFORD ROAD) WILL BE PERMITTED ONLY AT POINTS OF ACCESS APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING, DEPARTMENT OF PUBLIC WORKS, AND THE STATE HIGHWAY ADMINISTRATION.
44. ONE (1) LIGHTING FIXTURE IS PROPOSED FOR THE NEW PARKING LOT EXPANSION (TO MATCH EXISTING) AND IS SHOWN ON SHEET C-2. NEW PARKING FACILITY LIGHTING IS IN COMPLIANCE WITH SECTION 134-B-2 OF THE HOWARD COUNTY ZONING REGULATIONS.
45. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
46. STORMWATER QUANTITY MANAGEMENT IS TO BE PROVIDED BY MEANS OF A PRIVATELY OWNED AND MAINTAINED BY HOWARD CO. BOARD OF ED.) UNDERGROUND STORAGE FACILITY. SWM WATER QUALITY IS TO BE PROVIDED VIA BAYWATER WHICH WILL ALSO BE PRIVATELY OWNED & MAINTAINED BY HOWARD COUNTY BOARD OF EDUCATION.

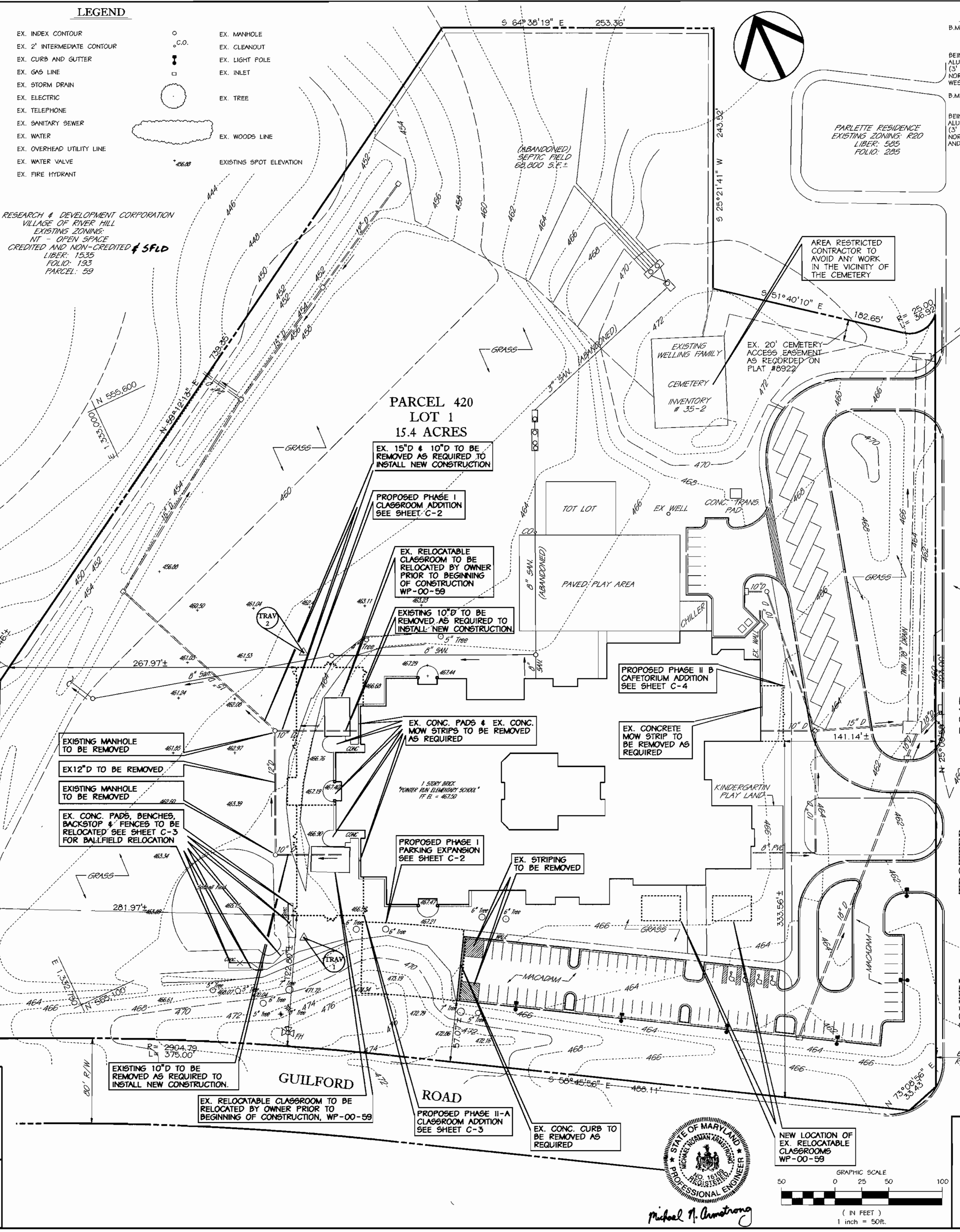
LEGEND

- 460 EX. INDEX CONTOUR
-462 EX. 2" INTERMEDIATE CONTOUR
g EX. CURB AND GUTTER
10"D EX. GAS LINE
EX. STORM DRAIN
EX. ELECTRIC
EX. TELEPHONE
EX. SANITARY SEWER
EX. WATER
EX. OVERHEAD UTILITY LINE
EX. WATER VALVE
EX. FIRE HYDRANT
EX. MANHOLE
EX. CLEANOUT
EX. LIGHT POLE
EX. INLET
EX. TREE
EX. WOODS LINE
EXISTING SPOT ELEVATION

HOWARD RESEARCH & DEVELOPMENT CORPORATION VILLAGE OF RIVER HILL EXISTING ZONING: NT - OPEN SPACE CREDITED AND NON-CREDITED & SFLD LIBER. 1535 FOLIO: 193 PARCEL: 59

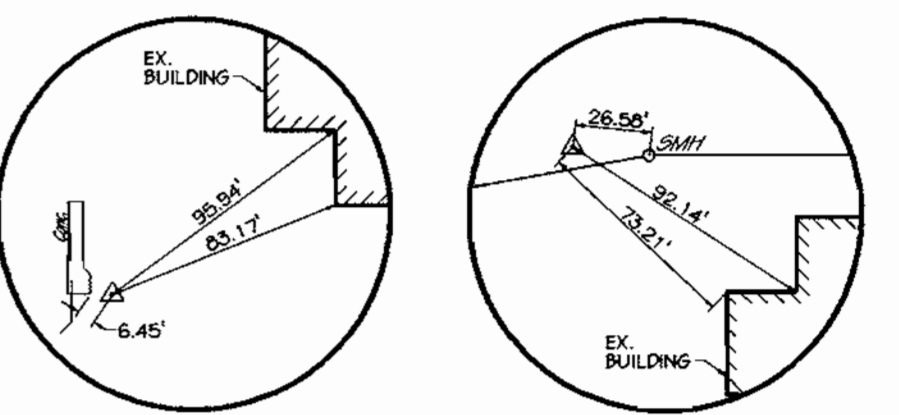
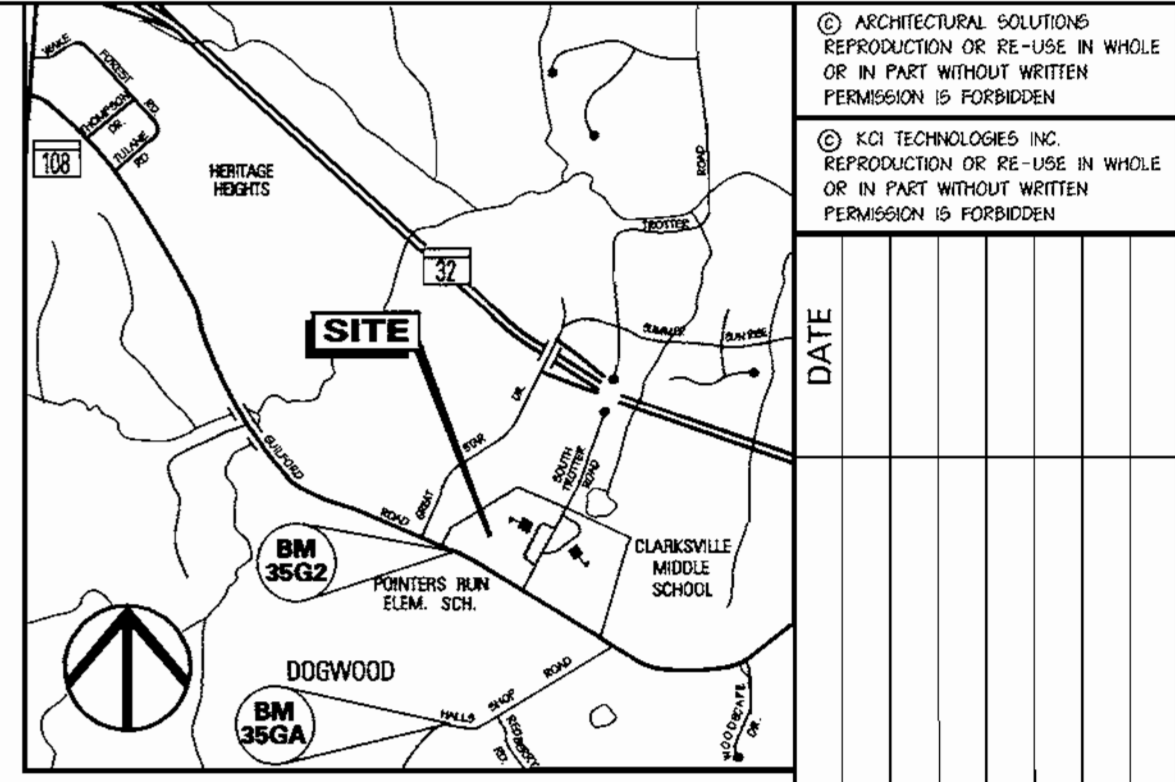
PARCEL 420 LOT 1 15.4 ACRES

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: 3-09-00
APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS
COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT



BENCHMARK DATA

B.M. 3562 ELEV. 477.49
N 554,965.67 E 1,332,934.90
B.M. 356A ELEV. 462.04
N 553,249.60 E 1,332,627.28



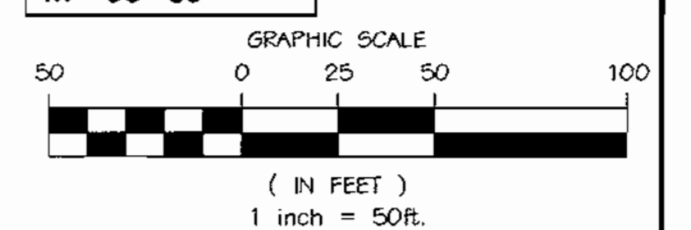
INDEX OF CIVIL DRAWINGS table with columns for SHEET and DESCRIPTION.

DESCRIPTION table listing drawing sheets C-1 through C-13 and their corresponding descriptions.

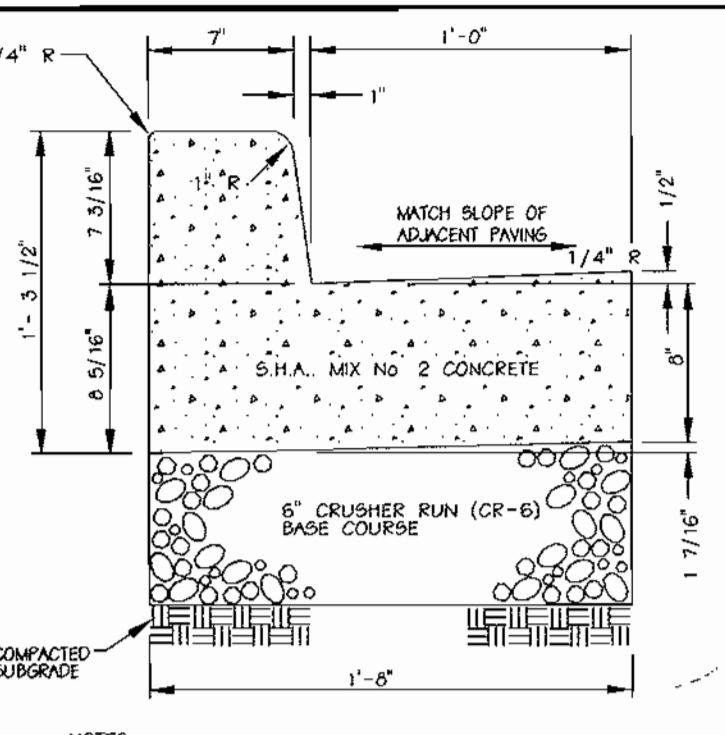
SITE ANALYSIS DATA CHART

- 1. SITE ADDRESS: 6600 SOUTH TROTTER ROAD CLARKSVILLE, MD. 21029
2. OWNER APPLICANT: HOWARD COUNTY BOARD OF EDUCATION 10910 ROUTE 106 ELLICOTT CITY, MD. 21043
3. PROPERTY REFERENCE: MAP 35 FLAT 8922 BLOCK 19/20 PARCEL 420 LOT 1 ELECTION DISTRICT 5
4. ZONING: NT-OPEN SPACE CREDITED AND NON-CREDITED
5. SETBACKS: 30' FROM PUBLIC STREET RIGHT OF WAY 25' FROM PROPERTY LINE
6. HEIGHT RESTRICTIONS: 34' FROM HIGHEST ADJACENT GROUND ELEVATION
7. AREA OF SITE: 15.4 ACRES PHASE I PROPOSED AREA = 46,011 sq. ft. PHASE II A SITE AREA = 94,875 sq. ft., PHASE II B SITE AREA = 2,218 sq. ft.
8. EXISTING BUILDING COVERAGE: 10.3% ADDITIONAL BUILDING COVERAGE: 2.1% EXISTING OPEN SPACE COVERAGE: 81% NEW OPEN SPACE COVERAGE: 79% EXISTING MAXIMUM LOT COVERAGE IS REQUIRED PER FDP-207 EXISTING BUILDING COVERAGE 69,070 SF OR 1.59 ACRES NEW BUILDING COVERAGE 13,090 SF OR 0.32 ACRES TOTAL BUILDING COVERAGE 82,160 SF PHASE I AREA TO BE VEGATED = 34,000 sq. ft. PHASE II A AREA TO BE VEGATED = 25,115 sq. ft. PHASE II B AREA TO BE VEGATED = 1,102 sq. ft.
9. FINAL DEVELOPMENT PLAN: FDP-207
10. EXISTING AREA OF PAVED PARKING 35,004 SF OR 0.82 ACRES, COVERAGE (5.2%) NEW AREA OF PAVED PARKING: 5,136 SF OR 0.12 ACRES, COVERAGE (0.0%) TOTAL PAVED PARKING AREA AS 0.96 ACRES, COVERAGE (6.1%) EXISTING PARKING SPACES = 80, (PER SDP-09-278/D.O.E. REQUIREMENTS) PROPOSED PARKING SPACES = 16 TOTAL PARKING SPACES = 96
11. PREVIOUSLY APPROVED SDP-09-278 (ORIGINAL SCHOOL CONSTRUCTION 1993/1999)
12. PHASE I ADDITION = 7,023 S.F. PHASE II A ADDITION = 5,796 S.F. PHASE II B ADDITION = 1,111 S.F. TOTAL ADDITIONS = 13,930 S.F.
APPLICABLE FILE: FDP-207, 5-09-63, PB-253,F-90-10, SDP-09-278, WP-00-59
SDP-00-68

ADDRESS CHART, PERMIT INFORMATION CHART, and SITE DEVELOPMENT PLAN POINTERS RUN ELEMENTARY SCHOOL VILLAGE OF RIVER HILL SECTION 1 AREA 2, LOT 1 PARCEL 420



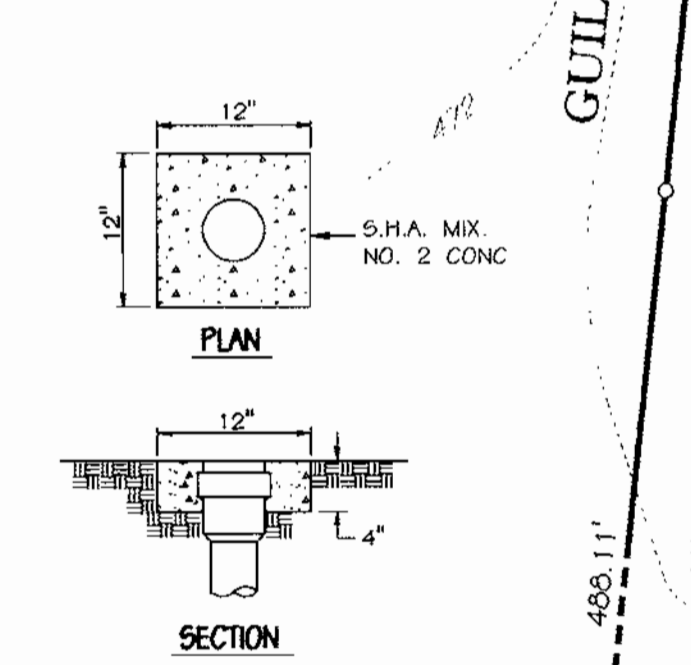
KCI TECHNOLOGIES INC. ARCHITECTURAL SOLUTIONS
15898 CRABS BRANCH WAY ROCKVILLE, MARYLAND 20855-2635
PROJECT # 01-99171
PERMIT ISSUE: 12-08-99
CONSTRUCTION ISSUE: 12-22-99



NOTES:  
 1. PROVIDE EXPANSION JOINTS EVERY 20' MAX.  
 2. PROVIDE CONTROL JOINTS EVERY 10' JOINTS  
 ARE TO ALIGN WITH THE PROPOSED SIDEWALK JOINTS.  
 3. HOWARD COUNTY STANDARD R-3.01.

**COMBINATION CURB AND GUTTER**  
 HO. CO. STD. R3.01  
 SCALE: N.T.S.

- LEGEND**
- 90 EX. INDEX CONTOUR
  - EX. 2' INTERMEDIATE CONTOUR
  - EX. CURB AND GUTTER
  - EX. GAS LINE
  - EX. STORM DRAIN
  - EX. ELECTRIC
  - EX. TELEPHONE
  - EX. SANITARY SEWER
  - EX. WATER
  - EX. OVERHEAD UTILITY LINE
  - EX. WATER VALVE
  - EX. FIRE HYDRANT
  - EX. MANHOLE
  - EX. CLEANOUT
  - EX. LIGHT POLE
  - EX. INLET
  - PROPOSED CLEANOUT
  - PROPOSED CONTOUR
  - PROPOSED CONCRETE
  - PROPOSED SPOT ELEVATION
  - SOIL BORING
  - PROPOSED CONSTRUCTION
  - EX. TREE
  - EX. WOODS LINE
  - EX. SPOT ELEVATION
  - PROPOSED SANITARY SEWER
  - PROPOSED LIGHT POLE (SEE ELECTRICAL PLANS FOR DETAILS)
  - PROPOSED STORM DRAIN



NOTE:  
 TYPICAL OF ALL CLEANOUTS IN GRASS AREAS

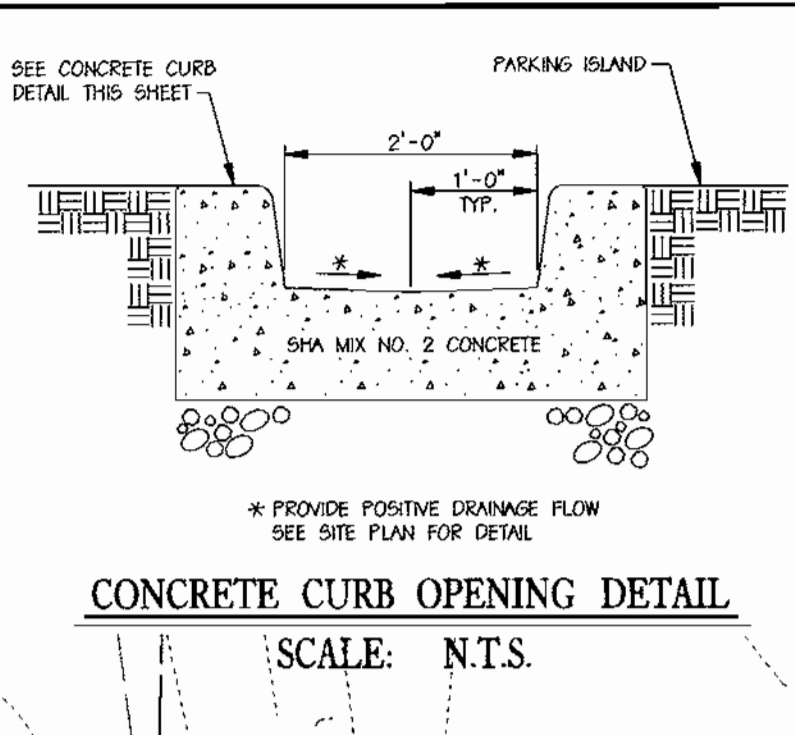
**CLEAN-OUT CONCRETE PAD DETAIL**  
 SCALE: N.T.S.

**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY

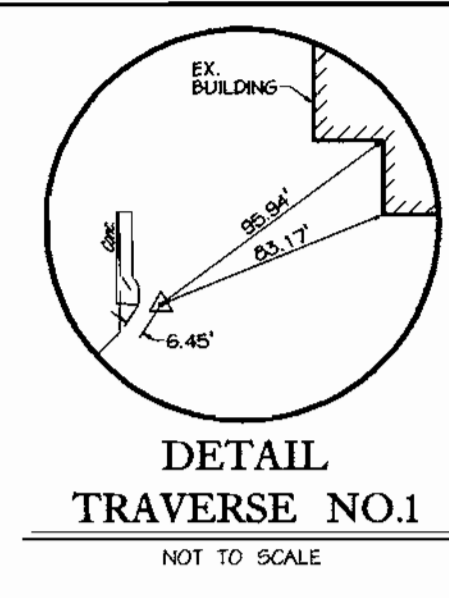
DATE: 3-09-00

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SERVICES

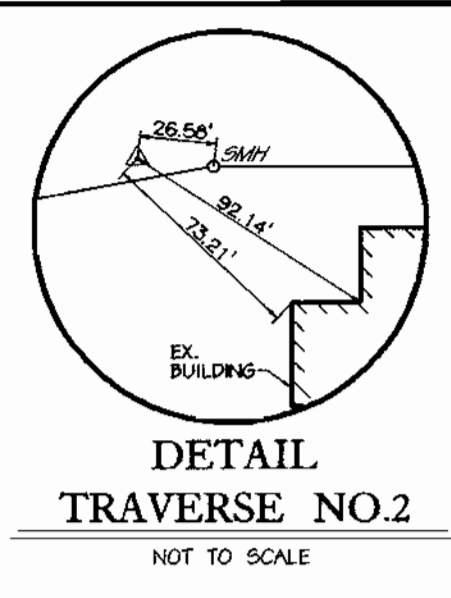
COUNTY HEALTH OFFICER  
 HOWARD COUNTY HEALTH DEPARTMENT



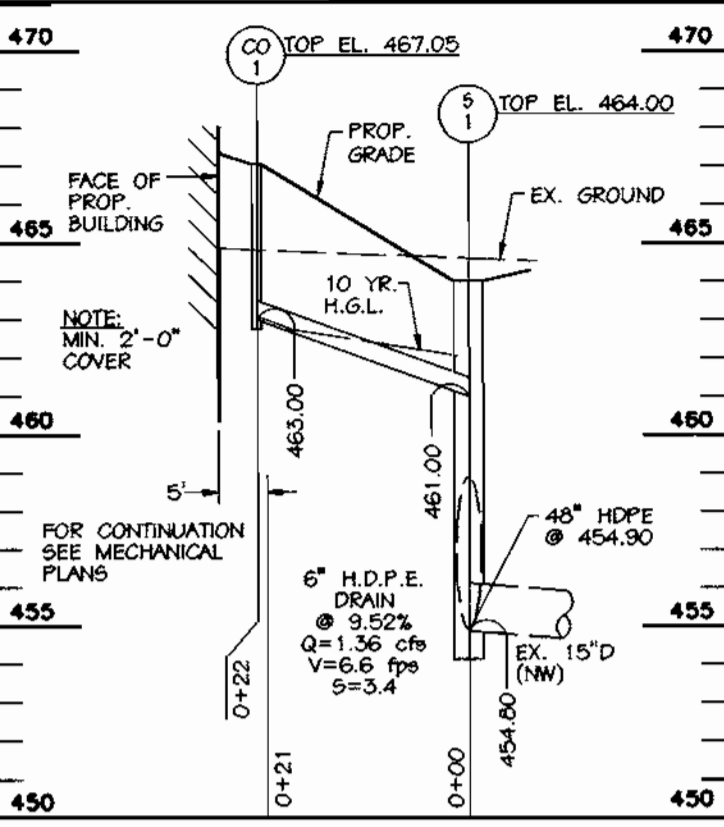
**CONCRETE CURB OPENING DETAIL**  
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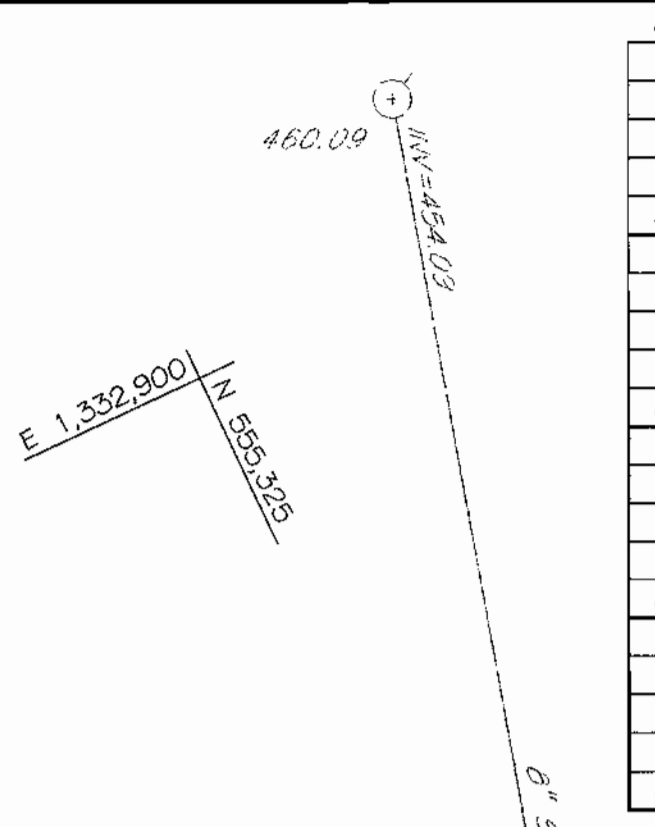
**DETAIL TRAVERSE NO.1**  
 NOT TO SCALE



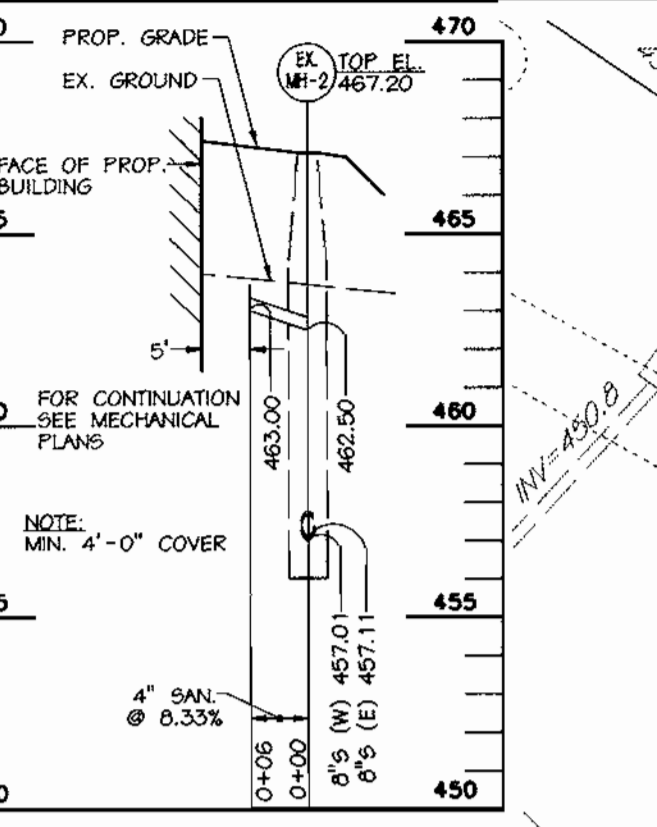
**DETAIL TRAVERSE NO.2**  
 NOT TO SCALE



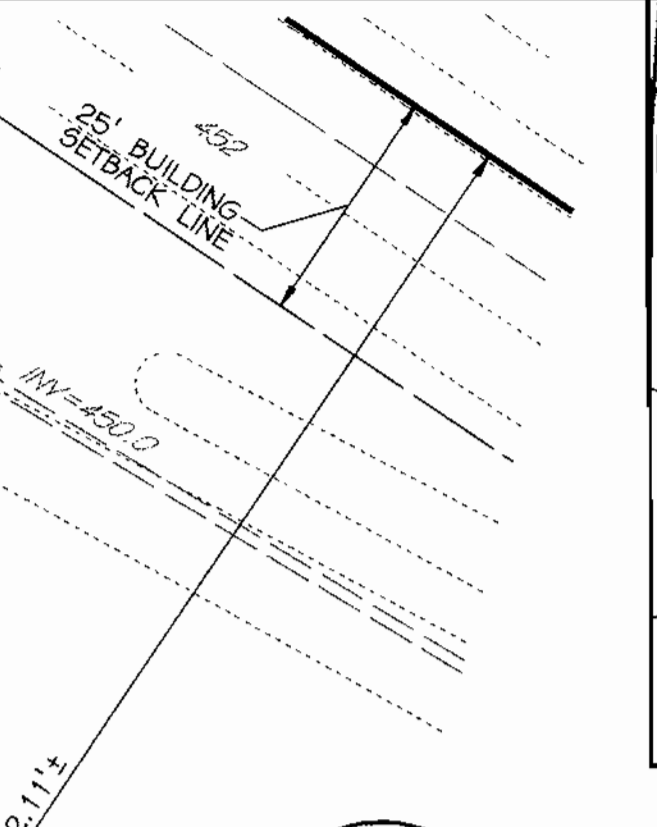
**6\"/>
 SCALE: HORIZ. 1\"/>**



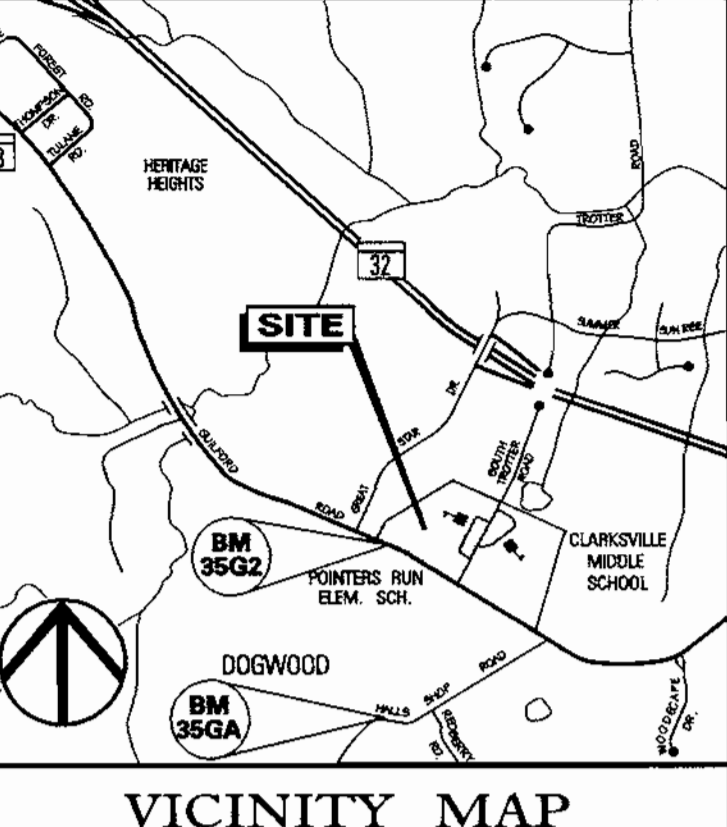
**SANITARY PROFILE**  
 SCALE: HORIZ. 1\"/>



**NORTH ELEVATION**  
 SCALE: N.T.S.



**VICINITY MAP**  
 Scale: 1\"/>

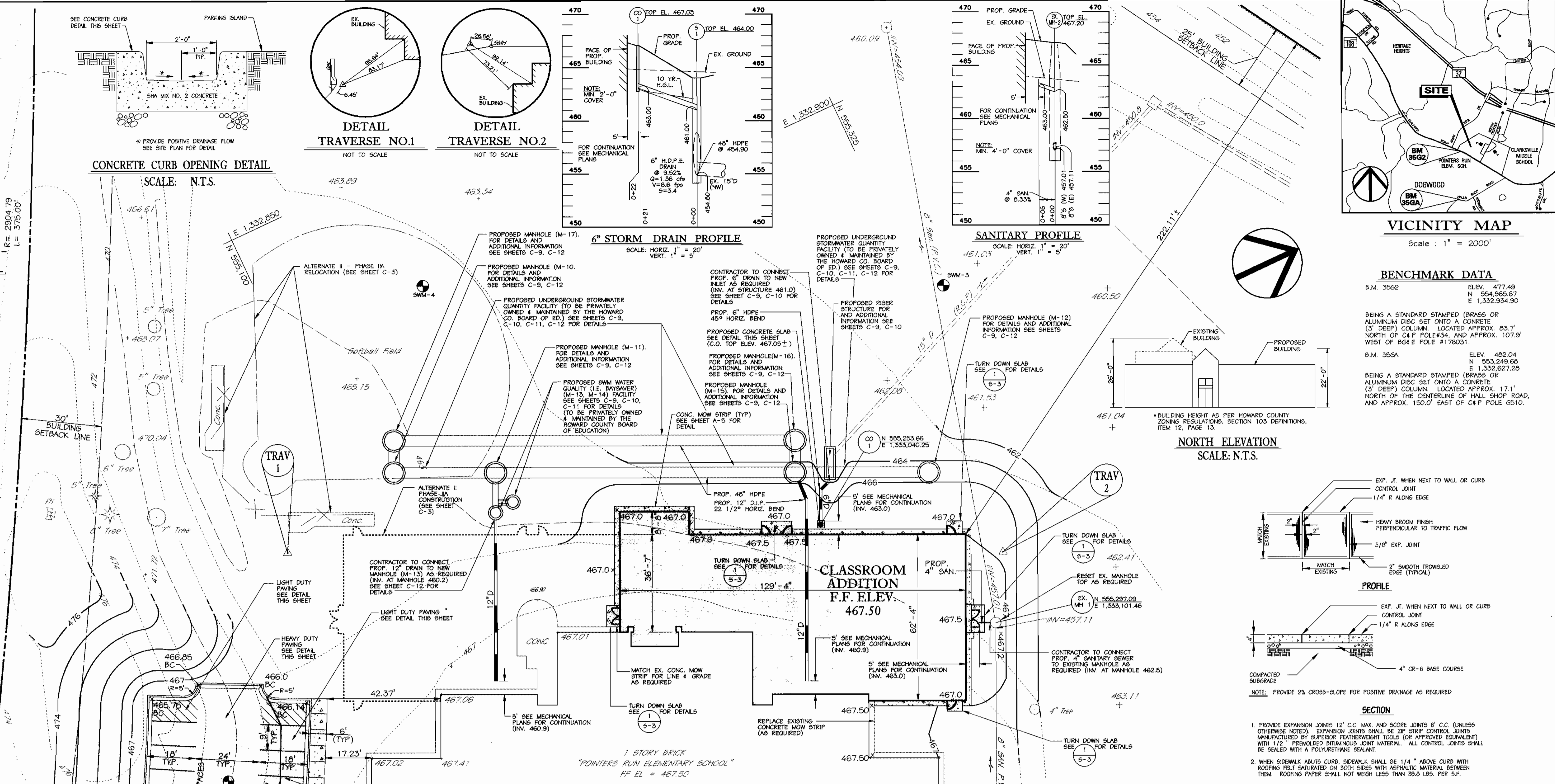


**BENCHMARK DATA**

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 N 554,965.67  
 E 1,332,934.90

