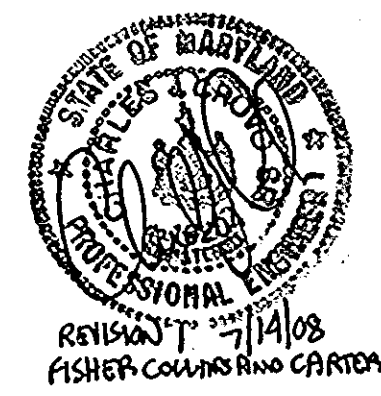


**INDEX OF DRAWINGS**

NO.	TITLE
CE-0	INDEX SHEET
CE-1	EXISTING CONDITION
CE-2	EXISTING CONDITION
CE-3	EXISTING CONDITION
CE-4	EXISTING CONDITION
CE-5	LAYOUT PLAN
CE-6	LAYOUT PLAN
CE-7	LAYOUT PLAN
CE-8	LAYOUT PLAN
CE-9	GEOMETRY PLAN
CE-10	GEOMETRY PLAN
CE-11	GEOMETRY PLAN
CE-12	GEOMETRY PLAN
CE-13	UTILITY PLAN
CE-14	UTILITY PLAN
CE-15	UTILITY PLAN
CE-16	GRADING PLAN
CE-17	GRADING PLAN
CE-18	GRADING PLAN
CE-19	GRADING PLAN
CE-20	SEDIMENT CONTROL PLAN
CE-21	SEDIMENT CONTROL PLAN
CE-22	SEDIMENT CONTROL PLAN
CE-23	SEDIMENT CONTROL PLAN
CE-24	SEDIMENT CONTROL NOTES
CE-25	SEDIMENT CONTROL NOTES
CE-26	SWM FOND 1
CE-27	SWM FOND 2
CE-28	SWM BORING PROFILES
CE-29	SWM DETAILS
CE-30	LANDSCAPING PLANS
CE-31	LANDSCAPING PLANS
CE-32	LANDSCAPING PLANS
CE-33	LANDSCAPING PLANS
CE-34	PLANTING DETAILS
CE-35	UTILITY PROFILE
CE-36	UTILITY PROFILE
CE-37	UTILITY PROFILE
CE-38	UTILITY PROFILES
CE-39	SITE DETAILS
CE-40	SITE DETAILS
CE-41	SITE DETAILS AND ACCESS ROAD PROFILE

**VICINITY MAP**  
SCALE: 1" = 200'



NAME: BOARD OF EDUCATION - HOWARD CO.  
 OWNER: ADDRESS: 10910 ROUTE 108  
 DEED REF.: LIBER 279 FOLIO 448  
 ELECTION DISTRICT NO. 1 HOWARD CO., MD.  
 CENSUS TRACT NO. 6012  
 TAX MAP 38 PARCEL NO. 20  
 WATER CODE \_\_\_\_\_ SEWER CODE \_\_\_\_\_

NOTE: THE INFORMATION SHOWN ON THE INDEX MAP IS FOR SHEET ORIENTATION ONLY AND NOT FOR CONSTRUCTION.

DATE	NO.	REVISIONS
7-19-90	1	Show 2 story Classroom, Cafeteria & Activity Center Additions

SHEET TITLE: INDEX SHEET

PROJECT TITLE: NEW ELKRIDGE ELEMENTARY SCHOOL

ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI  
 Consulting Engineers  
 1850 York Road  
 Timonium, Maryland 21093  
 301-252-6000

DESIGNED: PD  
 DRAWN: S.A.S.  
 CHECKED: P.D.  
 DATE: NOVEMBER 29, 1990  
 SCALE: AS NOTED  
 DRAWING NO.: CE-0 1 of 42

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] 11/10/91  
 DIRECTOR ACTING  
 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 [Signature] 1-11-91  
 COUNTY HEALTH OFFICER  
 DATE

APPROVED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 1/14/91  
 PLANNING DIRECTOR  
 DATE

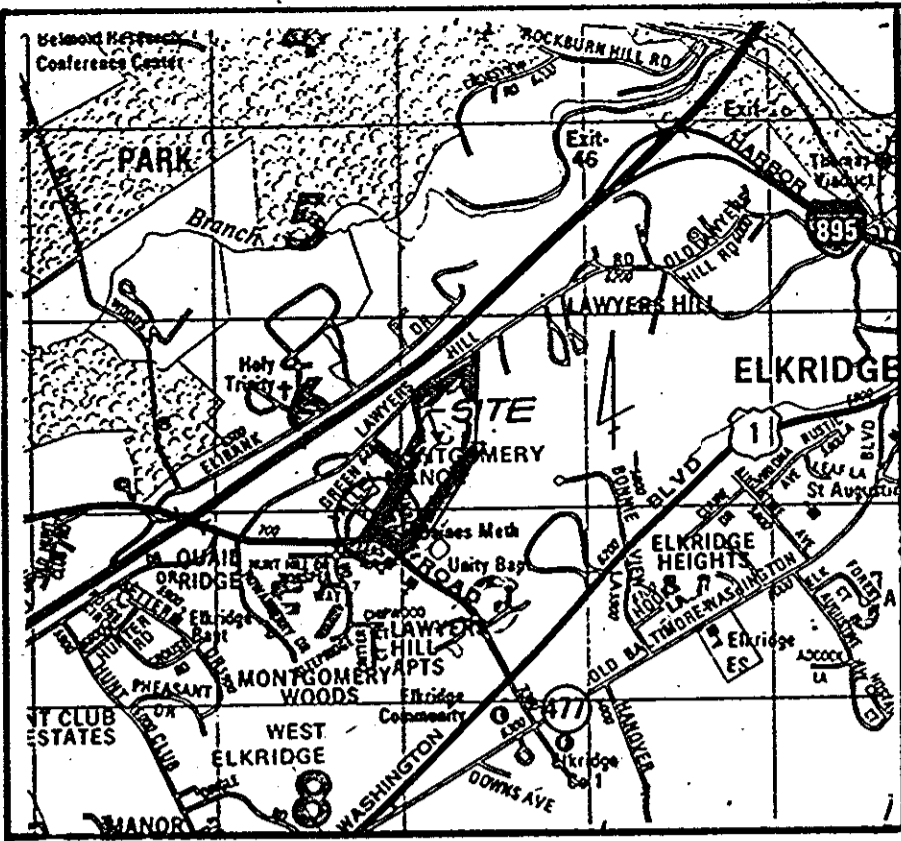
[Signature] 1/14/91  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
 DATE

SUBDIVISION NAME		SECT./AREA PARCEL			
ELKRIDGE ELEMENTARY SCHOOL		20			
PLAT OR L/F	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DIST.	CENSUS TR.
279/448	2	R-20	38	1	6012
WATER CODE			SEWER CODE		

INDEX MAP  
SCALE 1" = 100'

ADDRESS CHART

LOT NO.	STREET ADDRESS
ERCP ELEMENTARY	7075 MONTGOMERY RD.
EUT MIDDLE	7085 MONTGOMERY RD.



VICINITY MAP  
SCALE: 1" = 2000'

MATCH LINE A-A SEE DWG. CE-2  
SEE DWG. CE-3

**LEGEND**

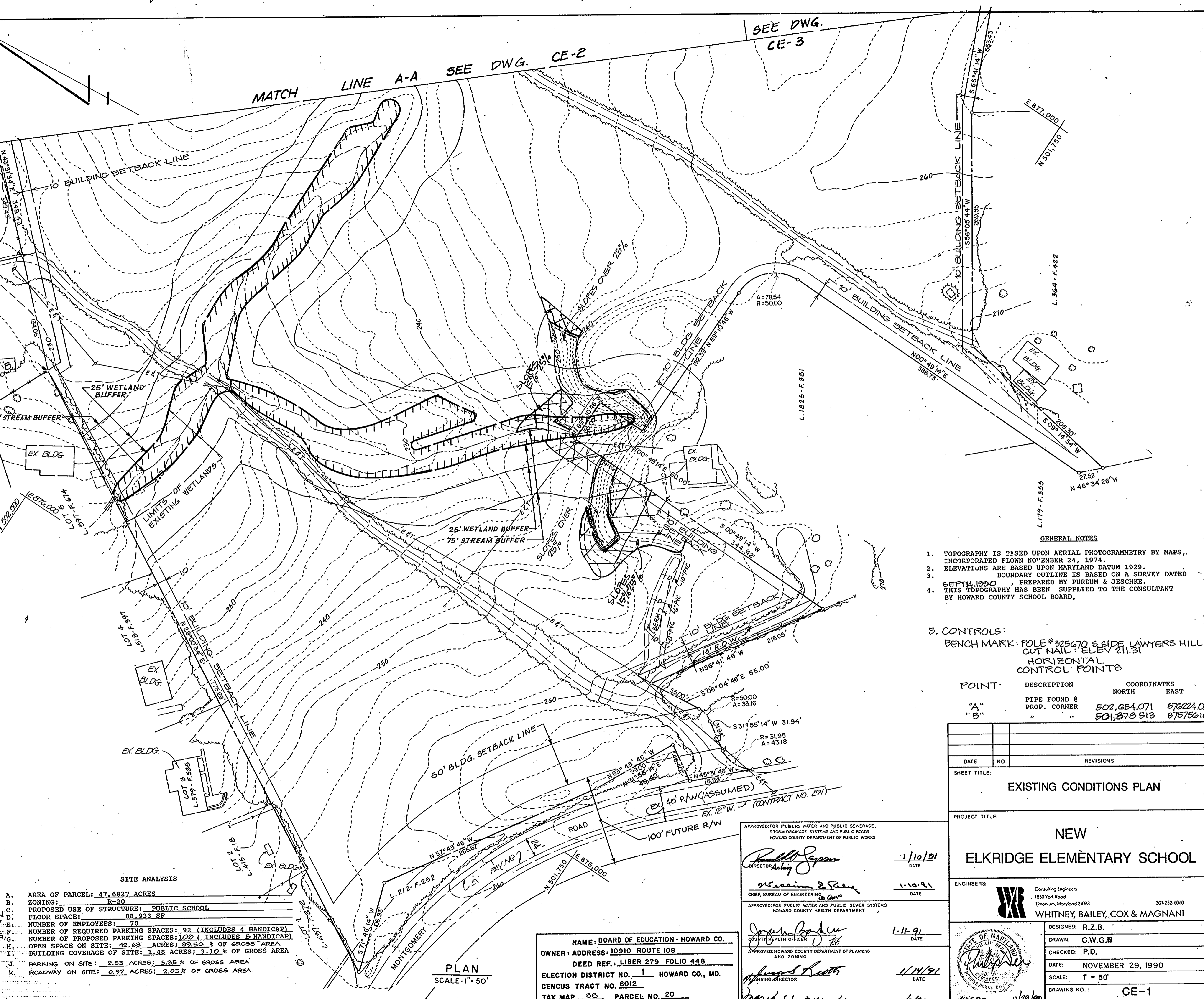
EXISTING	NEW
BIT. PAV. (HEAVY DUTY)	[Symbol]
BIT. PAV. (LIGHT DUTY)	[Symbol]
FIRE HYDRANT	[Symbol]
STRUCTURE	[Symbol]
CONTOUR	[Symbol]
CONC. WALKWAY	[Symbol]
ELECTRIC	[Symbol]
GAS	[Symbol]
SANITARY	[Symbol]
STORM DRAIN	[Symbol]
WATER	[Symbol]
INLET	[Symbol]
MANHOLE	[Symbol]
RIP-RAP	[Symbol]
SPOT ELEVATION	[Symbol]
CURB & GUTTER	[Symbol]
LIMIT OF WETLANDS	[Symbol]
LIGHT POLE	[Symbol]

**NOTES:**

- WP-91-72, A WAIVER OF SECTION 16-116(2)(G) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, TO ALLOW GRADING AND DISTURBANCE WITHIN THE REQUIRED 75' STREAM / 25' WETLANDS BUFFERS FOR THE PROPOSED SCHOOL BUILDING, PARKING LOT AND STORMWATER MANAGEMENT FACILITY. WAIVER GRANTED ON DECEMBER 7, 1990.
- NO GRADING, CLEARING OR DISTURBANCE WITHIN THE WETLANDS / FLOODPLAIN LIMITS EXCEPT AS NECESSARY FOR THE SCHOOL ENTRANCE ROAD AND PER WP-91-72.

**SITE ANALYSIS**

A.	AREA OF PARCEL: 47.6827 ACRES
B.	ZONING: R-20
C.	PROPOSED USE OF STRUCTURE: PUBLIC SCHOOL
D.	FLOOR SPACE: 88,933 SF
E.	NUMBER OF EMPLOYEES: 70
F.	NUMBER OF REQUIRED PARKING SPACES: 92 (INCLUDES 4 HANDICAP)
G.	NUMBER OF PROPOSED PARKING SPACES: 100 (INCLUDES 5 HANDICAP)
H.	OPEN SPACE ON SITE: 42.69 ACRES; 89.50 % OF GROSS AREA
I.	BUILDING COVERAGE OF SITE: 1.48 ACRES; 3.10 % OF GROSS AREA
J.	PARKING ON SITE: 2.55 ACRES; 5.35 % OF GROSS AREA
K.	ROADWAY ON SITE: 0.97 ACRES; 2.05 % OF GROSS AREA



- GENERAL NOTES**
- TOPOGRAPHY IS BASED UPON AERIAL PHOTOGRAMMETRY BY MAPS, INCORPORATED FLOWN NOVEMBER 24, 1974.
  - ELEVATIONS ARE BASED UPON MARYLAND DATUM 1929.
  - BOUNDARY OUTLINE IS BASED ON A SURVEY DATED SEPTEMBER 1990, PREPARED BY PURDUM & JESCHKE.
  - THIS TOPOGRAPHY HAS BEEN SUPPLIED TO THE CONSULTANT BY HOWARD COUNTY SCHOOL BOARD.

**CONTROLS:**

BENCH MARK: POLE # 325670 S. SIDE LAWYERS HILL RD  
CUT NAIL: ELEV 211.31

**HORIZONTAL CONTROL POINTS**

POINT	DESCRIPTION	COORDINATES NORTH	COORDINATES EAST
"A"	PIPE FOUND @ PROP. CORNER	502,654.071	876224.057
"B"	"	501,878.513	875756.103

DATE	NO.	REVISIONS

SHEET TITLE: **EXISTING CONDITIONS PLAN**

PROJECT TITLE: **NEW ELKBRIDGE ELEMENTARY SCHOOL**

ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**

DESIGNED: R.Z.B.  
DRAWN: C.W.G.III  
CHECKED: P.D.  
DATE: NOVEMBER 29, 1990  
SCALE: 1" = 50'  
DRAWING NO.: CE-1  
2 of 42

NAME: BOARD OF EDUCATION - HOWARD CO.  
OWNER: ADDRESS: 10510 ROUTE 108  
DEED REF.: LIBER 279 FOLIO 448  
ELECTION DISTRICT NO. HOWARD CO., MD.  
CENSUS TRACT NO. 6012  
TAX MAP 38 PARCEL NO. 20  
WATER CODE SEWER CODE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Ronald J. Sapan*  
DIRECTOR

*William E. Saly*  
CHIEF, BUREAU OF ENGINEERING

*James B. Baker*  
COUNTY HEALTH OFFICER

*James R. Heath*  
APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

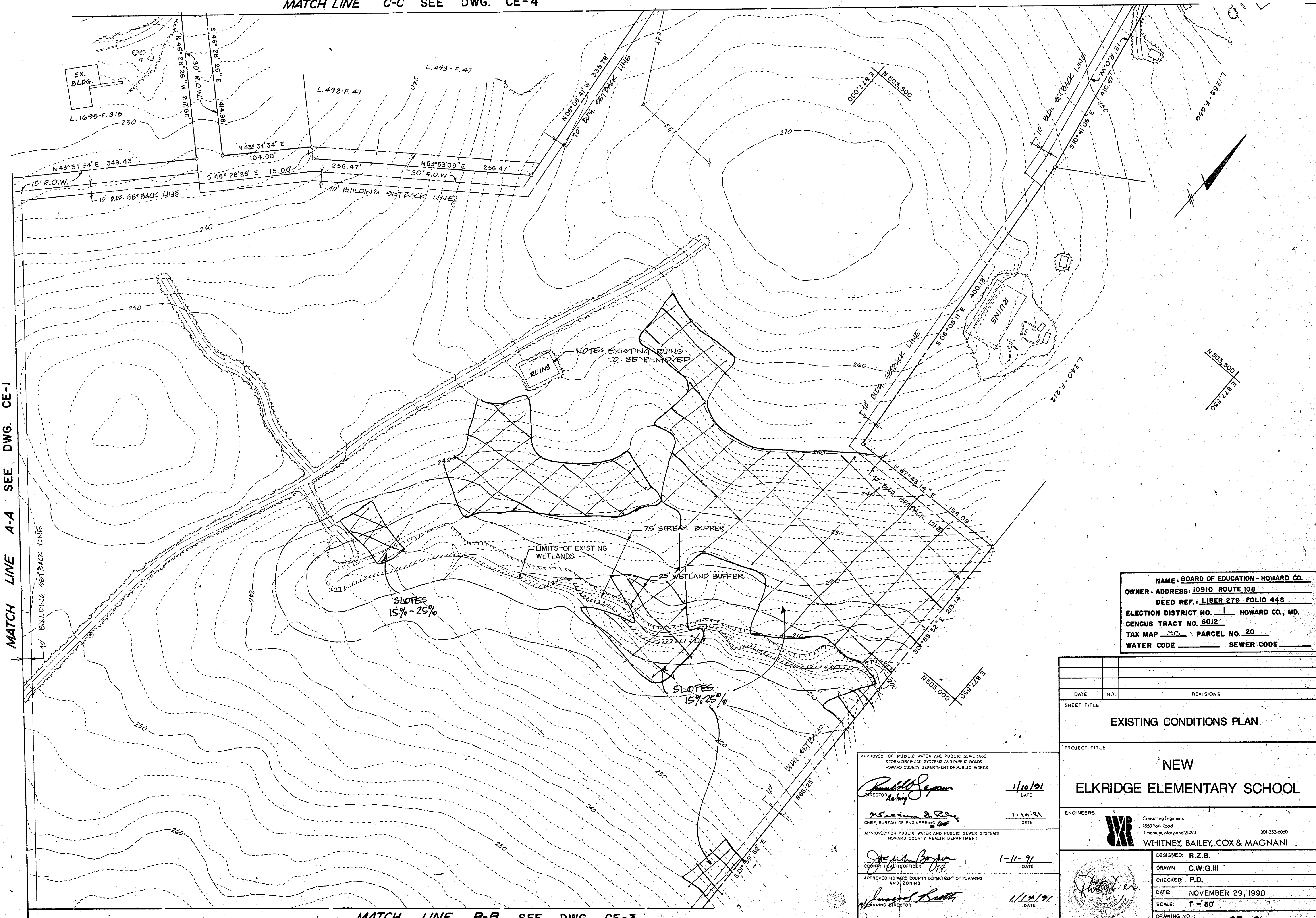
*Frank C. Mangel*  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

DATE: 1/10/91  
DATE: 1/10/91  
DATE: 1/11/91  
DATE: 1/24/91  
DATE: 1/29/90

MATCH LINE C-C SEE DWG. CE-4

MATCH LINE A-A SEE DWG. CE-1

NOTE: SEE DWG CE-1 FOR LEGEND.



NAME: BOARD OF EDUCATION - HOWARD CO.  
 OWNER: ADDRESS: 10910 ROUTE 108  
 DEED REF.: LIBER 279 FOLIO 448  
 ELECTION DISTRICT NO. 1 HOWARD CO., MD.  
 CENSUS TRACT NO. 5012  
 TAX MAP 38 PARCEL NO. 20  
 WATER CODE \_\_\_\_\_ SEWER CODE \_\_\_\_\_

DATE	NO.	REVISIONS

SHEET TITLE: EXISTING CONDITIONS PLAN

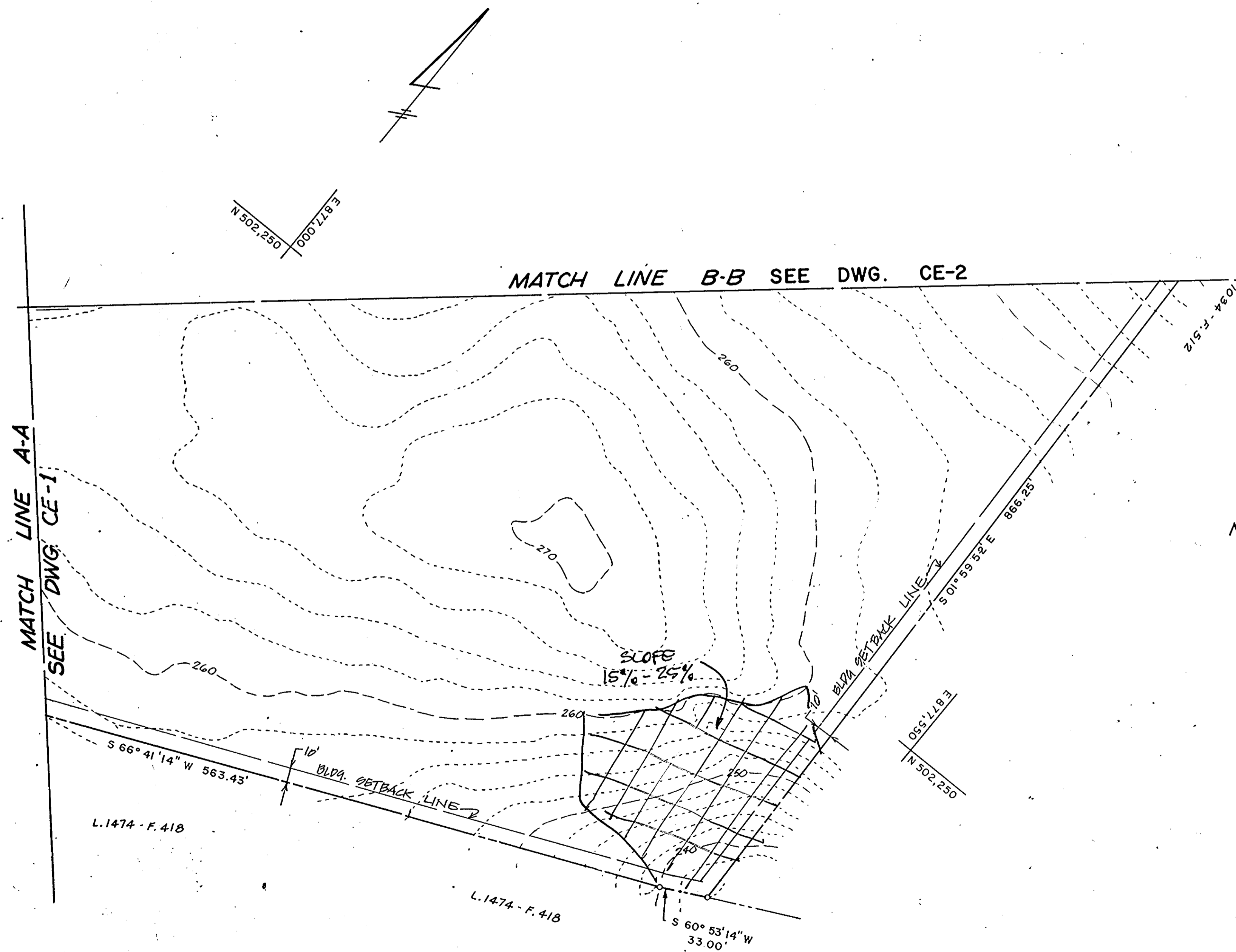
PROJECT TITLE: NEW ELKRIDGE ELEMENTARY SCHOOL

ENGINEERS: Consulting Engineers  
 1850 York Road  
 Timonium, Maryland 21093  
 301-252-6000  
 WHITNEY, BAILEY, COX & MAGNANI

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR 1/10/91 DATE  
 CHIEF, BUREAU OF ENGINEERING 1-10-91 DATE  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER 1-11-91 DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 PLANNING DIRECTOR 1/14/91 DATE  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT 1/16/91 DATE

DESIGNED: R.Z.B.  
 DRAWN: C.W.G.III  
 CHECKED: P.D.  
 DATE: NOVEMBER 29, 1990  
 SCALE: 1" = 50'  
 DRAWING NO.: CE-2  
 3 of 42

MATCH LINE B-B SEE DWG. CE-3




NOTE: 1. SEE DWG. CE-1 FOR LEGEND

NAME: BOARD OF EDUCATION - HOWARD CO.  
 OWNER: ADDRESS: 10910 ROUTE 108  
 DEED REF: LIBER 279 FOLIO 448  
 ELECTION DISTRICT NO. 1 HOWARD CO., MD.  
 CENSUS TRACT NO. 5012  
 TAX MAP 88 PARCEL NO. 20  
 WATER CODE \_\_\_\_\_ SEWER CODE \_\_\_\_\_


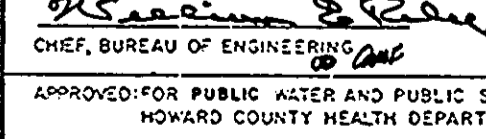
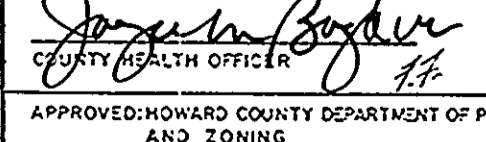
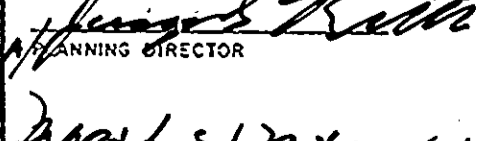
DATE	NO.	REVISIONS

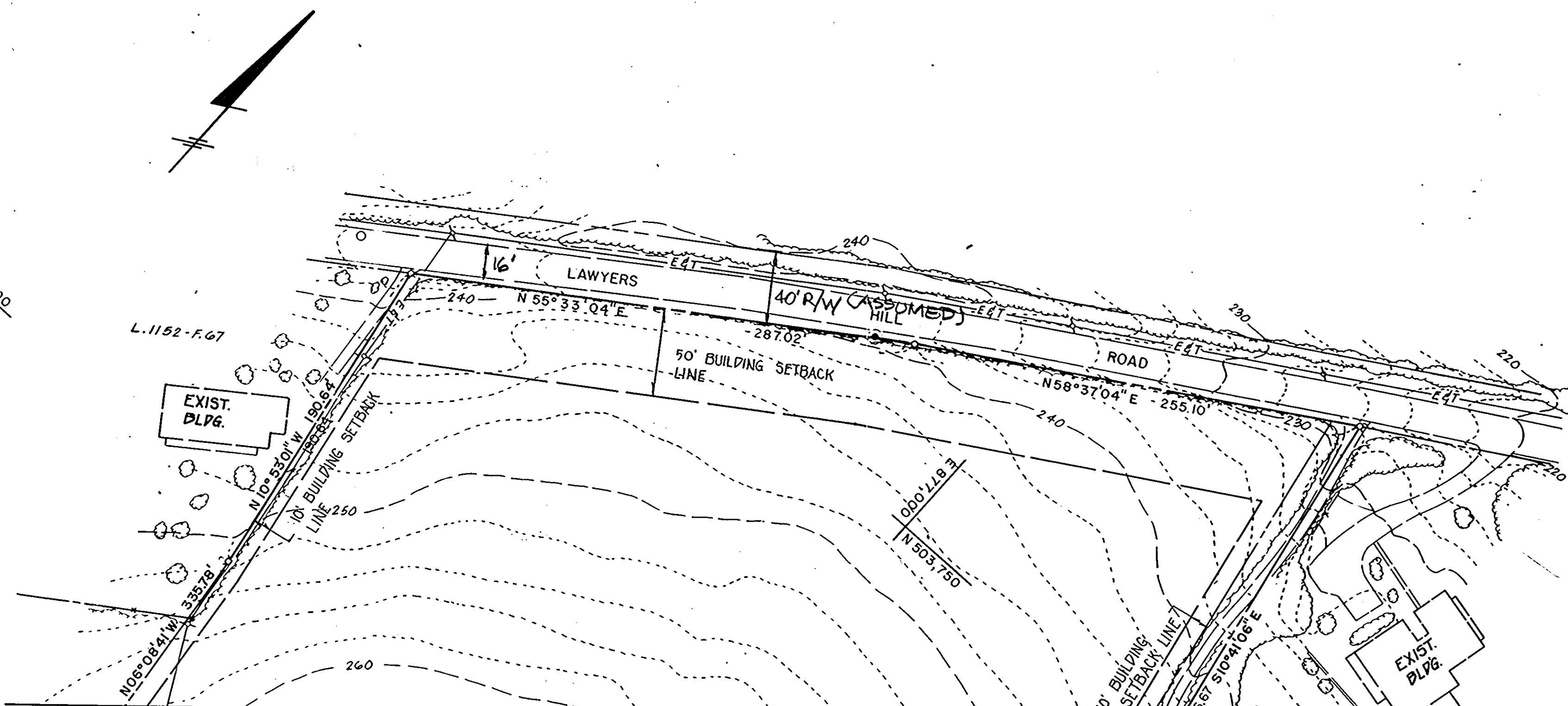
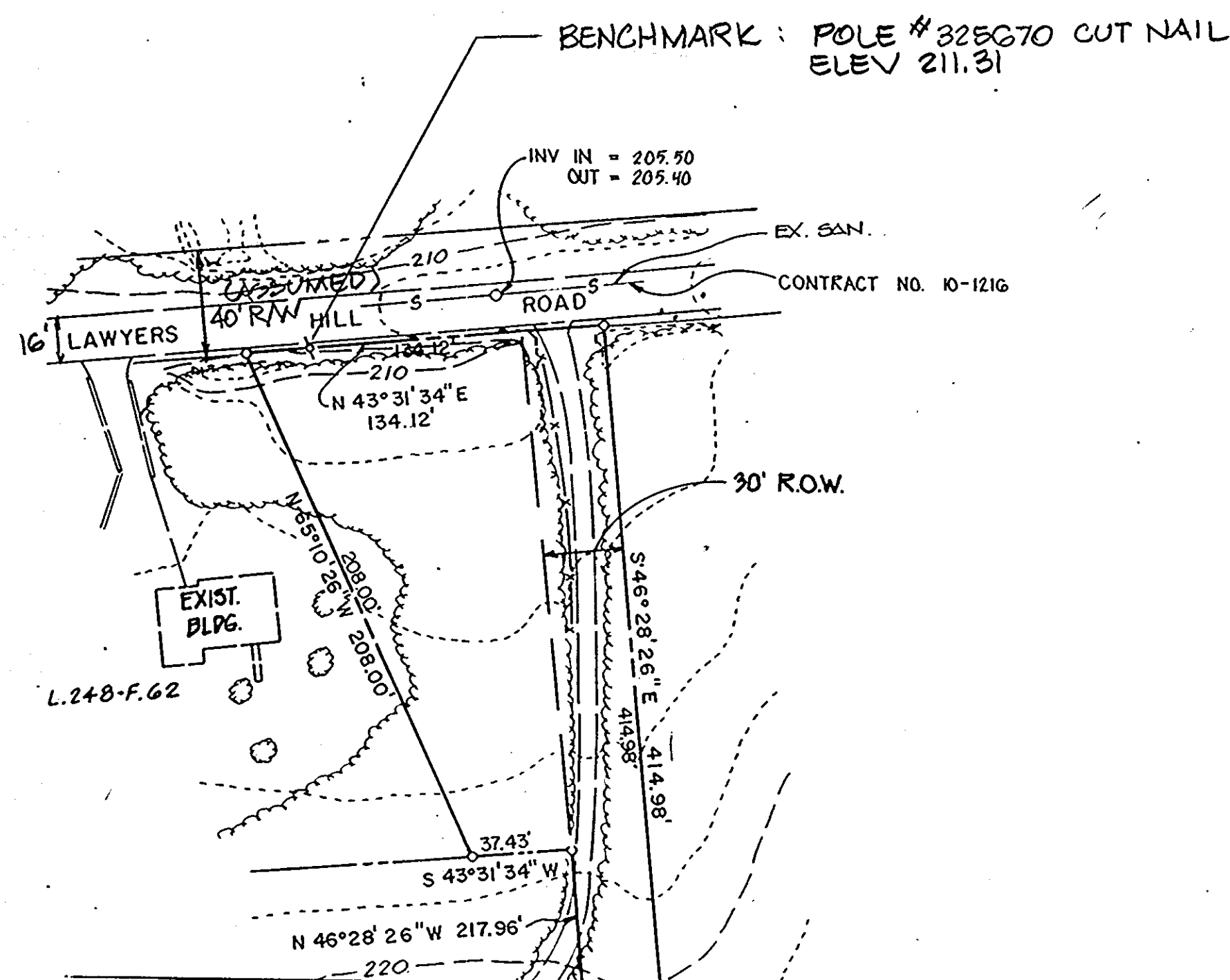
SHEET TITLE:  
**EXISTING CONDITIONS PLAN**

PROJECT TITLE:  
**NEW  
 ELKRIDGE ELEMENTARY SCHOOL**

ENGINEERS:  
 Consulting Engineers  
 1550 York Road  
 Timonium, Maryland 21093 301-252-6000  
**WHITNEY, BAILEY, COX & MAGNANI**

DESIGNED: R.Z.B.  
 DRAWN: C.W.G.III  
 CHECKED: P.D.  
 DATE: NOVEMBER 29, 1990  
 SCALE: 1" = 50'  
 DRAWING NO.: CE-3  
 4 of 42

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 1/10/91  
 DIRECTOR DATE  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 1-10-91  
 CHIEF, BUREAU OF ENGINEERING DATE  
 COUNTY HEALTH OFFICER  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
 AND ZONING  
 1/14/91  
 PLANNING DIRECTOR DATE  
 1/4/91  
 CHIEF, DIVISION OF COMMUNITY DATE  
 PLANNING AND LAND DEVELOPMENT 345



MATCH LINE C-C SEE DWG CE-2

NOTE: 1. SEE DWG. CE-1 FOR LEGEND

NAME: BOARD OF EDUCATION - HOWARD CO.  
 OWNER: ADDRESS: 10910 ROUTE 108  
 DEED REF.: LIBER 279 FOLIO 448  
 ELECTION DISTRICT NO. 1 HOWARD CO., MD.  
 CENSUS TRACT NO. 6012  
 TAX MAP 28 PARCEL NO. 20  
 WATER CODE \_\_\_\_\_ SEWER CODE \_\_\_\_\_

11-91	REVISED
DATE	NO.
	REVISIONS

SHEET TITLE:  
**EXISTING CONDITIONS PLAN**

PROJECT TITLE:  
**NEW  
 ELKBRIDGE ELEMENTARY SCHOOL**

ENGINEERS:  
  
 Consulting Engineers  
 1850 York Road  
 Timonium, Maryland 21093 301-252-6000  
**WHITNEY, BAILEY, COX & MAGNANI**

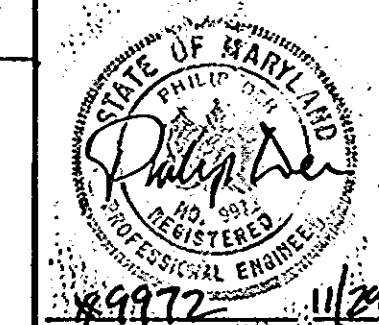
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
  
 DIRECTOR 1/10/91 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
  
 COUNTY HEALTH OFFICER 1-11-91 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
 AND ZONING  
  
 PLANNING DIRECTOR 1/14/91 DATE

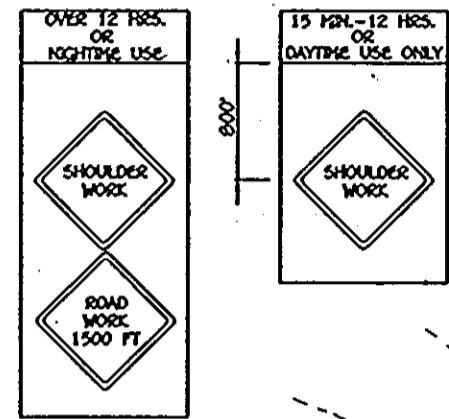
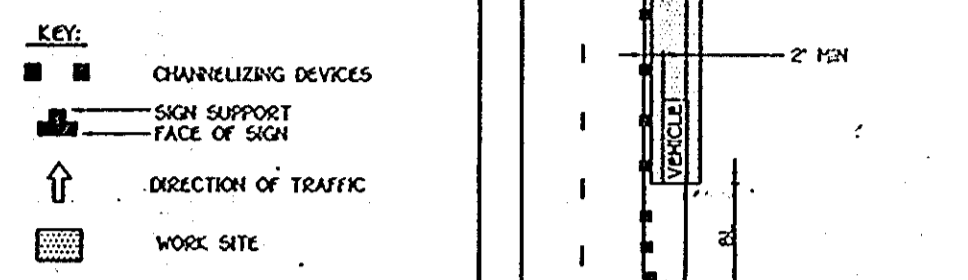
APPROVED: DIVISION OF COMMUNITY  
 PLANNING AND LAND DEVELOPMENT  
  
 CHIEF, DIVISION OF COMMUNITY  
 PLANNING AND LAND DEVELOPMENT 1/14/91 DATE

DESIGNED: R.Z.B.  
 DRAWN: C.W.G.III  
 CHECKED: P.D.  
 DATE: NOVEMBER 29, 1990  
 SCALE: 1" = 50'  
 DRAWING NO.: CE-4  
 5 of 42



**IMPORTANT:** THIS DRAWING SHALL BE USED IN CONJUNCTION WITH GENERAL NOTES NO. 104-00-01 TO 104-00-10 AND STANDARD DETAILS NO. 104-00-01 TO 104-00-10.

**NOTES:** SHOULDER CLOSED SIGNS ARE REQUIRED IN PLACE OF SHARKER WORK SIGNS WHEN THE SHOULDER IS CLOSED BY A PHYSICAL BARRIER REFER TO STANDARD NO. 104-00-11 WHEN WORK INVOLVES A PAVEMENT EDGE DROP-OFF. REFER TO STANDARD NO. 104-00-12 TO 104-00-15.



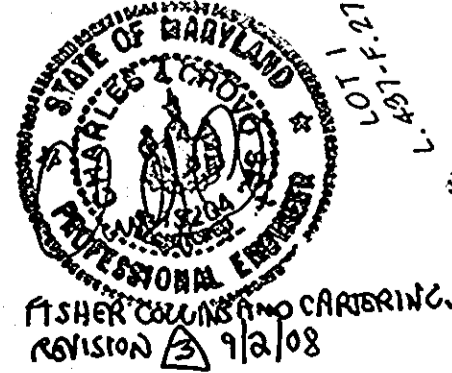
**CONSTRUCTION NOTES**

- C-1 NEW HEAVY DUTY BITUMINOUS CONCRETE PAVING SEE DETAIL 10. DRAWINGS NO. CE-39.
- C-2 NEW CONCRETE WALK, SEE DETAIL 1 DRAWING NO. CE-39.
- C-3 NEW SIDEWALK RAMP, SEE DETAIL 15 DRAWING NO. CE-41.
- C-4 NEW LIGHT DUTY BITUMINOUS CONCRETE PAVING, SEE DETAIL 2. DRAWING NO. CE-39.
- C-5 NEW DRIVEWAY ENTRANCE, HOWARD COUNTY STANDARD R-6.02.
- C-6 NEW CONCRETE STAIRS, SEE ARCHITECTURAL DRAWINGS.
- C-7 NEW WALL, SEE ARCHITECTURAL DRAWINGS.
- C-8 MEET EXISTING CONDITIONS.
- C-9 NOSE DOWN CURB.
- C-10 NEW BACKSTOP, PLAYER BENCHES AND TEAM AREA, SEE DETAIL 5 & 8 DWG. NO. CE-39.
- C-11 NEW AMPHITHEATER, SEE DETAIL DRAWING NO. CE-40.
- C-12 NEW 4" WIDE PAINT BUS PARKING LINES, SEE GEOMETRY PLAN AND SPECIFICATIONS.
- C-13 NEW STANDARD 7" COMBINATION CURB AND GUTTER, HOWARD COUNTY STANDARD R-3.01.
- C-14 NEW 4" WIDE PAINT PARKING LINES, SEE DETAIL 4 DRAWING NO. CE-39.
- C-15 NEW HANDICAP PAVEMENT MARKINGS, SEE DETAIL 3 DRAWING NO. CE-39.
- C-16 NEW HANDICAP PARKING SIGN AND POST, TYPICAL (TOTAL OF 5 REQUIRED). SEE DETAIL 7 DRAWING NO. CE-39.
- C-17 NEW CONCRETE PAVING, SEE DETAIL 11 DRAWING NO. CE-41.
- C-18 NEW AGGREGATE PAVING, SEE DETAIL 9 DRAWING NO. CE-39.
- C-19 NEW "STOP" SIGN, SEE SPECIFICATIONS.
- C-20 NEW "DO NOT ENTER" SIGN, SEE SPECIFICATIONS.
- C-21 NEW "ONE WAY" SIGN, SEE SPECIFICATIONS.
- C-22 NEW "BUSES ONLY" SIGN, 24"x30" WHITE SIGN WITH BLACK LETTERING, SEE SPECIFICATIONS.
- C-23 NEW PLAY EQUIPMENT AREA, SEE DETAIL 14 DRAWING NO. CE-41.
- C-24 NEW SOFTBALL FIELD, SEE DETAIL 8 DRAWING NO. CE-39.
- C-25 NEW BASKETBALL GOAL, SEE DETAIL 6, DRAWING NO. CE-39.
- C-26 NEW BITUMINOUS CONCRETE WALK, SEE DETAIL 12 DRAWING NO. CE-41.
- C-27 NEW PRECAST CONCRETE WHEEL STOP, TYPICAL (TOTAL OF 5 REQUIRED). SEE DETAIL 13 DRAWING NO. CE-41.
- C-28 NEW SIDEWALK RAMP AND DEPRESSED SIDEWALK, SEE DETAIL 16 DRAWING NO. CE-41.
- C-29 NEW POWER L. TRANSFORMER AND PAD, SEE DRAWING NO. E-2.
- C-30 SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS IN SERVICE AREA.
- C-31 DUMPSTER AREA.
- C-32 NEW LIGHT POLE, TYPICAL. SEE DRAWING NO. E-2.
- C-33 NEW PLAY AREA LAYOUT, SEE ARCHITECTURAL DRAWINGS.
- C-34 NEW BITUMINOUS CONCRETE WALK ALIGNMENT TO BE SET IN THE FIELD.
- C-35 NEW BITUMINOUS CONCRETE WALK (BY OTHERS).
- C-36 NEW BIKE RACKS, SEE ARCHITECTURAL DRAWINGS.
- C-37 NEW GENERATOR AND PAD, SEE ELECTRICAL DRAWINGS.
- C-38 6" R/W TO BE RELOCATED BY OTHERS.
- C-39 REMOVE SANITARY CLEANOUT. CONSTRUCT NEW SANITARY CLEANOUT AT STA 2+85 ±, 40' RT. LOCATION TO BE VERIFIED IN FIELD. CLEANOUT SHALL BE IN ACCORDANCE WITH HOWARD CO. STANDARD S 2.22.
- C-40 RELOCATE WATER METER TO STA 2+75 ±, 50' RT. LOCATION TO BE VERIFIED IN FIELD BY ENGINEER. EXTEND WATER SERVICE TO NEW METER LOCATION. SEE HOWARD CO. STANDARD DETAILS W 3.91, W 3.12.