B.M. 356A ELEV. 482.04  
 N 553,249.66  
 E 1,332,927.28

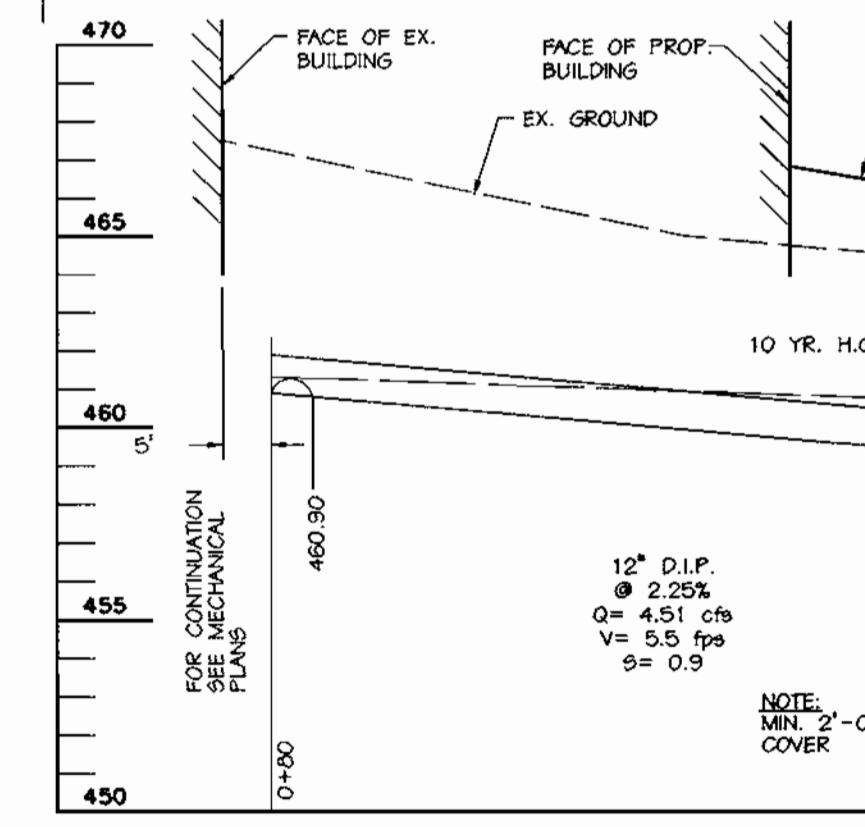
BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3\"/>



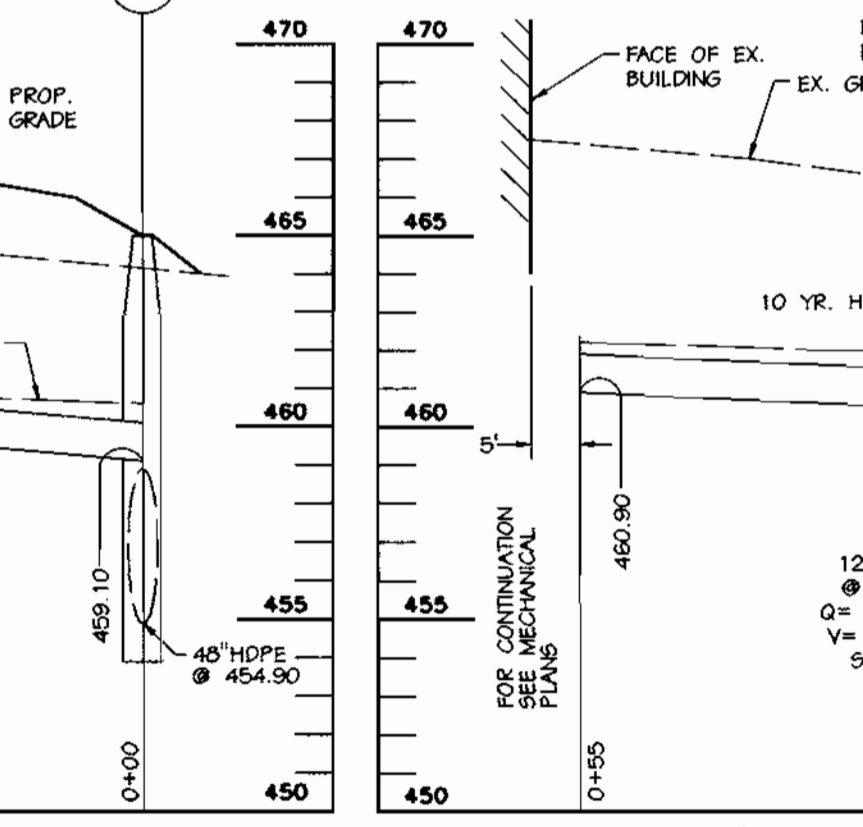
**STRUCTURE SCHEDULE**

NO.	TYPE	SIZE	INV. IN.	INV. OUT.	TOP ELEV.	REMARKS
CO-1	9\"/>					
EX MH-1	SHALLOW	48"	462.5	457.01	467.21	EX. HOWARD CO. 9\"/>
M-10	PRECAST MANHOLE	72"	454.9	454.9	464.94	MDSHA 304.05
M-11	PRECAST MANHOLE	72"	454.9	454.9	464.21	MDSHA 304.05
M-12	PRECAST MANHOLE	72"	454.9	454.9	465.05	MDSHA 304.05
M-13	STD. PRECAST MANHOLE	48"	462.0	459.2	466.61	EX. HOWARD CO. 6\"/>
M-14	STD. PRECAST MANHOLE	48"	455.2	455.2	466.64	EX. HOWARD CO. 6\"/>
M-15	PRECAST MANHOLE	72"	454.9	454.9	465.05	MDSHA 304.05
M-16	PRECAST MANHOLE	72"	454.9	454.9	463.66	MDSHA 304.05
M-17	PRECAST MANHOLE	72"	454.9	454.9	464.95	MDSHA 304.05
S-1	RISER STRUCTURE	48"	454.9	454.8	464.01	SEE DETAILS SHEET C-10

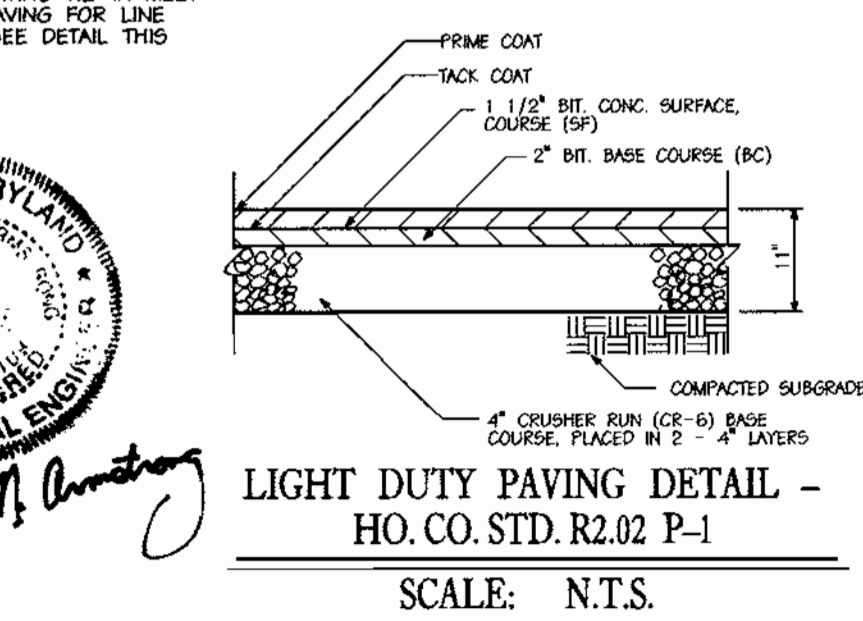
CONTRACTOR TO ADJUST MANHOLE COVER TO GRADE IN FIELD



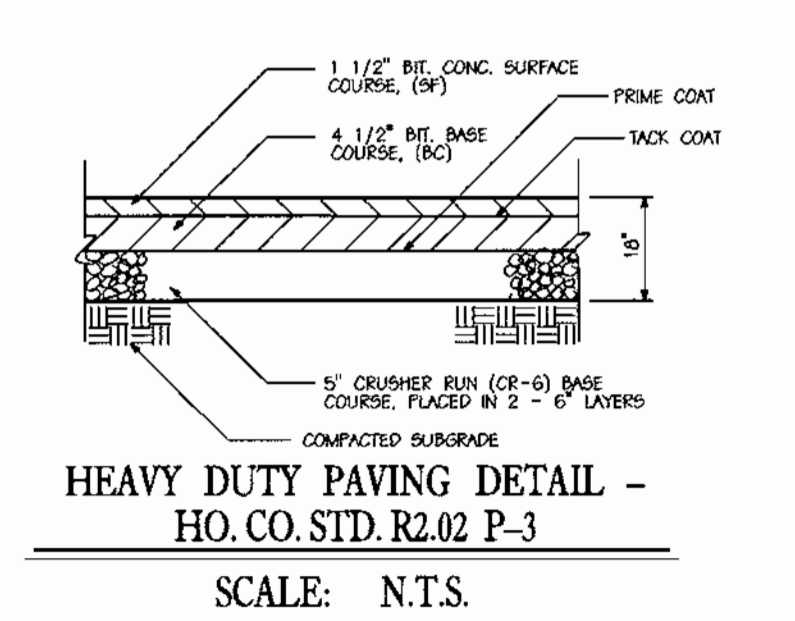
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 SCALE: HORIZ. 1\"/>**



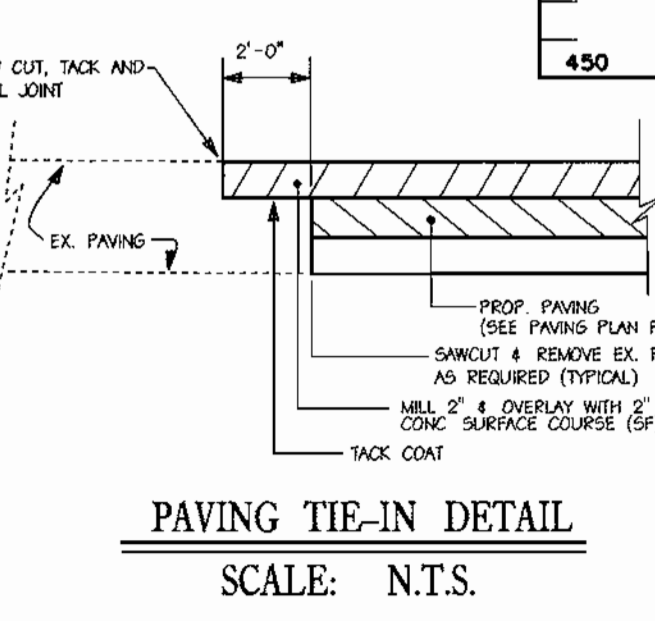
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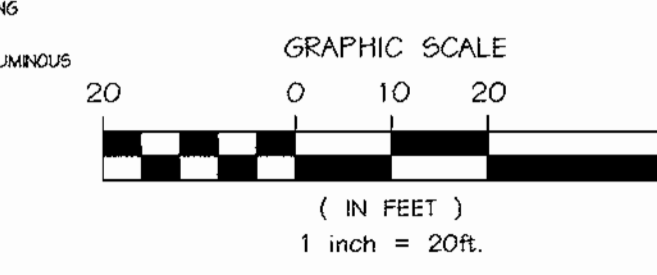
**LIGHT DUTY PAVING DETAIL -**  
 HO. CO. STD. R2.02 P-1  
 SCALE: N.T.S.



**HEAVY DUTY PAVING DETAIL -**  
 HO. CO. STD. R2.02 P-3  
 SCALE: N.T.S.



**PAVING TIE-IN DETAIL**  
 SCALE: N.T.S.



**PHASE I - SITE /UTILITY PLAN**  
**POINTERS RUN ELEMENTARY SCHOOL**  
 VILLAGE OF RIVER HILL  
 SECTION 1 AREA 2, LOT 1 PARCEL 420

OWNER:  
 HOWARD COUNTY BOARD OF EDUCATION  
 6990 ROCKYFTR  
 ELLICOTT CITY, MARYLAND 21043

SCALE: 1" = 20'  
 SHEET TITLE: 2 OF 13

PROJECT # 01-99171  
 PERMIT ISSUE: 12-08-99  
 CONSTRUCTION ISSUE: 12-22-99

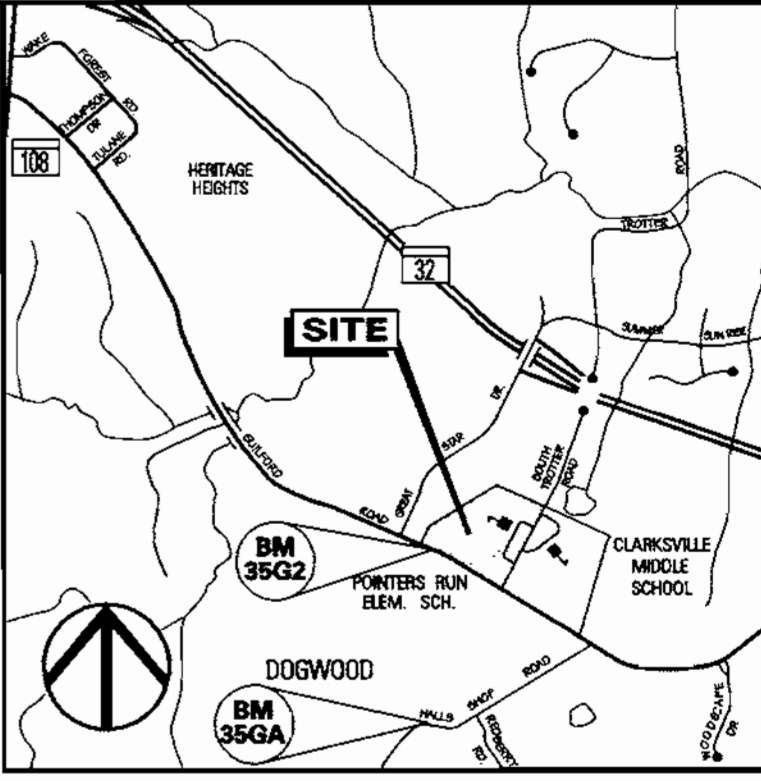
**ARCHITECTURAL SOLUTIONS**  
 15889B CRABBS BRANCH WAY  
 ROCKVILLE, MARYLAND 20855-2635  
 TEL: 301-670-5616  
 FAX: 301-670-5617  
 EMAIL: ARCSOL@AOL.COM

**KCI TECHNOLOGIES INC.**  
 ENGINEERS • PLANNERS • SCIENTISTS  
 CONSTRUCTION MANAGERS  
 10 NORTH PARK DRIVE  
 HUNT VALLEY, MARYLAND  
 21034-1888  
 PHONE: (410) 316-7800 FAX: (410) 316-7817  
 HTTP://WWW.KCI.COM

**ARCHITECTURAL SOLUTIONS**  
 KCI TECHNOLOGIES

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PERMISSION IS FORBIDDEN

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OR IN PART WITHOUT WRITTEN  
PERMISSION IS FORBIDDEN



VICINITY MAP

Scale: 1" = 2000'

BENCHMARK DATA

B.M. 3562 ELEV. 477.49  
N 554.365.67  
E 1,332.934.90

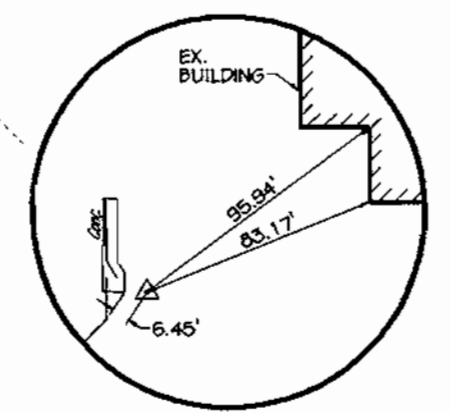
B.M. 356A ELEV. 482.04  
N 553,249.68  
E 1,332,627.28

BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3" DEEP) COLUMN, LOCATED APPROX. 63.7' NORTH OF C4 P. POLE#34, AND APPROX. 107.9' WEST OF B4 E POLE #176031.

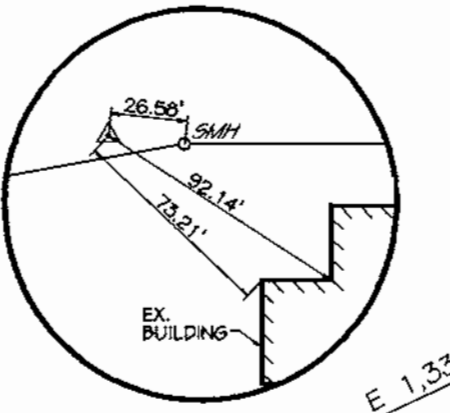
BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3" DEEP) COLUMN, LOCATED APPROX. 17.1' NORTH OF THE CENTERLINE OF HALL SHOP ROAD, AND APPROX. 150.0' EAST OF C4 P. POLE 6510.

NO.	TYPE	SIZE	INV. IN	INV. OUT	TOP ELEV.	REMARKS
EX CO-1	9"D	-	-	-	467.05	HOWARD CO. 9"D S 2.22
EX MH-1	SHALLOW	40"	462.5	457.01	467.21	EX. HOWARD CO. G 5.12
EX M-10	PRECAST MANHOLE	72"	454.9	454.9	464.91	MDSHA 364.05
EX M-11	PRECAST MANHOLE	72"	454.9	454.9	464.21	MDSHA 364.05
EX M-12	PRECAST MANHOLE	72"	454.9	454.9	465.01	MDSHA 364.05
EX M-13	PRECAST MANHOLE	48"	462.0	459.2	466.61	EX. HOWARD CO. G 5.12
EX M-14	PRECAST MANHOLE	48"	455.2	455.2	466.61	EX. HOWARD CO. G 5.12
EX M-15	PRECAST MANHOLE	72"	454.9	454.9	465.01	MDSHA 364.05
EX M-16	PRECAST MANHOLE	72"	454.9	454.9	463.66	MDSHA 364.05
EX M-17	PRECAST MANHOLE	72"	454.9	454.9	464.951	MDSHA 364.05
EX S-1	RISER STRUCTURE	48"	454.9	454.0	464.01	SEE DETAILS SHEET C-10

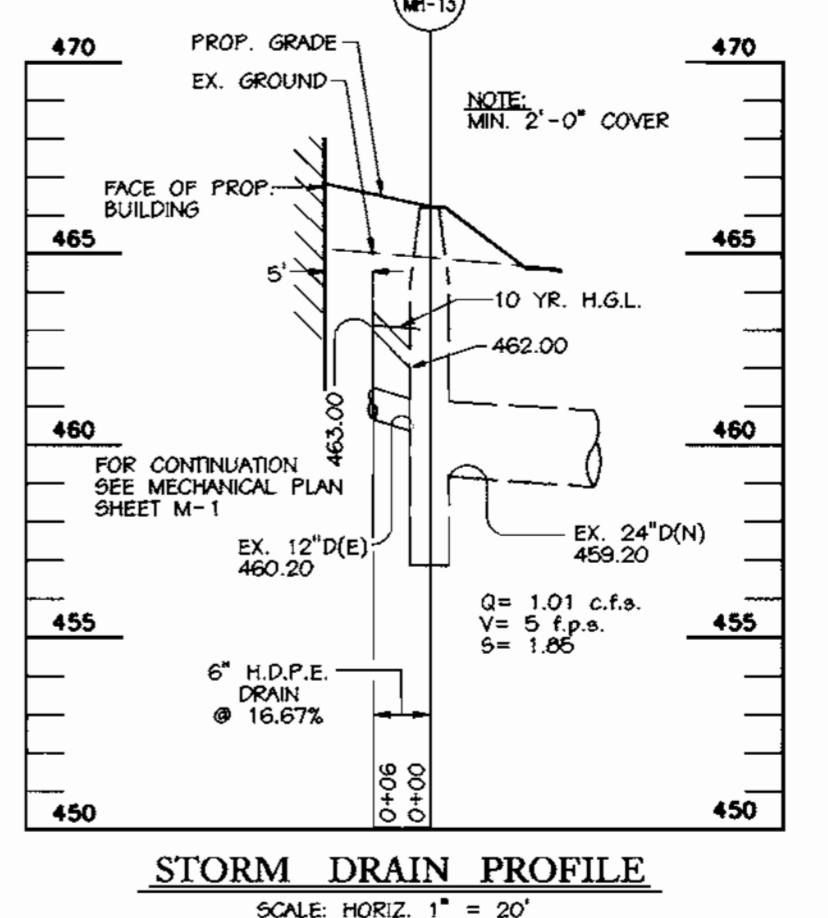
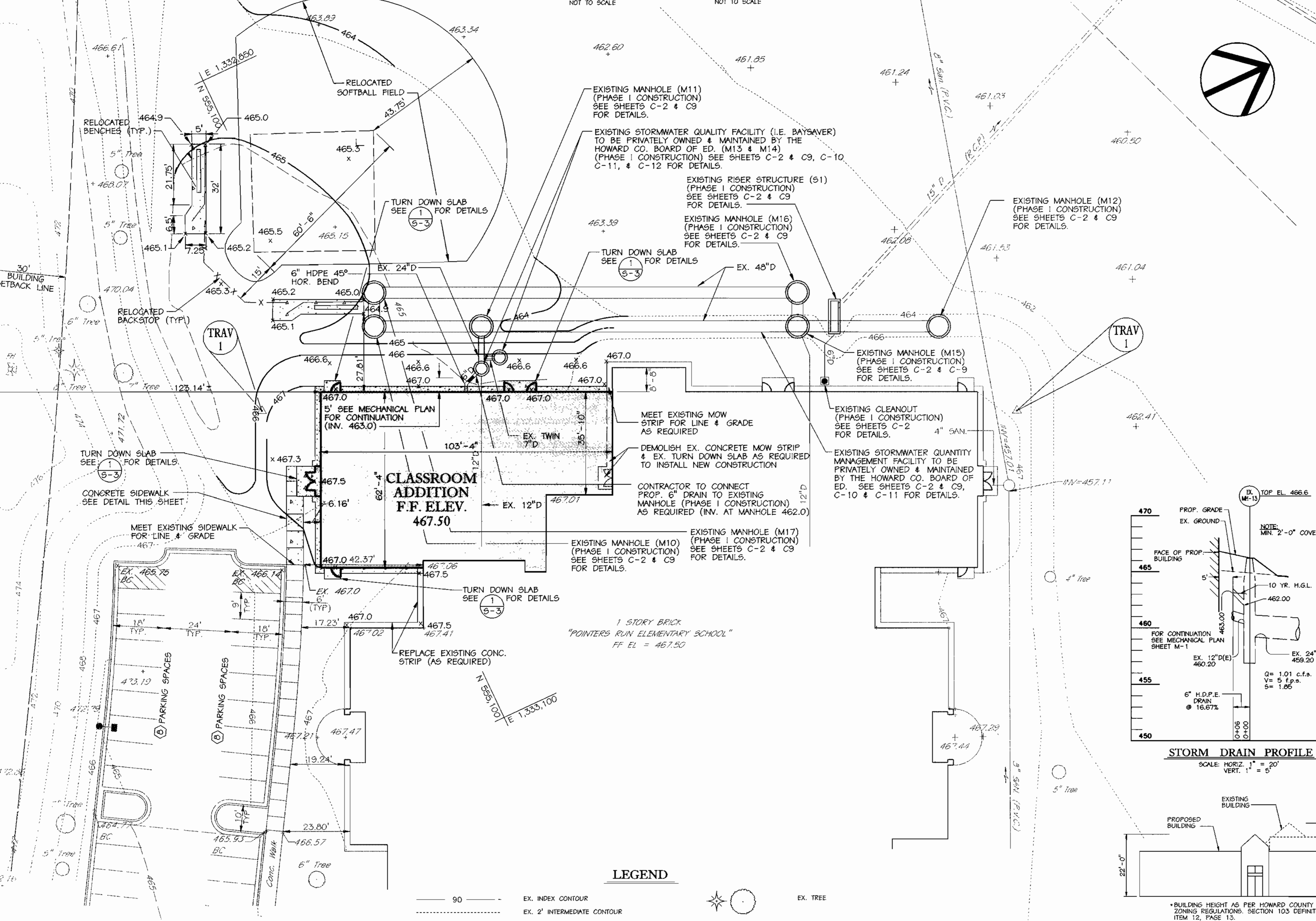
\* CONTRACTOR TO ADJUST MANHOLE COVER TO GRADE IN FIELD.



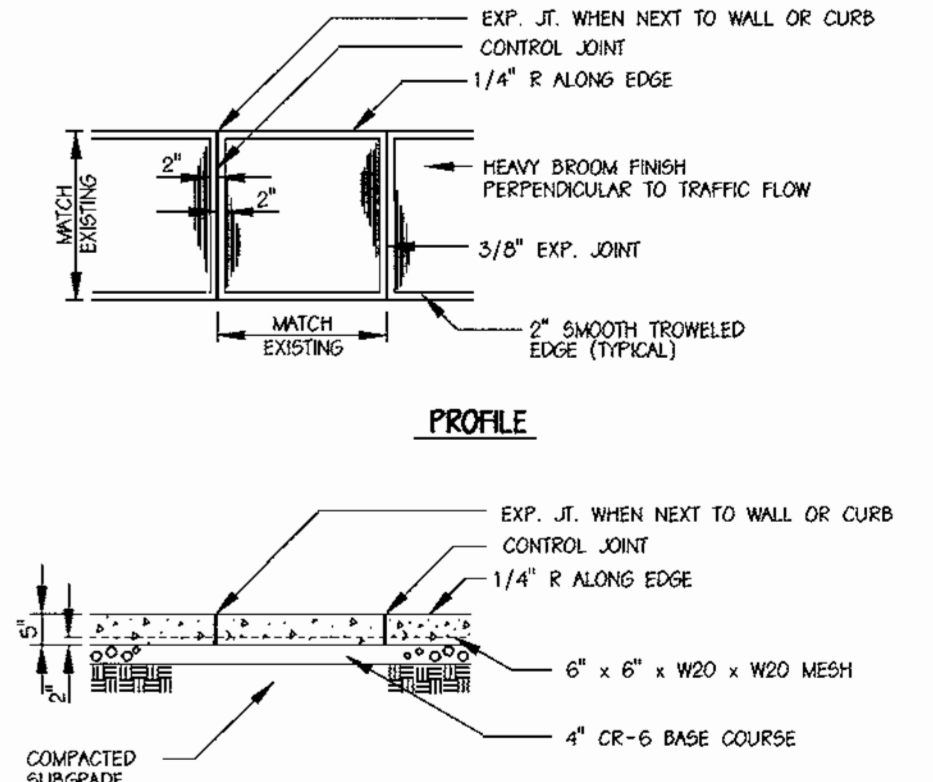
DETAIL TRAVERSE NO.1  
NOT TO SCALE



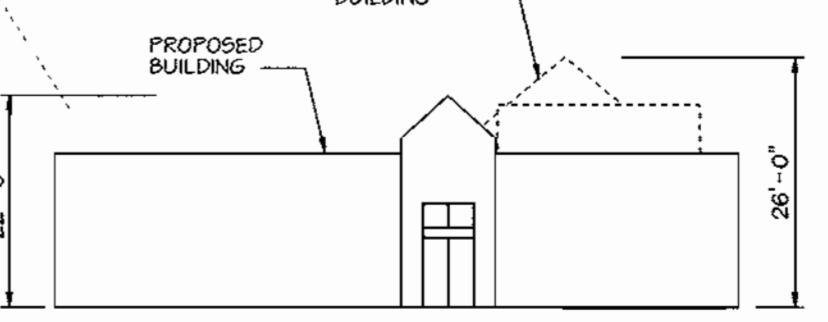
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NOT TO SCALE



STORM DRAIN PROFILE  
SCALE: HORIZ. 1" = 20'  
VERT. 1" = 5'



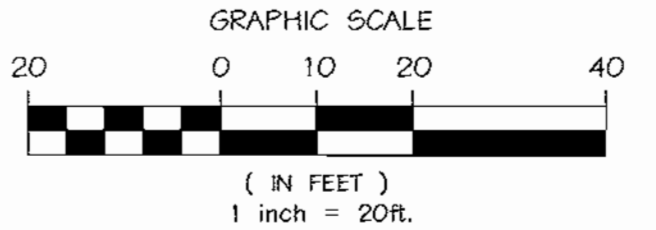
CONCRETE SIDEWALK DETAIL  
SCALE: N.T.S.



SOUTH ELEVATION  
SCALE: N.T.S.

LEGEND

90	EX. INDEX CONTOUR	EX. TREE
-----	EX. 2' INTERMEDIATE CONTOUR	EX. WOODS LINE
-----	EX. CURB AND GUTTER	EXISTING SPOT ELEVATION
-----	EX. GAS LINE	PROPOSED CONTOUR
-----	EX. STORM DRAIN	PROPOSED CONCRETE
-----	EX. ELECTRIC	PROPOSED SPOT ELEVATION
-----	EX. TELEPHONE	SOIL BORING
-----	EX. SANITARY SEWER	PROPOSED CONSTRUCTION
-----	EX. WATER	PROPOSED STORM DRAIN
-----	EX. OVERHEAD UTILITY LINE	PROPOSED CLEANOUT
-----	EX. WATER VALVE	
-----	EX. FIRE HYDRANT	
-----	EX. MANHOLE	
-----	EX. CLEANOUT	
-----	EX. LIGHT POLE	
-----	EX. INLET	



APPROVED  
PLANNING BOARD  
OF HOWARD COUNTY

DATE: 3-09-00

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 3/10/00

APPROVED: CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 3/15/00

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER  
HOWARD COUNTY HEALTH DEPARTMENT

ALTERNATE II - PHASE IIA SITE /UTILITY PLAN  
POINTERS RUN ELEMENTARY SCHOOL  
VILLAGE OF RIVER HILL  
SECTION 1 AREA 2, LOT 1 PARCEL 420  
OWNER:  
HOWARD COUNTY BOARD OF EDUCATION  
10910 ROUTE 108  
ELLICOTT CITY, MARYLAND 21043

PROJECT # 01-99171  
PERMIT ISSUE: 12-08-99  
CONSTRUCTION ISSUE: 10-22-99

C-3

SCALE: 1" = 20'  
SHEET TITLE: 3 OF 13

NO. REVISIONS DESCRIPTION

KCI TECHNOLOGIES INC.  
ENGINEERS • PLANNERS • SCIENTISTS  
CONSTRUCTION MANAGERS

10 NORTH PARK DRIVE  
HUNT VALLEY, MD 21031-1888  
PHONE: (410) 316-7800 FAX: (410) 316-7817  
HTTP://WWW.KCI.COM



ARCHITECTURAL SOLUTIONS

15889B CRABBS BRANCH WAY  
ROCKVILLE, MARYLAND 20855-2635  
EMAIL: ARCSOL@AOL.COM

TEL: 301-670-5616  
FAX: 301-670-5617

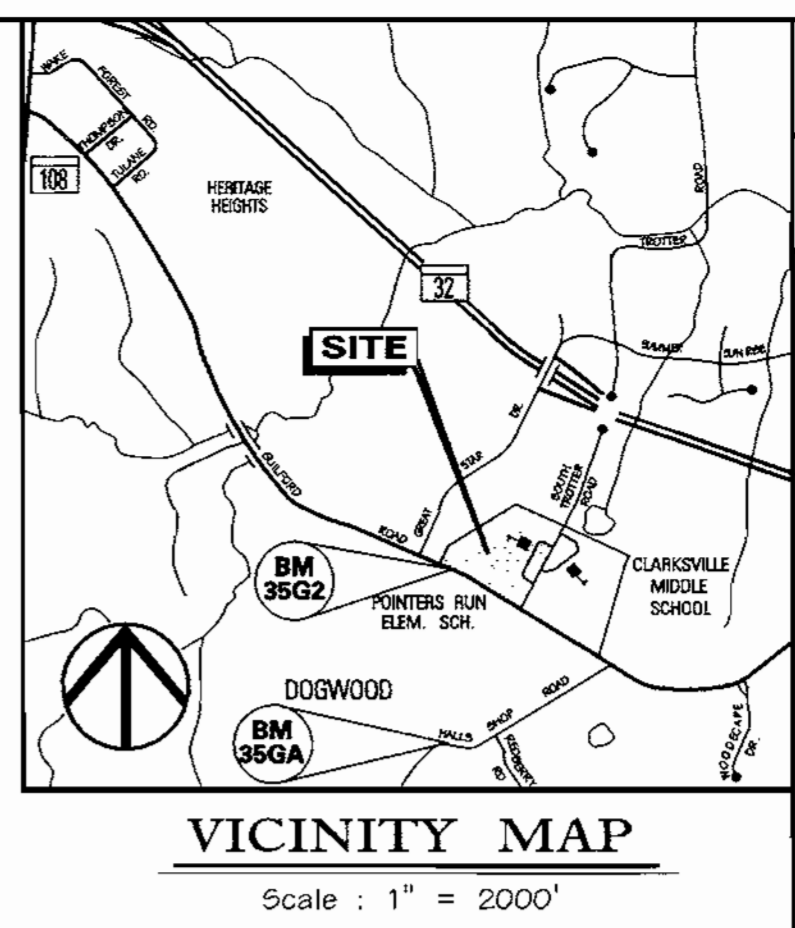
**BENCHMARK DATA**

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 N 554.965.67  
 E 1,332.934.30

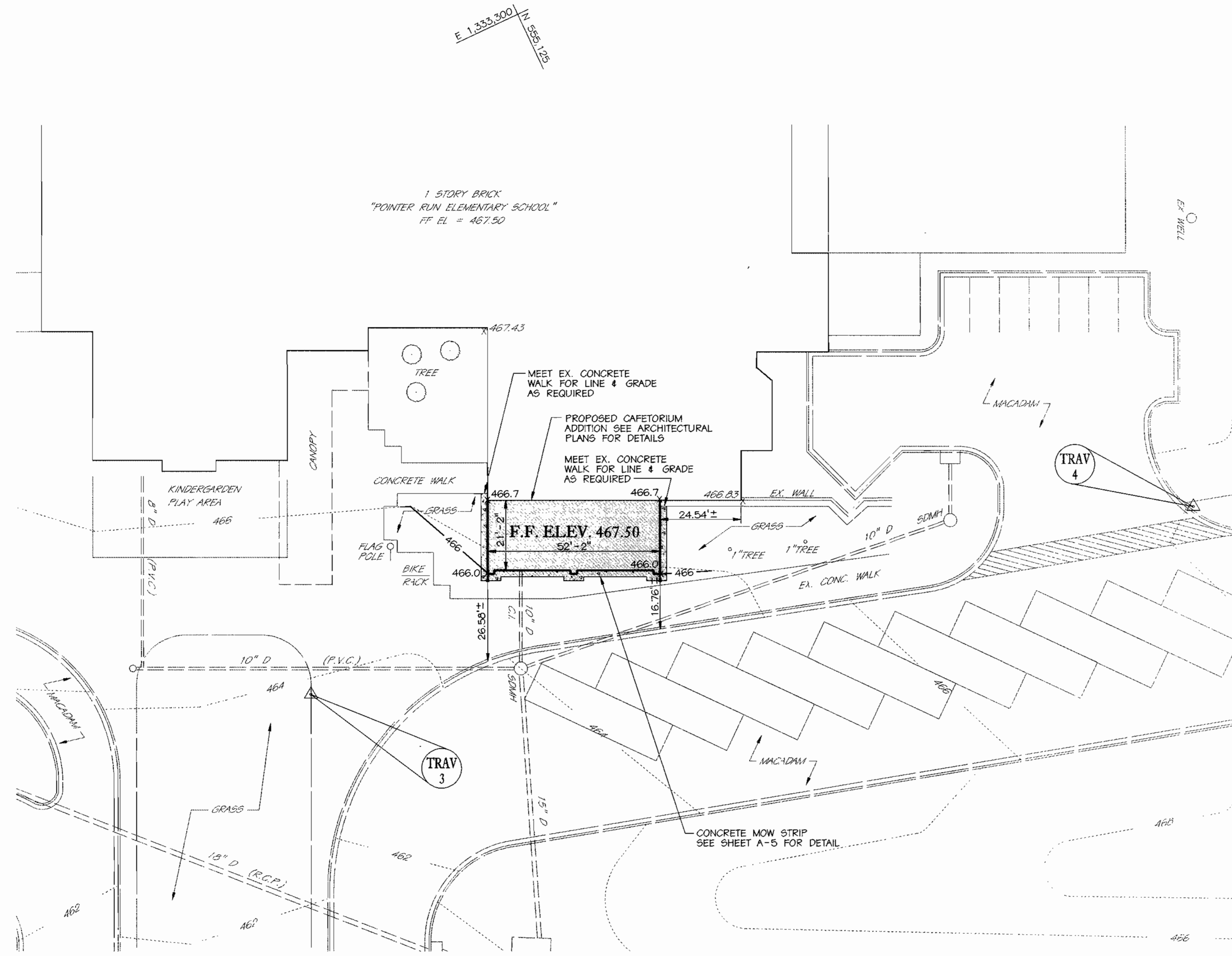
BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3' DEEP) COLUMN, LOCATED APPROX. 83.7' NORTH OF C4 P POLE #34, AND APPROX. 107.9' WEST OF B64 E POLE #176031.

B.M. 35GA ELEV. 482.04  
 N 553.249.69  
 E 1,332.627.26

BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3' DEEP) COLUMN, LOCATED APPROX. 17.1' NORTH OF THE CENTERLINE OF HALL SHOP ROAD, AND APPROX. 150.0' EAST OF C4 P POLE G510.



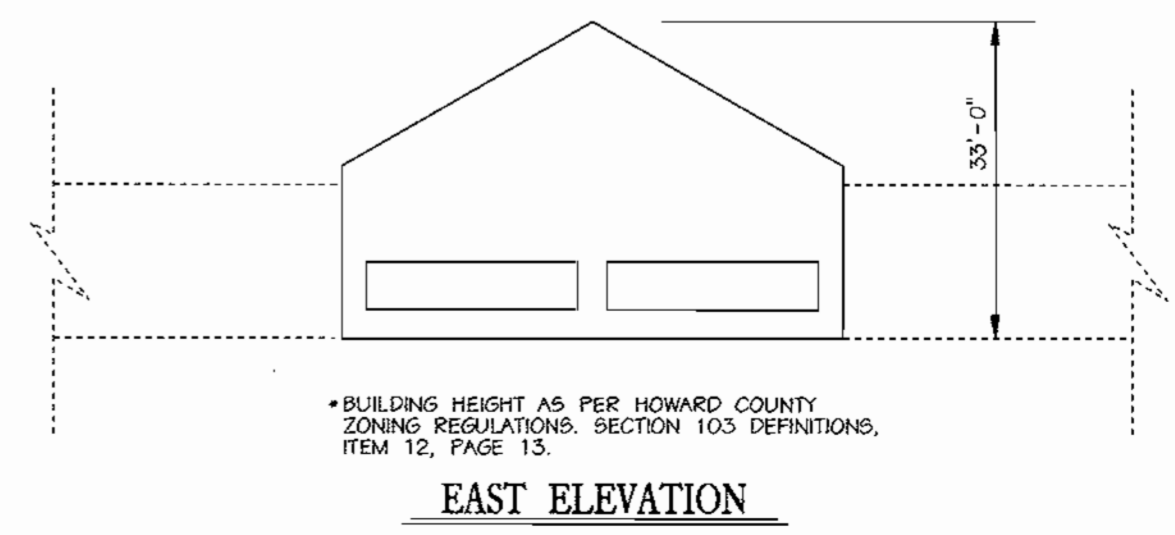
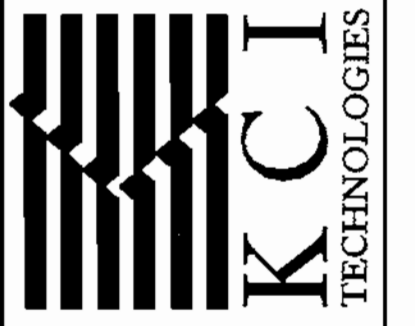
NO.	REVISIONS DESCRIPTION	DATE



**LEGEND**

90	EX. INDEX CONTOUR
---	EX. 2" INTERMEDIATE CONTOUR
---	EX. CURB AND GUTTER
---	EX. GAS LINE
---	EX. STORM DRAIN
---	EX. ELECTRIC
---	EX. TELEPHONE
---	EX. SANITARY SEWER
---	EX. WATER
OH	EX. OVERHEAD UTILITY LINE
+	EX. WATER VALVE
**	EX. FIRE HYDRANT
o	EX. MANHOLE
o.c.o.	EX. CLEANOUT
*LP	EX. LIGHT POLE
o	EX. INLET
o	EX. TREE
---	EX. WOODS LINE
---	PROPOSED CONSTRUCTION
---	PROPOSED CONCRETE

**KCI**  
 TECHNOLOGIES INC.  
 ENGINEERS • PLANNERS • SCIENTISTS  
 CONSTRUCTION MANAGERS  
 10 NORTH PARK DRIVE  
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 HTTP://WWW.KCI.COM

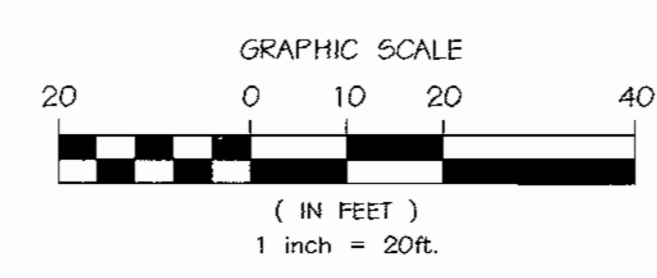
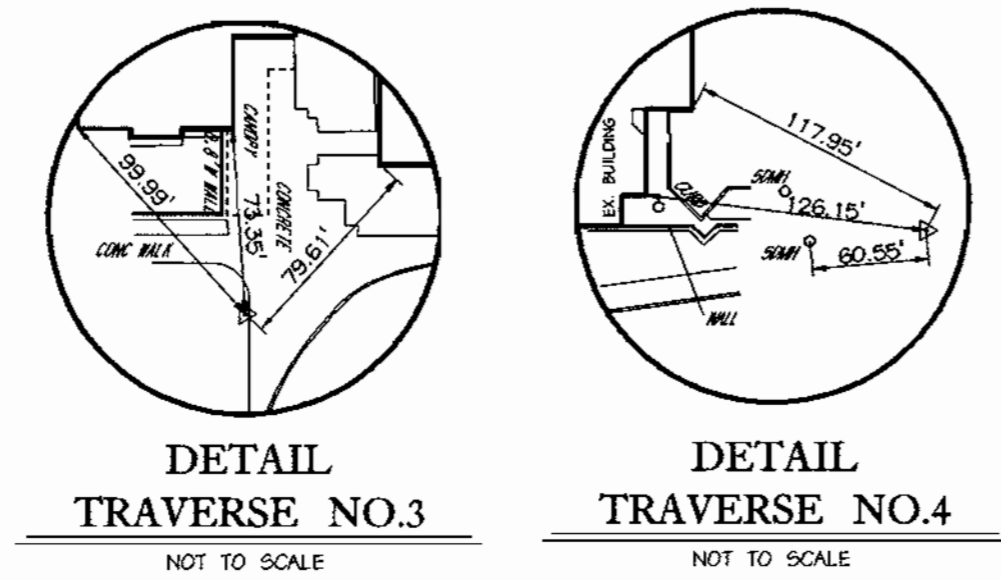


**APPROVED PLANNING BOARD of HOWARD COUNTY**  
 DATE: 3-09-00

APPROVED HOWARD COUNTY DEPT. OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 2/10/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 2/15/00  
 DIRECTOR DATE: 3/16/00

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER DATE: \_\_\_\_\_  
 HOWARD COUNTY HEALTH DEPARTMENT



**ALTERNATE II - PHASE IIB SITE PLAN**  
**POINTERS RUN ELEMENTARY SCHOOL**  
 VILLAGE OF RIVER HILL  
 SECTION 1 AREA 2, LOT 1 PARCEL 420  
 HOWARD COUNTY BOARD OF EDUCATION  
 10910 ROUTE 108  
 ELICOTT CITY, MARYLAND 21043

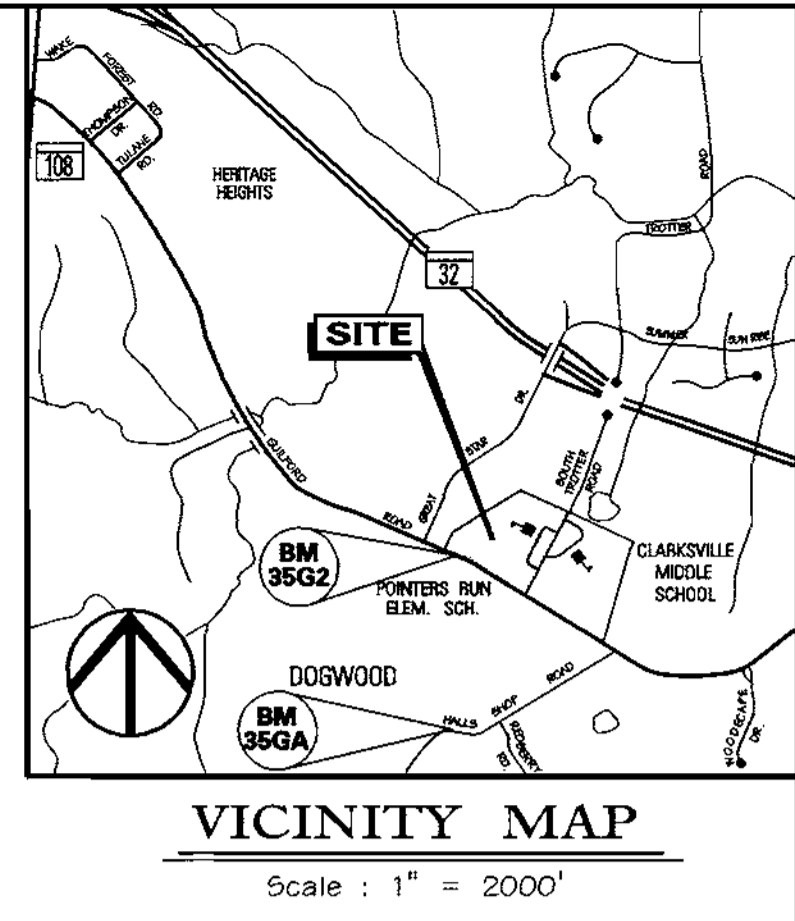
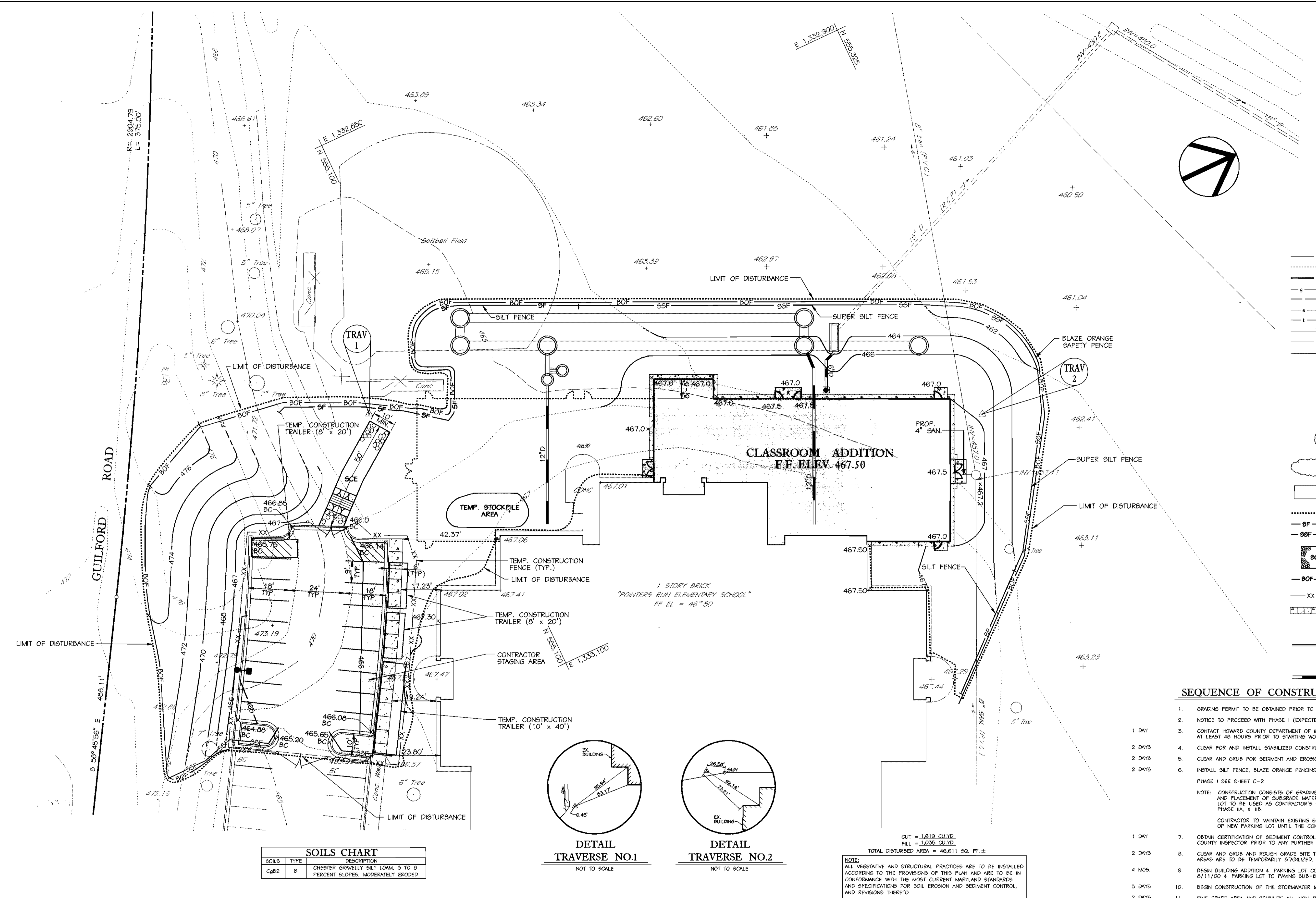
SCALE: 1" = 20'

SHEET TITLE: 4 OF 13

PROJECT # 01-99171  
 PERMIT ISSUE: 12-08-99  
 CONSTRUCTION ISSUE: 12-22-99

**C-4**

SDP-00-68



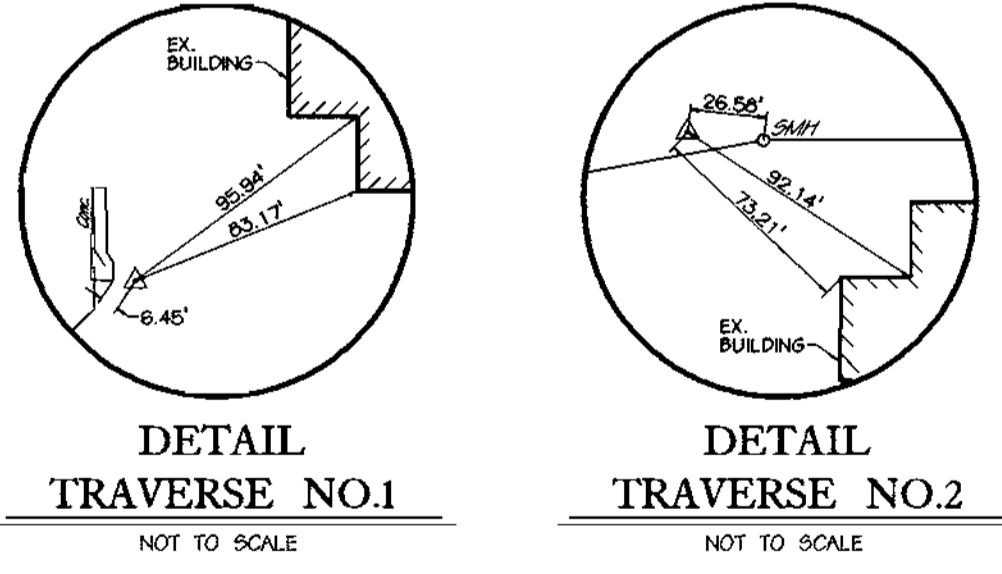
**LEGEND**

90	EX. INDEX CONTOUR
---	EX. 2' INTERMEDIATE CONTOUR
---	EX. CURB AND GUTTER
---	EX. GAS LINE
---	EX. STORM DRAIN
---	EX. ELECTRIC
---	EX. TELEPHONE
---	EX. SANITARY SEWER
---	EX. WATER
OH	EX. OVERHEAD UTILITY LINE
+	EX. WATER VALVE
+	EX. FIRE HYDRANT
o	EX. MANHOLE
c.o.	EX. CLEANOUT
*LP	EX. LIGHT POLE
+	EX. INLET
o	EX. TREE
---	EX. WOODS LINE
---	PROPOSED NEW CONSTRUCTION
---	LIMIT OF DISTURBANCE
---	SILT FENCE
---	SUPER SILT FENCE
---	STABILIZED CONSTRUCTION ENTRANCE
---	BLAZE ORANGE SAFETY FENCE
---	TEMPORARY CONSTRUCTION 6" HIGH PRE-FAB RELOCATABLE CHAIN LINK FENCE
---	PROPOSED CONCRETE
---	PROPOSED CLEANOUT
---	PROPOSED SANITARY SEWER
---	PROPOSED LIGHT POLE
---	PROPOSED STORM DRAIN

- SEQUENCE OF CONSTRUCTION**
1. GRADING PERMIT TO BE OBTAINED PRIOR TO NOTICE TO PROCEED.
  2. NOTICE TO PROCEED WITH PHASE I (EXPECTED APPROX. 2/15/00)
  3. CONTACT HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS AT LEAST 48 HOURS PRIOR TO STARTING WORK.
  4. CLEAR FOR AND INSTALL STABILIZED CONSTRUCTION ENTRANCE.
  5. CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL MEASURES OR DEVICES ONLY.
  6. INSTALL SILT FENCE, BLAZE ORANGE FENCINGS AND TEMPORARY CONSTRUCTION FENCE.
- PHASE I SEE SHEET C-2
- NOTE: CONSTRUCTION CONSISTS OF GRADING FOR PROPOSED BUILDING, PARKING LOT AND PLACEMENT OF SUBGRADE MATERIAL AND CURB & GUTTER FOR PARKING LOT TO BE USED AS CONTRACTOR'S STAGING AREA FOR PHASE I, & ALTERNATE II - PHASE IA, & IB.
- CONTRACTOR TO MAINTAIN EXISTING SEDIMENT CONTROLS IN THE AREA OF NEW PARKING LOT UNTIL THE COMPLETION OF ALTERNATE II - PHASE IA & IB.
7. OBTAIN CERTIFICATION OF SEDIMENT CONTROL DEVICE PLACEMENT FROM HOWARD COUNTY INSPECTOR PRIOR TO ANY FURTHER CONSTRUCTION.
  8. CLEAR AND GRUB AND ROUGH GRADE SITE TO LIMITS OF DISTURBANCE. STOCKPILE AREAS ARE TO BE TEMPORARILY STABILIZED.
  9. BEGIN BUILDING ADDITION & PARKING LOT CONSTRUCTION. COMPLETE PHASE I BUILDING BY 2/11/00 & PARKING LOT TO PAVING SUB-BASE BY 3/02/00
  10. BEGIN CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITY AND UTILITY CONNECTIONS.
  11. FINE GRADE AREA AND STABILIZE ALL NON-PAVED AREAS.
  12. CONCURRENTLY INSTALL FINISHED PAVING FOR PARKING LOT. ONLY IF ALTERNATE II - PHASE IA & IB ARE NOT TO BE CONSTRUCTED IMMEDIATELY FOLLOWING THE COMPLETION OF PHASE I SEE SHEET C-6 FOR SEQUENCE OF CONSTRUCTION FOR ALTERNATE II - PHASE IA & IB CONSTRUCTION.
  13. AFTER OBTAINING PERMISSION FROM SEDIMENT CONTROL INSPECTOR REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE ANY AREA DISTURBED BY THIS PROCESS.

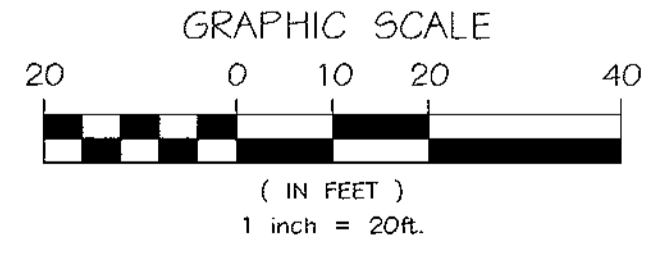
**SOILS CHART**

SOILS	TYPE	DESCRIPTION
CgB2	B	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED



CUT = 1,619 CU.YD.  
 FILL = 1,035 CU.YD.  
 TOTAL DISTURBED AREA = 46,611 SQ. FT. ±

NOTE: ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO



APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN FOR WATER AND SEWERAGE FOR HOWARD COUNTY

HOWARD COUNTY HEALTH OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Chris Simmons* 3/10/00  
 CHIEF, DEVELOPMENT ENGINEERS DIVISION

*Condy Hamilton* 3/15/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*Joseph H. Smith* 3/15/00  
 DATE

**APPROVED PLANNING BOARD OF HOWARD COUNTY**

DATE: 3-09-00

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR EROSION, SEDIMENTATION 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 NOTICED THE DISTRICT THAT THE TECHNICAL REQUIREMENTS FOR SMALL AND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, TO BE MET BY THE CONTRACTOR.

PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A TRUE COPY OF THIS PLAN AND ALL CHANGES TO THE PLAN.

DATE OF COMPLETION: 3/14/00

*Michael P. Armstrong* 3/3/00  
 ENGINEER

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

NATURAL RESOURCES CONSERVATION DISTRICT DATE \_\_\_\_\_

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

HOWARD SOIL CONSERVATION DISTRICT DATE \_\_\_\_\_

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

SMALL TRUCKS - REGISTERED PROFESSIONAL ENGINEER

ENGINEER TO SUPERVISE CONSTRUCTION AND PROPOSED EROSION AND SEDIMENT CONTROL MEASURES

DATE OF COMPLETION: I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

*John R. Robertson* 3/8/00  
 DEVELOPER

Reviewed for HOWARD SCD and meets Technical Requirements.

*Clayton Simmons* 3/8/00  
 USA - Natural Resources Conservation Service

*John R. Robertson* 3/8/00  
 DEVELOPER

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

*Michael P. Armstrong*  
 PROFESSIONAL ENGINEER



PHASE I - EROSION & SEDIMENT CONTROL PLAN  
 POINTERS RUN ELEMENTARY SCHOOL  
 VILLAGE OF RIVER HILL  
 SECTION 1 AREA 2, LOT 1 PARCEL 420

OWNER:  
 HOWARD COUNTY BOARD OF EDUCATION  
 10910 ROUTE 108  
 RILICOTT CITY, MARYLAND 21043

SCALE: 1" = 20'

SHEET TITLE: 5 OF 13

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KCI TECHNOLOGIES INC. ENGINEERS • PLANNERS • SCIENTISTS CONSTRUCTION MANAGERS  
 10 NORTH PARK DRIVE HUNT VALLEY, MARYLAND 21030-1888  
 PHONE: (410) 316-7800 FAX: (410) 316-7817  
 HTTP://WWW.KCI.COM

ARCHITECTURAL SOLUTIONS  
 15898 CRABS BRANCH WAY  
 ROCKVILLE, MARYLAND 20855-2635  
 TEL: 301-670-5616  
 FAX: 301-670-5617  
 EMAIL: ARCSOL@AOL.COM

PROJECT # 01-99171  
 PERMIT ISSUE: 12-08-99  
 CONSTRUCTION ISSUE: 12-22-99

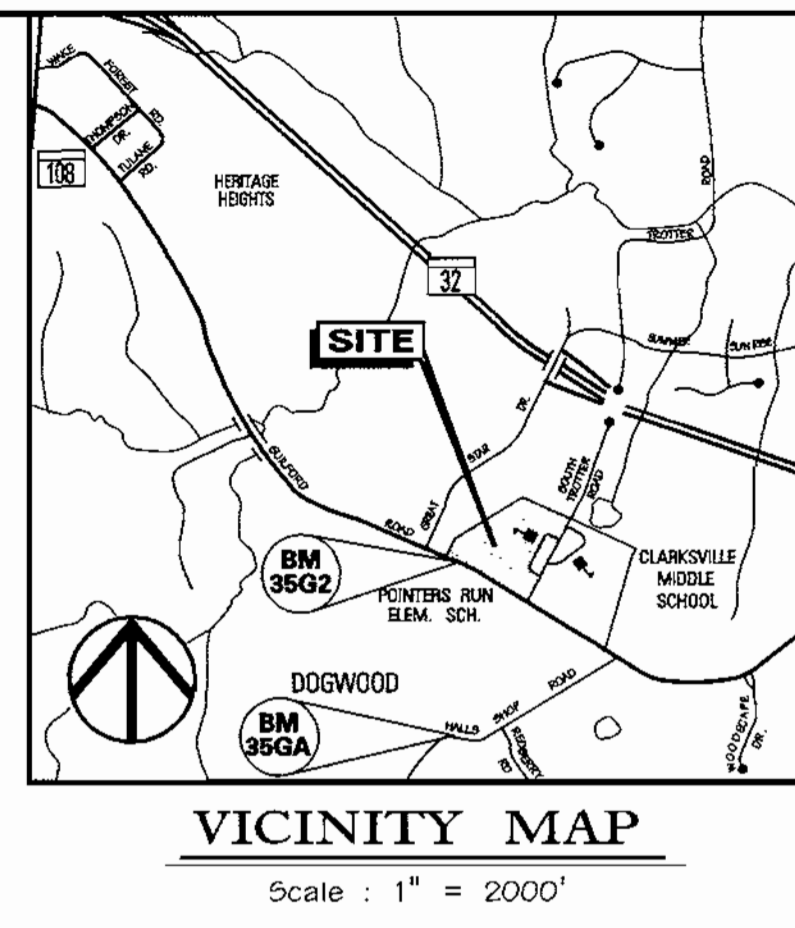
C-5

10/20/01 Agg. © KCI Technologies, Inc.



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**BENCHMARK DATA**

B.M. 3562	ELEV. 477.49 N 554,965.67 E 1,332,934.90
B.M. 356A	ELEV. 482.04 N 553,249.60 E 1,332,627.20

BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3' DEEP) COLUMN, LOCATED APPROX. 83.7' NORTH OF C4 P POLE #34, AND APPROX. 107.9' WEST OF B64 E POLE #176051.

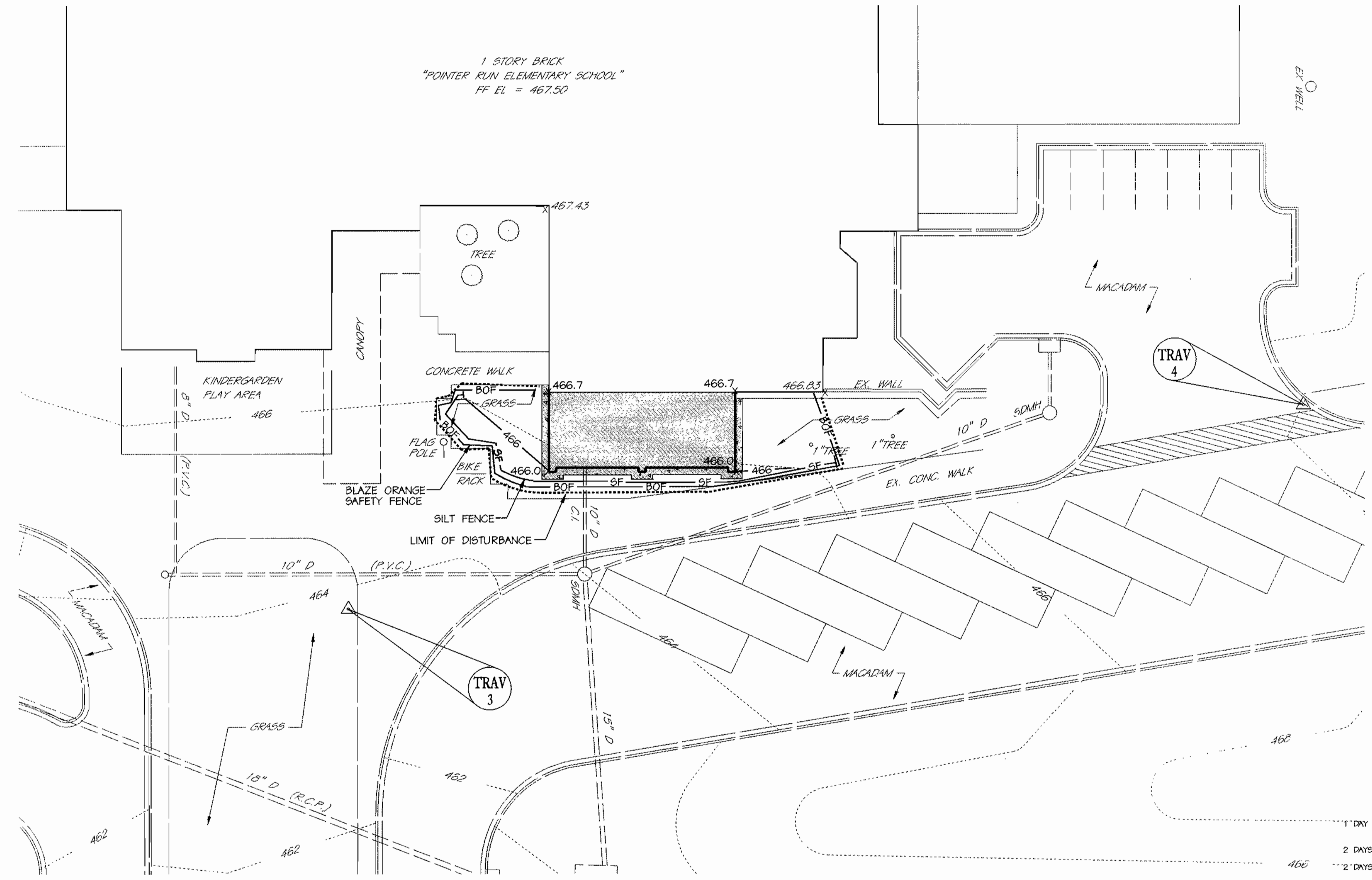
BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3' DEEP) COLUMN, LOCATED APPROX. 17.1' NORTH OF THE CENTERLINE OF HALL SHOP ROAD, AND APPROX. 150.0' EAST OF C4 P POLE G510.