NOTE: SEE DRAWING CE-1 FOR LEGEND

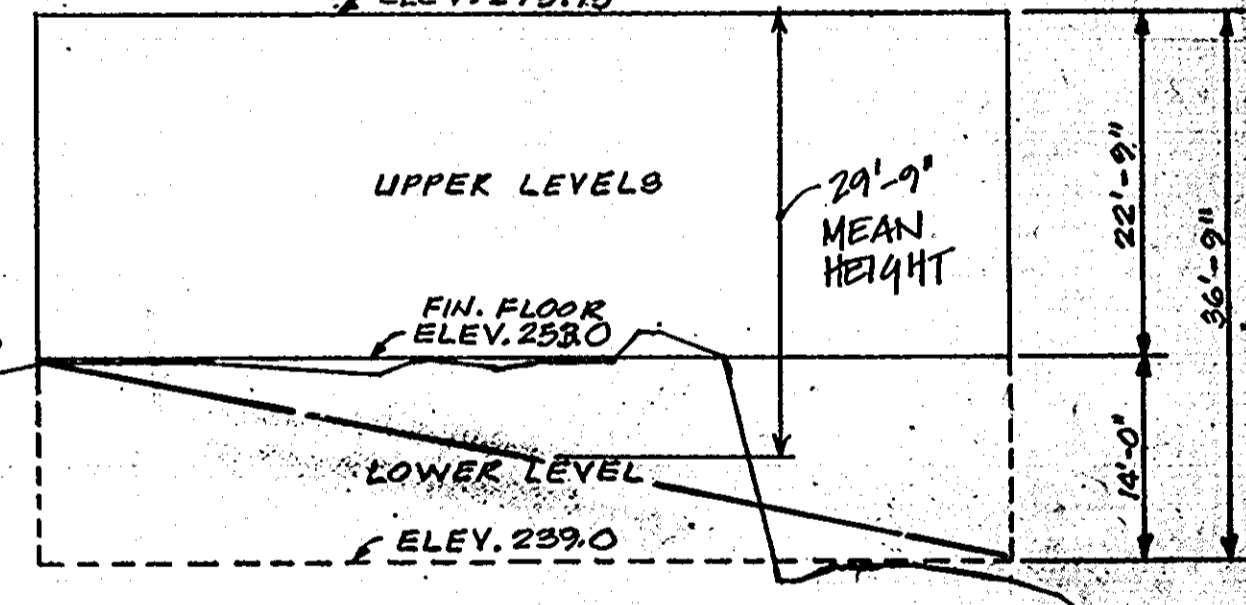
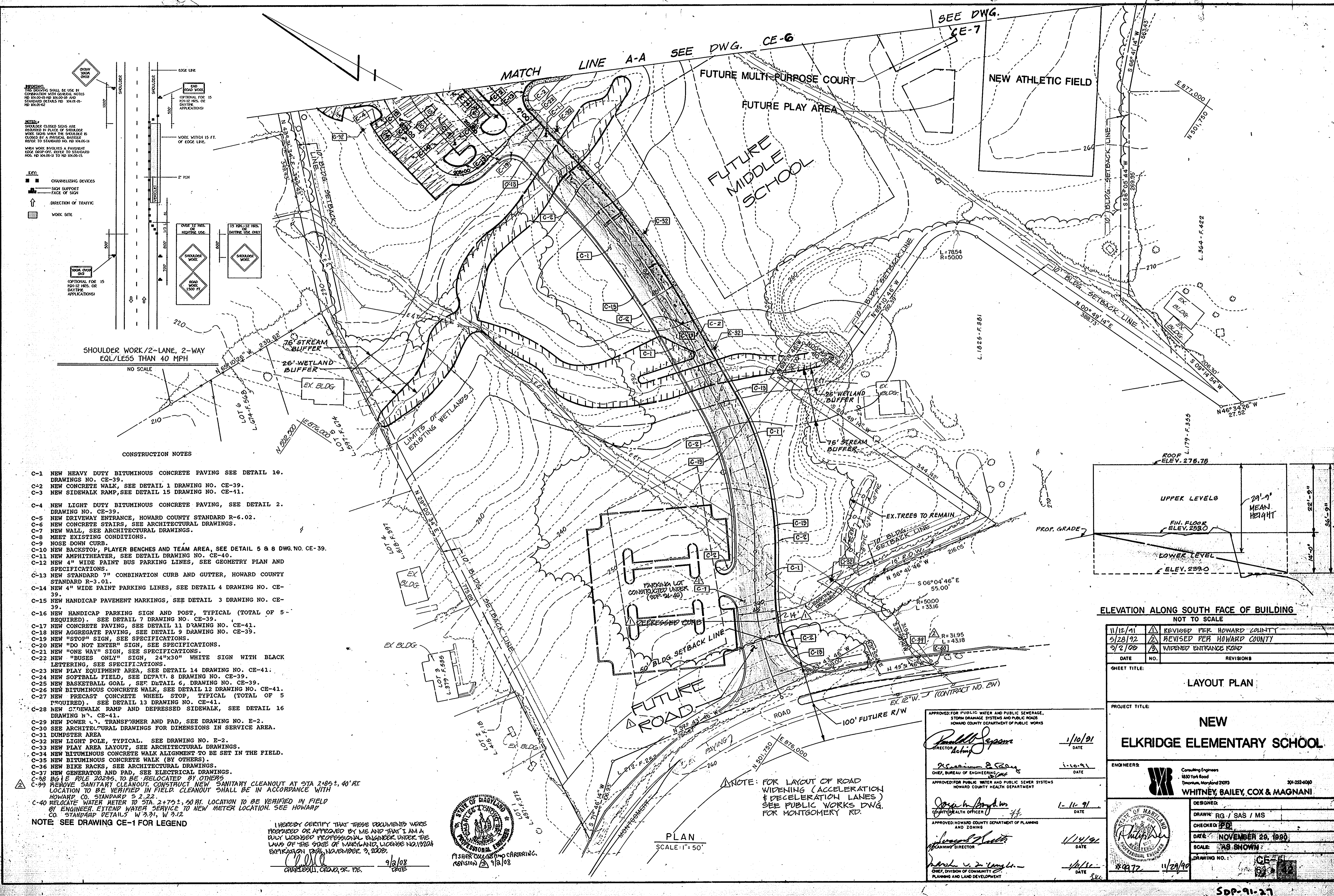
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19204 EXPIRATION DATE, NOVEMBER 3, 2008.

*Charles L. Cray*  
 CHARLES L. CRAY, P.E.  
 9/2/08  
 DATE



PLAN  
 SCALE: 1" = 50'

NOTE: FOR LAYOUT OF ROAD WIDENING (ACCELERATION & DECELERATION LANES) SEE PUBLIC WORKS DWG. FOR MONTGOMERY RD.



**ELEVATION ALONG SOUTH FACE OF BUILDING**  
 NOT TO SCALE

DATE	NO.	REVISIONS
11/12/91	1	REVISED PER HOWARD COUNTY
5/28/92	2	REVISED PER HOWARD COUNTY
9/2/08	3	WIDENED ENTRANCE ROAD

SHEET TITLE: **LAYOUT PLAN**

PROJECT TITLE: **NEW ELKRIDGE ELEMENTARY SCHOOL**

ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**

DESIGNED	DRAWN: RG / SAS / MS
CHECKED: <i>[Signature]</i>	DATE: <b>NOVEMBER 26, 1990</b>
SCALE: <b>AS SHOWN</b>	DRAWING NO.: <b>CE-5</b>
DRAWING NO.: <b>4972</b>	DATE: <b>11/29/90</b>

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Paul M. Seppan*  
 DIRECTOR 1/10/91 DATE

*Richard E. Ray*  
 CHIEF, BUREAU OF ENGINEERING 11/10/91 DATE

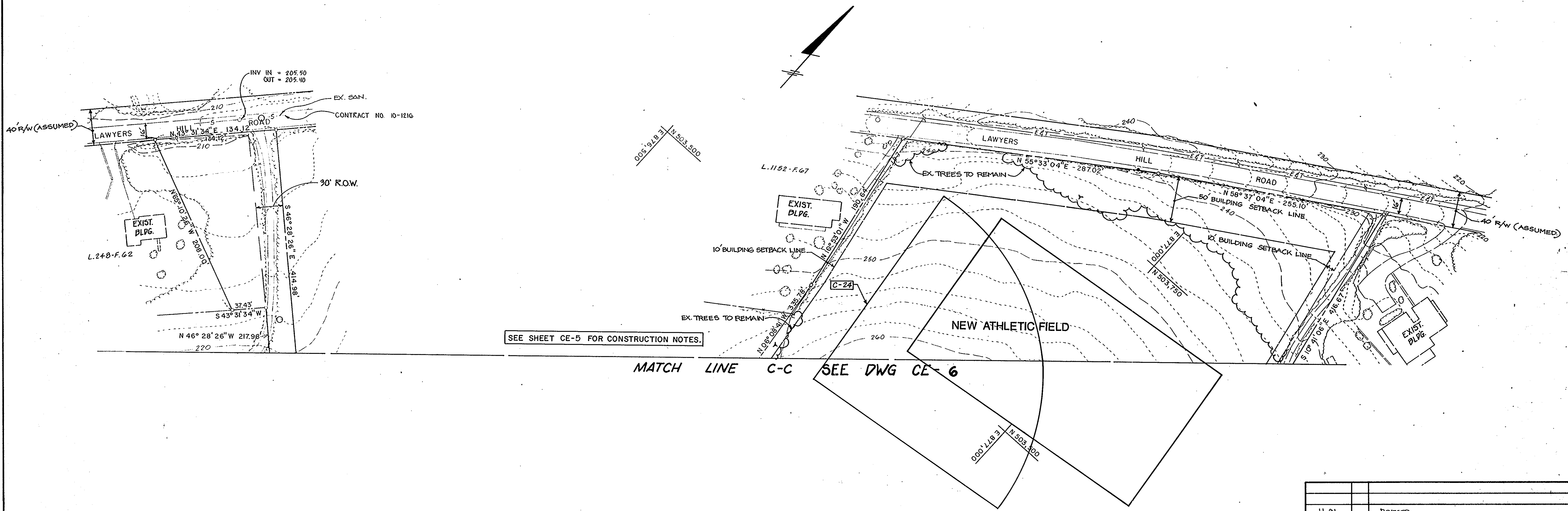
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

*Joseph M. Boyd*  
 COUNTY HEALTH OFFICER 1-11-91 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James A. Smith*  
 PLANNING DIRECTOR 1/14/91 DATE

*Mark V. Long*  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT 1/15/91 DATE



SEE SHEET CE-5 FOR CONSTRUCTION NOTES.

MATCH LINE C-C SEE DWG CE-6

NOTE: 1. SEE DWG. CE-1 FOR LEGEND

PLAN  
SCALE: 1" = 50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Ronald M. Szymon*  
DIRECTOR  
DATE: 1/10/91

*William D. Reid*  
CHIEF, BUREAU OF ENGINEERING  
DATE: 1-10-91

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

*James M. Boyd*  
COUNTY HEALTH OFFICER  
DATE: 1-11-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
AND ZONING

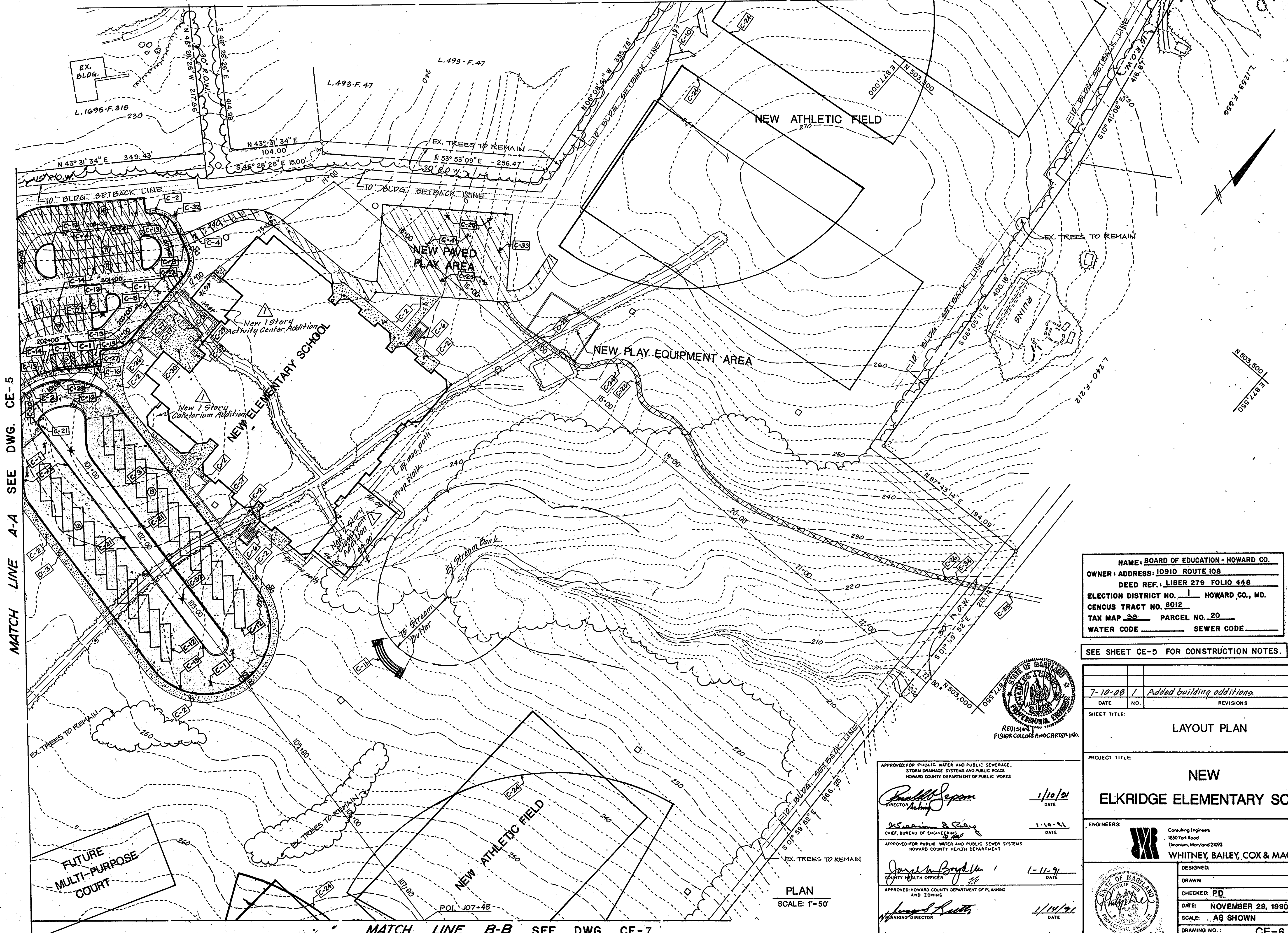
*James M. Boyd*  
PLANNING DIRECTOR  
DATE: 1/14/91

*David J. DeCamp*  
CHIEF, DIVISION OF COMMUNITY  
PLANNING AND LAND DEVELOPMENT  
DATE: 1/29/91

11-91	REVISED
DATE	NO. REVISIONS
SHEET TITLE: <b>LAYOUT PLAN</b>	
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>	
ENGINEERS:	 Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-6000 <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>
DESIGNED:	
DRAWN:	
CHECKED: <b>PD</b>	
DATE: <b>NOVEMBER 29, 1990</b>	
SCALE: <b>AS SHOWN</b>	
DRAWING NO.:	<b>CE-8</b>

MATCH LINE C-C SEE DWG. CE-8

MATCH LINE A-A SEE DWG. CE-5



NOTE: SEE DWG CE-1 FOR LEGEND.

NAME: BOARD OF EDUCATION - HOWARD CO.  
 OWNER: ADDRESS: 10910 ROUTE 108  
 DEED REF.: LIBER 279 FOLIO 448  
 ELECTION DISTRICT NO.: HOWARD CO., MD.  
 CENSUS TRACT NO. 0012  
 TAX MAP 28 PARCEL NO. 20  
 WATER CODE \_\_\_\_\_ SEWER CODE \_\_\_\_\_

SEE SHEET CE-5 FOR CONSTRUCTION NOTES.

DATE	NO.	REVISIONS
7-10-08	1	Added building additions.

SHEET TITLE: LAYOUT PLAN

PROJECT TITLE: NEW ELKRIDGE ELEMENTARY SCHOOL

ENGINEERS: WHITNEY, BAILEY, COX & MAGNANI  
 1850 York Road  
 Timonium, Maryland 21093  
 301-252-0000

DESIGNED: [Signature]  
 DRAWN: [Signature]  
 CHECKED: PD  
 DATE: NOVEMBER 29, 1990  
 SCALE: AS SHOWN  
 DRAWING NO.: CE-6  
 7 of 42

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] DIRECTOR  
 DATE: 1/10/91

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 [Signature] CITY HEALTH OFFICER  
 DATE: 1-10-91

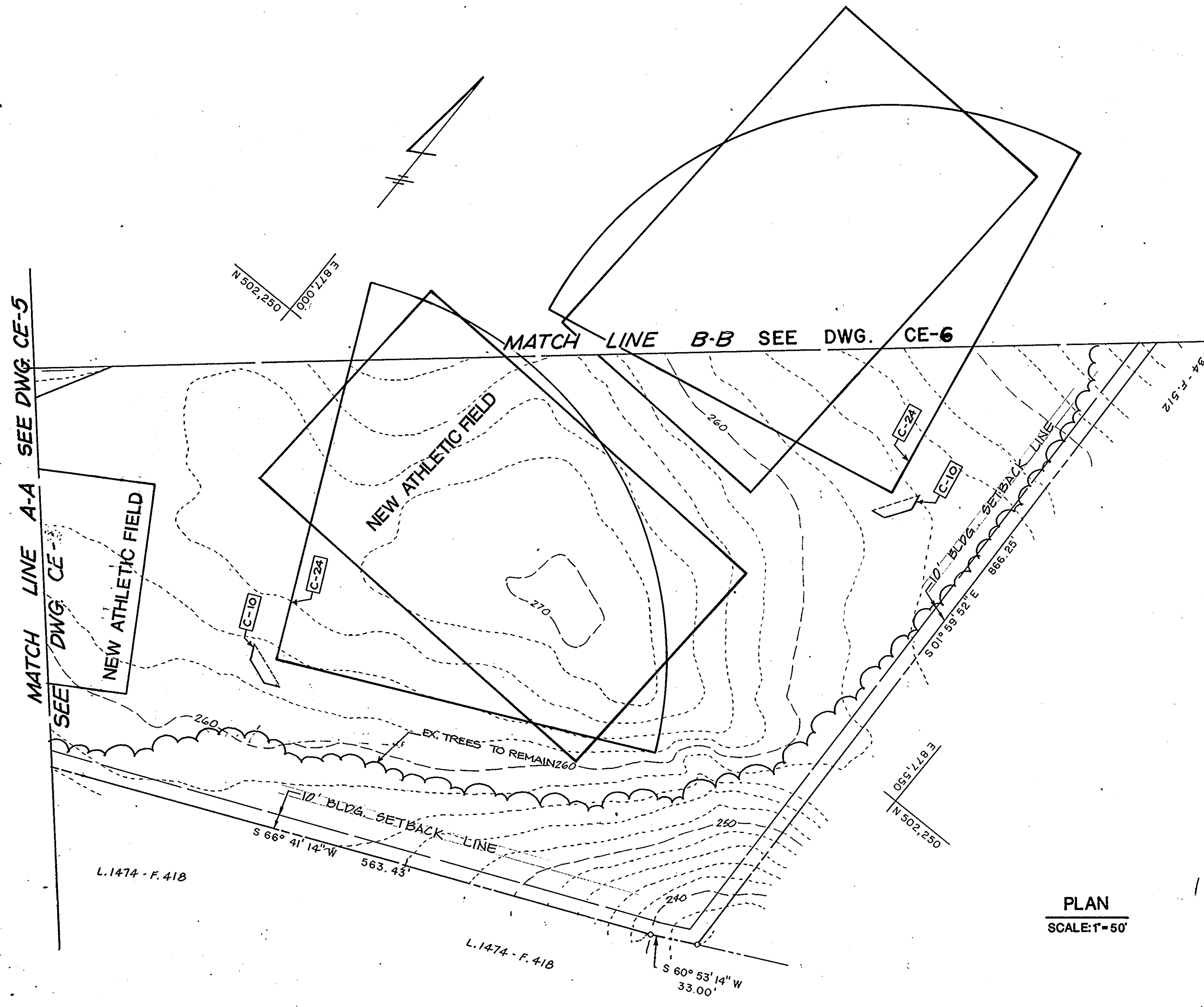
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 [Signature] PLANNING DIRECTOR  
 DATE: 1/14/91

APPROVED: [Signature]  
 CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
 DATE: 1/16/91

PLAN  
 SCALE: 1"=50'

MATCH LINE B-B SEE DWG. CE-7





NOTE: 1. SEE DWG. CE-1 FOR LEGEND  
 2. SEE DWG. CE-5 FOR CONSTRUCTION NOTES

PLAN  
 SCALE: 1"=50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Richard J. Seaman*  
 DIRECTOR Acting  
 DATE 1/10/91

*Michael S. Ryan*  
 CHIEF, BUREAU OF ENGINEERING  
 DATE 1-10-91


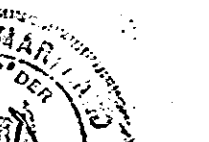
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

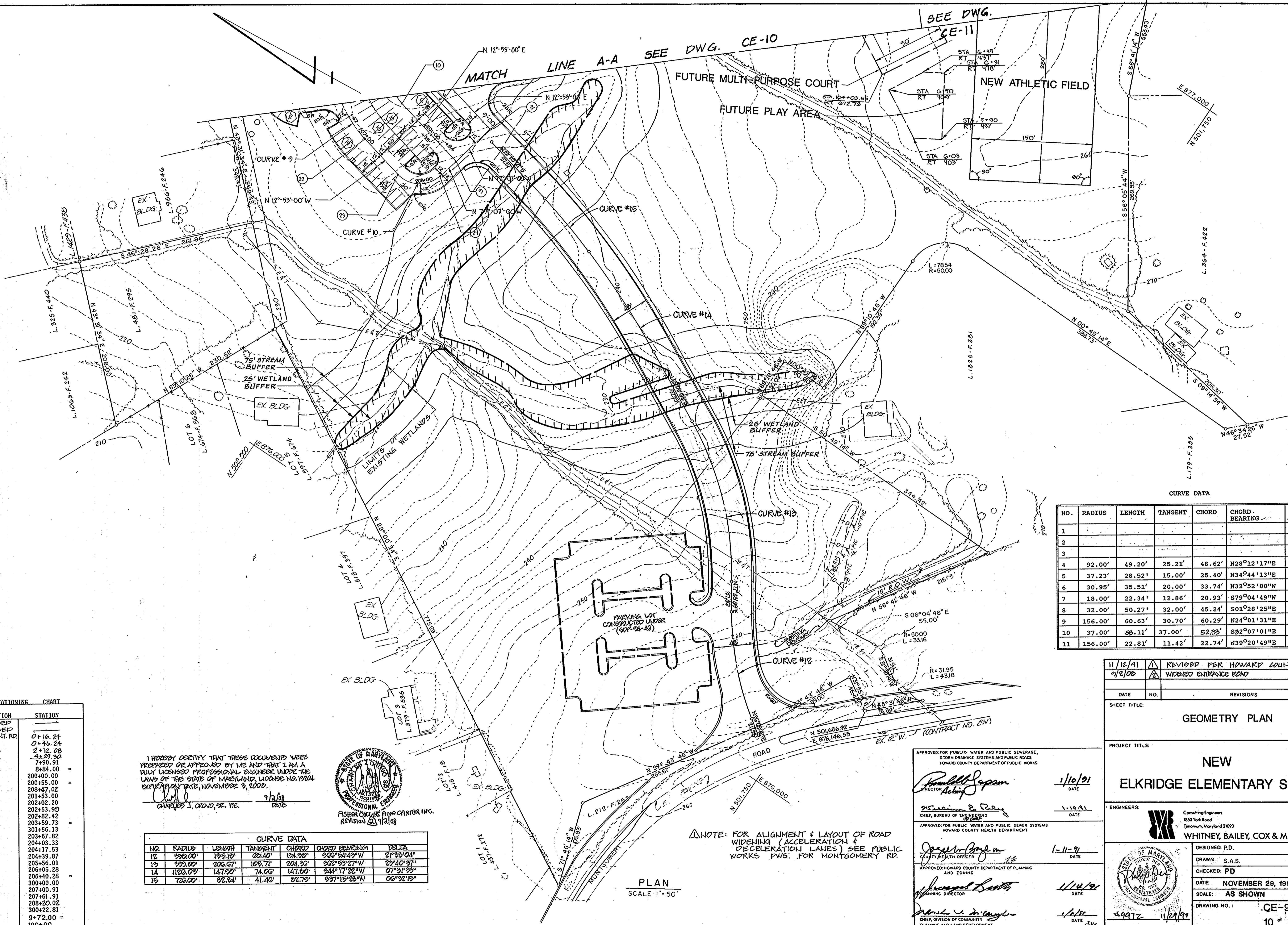
*Joseph W. Bond*  
 COUNTY HEALTH OFFICER  
 DATE 1-11-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
 AND ZONING

*James R. Smith*  
 PLANNING DIRECTOR  
 DATE 1/14/91

*Frank J. Long*  
 CHIEF, DIVISION OF COMMUNITY  
 PLANNING AND LAND DEVELOPMENT  
 DATE 1/29/91

DATE	NO.	REVISIONS
SHEET TITLE: <b>LAYOUT PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS:  Consulting Engineers 1850 York Road Timonium, Maryland 21093 <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED:  DRAWN: CHECKED: <b>PD</b> DATE: <b>NOVEMBER 29, 1990</b> SCALE: <b>AS SHOWN</b> DRAWING NO.: <b>CE-7</b>		
89972	11/29/90	

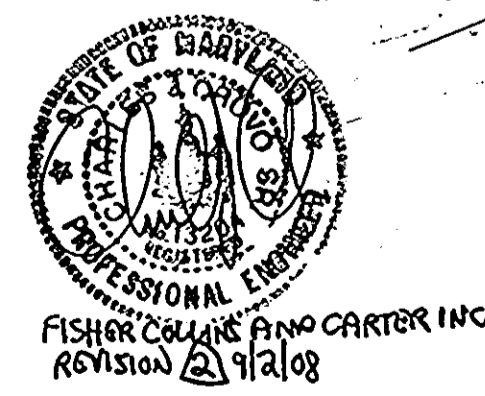


**BASELINE STATIONING CHART**

NO	DESCRIPTION	STATION
1	NOT USED	
2	NOT USED	
3	PL. & MONT. RD.	0+16.24
4	PC	0+46.24
5	PCC	2+12.08
6	PC	4+29.30
7	PT	7+90.91
8	PI	8+84.00
9	PI	200+00.00
10	PC	200+55.00
11	PT	208+47.02
12	PC	201+53.00
13	PT	202+02.20
14	PI	202+82.42
15	PC	203+59.73
16	PT	203+67.82
17	PC	204+03.33
18	PT	204+17.53
19	PC	204+39.87
20	PT	205+56.01
21	PI	206+06.28
22	PT	206+40.28
23	PC	207+00.91
24	PT	207+61.91
25	PT	208+20.02
26	PI	300+22.81
		9+72.00 = 100+00

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19024, EXPIRES ON DATE, NOVEMBER 3, 2008.

CHARLES J. ORONO, SR., P.E. 9/13/09 DATE



**CURVE DATA**

NO.	RADIUS	LENGTH	TANGENT	CHORD	CHORD BEARING	DELTA
9	350.00'	139.10'	68.40'	134.30'	90°54'43"W	21°30'04"
12	350.00'	206.67'	109.71'	204.36'	56°59'07"W	29°40'37"
13	1126.03'	147.90'	74.00'	147.60'	94°17'02"W	07°31'33"
14	700.00'	82.84'	41.40'	82.72'	93°19'08"W	00°32'15"

**CURVE DATA**

NO.	RADIUS	LENGTH	TANGENT	CHORD	CHORD BEARING	DELTA
1						
2						
3						
4	92.00'	49.20'	25.21'	48.62'	N28°12'17"E	30°38'34"
5	37.23'	28.52'	15.00'	25.40'	N34°44'13"E	43°53'33"
6	30.95'	35.51'	20.00'	33.74'	N32°52'00"W	65°44'02"
7	18.00'	22.34'	12.86'	20.93'	S79°04'49"W	71°06'23"
8	32.00'	50.27'	32.00'	45.24'	S01°28'25"E	90°00'00"
9	156.00'	60.63'	30.70'	60.29'	N24°01'31"E	22°15'59"
10	37.00'	68.11'	37.00'	52.33'	S32°07'01"E	90°00'00"
11	156.00'	22.81'	11.42'	22.74'	N39°20'49"E	8°22'35"

11/12/91	REVISION PER HOWARD COUNTY	
2/2/00	WIDENED ENTRANCE ROAD	
DATE	NO.	REVISIONS
SHEET TITLE: <b>GEOMETRY PLAN</b>		

PROJECT TITLE: **NEW ELKRIDGE ELEMENTARY SCHOOL**

ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**  
 Consulting Engineers  
 1850 York Road  
 Timonium, Maryland 21093  
 301-252-6000

DESIGNED: P.D.  
 DRAWN: S.A.S.  
 CHECKED: PD  
 DATE: NOVEMBER 29, 1990  
 SCALE: AS SHOWN  
 DRAWING NO.: **CE-9**  
 10 of 42

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Richard J. Sapon*  
 DIRECTOR 1/10/91 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

*William B. Papp*  
 CHIEF, BUREAU OF ENGINEERING 1-10-91 DATE

APPROVED FOR PLANNING AND ZONING  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Joseph W. Boyd*  
 COUNTY HEALTH OFFICER 1-11-91 DATE

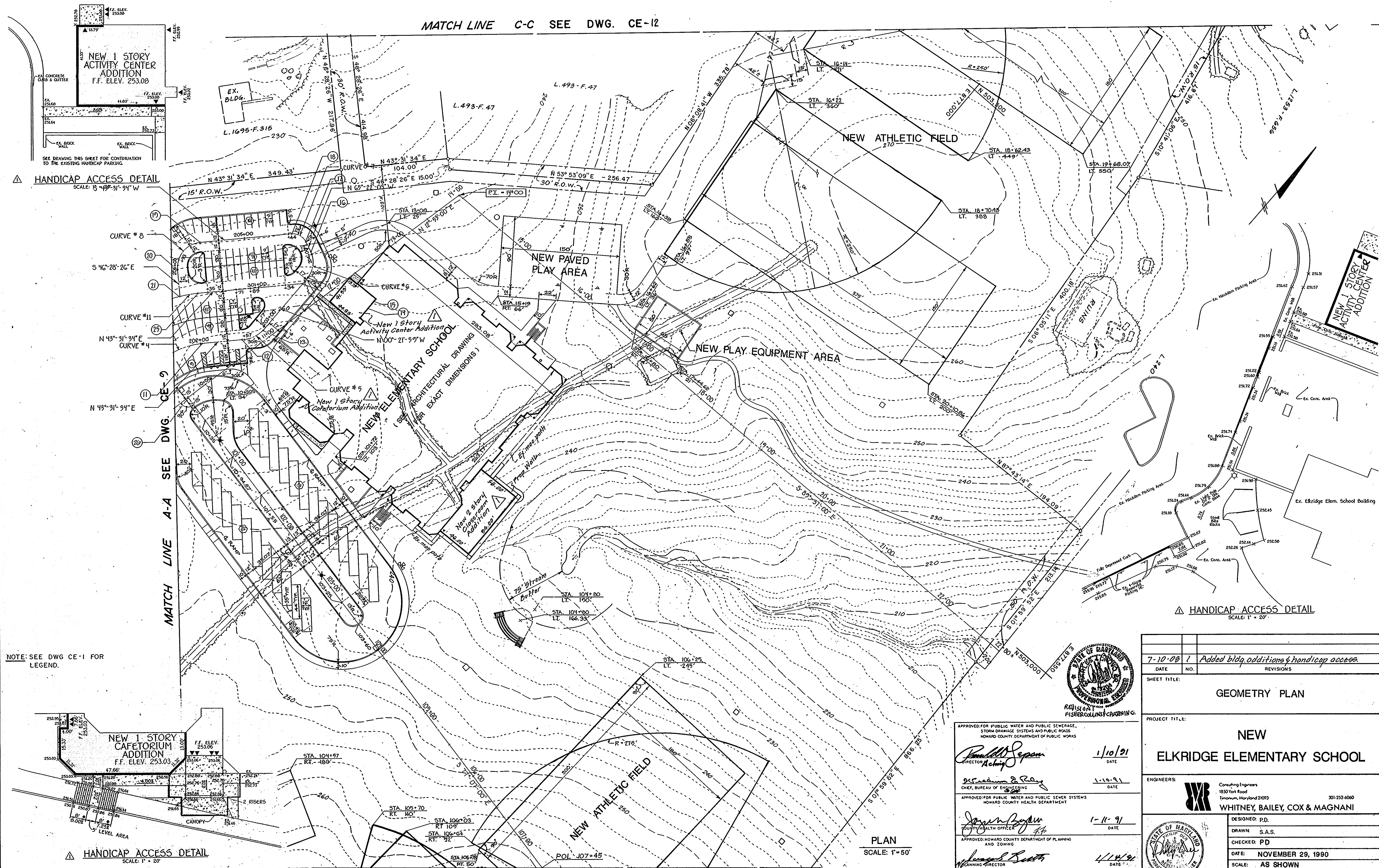
*James W. Smith*  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT 1/14/91 DATE

*Mark L. D'Amico*  
 1/14/91 DATE

NOTE: FOR ALIGNMENT & LAYOUT OF ROAD WIDENING (ACCELERATION & DECELERATION LANES) SEE PUBLIC WORKS PNG. FOR MONTGOMERY RD.

PLAN  
 SCALE: 1" = 50'

MATCH LINE C-C SEE DWG. CE-12



NOTE: SEE DWG CE-1 FOR LEGEND.

△ HANDICAP ACCESS DETAIL  
SCALE: 1" = 20'

△ HANDICAP ACCESS DETAIL  
SCALE: 1" = 20'

MATCH LINE B-B SEE DWG. CE-11

SEE SHEET CE-9 FOR CURVE DATA TABLE & FOR BASELINE STATIONING CHART

PLAN  
SCALE: 1" = 50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Sepan*  
DIRECTOR

1/10/91  
DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

*James R. Ray*  
CHIEF, BUREAU OF ENGINEERING

1-10-91  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
AND ZONING

*James R. Ray*  
COUNTY HEALTH OFFICER

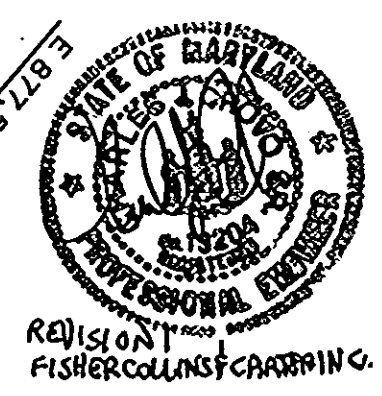
1-11-91  
DATE

*William J. Smith*  
PLANNING DIRECTOR

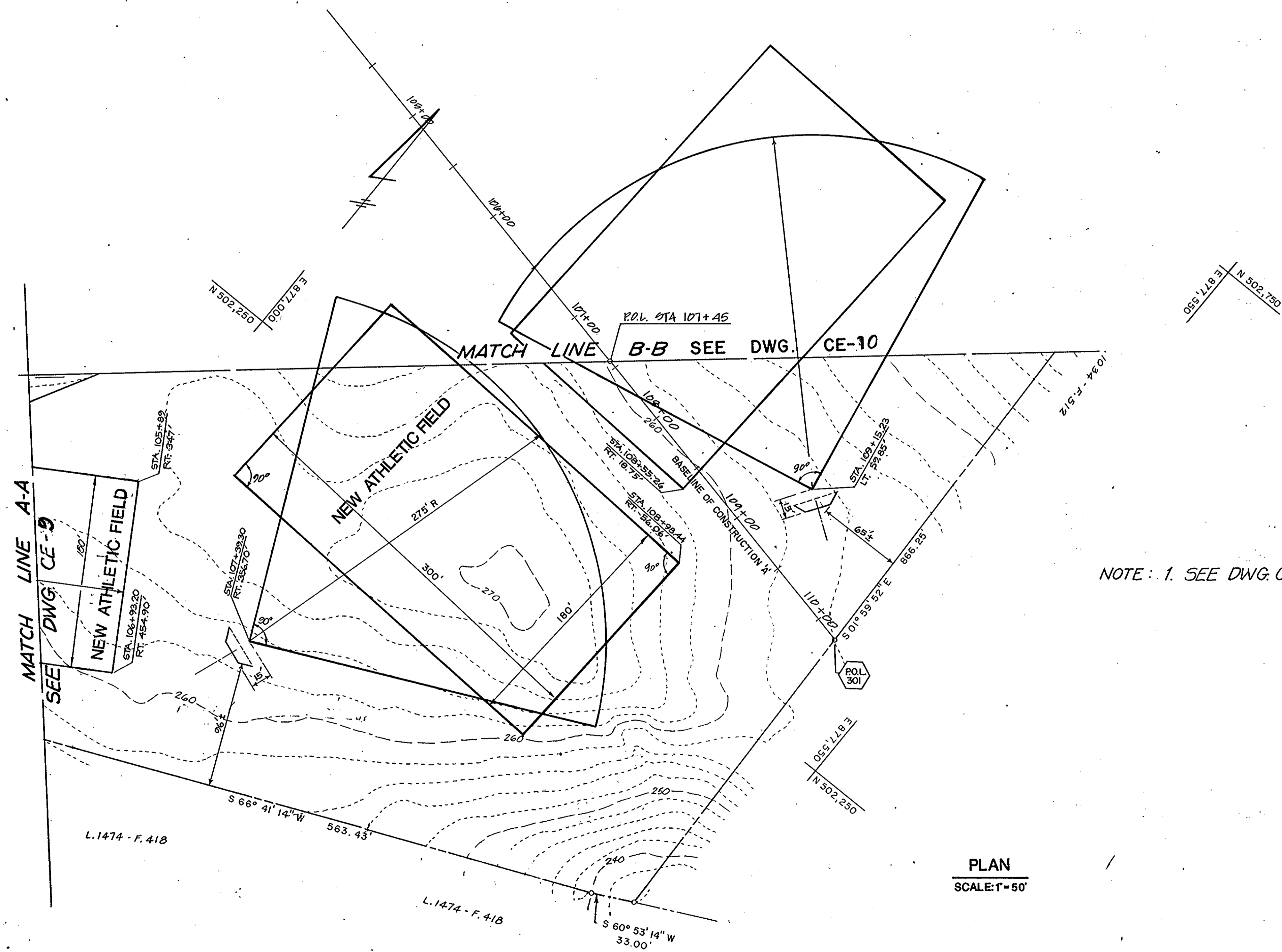
1/14/91  
DATE

*David V. A. Taylor*  
CHIEF, DIVISION OF COMMUNITY  
PLANNING AND LAND DEVELOPMENT

1/14/91  
DATE



DATE	7-10-88	REVISIONS	Added bldg. additions & handicap access.
SHEET TITLE: <b>GEOMETRY PLAN</b>			
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>			
ENGINEERS:	Consulting Engineers 1850 Tort Road Timonium, Maryland 21093 301-252-6000 <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED: P.D.	DRAWN: S.A.S.		
CHECKED: PD	DATE: NOVEMBER 29, 1990		
SCALE: AS SHOWN	DRAWING NO.: CE-10		
	11/29/90		



NOTE: 1. SEE DWG. CE-1 FOR LEGEND

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Sepp* 1/10/91  
DIRECTOR Acting DATE

*William B. Ray* 1-10-91  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS AND ZONING  
HOWARD COUNTY HEALTH DEPARTMENT

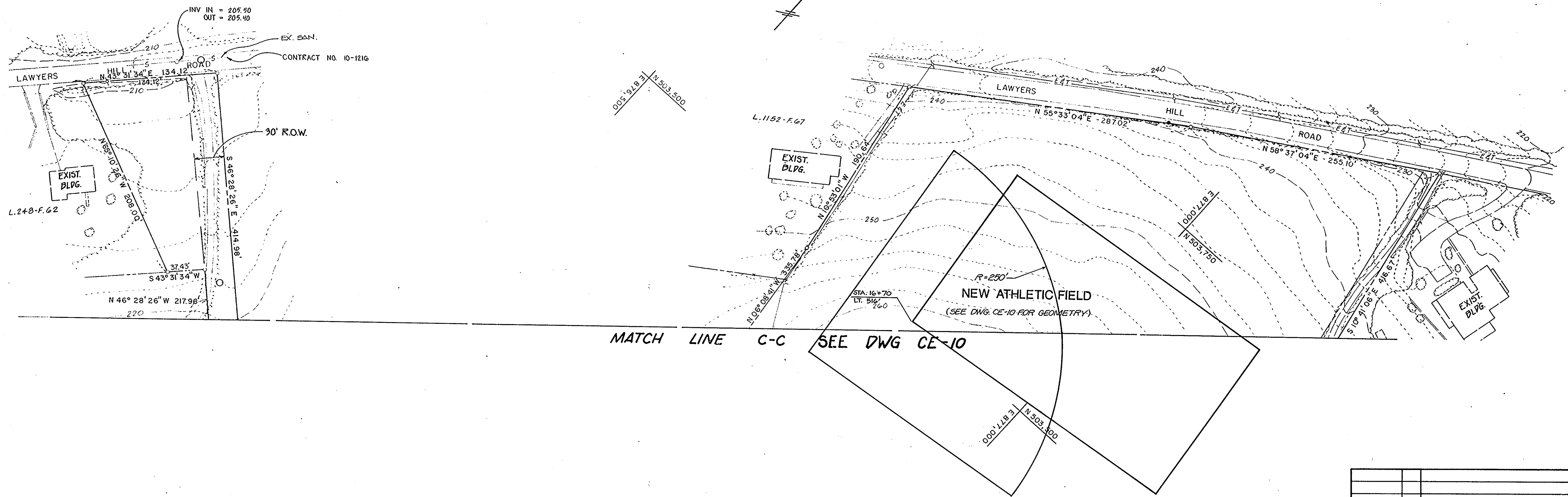
*James W. Boyden* 1-11-91  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James W. Boyden* 1/11/91  
DIRECTOR DATE

*Frank C. McLaughlin* 1/11/91  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

DATE	NO.	REVISIONS
SHEET TITLE: <b>GEOMETRY PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED: <i>[Signature]</i>		
DRAWN: <i>[Signature]</i>		
CHECKED: <b>PD</b>		
DATE: <b>NOVEMBER 29, 1990</b>		
SCALE: <b>AS SHOWN</b>		
DRAWING NO.: <b>CE-11</b>		
89972 11/29/90		



NOTE: 1. SEE DWG. CE-1 FOR LEGEND

PLAN  
SCALE: 1" = 50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Seppan* 1/10/91  
DIRECTOR ACTING DATE

*William E. Kelly* 1-10-91  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

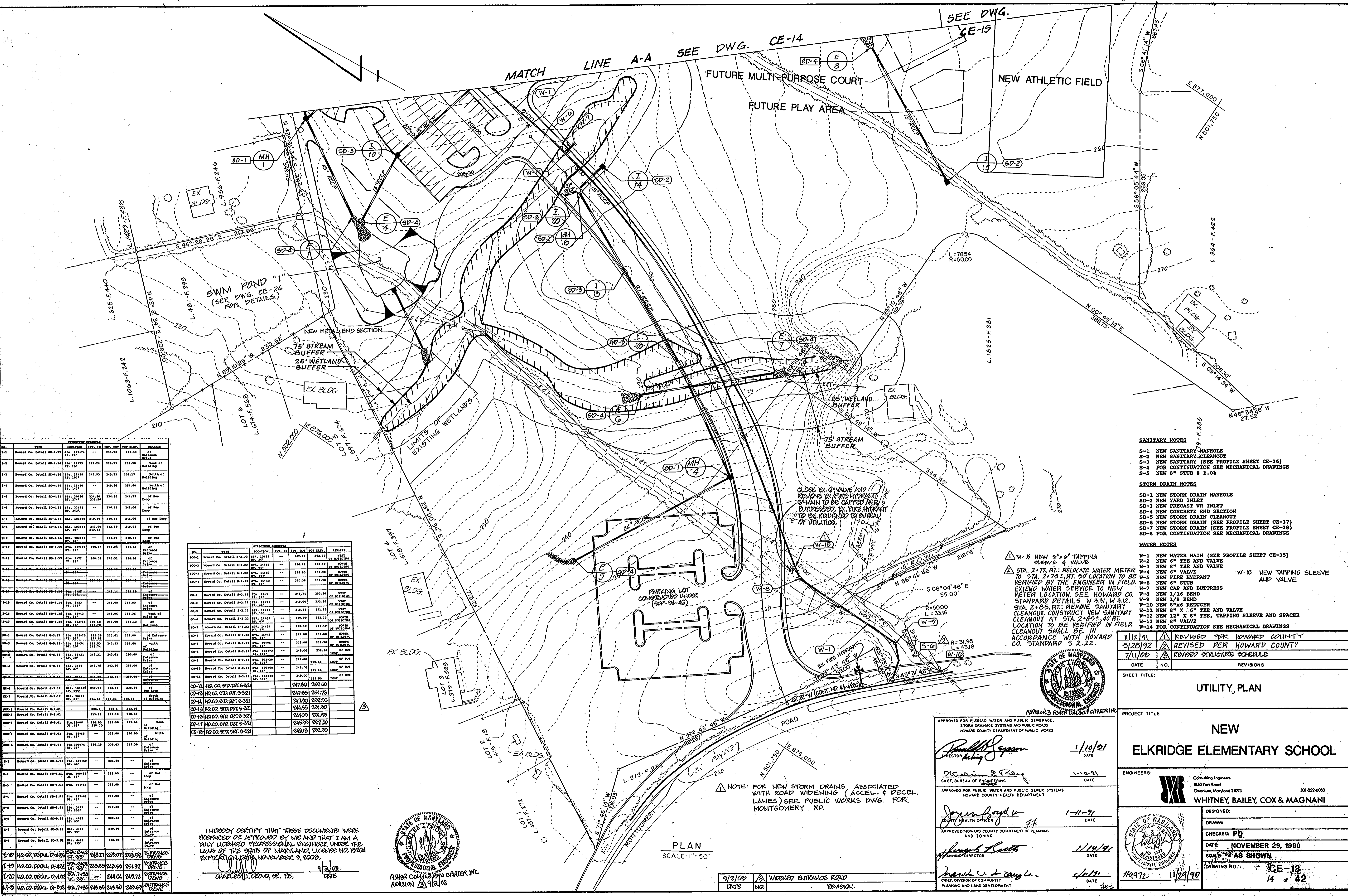
*James W. Boylston* 1-11-91  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
AND ZONING

*Howard Smith* 1/14/91  
PLANNING DIRECTOR DATE

*Harold D. Young* 1/14/91  
CHIEF, DIVISION OF COMMUNITY  
PLANNING AND LAND DEVELOPMENT DATE

11-91	REVISED
DATE	NO. REVISIONS
SHEET TITLE: GEOMETRY PLAN	
PROJECT TITLE: NEW ELKRIDGE ELEMENTARY SCHOOL	
ENGINEERS: Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-6000 WHITNEY, BAILEY, COX & MAGNANI	
DESIGNED:	
DRAWN:	
CHECKED: PD	
DATE: NOVEMBER 29, 1990	
SCALE: AS SHOWN	
DRAWING NO.:	CE-12 13 of 42