**LEGEND**

— 90 —	EX. INDEX CONTOUR
.....	EX. 2' INTERMEDIATE CONTOUR
— 10" D —	EX. CURB AND GUTTER
— 10" D —	EX. GAS LINE
— 10" D —	EX. STORM DRAIN
— 10" D —	EX. ELECTRIC
— 10" D —	EX. TELEPHONE
— 6" SAN —	EX. SANITARY SEWER
— 8" W —	EX. WATER
— OH —	EX. OVERHEAD UTILITY LINE
— W —	EX. WATER VALVE
— F —	EX. FIRE HYDRANT
— M —	EX. MANHOLE
— C.O. —	EX. CLEANOUT
— *LP —	EX. LIGHT POLE
— I —	EX. INLET
— T —	EX. TREE
— W —	EX. WOODS LINE
— [Pattern] —	PROPOSED NEW CONSTRUCTION
— [Pattern] —	LIMIT OF DISTURBANCE
— SF — SF —	SILT FENCE
— BOF — BOF —	BLAZE ORANGE SAFETY FENCE
— [Pattern] —	PROPOSED CONCRETE

**ALTERNATE II - PHASE IIA & IIB  
SEQUENCE OF CONSTRUCTION**

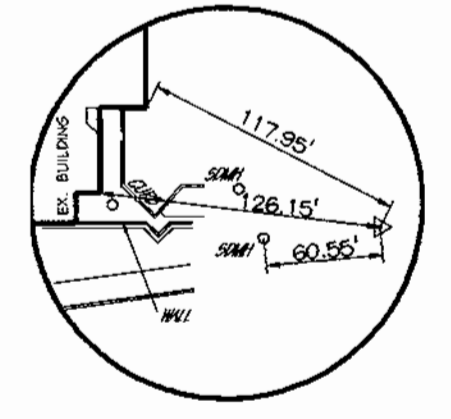
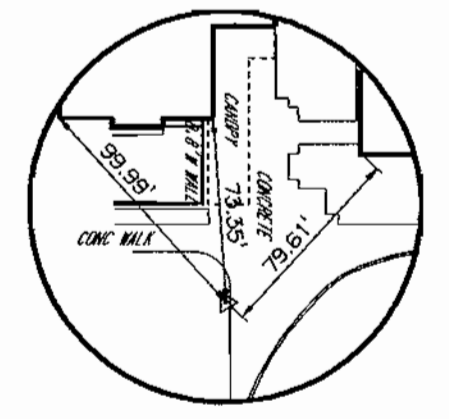
- GRADING PERMIT TO BE OBTAINED BY THE OWNER PRIOR TO NOTICE TO PROCEED.
  - NOTICE TO PROCEED WITH PHASE II (EXPECTED TO BE ISSUED BETWEEN 5/15/00 & 6/30/00)
  - CONTACT HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS AT LEAST 48 HOURS PRIOR TO STARTING WORK.
  - CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL MEASURES OR DEVICES ONLY.
  - INSTALL SILT FENCE, BLAZE ORANGE FENCING AND TEMPORARY CONSTRUCTION FENCE.
  - PHASE IIA & IIB SEE SHEET C-3 & C-4
- NOTE: PHASE IIA & IIB CONSTRUCTION CONSISTS OF GRADING FOR PROPOSED BUILDING ADDITIONS, AND RELOCATION OF EXISTING BACKSTOP, BENCHES AND SOFTBALL FIELD AND FINISH PAVING FOR PARKING LOT.
- CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES OR DEVICES ONLY.
  - OBTAIN CERTIFICATION OF SEDIMENT CONTROL DEVICE PLACEMENT FROM HOWARD COUNTY INSPECTOR PRIOR TO ANY FURTHER CONSTRUCTION.
  - CLEAR AND GRUB AND ROUGH GRADE SITE TO LIMITS OF DISTURBANCE. STOCKPILE AREAS ARE TO BE TEMPORARILY STABILIZED.
  - BEGIN BUILDING ADDITION CONSTRUCTION. COMPLETE PHASE II ADDITION BY 12/23/00 & BALL FIELD RELOCATION BY 10/15/00
  - BEGIN CONSTRUCTION OF UTILITY CONNECTIONS.
  - FINE GRADE AREA AND STABILIZE ALL NON-PAVED AREAS.
  - CONCURRENTLY INSTALL FINISHED PAVING FOR PARKING LOT.
  - AFTER OBTAINING PERMISSION FROM SEDIMENT CONTROL INSPECTOR REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE ANY AREA DISTURBED BY THIS PROCESS.



E 1,333,300  
N 554,675

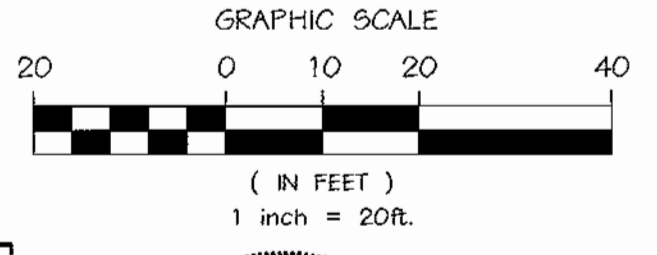
E 1,333,300  
N 555,125

E 1,333,675  
N 555,125



**SOILS CHART**

SOILS	TYPE	DESCRIPTION
CgB2	B	CHESTER GRAVELLY SILT LOAM, 3 TO 6 PERCENT SLOPES, MODERATELY ERODED



CUT = \_\_\_\_\_  
FILL = 347 CU.YD.  
TOTAL DISTURBED AREA = 2,613 SQ. FT. ±

NOTE: ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SERVICES IN CONFORMANCE WITH THE WATER MAIN OF WATER AND SEWERAGE FOR HOWARD COUNTY

HOWARD COUNTY HEALTH OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 4 \_\_\_\_\_ DATE 3/16/00

Chief, Division of Land Development \_\_\_\_\_ DATE 3/15/00

**APPROVED PLANNING BOARD OF HOWARD COUNTY**

DATE 3-09-00

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

\_\_\_\_\_  
DEVELOPER

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR ~~NON-CONSTRUCTION~~ 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.

\_\_\_\_\_  
ENGINEER

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

NATURAL RESOURCES CONSERVATION DATE \_\_\_\_\_

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 \_\_\_\_\_

Reviewed for HOWARD SCD and meets Technical Requirements.

\_\_\_\_\_  
DATE 3/14/00

\_\_\_\_\_  
DATE 3/14/00

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

\_\_\_\_\_  
DATE



ALTERNATE II - PHASE - IIB  
EROSION & SEDIMENT CONTROL PLAN  
POINTERS RUN ELEMENTARY SCHOOL  
VILLAGE OF RIVER HILL  
SECTION 1 AREA 2, LOT 1 PARCEL 420

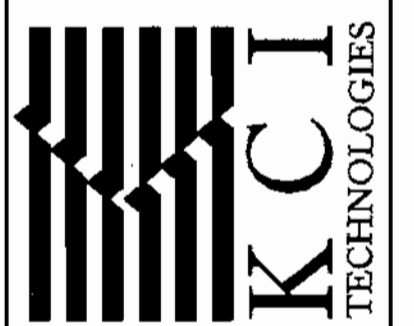
OWNER:  
HOWARD COUNTY BOARD OF EDUCATION  
10910 ROUTE 108  
ELLICOTT CITY, MARYLAND 21043

SCALE: 1" = 20'  
SHEET TITLE: 7 OF 13

PROJECT # 01-99171  
PERMIT ISSUE 12-08-99  
CONSTRUCTION ISSUE 12-22-99

**C-7**

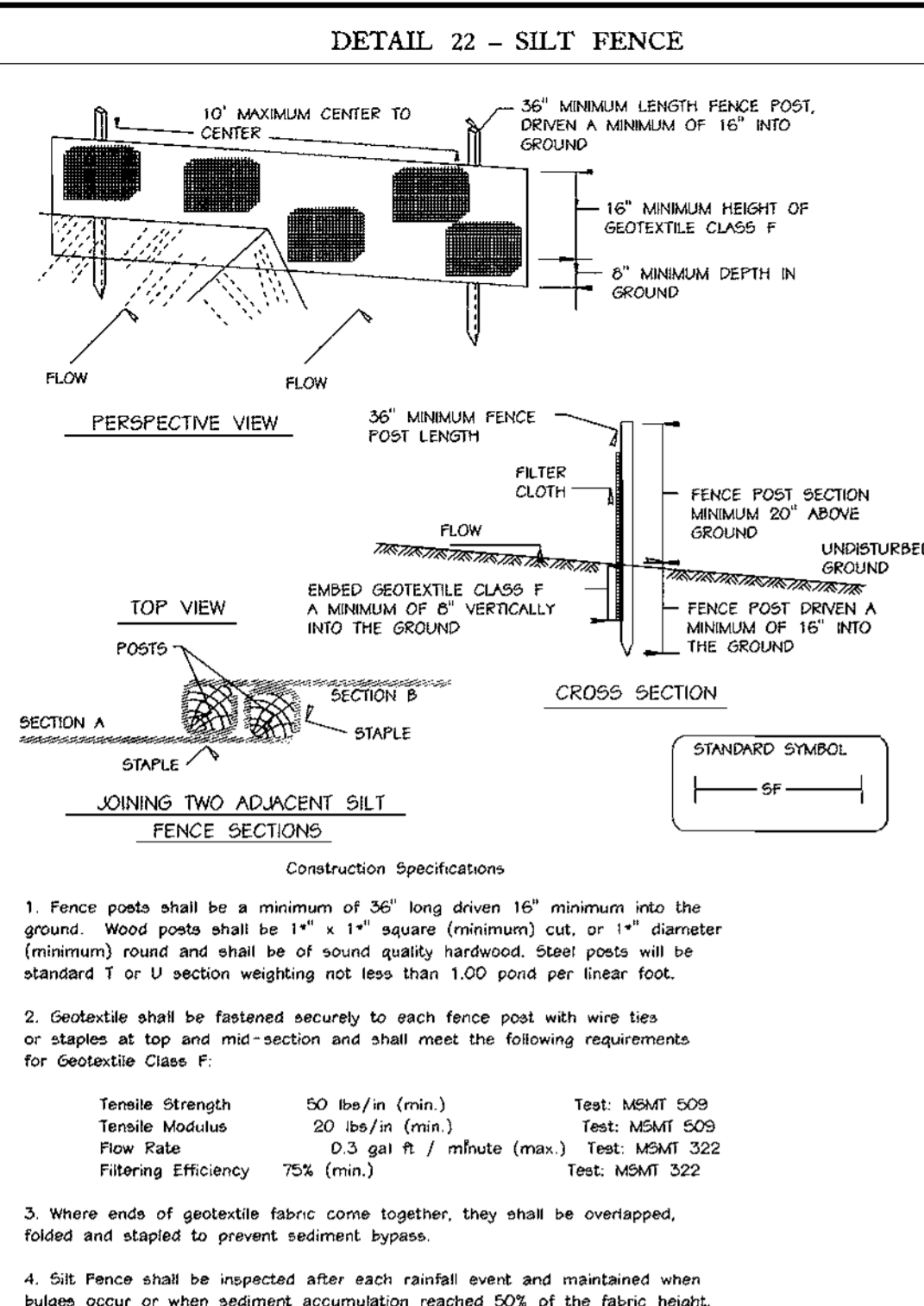
**KCI**  
TECHNOLOGIES INC.  
ENGINEERS • PLANNERS • SCIENTISTS  
CONSTRUCTION MANAGERS  
10 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
21030-1888  
PHONE: (410) 316-7800 FAX: (410) 316-7817  
HTTP://WWW.KCI.COM



**ARCHITECTURAL SOLUTIONS**

15889B CRABBS BRANCH WAY  
ROCKVILLE, MARYLAND 20855-2635  
EMAIL: ARCSOL@AOL.COM

TEL: 301-670-5616  
FAX: 301-670-5617



Construction Specifications

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1" x 1" square (minimum) cut, or 1" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard I or U section weighting not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

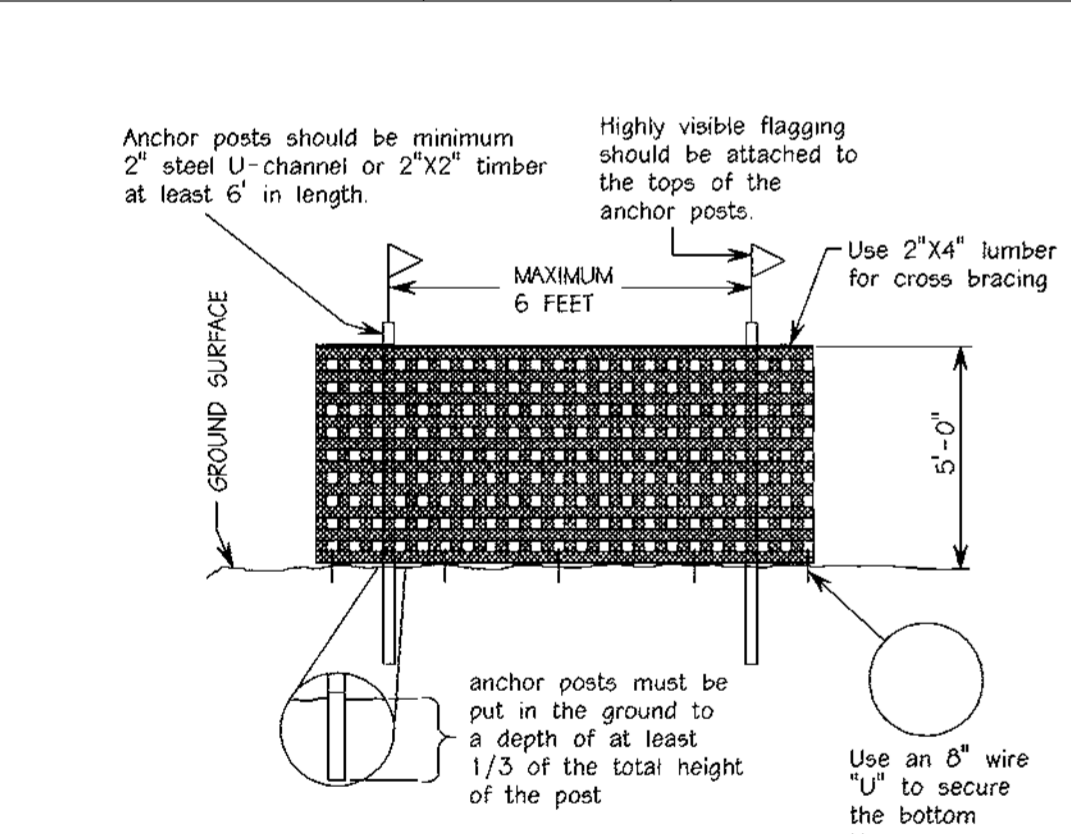
**SILT FENCE**

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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**Silt Fence Design Criteria**

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

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



**BLAZE ORANGE PLASTIC MESH FENCE DETAIL**  
NOT TO SCALE

Anchor posts should be minimum 2" steel U-channel or 2"x2" timber at least 6" in length.

Highly visible flagging should be attached to the tops of the anchor posts.

Use 2"x4" lumber for cross bracing.

Maximum 6 feet.

5'-0"

Use an 8" wire "U" to secure the bottom.

Anchor posts must be put in the ground to a depth of at least 1/3 of the total height of the post.

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN OF WATER AND SEWERAGE FOR HOWARD COUNTY

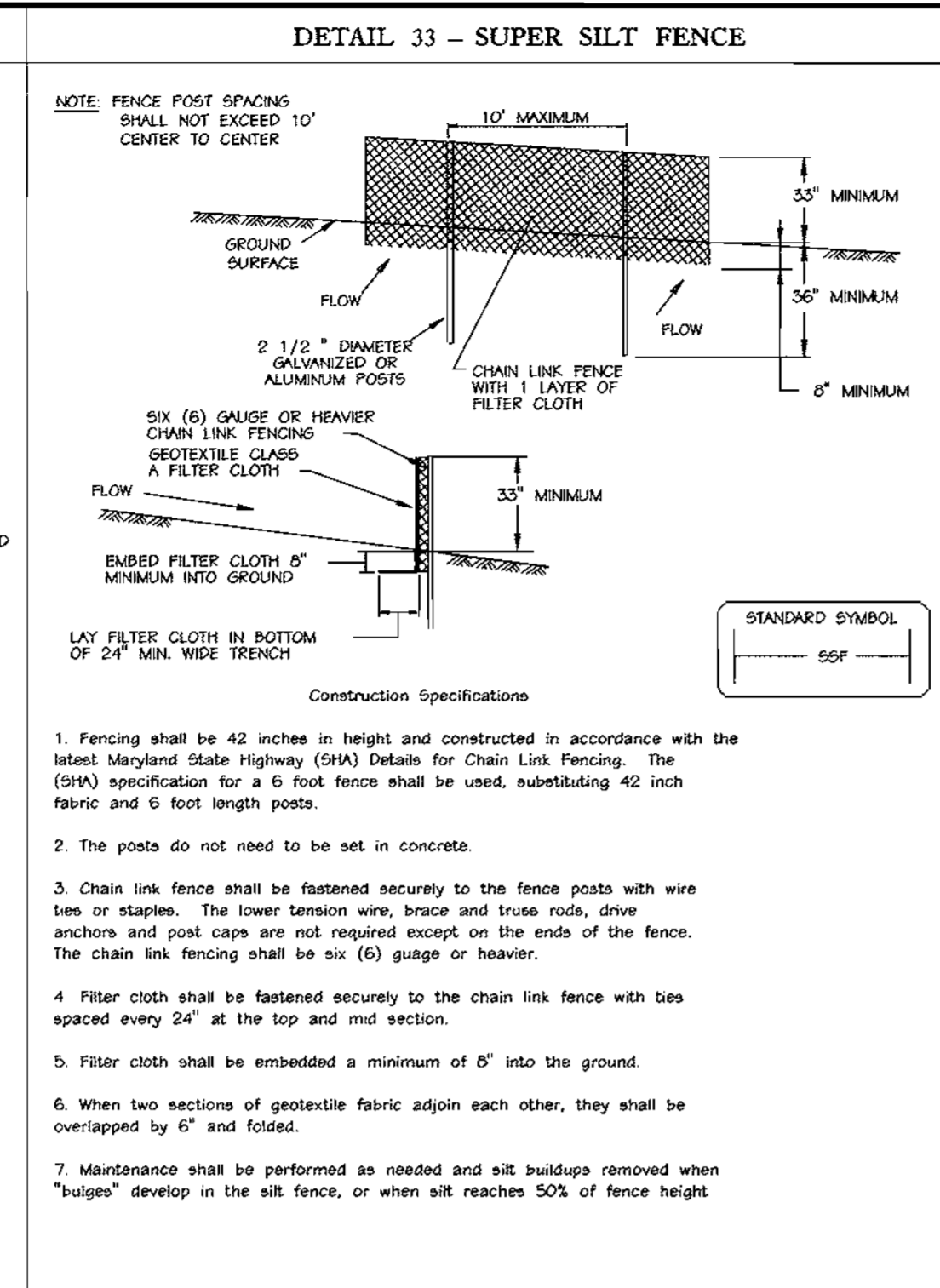
HOWARD COUNTY HEALTH OFFICER DATE: *3/15/00*

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE: *3/15/00*

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: *3/15/00*

CHIEF, DIVISION OF LAND DEVELOPMENT DATE: *3/15/00*

**APPROVED PLANNING BOARD OF HOWARD COUNTY**  
DATE: **3-09-00**



Construction Specifications

- Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The (SHA) specification for a 6 foot fence shall be used, substituting 42 inch fences and 6 foot long posts.
- The posts do not need to be set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buldage removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

**SUPER SILT FENCE**

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

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

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. SHEET NO. 3-09-00

DATE: **3-09-00**

BY THE ENGINEER:

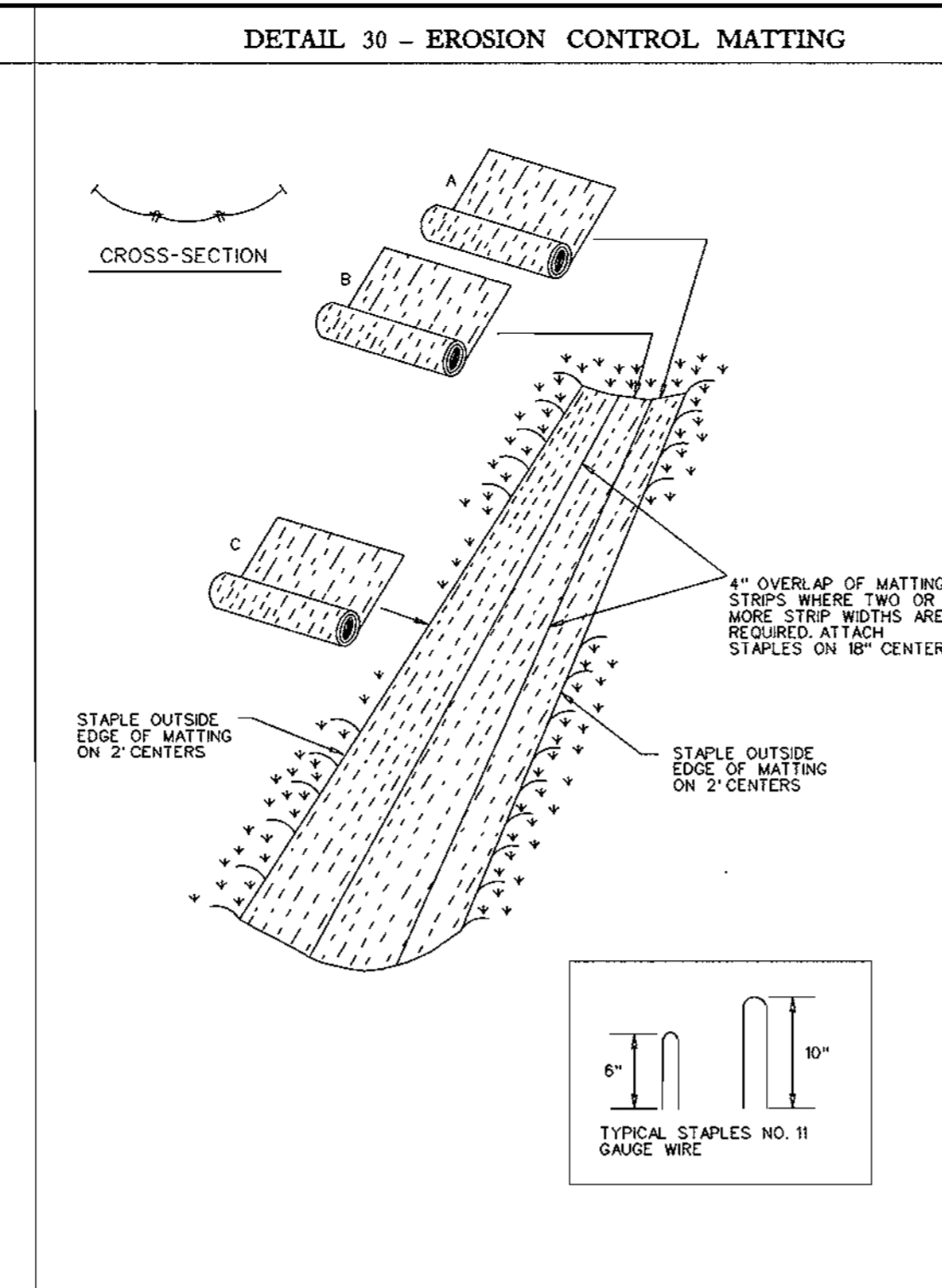
I CERTIFY THAT THIS PLAN FOR FOND CONSTRUCTION EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE: *Michael N. Armstrong* MD. LICENSE NO. **16109** DATE: **3/25/00**

SIGNATURE: *Michael N. Armstrong* KCI TECHNOLOGIES INC. FIRM NAME: **KCI TECHNOLOGIES INC.**

ADDRESS: **10 NORTH PARK DRIVE HUNT VALLEY, MD 21030**

TELEPHONE: **(410) 316-7800**



Construction Specifications

- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamps firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
- Staple the 4" overlap in the channel center using an 18" spacing between staples.
- Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
- Staples should be placed 2' apart with 4 rows for each strip. 2 outer rows, and 2 alternating rows down the center.
- Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", single fasten. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
- The discharge end of the matting line should be similarly secured with 2 double rows of staples.

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

**EROSION CONTROL MATTING**

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

THE DEVELOPER'S PLAN TO CONTROL SILT AND EROSION IS ADEQUATE TO CONTAIN THE SILT AND EROSION PROPERTIES COVERED BY THE PLAN. I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THIS SITE, AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT PLAN SUBMITTAL GUIDELINES AND THE CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SEDIMENT AND EROSION CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE: *Michael N. Armstrong* MD. LICENSE NO. **16109** DATE: **3/25/00**

SIGNATURE: *Michael N. Armstrong* KCI TECHNOLOGIES INC. FIRM NAME: **KCI TECHNOLOGIES INC.**

ADDRESS: **10 NORTH PARK DRIVE HUNT VALLEY, MD 21030**

TELEPHONE: **(410) 316-7800**

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

NATURAL RESOURCES CONSERVATION DATE: *3/14/00*

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

HOWARD SOIL CONSERVATION DISTRICT DATE: *3/14/00*

Reviewed for HOWARD SCD and meets Technical Requirements.

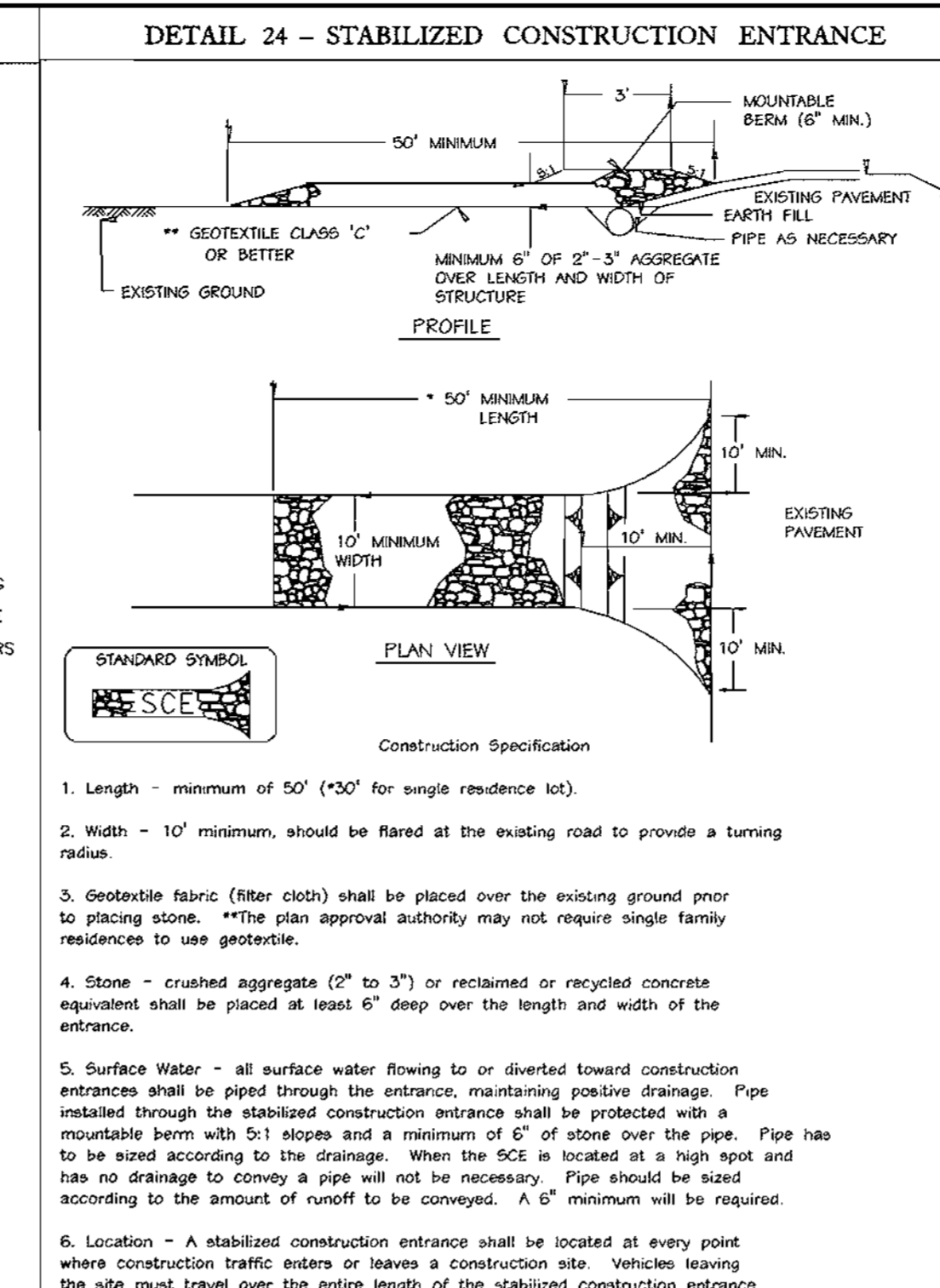
SIGNATURE: *John Simmon* DATE: **3/14/00**

SIGNATURE: *John Simmon* DATE: **3/14/00**

U.S. Natural Resources Conservation Service

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

SIGNATURE: *Michael A. Armstrong* DATE: **3/14/00**



Construction Specifications

- Length - minimum of 50' (\*50' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. \*\*The plan approval authority may not require single family residence to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 6" stones and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCC is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

**STANDARD RESPONSIBILITY NOTES**

- DEVELOPER'S CERTIFICATION:
  - (WE) CERTIFY THAT:
    - ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS.
    - ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
  - RESPONSIBLE PERSON ON THE SITE: *Cathleen Conley Young* DATE: **3/25/00**
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, AND/OR RIGHTS OF WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL STRUCTURES, STORMWATER MANAGEMENT PRACTICES AND THE DEGRASSING OF STORMWATERS ON/OFF OR ACROSS ADJACENT OR DOWNSTREAM PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS OF WAY THAT MAY BE REQUIRED FOR GRADING AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DICES, SWALES, DITCHES, PERIMETER DYPES, AND ALL SLOPES GREATER THAN 3:1 HORIZONTAL TO 1 VERTICAL (3:1) AND FOURTEEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- THE SEDIMENT CONTROL APPROVALS ON THE PLAN EXTEND ONLY TO AREAS AND PRACTICES IDENTIFIED AS PROPOSED WORK.
- THE APPROVAL OF THIS PLAN FOR SEDIMENT AND EROSION CONTROL DOES NOT RELIEVE THE DEVELOPER/CONSULTANT FROM COMPLYING WITH ANY FEDERAL/STATE/COUNTY REQUIREMENTS APPLICABLE TO ENVIRONMENTAL ISSUES.
- THE DEVELOPER MUST REQUEST THAT THE DEPARTMENT OF INSPECTIONS AND PERMITS APPROVE WORK COMPLETED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN. THE GRADING OR BUILDING PERMIT AND THE ORDINANCE.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE DEPARTMENT OF INSPECTIONS AND PERMITS SHALL BE REQUIRED ON 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 THE INITIAL APPROVAL BY THE DEPARTMENT OF INSPECTIONS AND PERMITS IS GIVEN.
- APPROVAL SHALL BE REQUESTED ON FINAL STABILIZATION OF ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES BEFORE REMOVAL OF CONTROLS.