NO.	TYPE	LOCATION	REV.	DATE	TOP ELEV.	REMARKS
1-1	Howard Co. Detail SD-4.13	Sta. 217.00	---	---	217.00	Entrance of
1-2	Howard Co. Detail SD-4.14	Sta. 217.21	---	---	217.21	West of
1-3	Howard Co. Detail SD-4.15	Sta. 217.42	---	---	217.42	South of
1-4	Howard Co. Detail SD-4.16	Sta. 217.63	---	---	217.63	South of
1-5	Howard Co. Detail SD-4.17	Sta. 217.84	---	---	217.84	of the
1-6	Howard Co. Detail SD-4.18	Sta. 218.05	---	---	218.05	of the
1-7	Howard Co. Detail SD-4.19	Sta. 218.26	---	---	218.26	of the
1-8	Howard Co. Detail SD-4.20	Sta. 218.47	---	---	218.47	of the
1-9	Howard Co. Detail SD-4.21	Sta. 218.68	---	---	218.68	of the
1-10	Howard Co. Detail SD-4.22	Sta. 218.89	---	---	218.89	of the
1-11	Howard Co. Detail SD-4.23	Sta. 219.10	---	---	219.10	of the
1-12	Howard Co. Detail SD-4.24	Sta. 219.31	---	---	219.31	of the
1-13	Howard Co. Detail SD-4.25	Sta. 219.52	---	---	219.52	of the
1-14	Howard Co. Detail SD-4.26	Sta. 219.73	---	---	219.73	of the
1-15	Howard Co. Detail SD-4.27	Sta. 219.94	---	---	219.94	of the
1-16	Howard Co. Detail SD-4.28	Sta. 220.15	---	---	220.15	of the
1-17	Howard Co. Detail SD-4.29	Sta. 220.36	---	---	220.36	of the
1-18	Howard Co. Detail SD-4.30	Sta. 220.57	---	---	220.57	of the
1-19	Howard Co. Detail SD-4.31	Sta. 220.78	---	---	220.78	of the
1-20	Howard Co. Detail SD-4.32	Sta. 220.99	---	---	220.99	of the
1-21	Howard Co. Detail SD-4.33	Sta. 221.20	---	---	221.20	of the
1-22	Howard Co. Detail SD-4.34	Sta. 221.41	---	---	221.41	of the
1-23	Howard Co. Detail SD-4.35	Sta. 221.62	---	---	221.62	of the
1-24	Howard Co. Detail SD-4.36	Sta. 221.83	---	---	221.83	of the
1-25	Howard Co. Detail SD-4.37	Sta. 222.04	---	---	222.04	of the
1-26	Howard Co. Detail SD-4.38	Sta. 222.25	---	---	222.25	of the
1-27	Howard Co. Detail SD-4.39	Sta. 222.46	---	---	222.46	of the
1-28	Howard Co. Detail SD-4.40	Sta. 222.67	---	---	222.67	of the
1-29	Howard Co. Detail SD-4.41	Sta. 222.88	---	---	222.88	of the
1-30	Howard Co. Detail SD-4.42	Sta. 223.09	---	---	223.09	of the
1-31	Howard Co. Detail SD-4.43	Sta. 223.30	---	---	223.30	of the
1-32	Howard Co. Detail SD-4.44	Sta. 223.51	---	---	223.51	of the
1-33	Howard Co. Detail SD-4.45	Sta. 223.72	---	---	223.72	of the
1-34	Howard Co. Detail SD-4.46	Sta. 223.93	---	---	223.93	of the
1-35	Howard Co. Detail SD-4.47	Sta. 224.14	---	---	224.14	of the
1-36	Howard Co. Detail SD-4.48	Sta. 224.35	---	---	224.35	of the
1-37	Howard Co. Detail SD-4.49	Sta. 224.56	---	---	224.56	of the
1-38	Howard Co. Detail SD-4.50	Sta. 224.77	---	---	224.77	of the
1-39	Howard Co. Detail SD-4.51	Sta. 224.98	---	---	224.98	of the
1-40	Howard Co. Detail SD-4.52	Sta. 225.19	---	---	225.19	of the
1-41	Howard Co. Detail SD-4.53	Sta. 225.40	---	---	225.40	of the
1-42	Howard Co. Detail SD-4.54	Sta. 225.61	---	---	225.61	of the
1-43	Howard Co. Detail SD-4.55	Sta. 225.82	---	---	225.82	of the
1-44	Howard Co. Detail SD-4.56	Sta. 226.03	---	---	226.03	of the
1-45	Howard Co. Detail SD-4.57	Sta. 226.24	---	---	226.24	of the
1-46	Howard Co. Detail SD-4.58	Sta. 226.45	---	---	226.45	of the
1-47	Howard Co. Detail SD-4.59	Sta. 226.66	---	---	226.66	of the
1-48	Howard Co. Detail SD-4.60	Sta. 226.87	---	---	226.87	of the
1-49	Howard Co. Detail SD-4.61	Sta. 227.08	---	---	227.08	of the
1-50	Howard Co. Detail SD-4.62	Sta. 227.29	---	---	227.29	of the
1-51	Howard Co. Detail SD-4.63	Sta. 227.50	---	---	227.50	of the
1-52	Howard Co. Detail SD-4.64	Sta. 227.71	---	---	227.71	of the
1-53	Howard Co. Detail SD-4.65	Sta. 227.92	---	---	227.92	of the
1-54	Howard Co. Detail SD-4.66	Sta. 228.13	---	---	228.13	of the
1-55	Howard Co. Detail SD-4.67	Sta. 228.34	---	---	228.34	of the
1-56	Howard Co. Detail SD-4.68	Sta. 228.55	---	---	228.55	of the
1-57	Howard Co. Detail SD-4.69	Sta. 228.76	---	---	228.76	of the
1-58	Howard Co. Detail SD-4.70	Sta. 228.97	---	---	228.97	of the
1-59	Howard Co. Detail SD-4.71	Sta. 229.18	---	---	229.18	of the
1-60	Howard Co. Detail SD-4.72	Sta. 229.39	---	---	229.39	of the
1-61	Howard Co. Detail SD-4.73	Sta. 229.60	---	---	229.60	of the
1-62	Howard Co. Detail SD-4.74	Sta. 229.81	---	---	229.81	of the
1-63	Howard Co. Detail SD-4.75	Sta. 230.02	---	---	230.02	of the
1-64	Howard Co. Detail SD-4.76	Sta. 230.23	---	---	230.23	of the
1-65	Howard Co. Detail SD-4.77	Sta. 230.44	---	---	230.44	of the
1-66	Howard Co. Detail SD-4.78	Sta. 230.65	---	---	230.65	of the
1-67	Howard Co. Detail SD-4.79	Sta. 230.86	---	---	230.86	of the
1-68	Howard Co. Detail SD-4.80	Sta. 231.07	---	---	231.07	of the
1-69	Howard Co. Detail SD-4.81	Sta. 231.28	---	---	231.28	of the
1-70	Howard Co. Detail SD-4.82	Sta. 231.49	---	---	231.49	of the
1-71	Howard Co. Detail SD-4.83	Sta. 231.70	---	---	231.70	of the
1-72	Howard Co. Detail SD-4.84	Sta. 231.91	---	---	231.91	of the
1-73	Howard Co. Detail SD-4.85	Sta. 232.12	---	---	232.12	of the
1-74	Howard Co. Detail SD-4.86	Sta. 232.33	---	---	232.33	of the
1-75	Howard Co. Detail SD-4.87	Sta. 232.54	---	---	232.54	of the
1-76	Howard Co. Detail SD-4.88	Sta. 232.75	---	---	232.75	of the
1-77	Howard Co. Detail SD-4.89	Sta. 232.96	---	---	232.96	of the
1-78	Howard Co. Detail SD-4.90	Sta. 233.17	---	---	233.17	of the
1-79	Howard Co. Detail SD-4.91	Sta. 233.38	---	---	233.38	of the
1-80	Howard Co. Detail SD-4.92	Sta. 233.59	---	---	233.59	of the
1-81	Howard Co. Detail SD-4.93	Sta. 233.80	---	---	233.80	of the
1-82	Howard Co. Detail SD-4.94	Sta. 234.01	---	---	234.01	of the
1-83	Howard Co. Detail SD-4.95	Sta. 234.22	---	---	234.22	of the
1-84	Howard Co. Detail SD-4.96	Sta. 234.43	---	---	234.43	of the
1-85	Howard Co. Detail SD-4.97	Sta. 234.64	---	---	234.64	of the
1-86	Howard Co. Detail SD-4.98	Sta. 234.85	---	---	234.85	of the
1-87	Howard Co. Detail SD-4.99	Sta. 235.06	---	---	235.06	of the
1-88	Howard Co. Detail SD-4.100	Sta. 235.27	---	---	235.27	of the

SWM POND "1"  
(SEE DWG. CE-26  
FOR DETAILS)

- SANITARY NOTES**
- S-1 NEW SANITARY MANHOLE
  - S-2 NEW SANITARY CLEANOUT
  - S-3 NEW SANITARY (SEE PROFILE SHEET CE-36)
  - S-4 FOR CONTINUATION SEE MECHANICAL DRAWINGS
  - S-5 NEW 8" STUB @ 1.04'
- STORM DRAIN NOTES**
- SD-1 NEW STORM DRAIN MANHOLE
  - SD-2 NEW YARD INLET
  - SD-3 NEW PRECAST WR INLET
  - SD-4 NEW CONCRETE END SECTION
  - SD-5 NEW STORM DRAIN CLEANOUT
  - SD-6 NEW STORM DRAIN (SEE PROFILE SHEET CE-37)
  - SD-7 NEW STORM DRAIN (SEE PROFILE SHEET CE-38)
  - SD-8 FOR CONTINUATION SEE MECHANICAL DRAWINGS
- WATER NOTES**
- W-1 NEW WATER MAIN (SEE PROFILE SHEET CE-35)
  - W-2 NEW 6" TEE AND VALVE
  - W-3 NEW 8" TEE AND VALVE
  - W-4 NEW 6" VALVE
  - W-5 NEW FIRE HYDRANT
  - W-6 NEW 8" STUB
  - W-7 NEW CAP AND BUTTRESS
  - W-8 NEW 1/2" BEND
  - W-9 NEW 3/4" BEND
  - W-10 NEW 5"X6" REDUCER
  - W-11 NEW 8" X 6" TEE AND VALVE
  - W-12 NEW 12" X 8" TEE, TAPPING SLEEVE AND SPACER
  - W-13 NEW 8" VALVE
  - W-14 FOR CONTINUATION SEE MECHANICAL DRAWINGS
  - W-15 NEW TAPPING SLEEVE AND VALVE

W-15 NEW 8" X 6" TAPPING SLEEVE & VALVE  
 STA. 2+77.5, RT. 50' LOCATION TO BE VERIFIED BY THE ENGINEER IN FIELD. EXTEND WATER SERVICE TO NEW METER LOCATION SEE HOWARD CO. STANDPAP 5 2.22.  
 STA. 2+85.0, RT. REMOVE SANITARY CLEANOUT. CONSTRUCT NEW SANITARY CLEANOUT AT STA. 2+85.40 RT. LOCATION TO BE VERIFIED IN FIELD. CLEANOUT SHALL BE IN ACCORDANCE WITH HOWARD CO. STANDPAP 5 2.22.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19204 EXPIRATION DATE NOVEMBER 3, 2009.

CHARLES J. COOPER, PE  
 DATE 9/2/09



ASHBURN COX, KISSEL AND CARTER, INC.  
 REVISION 9/2/09

PLAN  
 SCALE 1" = 50'

NOTE: FOR NEW STORM DRAINS ASSOCIATED WITH ROAD WIDENING (ACCEL. & DECEL. LANES) SEE PUBLIC WORKS DWG. FOR MONTGOMERY, RP.

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Richard J. Spang*  
 DIRECTOR  
 DATE 1/10/21

*Debra Ann & Craig*  
 CHIEF, BUREAU OF ENGINEERING  
 DATE 1-10-21

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

*James Boyd*  
 COUNTY HEALTH OFFICER  
 DATE 1-11-21

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James B. Smith*  
 PLANNING DIRECTOR  
 DATE 1/14/21

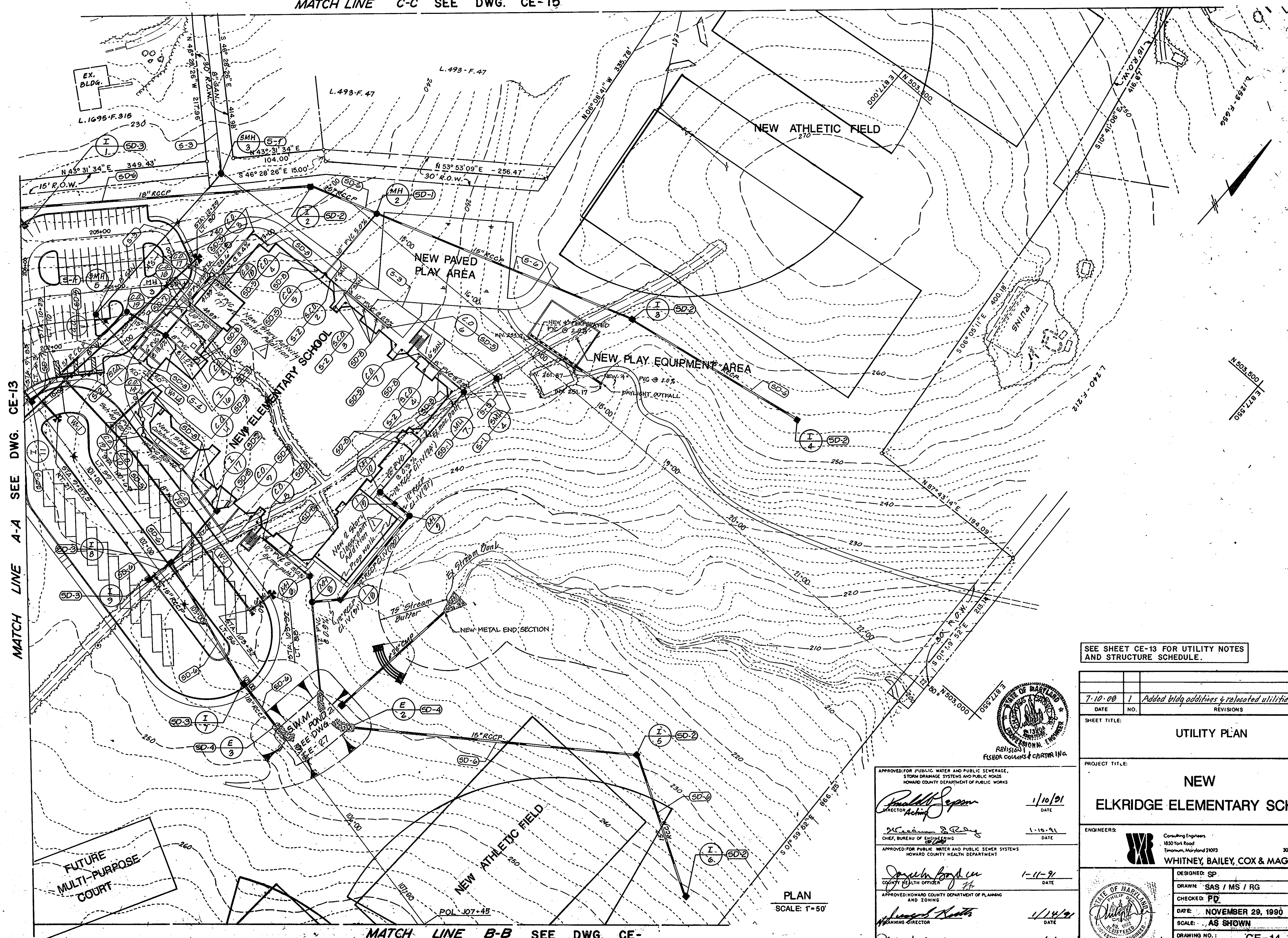
*David C. & Craig L.*  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
 DATE 1/15/21

11/12/19	REVISION PER HOWARD COUNTY	
5/28/19	REVISION PER HOWARD COUNTY	
7/1/08	REVISED STRUCTURE SCHEDULE	
DATE	NO.	REVISIONS
SHEET TITLE: <b>UTILITY PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED: _____		
DRAWN: _____		
CHECKED: <b>PD</b>		
DATE: <b>NOVEMBER 29, 1990</b>		
SCALE: <b>AS SHOWN</b>		
DRAWING NO.: <b>CE-13</b>		
14 of 42		

MATCH LINE C-C SEE DWG. CE-15

MATCH LINE A-A SEE DWG. CE-13

NOTE: SEE DWG. CE-1 FOR LEGEND.



MATCH LINE B-B SEE DWG. CE-

PLAN  
SCALE: 1"=50'

SEE SHEET CE-13 FOR UTILITY NOTES AND STRUCTURE SCHEDULE.

DATE	NO.	REVISIONS
7-10-00	1	Added bldg additions & relocated utilities.

SHEET TITLE:  
**UTILITY PLAN**

PROJECT TITLE:  
**NEW ELKRIDGE ELEMENTARY SCHOOL**

ENGINEERS:  
**WHITNEY, BAILEY, COX & MAGNANI**  
Consulting Engineers  
1850 York Road  
Timonium, Maryland 21093  
301-252-6060

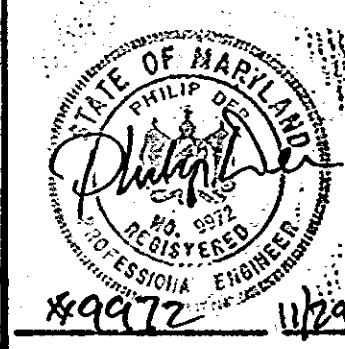
DESIGNER: SP  
DRAWN: SAS / MS / RG  
CHECKED: PD  
DATE: NOVEMBER 29, 1990  
SCALE: AS SHOWN  
DRAWING NO.: CE-14  
15 of 42

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Donald J. Sappan*  
DIRECTOR  
DATE: 1/10/91

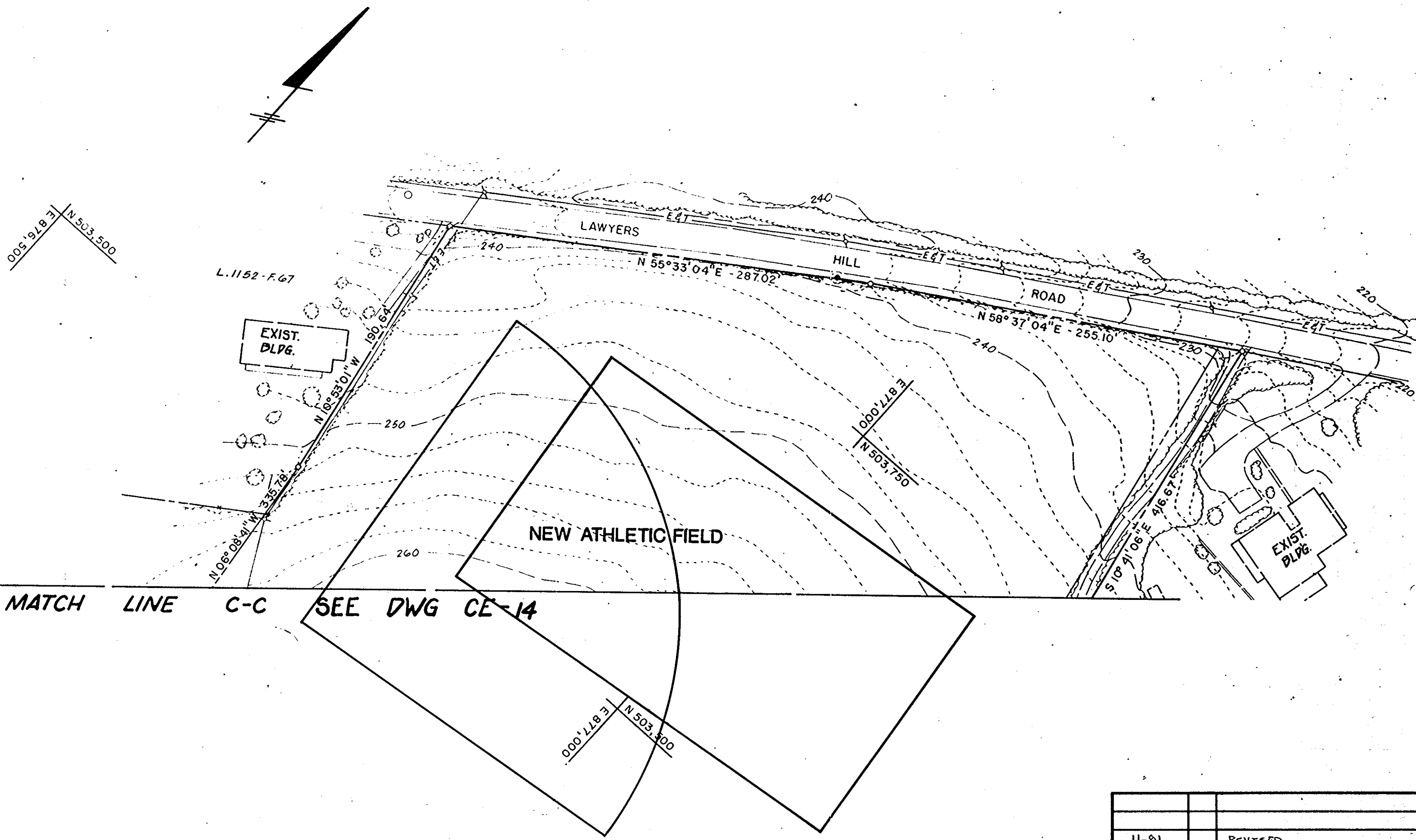
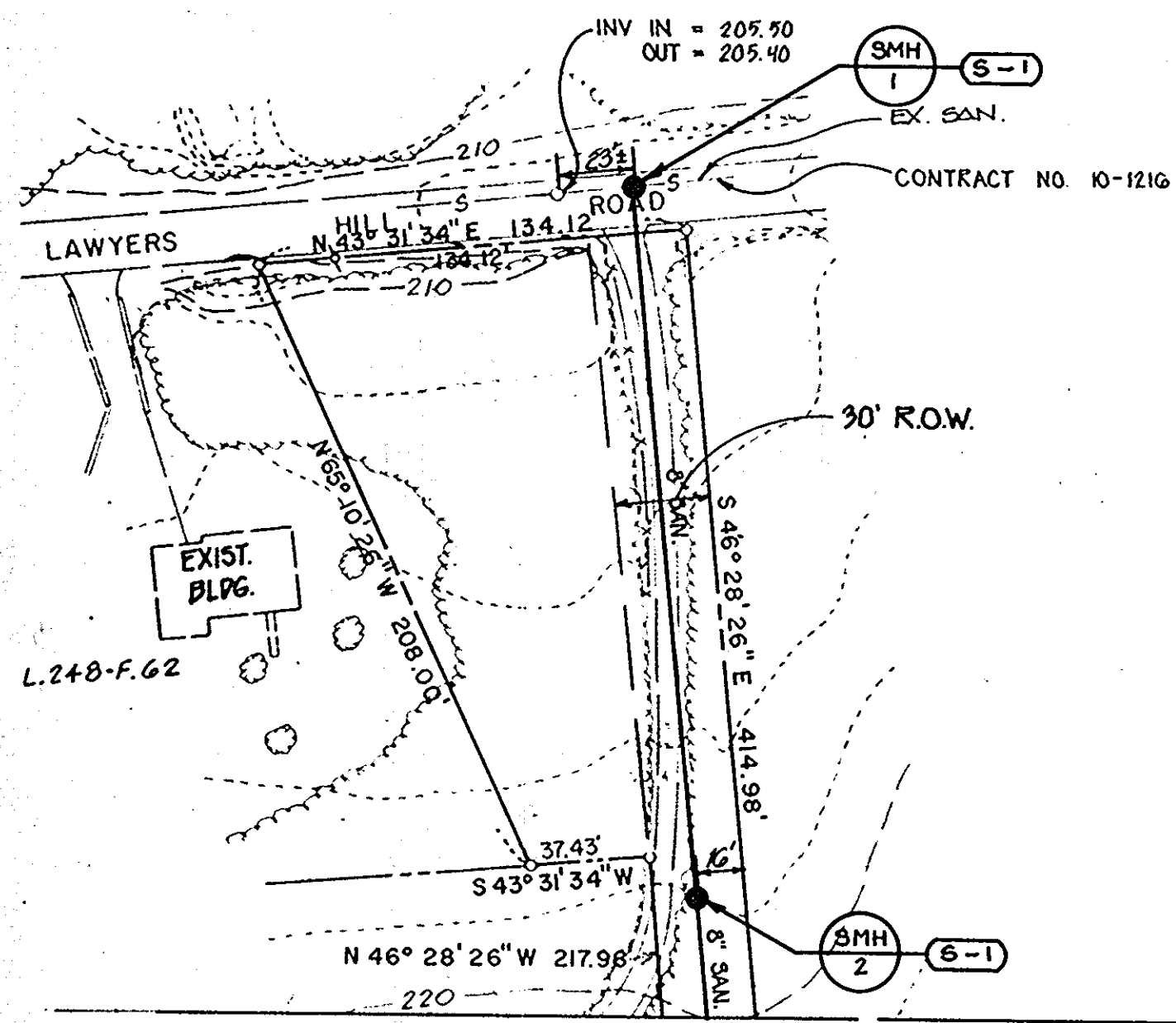
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT  
*James H. Boyd*  
COUNTY HEALTH OFFICER  
DATE: 1-11-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*James H. Boyd*  
PLANNING DIRECTOR  
DATE: 1/14/91

*Mark S. Campbell*  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
DATE: 1/15/91



SDP-91-27



MATCH LINE C-C SEE DWG CE-14

NOTE: 1. SEE DWG. CE-1 FOR LEGEND

PLAN  
SCALE: 1" = 50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Saper*  
DIRECTOR  
DATE: 1/10/91

*Richard A. Roney*  
CHIEF, BUREAU OF ENGINEERING  
DATE: 1-10-91

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

*James W. Snyder*  
COUNTY HEALTH OFFICER  
DATE: 1-11-91

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING  
AND ZONING

*Edward J. Smith*  
PLANNING DIRECTOR  
DATE: 1/14/91

*Mark C. Taylor*  
CHIEF, DIVISION OF COMMUNITY  
PLANNING AND LAND DEVELOPMENT  
DATE: 1/15/91

11-91	REVISED
DATE	NO. REVISIONS
SHEET TITLE: <b>UTILITY PLAN</b>	
PROJECT TITLE: <b>NEW ELKCRIDGE ELEMENTARY SCHOOL</b>	
ENGINEERS: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b> Consulting Engineers 1550 York Road Dorham, Maryland 21073 301-252-0000	
DESIGNED: <i>WBC</i>	
DRAWN: <i>WBC</i>	
CHECKED: <i>PD</i>	
DATE: <b>NOVEMBER 29, 1990</b>	
SCALE: <b>AS SHOWN</b>	
DRAWING NO.: <b>CE-15</b>	



MATCH LINE A-A SEE DWG. CE-17

SEE DWG. CE-18

FUTURE MULTI-PURPOSE COURT

FUTURE PLAY AREA

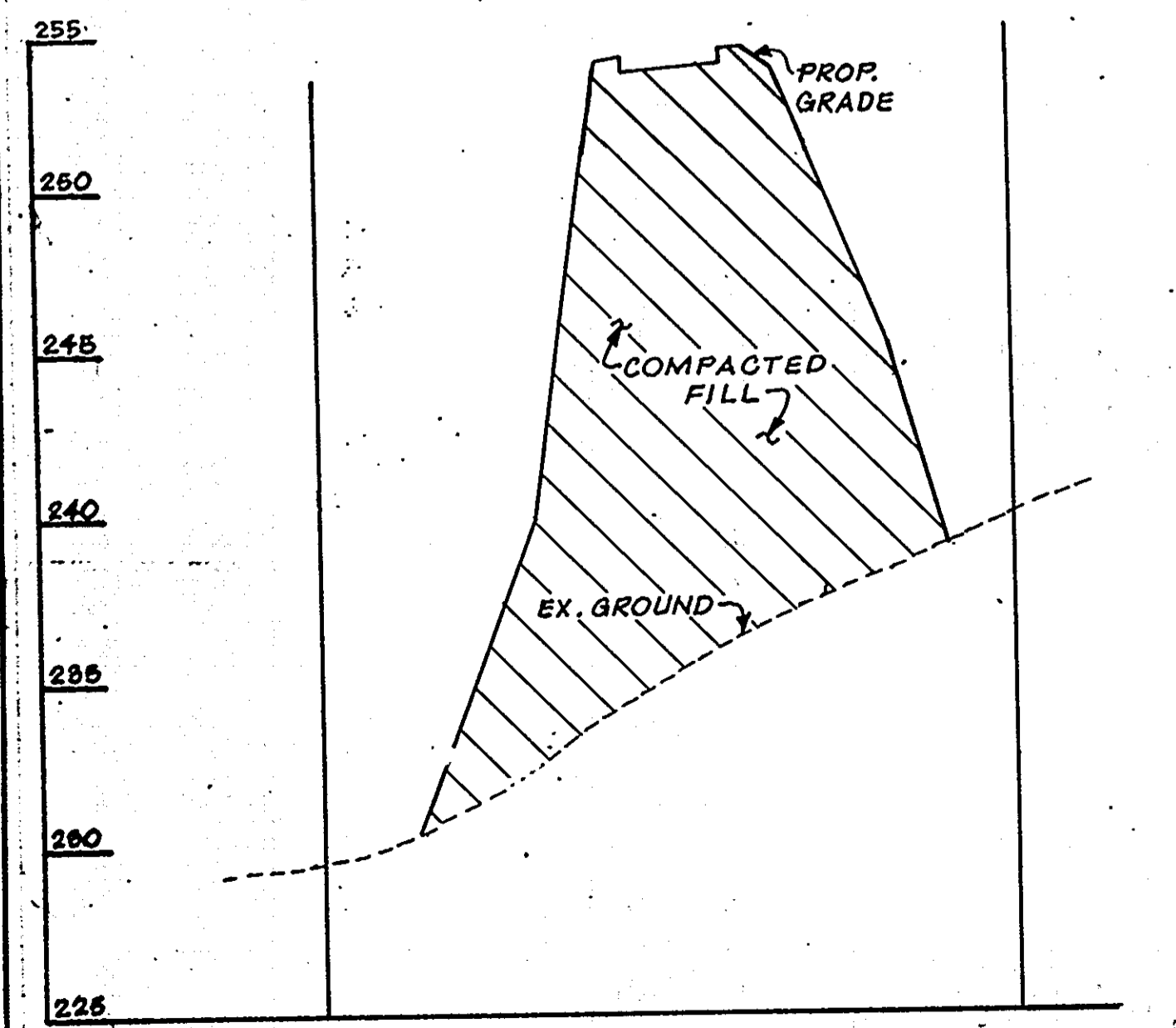
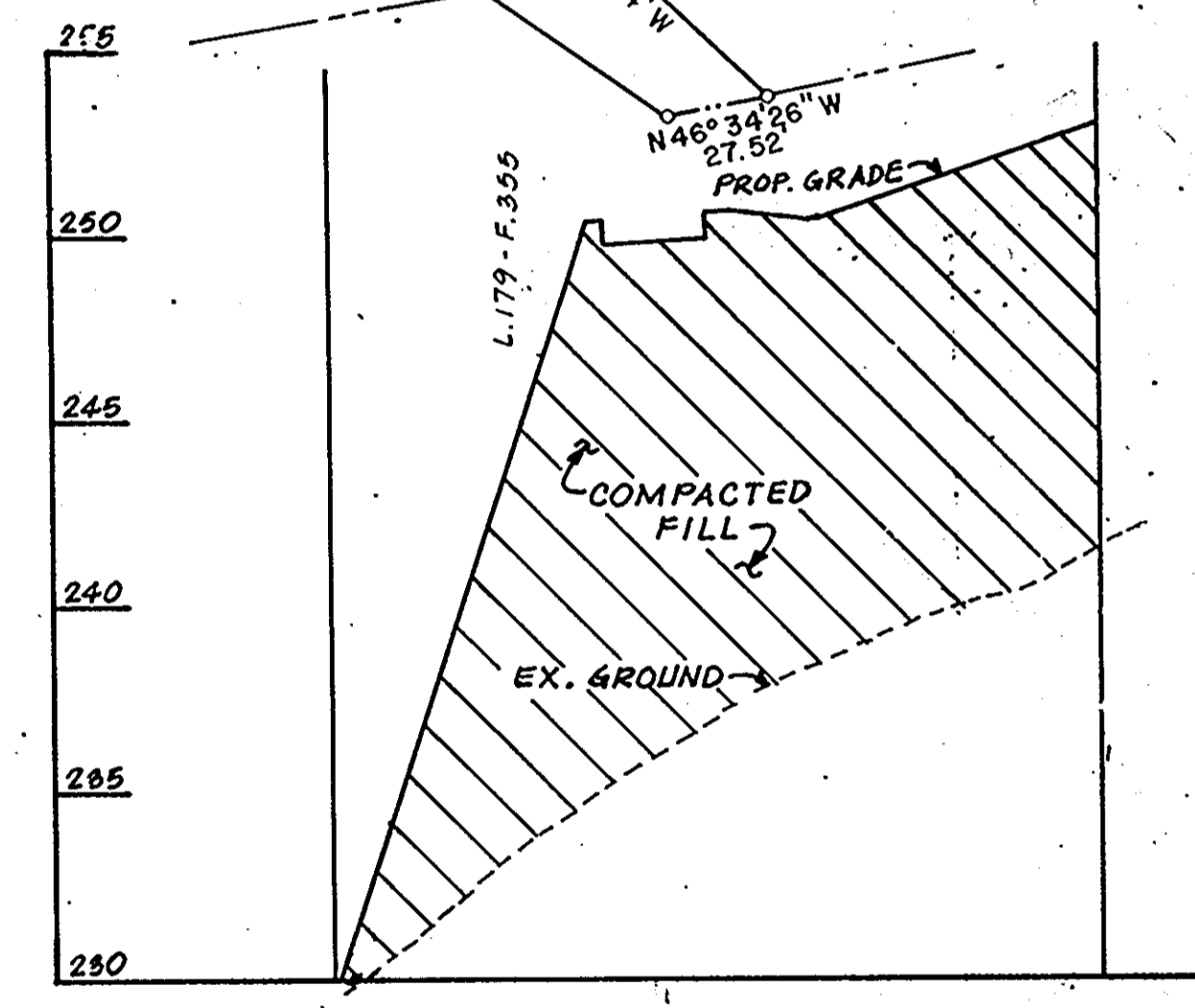
NEW ATHLETIC FIELD

AREA B

AREA A

**WETLANDS IMPACT DATA**

1. AREA OF WETLANDS IMPACTED
  - a) AREA A = 0.19 ACRES
  - b) AREA B = 0.17 ACRES
2. DRAINAGE AREA TO IMPACTED WETLANDS
  - a) AREA A = 4.26 ACRES
  - b) AREA B = 1.73 ACRES
3. VOLUME OF FILL
  - a) AREA A = 2690 CU. YDS.
  - b) AREA B = 2745 CU. YDS.



**PROFESSIONAL ENGINEER**  
 FISHER COLLINS AND PARTNERS, INC.  
 REVISION 2/17/08  
 NOTE: I, SEE SHEET CE-1 FOR LEGEND.  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19204, EXPIRATION DATE, NOVEMBER 3, 2009.  
 CHARLES J. ORLAND, P.E. 2/2/08 DATE

NOTE: FOR GRADING OF ROAD WIDENING (ACCELERATION & DECELERATION LANES) SEE PUBLIC WORKS DWG. FOR MONTGOMERY RD.

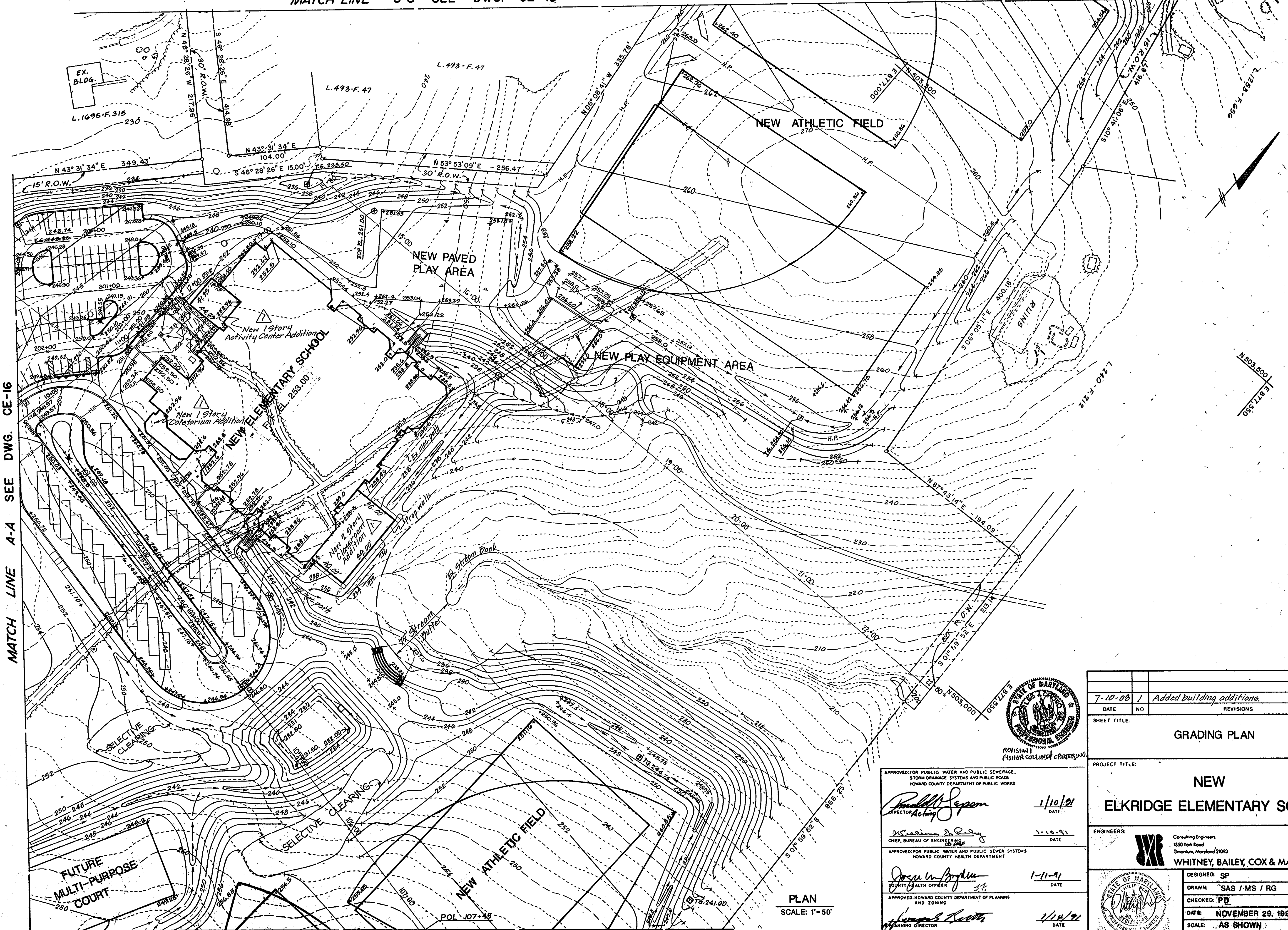
PLAN  
 SCALE: 1" = 50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Director: *Paul J. Sapon* 1/10/01 DATE  
 Chief, Bureau of Engineering: *Debra J. Reed* 1-10-01 DATE  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 Director: *Joseph A. Brubaker* 1-11-91 DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Director: *William H. Smith* 1/14/01 DATE  
 Chief, Division of Community Planning and Land Development: *Charles W. Taylor* 1/15/01 DATE

SECTION YY OVER WETLAND ALONG C OF SWALE  
 SCALE: 1" = 50' HORIZ.  
 1" = 5' VERT.

11/12/01	REVISION PER HOWARD COUNTY	
2/2/08	WIDENED ENTRANCE ROAD	
DATE	NO.	REVISIONS
SHEET TITLE: <b>GRADING PLAN AND WETLANDS IMPACT INFORMATION</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS:  Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-6050 <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED:  DRAWN: CHECKED: PD DATE: NOVEMBER 28, 1990 SCALE: AS SHOWN DRAWING NO.: CE-16 17 of 42		

MATCH LINE C-C SEE DWG. CE-19



NOTE: SEE DWG CE-1 FOR LEGEND.