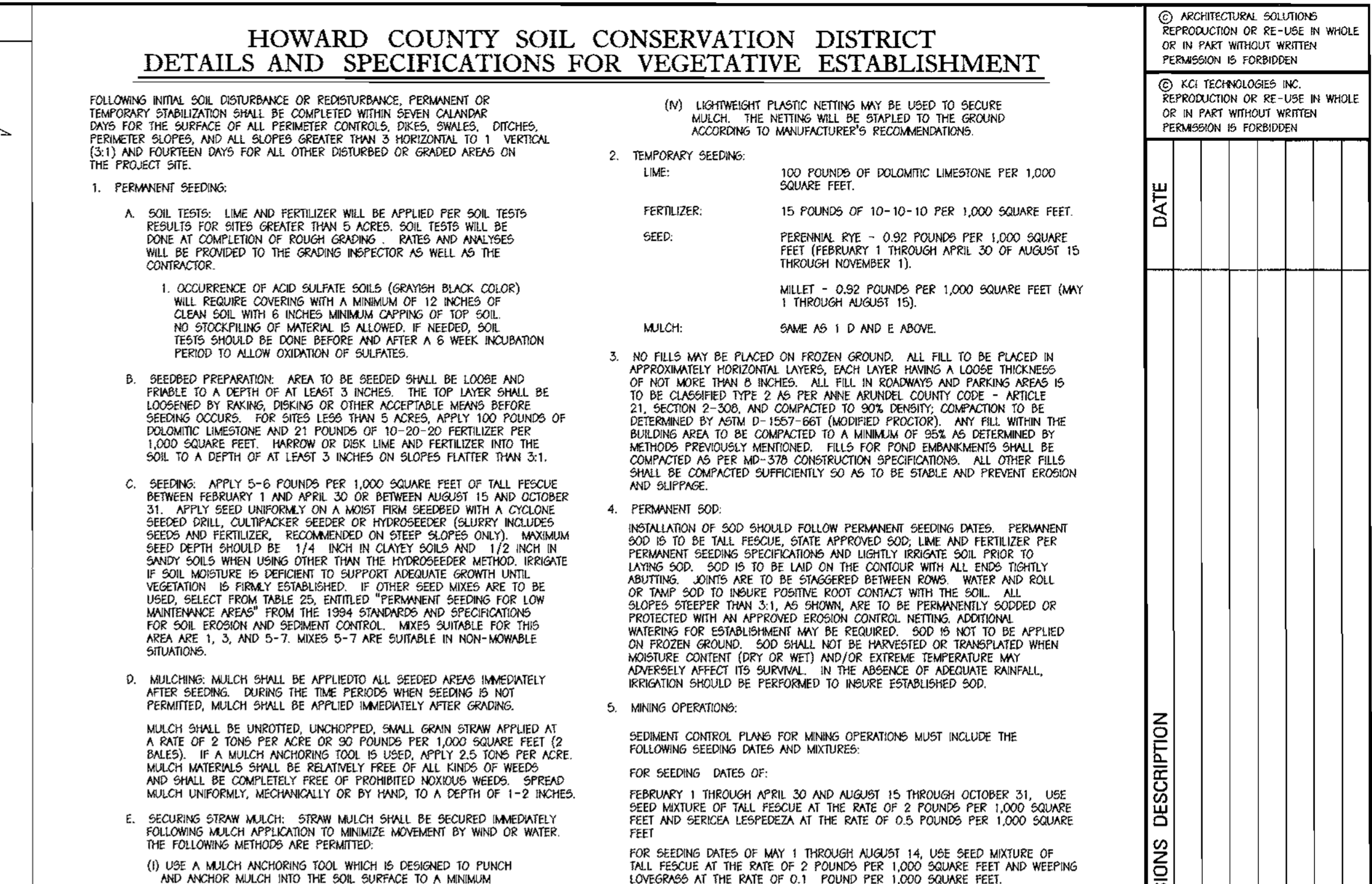
CATHLEEN CONLEY YOUNG

PRINT NAME: **HOWARD COUNTY PUBLIC SCHOOLS** TITLE:

ADDRESS: **10910 ROUTE 108, ELLICOTT CITY, MD 21043**

TELEPHONE: **410-383-6810**

NOTE: ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO



FOLLOWING INITIAL SOIL DISTURBANCE OR RESTORATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DICES, SWALES, DITCHES, PERIMETER DYPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND FOURTEEN DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

- PERMANENT SEEDING:
  - SOIL TESTS: LIME AND FERTILIZER WILL BE APPLIED PER SOIL TESTS RESULTS FOR SITES GREATER THAN 5 ACRES. SOIL TESTS WILL BE DONE AT COMPLETION OF ROUGH GRADING. LATES AND ANALYSES WILL BE PROVIDED TO THE GRADING INSPECTOR AS WELL AS THE CONTRACTOR.
  - OCURRENCE OF ACID SULFATE SOILS (GRAYISH BLACK COLOR) WILL REQUIRE COVERING WITH A MINIMUM OF 12 INCHES OF CLEAN SOIL WITH 6 INCHES MINIMUM CAPPING OF TOP SOIL. NO STOCKING OF MATERIAL IS ALLOWED. IF AERATED SOIL TESTS SHOULD BE DONE BEFORE AND AFTER A 6 WEEK INCUBATION PERIOD TO ALLOW OXIDATION OF SULFATES.
  - SEEDING PREPARATION: AREA TO BE SEEDDED SHALL BE LOOSE AND FRANKLE TO A DEPTH OF AT LEAST 3 INCHES. THE TOP LAYER SHALL BE LOOSED BY TANKING, DRAGGING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING OCCURS. FOR SITES LESS THAN 5 ACRES, APPLY 100 POUNDS OF DOLOMITIC LIMESTONE AND 21 POUNDS OF 10-20-20 FERTILIZER PER 1,000 SQUARE FEET. HARROW OR DISK LINE AND FERTILIZER INTO THE SOIL TO A DEPTH OF AT LEAST 3 INCHES ON SLOPES FLATTER THAN 3:1.
  - SEEDING: APPLY 5-6 POUNDS PER 1,000 SQUARE FEET OF TALL FESCUE BETWEEN SEPTEMBER 1 AND APRIL 30 OR BETWEEN AUGUST 15 AND OCTOBER 31. APPLY SEED UNIFORMLY ON A MOIST FIRM SEEDBED WITH A CLOSURE SEEDER DRILL, CULTIPACKER SEEDER OR HYDROSEEDER (SLURRY INCLUDES SEEDS AND FERTILIZER). RECOMMENDED ON STEEP SLOPES ONLY. MINIMUM SEED DEPTH SHOULD BE 1/4 INCH IN CLAYEY SOILS AND 1/2 INCH IN SANDY SOILS WHEN USING OTHER THAN THE HYDROSEEDER METHOD. IRRIGATE SEEDING AREAS TO BE SUFFICIENT TO SUPPORT ADEQUATE GROWTH UNTIL VEGETATION IS FIRMLY ESTABLISHED. IF OTHER SEED MIXES ARE TO BE USED, SELECT FROM TABLE 25. ENTITLED "PERMANENT SEEDING FOR LOW MAINTENANCE AREAS" FROM THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. MIXED SUITABLE FOR THIS AREA ARE 1, 3, AND 5-7. MIXES 5-7 ARE SUITABLE IN NON-HUMBLE SITUATIONS.
  - MULCHING: MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. DURING THE TIME PERIODS WHEN SEEDING IS NOT PERMITTED MULCH SHALL BE APPLIED IMMEDIATELY AFTER GRADING.
- MULCHING: MULCH SHALL BE UNROTATED UNCHIPPED, SMALL GOWN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 50 POUNDS PER 1,000 SQUARE FEET (2 BALS). IF A MULCH ANCHORSING TOOL IS USED, APPLY 2.5 TONS PER ACRE. MULCH MATERIALS SHALL BE RELATIVELY FREE OF ALL KINDS OF WEEDS AND SHALL BE COMPLETELY FREE OF PROHIBITED NOXIOUS WEEDS. SPREAD MULCH UNIFORMLY, MECHANICALLY OR BY HAND, TO A DEPTH OF 1-2 INCHES.
- SECURING STRAW MULCH: STRAW MULCH SHALL BE SECURED IMMEDIATELY FOLLOWING MULCH APPLICATION TO PREVENT MOVEMENT BY WIND OR WATER. THE FOLLOWING METHODS ARE PERMITTED:
  - USE A MULCH ANCHORSING TOOL WHICH IS DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE TO A MINIMUM DEPTH OF 2 INCHES. THIS IS THE MOST EFFECTIVE METHOD FOR SECURING MULCH. HOWEVER, IT IS LIMITED TO RELATIVELY FLAT AREAS WHERE EQUIPMENT CAN OPERATE WITHOUT INTERFERENCE.
  - WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORSING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. IF MIXED WITH WATER, USE 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
  - LIQUID BINDERS MAY BE USED AND APPLIED HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF SLOPES. THE REMAINDER OF THE AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. BINDERS LISTED IN THE 1994 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL OR APPROVED EQUIVALENTS SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURERS.
- SEEDING DATES OF MAY 1 THROUGH AUGUST 14. USE MIXED CULTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND WEEPING LOVEGRASS AT THE RATE OF 0.1 POUNDS PER 1,000 SQUARE FEET.
- SEEDING DATES OF SEPTEMBER 1 THROUGH OCTOBER 31. USE SEED MIXTURE OF TALL FESCUE AT THE RATE OF 2 POUNDS PER 1,000 SQUARE FEET AND SERICIA LEUCOPEDZA AT THE RATE OF 0.5 POUNDS PER 1,000 SQUARE FEET.

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

For site having disturbed areas over 5 acres:

- On soil meeting Topsoil specifications, obtain test results (distate) for fertilizer and soil pH. Fertilizer and lime shall be applied to bring the soil into compliance with the following:
  - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
  - Organic content of topsoil shall be not less than 1.5 percent by weight.
  - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
  - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time or elapsed (14 days min.) to permit dissipation of phytotoxins.
- Topsoil sublayers or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate authority, may be used in lieu of natural topsoil.
- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section " - Vegetative Stabilization Methods and Materials.

(Type) Topsoil Application

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" - 6" higher in elevation.
- Topsoil shall be uniformly distributed in a 4" - 6" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

(Type) Alternative for Permanent Seeding - Instead of applying the full amount of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

- Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
  - Composted Sludge shall be supplied by or originate from a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
  - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate conclusions must be added to meet the requirements prior to use.
  - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
  - Composted sludge shall be amended with a potassium fertilizer applied at 1/4 rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

\*\* For site having disturbed areas over 5 acres:

**ARCHITECTURAL SOLUTIONS**  
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10 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
21030-1888  
PHONE: (410) 316-7800 FAX: (410) 316-7817  
HTTP://WWW.KCI.COM

**ARCHITECTURAL SOLUTIONS**  
15889B CRABBS BRANCH WAY  
ROCKVILLE, MARYLAND 20855-2635  
EMAIL: ARCSOL@AOL.COM

PROJECT # **01-99171**  
PERMIT ISSUE: **12-08-99**  
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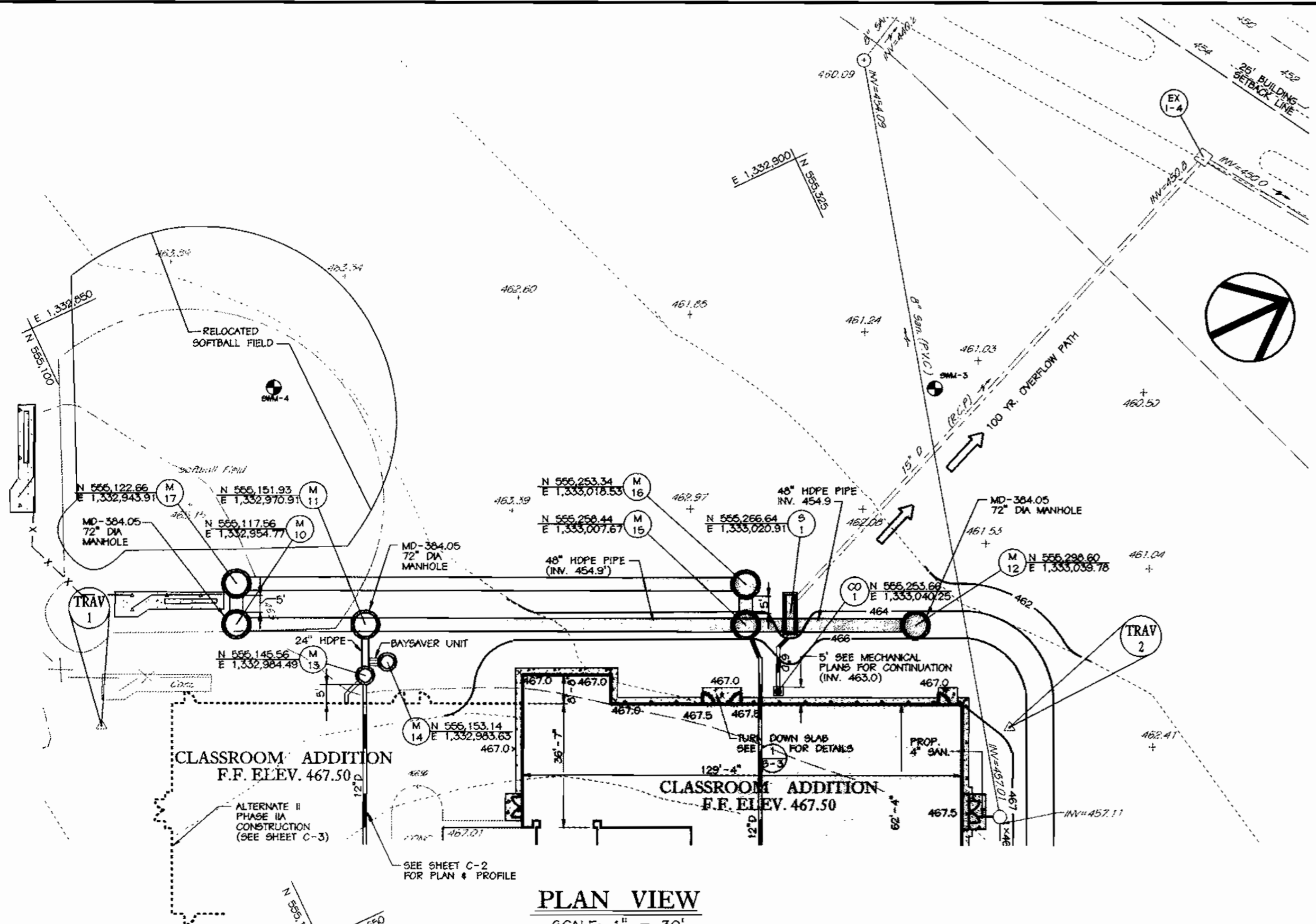
**EROSION & SEDIMENT CONTROL NOTES AND DETAILS**  
**POINTERS RUN ELEMENTARY SCHOOL**  
VILLAGE OF RIVER HILL  
SECTION 1 AREA 2, LOT 1 PARCEL 420  
OWNER:  
HOWARD COUNTY BOARD OF EDUCATION  
10910 ROUTE 108  
ELLICOTT CITY, MARYLAND 21043 SHEET TITLE: 8 OF 13

SCALE: N.T.S.

PROJECT # **01-99171**  
PERMIT ISSUE: **12-08-99**  
CONSTRUCTION ISSUE: **12-22-99**

**C-8**





PLAN VIEW  
SCALE: 1" = 30'

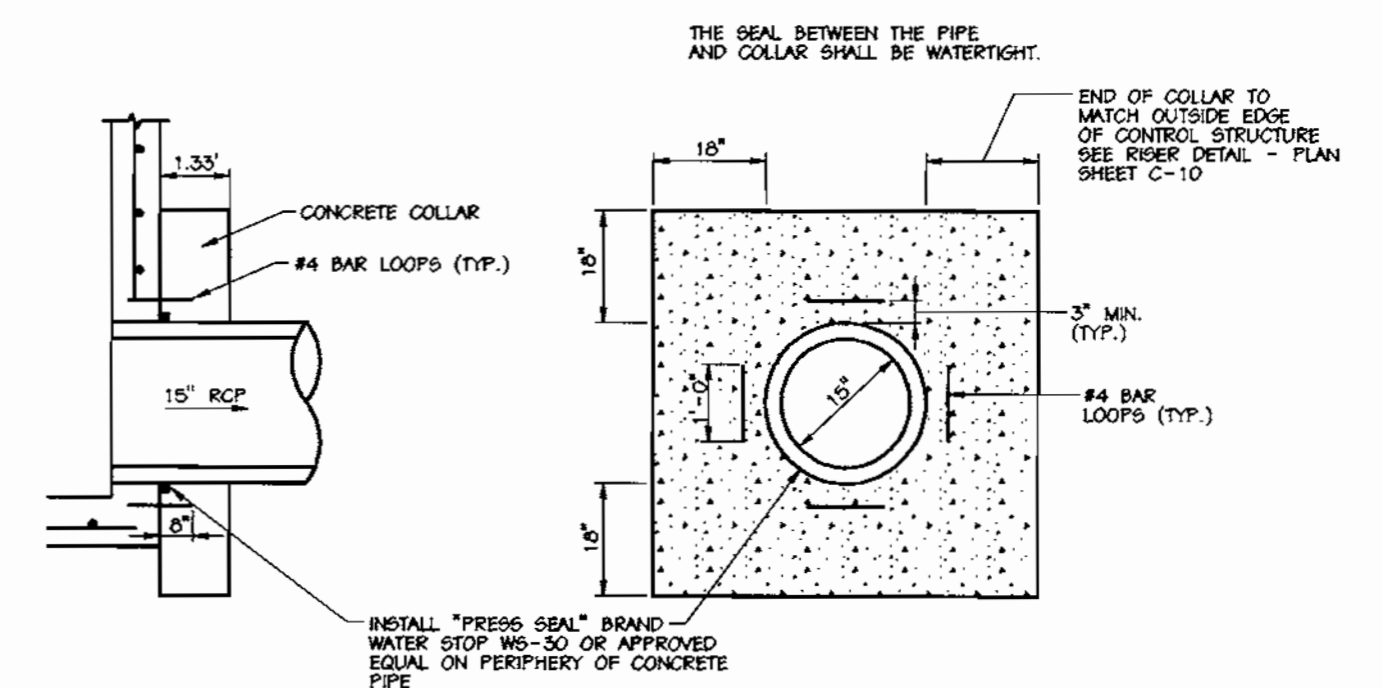
STRUCTURE SCHEDULE						
NO.	TYPE	SIZE	INV. IN	INV. OUT	TOP ELEV.	REMARKS
EX M-1	PRECAST MANHOLE	-	-	-	-	TO BE REMOVED
EX M-2	PRECAST MANHOLE	-	-	-	-	TO BE REMOVED
M-10	PRECAST MANHOLE	72"	454.9	454.9	464.91	MD SHA 384.05
M-11	PRECAST MANHOLE	72"	48" 454.9 24" 459.0	454.9	464.21	MD SHA 384.05
M-12	PRECAST MANHOLE	72"	-	454.9	465.01	MD SHA 384.05
M-13	STD. PRECAST MANHOLE	48"	6" 462.0 12" 460.2	459.2	466.61	EX. HOWARD CO. G 5.12
M-14	STD. PRECAST MANHOLE	48"	-	459.2	466.64	EX. HOWARD CO. G 5.12
M-15	PRECAST MANHOLE	72"	48" 454.9 12" 459.1	454.9	465.01	MD SHA 384.05
M-16	PRECAST MANHOLE	72"	454.9	454.9	463.66	MD SHA 384.05
M-17	PRECAST MANHOLE	72"	454.9	454.9	464.95	MD SHA 384.05
S-1	RISER STRUCTURE	-	48" 454.9 6" 461.0	454.0	464.01	SEE DETAIL SHEET C-10

\* CONTRACTOR TO ADJUST MANHOLE COVER TO GRADE IN FIELD

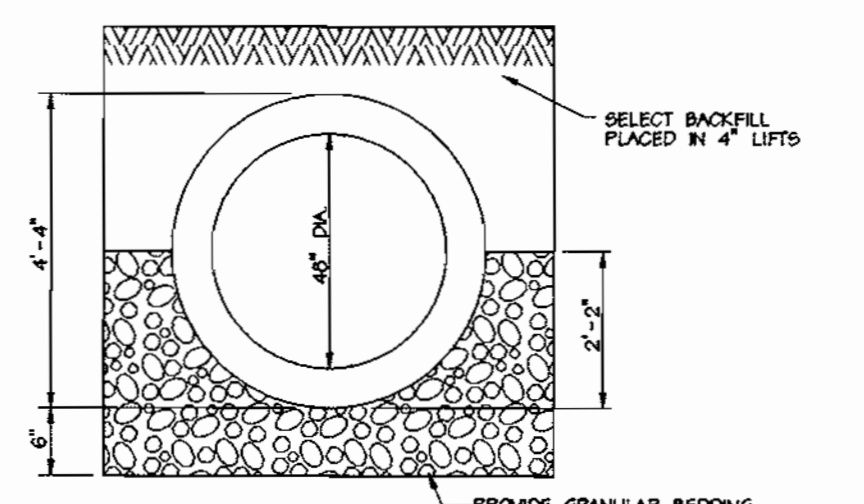
SWM DESIGN SUMMARY						
DESIGN STORM (YEAR)	ALLOWABLE RELEASE RATE AT DESIGN POINT (cfs)	FACILITY INFLOW (cfs)	FACILITY DISCHARGE (cfs)	WATER SURFACE ELEVATION (ft.)	STORAGE VOLUME (AC.FT.)	PROPOSED RELEASE RATE W/ SWM AT DESIGN POINT (cfs)
2	7.80	5.30	3.70	456.78	0.048	7.80
10	21.70	8.40	5.50	458.05	0.087	20.30

DRAINAGE AREA TO FACILITY = 1.37 ACRES

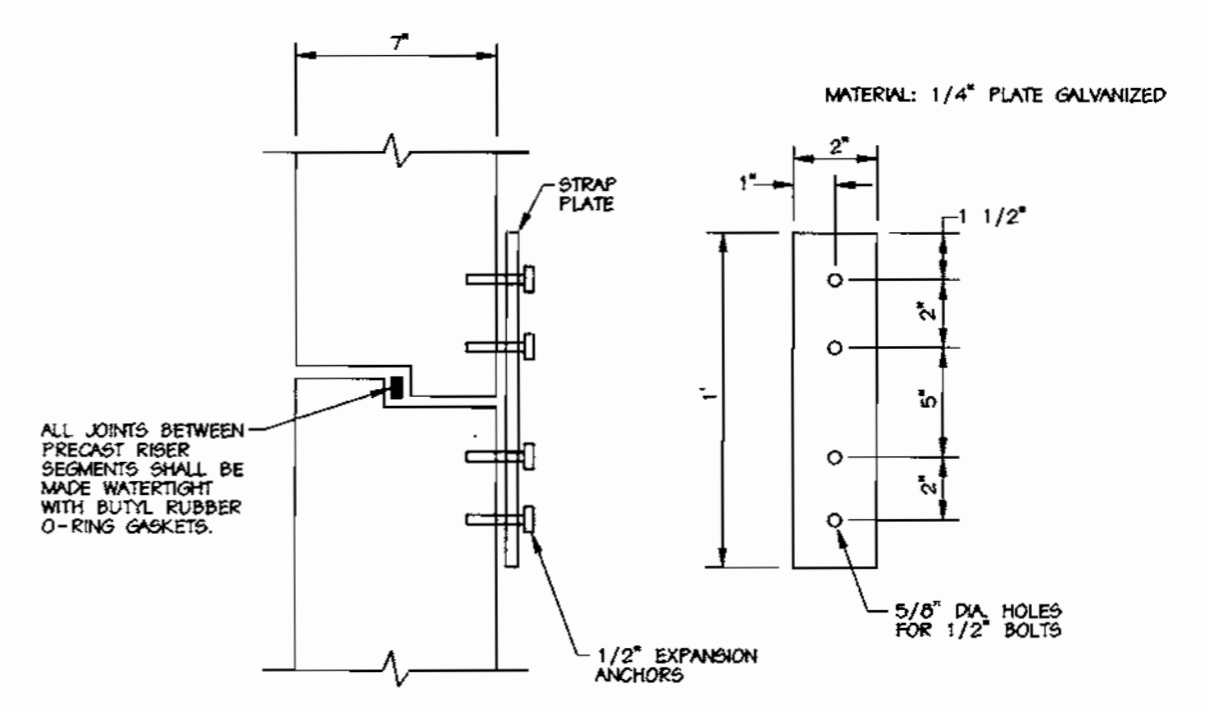
NOTE: TRASH RACK SHALL BE GALVANIZED AFTER FABRICATION AND PAINTED WITH TWO COATS OF BATTLESHIP GRAY PAINT.



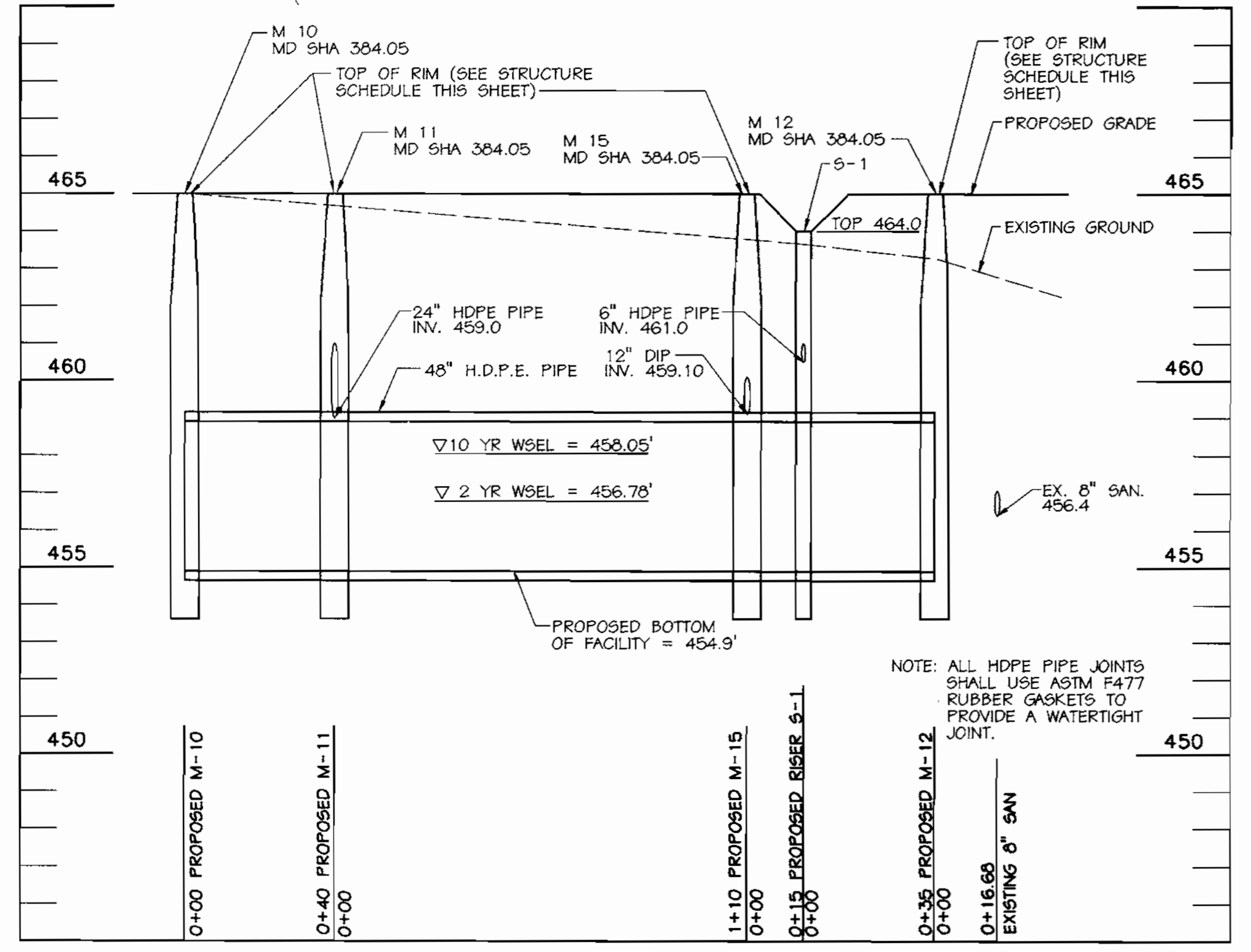
CONCRETE COLLAR DETAIL  
SCALE: N.T.S.



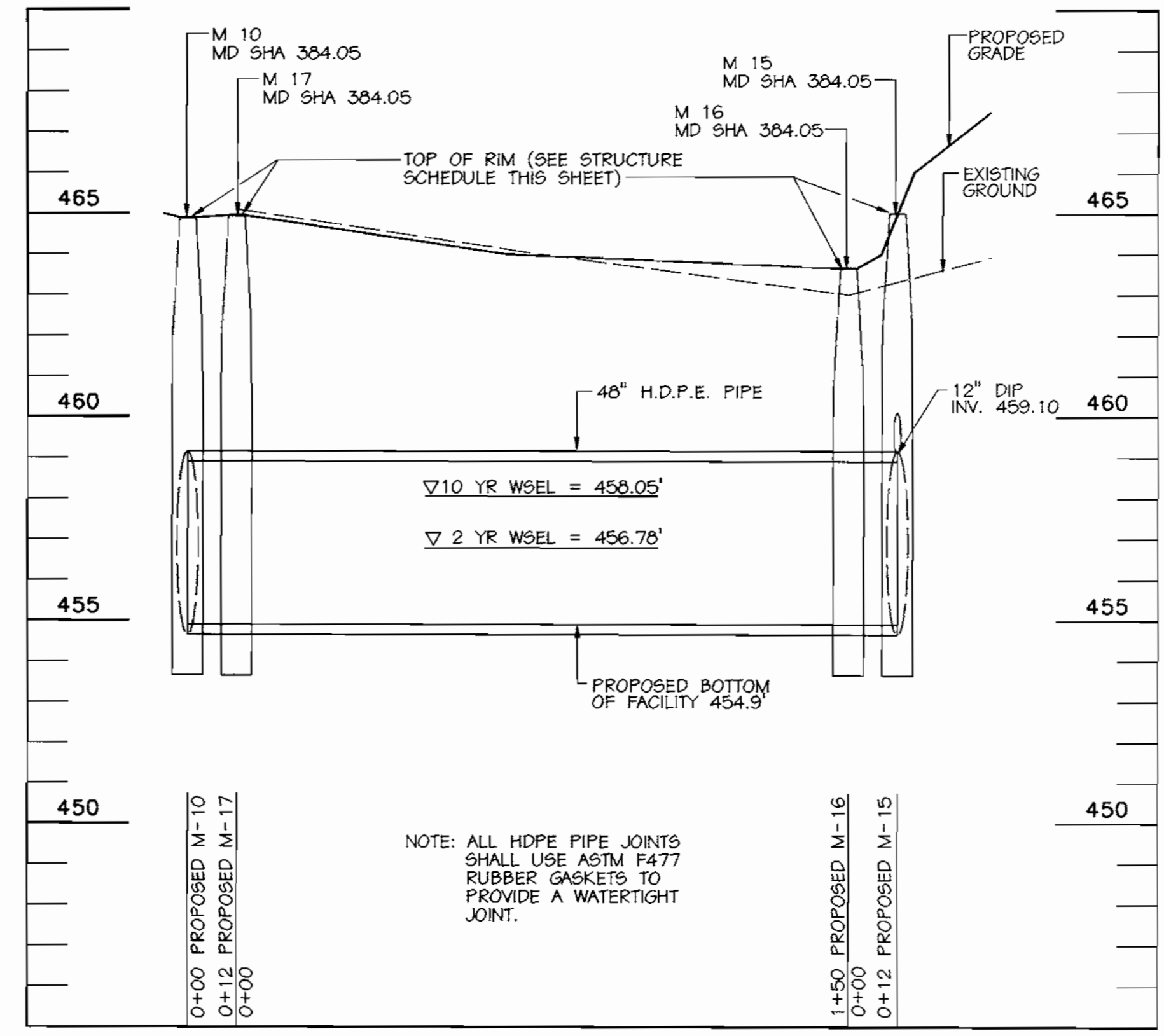
HDPE PIPE BEDDING DETAIL  
SCALE: N.T.S.



PRECAST MANHOLE JOINT DETAIL WITH STRAP PLATES  
SCALE: N.T.S.



PROFILE ALONG SWM FACILITY  
SCALE: HORIZ. 1" = 30'  
VERT. 1" = 3'



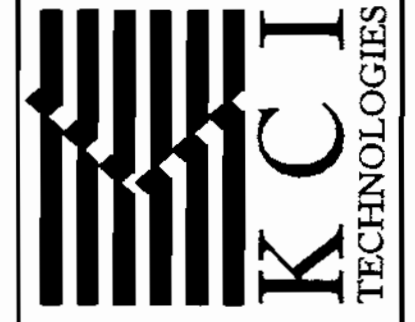
PROFILE ALONG SWM FACILITY  
SCALE: HORIZ. 1" = 30'  
VERT. 1" = 3'

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KCI TECHNOLOGIES INC. REPRODUCTION OR RE-USE IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION IS FORBIDDEN

NO.	REVISIONS DESCRIPTION	DATE

KCI TECHNOLOGIES INC.  
ENGINEERS • PLANNERS • SCIENTISTS  
CONSTRUCTION MANAGERS  
10 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
21030-1888  
PHONE: (410) 336-7800 FAX: (410) 336-7817  
HTTP://WWW.KCI.COM



ARCHITECTURAL SOLUTIONS  
15889B CRABBS BRANCH WAY  
ROCKVILLE, MARYLAND 20855-2635  
TEL: 301-670-5616  
FAX: 301-670-5617  
EMAIL: ARCSOL@AOL.COM

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN OF WATER AND SEWERAGE FOR HOWARD COUNTY.  
HOWARD COUNTY HEALTH OFFICER  
DATE: 3/10/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DATE: 3/15/00  
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED PLANNING BOARD OF HOWARD COUNTY  
DATE: 3-09-00  
KS

BY THE DEVELOPER:  
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.  
DATE: 3/9/00  
DEVELOPER

BY THE ENGINEER:  
I CERTIFY THAT THIS PLAN FOR EROSION CONTROL, SEDIMENT CONTROL, AND SOIL CONSERVATION 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.  
DATE: 3/9/00  
ENGINEER

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.  
DATE: 3/9/00  
HOWARD SOIL CONSERVATION DISTRICT

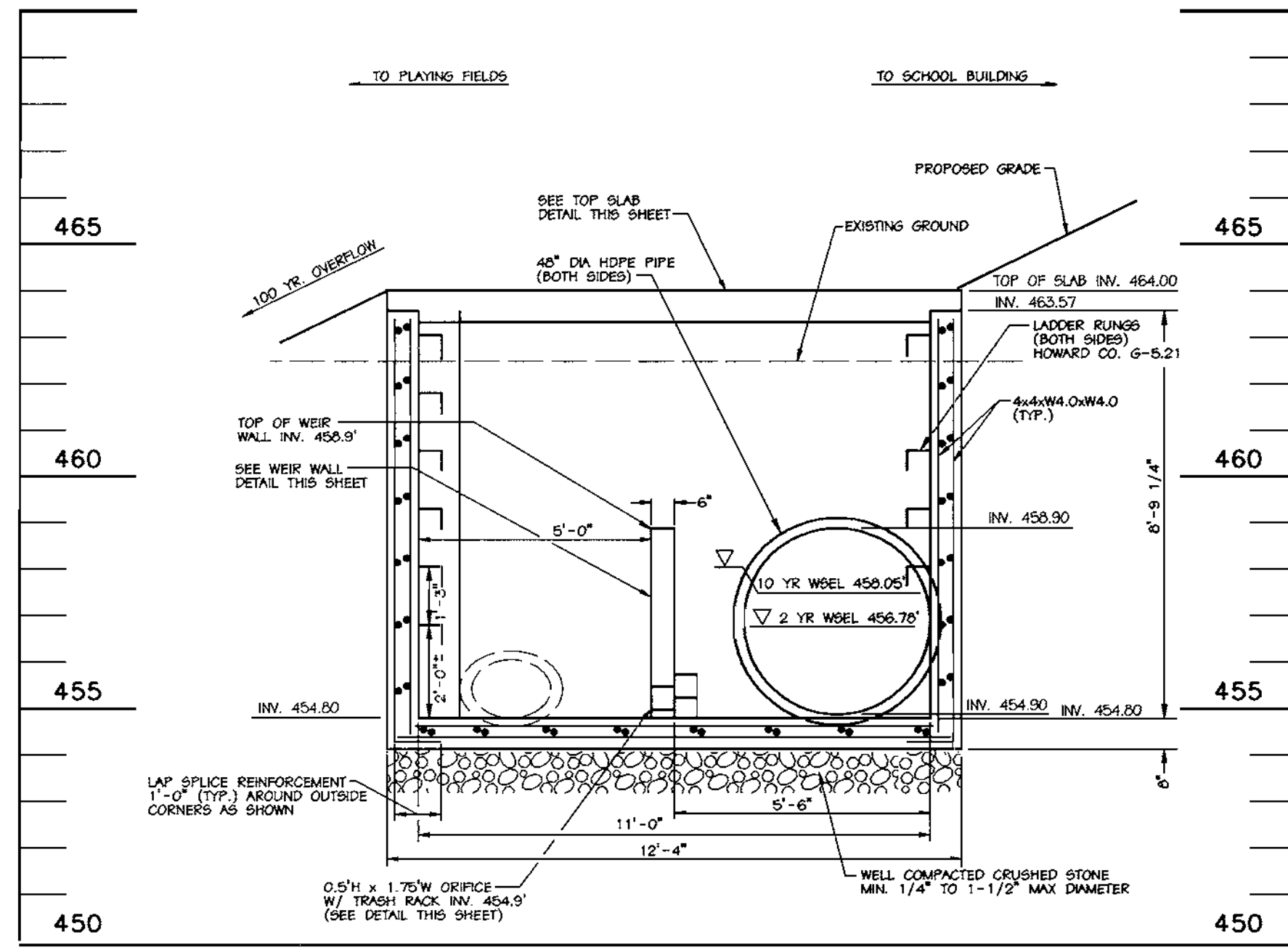
Reviewed for HOWARD SCD and meets Technical Requirements.  
Date: 3/9/00  
Date: 3/9/00



AS-BUILT CERTIFICATION  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_  
CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE SECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