MATCH LINE A-A SEE DWG. CE-16

MATCH LINE B-B SEE DWG. CE-18

PLAN  
SCALE: 1" = 50'

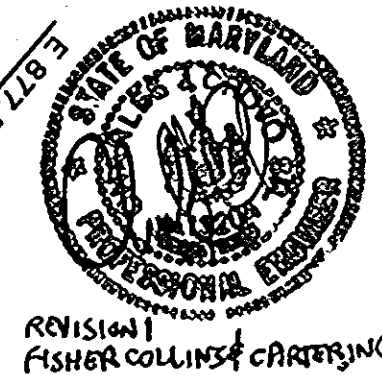
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Donald J. Sepp*  
DIRECTOR ACTING  
1/10/91  
DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT  
*William A. Ray*  
CHIEF, BUREAU OF ENGINEERING  
1/10/91  
DATE

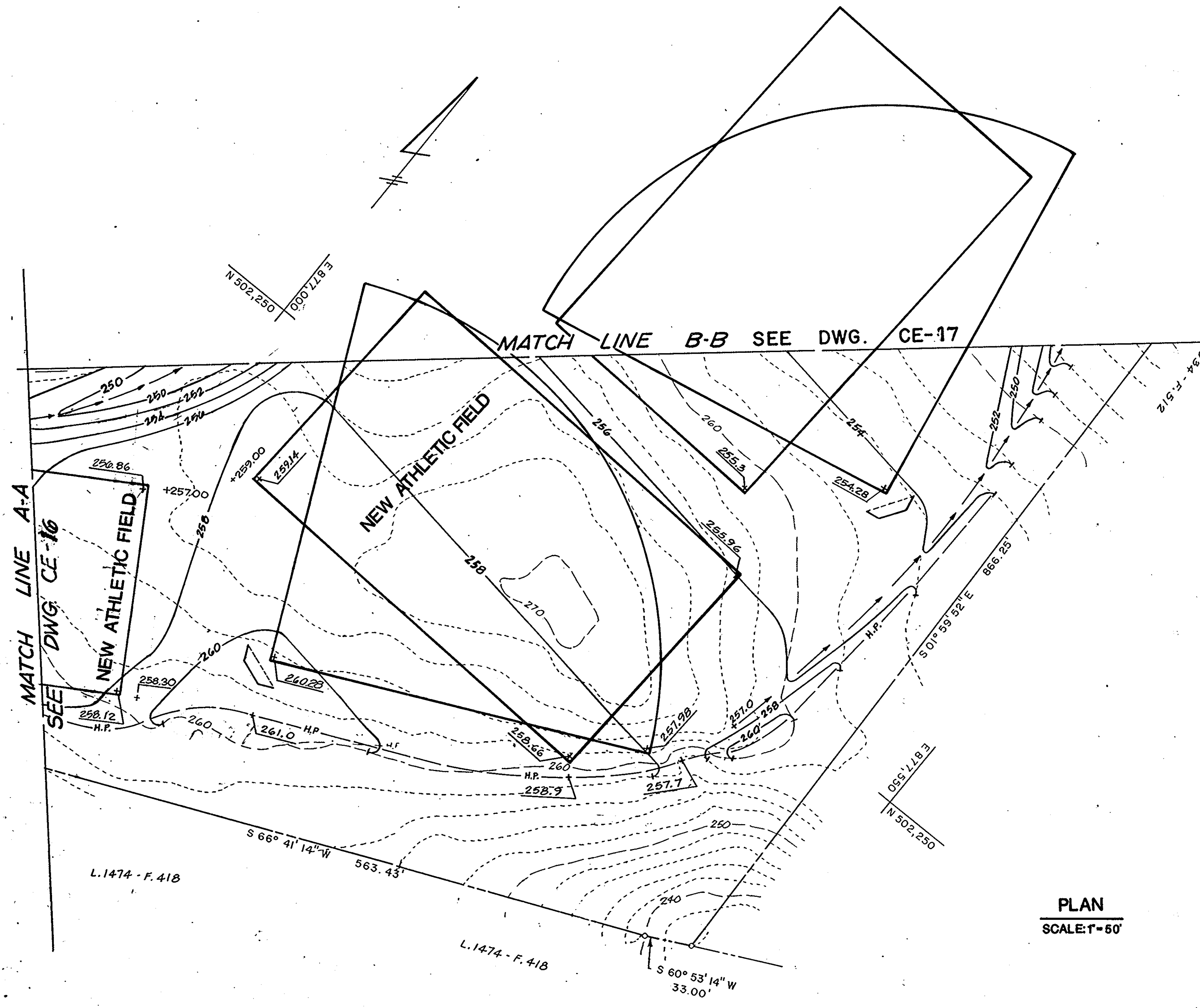
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*James W. Boyden*  
COUNTY HEALTH OFFICER  
1-11-91  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*James W. Boyden*  
PLANNING DIRECTOR  
1/10/91  
DATE

APPROVED: DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
*Heather L. Cayle*  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
1/10/91  
DATE



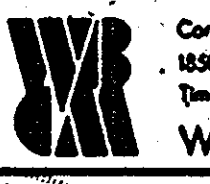
DATE	7-10-08	NO.	1	ADDED BUILDING ADDITIONS.
REVISIONS				
SHEET TITLE: GRADING PLAN				
PROJECT TITLE: NEW ELK RIDGE ELEMENTARY SCHOOL				
ENGINEERS: Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-6000 WHITNEY, BAILEY, COX & MAGNANI				
DESIGNED: SP				
DRAWN: SAS / MS / RG				
CHECKED: PD				
DATE: NOVEMBER 29, 1990				
SCALE: AS SHOWN				
DRAWING NO.: CE-17-18-42				



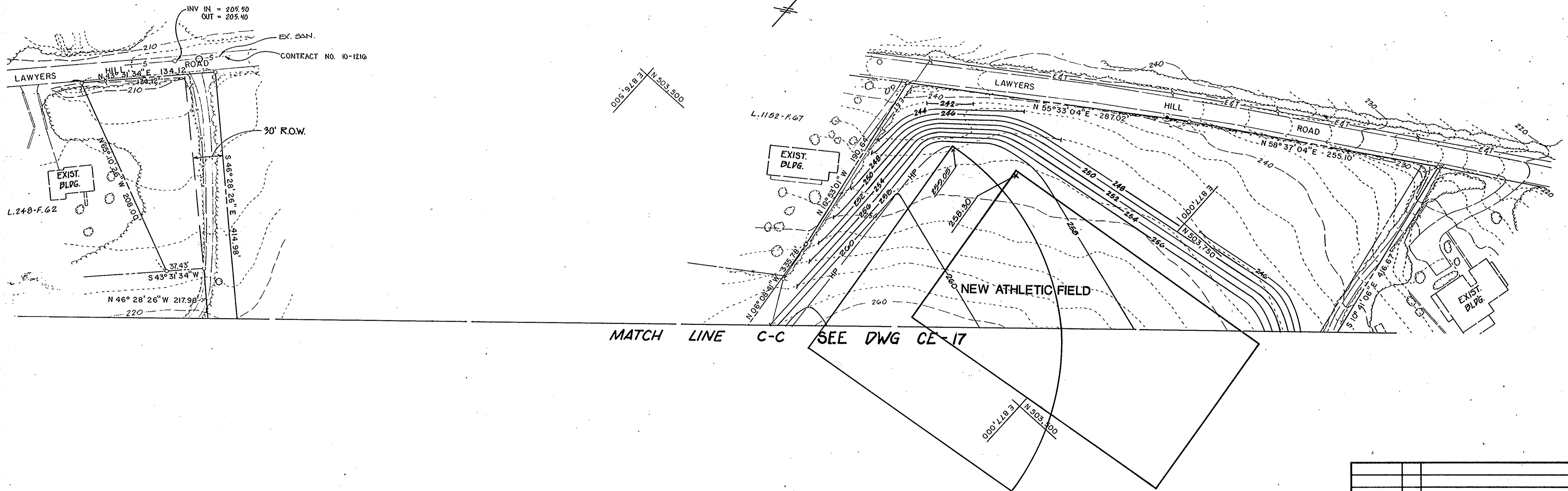
NOTE: 1. SEE DWG. CE-1 FOR LEGEND

PLAN  
SCALE: 1" = 50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	<i>Donald J. Sapon</i> DIRECTOR	1/10/91 DATE
CHIEF, BUREAU OF ENGINEERING	<i>Joseph A. Actis</i>	1-10-91 DATE
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT	<i>Joseph W. Baylun</i> COUNTY HEALTH OFFICER	1-11-91 DATE
APPROVED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	<i>James R. Smith</i> PLANNING DIRECTOR	1/14/91 DATE
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	<i>Harold R. Range</i>	1/14/91 DATE

DATE	NO.	REVISIONS
SHEET TITLE: <b>GRADING PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS:	 Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-4040 <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>	
DESIGNED:	<i>W.B. Bailey</i>	
DRAWN:	<i>W.B. Bailey</i>	
CHECKED:	<i>W.B. Bailey</i>	
DATE:	NOVEMBER 20, 1990	
SCALE:	AS SHOWN	
DRAWING NO.:	CE-17	

SDP-91-27



NOTE: 1. SEE DWG. CE-1 FOR LEGEND

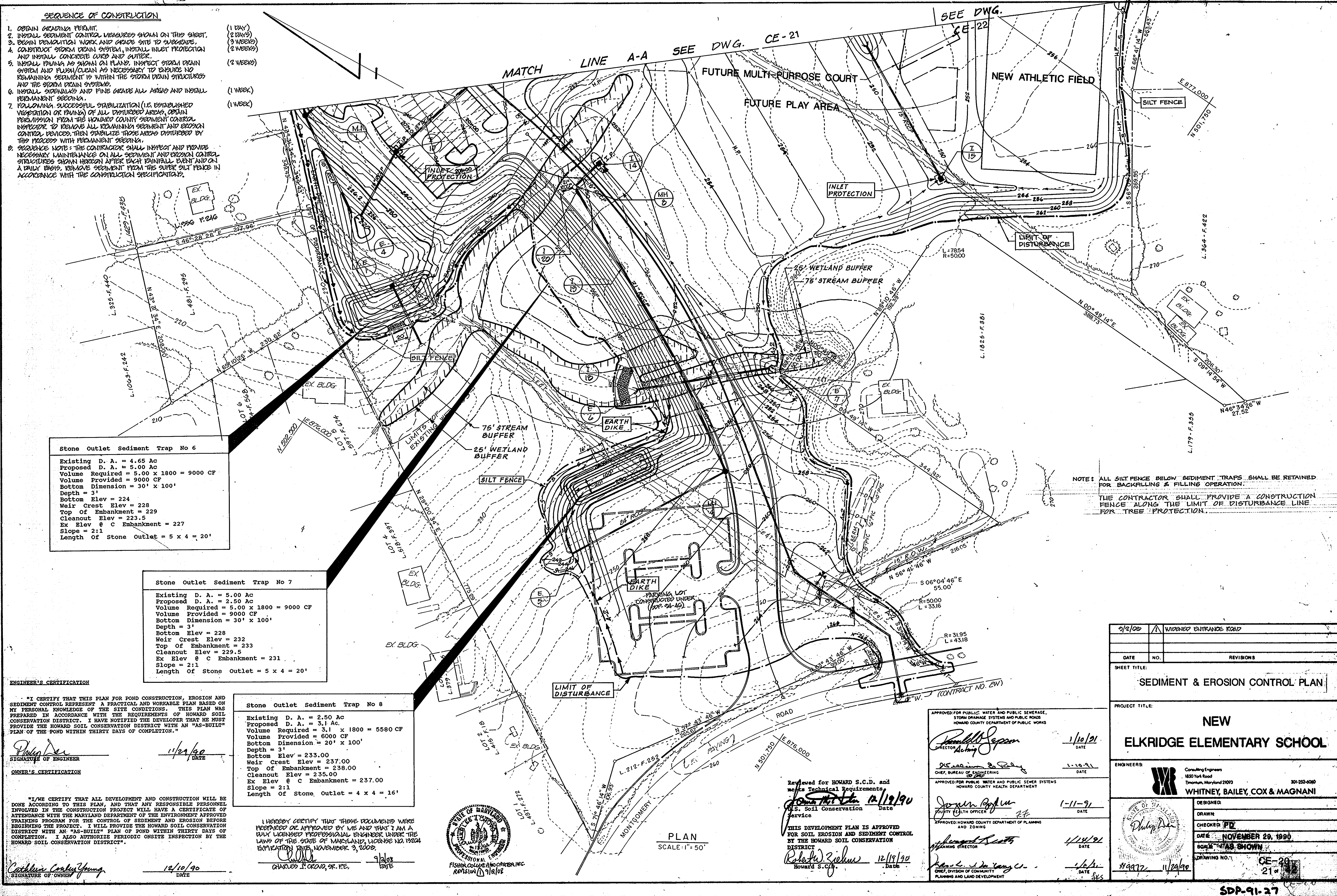
PLAN  
SCALE: 1" = 50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	<i>Donald J. Saper</i> DIRECTOR	1/10/91 DATE
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT	<i>Michael J. Ryan</i> CHIEF, BUREAU OF ENGINEERING	1-10-91 DATE
APPROVED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	<i>James R. ...</i> COUNTY HEALTH OFFICER	1-11-91 DATE
APPROVED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	<i>James R. ...</i> PLANNING DIRECTOR	1/14/91 DATE
APPROVED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	<i>David L. ...</i> CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT	1/15/91 DATE

DATE	NO.	REVISIONS
SHEET TITLE: <b>GRADING PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS:	 Consulting Engineers 1650 York Road Timonium, Maryland 21093 301-252-6000	
DESIGNED:	 4972 4290	
DRAWN:		
CHECKED:	PD	
DATE:	NOVEMBER 29, 1990	
SCALE:	AS SHOWN	
DRAWING NO. 1	CE-10 20	

**SEQUENCE OF CONSTRUCTION**

1. OBTAIN GRADING PERMIT. (1 DAY)
  2. INSTALL SEDIMENT CONTROL MEASURES SHOWN ON THIS SHEET. (2 DAYS)
  3. BEGIN DEMOLITION WORK AND GRADE SITE TO SUBGRADE. (3 WEEKS)
  4. CONSTRUCT STORM DRAIN SYSTEM, INSTALL INLET PROTECTION AND INSTALL CONCRETE CURB AND GUTTER. (2 WEEKS)
  5. INSTALL PAVING AS SHOWN ON PLAN. INSPECT STORM DRAIN SYSTEM AND FLUSH/CLEAN AS NECESSARY TO ENSURE NO REMAINING SEDIMENT IS WITHIN THE STORM DRAIN STRUCTURES AND THE STORM DRAIN SYSTEMS. (2 WEEKS)
  6. INSTALL SIDEWALKS AND FINE GRADE ALL AREAS AND INSTALL PERMANENT SEEDING. (1 WEEK)
  7. FOLLOWING SUCCESSFUL STABILIZATION (I.E. ESTABLISHED VEGETATION OR PAVING) OF ALL DISTURBED AREAS, OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ALL REMAINING SEDIMENT AND EROSION CONTROL DEVICES, THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMANENT SEEDING. (1 WEEK)
8. SEQUENCE NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL EVENT AND ON A DAILY BASIS, REMOVE SEDIMENT FROM THE SILT FENCE IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS.



**Stone Outlet Sediment Trap No 6**

Existing D. A. = 4.65 Ac  
 Proposed D. A. = 5.00 Ac  
 Volume Required = 5.00 x 1800 = 9000 CF  
 Volume Provided = 9000 CF  
 Bottom Dimension = 30' x 100'  
 Depth = 3'  
 Bottom Elev = 224  
 Weir Crest Elev = 228  
 Top of Embankment = 229  
 Cleanout Elev = 223.5  
 Ex Elev @ C Embankment = 227  
 Slope = 2:1  
 Length of Stone Outlet = 5 x 4 = 20'

**Stone Outlet Sediment Trap No 7**

Existing D. A. = 5.00 Ac  
 Proposed D. A. = 2.50 Ac  
 Volume Required = 5.00 x 1800 = 9000 CF  
 Volume Provided = 9000 CF  
 Bottom Dimension = 30' x 100'  
 Depth = 3'  
 Bottom Elev = 228  
 Weir Crest Elev = 232  
 Top of Embankment = 233  
 Cleanout Elev = 229.5  
 Ex Elev @ C Embankment = 231  
 Slope = 2:1  
 Length of Stone Outlet = 5 x 4 = 20'

**Stone Outlet Sediment Trap No 8**

Existing D. A. = 2.50 Ac  
 Proposed D. A. = 3.1 Ac  
 Volume Required = 3.1 x 1800 = 5580 CF  
 Volume Provided = 6000 CF  
 Bottom Dimension = 20' x 100'  
 Depth = 3'  
 Bottom Elev = 233.00  
 Weir Crest Elev = 237.00  
 Top of Embankment = 238.00  
 Cleanout Elev = 235.00  
 Ex Elev @ C Embankment = 237.00  
 Slope = 2:1  
 Length of Stone Outlet = 4 x 4 = 16'

**ENGINEER'S CERTIFICATION**

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

*Philip De...*  
 SIGNATURE OF ENGINEER  
 DATE: 11/29/90

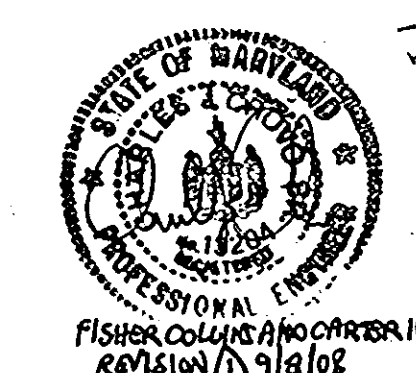
**OWNER'S CERTIFICATION**

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF POND WITHIN THIRTY DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

*Cathleen Conley Young*  
 SIGNATURE OF OWNER  
 DATE: 12/10/90

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19224 EXPIRATION DATE: NOVEMBER 3, 2002.

*Charles J. Orino, Jr., P.E.*  
 SIGNATURE OF ENGINEER  
 DATE: 9/10/90



Reviewed for HOWARD S.C.D. and meets Technical Requirements  
 U.S. Soil Conservation Service  
*James Smith* 12/12/90  
 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*Robert Zickow* 12/19/90  
 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Donald J. Seppan* 1/10/91  
 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY DEPARTMENT OF HEALTH  
*Deborah A. Kelly* 1-10-91  
 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*John R. Pappas* 1-11-91  
 DATE

APPROVED FOR PLANNING AND LAND DEVELOPMENT  
*William R. Smith* 1/14/91  
 DATE

APPROVED FOR PLANNING AND LAND DEVELOPMENT  
*Robert J. M. Young, Jr.* 1/16/91  
 DATE

0/2/00	WIDENED ENTRANCE ROAD
DATE	NO.
REVISIONS	
SHEET TITLE:	
SEDIMENT & EROSION CONTROL PLAN	
PROJECT TITLE:	
NEW ELKRIDGE ELEMENTARY SCHOOL	
ENGINEERS:	
	Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-0090
WHITNEY, BAILEY, COX & MAGNANI	
DESIGNER:	
DRAWN:	
CHECKED: PD	
DATE: NOVEMBER 28, 1990	
SCALE: AS SHOWN	
DRAWING NO.: CE-20	
21	

NOTE: ALL SILT FENCE BELOW SEDIMENT TRAPS SHALL BE RETAINED FOR BACKFILLING & FILLING OPERATION.  
 THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION FENCE ALONG THE LIMIT OF DISTURBANCE LINE FOR TREE PROTECTION.

PLAN  
 SCALE: 1" = 50'

OWNER'S CERTIFICATION

I HEREBY 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 WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF POND WITHIN THIRTY DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*Richard*  
SIGNATURE OF OWNER  
11/21/90  
DATE

ENGINEER'S CERTIFICATION

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

*Catherine Leahy Young*  
SIGNATURE OF ENGINEER  
12/10/90  
DATE

APPROVED  
HOWARD COUNTY  
PLANNING DISTRICT

*Richard Zich*  
DATE 12/11/90  
HOWARD COUNTY, S.C.D.

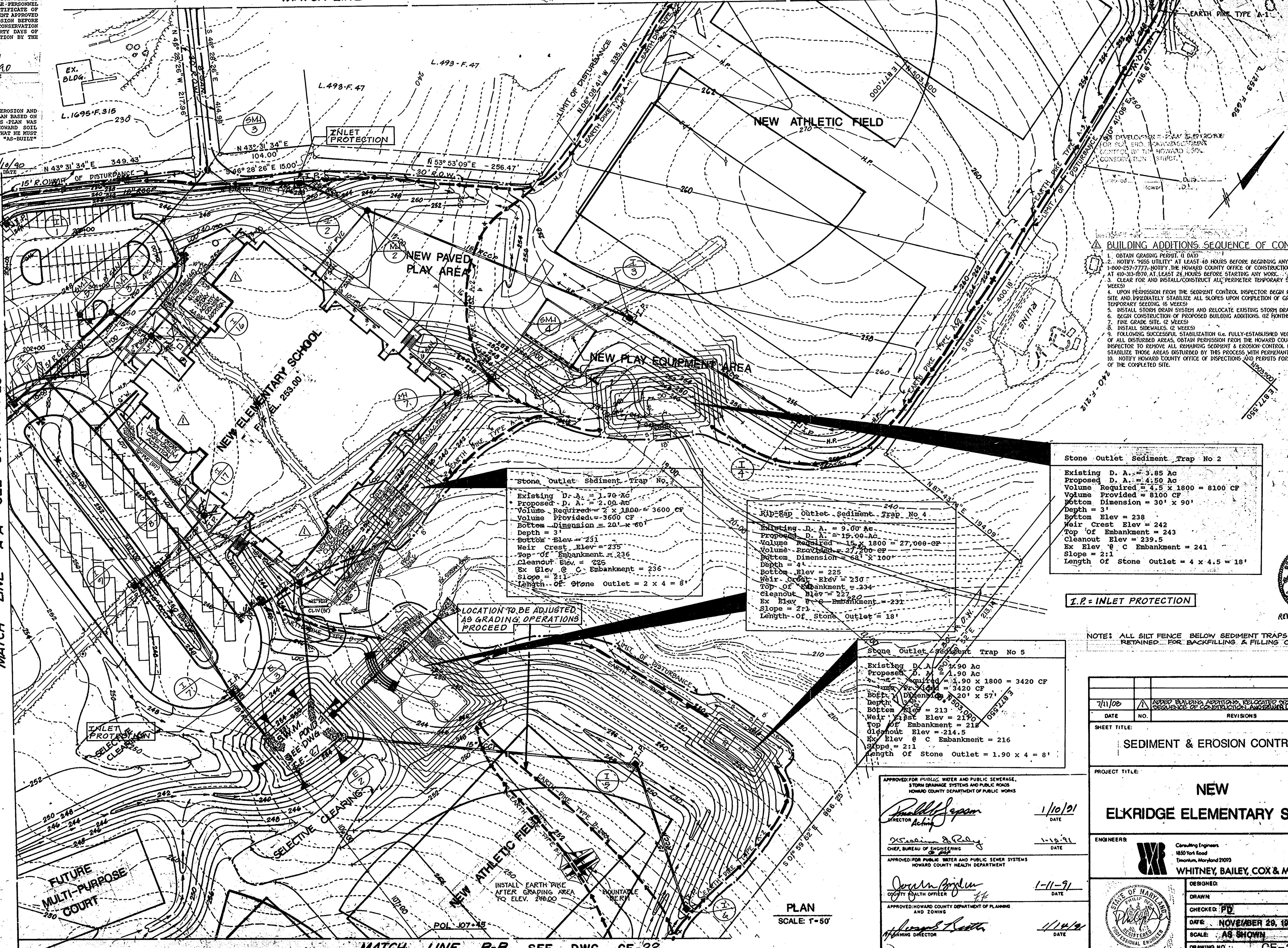
Reviewed for HOWARD COUNTY

*John M. Allen*  
DATE 12/19/90  
S. Soil Conservation District

MATCH LINE C-C SEE DWG. CE-23

MATCH LINE A-A SEE DWG. CE-20

NOTE: SEE DWG CE-1 FOR LEGEND.



Stone Outlet Sediment Trap No. 3  
Existing D. A. = 1.70 ac  
Proposed D. A. = 2.00 ac  
Volume Required = 2 x 1800 = 3600 CF  
Volume Provided = 3600 CF  
Bottom Dimension = 20' x 60'  
Depth = 3'  
Bottom Elev = 231  
Weir Crest Elev = 235  
Top of Embankment = 236  
Cleanout Elev = 225  
Ex Elev @ C Embankment = 236  
Slope = 2:1  
Length of Stone Outlet = 2 x 4 = 8'

Rip-Rap Outlet Sediment Trap No. 4  
Existing D. A. = 9.00 ac  
Proposed D. A. = 15.00 ac  
Volume Required = 15 x 1800 = 27,000 CF  
Volume Provided = 27,200 CF  
Bottom Dimension = 68' x 100'  
Depth = 4'  
Bottom Elev = 225  
Weir Crest Elev = 230  
Top of Embankment = 234  
Cleanout Elev = 227  
Ex Elev @ C Embankment = 231  
Slope = 2:1  
Length of Stone Outlet = 18'

Stone Outlet Sediment Trap No. 2  
Existing D. A. = 3.85 ac  
Proposed D. A. = 4.50 ac  
Volume Required = 4.5 x 1800 = 8100 CF  
Volume Provided = 8100 CF  
Bottom Dimension = 30' x 90'  
Depth = 3'  
Bottom Elev = 238  
Weir Crest Elev = 242  
Top of Embankment = 243  
Cleanout Elev = 239.5  
Ex Elev @ C Embankment = 241  
Slope = 2:1  
Length of Stone Outlet = 4 x 4.5 = 18'

Stone Outlet Sediment Trap No. 5  
Existing D. A. = 2.90 ac  
Proposed D. A. = 1.90 ac  
Volume Required = 1.90 x 1800 = 3420 CF  
Volume Provided = 3420 CF  
Bottom Dimension = 20' x 57'  
Depth = 2.5'  
Bottom Elev = 213  
Weir Crest Elev = 218  
Top of Embankment = 218  
Cleanout Elev = 214.5  
Ex Elev @ C Embankment = 216  
Slope = 2:1  
Length of Stone Outlet = 1.90 x 4 = 8'

LOCATION TO BE ADJUSTED AS GRADING OPERATIONS PROCEED

- BUILDING ADDITIONS SEQUENCE OF CONSTRUCTION**
1. OBTAIN GRADING PERMIT. (6 DAYS)
  2. NOTIFY WSS UTILITY AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
  3. CLEAR FOR AND INSTALL/CONSTRUCT ALL PERIMETER TEMPORARY SEDIMENT CONTROLS. (3 WEEKS)
  4. UPON PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEGIN ROUGH GRADING THE SITE AND IMMEDIATELY STABILIZE ALL SLOPES UPON COMPLETION OF GRADING WITH TEMPORARY SEEDING. (2 WEEKS)
  5. INSTALL STORM DRAIN SYSTEM AND RELOCATE EXISTING STORM DRAIN SYSTEM. (6 WEEKS)
  6. BEGIN CONSTRUCTION OF PROPOSED BUILDING ADDITIONS. (12 MONTHS)
  7. FINE GRADE SITE. (2 WEEKS)
  8. INSTALL SIDEWALKS. (2 WEEKS)
  9. FOLLOWING SUCCESSFUL STABILIZATION (i.e. FULLY ESTABLISHED VEGETATION OR PAVING) OF ALL DISTURBED AREAS, OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ALL REMAINING SEDIMENT & EROSION CONTROL DEVICES AND THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS, WITH PERMANENT SEEDING. (2 WEEKS)
  10. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED SITE.

**I.P. - INLET PROTECTION**

NOTE: ALL SILT FENCE BELOW SEDIMENT TRAPS SHALL BE RETAINED FOR BACKFILLING & FILLING OPERATION.



APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard Zich*  
DIRECTOR  
1/10/91  
DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT  
*Josephine*  
COUNTY HEALTH OFFICER  
1-11-91  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Catherine Leahy Young*  
REGISTERED PROFESSIONAL ENGINEER  
1/11/91  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT  
*Richard Zich*  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
1/11/91  
DATE

7/11/08	ADDED BUILDING ADDITIONS, RELOCATED STORM DRAIN AND SEQUENCE OF CONSTRUCTION, AND SUMMIT LINE	
DATE	NO.	REVISIONS
SHEET TITLE: <b>SEDIMENT &amp; EROSION CONTROL PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED: DRAWN: CHECKED: <i>PD</i> DATE: <b>NOVEMBER 28, 1990</b> SCALE: <b>AS SHOWN</b> DRAWING NO.: <b>CE-21</b>		
DRAWING NO.: <b>CE-21</b> <b>22 of 42</b>		

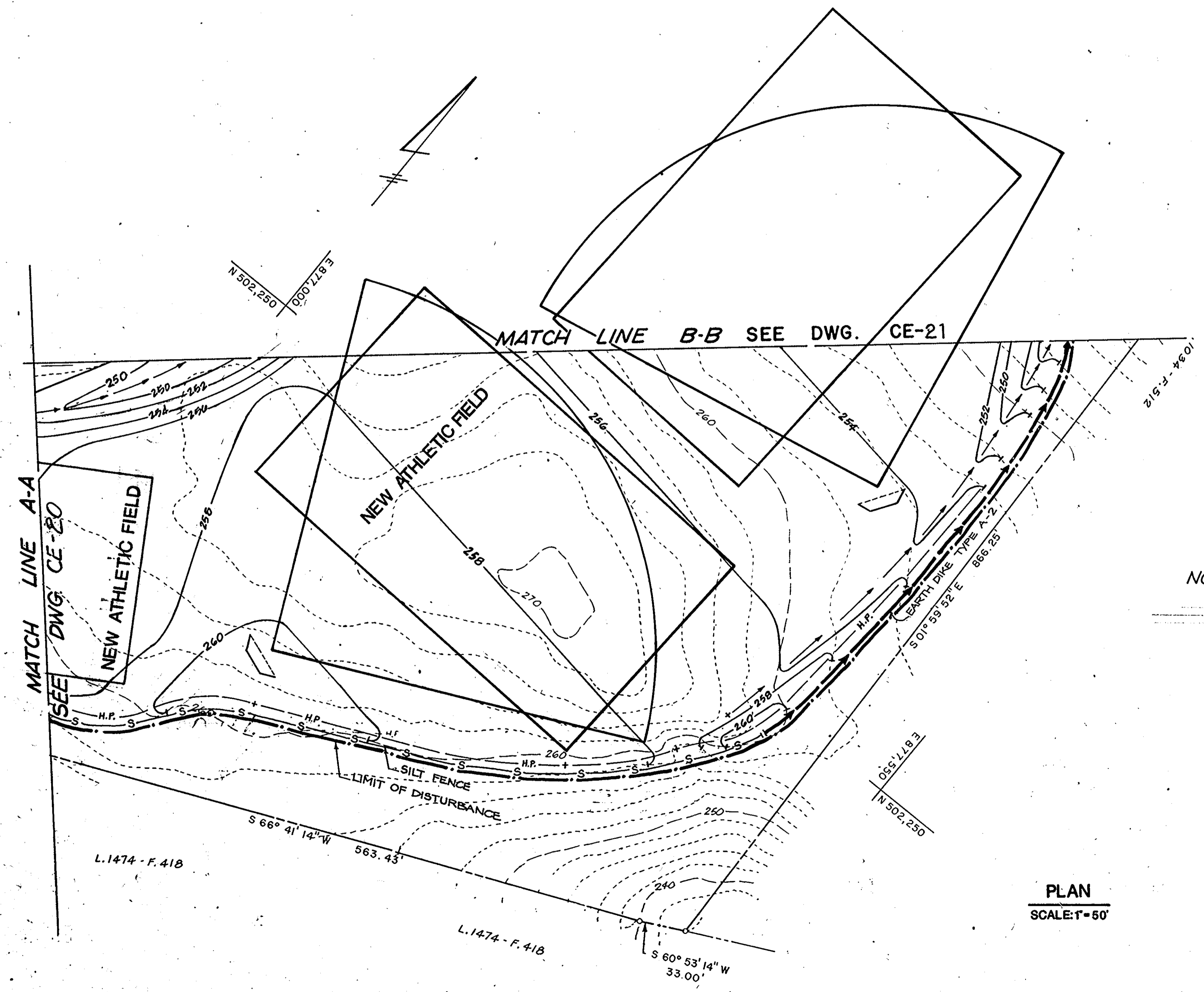
PLAN  
SCALE 1"=50'

MATCH LINE B-B SEE DWG. CE-22

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

Approved: *Robert J. John* 12/19/90  
 HOWARD COUNTY CONSERVATION DISTRICT

Reviewed for: **HOWARD** S.C.D.  
 Signature: *John M. De...* Date: 12/19/90  
 1831 Conservation Service



NOTES: 1. SEE DWG. CE-1 FOR LEGEND  
 2. ALL SILT FENCE BELOW SEDIMENT TRAPS SHALL BE RETAINED FOR BACKFILLING & FILLING OPERATION.

PLAN  
 SCALE: 1" = 50'

**OWNER'S CERTIFICATION**

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF POND WITHIN THIRTY DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Owner: *Cathleen Conley Young* Date: 12/10/90

**ENGINEER'S CERTIFICATION**

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

Signature of Engineer: *Philip A...* Date: 11/29/90

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Seppan* 1/10/91  
 DIRECTOR

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

*James H. Bradley* 1-10-91  
 CHIEF, BUREAU OF ENGINEERING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James H. Bradley* 1-11-91  
 COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James H. Bradley* 1/29/90  
 PLANNING DIRECTOR

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT

*James H. Bradley* 1/29/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

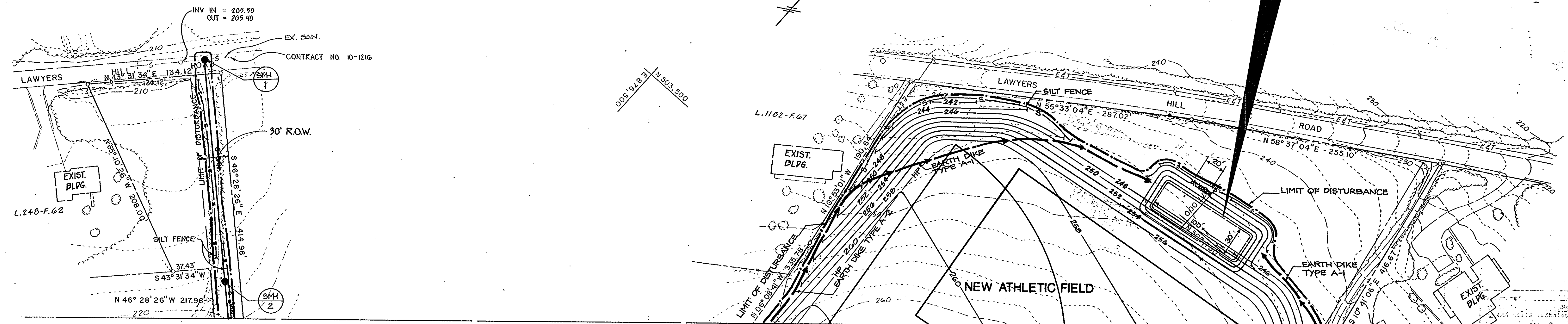
DATE	NO.	REVISIONS
SHEET TITLE: <b>SEDIMENT &amp; EROSION CONTROL PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS:  <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b> Consulting Engineers 1850 York Road Gaithersburg, Maryland 20878 301-292-4000		
DESIGNED:		
DRAWN:		
CHECKED:		
DATE:	NOVEMBER 29, 1990	
SCALE:	AS SHOWN	
DRAWING NO.:	CE-22	

Reviewed for: **HOWARD** S.C.D.  
 Name: **Howard Soil Conservation District**  
 Date: **11/19/90**  
 Signature: *[Signature]*  
 Title: **Soil Conservation Service**

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

Approved: *[Signature]* Date: **11/19/90**  
 Howard S.C.D.

**Stone Outlet Sediment Trap No 1**  
 Existing D. A. = 5.00 AC  
 Proposed D. A. = 4.35 AC  
 Volume Required = 5 x 1800 = 9000 CF  
 Volume Provided = 9000 CF  
 Bottom Dimension = 30' x 100'  
 Depth = 3'  
 Bottom Elev = 241  
 Weir Crest Elev = 245  
 Top Of Embankment = 246  
 Cleanout Elev = 242.5  
 Ex Elev = C Embankment = 244.5  
 Slope = 2:1  
 Length Of Stone Outlet = 4 x 5 = 20'



**ENGINEER'S CERTIFICATION**  
 "I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENT A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN THIRTY DAYS OF COMPLETION."  
*[Signature]* **11/21/90**  
 SIGNATURE OF ENGINEER DATE

**OWNER'S CERTIFICATION**  
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF POND WITHIN THIRTY DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
*[Signature]* **12/10/90**  
 SIGNATURE OF OWNER DATE

**PLAN**  
 SCALE: 1" = 50'

**NOTES:** 1. SEE DWG. CE-1 FOR LEGEND  
 2. ALL SILT FENCE BELOW SEDIMENT TRAPS SHALL BE RETAINED FOR BACKFILLING AND FILLING OPERATION.

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*[Signature]* **1/10/91**  
 DIRECTOR DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
*[Signature]* **1-10-91**  
 CHIEF, BUREAU OF INSPECTION DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
*[Signature]* **1-11-91**  
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* **1/11/91**  
 PLANNING DIRECTOR DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*[Signature]* **1/11/91**  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

DATE	NO.	REVISIONS
SHEET TITLE: <b>SEDIMENT &amp; EROSION CONTROL PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED: <b>[Signature]</b>		
DRAWN: <b>[Signature]</b>		
CHECKED: <b>[Signature]</b>		
DATE: <b>NOVEMBER 29, 1990</b>		
SCALE: <b>AS SHOWN</b>		
DRAWING NO.: <b>CE-1</b>		



Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

**Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

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

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.

**Seeding** - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

**Mulching** - Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

**Maintenance** - Inspect all seeded areas and make needed repairs, replacements and reseeds.

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

**Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

**Soil Amendments:** Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

**Seeding:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

**Mulching:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring areas.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
  - a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1,
  - b) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- 7) Site Analysis:
 

Total Area of Site	50+ Acres
Area Disturbed	36.0 Acres
Area to be roofed or paved	6.50 Acres
Area to be vegetatively stabilized	31.5 Acres
Total Cut	- Cu. Yds.
Total Fill	- Cu. Yds.
Office waste/borrow area location	NOT KNOWN
- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- 9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- 11) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

\* The information shown for Howard County only and not to be used for bidding purposes by the contractor.

**OWNER'S CERTIFICATION**

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF POND WITHIN THIRTY DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT".

*Cathleen Conley Young*  
SIGNATURE OF OWNER

12/10/90  
DATE

**ENGINEER'S CERTIFICATION**

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

*Philip Der*  
SIGNATURE OF ENGINEER

1/22/90  
DATE

PHILIP DER  
WHITNEY, BAILEY, COX, & MAGNANI  
1850 YORK RD, TIMONIUM, MD

Reviewed for HOWARD S.C.D. and meets Technical Requirements

*John W. Hahn* 12/19/90  
U.S. Soil Conservation Service Date

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

*Robert J. Zelman* 12/19/90  
Howard S.C.D. Date

**SEQUENCE OF OPERATIONS**

1. OBTAIN GRADING PERMIT.
2. CLEARING AND GRUBBING FOR THE INSTALLATION OF SEDIMENT CONTROL DEVICES.
3. INSTALL SEDIMENT CONTROL DEVICES EXCEPT AS NOTED ON PLAN.
4. CLEARING AND GRUBBING OF SITE.
5. START GRADING SITE TO SUBGRADE AND STABILIZE ALL SLOPES.
6. INSTALL BY SEEDING AND MULCHING CULVERT UNDER THE PROPOSED ROADWAY AND BLOCK UPSTREAM END OF PIPE WITH FILTER CLOTH AND 2ND STONE.
7. START EXCAVATION FOR BUILDING CONSTRUCTION.
8. START BUILDING CONSTRUCTION.
9. INSTALL STORM DRAIN SYSTEM, EXCEPT FOR THE SYSTEM AFFECTED BY THE SEDIMENT TRAP AND INSTALL INLET PROTECTION TO ALL INLETS.
10. INSTALL WATER MAIN AND SEWER MAIN.
11. START INSTALLATION OF CURB AND GUTTER OF THE ROADWAY AND PARKING LOTS.
12. FINAL GRADING OF THE PLAYING FIELDS AND ADJOINING.
13. START INSTALLATION OF PAVING OF ROADWAY AND PARKING LOTS.
14. DEWATER SEDIMENT TRAP NOS. 1, 2, 5&6 AND COMPLETE REMAINING EARTHWORK AFFECTED BY THESE TRAPS. INSTALL SILT FENCE AS NEEDED. STABILIZE DISTURBED AREAS BY SEEDING AND MULCHING.
15. START CONSTRUCTION OF SWM FACILITIES AND STABILIZE DISTURBED AREAS BY SEEDING AND MULCHING.
16. COMPLETE GRADING AROUND BUILDING SITE AND INSTALL WALK AND ACCESSORIES. STABILIZE AREAS BY SEEDING AND MULCHING.
17. DEWATER SEDIMENT TRAP NO. 4 AND COMPLETE GRADING OPERATION ADJACENT TO TRAP.
18. REMOVE ALL SILT FENCE AND EARTHDIKE AND STABILIZE DISTURBED AREAS BY SEEDING AND MULCHING.
19. REMOVE MOUNTABLE STONE BERM AT THE END OF THE CULVERT AND INSTALL RIPRAP OUTLET PROTECTION.
20. REMOVE INLET PROTECTION AND FINAL GRADING OPERATION AND STABILIZATION OF THE ADJACENT AREAS.
21. COMPLETE REMAINING ACTIVITIES AND BUILDING CONSTRUCTION AND FINAL STABILIZATION OF THE SITE.

1. PERMANENT SEEDING NOTES

2. SEDIMENT CONTROL NOTES

3. SEDIMENT CONTROL CERTIFICATIONS

4. SEQUENCE OF OPERATIONS

Reviewed for \_\_\_\_\_ S.C.D. Name and meets Technical Requirements Date \_\_\_\_\_ Signature \_\_\_\_\_ U.S. Soil Conservation Service

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

*Robert J. Zelman* 12/19/90  
Howard S.C.D. Date

DATE	NO.	REVISIONS
SHEET TITLE: <b>SEDIMENT CONTROL NOTES</b>		
PROJECT TITLE: <b>NEW ELKBRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED BY:		
DRAWN:		
CHECKED BY:	<i>PD</i>	
DATE:	NOVEMBER 29, 1990	
SCALE:	AS SHOWN	
DRAWING NO.:	CE-24	25 of 42

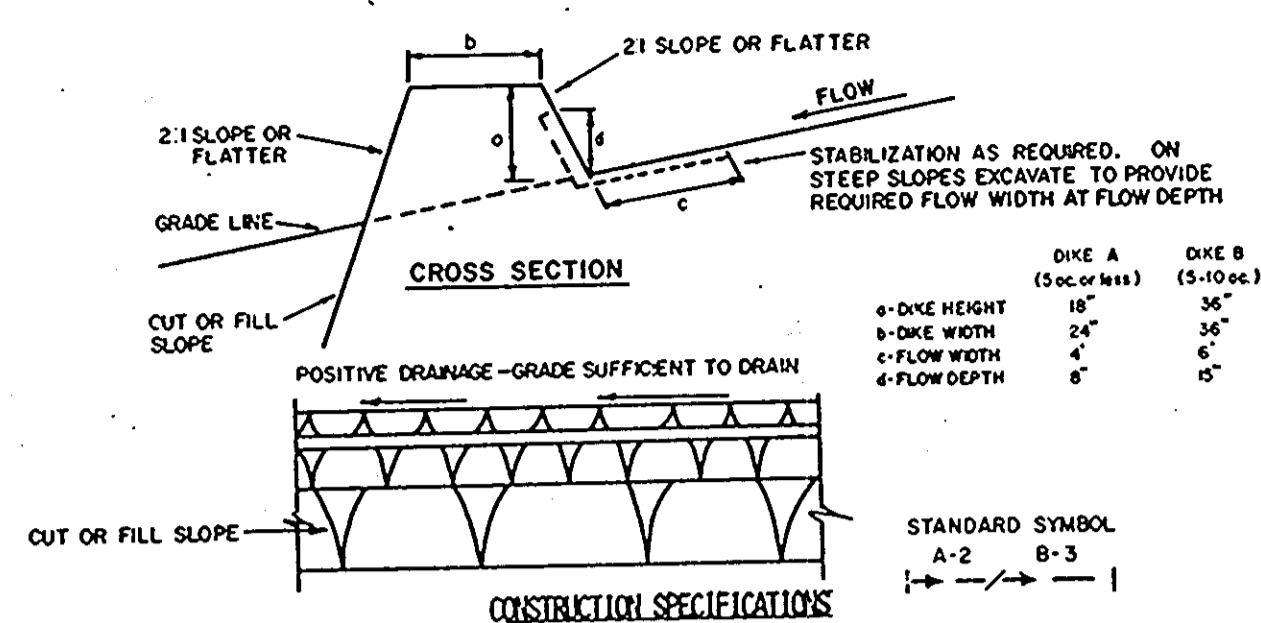
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Robert J. Zelman* 1/10/91  
DIRECTOR Acting DATE

*Michael J. P. King* 1-10-91  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT  
*Joseph W. Boyden* 1-11-91  
HEALTH OFFICER DATE

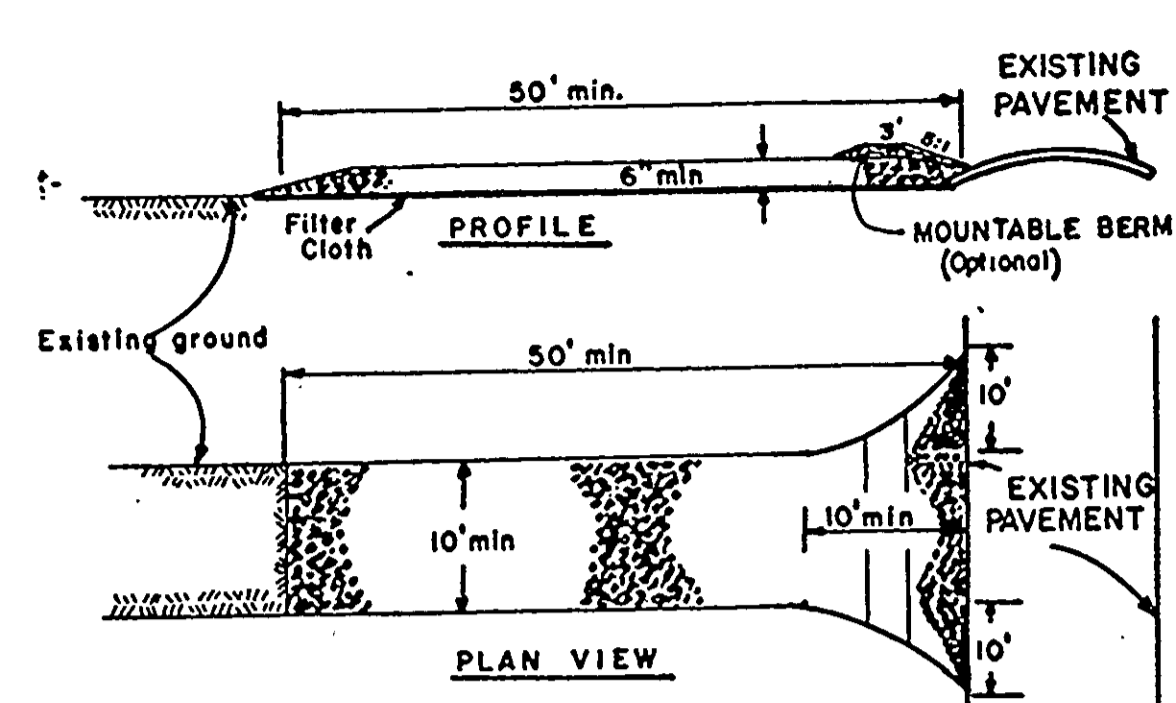
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*William J. Banta* 1/14/91  
PLANNING DIRECTOR DATE

*Robert J. Zelman* 1/14/91  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

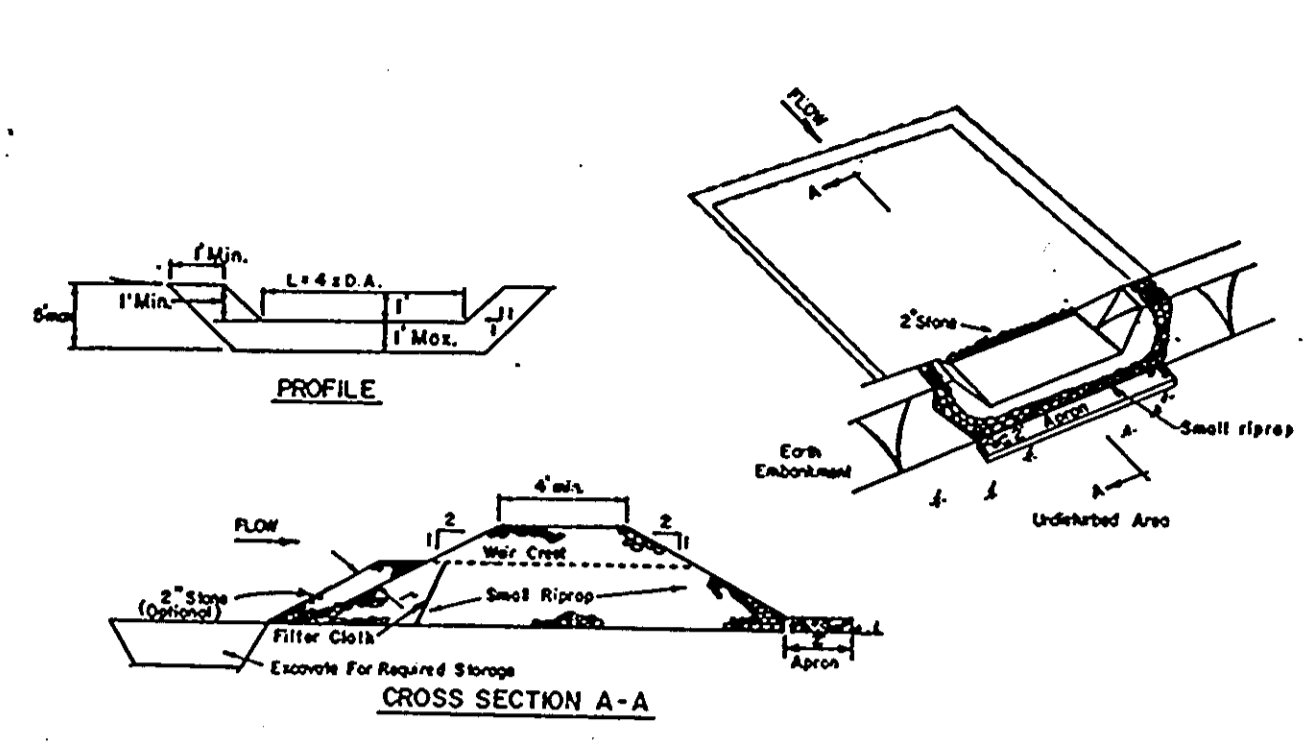


TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSTOR; SOO; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOO; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

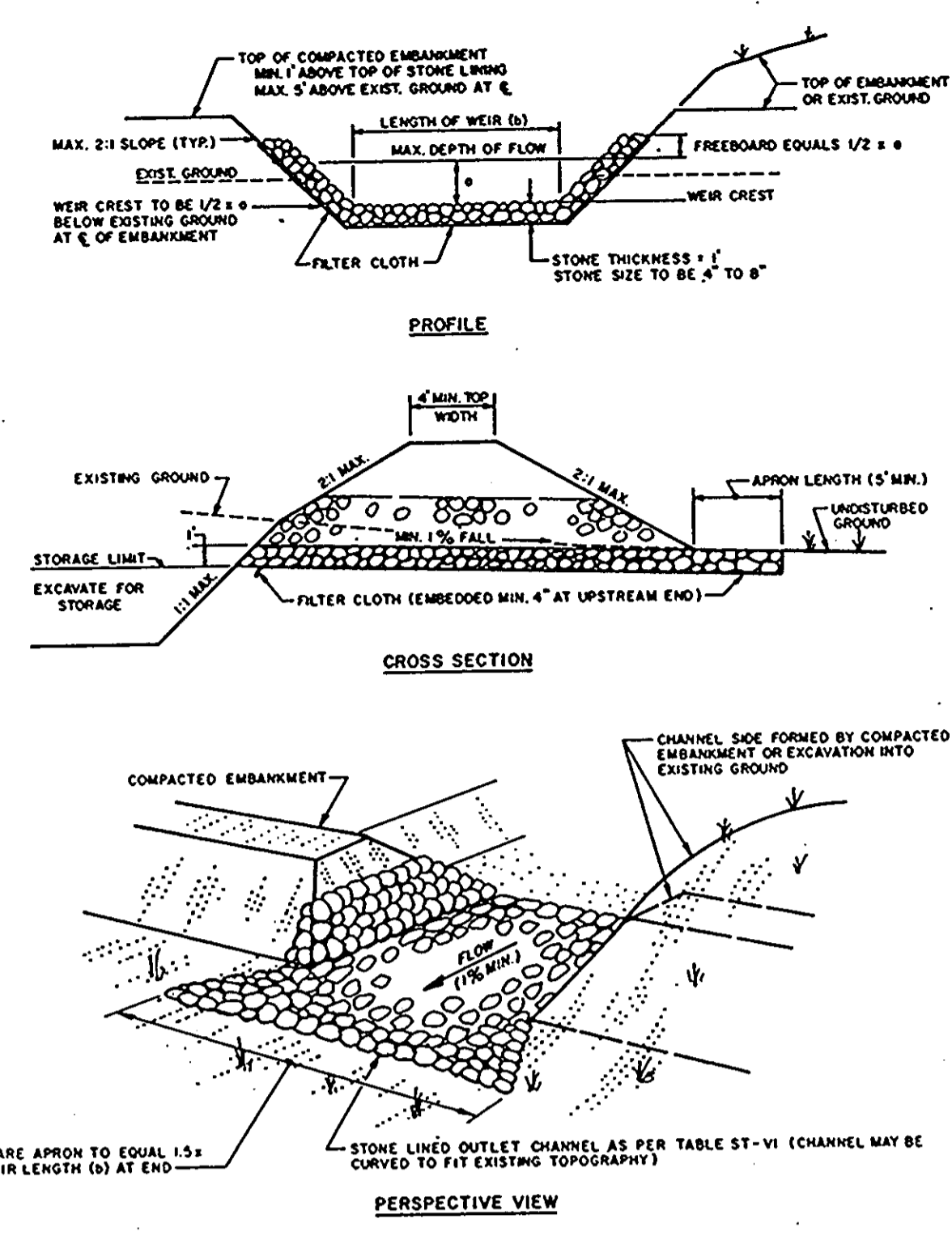
A. Stone to be 2 inch stone, or recycled concrete equivalent, in a layer at least 3 inches in thickness and be pressed into the soil with construction equipment.  
 B. Rip-rap to be 4-8 inches in a layer at least 8 inches thickness and pressed into the soil.  
 C. Approved equivalents can be substituted for any of the above materials.  
 7. Periodic inspection and required maintenance must be provided after each rain event.



- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
  - Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
  - Thickness - Not less than six (6) inches.
  - Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
  - Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
  - Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
  - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
  - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an arc stabilized with stone and which drains into an approved sediment trapping device.
  - Periodic inspection and needed maintenance shall be provided after each rain.



- CONSTRUCTION SPECIFICATIONS FOR ST-V**
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
  - The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
  - All cut and fill slopes shall be 2:1 or flatter.
  - The stone used in the outlet shall be small riprap 4"-8" long with a 1" thickness of 2" aggregate placed on the up-grade side on the small riprap on embedded filter cloth in the riprap.
  - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
  - The structure shall be inspected after each rain and repairs made as needed.
  - Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
  - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
- OPTION:** A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.



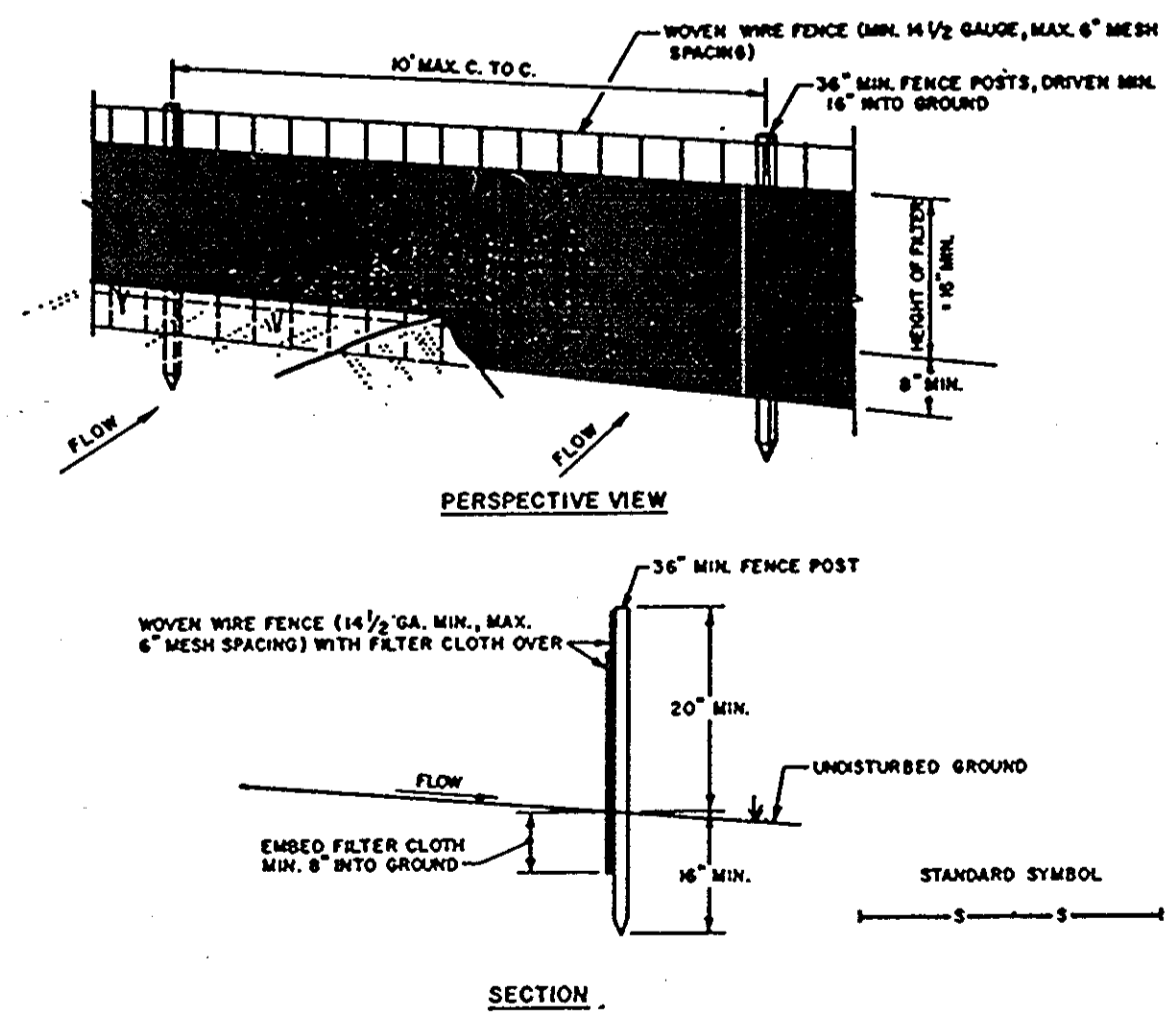
- CONSTRUCTION SPECIFICATIONS FOR ST-VI**
- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
  - The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
  - All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
  - Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
  - Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
  - Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
  - Stone used in the outlet channel shall be four (4) to eight (8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
  - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
  - The structure shall be inspected after each rain and repaired as needed.
  - Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
  - The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
  - Drainage area for this practice is limited to 15 acres or less.

1. EARTH DIKE DETAIL

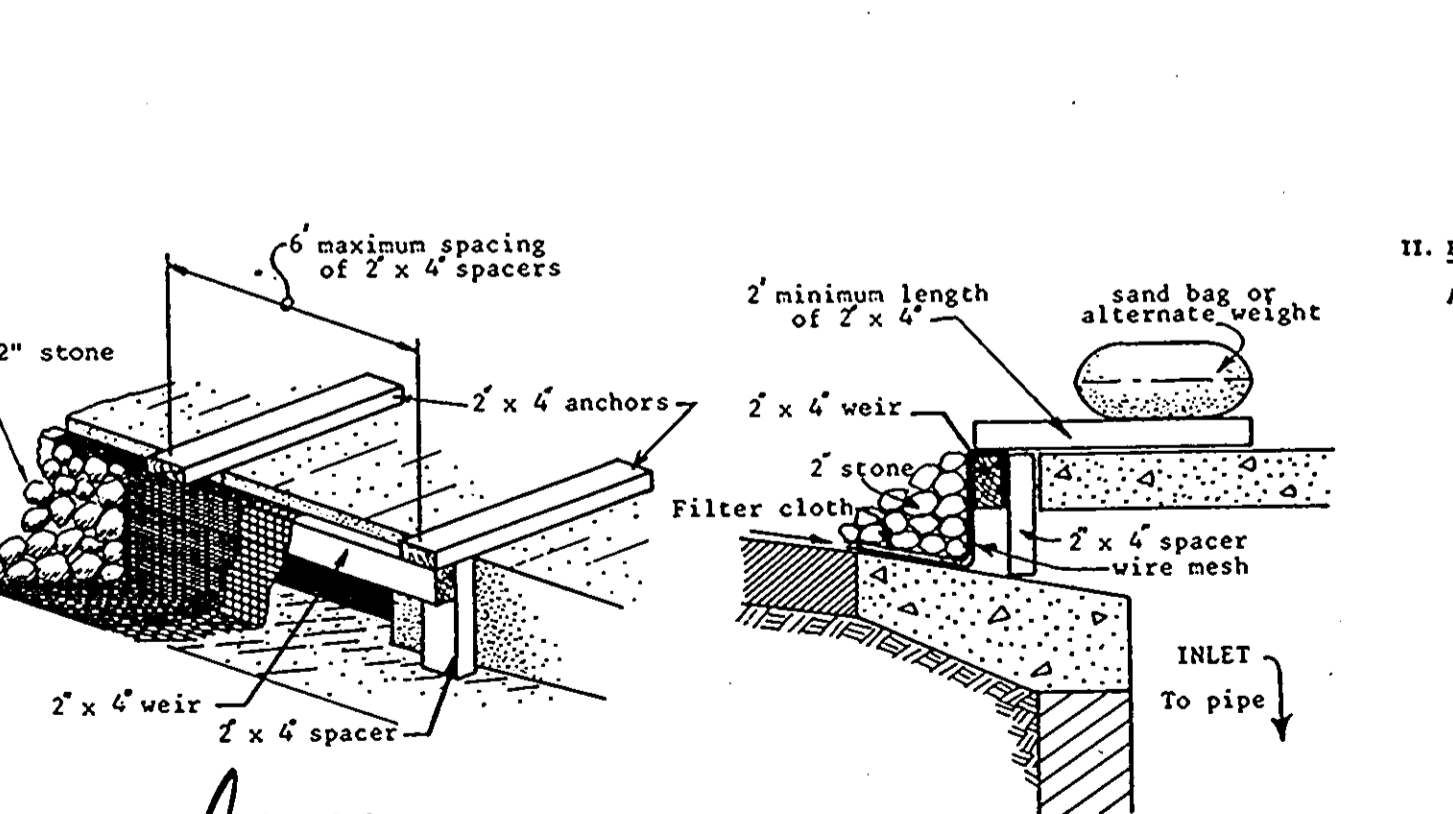
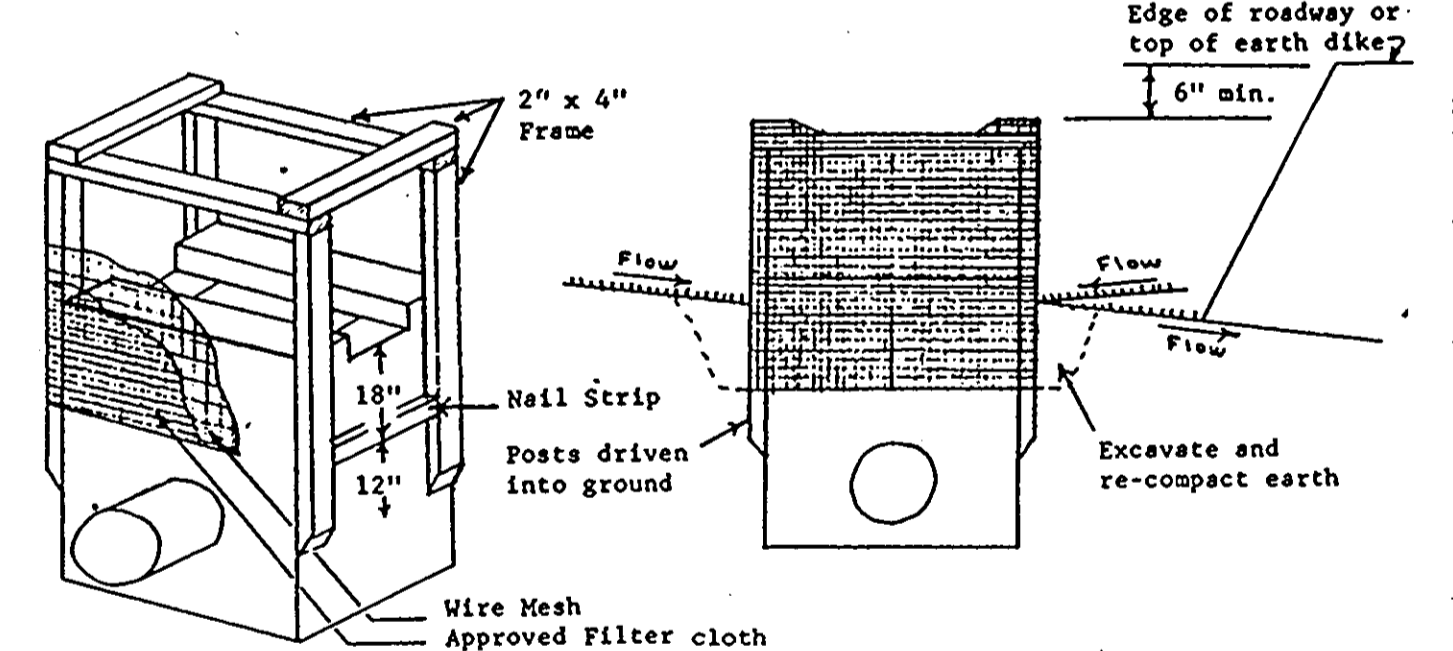
2. STABILIZED CONSTRUCTION ENTRANCE

3. RIP-RAP OUTLET SEDIMENT TRAP DETAIL

4. STONE OUTLET SEDIMENT TRAP DETAIL



- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- Woven wire fence to be fastened securely to fence posts with wire ties or staples.
  - Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
  - When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
  - Maintenance shall be performed as needed and material removed when "blugs" develop in the silt fence.
- POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD  
 FENCE: WOVEN WIRE, 1/2" GA. 6" MAX. MESH OPENING  
 FILTER CLOTH: FILTER X, HIRAFIL 1000, STABIL-LINER 1140N OR APPROVED EQUAL  
 PREFABRICATED UNIT: GEOTAB, ENVIROFENCE, OR APPROVED EQUAL



Reviewed for HOWARD S.C.D. and State Technical Requirements  
 U.S. Soil Conservation Service  
 Date 12/19/90  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 Date 12/19/90

**STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION**

**Definition**  
 Filter cloth installed around inlets in the form of a fence or across an opening, thereby reducing sediment content of sediment laden water.

**Purpose**  
 To prevent sediment laden water from entering a storm drain system through inlets.

**Conditions Where Practice Applies**  
 This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a sediment trapping device and watertight blocking of inlets is not advisable. It is not to be used in place of sediment trapping devices. This practice may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with a low slope angle.

**Construction Specifications**

- Materials**
  - Wooden frame is to be constructed of 2" x 4" construction grade lumber.
  - Wire mesh must be of sufficient strength to support filter fabric, and stone for curb inlets, with water fully impounded against it.
  - Filter cloth must be of a type approved for this purpose; resistant to sunlight with sieve size, 200, 40-85, to allow sufficient passage of water and removal of sediment.
  - Stone is to be 2" in size and clean, since fines would clog the cloth.
- Procedure**
  - A. A swale, ditchline or yard inlet protection.**
    - Excavate completely around inlet to a depth of 18" below notch elevation.
    - Drive 2 x 4 post 1' into ground at four corners of inlet. Place nail strips between posts on end of inlet. Assemble top portion of 2 x 4 frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
    - Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
    - Stretch filter cloth tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet notch elev. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
    - Backfill around inlet in compacted 6" layers until layer of earth is even with notch elevation on ends and top elevation on sides.
    - If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
    - This structure must be inspected frequently and the filter fabric replaced when clogged.
  - Curb Inlet Protection.**
    - Attach a continuous piece of wire mesh (30" min. width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
    - Place a piece of approved filter cloth (40-85 sieve) of the same dimensions as the wire mesh over the wire mesh and securely attach to the 2" x 4" weir.

- Securely nail the 2" x 4" weir to 9" long vertical spacers to be located between the weir and inlet face (max. 6' apart).
- Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations. These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
- The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
- Form the wire mesh and filter cloth to the concrete gutter and against the face of curb on both sides of the inlet. Place clean 2" stone over the wire mesh and filter fabric in such a manner as to prevent water from entering the inlet under or around the filter cloth.
- This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.
- Assure that storm flow does not bypass inlet by installing temporary earth or asphalt dikes directing flow into inlet.

5. SILT FENCE DETAIL

6. INLET PROTECTION DETAIL

NAME: BOARD OF EDUCATION - HOWARD CO.  
 OWNER: ADDRESS: 10910 ROUTE 108  
 DEED REF.: LIBER 279 FOLIO 448  
 ELECTION DISTRICT NO. 1 HOWARD CO., MD.  
 CENSUS TRACT NO. 6012  
 TAX MAP 38 PARCEL NO. 20  
 WATER CODE \_\_\_\_\_ SEWER CODE \_\_\_\_\_

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Director: [Signature] DATE: 1/10/91  
 Chief, Bureau of Engineering: [Signature] DATE: 1-10-91  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 County Health Officer: [Signature] DATE: 1-11-91  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Planning Director: [Signature] DATE: 1/14/91  
 Chief, Division of Community Planning and Land Development: [Signature] DATE: 1/14/91

DATE: \_\_\_\_\_ NO. \_\_\_\_\_ REVISIONS \_\_\_\_\_

SHEET TITLE: **SEDIMENT CONTROL DETAILS**

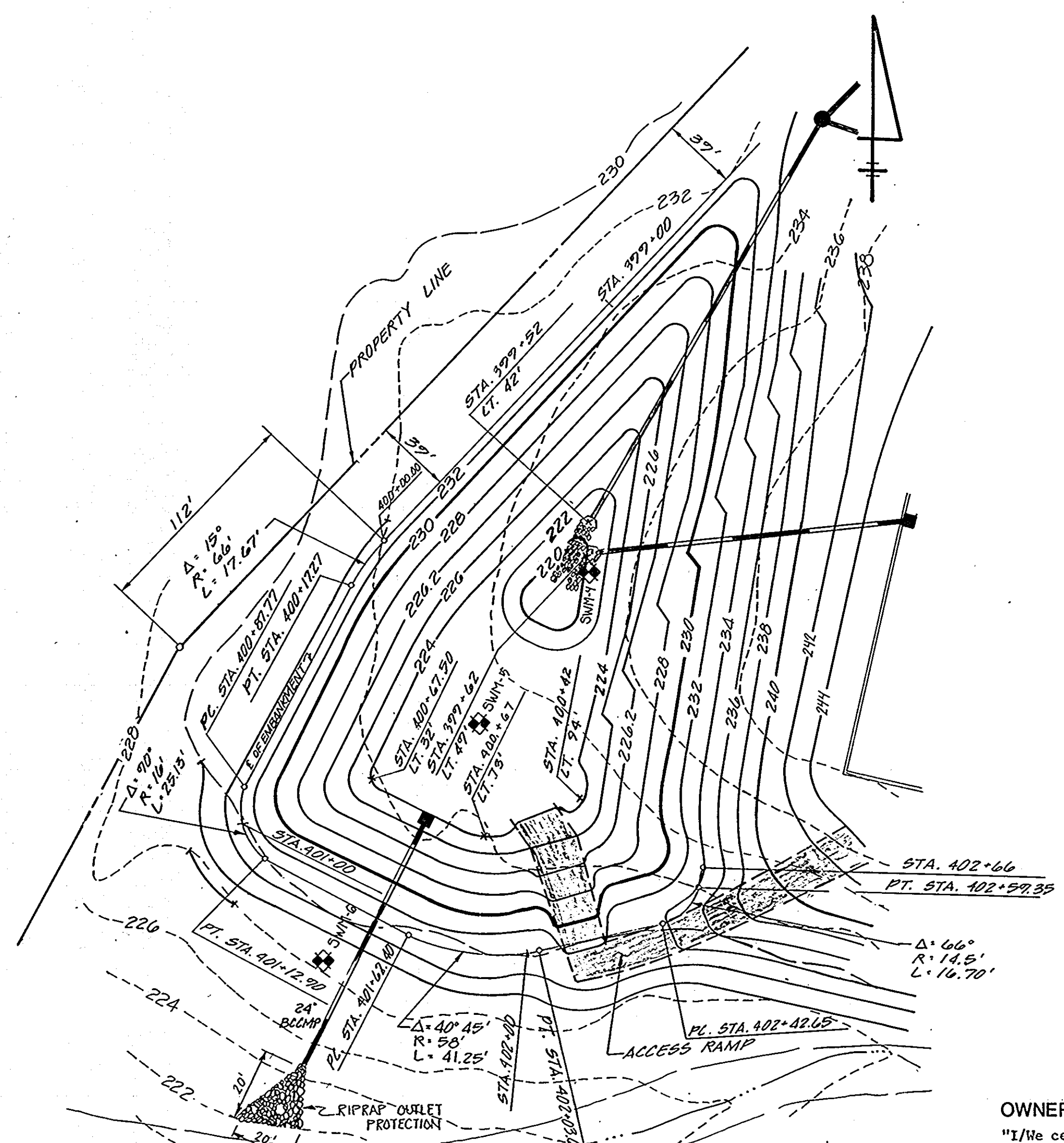
PROJECT TITLE: **NEW ELKBRIDGE ELEMENTARY SCHOOL**

ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**  
 Consulting Engineers  
 1850 York Road  
 Timonium, Maryland 21073  
 301-252-6000

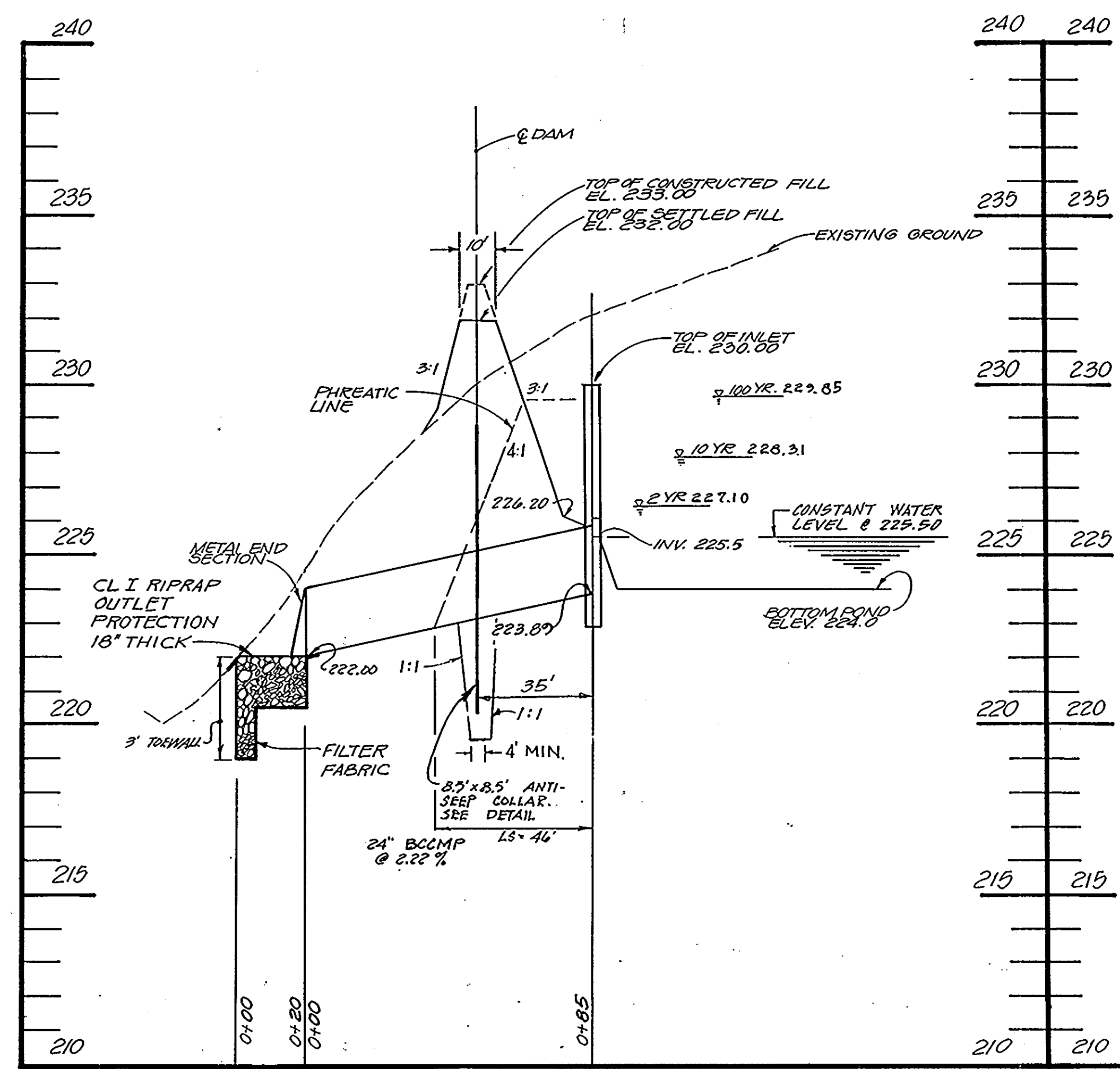
DESIGNED: ART REYES  
 DRAWN: S.S.  
 CHECKED: P.D.  
 DATE: NOVEMBER 29, 1990  
 SCALE: NONE  
 DRAWING NO.: CE-25

#9972 1/29/90

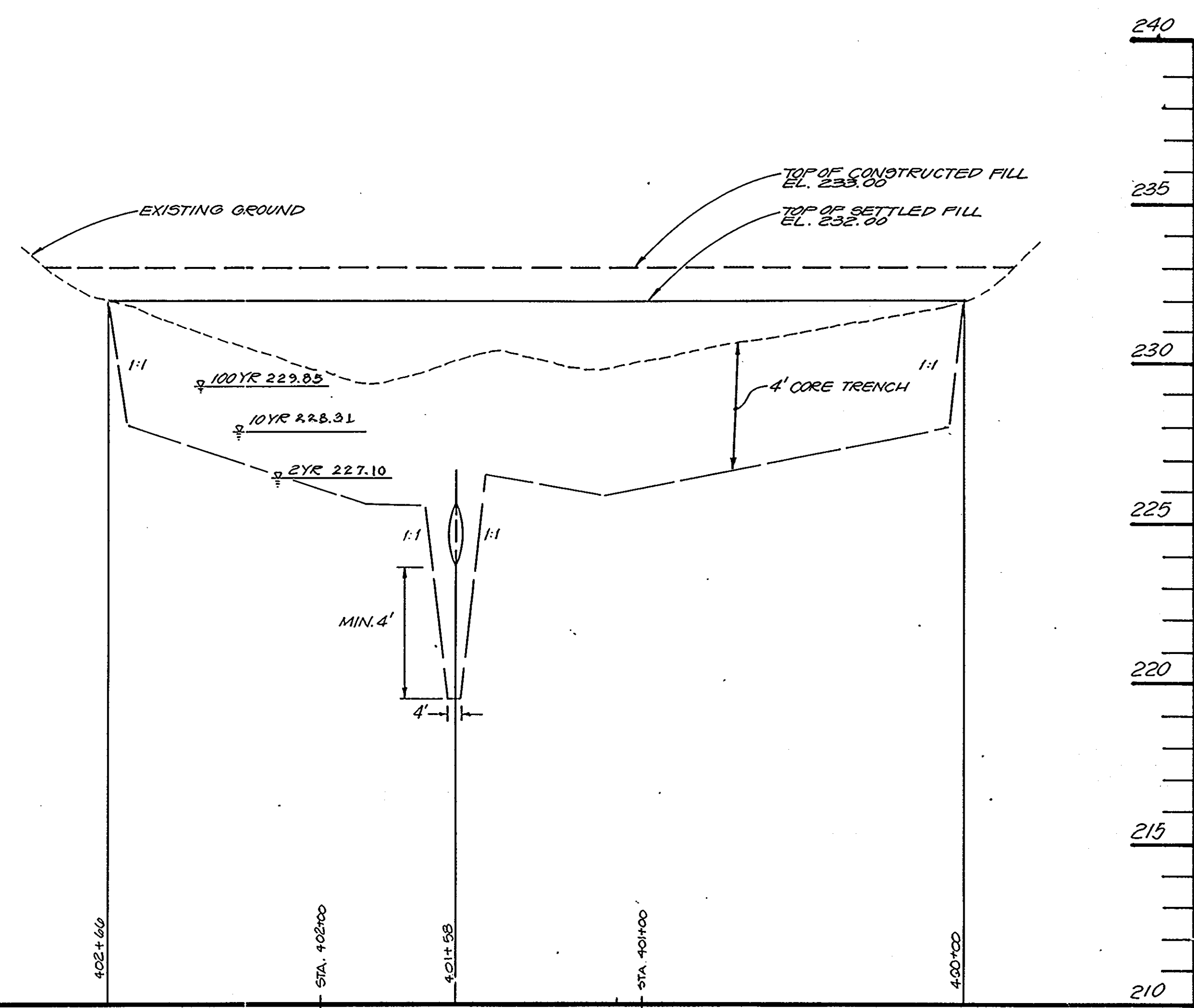
26 of 42



**PLAN**  
SCALE: 1" = 30'



**PROFILE THRU  $\phi$  OF PRINCIPAL SPILLWAY**  
SCALE: VERT. 1" = 3', HORIZ. 1" = 30'



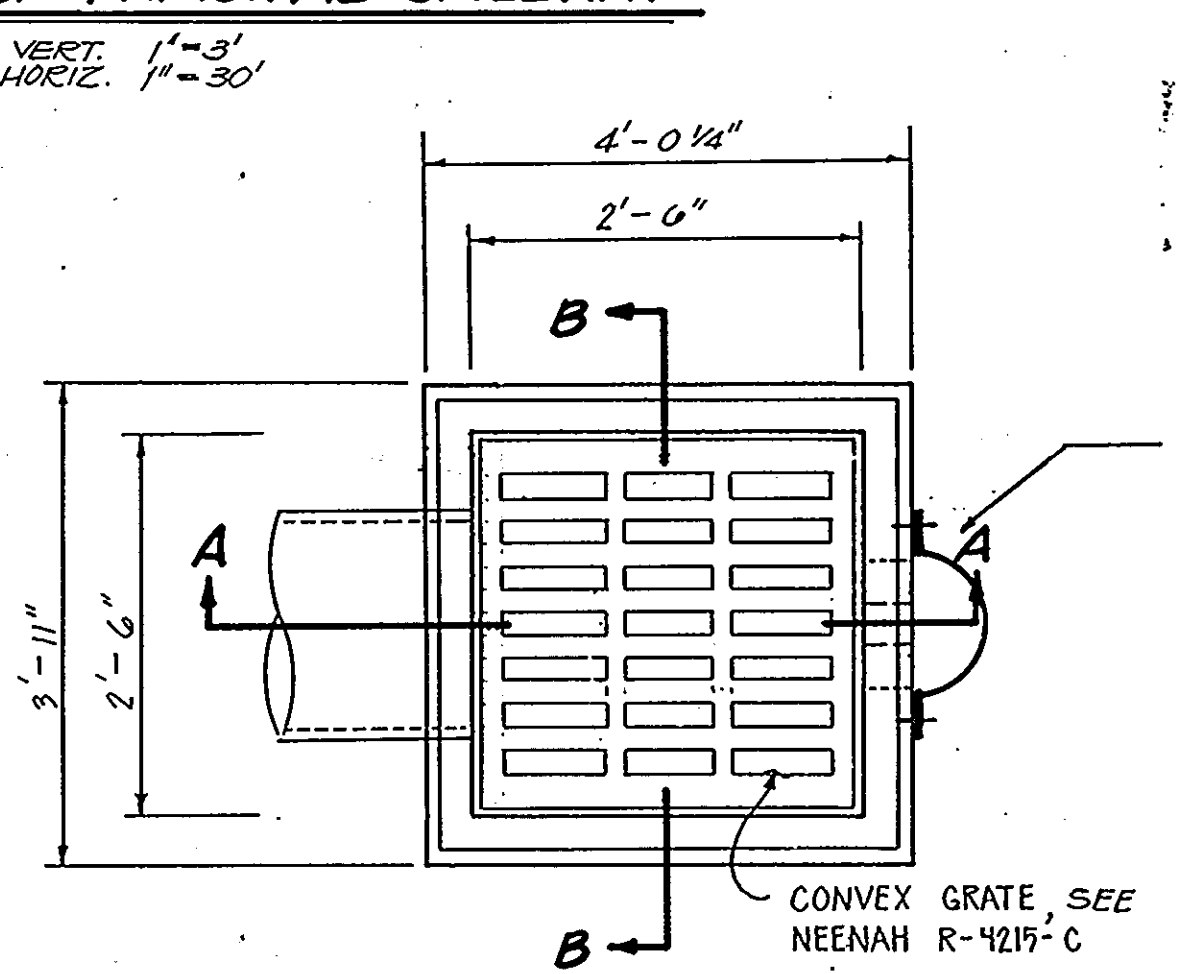
**PROFILE THRU  $\phi$  OF DAM**  
SCALE: VERT. 1" = 3', HORIZ. 1" = 30'

**OWNER/DEVELOPER CERTIFICATION.**  
"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."  
*Cathleen Conley Young* 12/10/90  
Signature of Developer Date

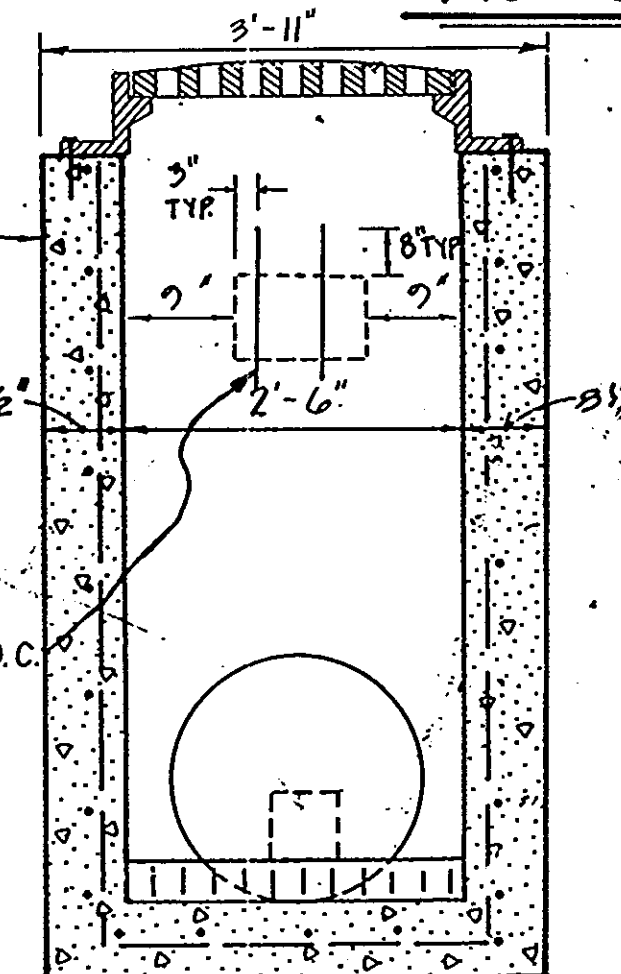
**ENGINEER'S CERTIFICATION**  
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."  
*Philip Dea* 11/29/90  
Signature of Engineer Date  
PHILIP DEA, BAILEY, COX & MAGNANI  
1850 YORK ROAD, TIMONUM, MD

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.  
*James M. Nelson* 12/19/90  
Soil Conservation Service Date

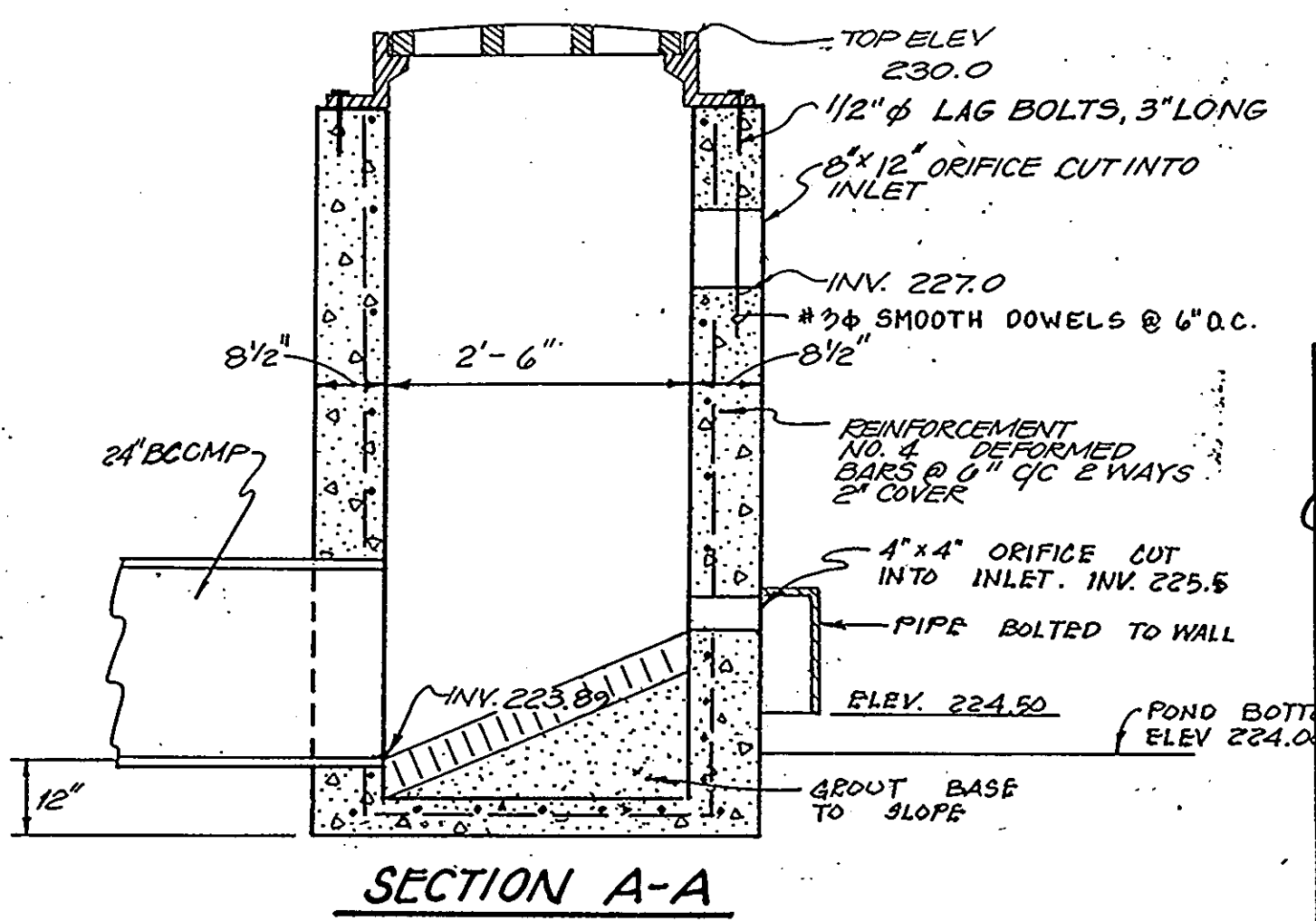
These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.  
*Robert W. Ziehm* 12/19/90  
Howard Soil Conservation District Date



**PLAN**



**SECTION B-B**



**SECTION A-A**

POND 1 - STRUCTURE DATA						
TYPE - EMBANKMENT DETENTION POND						
LOCATION - URBAN						
STRUCTURE CLASS - "A"						
DRAINAGE AREA - 7.482 ACRES TO POND; 17.857 ACRES TOTAL						
STORAGE x HEIGHT PRODUCT - 1,3429 ACRE-Feet x 6.0 FEET = 8,0574 ACRE-Feet <sup>2</sup>						
HEIGHT TO EMERGENCY SPILLWAY CREST - 6.0 FEET						
DESIGN DATA						
STORM	EXISTING $Q$ (TOTAL)	DEVELOPED $Q_1$ (TOTAL)	DEVELOPED $Q_2$ (TOTAL)	DEVELOPED $Q_3$ (TOTAL)	STORAGE VOLUME	HIGHWATER ELEVATION
2 Year	4.85	6.08	0.91	6.13	0.4015	227.10
10 Year	18.30	14.74	3.97	18.40	0.7467	228.31
100 Year	37.36	25.31	6.17	26.92	1.2874	229.85
HYDROLOGIC CRITERIA						
PRINCIPAL SPILLWAY - 2,10, and 100 Year Design						
EMERGENCY SPILLWAY - Same as PRINCIPAL						
FREEBOARD - 2.15 FEET						

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard J. Eppson* 1/10/91  
DIRECTOR DATE  
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT  
*James M. Nelson* 11/10/90  
HEALTH OFFICER DATE  
APPROVED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*James M. Nelson* 11/10/90  
PLANNING DIRECTOR DATE  
APPROVED FOR HOWARD COUNTY DEPARTMENT OF PLANNING AND LAND DEVELOPMENT  
*James M. Nelson* 11/10/90  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