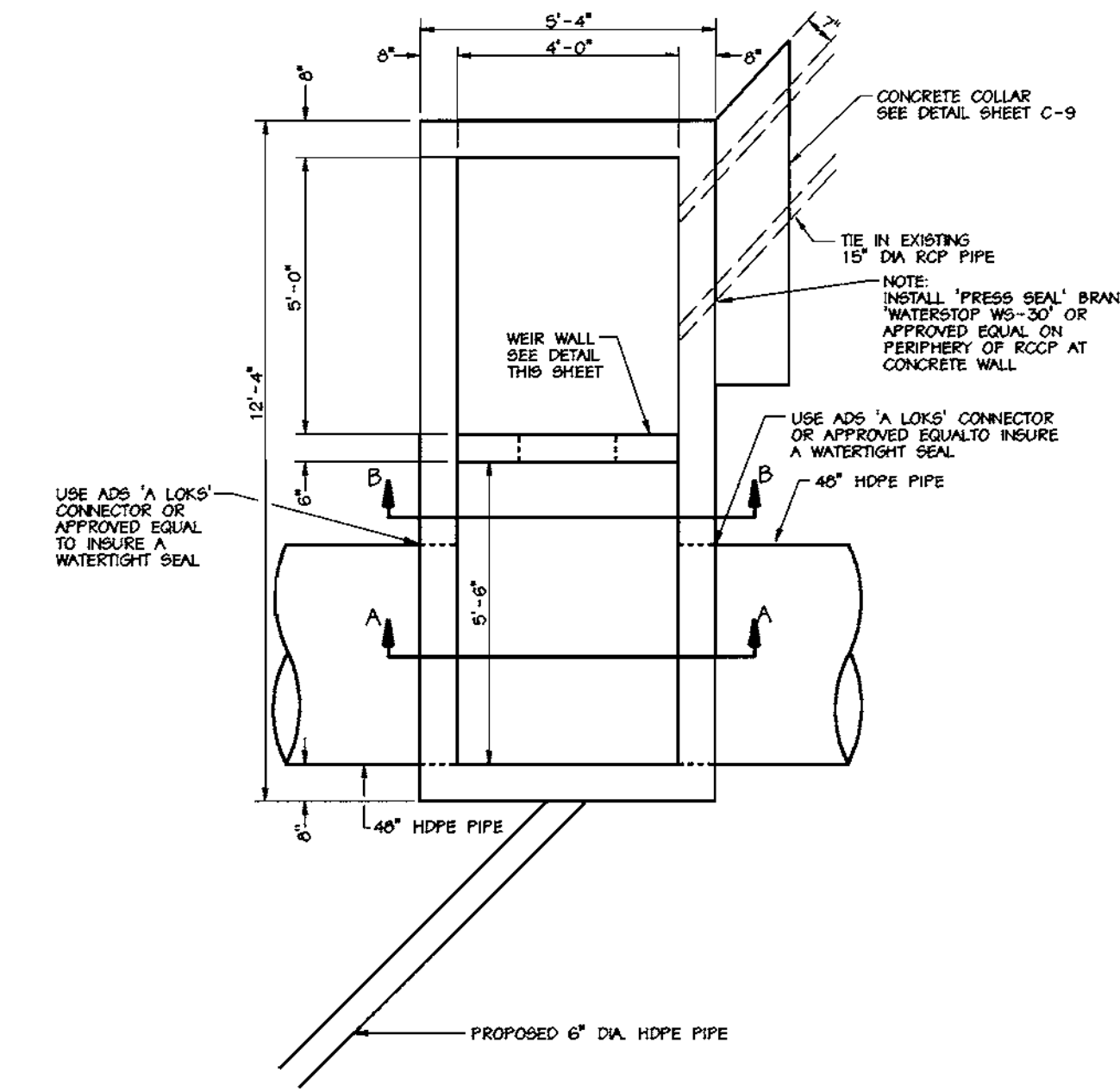
STORMWATER MANAGEMENT PLAN, SECTIONS, AND DETAILS  
POINTERS RUN ELEMENTARY SCHOOL  
VILLAGE OF RIVER HILL  
SECTION 1 AREA 2, LOT 1 PARCEL 59  
OWNER:  
HOWARD COUNTY BOARD OF EDUCATION  
10940 ROUTE 108  
ELLCOTT CITY, MARYLAND 21043 SHEET TITLE: 9 OF 13

PROJECT # 01-99171  
PERMIT ISSUE: 12-08-99  
CONSTRUCTION ISSUE: 12-22-99  
C-9



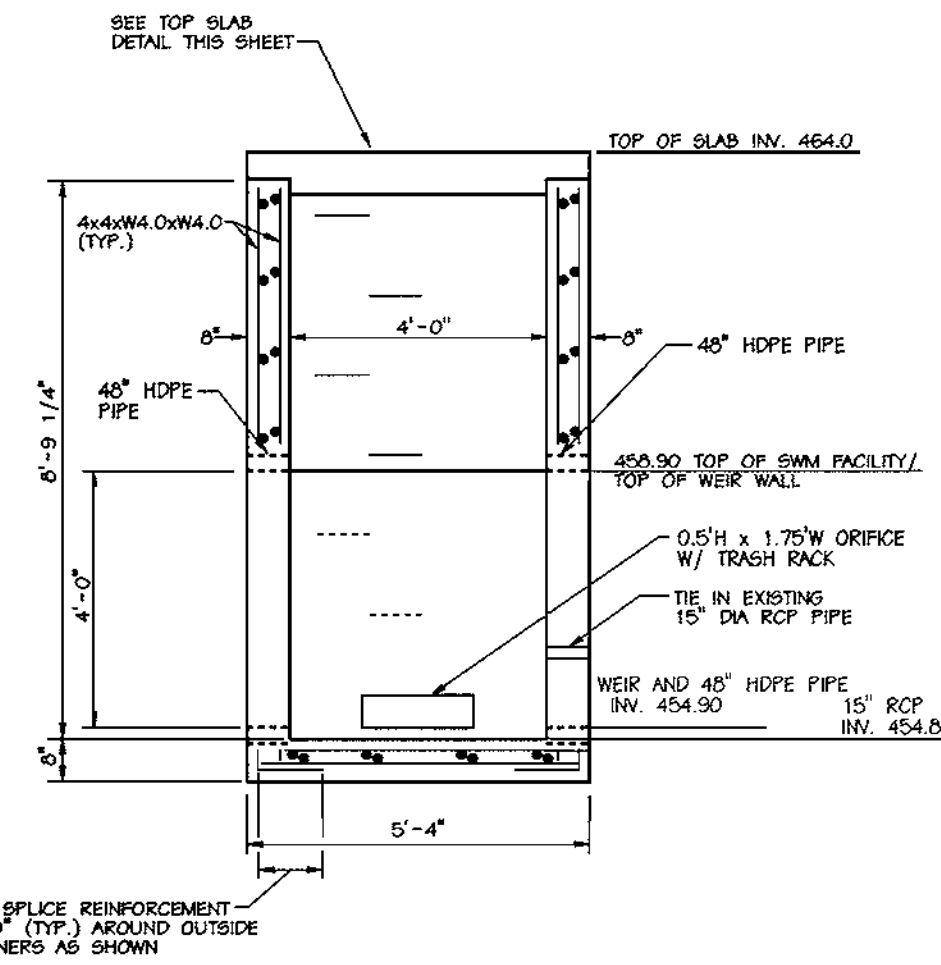
**PROFILE ALONG PRINCIPAL SPILLWAY**

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



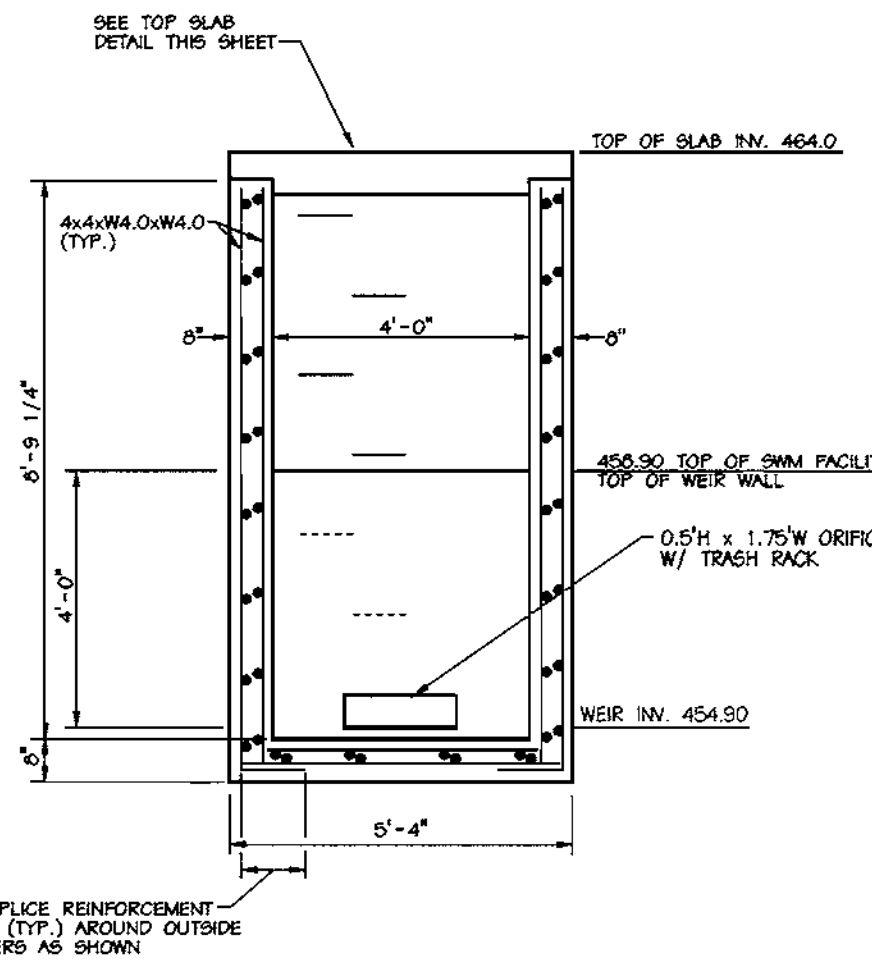
**RISER DETAIL - PLAN**

SCALE: 1" = 3'



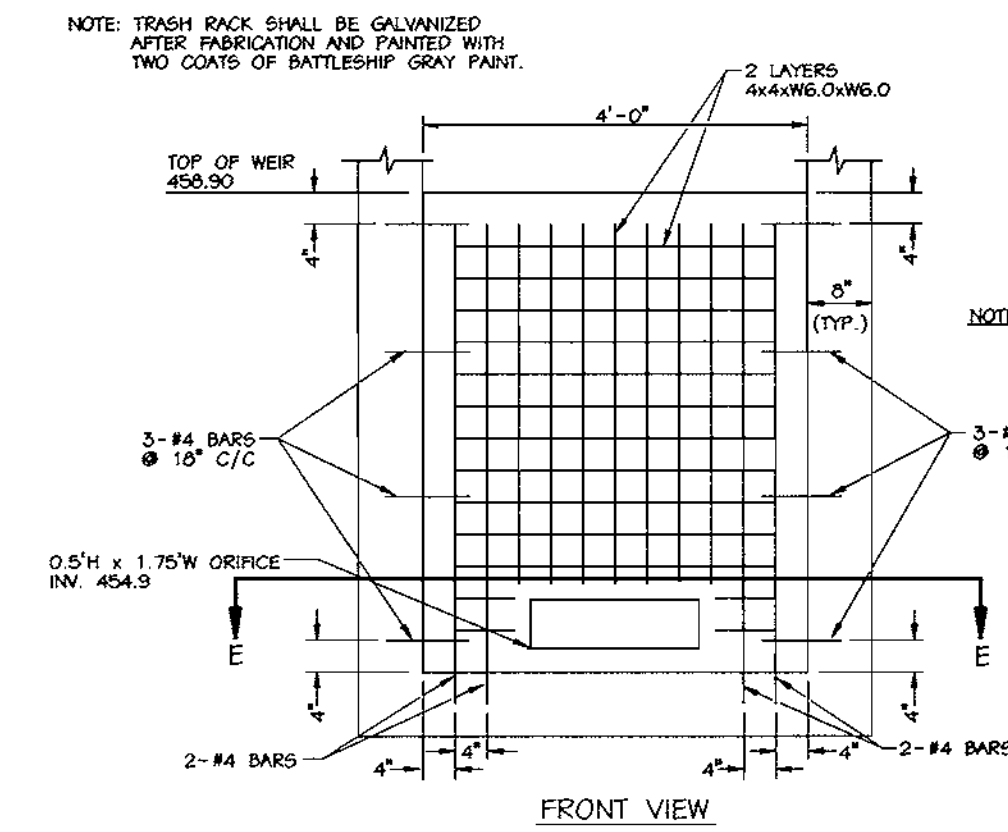
**SECTION A-A**

SCALE: 1" = 3'



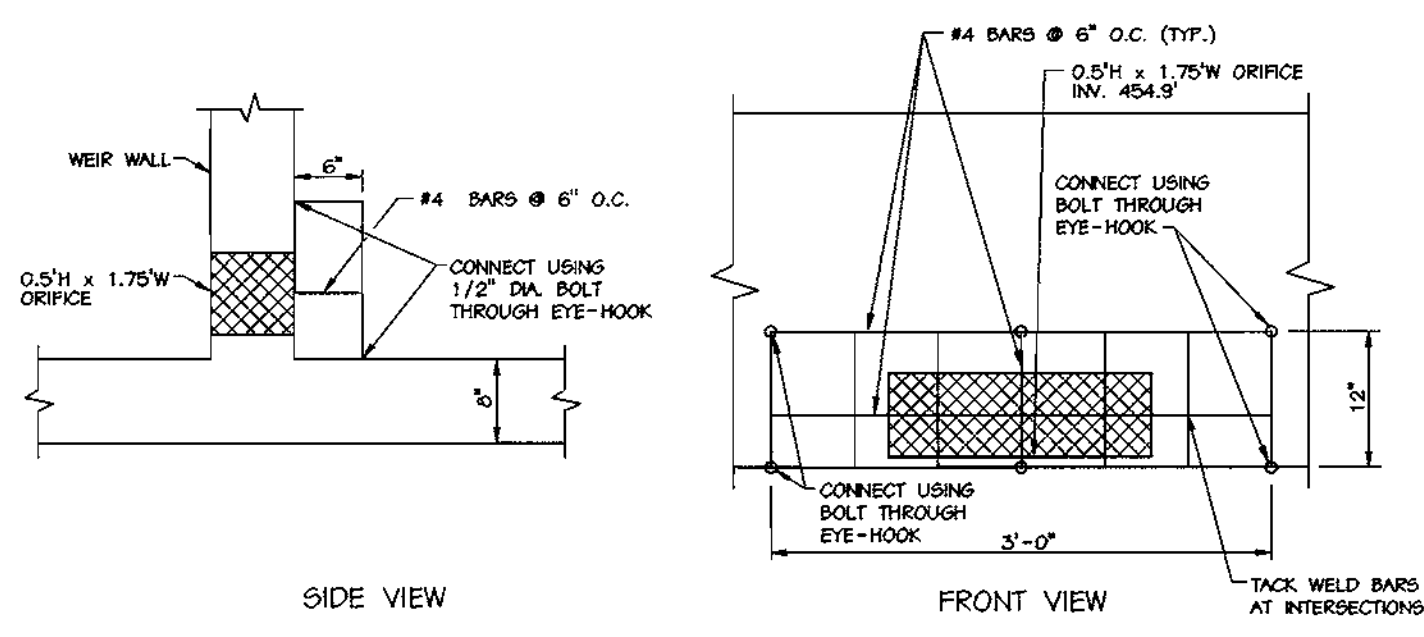
**SECTION B-B**

SCALE: 1" = 3'



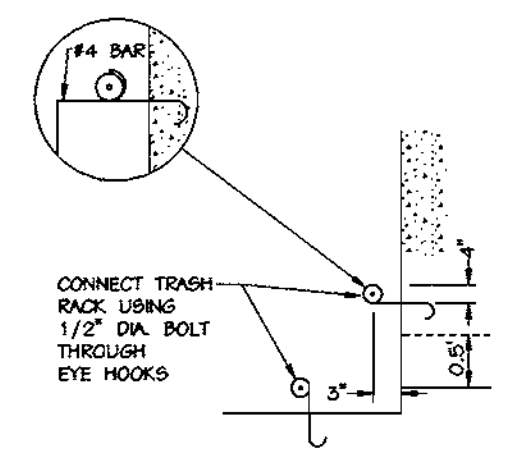
**WEIR WALL DETAIL**

SCALE: 1" = 2'



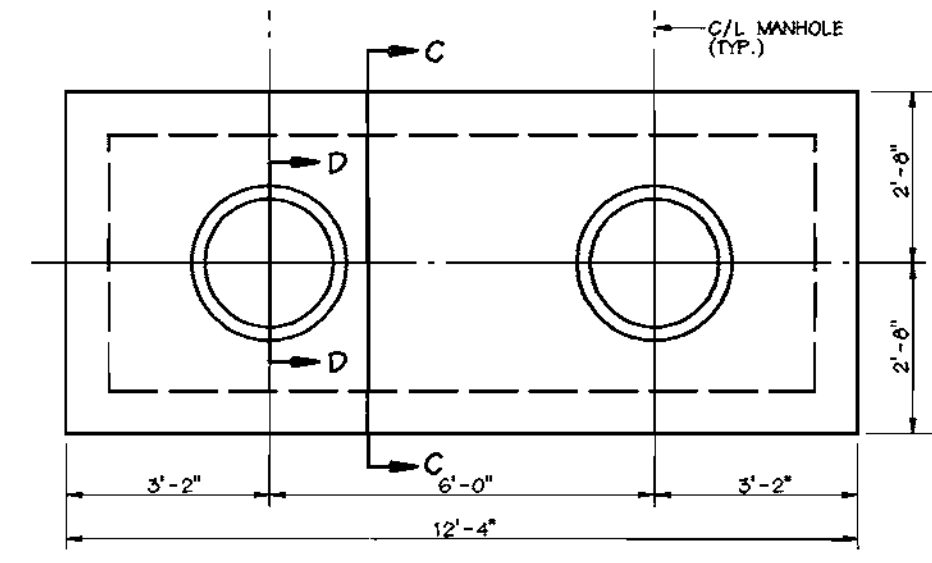
**TRASH RACK DETAIL**

SCALE: N.T.S.



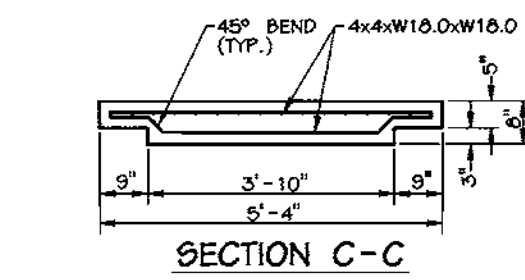
**EYE HOOK DETAIL**

SCALE: N.T.S.

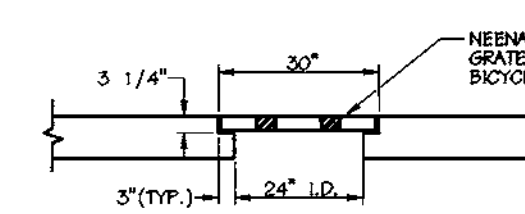


**PLAN**

NOTE: GRATE NOT SHOWN



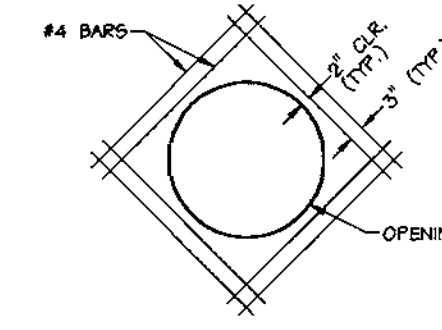
**SECTION C-C**



**SECTION D-D**

**TOP SLAB DETAIL**

SCALE: 1" = 3'



**DETAIL F**

SCALE: 1" = 3'

**NOTES:**

1. ALL JOINTS AND CONNECTIONS TO BE WATERTIGHT.
2. PROVIDE MANHOLE STEPS PER HOWARD COUNTY G-5.21 TO INVERT OF STRUCTURE.
3. INSTALLATION FOR PIPES TO BE IN ACCORDANCE W/ MANUFACTURERS SPECIFICATIONS.
4. CONCRETE TO BE MIX NO. 6.
5. ALL REINFORCEMENT TO BE ASTM A615 GRADE 60.
6. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.
7. PROVIDE A MINIMUM OF 2" CLEARANCE TO ALL REINFORCEMENT.
8. PROVIDE A MINIMUM LAP SPICE OF 1'-0" AROUND ALL OUTSIDE CORNERS.
9. ALL OPENINGS SHALL BE ADDITIONALLY REINFORCED AS SHOWN IN DETAIL F.

**AS-BUILT CERTIFICATION**

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

FE NO. \_\_\_\_\_  
DATE \_\_\_\_\_

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETINGS COMMONLY ACCEPTED INDUSTRY PRACTICES.

**RISER STRUCTURE, SECTIONS, AND DETAILS**  
**POINTERS RUN ELEMENTARY SCHOOL**  
 VILLAGE OF RIVER HILL  
 SECTION 1 AREA 2, LOT 1 PARCEL 59  
 OWNER:  
 HOWARD COUNTY BOARD OF EDUCATION  
 10910 ROUTE 108  
 ELLICOTT CITY, MARYLAND 21043  
 SCALE: AS SHOWN SHEET TITLE: 10 OF 13

NO.	REVISIONS DESCRIPTION	DATE

**KCI TECHNOLOGIES INC.**  
 ENGINEERS • PLANNERS • SCIENTISTS  
 CONSTRUCTION MANAGERS  
 10 NORTH PARK DRIVE  
 HUNT VALLEY, MARYLAND  
 21034-1888  
 PHONE: (410) 316-7800 FAX: (410) 316-7817  
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**ARCHITECTURAL SOLUTIONS**  
 15899B CRABBS BRANCH WAY  
 ROCKVILLE, MARYLAND 20855-2635  
 EMAIL: ARCSOL@AOL.COM  
 TEL: 301-670-5616  
 FAX: 301-670-5617

PROJECT # 01-99171  
 PERMIT ISSUE 12-08-99  
 CONSTRUCTION ISSUE 12-22-99

**C-10**

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN OF WATER AND SEWERAGE FOR HOWARD COUNTY.

HOWARD COUNTY HEALTH OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 \_\_\_\_\_ DATE 2/10/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 \_\_\_\_\_ DATE 3/15/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 \_\_\_\_\_ DATE 3/15/00

**APPROVED PLANNING BOARD OF HOWARD COUNTY**

DATE 3-09-00  
 KS

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

\_\_\_\_\_  
 DEVELOPER DATE 2/25/00

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR POINTERS RUN ELEMENTARY SCHOOL 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.

\_\_\_\_\_  
 ENGINEER DATE 3/15/00

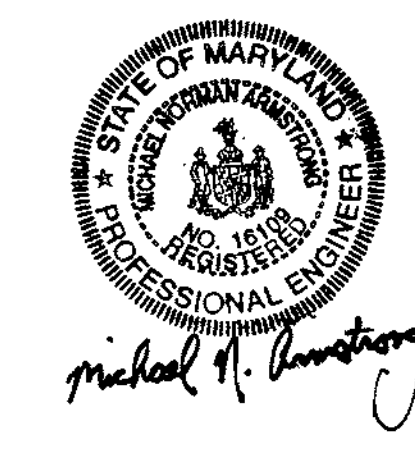
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

\_\_\_\_\_  
 HOWARD SOIL CONSERVATION DISTRICT DATE

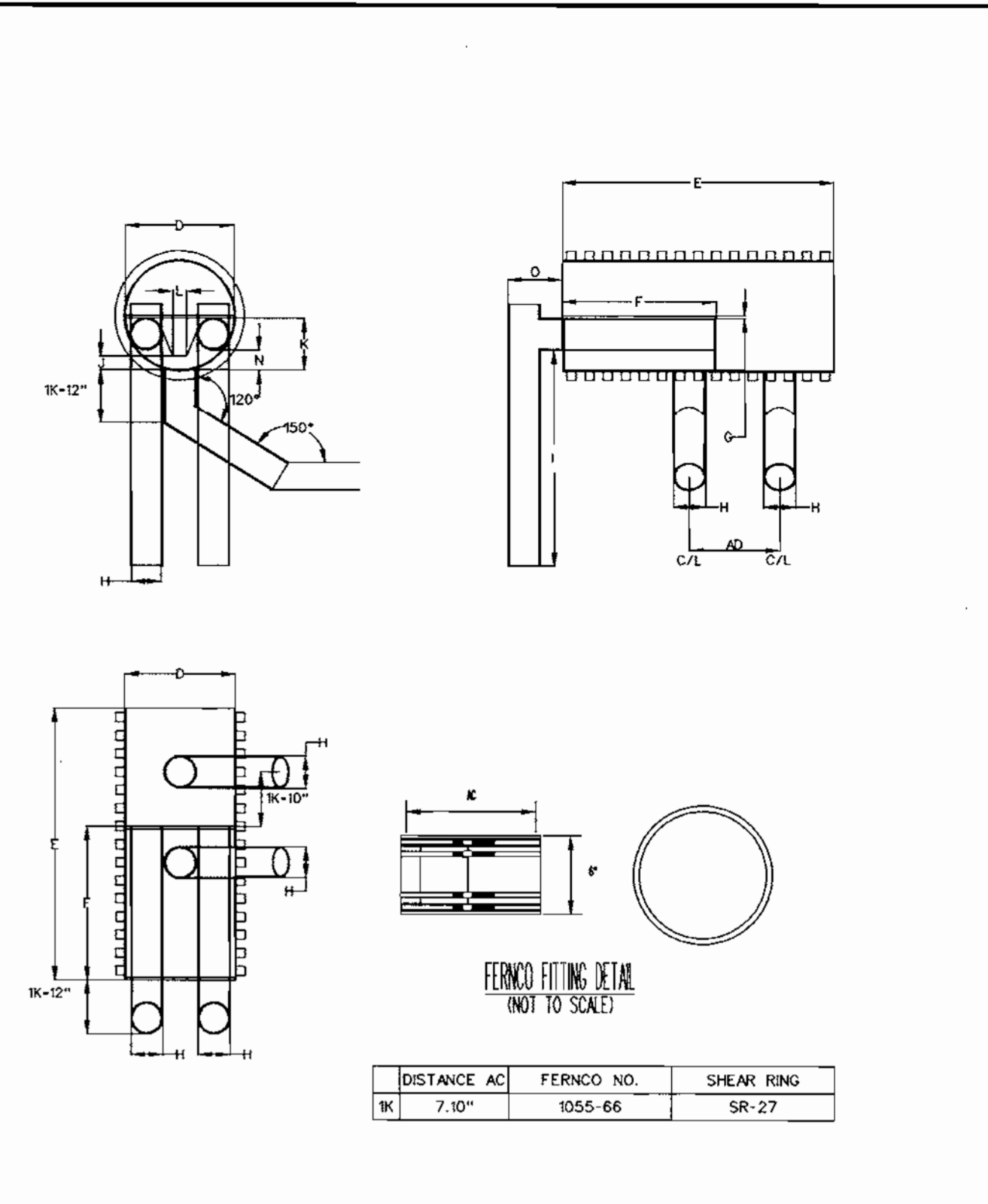
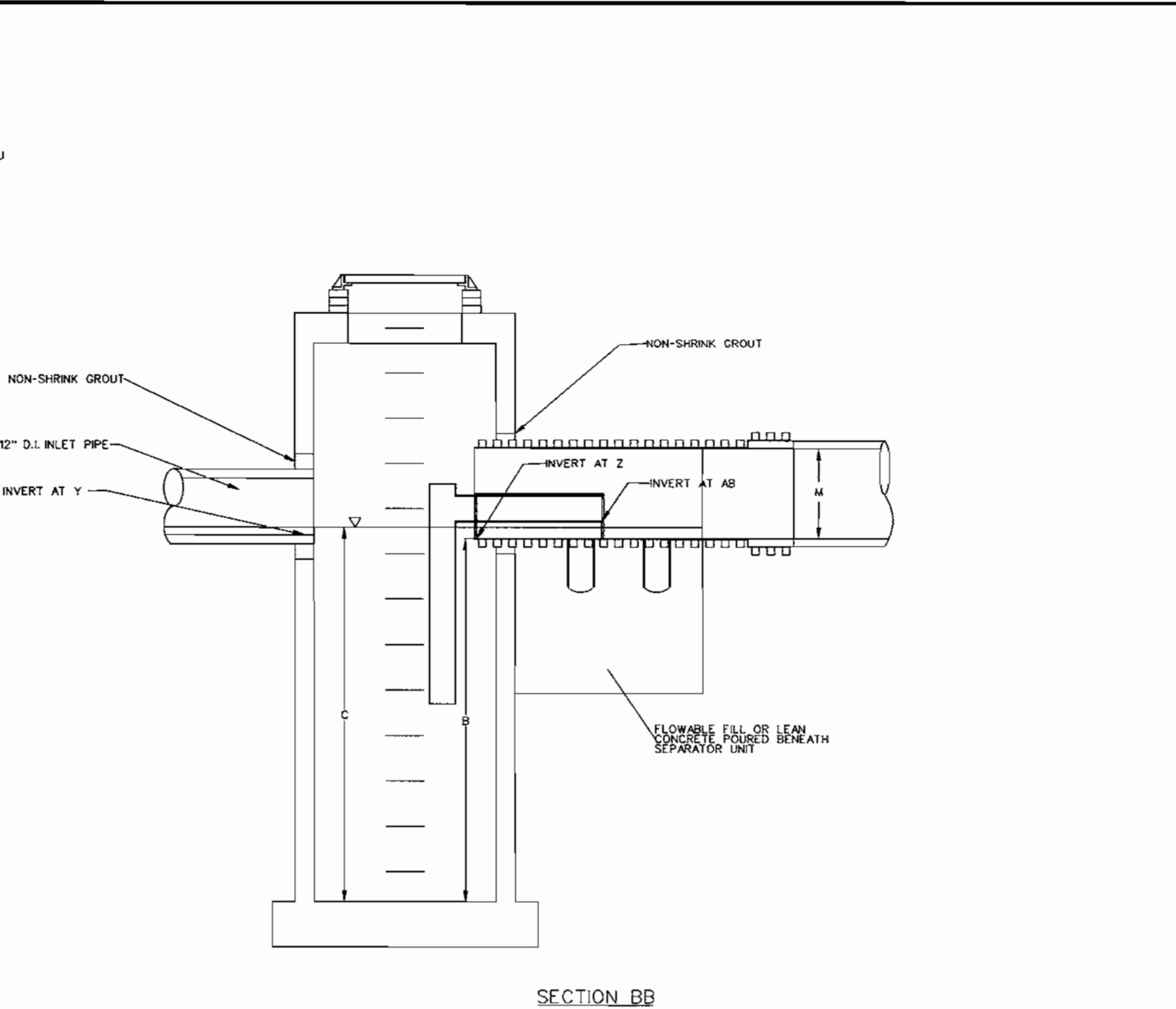
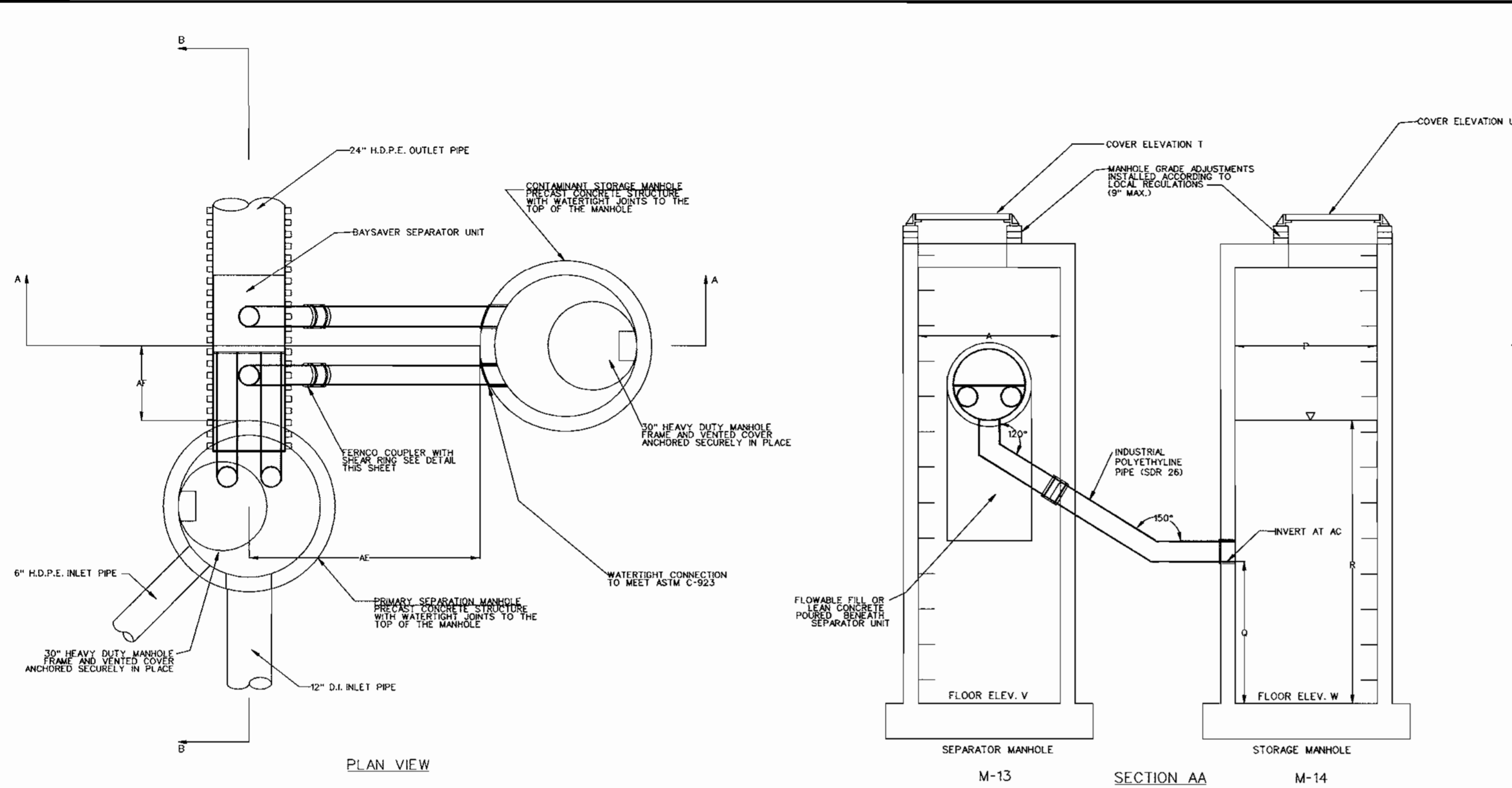
Reviewed for HOWARD SCD and meets Technical Requirements.

\_\_\_\_\_  
 DATE 3/19/00

\_\_\_\_\_  
 DATE 3/19/00



STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 MICHAEL A. ARMSTRONG  
 No. 16167



**SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR DUAL MANHOLE SEPARATORS**

Stage (X = Approval Required)	Developer's/Engineer Approval		Inspector		Geotechnical Engineer	
	Initials	Date	Initials	Date	Initials	Date
1. Pre-Construction Meeting.	X		X		X	
2. Install Manholes and associated storm drainage: a. Obtain approval of subgrade from Geotechnical Engineer. (Subgrade to have a minimum of 95% compaction) b. Installation of precast base, lower tank and lower piping. c. Backfill and min. 95% compaction around lower tank and lower piping. d. Installation of precast middle section(s) with separator unit and remaining piping. e. Installation of precast top slab. f. Installation of adjustment rings and frame and cover. g. Installation of flowable fill or concrete backfill.	X		X		X	
3. Backfilling operation and compaction.					X	
4. Site is permanently stabilized. Sediment control measures removed and all sediment and debris removed from dual manhole separators.			X		X	
5. Final inspection.			X			

Baysaver Separator Unit	Baysaver Manhole Sizes (prim. x stor.)	Maximum Treatment (cfs)*1	Maximum Treatment (gpm)*1	Impervious Area (acres)
1K Baysaver Separator	48x48	2.4	1076	1.2

**NOTE:**  
BAYSAVERS ARE TO BE INSTALLED WITH THE STORM DRAIN SYSTEM AND WILL FUNCTION AS SECONDARY SEDIMENT CONTROL DEVICES. UPON COMPLETION OF SITE STABILIZATION, EACH BAYSAYER SYSTEM SHALL BE FLUSHED CLEAN & THE MANHOLES CLEANED OUT AND REFILLED WITH CLEAN WATER.

**NOTE:** DIMENSIONAL SHOP DRAWINGS ARE TO BE APPROVED BY THE DESIGN ENGINEER

**BAYSAYER MAINTENANCE**

BAYSAYER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET. MINIMUM INSPECTION IS REQUIRED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF BAYSAYER.

MAINTENANCE CONSISTS OF THE FOLLOWING:

- A. CONTAMINANT STORAGE MANHOLE**
  - REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.
  - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- B. PRIMARY SEPARATION MANHOLE**
  - USING A SUBMERSIBLE PUMP, PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
  - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
  - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
  - CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

**BAYSAYER INSTALLATION INSTRUCTIONS**

- EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAYER UNIT. INSTALL PRECAST DROP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.
- VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
- MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT. INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTIONS AS REQUIRED. SEAL LIFT HOLES WITH NON-SHRINK GROUT.
- BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE CONNECTING PIPES. USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.
- INSTALL BAYSAYER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OFF CONNECTING PIPES INSIDE STORAGE MANHOLE.
- BACKFILL SEPARATOR UNIT AND MANHOLES. AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
- CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENT RINGS AS NECESSARY.

**GENERAL CONSTRUCTION NOTES**

- ALL WORK MUST BE DONE WITH REGARD FOR THE SAFETY OF THE CONSTRUCTION CREW.
- ALL WORK AND MATERIALS MUST COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS.
- KNOW THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.

**SS1 BAYSAYER SEPARATION SYSTEM SEPARATOR UNIT ORDER FORM**

PROJECT: POINTERS RUN ELEMENTARY SCHOOL  
 ADDRESS: 5600 SOUTH TROTTER ROAD, ELLICOTT CITY, MD.  
 DESIGNER: KCI TECHNOLOGIES, INC.  
 CONTACT: MARK RICHMOND, P.E.  
 PHONE: 410-316-7800  
 FAX: 410-316-7972  
 DELIVERY DATE: \_\_\_\_\_  
 OWNER: HOWARD COUNTY BOARD OF EDUCATION  
 CONTACT: WALTER SCHNEIDER  
 ADDRESS: 10910 ROUTE 108, ELLICOTT CITY, MD. 21043  
 CONTRACTOR: SCHAFFER & SONS, INC.  
 CONTACT: JOHN JENKINS  
 PHONE: 410-335-3000  
 FAX: 410-335-6539

**SEPARATOR UNIT MODEL:**  
 1K   
 3K   
 5K

**CIRCLE SYSTEM ORIENTATION ABOVE**

**MANHOLE SPECIFICATIONS:**

PRIMARY MANHOLE DIAMETER: 48"  
 STORAGE MANHOLE DIAMETER: 48"  
 FLOOR ELEVATIONS:  
 PRIMARY MANHOLE: 451.2'  
 STORAGE MANHOLE: 451.2'  
 PRIMARY MANHOLE INVERT ELEVATIONS:  
 SEPARATOR UNIT: 459.2'  
 INLET PIPE(S): 12" D.I. 460.2', 6" HDPE 462.0'  
 MANHOLE COVER ELEVATIONS:  
 PRIMARY MANHOLE: 466.6'  
 STORAGE MANHOLE: 466.6'

\*CONTRACTOR SHALL ADJUST MANHOLE COVER TO GRADE IN FIELD.

FOR QUESTIONS, PRICES, OR TECHNICAL SUPPORT, PLEASE CONTACT  
 BAYSAYER, INC.  
 1010 DEER HOLLOW DRIVE, MOUNT AIRY, MARYLAND 21771  
 PHONE (301) 829-6470 FAX (301) 829-3747

**BAYSAYER SYSTEM DIMENSIONS**

DESCRIPTION	SEPARATOR MANHOLE DIMENSIONS		
	1K SYSTEM	3K SYSTEM	5K SYSTEM
A PRIMARY MANHOLE DIAMETER	48"	60"	72"
B MANHOLE DEPTH BELOW OUTLET	8' - 0"	8' - 0"	8' - 0"
C MINIMUM FLUID DEPTH	8' - 3"	8' - 4 1/2"	8' - 6"
STANDARD SEPARATOR UNIT DIMENSIONS			
D SEPARATOR UNIT ID	24"	36"	48"
E SEPARATOR UNIT LENGTH	60"	78.2"	75.4"
F BYPASS PLATE LENGTH	34"	45"	45"
G WEIR/BYPASS PLATE THICKNESS	3/4"	3/4"	3/4"
H ELBOW AND CONNECTING PIPE OD	7.125"	10.75"	12.75"
I ELBOW LENGTH	48"	48"	48"
J WEIR HEIGHT ABOVE INVERT	3"	4"	6"
K BYPASS PLATE HEIGHT ABOVE INVERT	12"	18"	24"
L WIDTH OF WEIR AT BASE	3"	4 1/2"	6"
M OUTLET PIPE DIAMETER	24"	M	M
N ELBOW INVERT HEIGHT ABOVE UNIT INVERT	4 1/2"	7 1/2"	11"
O ELBOW PIPE OVERHANG	12"	18"	24"
STORAGE MANHOLE DIMENSIONS			
P STORAGE MANHOLE DIAMETER	48"	60"	N/A 72"
Q MANHOLE DEPTH BELOW INLET/OUTLET	48"	48"	48"
R FLUID DEPTH	8' - 0"	8' - 0"	8' - 0"
S TOTAL STORAGE VOLUME	200 CF	300 CF	450 CF
SYSTEM DIMENSIONS AND ELEVATIONS			
T SEPARATOR MANHOLE COVER ELEVATION x	466.6'	T	T
U STORAGE MANHOLE COVER ELEVATION x	466.6'	U	U
V SEPARATOR MANHOLE FLOOR ELEVATION	451.2'	V	V
W STORAGE MANHOLE FLOOR ELEVATION	451.2'	W	W
X INLET PIPE ID AND MATERIAL	12" D.I. 6" HDPE	X	X
Y INLET PIPE INVERT	460.2' 462.0'	Y	Y
Z SEPARATOR UNIT INVERT	459.2'	Z	Z
AA OUTLET PIPE ID AND MATERIAL	24" H.D.P.E.	AA	AA
AB ELBOW INVERT ELEVATION	459.575'	AB	AB
AC CONNECTING PIPE INVERT ELEVATION	455.2'	AC	AC
AD CONNECTION PIPE SPACING	20"	24"	24"
AE STORAGE MANHOLE SIDE OFFSET	72" ± 6"	72 ± 6"	72 ± 6"
AF STORAGE MANHOLE DOWNSTREAM OFFSET	23"	31"	25"

\* NOTE: CONTRACTOR SHALL ADJUST MANHOLE COVER TO GRADE IN THE FIELD.

APPROVED: FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN OF WATER AND SEWERAGE FOR HOWARD COUNTY.  
 HOWARD COUNTY HEALTH OFFICER  
 DATE: 3/10/00  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 3/15/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 3/15/00

**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE: 3-09-00

BY THE DEVELOPER:  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.  
 DATE: 3/15/00  
 DEVELOPER: Catherine Anley King

BY THE ENGINEER:  
 I CERTIFY THAT THIS PLAN FOR 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.  
 DATE: 3/15/00  
 ENGINEER: Michael N. Armstrong

THESE PLANS FOR SWM, FLOOD PROTECTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 HOWARD SOIL CONSERVATION DISTRICT DATE: \_\_\_\_\_

Reviewed for HOWARD SOIL CONSERVATION DISTRICT and meets Technical Requirements.  
 DATE: 3/15/00  
 DATE: 3/15/00



**STORMWATER QUALITY STRUCTURE NOTES & DETAILS**  
**POINTERS RUN ELEMENTARY SCHOOL**  
 VILLAGE OF RIVER HILL  
 SECTION 1 AREA 2, LOT 1 PARCEL 59  
 OWNER: HOWARD COUNTY BOARD OF EDUCATION  
 10910 ROUTE 108, ELLICOTT CITY, MARYLAND 21043  
 SCALE: N.T.S. SHEET TITLE: 11 OF 13

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ARCHITECTURAL SOLUTIONS  
 15889 CRABBS BRANCH WAY ROCKVILLE, MARYLAND 20855-2635  
 TEL: 301-670-5616 FAX: 301-670-5617  
 EMAIL: ARCSOL@AOL.COM

PROJECT: 01-99171  
 PERMIT ISSUE: 12-08-99  
 CONSTRUCTION ISSUE: 12-22-99

**C-11**

SDP-00-68

**SWM POND CONSTRUCTION SPECIFICATIONS**

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-37B. All references to ASTM and AASHTO specifications apply to the most recent version.

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

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

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

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

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

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

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

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

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

**Pipe Conduits**  
All pipes shall be circular in cross section.

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

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

2. **Coupling bands, anti-seep collars, and end sections, etc., must be composed of the same materials as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 1/8" in thickness.**

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

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

**Helicly corrugated pipe shall have either continuously welded seams or have lock seams with interlocking gaskets or a neoprene bead.**

**OPERATION AND MAINTENANCE SCHEDULE**  
**STORMWATER MANAGEMENT AND WATER QUALITY FACILITY**

1. THE UNDERGROUND STORMWATER FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
2. THE UNDERGROUND STORMWATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
3. WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUTFALL IS OBSERVED, THE FACILITY SHALL BE CLEANED.
4. THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEANUP OPERATION.
5. THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORMWATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL OR LIQUID.
6. THE INLET AND OUTFLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX (6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.
7. SEE SHEET C-11 FOR ADDITIONAL NOTES ON THE BAYSAYER UNIT.

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

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

1. **Materials - Reinforced concrete pipe shall have belted and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.**
2. **Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the side of the pipe at least 100% of its outside diameter with a minimum thickness of 3 inches or as shown on the drawings.**
3. **Laying pipe - Belled and spigot pipe shall be placed with the belled upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.**
4. Backfilling shall conform to "Structure Backfill".

**Concrete**  
Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 902, Mix No. 3.

**Rock Riprap**  
Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 901.

**The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09.**

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

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

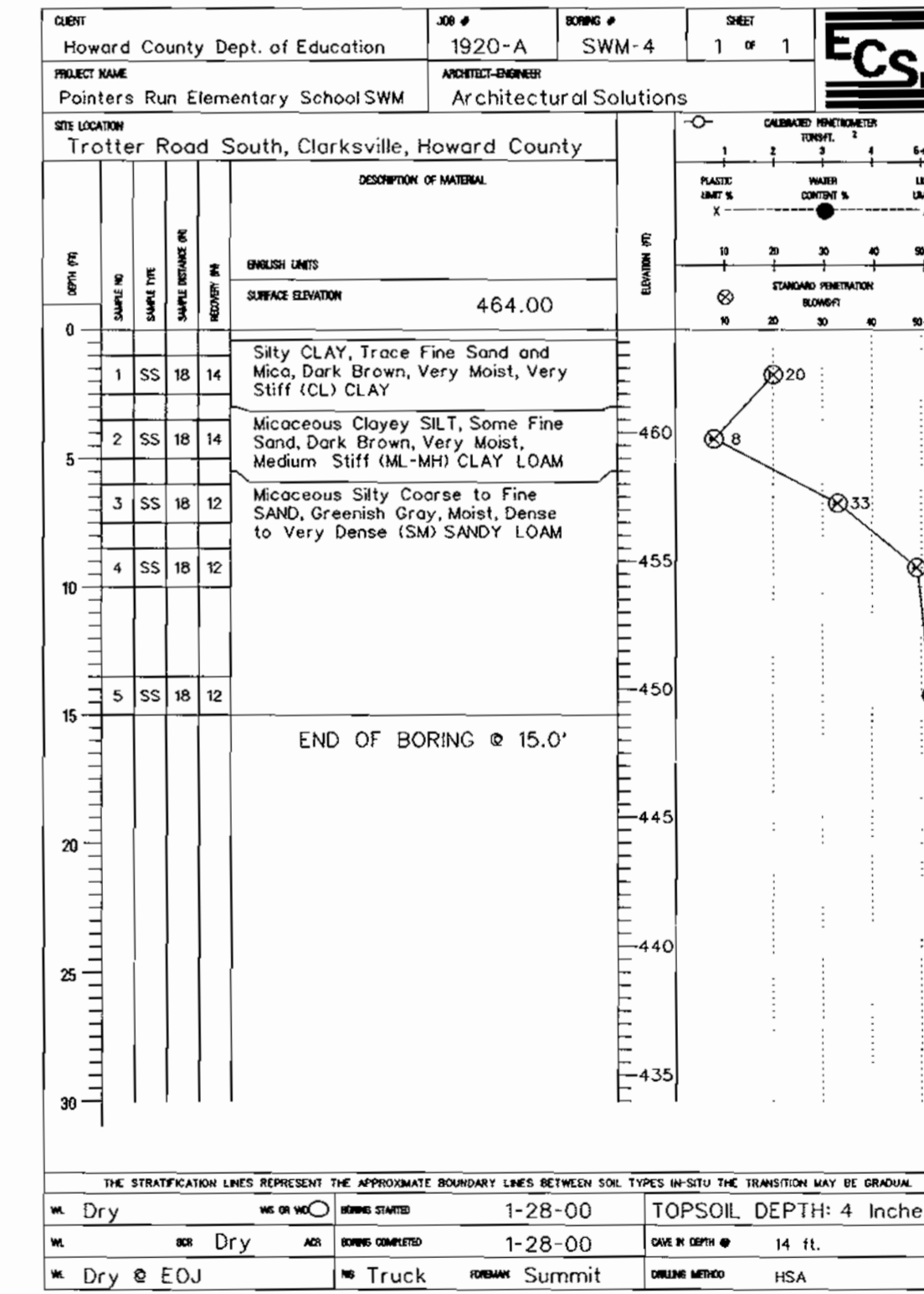
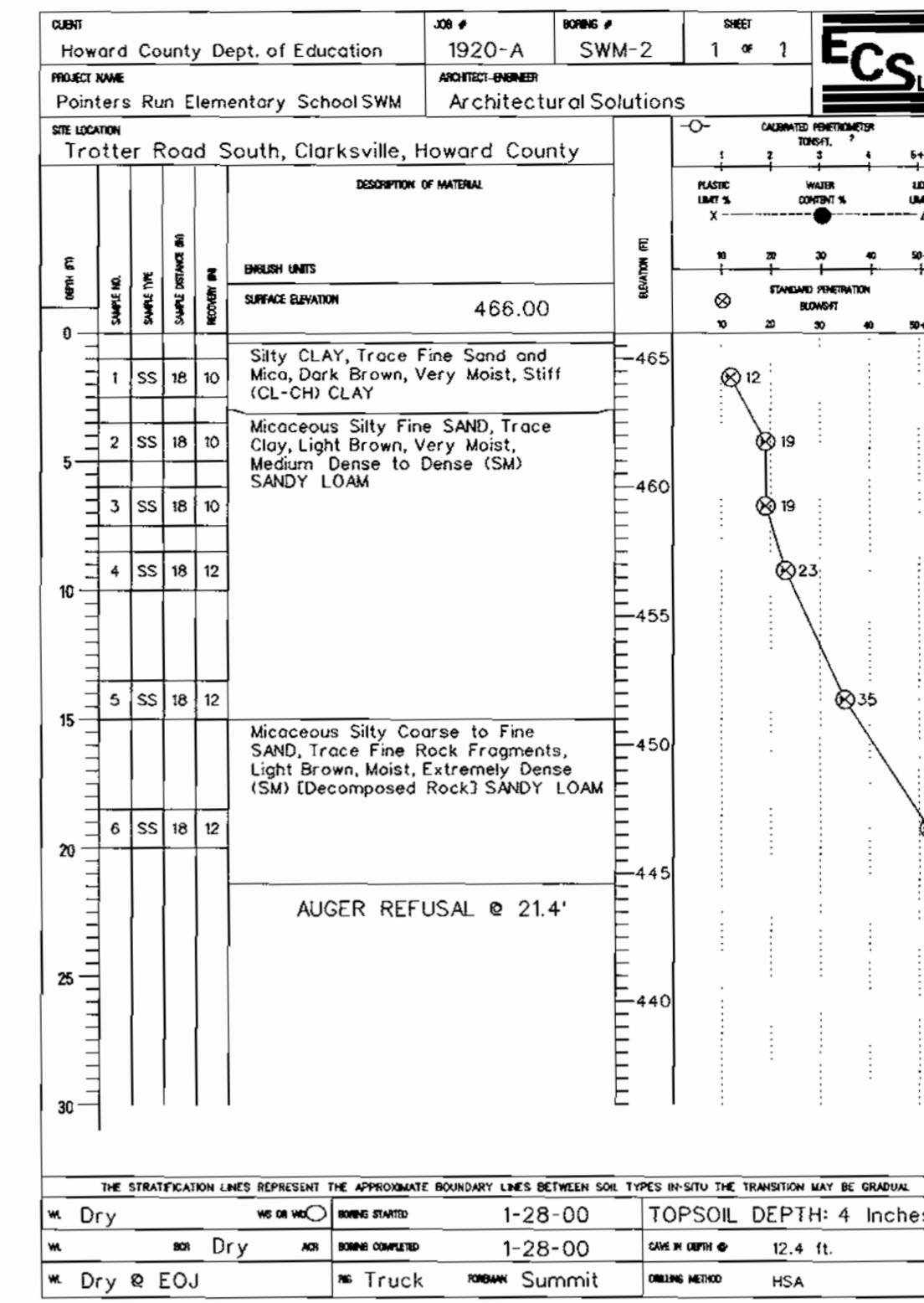
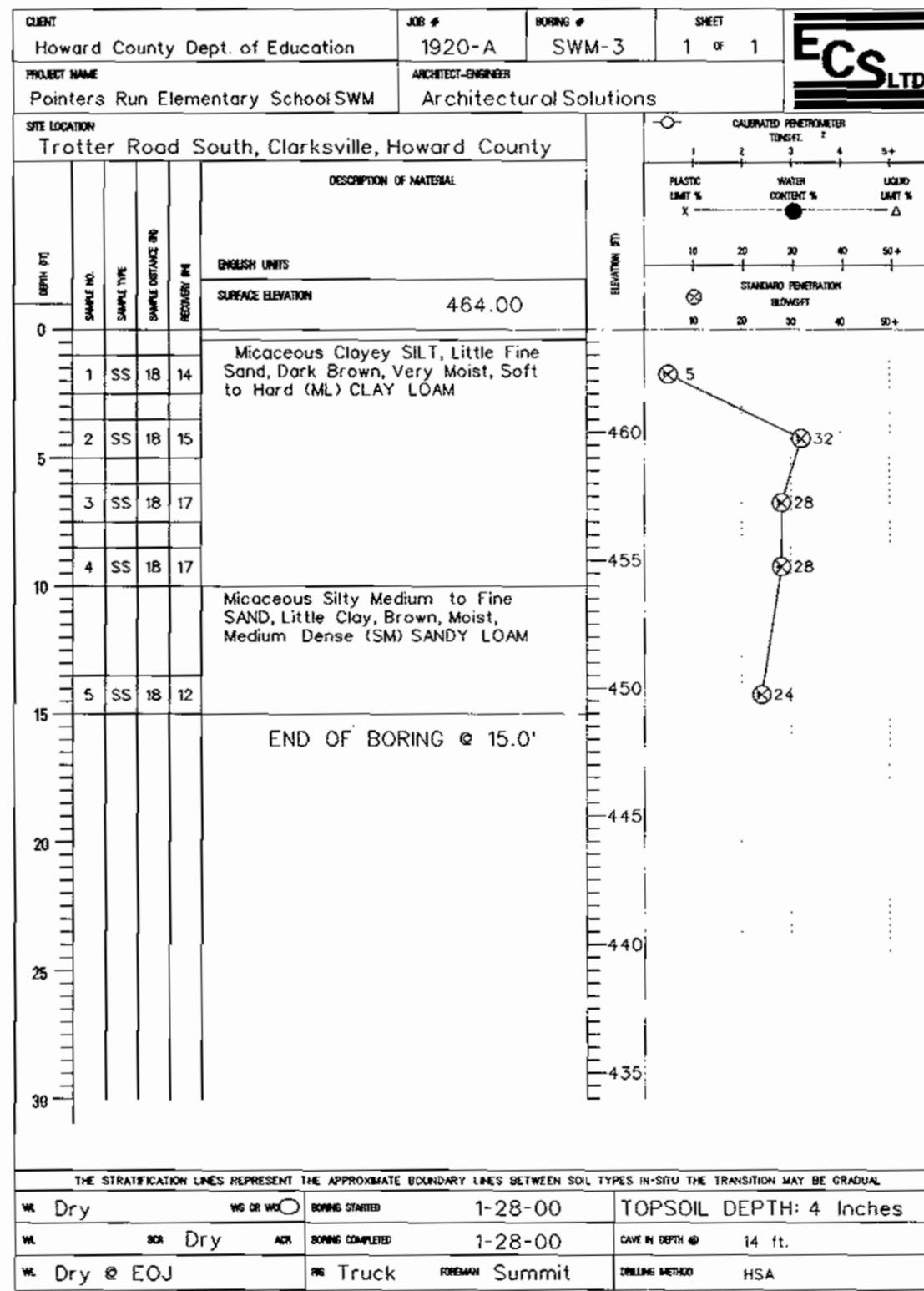
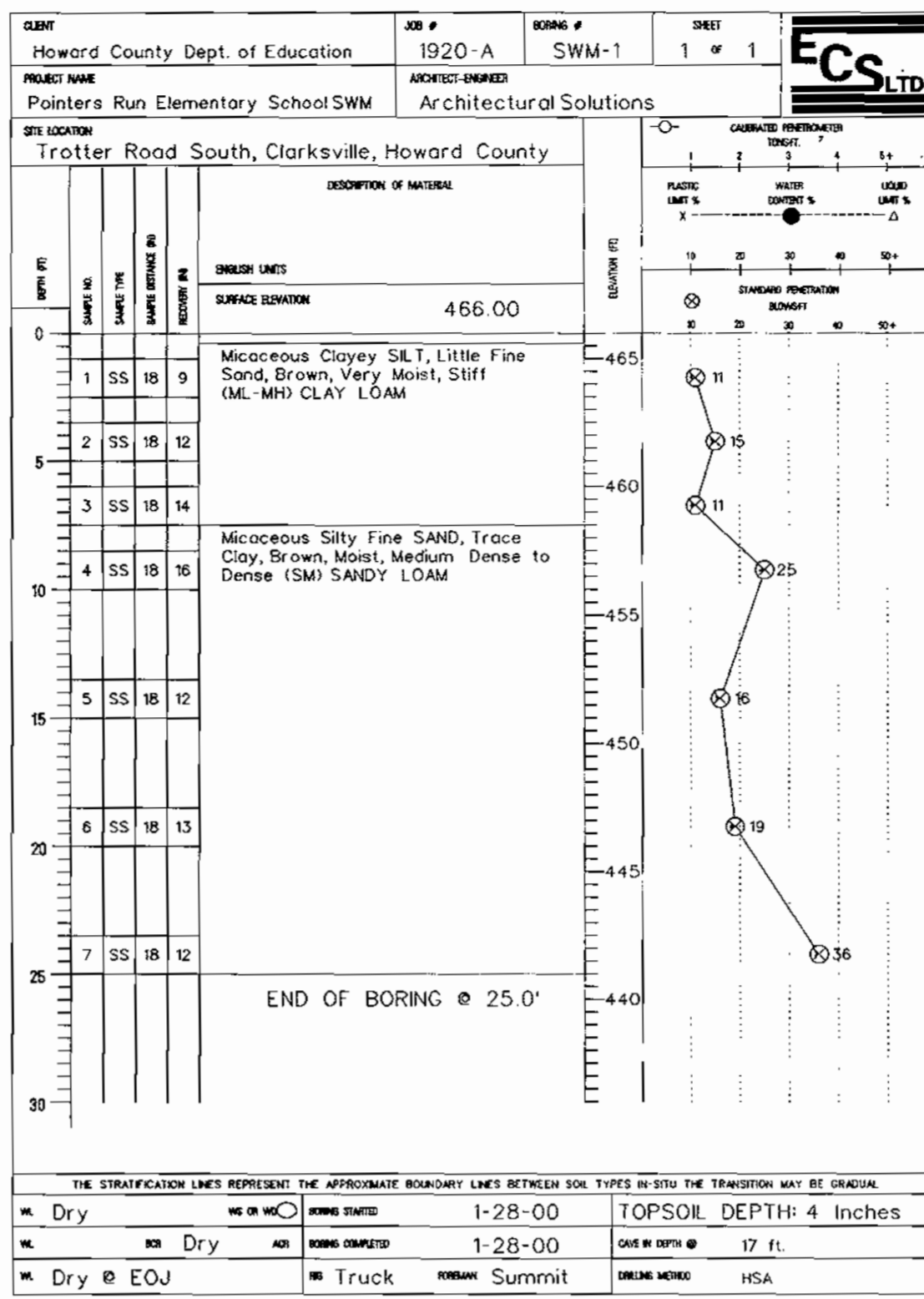
**Erosion and Sediment Control**  
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures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

**Fence and Gate (42 inch height)**  
Construct fencing in accordance with the State Highway Administration Standard Details 690.01 and 690.02. Use 6-foot fence substituting 42-inch fabric and 6-foot 8-inch line posts. Construct the gate in accordance with State Highway Administration Standard Detail 692.01 with 42-inch fabric. The fabric used for the fence and gate must conform to AASHTO Specification M18.74. A minimum access gate of 18 feet shall be provided when access is perpendicular to the gate. A 24-foot gate shall be provided when access is skewed.

**Filter Cloth**  
Filter cloth shall be Miraf 1405, Dupont Typar #3341 or approved equal. See Baltimore County Standard 20.25-5.

**High Density Polyethylene Pipe (H.D.P.E.)**  
ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR H.D.P.E. PIPE

1. THIS SPECIFICATION APPLIES TO HIGH DENSITY POLYETHYLENE CORRUGATED PIPE WITH AN INTEGRALLY FORMED SMOOTH WATERWAY. NOMINAL SIZES FOR WHICH THIS SPECIFICATION IS ACCEPTABLE ARE: 100-1500 MM (4-60 INCH) DIAMETERS. SIZES 100-1500 MM (4-60 INCH) SHALL BE EITHER AASHTO TYPE "S" OR TYPE "D" AS FOLLOWS. SIZES 100-1050 MM (4-42 INCH) DESIGNATED AS AASHTO TYPE "S" (N-12) SHALL HAVE A FULL CIRCULAR CROSS-SECTION, WITH AN OUTER CORRUGATED PIPE WALL AND AN ESSENTIALLY SMOOTH INNER WALL. (WATERWAYS) CORRUGATIONS FOR TYPE "S" SIZES 100-1050 MM (4-42 INCH) SHALL BE ANNULAR (N-12). SIZES 1050-1500 MM (42-60 INCH) DESIGNATED AS AASHTO TYPE "D" (N-12C) SHALL CONSIST OF AN ESSENTIALLY SMOOTH WATERWAY BRACED CIRCUMFERENTIALLY WITH CIRCULAR RIBS WHICH ARE FORMED SIMULTANEOUSLY WITH AN ESSENTIALLY SMOOTH OUTER WALL. THE 1050-1500 MM (42-60 INCH) (N-12C) SIZES ALL CONFORM TO AASHTO TYPE "D" (WHICH DESCRIBES DUAL WALL PIPE WITH A SMOOTH WATERWAY).
2. PIPE MANUFACTURED FOR THIS SPECIFICATION SHALL COMPLY WITH THE REQUIREMENTS FOR TEST METHODS, DIMENSIONS AND MARKINGS FOUND IN AASHTO DESIGNATIONS M252, M294 AND MPT-97. PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN PE COMPOUNDS WHICH CONFORM WITH THE APPLICABLE CURRENT EDITION OF THE AASHTO MATERIAL SPECIFICATIONS FOR CELL CLASSIFICATION AS DEFINED AND DESCRIBED IN ASTM D3350.
3. THE FITTINGS SHALL NOT REDUCE OR IMPAIR THE OVERALL INTEGRITY OR FUNCTION OF THE PIPELINE. FITTINGS MAY BE EITHER MOLDED OR FABRICATED. COMMON CORRUGATED FITTINGS INCLUDE IN-LINE JOINT FITTINGS, SUCH AS COUPLERS AND REDUCERS, AND BRANCH OR COMPLEMENTARY ASSEMBLY FITTINGS, SUCH AS TEES, WYES AND END CAPS. THESE FITTINGS MAY BE INSTALLED BY VARIOUS METHODS, SUCH AS SNAP-ON, BELL AND SPIGOT, BELL-BELL, AND WRAP AROUND COUPLERS. COUPLERS SHALL PROVIDE SUFFICIENT LONGITUDINAL STRENGTH TO PRESERVE PIPE ALIGNMENT AND PREVENT SEPARATION AT THE JOINTS. ONLY FITTING SUPPLIED OR RECOMMENDED BY THE MANUFACTURER SHALL BE USED. WHERE DESIGNATED ON THE PLANS OR PROJECT SPECIFICATIONS, AN ELASTOMERIC GASKET MEETING THE REQUIREMENTS OF ASTM F477 SHALL BE SUPPLIED.
4. INSTALLATION OF THE PIPE SPECIFIED ABOVE SHALL BE IN ACCORDANCE WITH EITHER AASHTO SECTION 30 OR ASTM RECOMMENDED PRACTICE D2321 AS DESCRIBED ELSEWHERE IN THESE SPECIFICATIONS AND AS RECOMMENDED BY THE MANUFACTURER.
5. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT. THE 60" HDPE SHALL BE BEDDED AS SHOWN ON THE HDPE PIPE BEDDING DETAIL ON THESE PLANS.
6. BACKFILLING SHALL CONFORM TO STRUCTURE "BACKFILL".
7. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.



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**KCI TECHNOLOGIES INC.**  
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ROCKVILLE, MARYLAND 20855-2635  
TEL: 301-670-5616  
FAX: 301-670-5617  
EMAIL: ARCSOL@AOL.COM

**AS-BUILT CERTIFICATION**  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PE NO. \_\_\_\_\_  
DATE \_\_\_\_\_

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE REQUIRED BY THE SPECIFICATIONS AND TESTS REQUIRED BY THE SPECIFICATIONS AND COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER. THE ENGINEER DOES AN ENGINEER'S CERTIFICATION RELIES ON THE ENGINEER'S MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

**STORMWATER MANAGEMENT NOTES & BORING LOGS**  
**POINTERS RUN ELEMENTARY SCHOOL**  
VILLAGE OF RIVER HILL  
SECTION 1 AREA 2, LOT 1 PARCEL 59  
OWNER:  
HOWARD COUNTY BOARD OF EDUCATION  
1090 ROCKVILLE ROAD  
ELLICOTT CITY, MARYLAND 21043  
SCALE: N.T.S. SHEET TITLE: 12 OF 13

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS IN CONFORMANCE WITH THE MASTER PLAN OF WATER AND SEWERAGE FOR HOWARD COUNTY

HOWARD COUNTY HEALTH OFFICER \_\_\_\_\_ DATE \_\_\_\_\_

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPMENT ENGINEERING DIVISION \_\_\_\_\_ DATE 3/10/00

CHIEF, DIVISION OF LAND DEVELOPMENT \_\_\_\_\_ DATE 3/15/00

**APPROVED PLANNING BOARD of HOWARD COUNTY**  
DATE 3-09-00

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR CONSTRUCTION, SOIL 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.