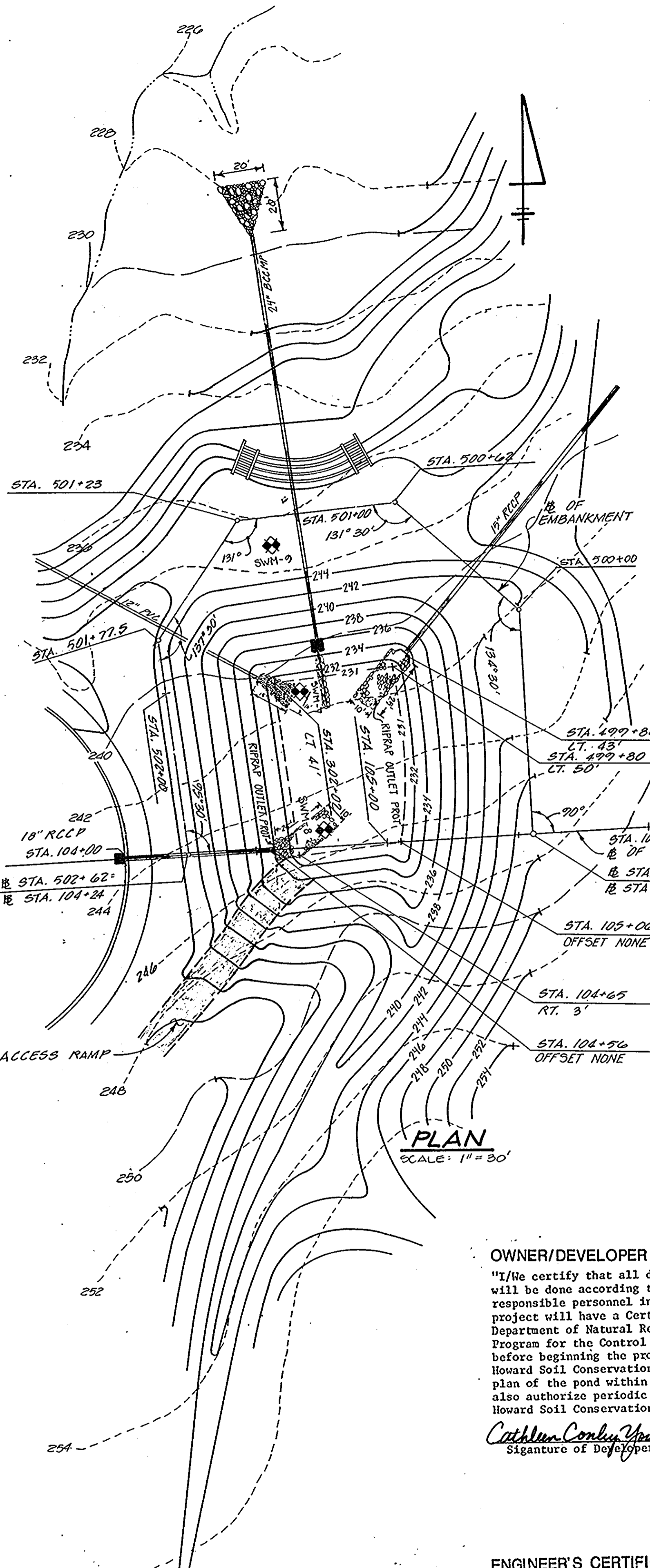
DATE	NO.	REVISIONS

SHEET TITLE:  
**STORMWATER MANAGEMENT PLAN  
POND "1"**

PROJECT TITLE:  
**NEW  
ELKBRIDGE ELEMENTARY SCHOOL**

ENGINEERS:  
**WHITNEY, BAILEY, COX & MAGNANI**  
Consulting Engineers  
1850 YORK ROAD  
TIMONUM, MARYLAND 21093  
301-252-4000

DESIGNED: *R. W. B.*  
DRAWN: *R. W. B.*  
CHECKER: *PD*  
DATE: **NOVEMBER 29, 1990**  
SCALE: **AS SHOWN**  
DRAWING NO.: **CE-26**  
**27 of 42**



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

*[Signature]* 12/28/90  
S. Soil Conservation Service Date

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

*[Signature]* 12/13/90  
Howard Soil Conservation District Date

**OWNER/DEVELOPER CERTIFICATION**

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

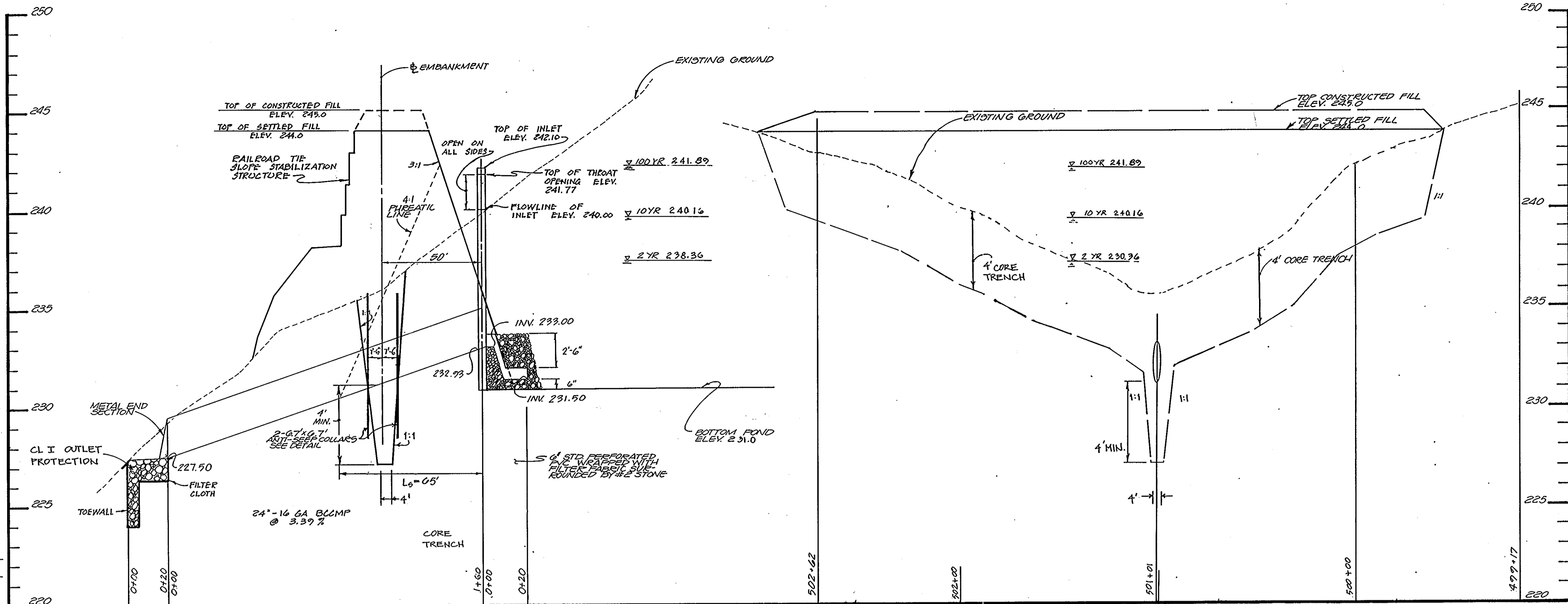
*[Signature]* 12/10/90  
Signature of Developer Date

**ENGINEER'S CERTIFICATION**

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

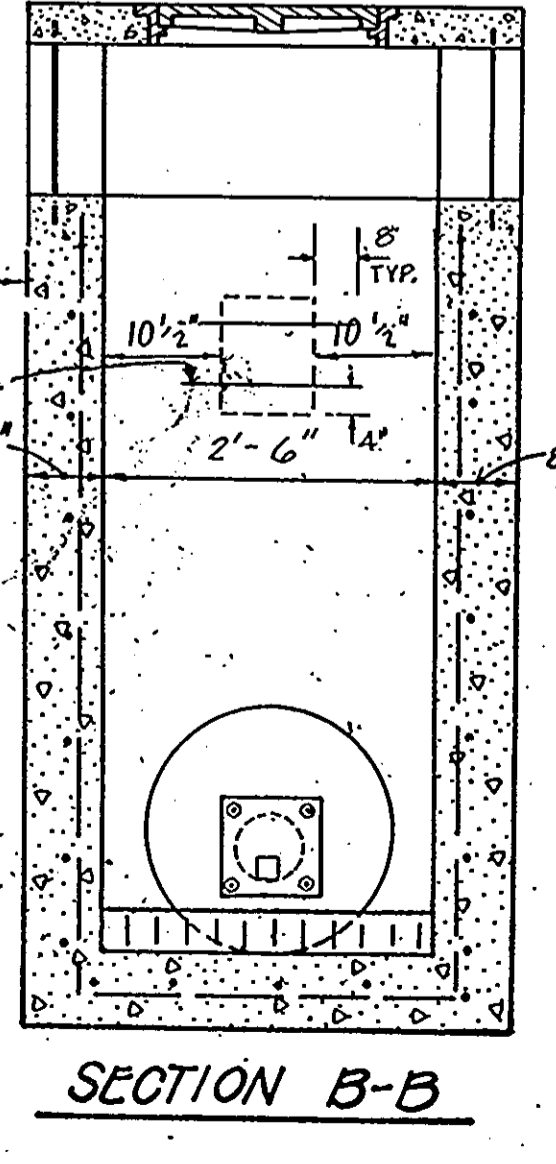
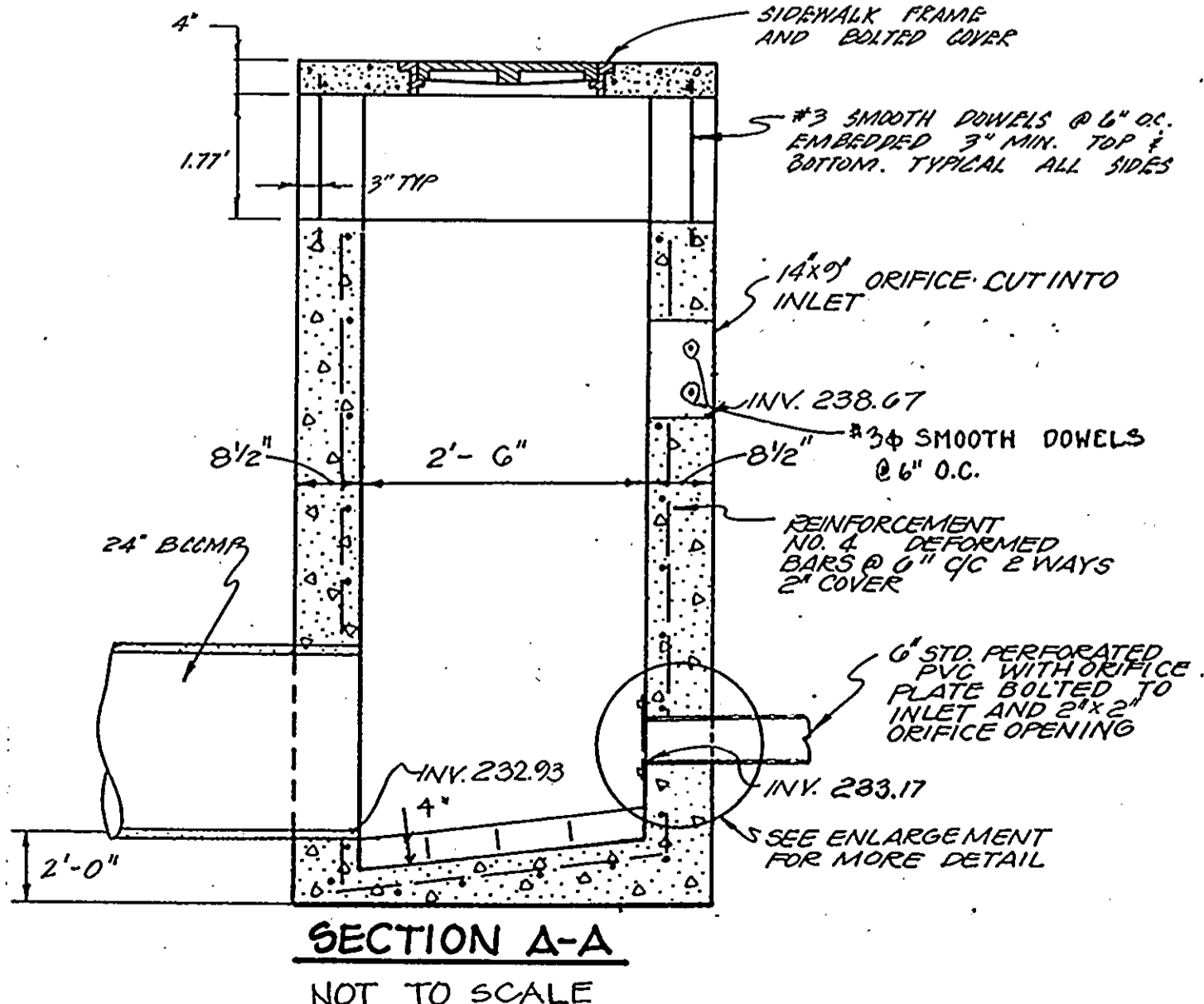
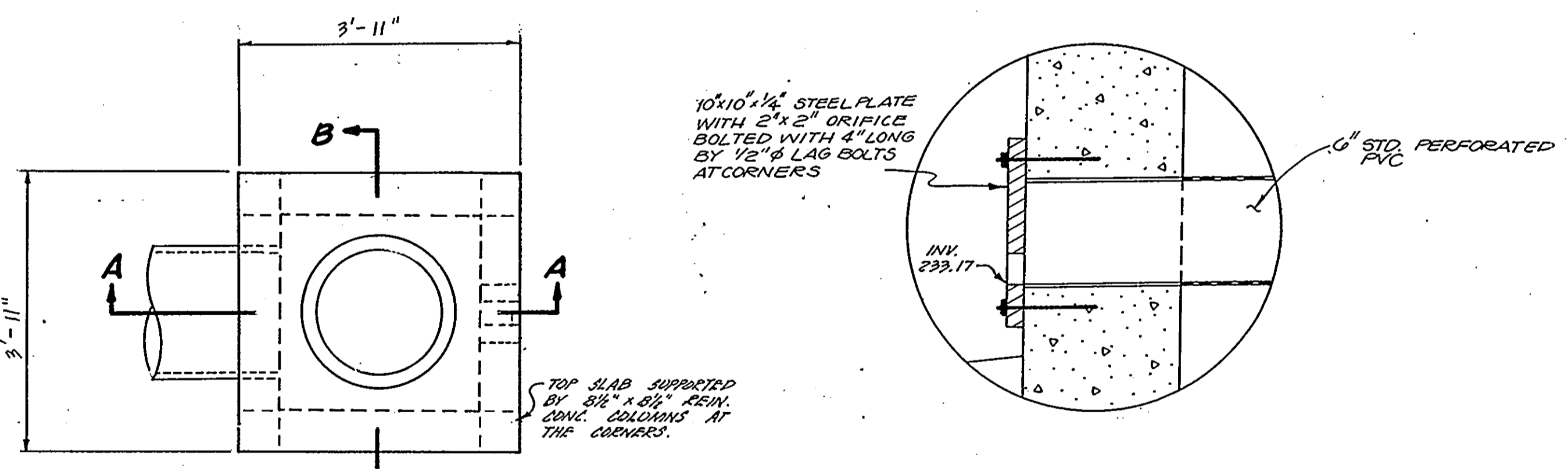
*[Signature]* 11/29/90  
Signature of Engineer Date

PHIL DER  
WHITNEY, BAILEY, COX & MAGNANI  
1850 YORK ROAD TIMONIUM, MD



**PROFILE THRU Q OF PRINCIPAL SPILLWAY**  
SCALE: VERT 1" = 3'  
HORIZ 1" = 30'

**PROFILE THRU Q OF BERM**  
SCALE: VERT 1" = 3'  
HORIZ 1" = 30'



**OUTLET**

POND 2 - STRUCTURE DATA						
TYPE - EMBANKMENT DETENTION POND						
LOCATION - URBAN						
STRUCTURE CLASS - 1A						
DRAINAGE AREA - 14,800 ACRES TO POND; 21,580 ACRES TOTAL						
STORAGE x HEIGHT PRODUCT - 1,3970 ACRE-FEET x 9.0 FEET = 12,5730 ACRE-FEET <sup>2</sup>						
HEIGHT TO EMERGENCY SPILLWAY CREST - 9.0 FEET						
DESIGN DATA						
STORM	ESTIMD Q (CFS)	DEVELOPED O <sub>2</sub> (TO POND)	DEVELOPED O <sub>2</sub> (POND)	DEVELOPED O <sub>2</sub> (TOTAL)	STORAGE VOLUME	HIGHWATER ELEVATION
2 Year	5.50	10.25	0.00	3.71	0.9007	238.26
10 Year	24.00	26.87	6.10	12.28	1.4451	240.18
100 Year	50.55	48.00	29.89	48.12	2.0120	241.89
HYDROLOGIC CRITERIA						
PRINCIPAL SPILLWAY - 2.10, and 100 Year Design						
EMERGENCY SPILLWAY - Same as PRINCIPAL						
FREEBOARD - 2.11 FEET						

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*[Signature]* 1/10/91  
DIRECTOR DATE

*[Signature]* 1/10/91  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

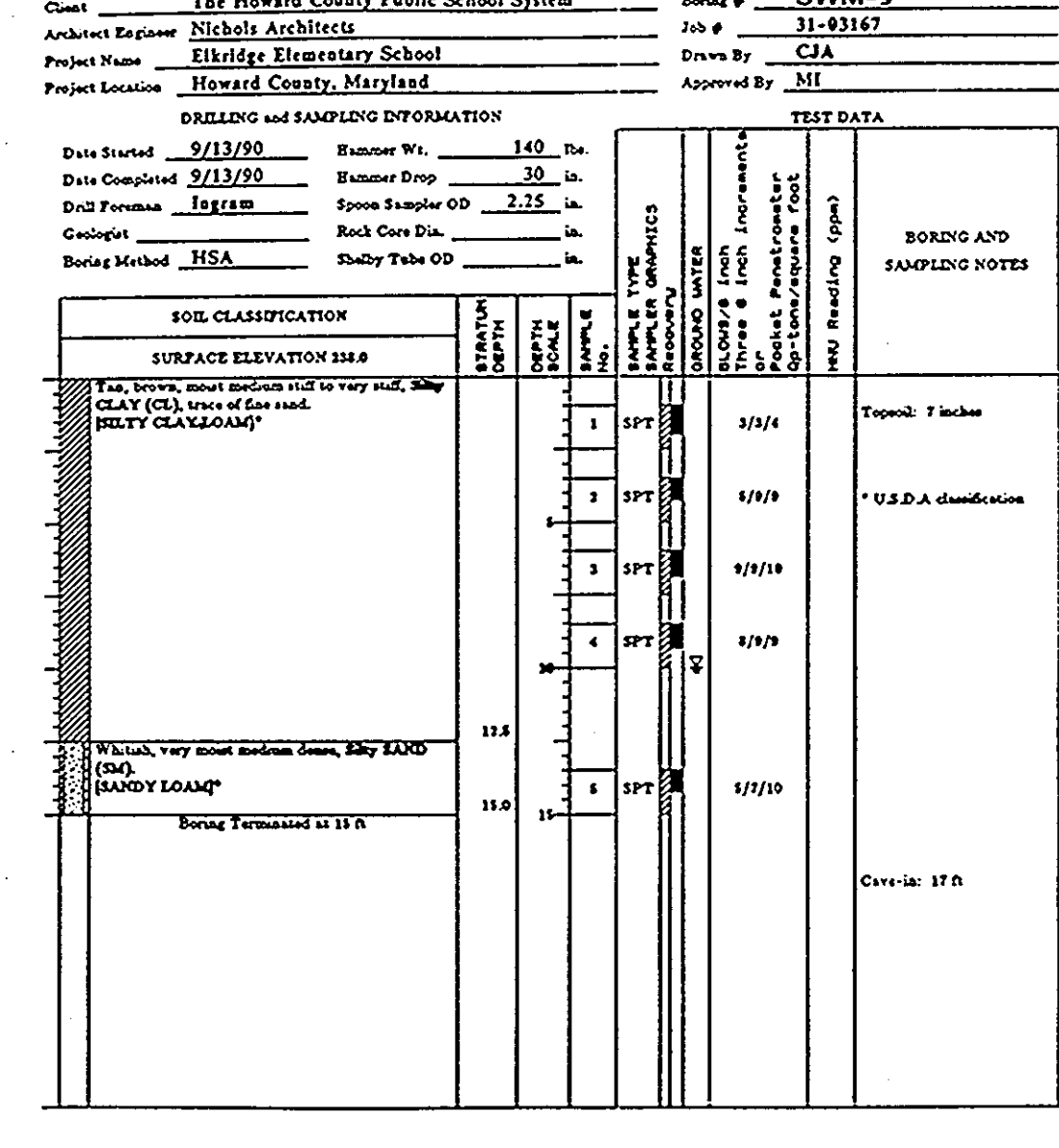
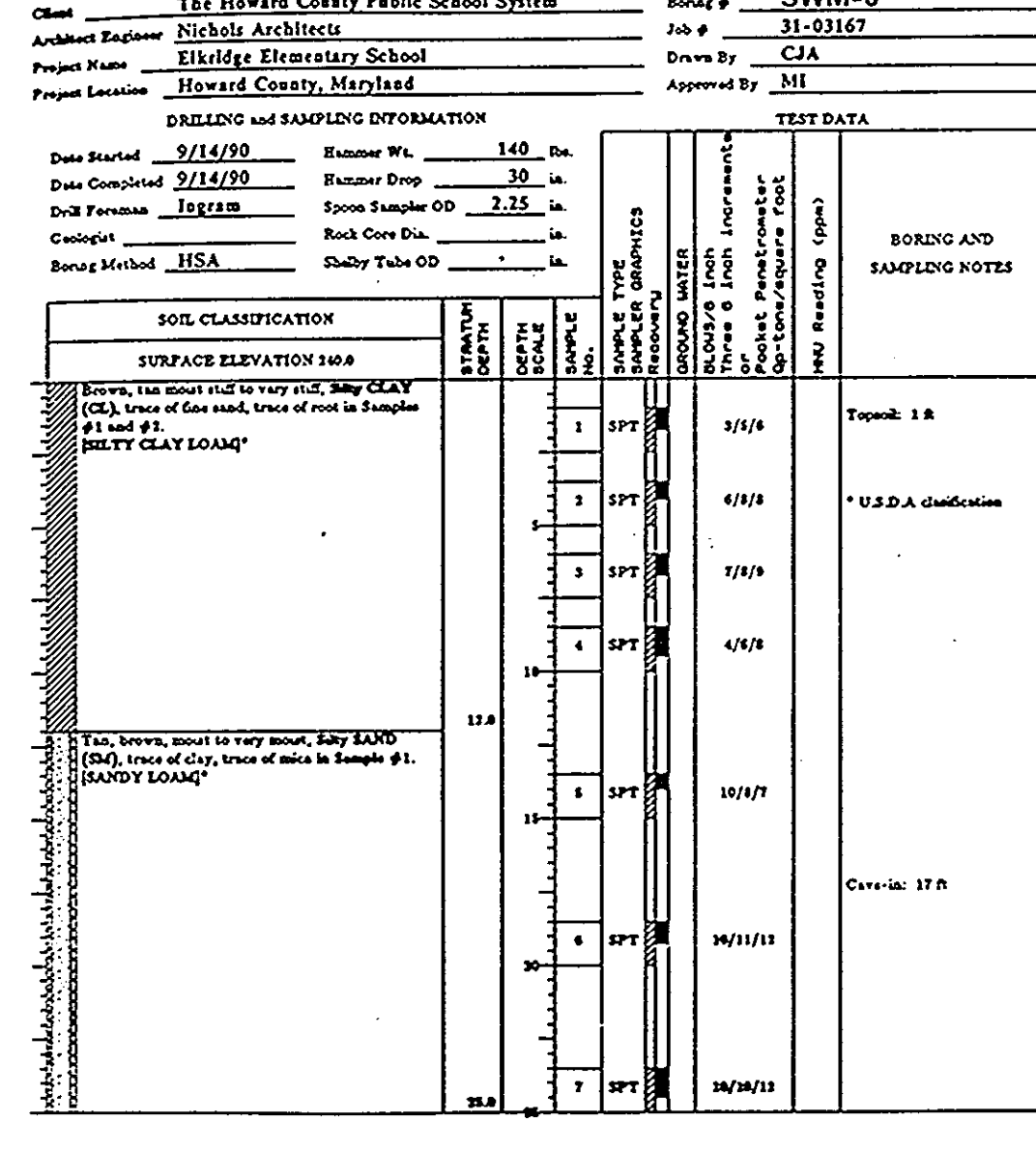
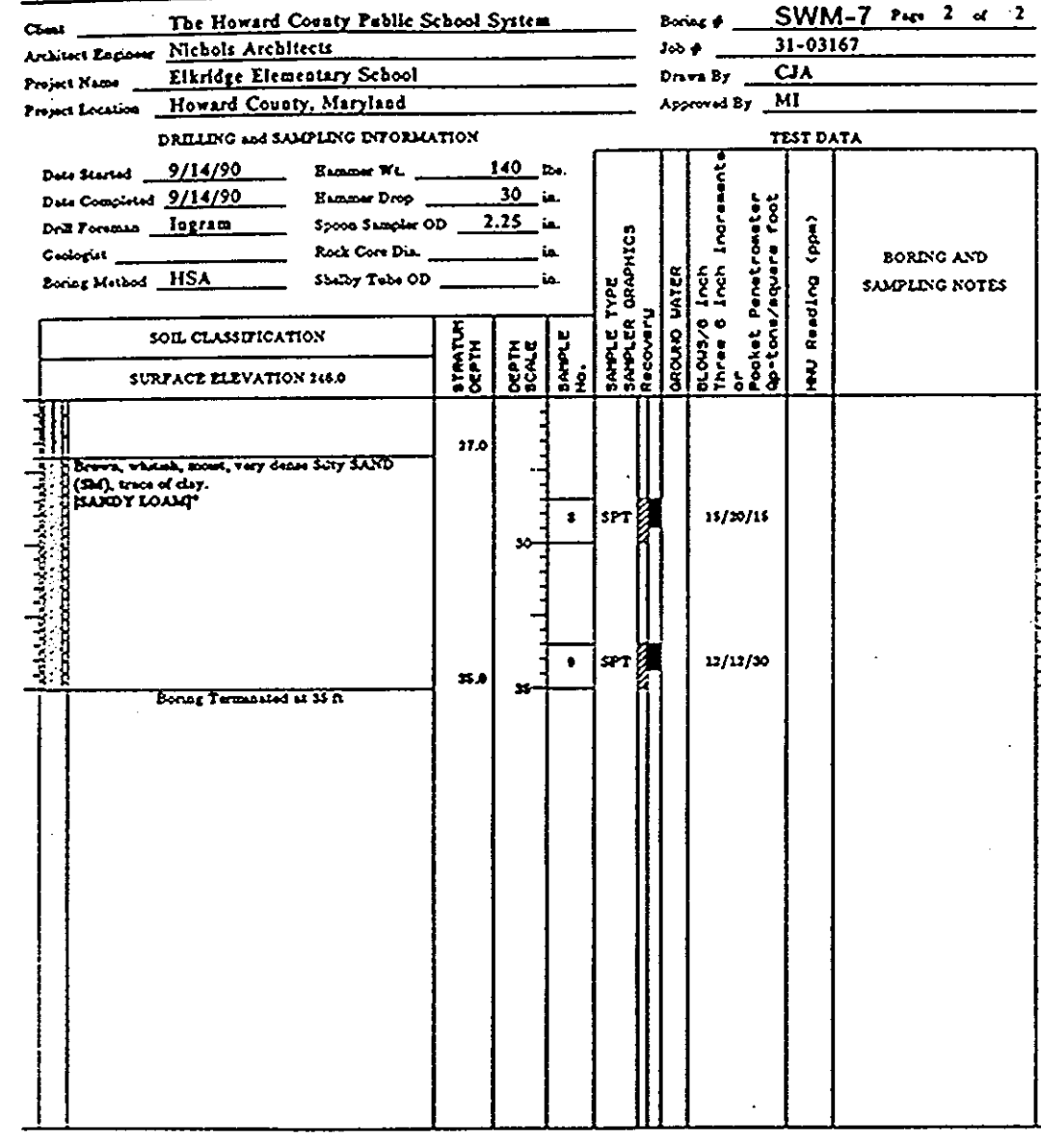
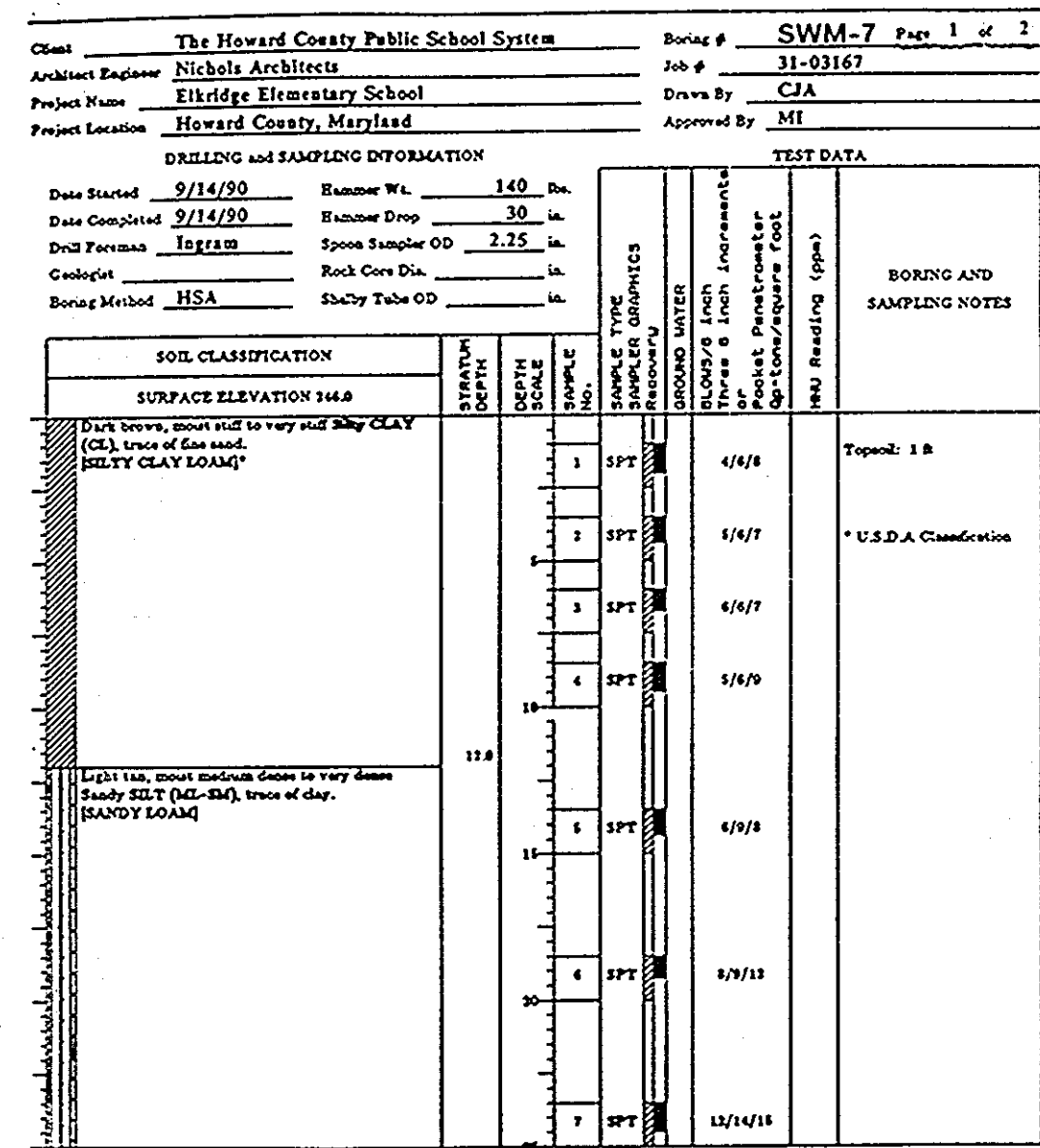
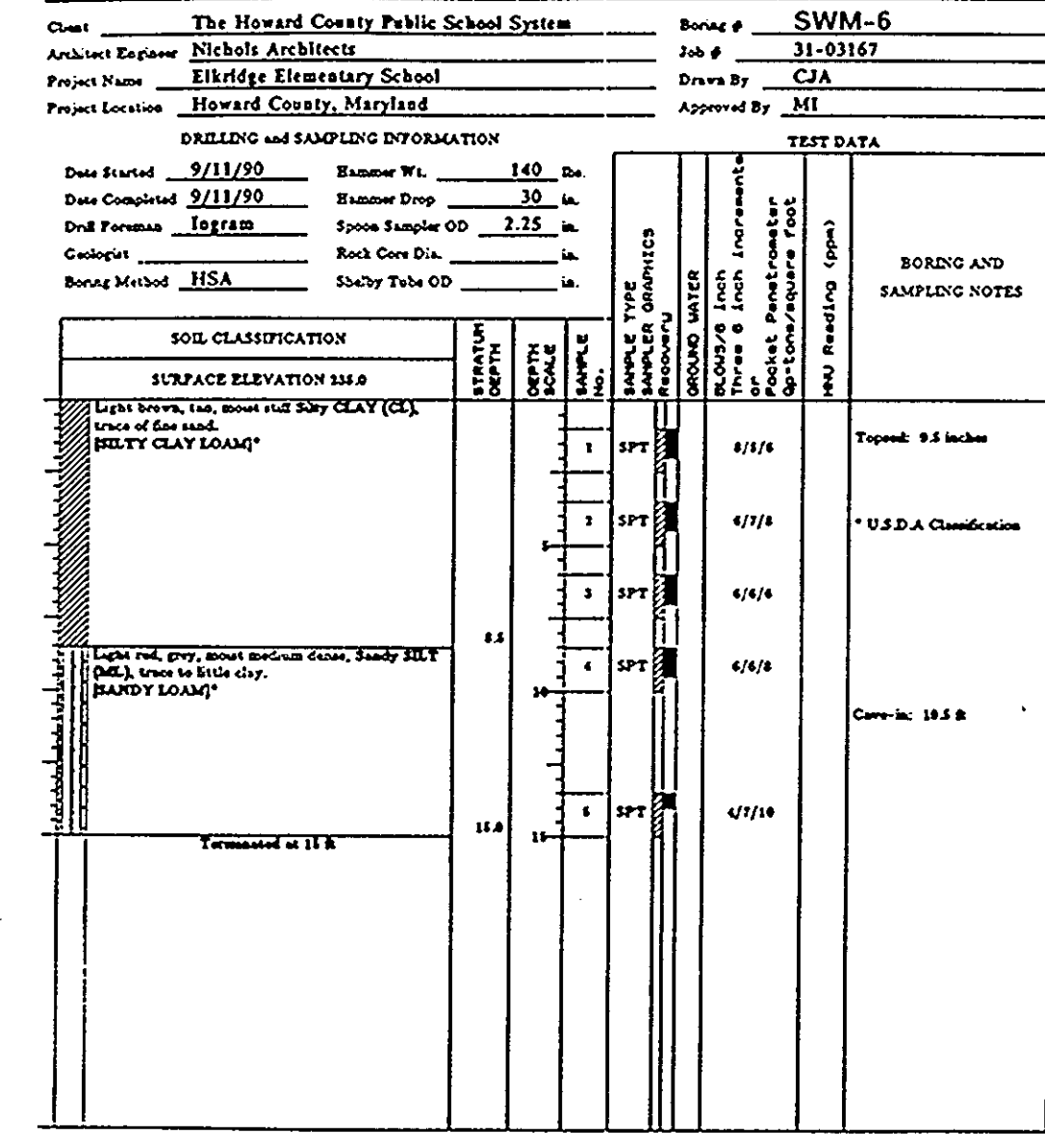
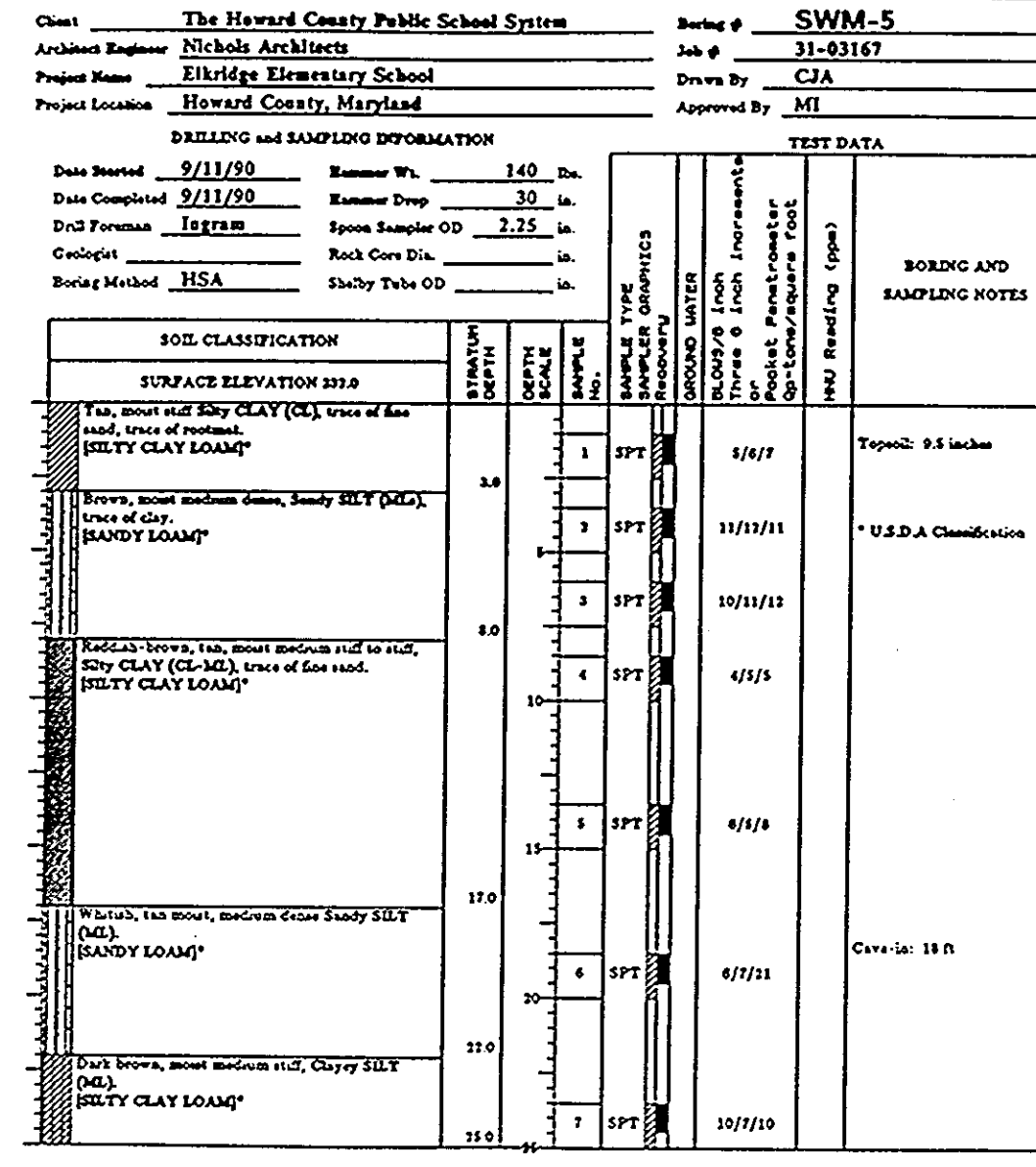
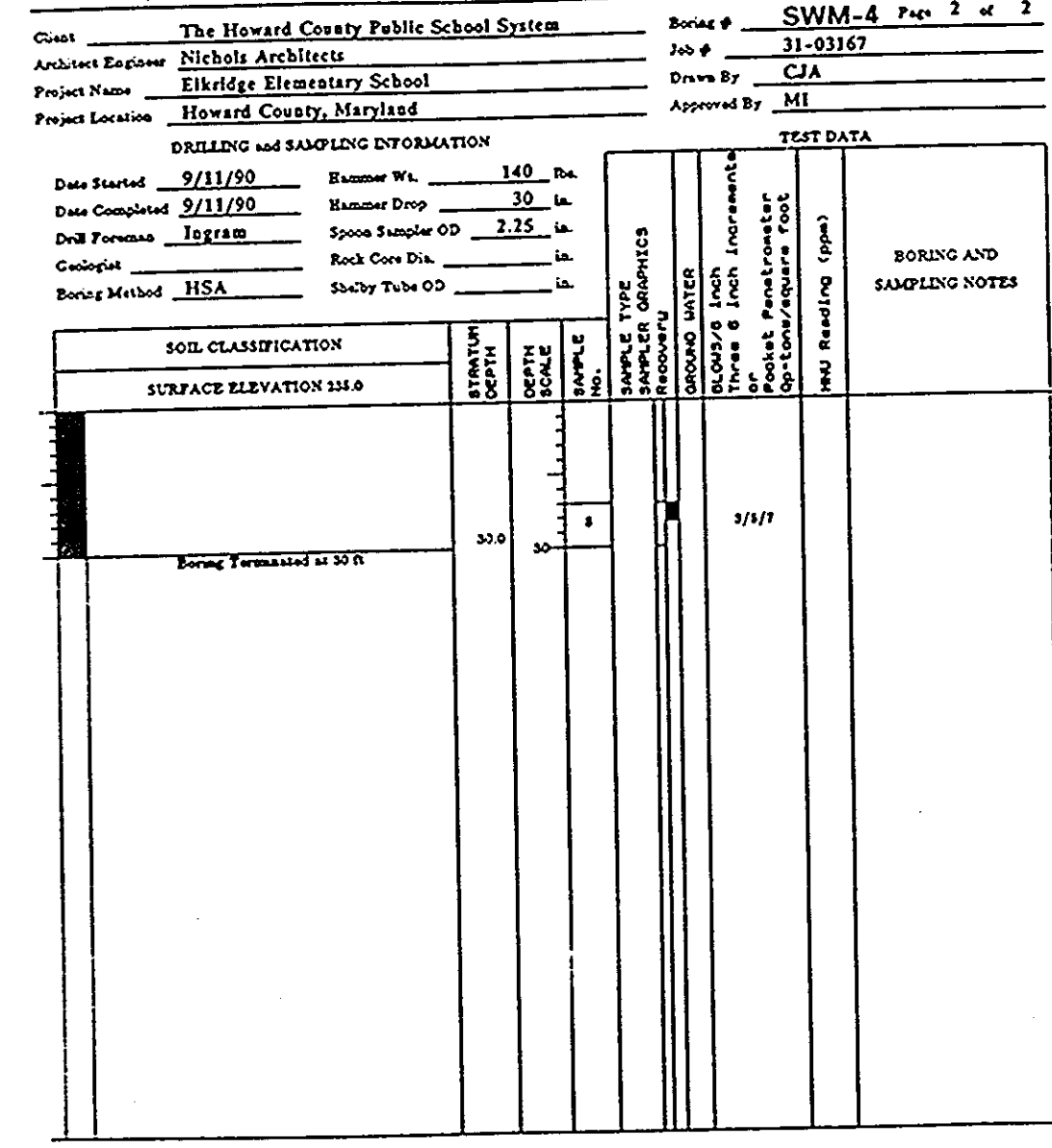
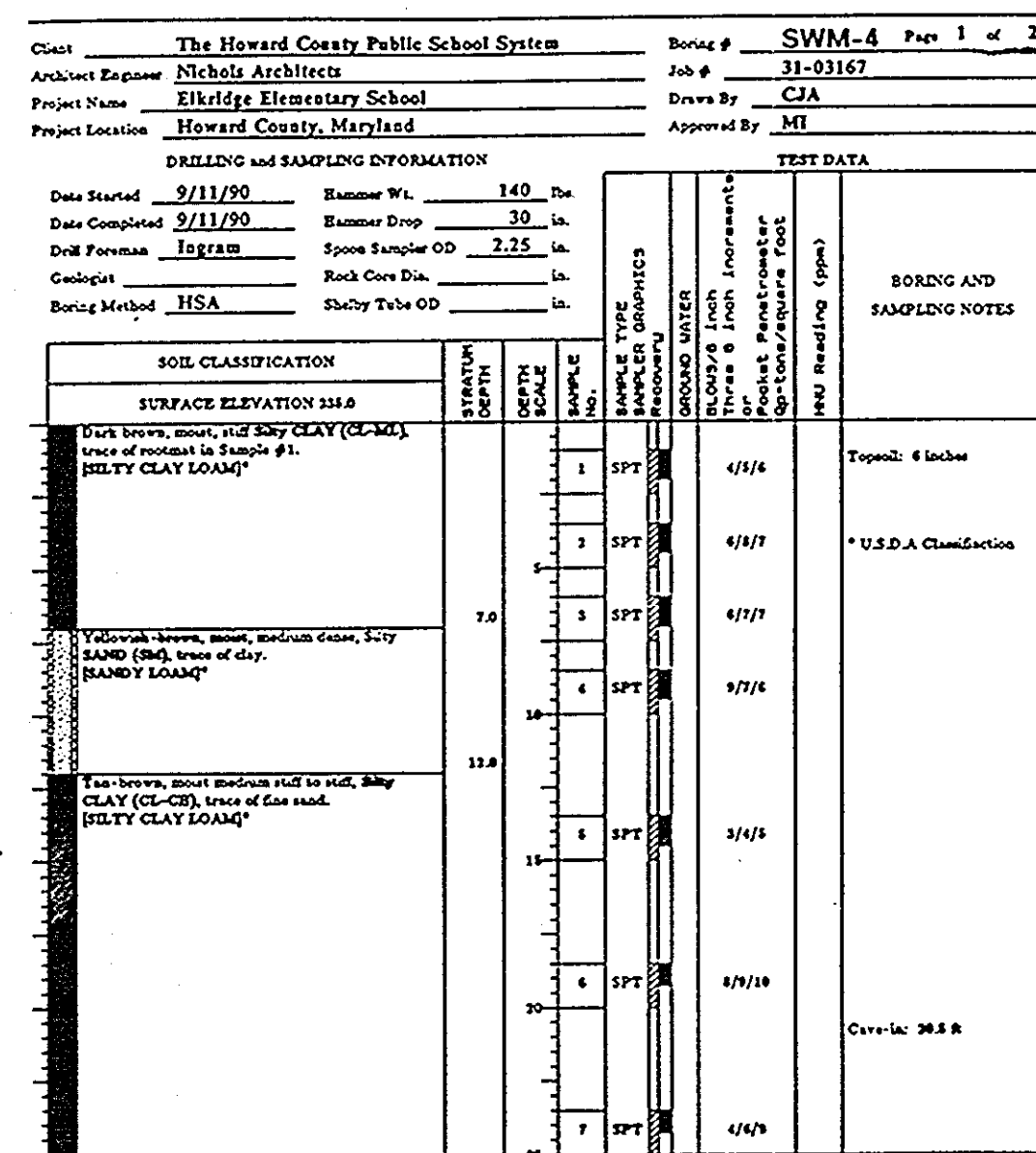
*[Signature]* 1-11-91  
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 1/14/91  
PLANNING DIRECTOR DATE

*[Signature]* 1/14/91  
PLANNING AND LAND DEVELOPMENT DATE

DATE	NO.	REVISIONS
SHEET TITLE: <b>STORMWATER MANAGEMENT PLAN POND "2"</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED: R.W.B.		
DRAWN: R.W.B.		
CHECKED: PD		
DATE: NOVEMBER 29, 1990		
SCALE: AS SHOWN		
DRAWING NO.: CE-27 28 of 42		



APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Franklin S. Japan*  
 DIRECTOR 1/10/91 DATE

*W. S. S. S. S. S.*  
 CHIEF, BUREAU OF ENGINEERING 1-10-91 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

*Joseph A. Boyd*  
 HEALTH OFFICER 1-11-91 DATE

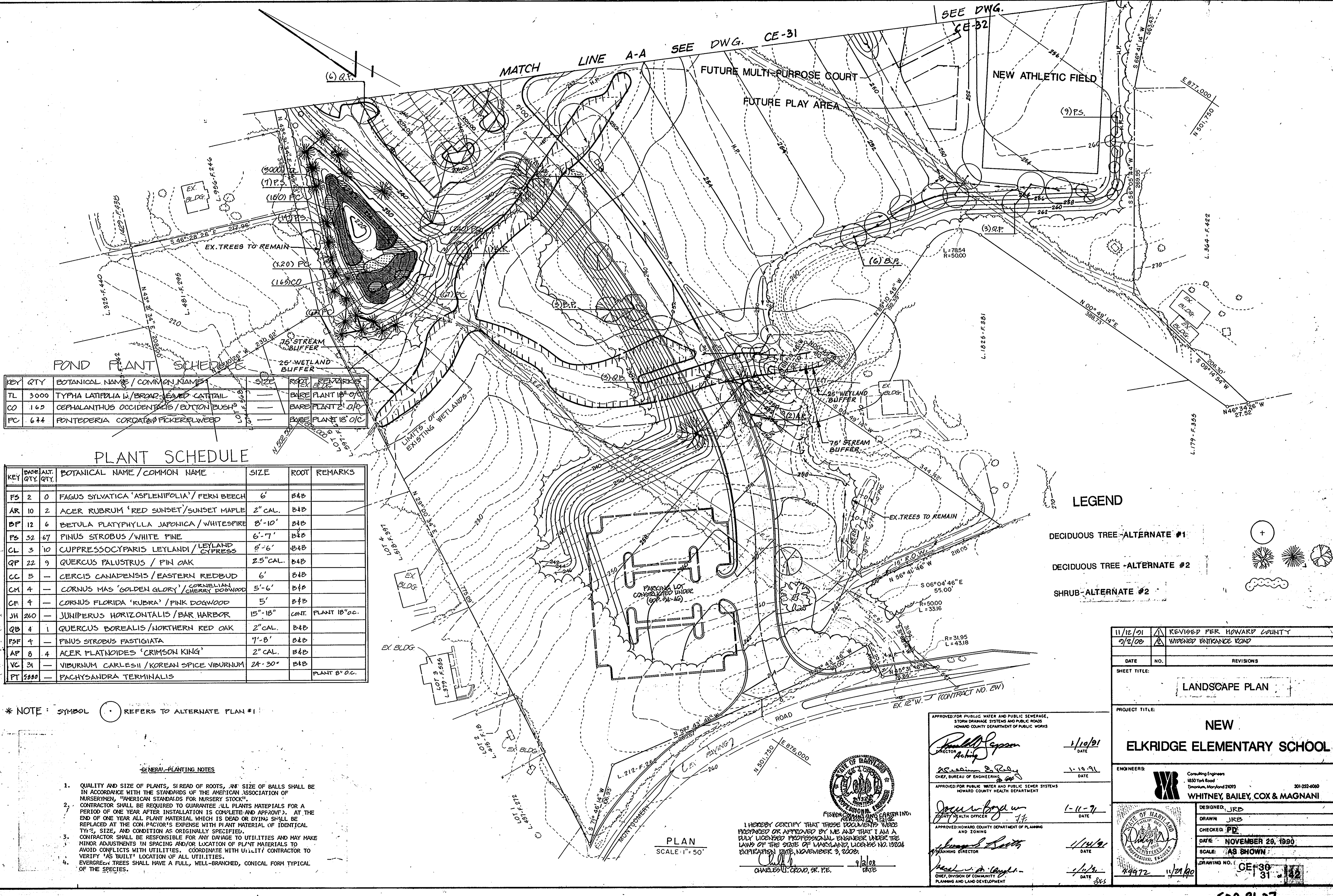
APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING  
 AND ZONING

*William J. S. S. S.*  
 PLANNING DIRECTOR 1/14/91 DATE

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING  
 AND ZONING

*W. S. S. S. S.*  
 1/14/91 DATE

DATE	NO.	REVISIONS
SHEET TITLE SWM BORING PROFILES		
PROJECT TITLE NEW ELKRIDGE ELEMENTARY SCHOOL		
ENGINEERS:	 Consulting Engineers 1850 Tola Road Timonium, Maryland 21093 301-252-6000 WHITNEY, BAILEY, COX & MAGNANI	
DESIGNED: <i>W. S. S. S.</i>		
DRAWN: <i>W. S. S. S.</i>		
CHECKED: PD		
DATE: NOVEMBER 29, 1990		
SCALE: AS SHOWN		
DRAWING NO: CE-28 29 of 42		



**POND PLANT SCHEDULE**

KEY	QTY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	REMARKS
TL	3000	TYPHA LATIFOLIA L / BROAD-LEAVED CATTAIL	—	BARE PLANT 18" O.C.	
CO	165	CEPHALANTHUS OCCIDENTALIS / BUTTON BUSH	—	BARE PLANT 2' O.C.	
PC	674	PONTERDERIA CORDATA / FICKERELWEED	—	BARE PLANT 18" O.C.	