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

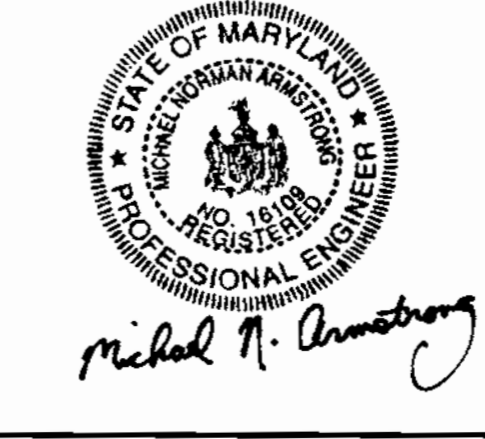
THESE PLANS FOR SMALL FARM CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL, MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED FOR HOWARD SOIL CONSERVATION DISTRICT

Michael J. Armstrong 3/3/00

John Robertson 3/4/00

Michael J. Armstrong 3/4/00

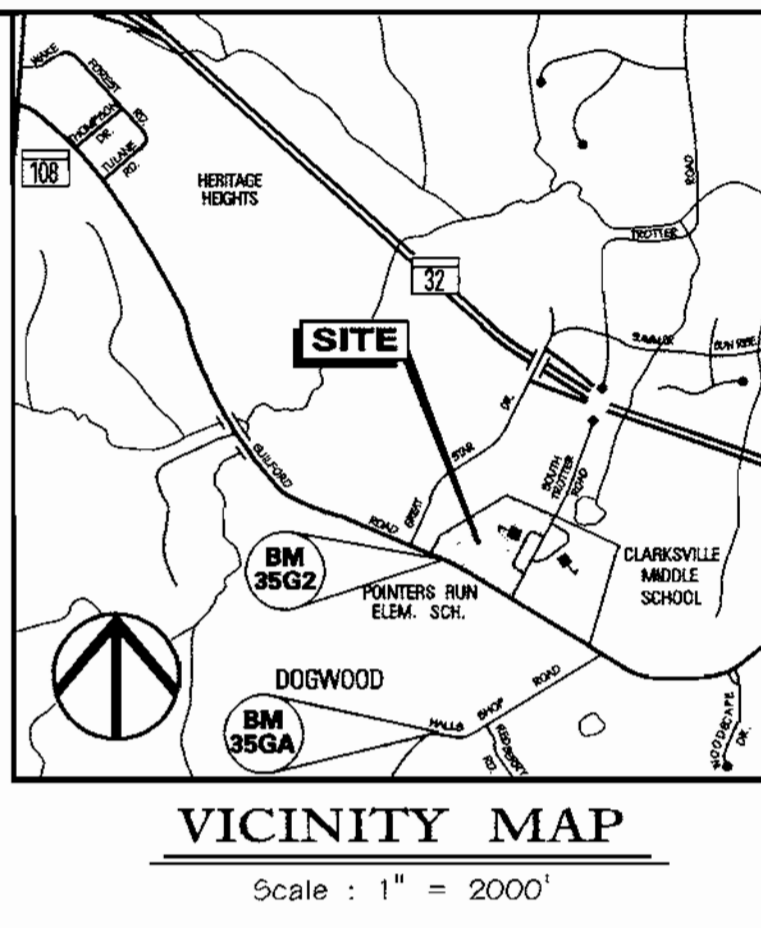


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DATE

NO. REVISIONS DESCRIPTION

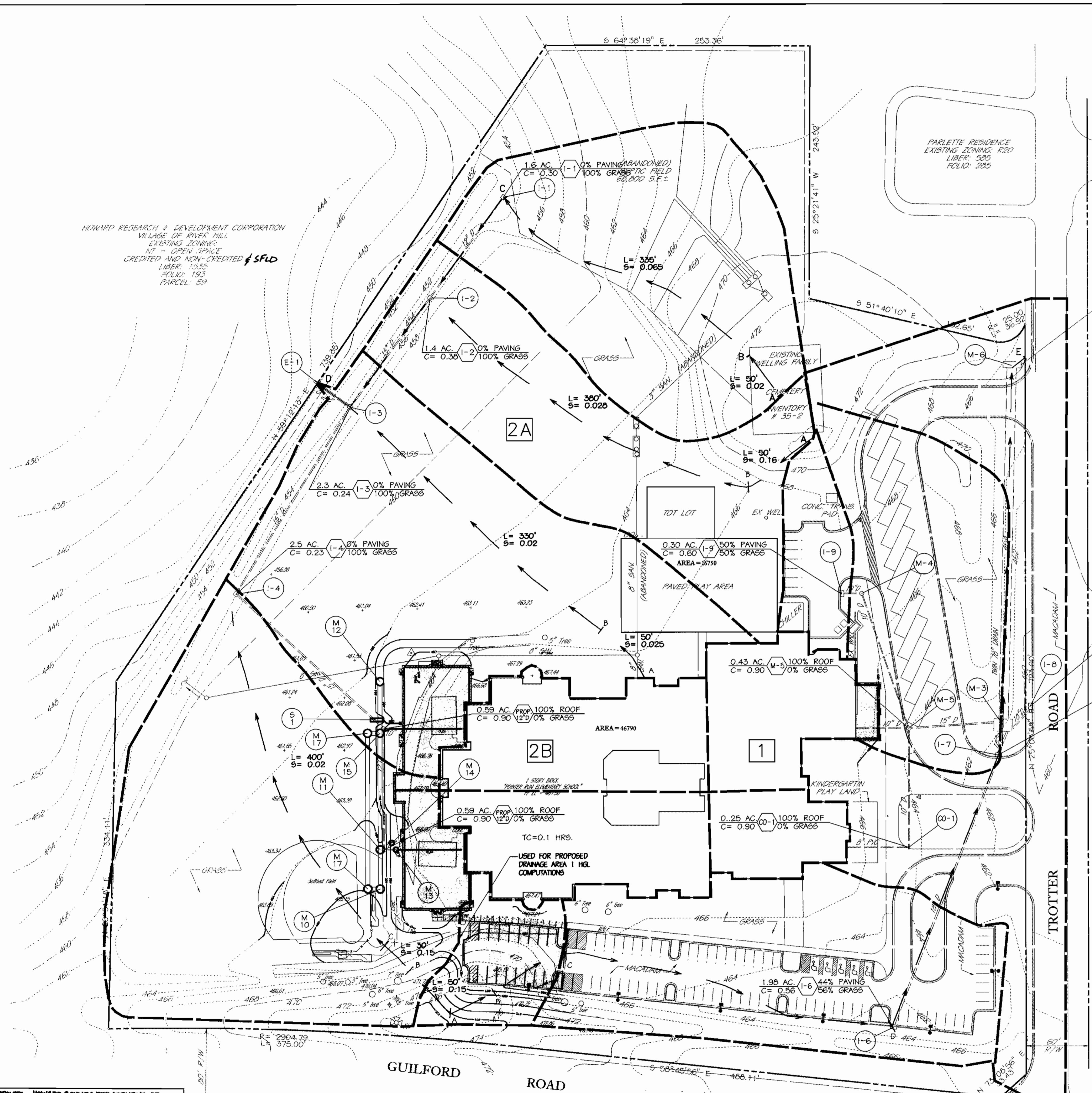


**LEGEND**

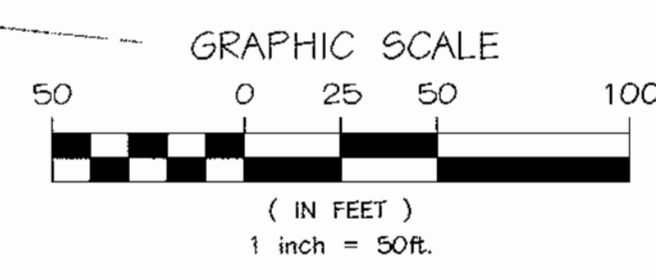
- 460 --- EX. INDEX CONTOUR
- 462 --- EX. 2' INTERMEDIATE CONTOUR
- DRAINAGE AREA BOUNDARY
- DRAINAGE AREA NUMBER
- TC PATH
- PROPOSED CONSTRUCTION

**NOTES:**

1. ALL SOILS ARE "B" TYPE HYDROLOGIC SOIL CLASSIFICATION
2. DRAINAGE AREA 1 EAST BOUNDARY BASED ON FINAL SUBMITTAL DATED DECEMBER 15, 1989.



STORM DRAIN COMPUTATIONS															
PROJECT: POINTERS RUN ELEMENTARY SCHOOL										SHEET 1 OF 1					
COMPUTED BY: B.E.S.										DATE: 2-07-2000					
CHECKED BY:										DESIGN FREQUENCY: 10 YR.					
DATE:										(SEAL)					
FROM NO.	TO NO.	INC. AREA (AC)	TOTAL AREA (AC)	C	CxS	SUM (CxA)	TIME (MIN.)	Q (CFS)	DES. SLOPE (2)	DIAMETER (IN.)	VELOCITY (FT/SEC)	LENGTH (FT)	TIME (MIN.)	REMARKS	
I-6	I-7	1.90		0.56	0.97	1.86	11.0	6.30	0.70	16"	4.7	276'	1.0	n = 0.014	
I-7	I-7	0.87		0.60	0.52	1.76	10.0	6.60	3.45						
I-7	M-3		0.85				11.0	6.30	11.21	1.26	16"	6.2	40'	0.1 n = 0.014	
ROOF	M-5	0.43		0.90	0.39	5.0	8.5	3.30	2.20	10" CI	6.0	24'		NO INFLOW	
CO-1	M-5	0.25		0.90	0.23	5.0	5.0	1.96	0.46	10" PVC	3.5	116'	0.6	n = 0.010	
I-9	M-5	0.30		0.60	0.18	8.0	8.0	1.76	0.37	10" PVC	3.2	162'	0.8	n = 0.010	
M-5	M-3		0.98			0.83	5.8	8.10	6.72	1.20	15" RCP	5.4	86'	n = 0.014	
M-1	M-1	0.59		0.59	0.507	5.0	8.50	4.3	1.4	12"	5.5	114'	0.35	ROOF	
M-2	M-2	0.59		0.59	0.86	5.07	5.0	8.50	4.3	6.12	10"	11.0		ROOF	
M-1	M-2		1.18			0.531	5.0	8.50	4.5					NO INFLOW	
M-2	M-2		1.18			1.0148	5.0	8.50	8.6	2.26	15"	9.0	186'	0.39	TOTAL Q TO M-2
M-2	I-4	2.46		0.21	0.517	8.0	7.20	3.7						DA I-4	
I-1	I-4		3.64			1.5314	8.0	7.20	11.0	2.08	15"	9.0	194'	0.43	TOTAL Q TO I-4
I-4	I-3	2.24		0.21	0.470	10.0	6.60	3.1						DA I-3	
I-1	I-1	1.82		1.6	0.486	10.0	6.6	3.2	0.67	12"	4.1	120'	0.54	TOTAL Q TO I-1	
I-1	I-2	1.41		0.21	0.296	6.0	8.0	2.4						DA I-2	
I-2	I-2		3.03			0.7821	11.0	6.3	4.9	0.85	15"	5.4	130'	0.44	TOTAL Q TO I-2
I-3	I-3			0.91		2.7839	11.0	6.3	17.5	3.5	24"	12.9	40'	0.05	TOTAL Q TO I-3

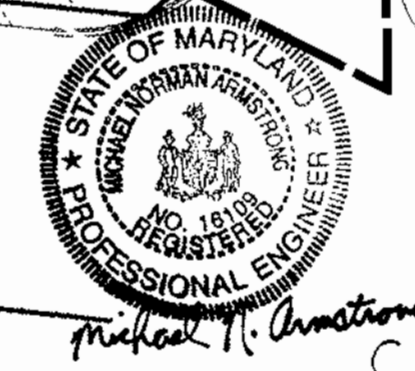


**STORM DRAIN DRAINAGE AREA MAP**  
**POINTERS RUN ELEMENTARY SCHOOL**  
 VILLAGE OF RIVER HILL  
 SECTION 1 AREA 2, LOT 1 PARCEL 420  
 OWNER:  
 HOWARD COUNTY BOARD OF EDUCATION  
 10910 ROUTE 108  
 ELLICOTT CITY, MARYLAND 21043  
 SCALE: 1" = 50'  
 SHEET TITLE: 13 OF 13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 3/10/00

APPROVED: [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 3/10/00

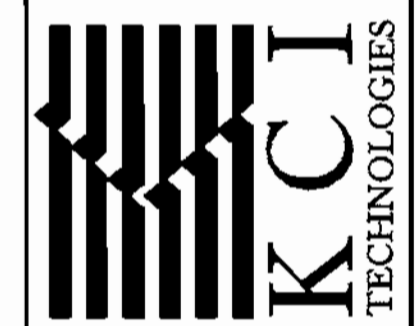
**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE: 3-09-00



PROJECT # 01-99171  
 PERMIT ISSUE: 12-08-99  
 CONSTRUCTION ISSUE: 12-22-99

**C-13**

**KCI**  
 TECHNOLOGIES INC.  
 ENGINEERS • PLANNERS • SCIENTISTS  
 CONSTRUCTION MANAGERS  
 10 NORTH PARK DRIVE  
 HUNT VALLEY, MARYLAND  
 21030-1888  
 PHONE: (410) 316-7800 FAX: (410) 316-7817  
 HTTP://WWW.KCI.COM



**ARCHITECTURAL SOLUTIONS**  
 15889B CRABBS BRANCH WAY  
 ROCKVILLE, MARYLAND 20855-2635  
 EMAIL: ARCSOL@AOL.COM  
 TEL: 301-670-5616  
 FAX: 301-670-5617

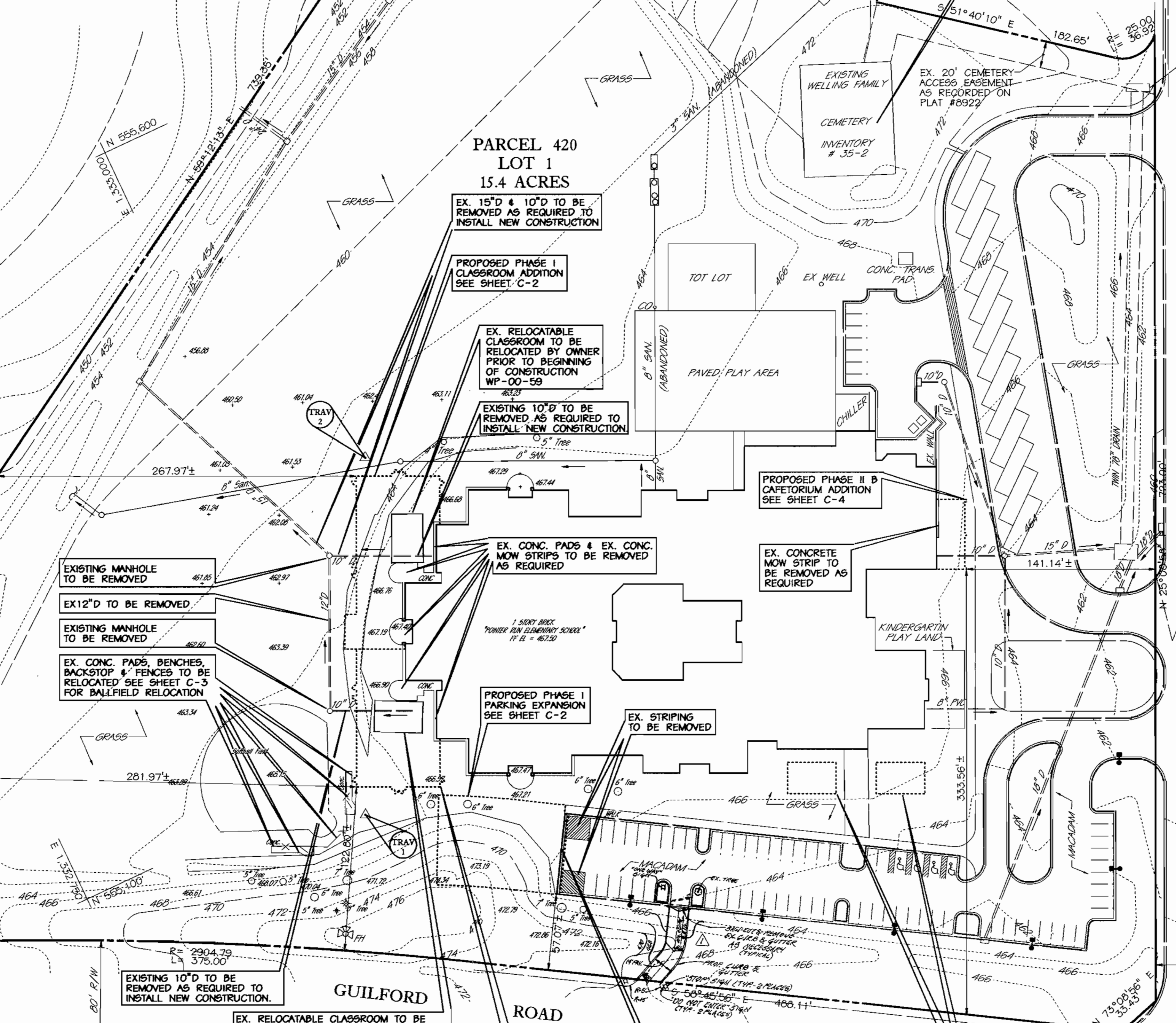
**GENERAL NOTES**

- THE CONTRACTOR SHALL NOTIFY "M&S UTILITY" (800-257-7777) AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK.
- TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON PLANS DATED JUNE 1989, TITLED "WESTERN ELEMENTARY SCHOOL VILLAGE OF RIVER HILL" COMPLETED BY THOMAS CLARK ASSOCIATES ARCHITECTS & KILLDUFF N&S LANDSCAPE ARCHITECTS, AND A "PROJECT AREA" FIELD SURVEY DATED AUGUST 1989, COMPLETED BY KCI TECHNOLOGIES, INC.
- BOUNDARY INFORMATION SHOWN HEREON IS BASED ON PLANS DATED JUNE 1989, TITLED "WESTERN ELEMENTARY SCHOOL VILLAGE OF RIVER HILL" COMPLETED BY THOMAS CLARK ASSOCIATES ARCHITECTS & KILLDUFF N&S LANDSCAPE ARCHITECTS, AND A "PROJECT AREA" FIELD SURVEY DATED AUGUST 1989, COMPLETED BY KCI TECHNOLOGIES, INC.
- EXISTING UTILITY INFORMATION SHOWN HEREON IS BASED ON THE BEST AVAILABLE INFORMATION (A "PROJECT AREA" FIELD SURVEY CONDUCTED BY KCI TECHNOLOGIES, INC. DATED AUGUST 1989, AND PLANS DATED JUNE 1989, TITLED "WESTERN ELEMENTARY SCHOOL VILLAGE OF RIVER HILL" COMPLETED BY THOMAS CLARK ASSOCIATES ARCHITECTS & KILLDUFF N&S LANDSCAPE ARCHITECTS).
- OBSTRUCTIONS SHOWN ON THIS DRAWING 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.
- CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES SHOWN HEREON BEFORE STARTING ANY WORK ON THESE PLANS.
- CONTRACTOR TO REMOVE EXISTING FOUNDATIONS AND SUPPORTING WALLS TO A UNIFORM DEPTH OF 12 INCHES BELOW LOWEST FOUNDATION ELEVATION.
- CONTRACTOR SHALL REMOVE DRIVEWAY ENTRANCES, STRUCTURES, AND CONCRETE WALK TO LIMITS INDICATED ON THE DRAWING.
- CONTRACTOR SHALL NOT PROCEED WITH ANY DEMOLITION WORK UNTIL ALL UTILITY DISCONNECTIONS ARE COMPLETED AND VERIFIED IN WRITING.
- BURNINGS OF COMBUSTIBLE MATERIALS FROM DEMOLISHED STRUCTURES WILL NOT BE PERMITTED ON SITE.
- CONTRACTOR SHALL INSURE THAT ALL MATERIAL REMOVED FROM DEMOLISHED STRUCTURES ARE LEGALLY DISPOSED OF OFF SITE.
- SEE SITE PLAN FOR LIMITS OF APPROXIMATE SIDEWALK, CURB AND GUTTER AND PAVING REMOVAL.
- EXISTING CURB AND GUTTER & CONCRETE SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT. NO PATCHING SHALL BE PERMITTED.
- A GEOTECHNICAL STUDY WAS PREPARED BY ENGINEERING CONSULTING SERVICES, LTD. DATED JANUARY, 2000.
- REFER TO ARCHITECTURAL AND MECHANICAL/ELECTRICAL PLANS FOR BUILDING DEMOLITION.
- 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.
- 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.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL BUILDING INFORMATION.
- SEE MECHANICAL/ELECTRICAL/PLUMBING PLANS FOR ADDITIONAL MECHANICAL/ELECTRICAL/PLUMBING DEMOLITION INFORMATION.
- THE EXISTING BUILDING IS CURRENTLY SPRINKLERED FOR NEW SPRINKLER SYSTEM LAYOUT SEE SHEET FF-1.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/ BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1000 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 3552 AND 3564 WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC CONTRACT NO. 34-9956-D.
- SEWER IS PUBLIC CONTRACT NO. 34-3356-D. DRAINAGE AREA: MIDDLE PATUXENT, TREATMENT PLANT LITTLE PATUXENT.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE ARE NO WETLANDS ON THIS SITE.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- ADJUST TOP OF CURB GRADES AS NECESSARY TO PROVIDE SMOOTH TRANSITION TO EXISTING.
- SAW CUT EXISTING PAVEMENT AS NEEDED TO INSTALL NEW CONSTRUCTION.
- STRIP AND RESURFACE EXISTING PAVING AS NEEDED TO PROVIDE SMOOTH TRANSITION TO EXISTING GRADES. SEE PAVING TIE IN DETAIL THIS SHEET.
- THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN THE SCALED AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
- TRENCH BACKFILL IN GRASS AREAS SHALL BE COMPACTED TO A MINIMUM 90% OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH A.A.S.H.T.O. VERIFY DESIGNATION T-100, METHOD C. TRENCH BACKFILL IN STRUCTURAL AREAS SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D-1557). IN PAVED AREAS, FILL BELOW THE TOP 12 INCHES SHOULD BE COMPACTED TO 97%.
- CONTRACTOR SHALL ADJUST ALL EXISTING UTILITIES, I.E. MANHOLE FRAMES AND COVERS, ETC. TO FINISHED GRADE.
- UNLESS OTHERWISE NOTED, PIPE ELEVATIONS REFER TO THE INVERT.
- UNLESS OTHERWISE NOTED, ALL SEWER PIPE SHALL BE PVC 8" OR 10" CONFORMING TO THE REQUIREMENTS OF A.S.T.M. SPECIFICATION D-3034. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE & FITTINGS SHALL BE HANCOCK SURE-LOC W/ CORRUGATED POLYETHYLENE PIPE (H.D.P.E.) OF APPROX. AS MANUFACTURED BY HANCOCK INCORPORATED. ONE WILLIAM DONNELLY INDUSTRIAL PARKWAY, HANOVER, NY 14092. 1-800-247-5000.
- ALL UTILITIES STRUCTURES DIMENSIONS SHALL REFER TO THE CENTERLINE OF THE "STRUCTURES".
- SEE MECHANICAL, ELECTRICAL AND PLUMBING PLANS FOR CONTINUATION OF UTILITY CONNECTIONS TO BUILDING AND SITE LIGHTING INFORMATION.
- THIS SITE PLAN IS EXEMPT FROM THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 (5)(1)(V) OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL.
- WATER SERVICE CONNECTION TO THE NEW ADDITION(S) WILL BE COMPLETED WITHIN THE EXISTING SCHOOL FACILITY, SEE MECHANICAL PLAN M-3 FOR DETAILS.
- VEHICULAR INGRESS AND EGRESS ONTO SOUTH TROTTER ROAD AND MD RTE. 30 (GUILFORD ROAD) WILL BE PERMITTED ONLY AT POINTS OF ACCESS APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING, DEPARTMENT OF PUBLIC WORKS, AND THE STATE HIGHWAY ADMINISTRATION.
- ONE (1) LIGHTING FIXTURE IS PROPOSED FOR THE NEW PARKING LOT EXPANSION (TO MATCH EXISTING), AND IS SHOWN ON SHEET C-2. NEW PARKING FACILITY LIGHTING IS IN COMPLIANCE WITH SECTION 134-B-2 OF THE HOWARD COUNTY ZONING REGULATIONS.
- NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
- STORMWATER QUANTITY MANAGEMENT IS TO BE PROVIDED BY MEANS OF A PRIVATELY OWNED AND MAINTAINED (BY HOWARD CO. BOARD OF ED.) UNDERGROUND STORAGE FACILITY, SWM WATER QUALITY IS TO BE PROVIDED VIA BAYWATER WHICH WILL ALSO BE PRIVATELY OWNED & MAINTAINED BY HOWARD COUNTY BOARD OF EDUCATION.

**LEGEND**

- EX. INDEX CONTOUR
- EX. 2' INTERMEDIATE CONTOUR
- EX. CURB AND GUTTER
- EX. GAS LINE
- EX. STORM DRAIN
- EX. ELECTRIC
- EX. TELEPHONE
- EX. SANITARY SEWER
- EX. WATER
- EX. OVERHEAD UTILITY LINE
- EX. WATER VALVE
- EX. FIRE HYDRANT
- EX. MANHOLE
- EX. CLEANOUT
- EX. LIGHT POLE
- EX. INLET
- EX. TREE
- EX. WOODS LINE
- EXISTING SPOT ELEVATION

HOWARD RESEARCH & DEVELOPMENT CORPORATION  
VILLAGE OF RIVER HILL  
EXISTING ZONING: NT - OPEN SPACE  
CREDITED AND NON-CREDITED 4 5FLD  
LIBER: 1535  
FOLIO: 193  
PARCEL: 39



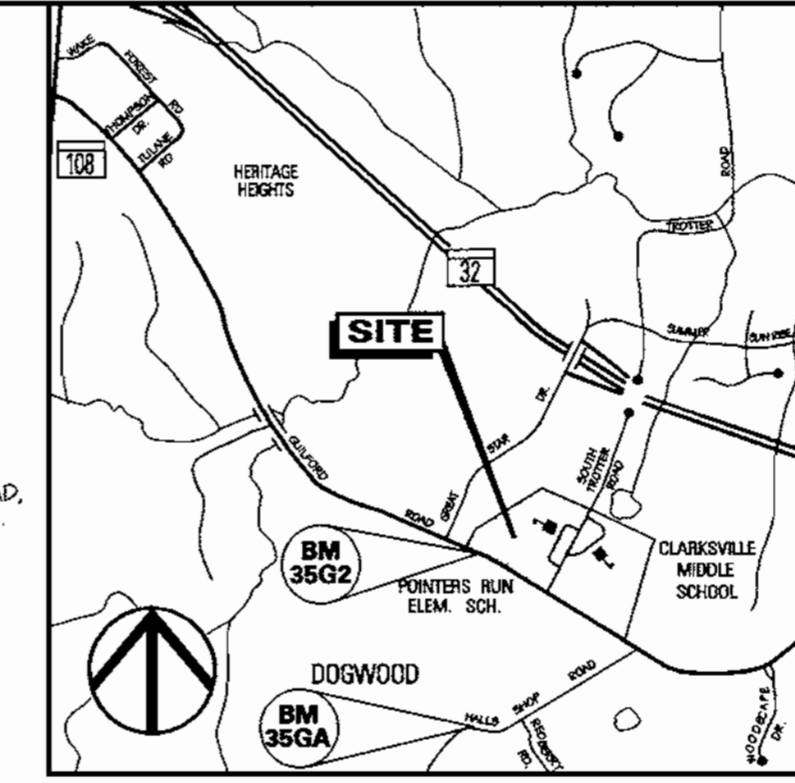
**BENCHMARK DATA**

B.M. 3562 ELEV. 477.49  
N 504.966.67  
E 1,332.934.90

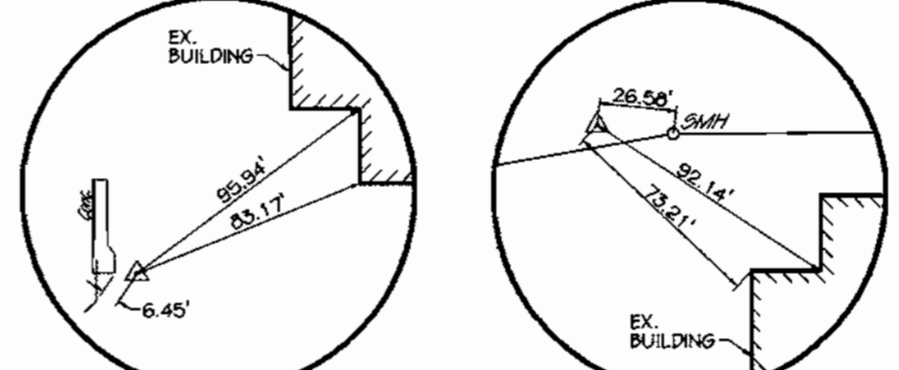
B.M. 3564 ELEV. 482.04  
N 503.249.60  
E 1,332.627.20

BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3" DEEP) COLUMN LOCATED APPROX. 83.7' NORTH OF C4 P POLE #34, AND APPROX. 107.9' WEST OF B64 E POLE #176051.

BEING A STANDARD STAMPED (BRASS OR ALUMINUM DISC SET ONTO A CONCRETE (3" DEEP) COLUMN LOCATED APPROX. 17.1' NORTH OF THE CENTERLINE OF HALL SHOP ROAD, AND APPROX. 150.0' EAST OF C4 P POLE 6510.



**VICINITY MAP**  
Scale: 1" = 2000'



**DETAIL TRAVERSE NO.1**  
NOT TO SCALE

**DETAIL TRAVERSE NO.2**  
NOT TO SCALE

**INDEX OF CIVIL DRAWINGS**

SHEET	DESCRIPTION
C-1	SDP/ EXISTING CONDITIONS/ DEMOLITION PLAN
C-2	PHASE I SITE/ UTILITY PLAN
C-3	ALTERNATE II - PHASE IA - SITE/ UTILITY PLAN
C-4	ALTERNATE II - PHASE IB - SITE PLAN
C-5	PHASE I - EROSION & SEDIMENT CONTROL PLAN
C-6	ALTERNATE II - PHASE IA - EROSION & SEDIMENT CONTROL PLAN
C-7	ALTERNATE II - PHASE IB - EROSION & SEDIMENT CONTROL PLAN
C-8	EROSION & SEDIMENT CONTROL NOTES & DETAILS
C-9	STORMWATER MANAGEMENT PLAN, SECTIONS AND DETAILS
C-10	RISER STRUCTURE, SECTIONS AND DETAILS
C-11	STORMWATER QUALITY STRUCTURE NOTES AND DETAILS
C-12	STORMWATER MANAGEMENT NOTES & BORING LOGS
C-13	STORM DRAIN DRAINAGE AREA MAP

**SITE ANALYSIS DATA CHART**

- SITE ADDRESS: 6600 SOUTH TROTTER ROAD CLARKSVILLE, MD. 21029
- OWNER APPLICANT: HOWARD COUNTY BOARD OF EDUCATION 10910 ROUTE 108 ELLICOTT CITY, MD. 21043
- PROPERTY REFERENCE: MAP 35 PLAT 8922 BLOCK 19/20 PARCEL 420 LOT 1 ELECTION DISTRICT 5
- ZONING: NT-OPEN SPACE CREDITED AND NON-CREDITED
- SETBACKS: 30' FROM PUBLIC STREET RIGHT OF WAY 25' FROM PROPERTY LINE
- HEIGHT RESTRICTIONS: 34' FROM HIGHEST ADJOINING GROUND ELEVATION
- AREA OF SITE: 15.4 ACRES. **PHASE I DISTURBED AREA = 46,011 sq. ft.** **PHASE II A TOTAL AREA = 94,873 sq. ft.** **PHASE II B TOTAL AREA = 2,819 sq. ft.**
- EXISTING BUILDING COVERAGE: 10.3%. ADDITIONAL BUILDING COVERAGE: 2.1% EXISTING OPEN SPACE COVERAGE: 81%. NEW OPEN SPACE COVERAGE: 79% 10% MAXIMUM LOT COVERAGE IS REQUIRED PER FDP-207 EXISTING BUILDING COVERAGE 69,070 SF OR 1.59 ACRES NEW BUILDING COVERAGE 13,930 SF OR 0.32 ACRES TOTAL BUILDING COVERAGE 12.4%
- PHASE II A AREA TO BE VEGETATED = 25,112 sq. ft.** **PHASE II B AREA TO BE VEGETATED = 1,702 sq. ft.**
- FINAL DEVELOPMENT PLAN: FDP-207**  
 1. EXISTING AREA OF PAVED PARKING: 35,804 SF OR 0.82 ACRES, COVERAGE (5.3%)  
 NEW AREA OF PAVED PARKING: 5,376 SF OR 0.12 ACRES, COVERAGE (0.3%)  
 TOTAL PAVED PARKING AREA AS 0.96 ACRES, COVERAGE (6.2%)  
 EXISTING PARKING SPACES = 80 (PER SDP-09-276/B.O.E. REQUIREMENTS)  
 PROPOSED PARKING SPACES = 18  
 TOTAL PARKING SPACES = 98
- PREVIOUSLY APPROVED SDP-89-276 (ORIGINAL SCHOOL CONSTRUCTION 1985/1993)
- PHASE I ADDITION = 7,023 S.F.  
 PHASE IA ADDITION = 5,756 S.F.  
 PHASE IB ADDITION = 1,111 S.F.  
 TOTAL ADDITIONS = 13,890 S.F.
- APPLICABLE FILE:  
 FDP - 207, S-89-63,  
 PB-253,F-90-10,  
 SDP-89-276, WP-00-59

ADDRESS CHART	
LOT NUMBER	STREET ADDRESS
LOT 1	6600 SOUTH TROTTER ROAD

PERMIT INFORMATION CHART			
SUBDIVISION NAME	SECT./AREA	PARCEL #	
VILLAGE OF RIVER HILL	1 / 2	420 LOT 1	
PLAT OR L/F	BLOCK #	TAX/ZONE MAP	ELEC. DIST.
8922	35	19/20	5TH
WATER CODE	N/A	SEWER CODE	N/A

**SITE DEVELOPMENT PLAN EXISTING CONDITIONS/DEMOLITION**  
**POINTERS RUN ELEMENTARY SCHOOL**  
 VILLAGE OF RIVER HILL  
 SECTION 1 AREA 2, LOT 1 PARCEL 420  
 OWNER:  
 HOWARD COUNTY BOARD OF EDUCATION  
 10910 ROUTE 108  
 ELLICOTT CITY, MARYLAND 21043

SCALE: 1" = 50'  
 SHEET TITLE: 1 OF 13

**APPROVED**  
 PLANNING BOARD  
 of HOWARD COUNTY

DATE: 3-09-00

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER  
 HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division DATE: 3/10/00

Chief, Division of Land Development DATE: 3/15/00

DIRECTOR DATE: 3/15/00

APPROVED FOR PRIVATE WATER AND PUBLIC SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER DATE: \_\_\_\_\_

HOWARD COUNTY HEALTH DEPARTMENT

REVISION BLOCK

1	REVISE THE PARKING SPACE TOTALS IN THE SITE ANALYSIS DATA CHART. NOTE 16.10 TO EXCLUDE 3 PARKING SPACES AND TO THE ADD TRAILER PARKING LOCATIONS AREA ON THE NEW & TOTAL PAVED AREA.	10-12-00
2	ADD THE PROPOSED DRIVEWAY AND PARKING LOT REVISIONS.	10-18-00
3	DATE	

Michael A. Armstrong  
 PROFESSIONAL ENGINEER

GRAPHIC SCALE  
 0 25 50 100  
 (IN FEET)  
 1 inch = 50ft.

**ARCHITECTURAL SOLUTIONS**  
 ENGINEERS • PLANNERS • SCIENTISTS  
 CONSTRUCTION MANAGERS

15889B CRABBS BRANCH WAY  
 ROCKVILLE, MARYLAND 20855-2635  
 EMAIL: ARCSOL@AOL.COM

PROJECT # 01-99171  
 PERMIT ISSUE 12-08-99  
 CONSTRUCTION ISSUE 12-22-99

**C-1**

SDP-00-68