**PLANT SCHEDULE**

KEY	BASE QTY.	ALT. QTY.	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	REMARKS
FS	2	0	FAGUS SYLVATICA 'ASPLENIFOLIA' / FERN BEECH	6'	B&B	
AR	10	2	ACER RUBRUM 'RED SUNSET' / SUNSET MAPLE	2" CAL.	B&B	
BP	12	6	BETULA PLATYPHYLLA JAPONICA / WHITESPIRE	8'-10'	B&B	
PS	32	67	PINUS STROBUS / WHITE PINE	6'-7'	B&B	
CL	3	10	CUPRESSOCYPARIS LEYLANDI / LEYLAND CYPRESS	5'-6'	B&B	
QP	22	9	QUERCUS PALUSTRIS / PIN OAK	2.5" CAL.	B&B	
CC	5	—	CERCIS CANADENSIS / EASTERN REDBUD	6'	B&B	
CM	4	—	CORNUS MAS 'GOLDEN GLORY' / CORNELIAN CHERRY DOGWOOD	5'-6'	B&B	
CF	4	—	CORNUS FLORIDA 'KUBRA' / PINK DOGWOOD	5'	B&B	
JH	260	—	JUNIPERUS HORIZONTALIS / BAR HARBOR	15"-18"	CONT. PLANT 18" O.C.	
QB	4	1	QUERCUS BOREALIS / NORTHERN RED OAK	2" CAL.	B&B	
PSF	4	—	PINUS STROBUS FASTIGIATA	7'-8'	B&B	
AP	8	4	ACER PLATANOIDES 'CRIMSON KING'	2" CAL.	B&B	
VC	31	—	VIBURNUM CARLESII / KOREAN SPICE VIBURNUM	24"-30"	B&B	
PT	5800	—	PACHYSANDRA TERMINALIS	—	PLANT 8" O.C.	

\* NOTE: SYMBOL REFERS TO ALTERNATE PLAN #1

**GENERAL PLANTING NOTES**

1. QUALITY AND SIZE OF PLANTS, SIZE OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN, "AMERICAN STANDARDS FOR NURSERY STOCK". CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANTS MATERIALS FOR A PERIOD OF ONE YEAR AFTER INSTALLATION IS COMPLETE AND APPROVED. AT THE END OF ONE YEAR ALL PLANT MATERIAL WHICH IS DEAD OR DYING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE WITH PLANT MATERIAL OF IDENTICAL TYPE, SIZE, AND CONDITION AS ORIGINALLY SPECIFIED.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND/OR LOCATION OF PLANT MATERIALS TO AVOID CONFLICTS WITH UTILITIES. COORDINATE WITH UTILITY CONTRACTOR TO VERIFY "AS BUILT" LOCATION OF ALL UTILITIES.
3. EVERGREEN TREES SHALL HAVE A FULL, WELL-BRANCHED, CONICAL FORM TYPICAL OF THE SPECIES.

**LEGEND**

- DECIDUOUS TREE - ALTERNATE #1
- DECIDUOUS TREE - ALTERNATE #2
- SHRUB - ALTERNATE #2

11/12/01	REVISION PER HOWARD COUNTY	
01/2/02	WIDENED ENTRANCE ROAD	
DATE	NO.	REVISIONS
SHEET TITLE: <b>LANDSCAPE PLAN</b>		

PROJECT TITLE: **NEW ELKRIDGE ELEMENTARY SCHOOL**

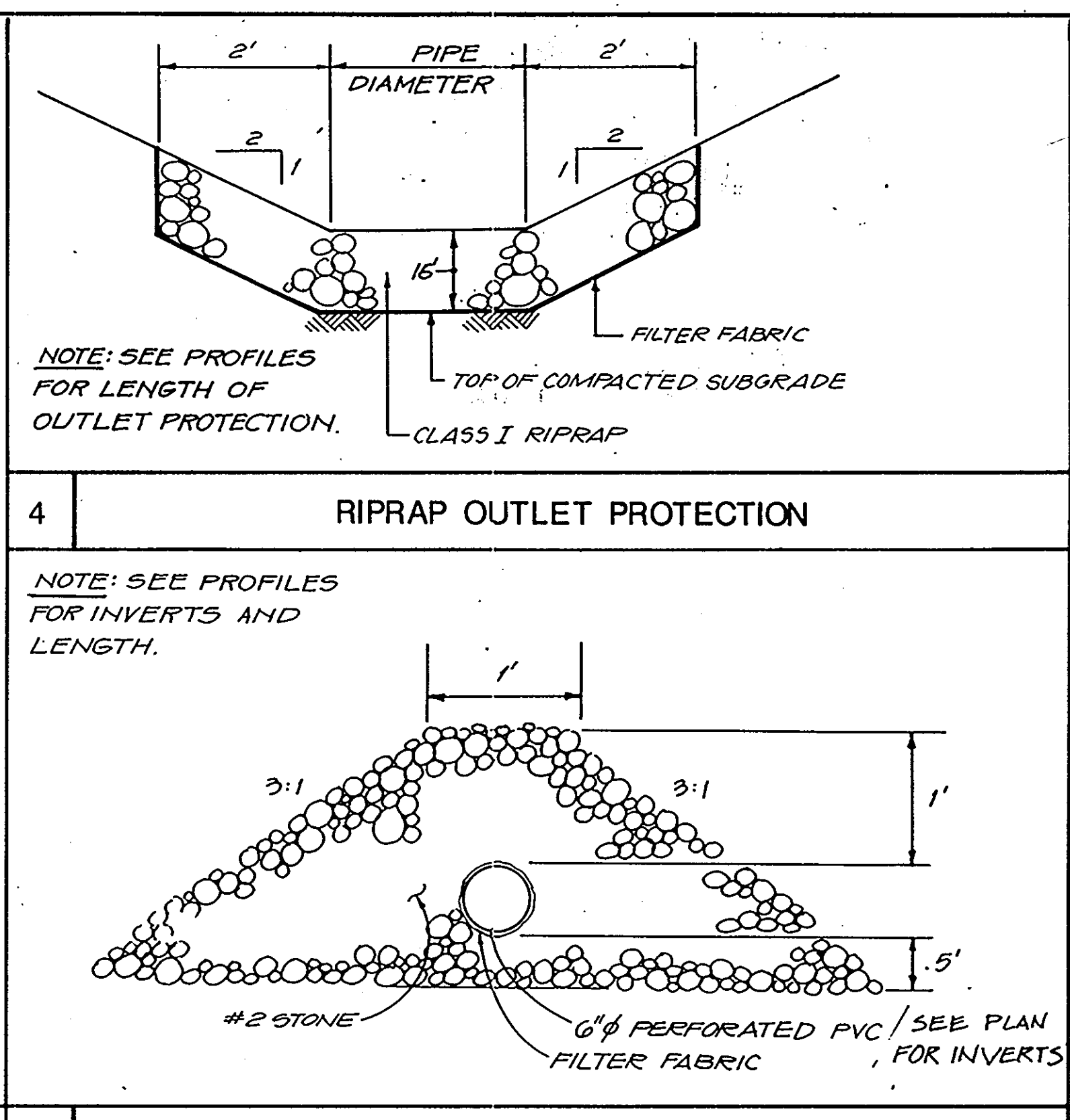
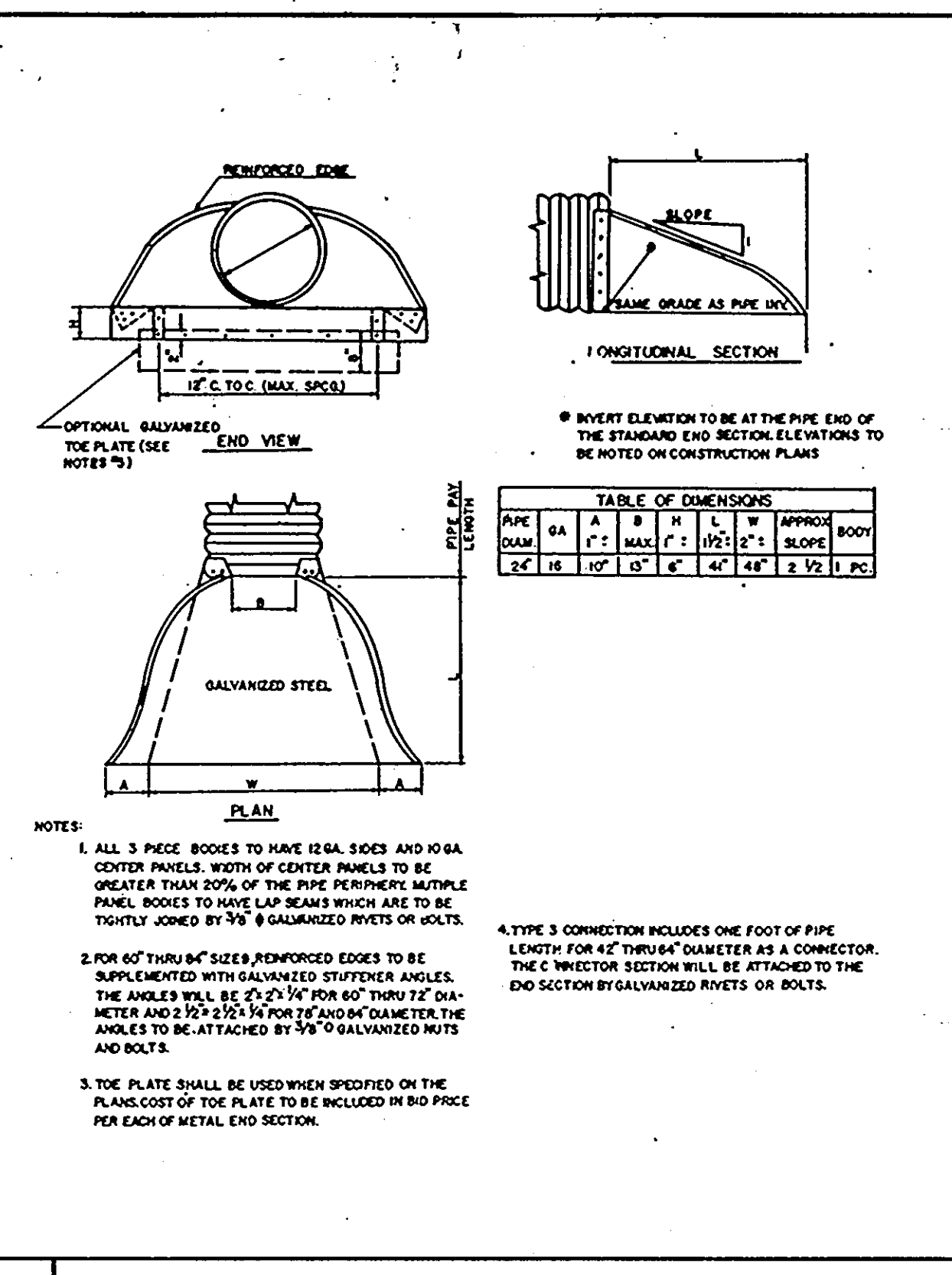
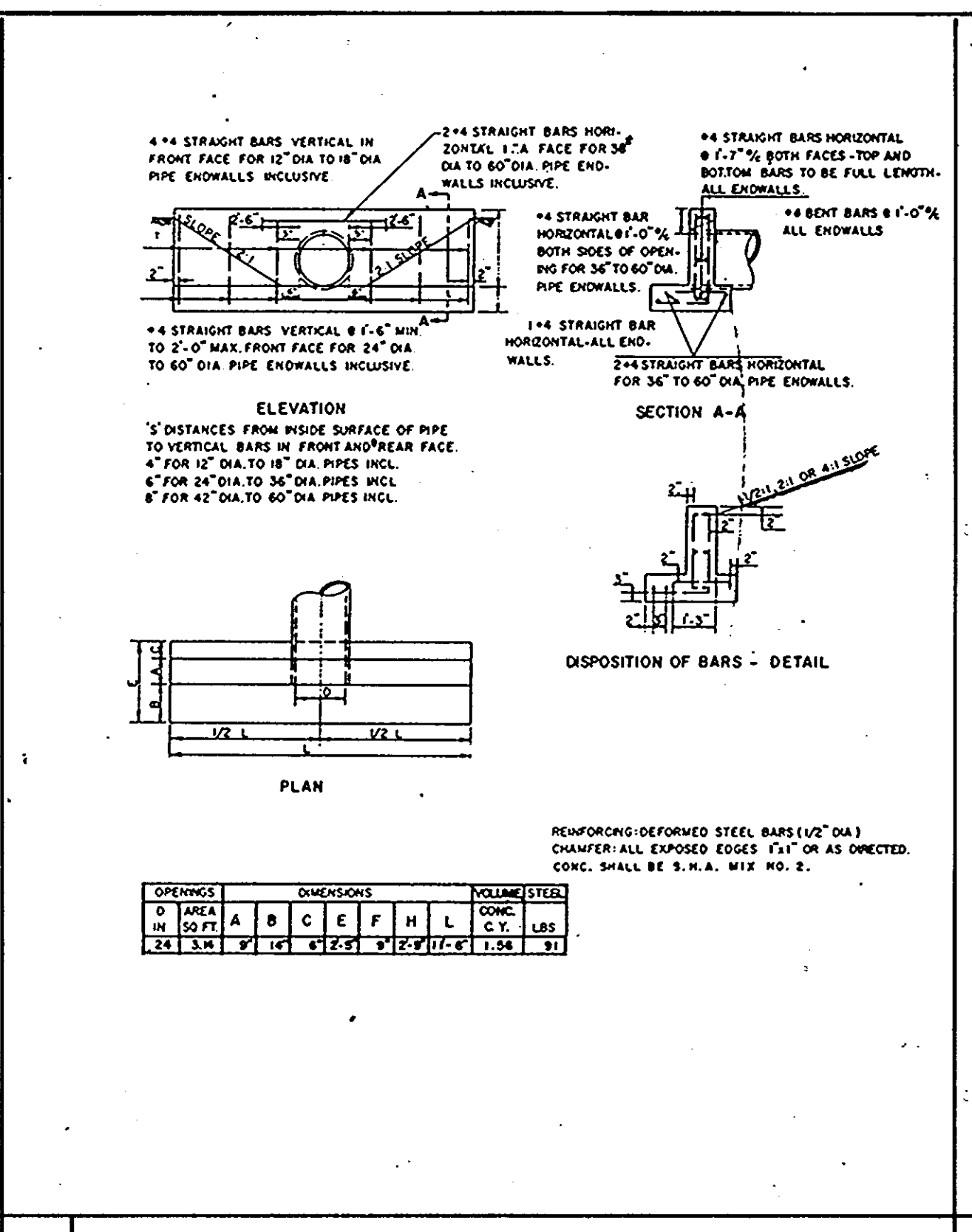
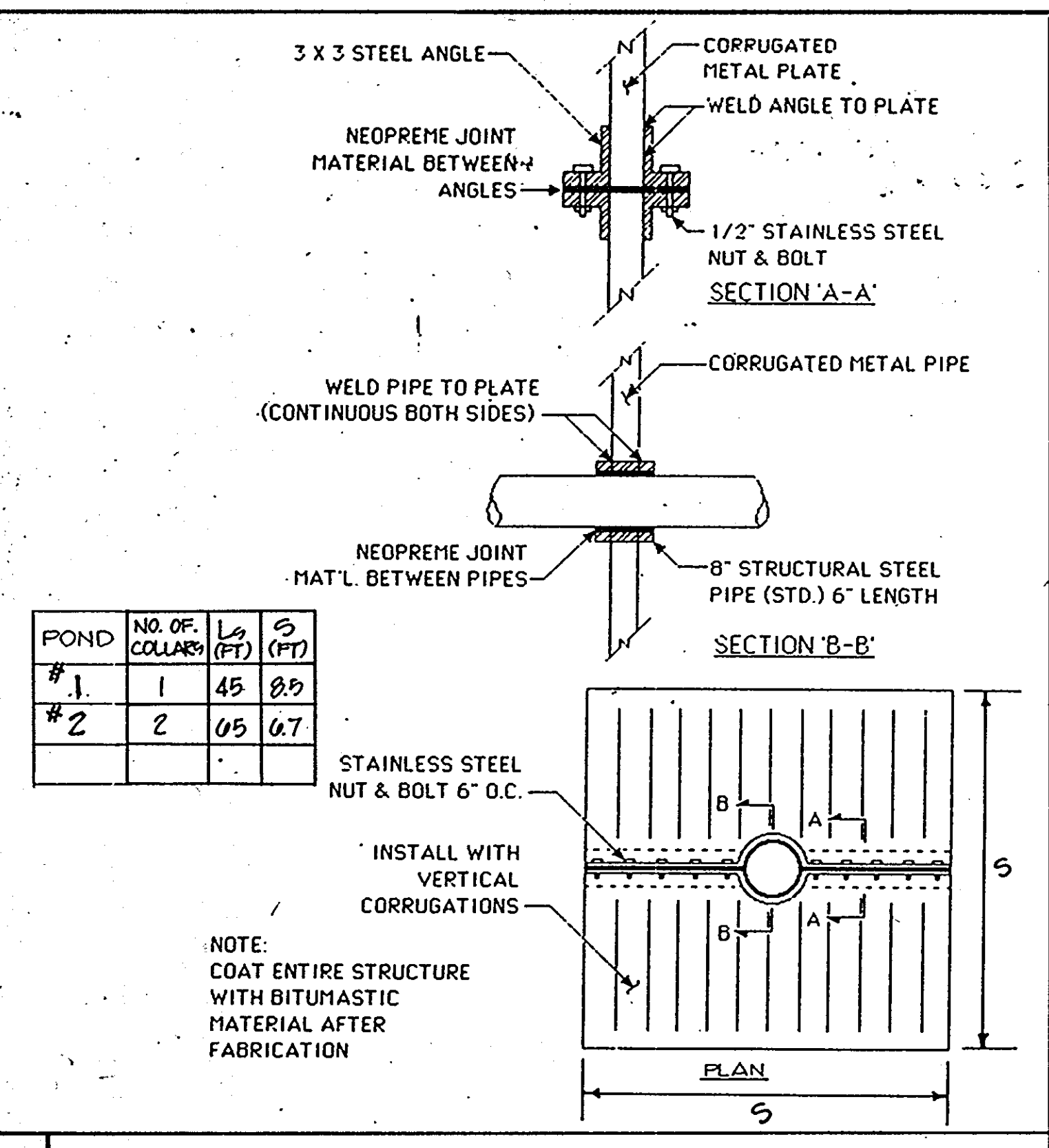
ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**

DESIGNED: JRB  
 DRAWN: JRB  
 CHECKED: PR  
 DATE: **NOVEMBER 28, 1990**  
 SCALE: **AS SHOWN**  
 DRAWING NO.: **CE-30**

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
**HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
 DIRECTOR: *Donald S. Saper* 1/10/01 DATE  
 CHIEF, BUREAU OF ENGINEERING: *Richard D. Ray* 1-19-91 DATE  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER: *Joseph Boyer* 1-11-91 DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 PLANNING DIRECTOR: *William D. Smith* 1/14/91 DATE  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: *Paul W. D. Campbell* 1/14/91 DATE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 13204 EXPIRATION DATE, NOVEMBER 9, 2008.  
**CHARLES L. CROW, SR. P.E.** 9/2/08 DATE

PLAN  
 SCALE: 1" = 50'



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

Approved: *R. Johnson*, Date 12/19/90  
Howard E. G. D.

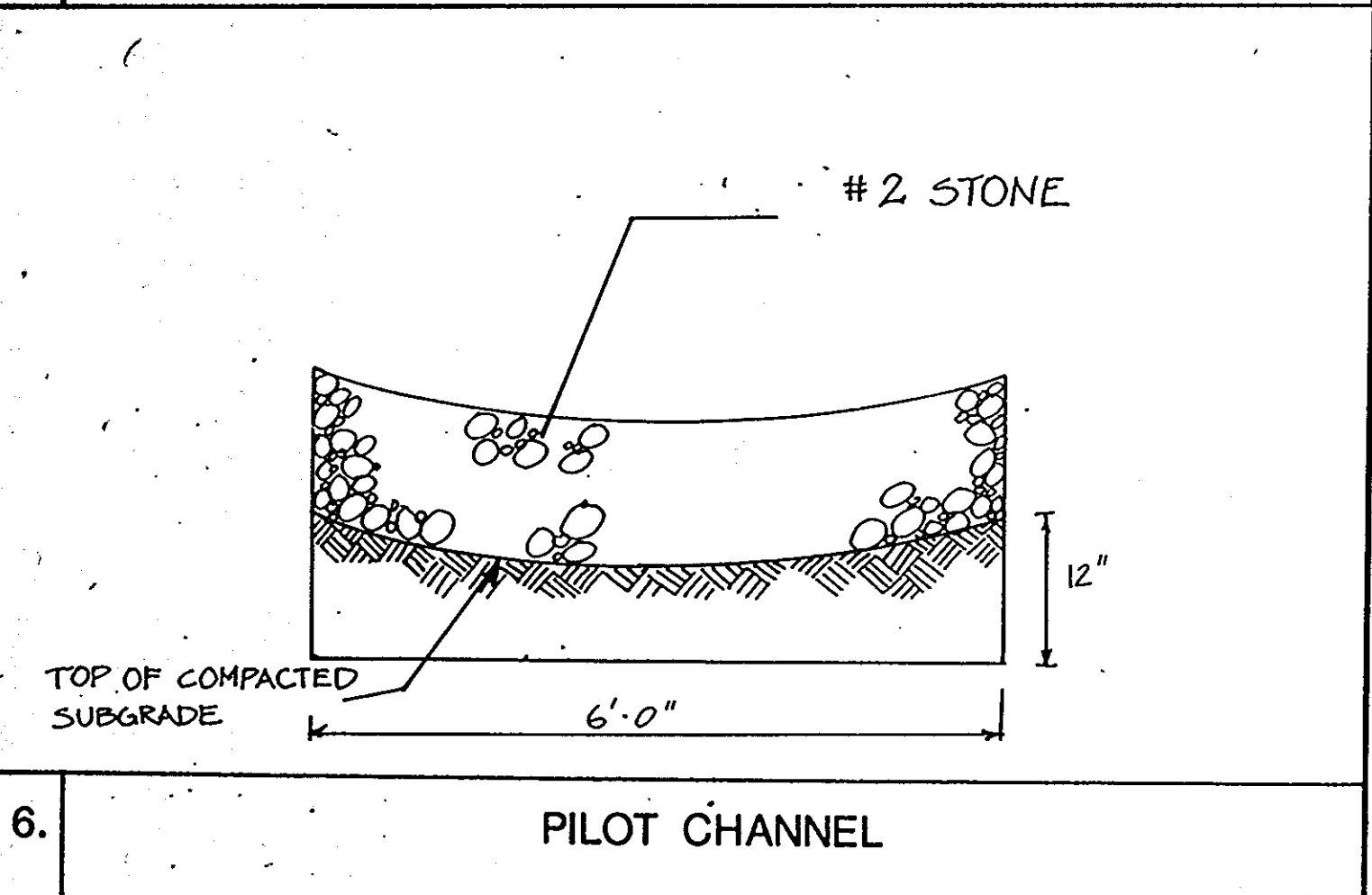
Signature: *Howard E. G. D.*  
U.S. Soil Conservation Service

1 ANTI-SEEP COLLAR

2 TYPE 'C' ENDWALL

3 METAL END SECTION

5 CROSS SECTION OF EXTENDED DETENSION PIPE



6 PILOT CHANNEL

**SOIL CONSERVATION SERVICE**  
FANNING  
CONSTRUCTION SPECIFICATIONS FOR PONDS

These specifications are appropriate for ponds within the scope of the Standard for practice 378.

**I. SITE PREPARATION**

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

Areas to be covered by the pond or 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.

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 filled in a suitable location for use on the embankment and other designated areas.

**II. FILL FILL**

**Material**

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation (including freeboard) as shown on the plans.

**Placement**

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

**Compaction**

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer.

**Cutoff Trench**

Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

**III. STRUCTURAL BACKFILL**

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tamper or other 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 twenty-four inches or greater over the structure or pipe.

**IV. PIPE CONDUITS**

All pipes shall be circular in cross section.

**A. 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 ASTM Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both the inside and outside of the pipe. The following coatings are commercially available: Merox, Plast-Coat, Blue-Klad, and Beth-O-Loy. Coated corrugated steel pipe shall meet the requirements of ASTM M-250 and M-255.

2. **Materials** - (Aluminum Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of ASTM Specification M-274-791 with watertight coupling bands or flanges.

3. **Materials** - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of ASTM Specification M-190 or M-211 with watertight coupling bands or flanges. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

4. **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. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Diaple bands are not considered to be watertight.

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.

6. **Laying pipe** - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

7. **Backfilling** shall conform to structural backfill as shown above.

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

**V. CONCRETE**

**1. Materials**

a. **Cement** - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. **Water** - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

c. **Sand** - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing one-quarter inch sieve. Limestone sand shall not be used.

d. **Coarse Aggregate** - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.

e. **Reinforcing Steel** - The reinforcing steel shall be deformed bars of intermediate grade miller steel or rail steel conforming to ASTM Specification A-615.

2. **Design Mix** - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. **Mixing** - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Free mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given herein.

4. **Forms** - The forms shall have sufficient strength and rigidity to hold the concrete to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

5. **Reinforcing Steel** - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

6. **Consolidating** - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

7. **Finishing** - Defective concrete, honeycombed areas, voids left by the removal of the rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

**VI. STABILIZATION**

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and terms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

**VII. 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.

**MAINTENANCE SCHEDULE**

- The facility shall be inspected twice annually - March and September.
  - Visual inspection of all components.
  - Physical inspection of any movable parts, drains, valves, etc.
- Vegetated cover shall be maintained at all times.
- Rills on the slopes of the dam and washed in the earth spillway shall be filled with suitable material and thoroughly compacted. These areas shall be reseeded or resodded, lined and fertilized as needed.
- All appurtenances shall be kept free of trash.

NAME: BOARD OF EDUCATION - HOWARD CO.  
OWNER: ADDRESS: 10910 ROUTE 108  
DEED REF.: LIBER 279 FOLIO 448  
ELECTION DISTRICT NO. 1 HOWARD CO., MD.  
CENSUS TRACT NO. 6012  
TAX MAP 38 PARCEL NO. 20  
WATER CODE SEWER CODE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Donald J. Rapson* 1/10/91  
DIRECTOR DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT  
*James R. Boyle* 1-11-91  
COUNTY HEALTH OFFICER DATE

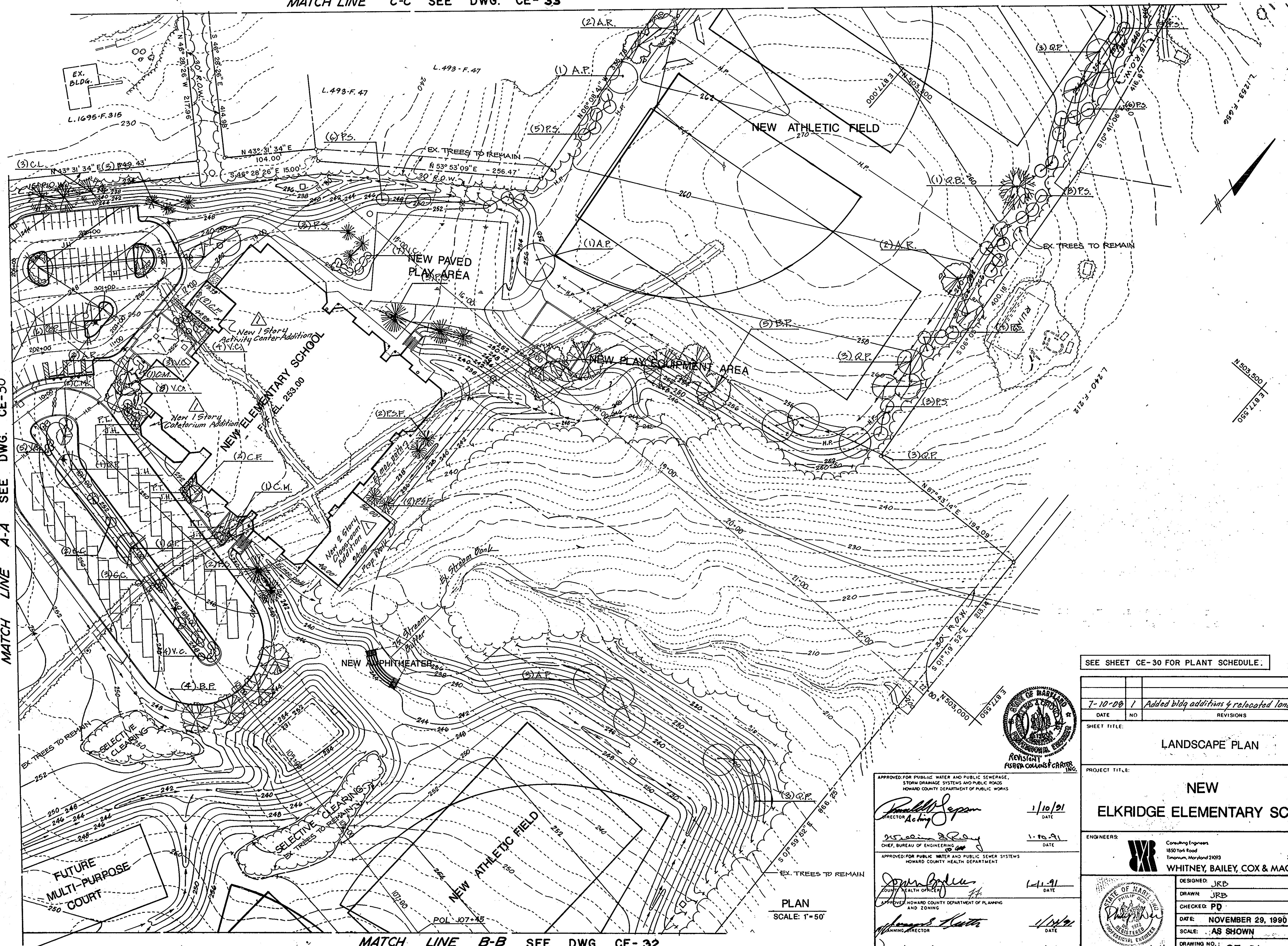
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*James E. Smith* 1/14/91  
PLANNING DIRECTOR DATE

APPROVED: DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
*James E. Smith* 1/14/91  
DATE

11-91	REVISED
DATE	NO. REVISIONS
SHEET TITLE:	
STORMWATER MANAGEMENT DETAILS	
PROJECT TITLE:	
NEW ELKBRIDGE ELEMENTARY SCHOOL	
ENGINEERS:	Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-6000 WHITNEY, BAILEY, COX & MAGNANI
DESIGNED:	R.W.B.
DRAWN:	R.W.B.
CHECKED:	P.D.
DATE:	NOVEMBER 29, 1990
SCALE:	NOT TO SCALE
DRAWING NO.:	CE-29
	30 of 42

MATCH LINE A-A SEE DWG. CE-30

NOTE: SEE DWG CE-1 FOR LEGEND.



SEE SHEET CE-30 FOR PLANT SCHEDULE.

DATE	NO	REVISIONS
7-10-88	1	Added bldg additions & relocated landscaping

SHEET TITLE: **LANDSCAPE PLAN**

PROJECT TITLE: **NEW ELK RIDGE ELEMENTARY SCHOOL**

ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**  
 Consulting Engineers  
 1850 York Road  
 Timonium, Maryland 21093  
 301-252-6000

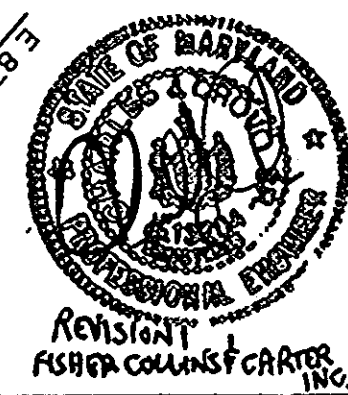
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 DRAWN: JRB  
 CHECKED: PD  
 DATE: NOVEMBER 29, 1990  
 SCALE: AS SHOWN  
 DRAWING NO.: CE-31  
 32 of 42

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Director: *Donald L. Japan* 1/10/91 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 County Health Officer: *John Bodner* 1-10-91 DATE

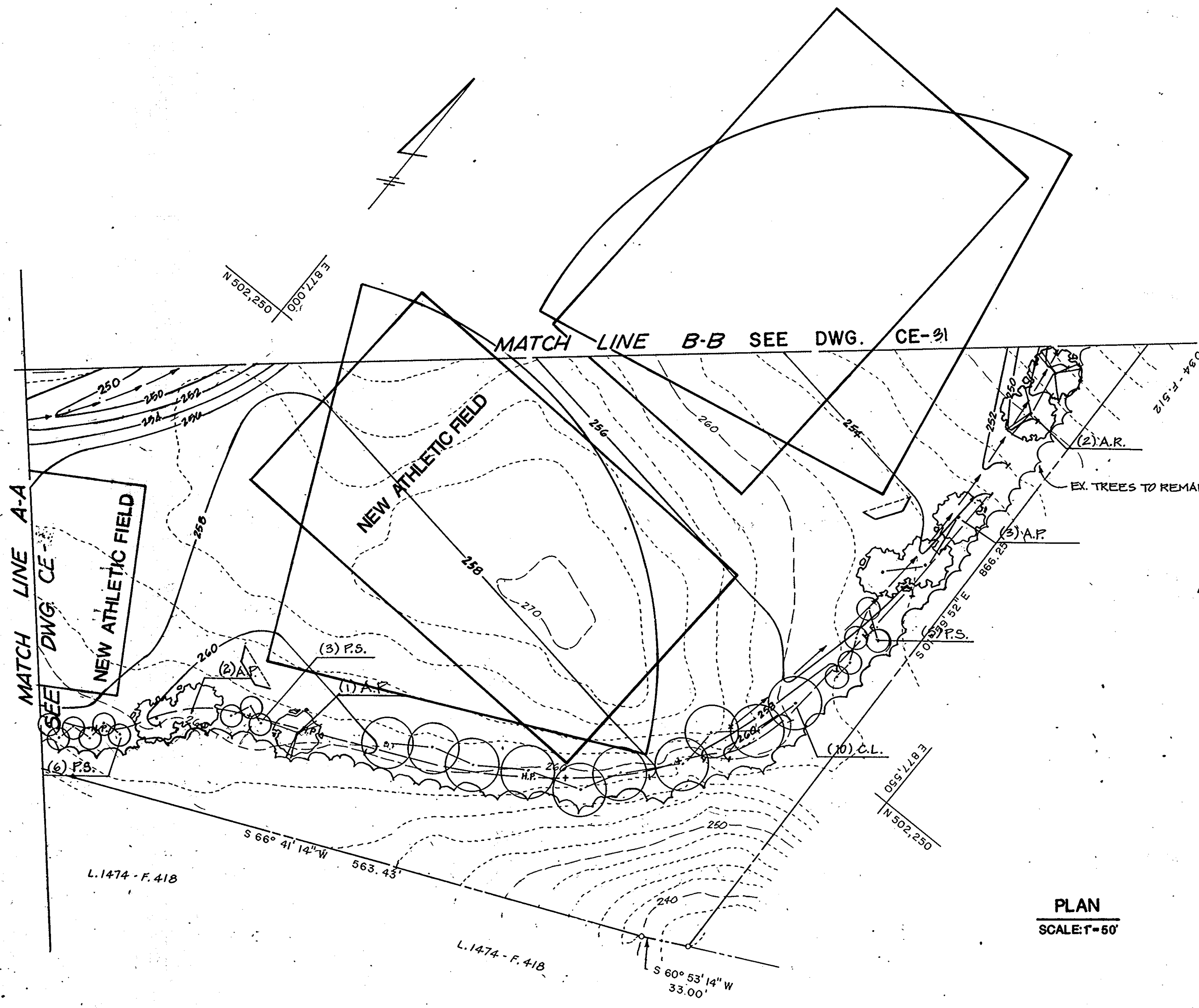
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 Planning Director: *James H. Scott* 1/10/91 DATE

CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
*David L. Smith* 1/10/91 DATE



PLAN SCALE: 1"=50'





NOTE: 1. SEE DWG. CE-1 FOR LEGEND

PLAN  
SCALE: 1" = 50'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Saper*  
DIRECTOR Acting 1/10/91 DATE

*James R. Saper*  
CHIEF, BUREAU OF ENGINEERING 1-10-91 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
AND ZONING  
HOWARD COUNTY HEALTH DEPARTMENT

*James R. Saper*  
COUNTY HEALTH OFFICER 1-11-91 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
AND ZONING

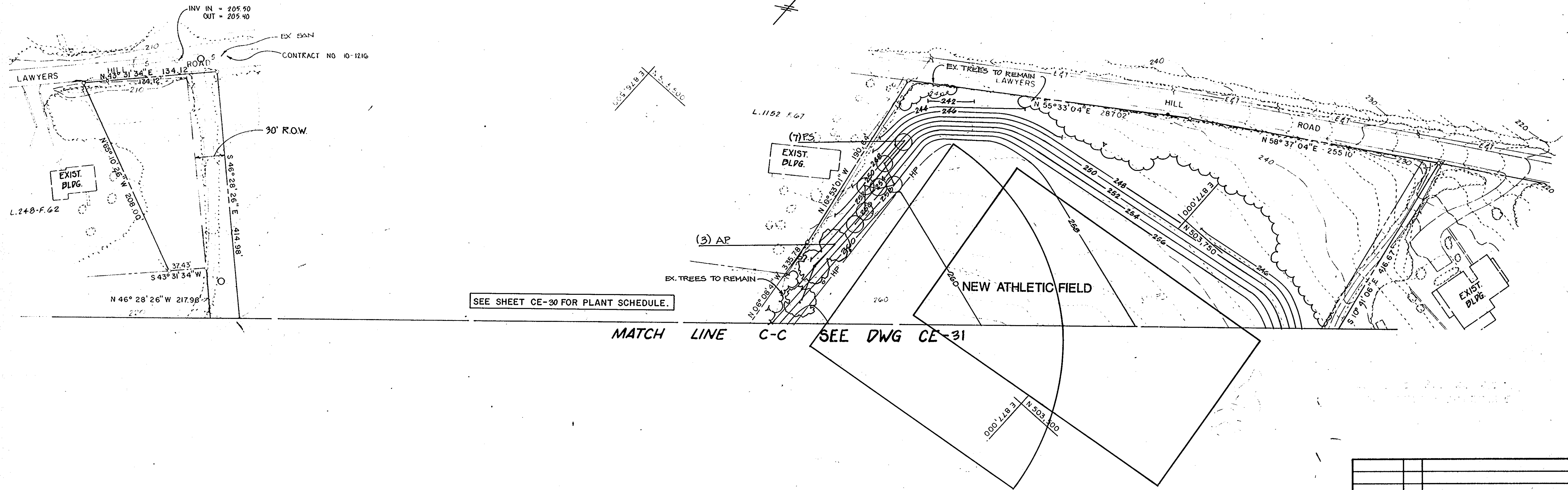
*James R. Saper*  
PLANNING DIRECTOR 1/14/91 DATE

*James R. Saper*  
CHIEF, DIVISION OF COMMUNITY  
PLANNING AND LAND DEVELOPMENT 1/16/91 DATE

SEE SHEET CE-30 FOR PLANT SCHEDULE.

DATE	NO.	REVISIONS
SHEET TITLE: <b>LANDSCAPE PLAN</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEER: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED: <i>[Signature]</i>		
DRAWN: <i>[Signature]</i>		
CHECKED: <i>[Signature]</i>		
DATE: <b>NOVEMBER 20, 1990</b>		
SCALE: <b>AS SHOWN</b>		
DRAWING NO. <b>SDP-91-27</b>		

SDP-91-27



NOTE: 1. SEE DWG. CE-1 FOR LEGEND

PLAN  
SCALE: 1" = 50'

SEE SHEET CE-30 FOR PLANT SCHEDULE.

MATCH LINE C-C SEE DWG CE-31

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Saper*  
DIRECTOR  
1/10/91  
DATE

*William B. Ray*  
CHIEF, BUREAU OF ENGINEERING  
1-10-91  
DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

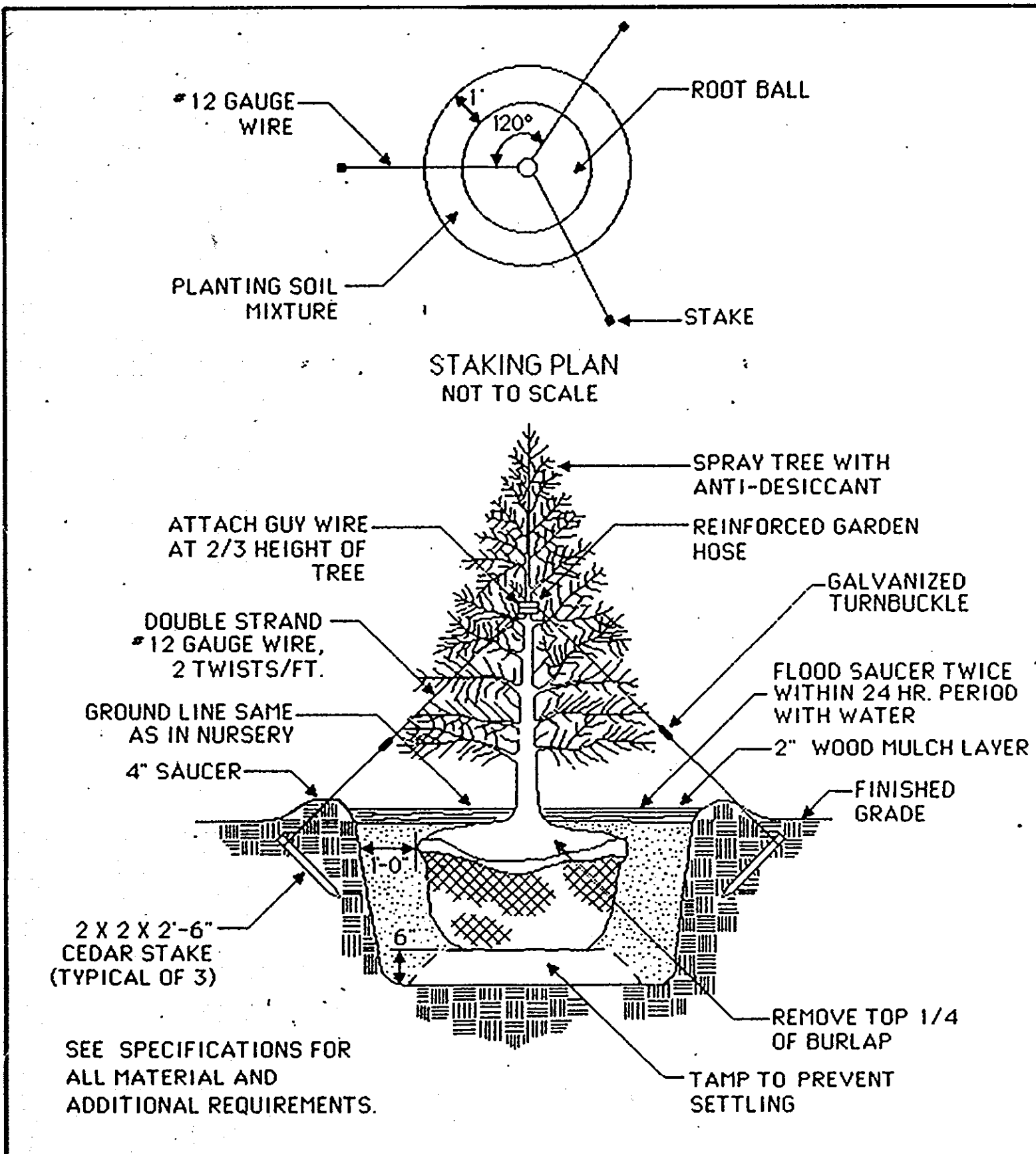
*Joseph A. Boykin*  
COUNTY HEALTH OFFICER  
1-11-91  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
AND ZONING

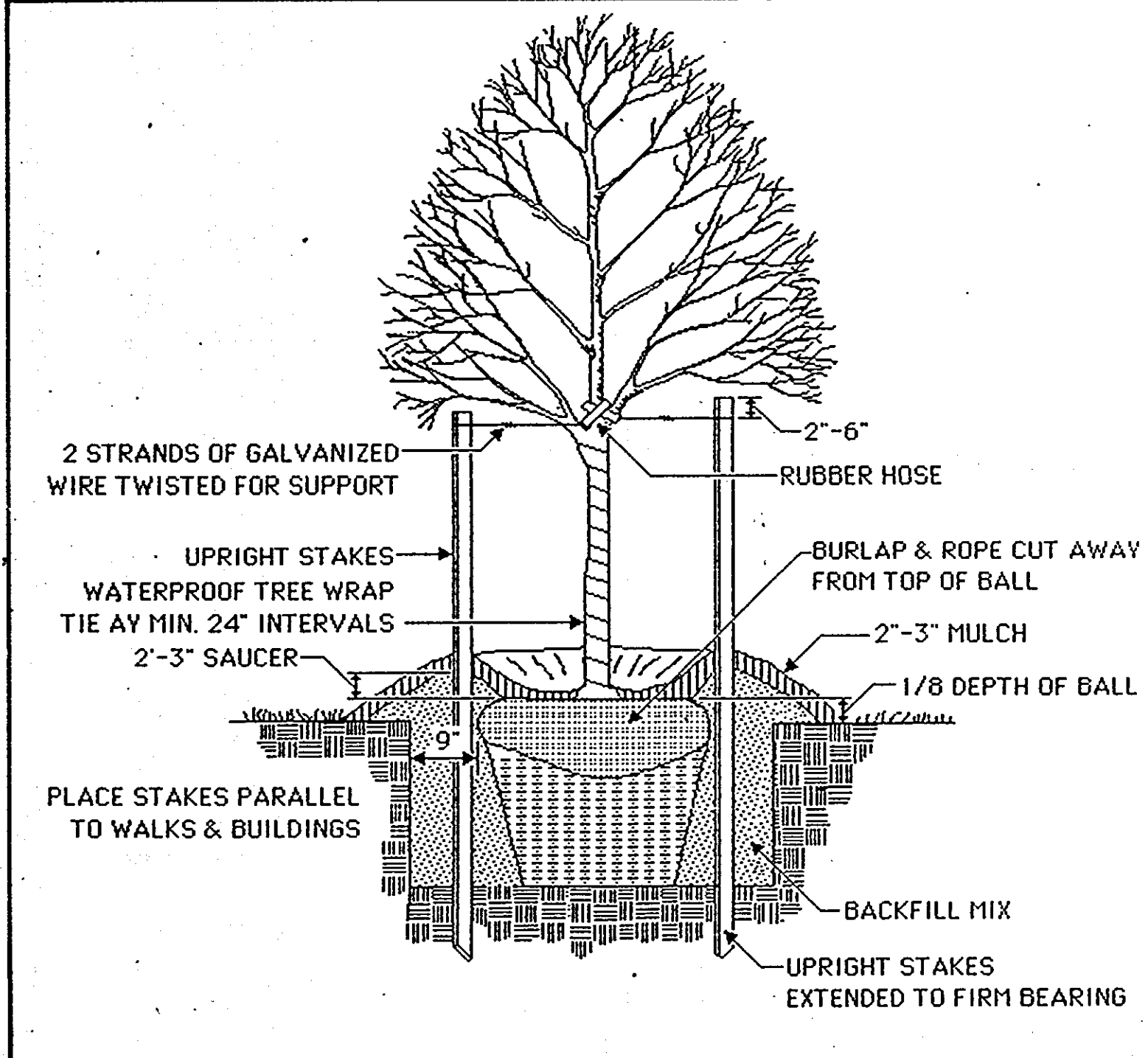
*Jeffrey M. Smith*  
PLANNING DIRECTOR  
1/14/91  
DATE

*Robert C. de Vaux*  
CHIEF, DIVISION OF COMMUNITY  
PLANNING AND LAND DEVELOPMENT  
1/14/91  
DATE

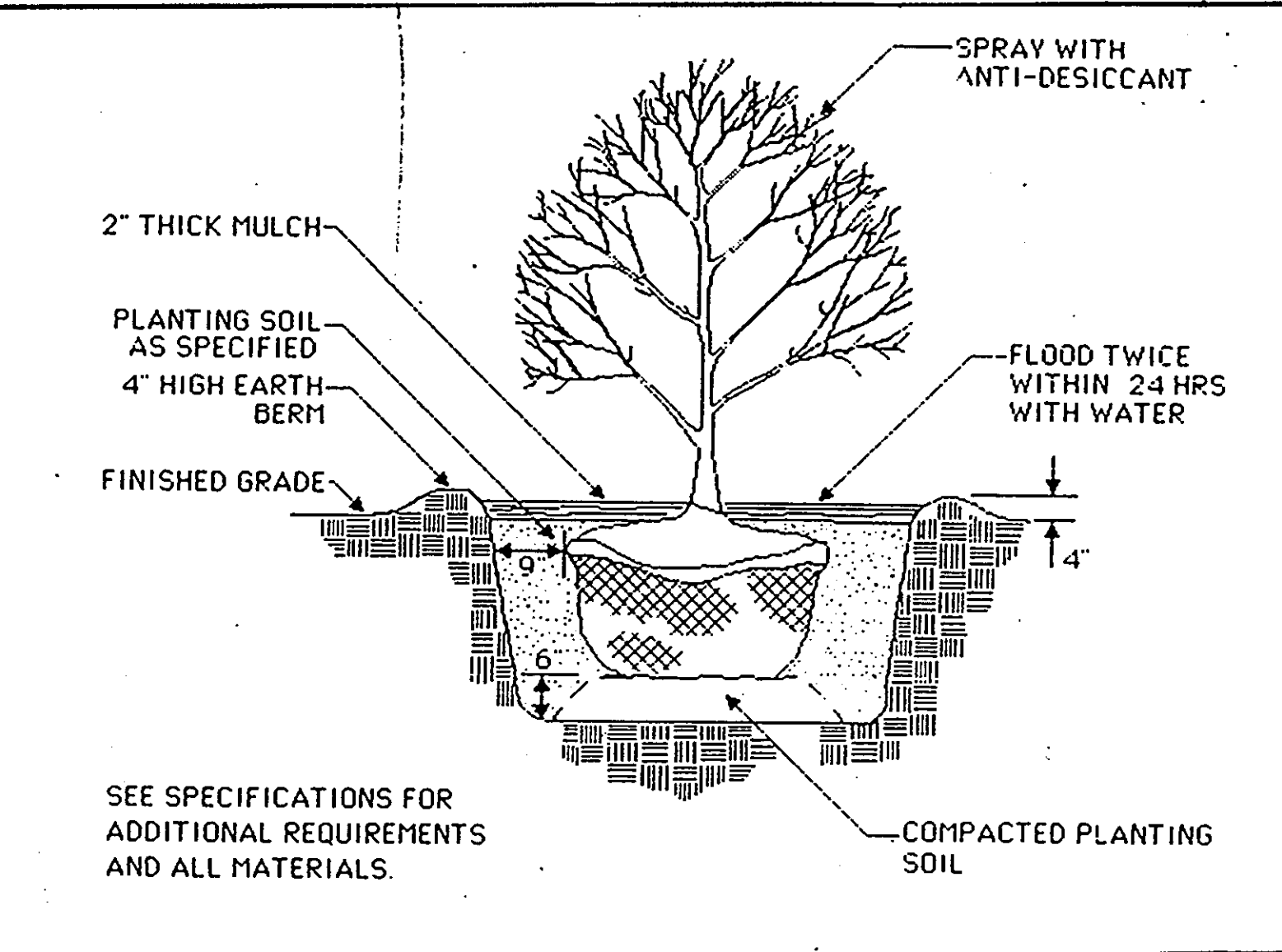
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PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS: <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED:	JRB	
DRAWN:	JRB	
CHECKED:	PD	
DATE:	NOVEMBER 28, 1990	
SCALE:	AS SHOWN	
DRAWING NO.:	CE-33	



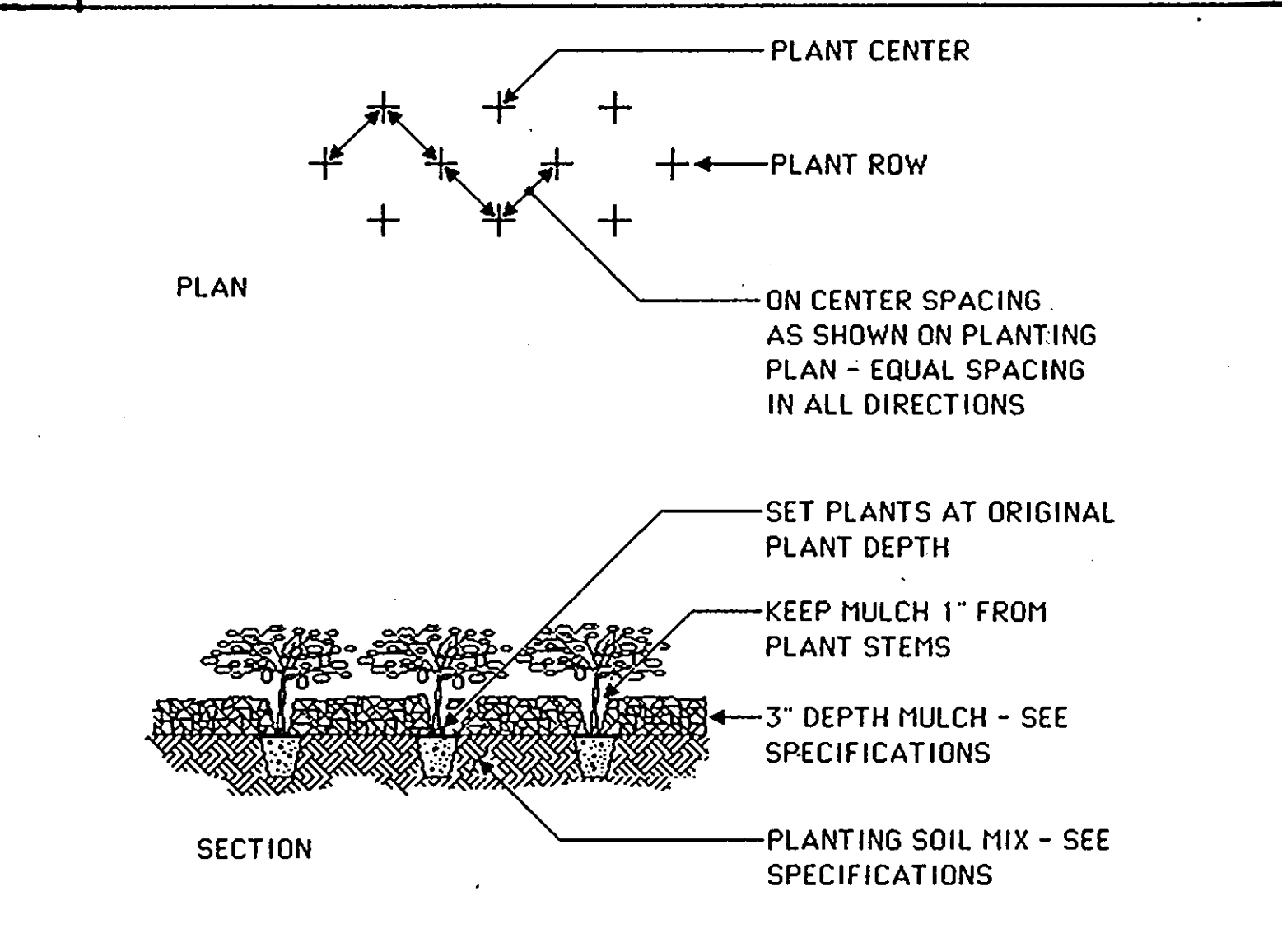
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2 TYPICAL UPRIGHT STAKING DETAIL WITH WRAPPING NOT TO SCALE



3 SHRUB PLANTING DETAIL NOT TO SCALE



4 GROUNDCOVER PLANTING NOT TO SCALE

NAME: BOARD OF EDUCATION - HOWARD CO.  
 OWNER: ADDRESS: 10910 ROUTE 108  
 DEED REF.: LIBER 279 FOLIO 448  
 ELECTION DISTRICT NO. 1 HOWARD CO., MD.  
 CENSUS TRACT NO. 6012  
 TAX MAP 38 PARCEL NO. 20  
 WATER CODE \_\_\_\_\_ SEWER CODE \_\_\_\_\_

DATE	NO.	REVISIONS

SHEET TITLE: PLANTING DETAILS

PROJECT TITLE: NEW ELKBRIDGE ELEMENTARY SCHOOL

ENGINEERS: Consulting Engineers  
 1550 Hill Road  
 Timonium, Maryland 21093 301-252-0000  
 WHITNEY, BAILEY, COX & MAGNANI

DESIGNED: R.Z.B.  
 DRAWN: C.W.G.III  
 CHECKED: P.D.  
 DATE: NOVEMBER 29, 1990  
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 35 of 42

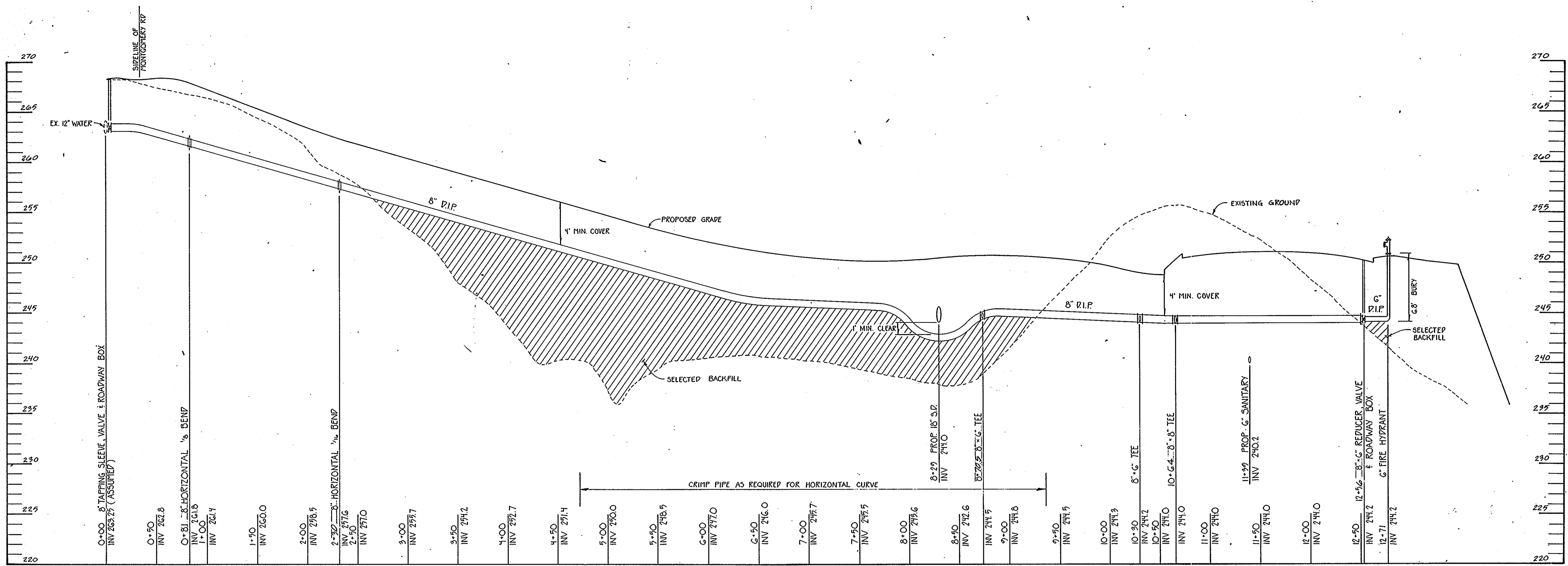
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
  
 DIRECTOR 1/10/91 DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
  
 CHIEF, BUREAU OF ENGINEERING 1-10-91 DATE

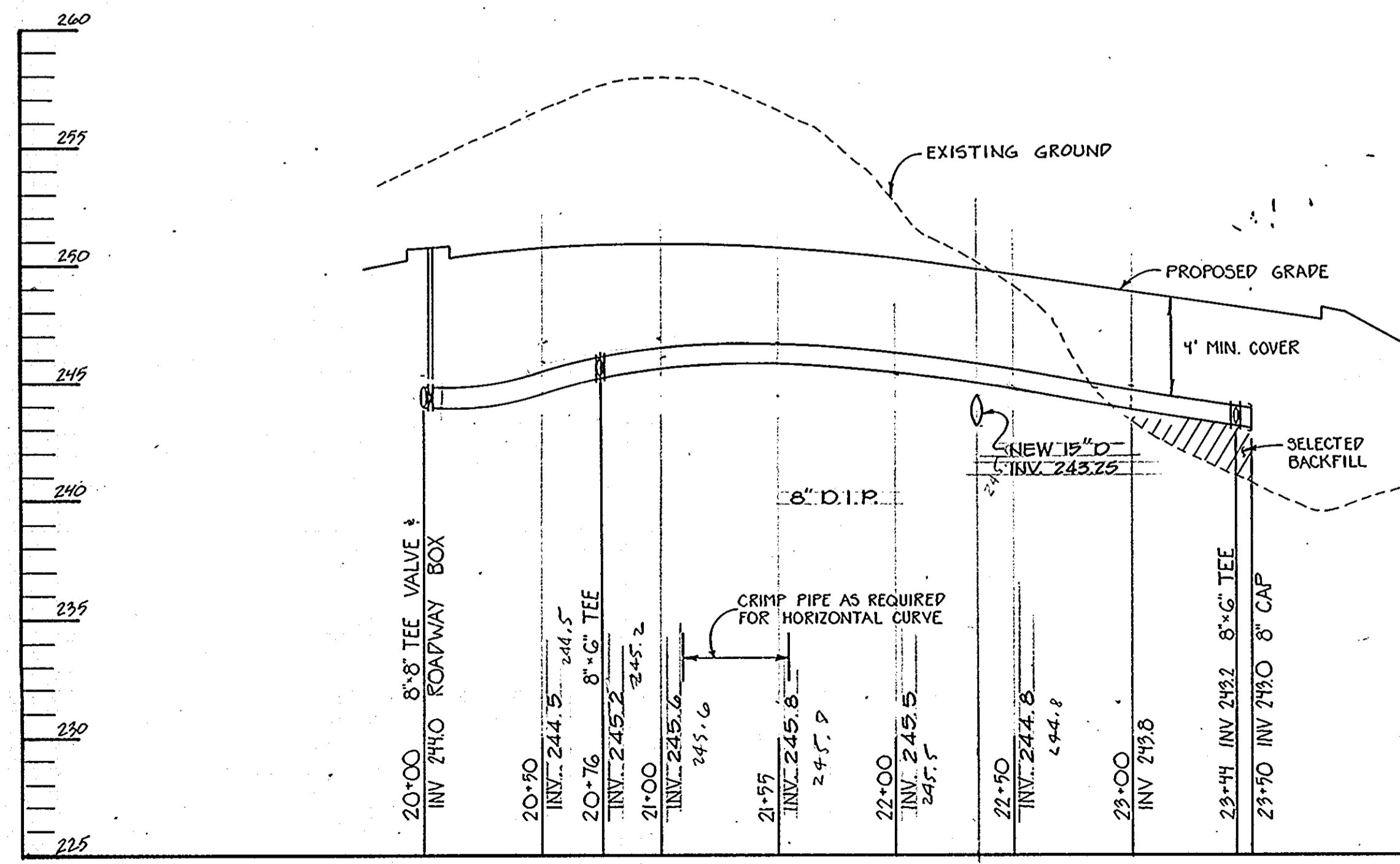
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
 COUNTY HEALTH OFFICER 1-11-91 DATE

APPROVED FOR PLANNING AND ZONING  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
 PLANNING DIRECTOR 1/14/91 DATE

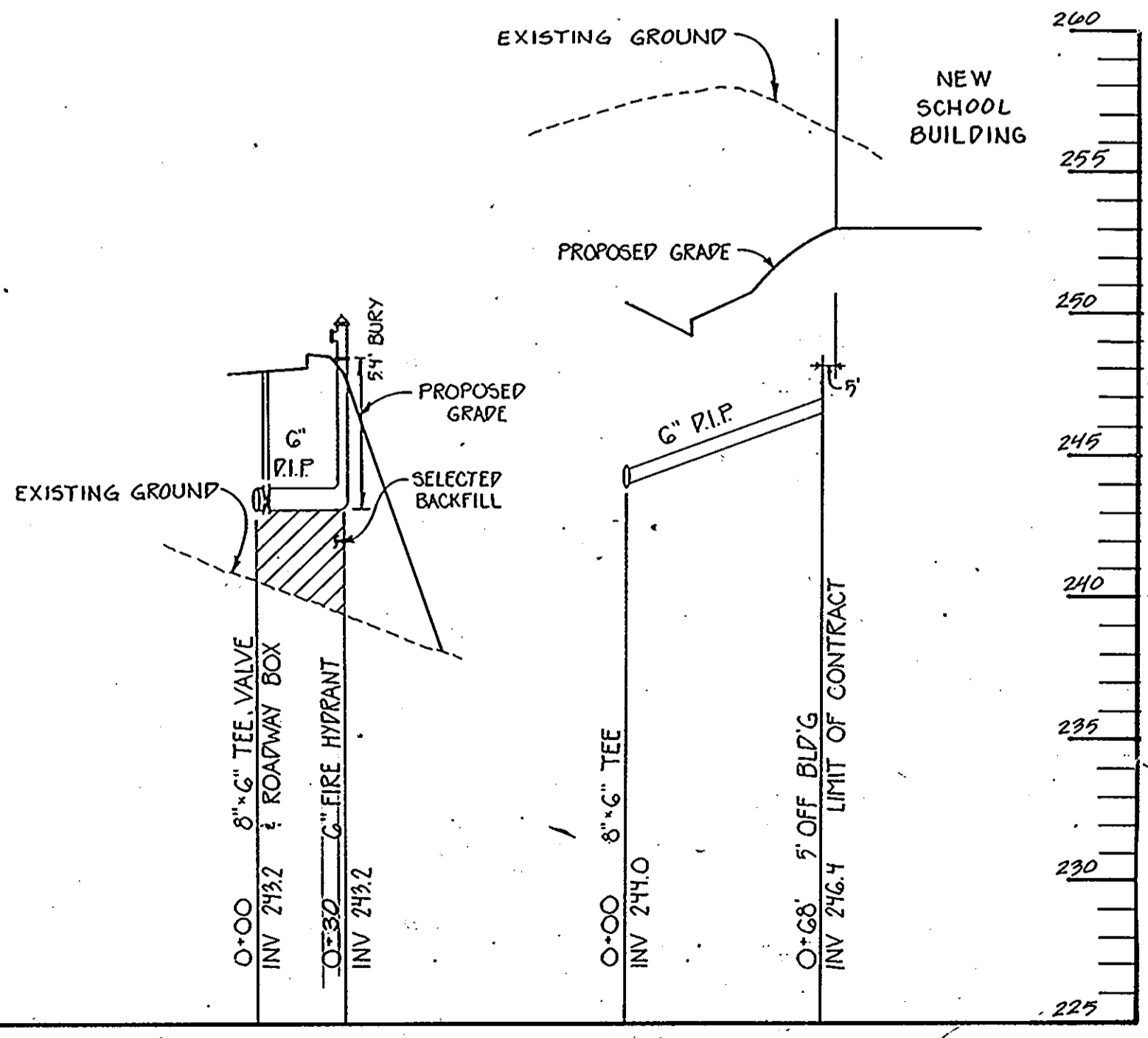
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 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT 1/14/91 DATE



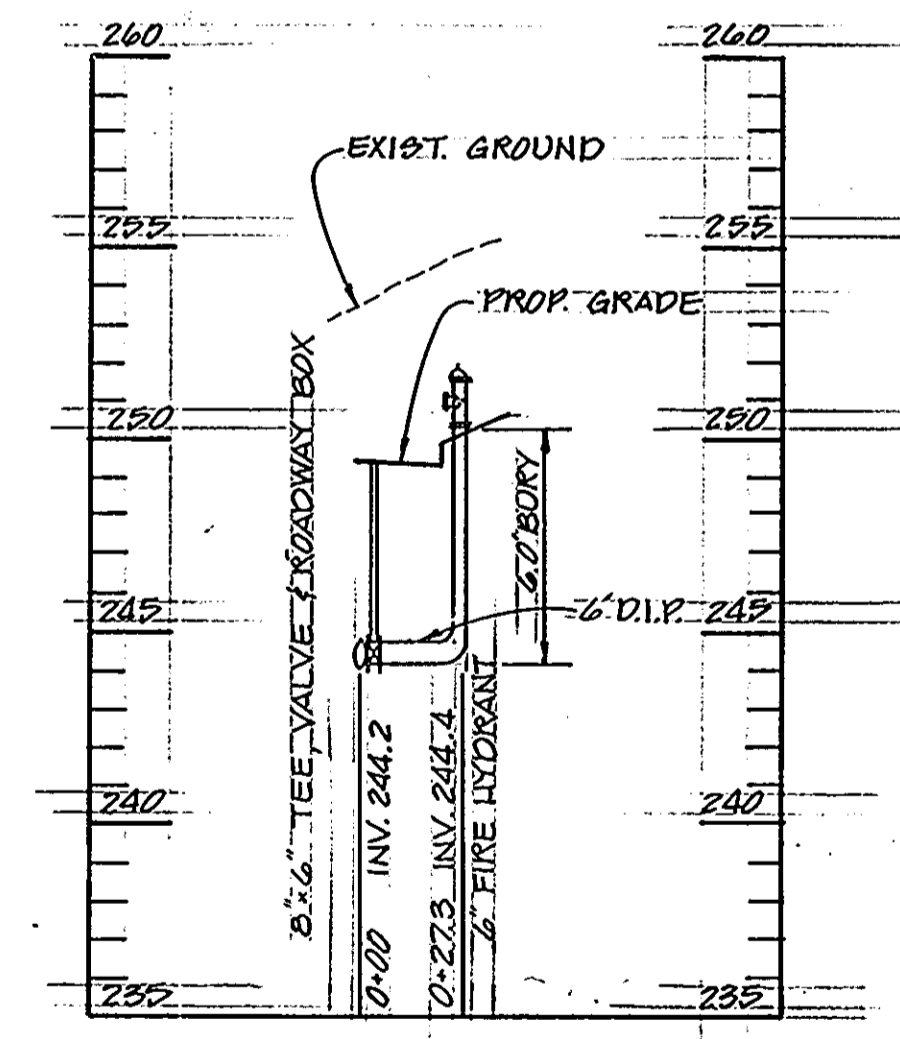
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 SCALE: HORIZ: 1" = 50'  
 VERT: 1" = 5'



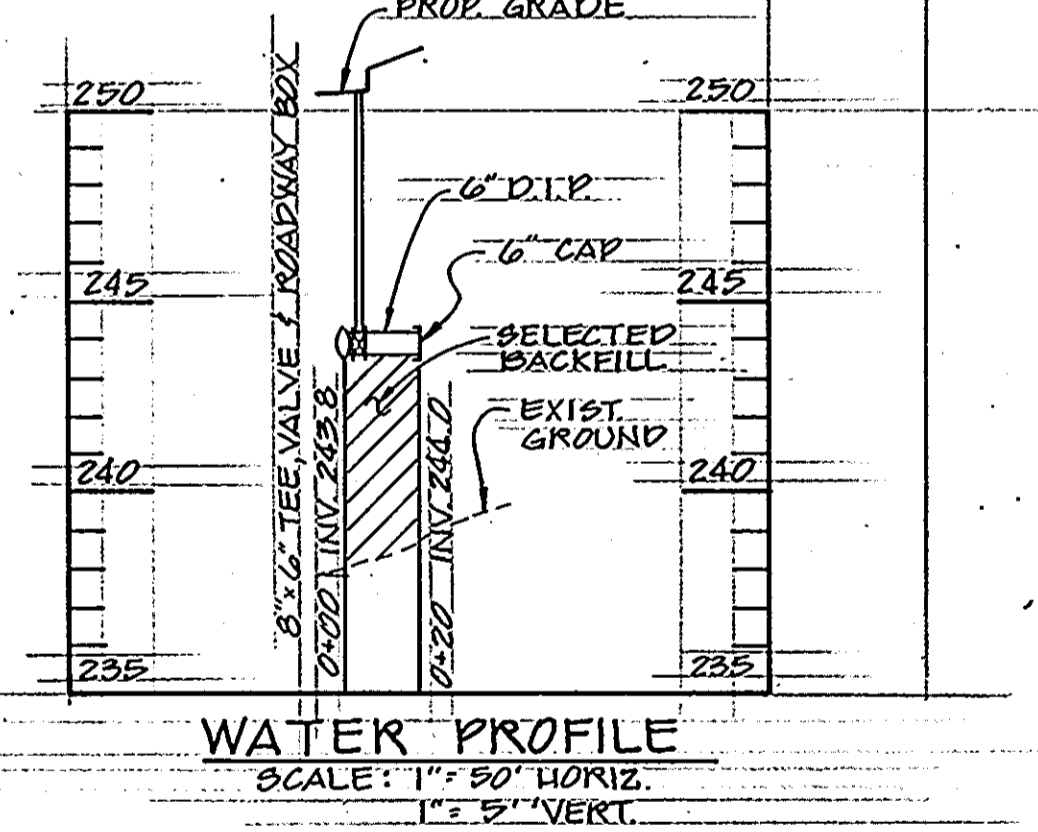
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 SCALE: HORIZ: 1" = 50'  
 VERT: 1" = 5'



**WATER PROFILE** (NOTE STATIONING IS ALONG PIPE)  
 SCALE: HORIZ: 1" = 50'  
 VERT: 1" = 5'



**WATER PROFILE** (NOTE STATIONING IS ALONG PIPE)  
 SCALE: HORIZ: 1" = 50'  
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**WATER PROFILE** (NOTE STATIONING IS ALONG PIPE)  
 SCALE: HORIZ: 1" = 50'  
 VERT: 1" = 5'

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Seaman*  
 DIRECTOR  
 DATE: 1/10/91

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James A. Boyer*  
 COUNTY HEALTH OFFICER  
 DATE: 1-10-91

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS AND ZONING  
 AND ZONING

*James A. Boyer*  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
 DATE: 1/14/91

*James A. Boyer*  
 DATE: 1/15/91

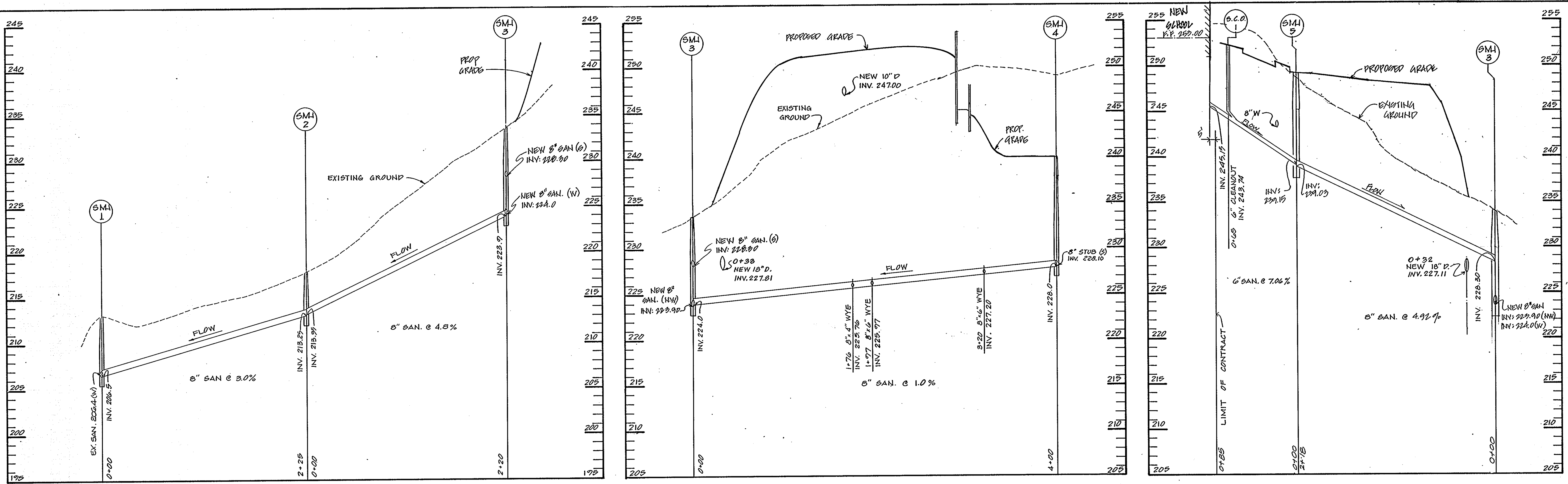
DATE	NO.	REVISIONS

SHEET TITLE: **UTILITY PROFILES**

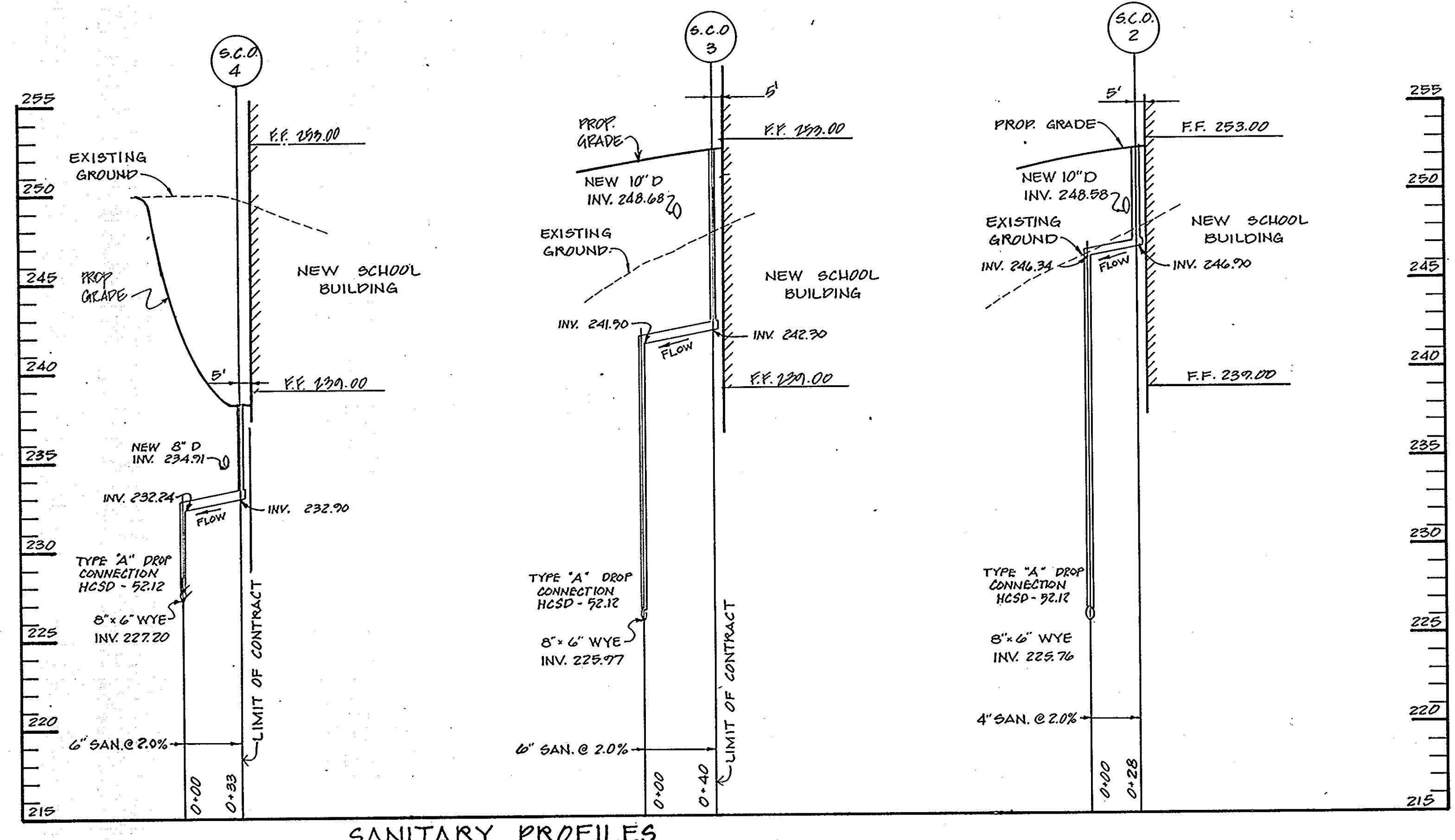
PROJECT TITLE: **NEW ELKRIDGE ELEMENTARY SCHOOL**

ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**  
 Consulting Engineers  
 1850 York Road  
 Timonium, Maryland 21093  
 301-252-0050

DESIGNED: **SP**  
 DRAWN: **MS**  
 CHECKED: **PD**  
 DATE: **NOVEMBER 29, 1990**  
 SCALE: **AS SHOWN**  
 DRAWING NO.: **CE-35**  
 36 of 42



**SANITARY PROFILES**  
 SCALE: 1" = 50' HORIZ.  
 1" = 5' VERT.



**SANITARY PROFILES**  
 SCALE: 1" = 50' HORIZ.  
 1" = 5' VERT.

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE,  
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Phillip Saper* 1/10/91  
 DIRECTOR DATE

*William S. Kelly* 1-10-91  
 CHIEF, BUREAU OF ENGINEERING DATE


APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

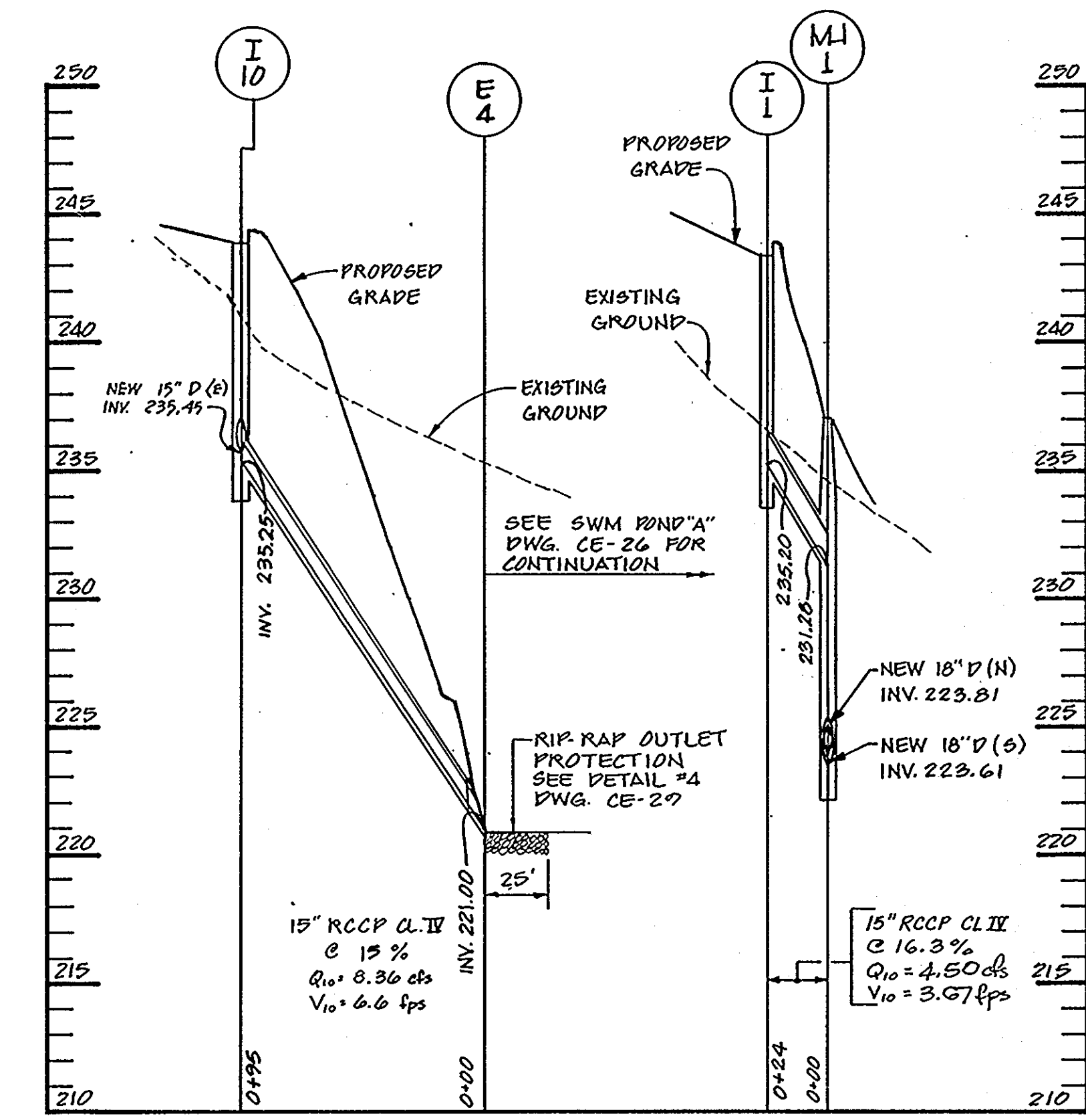
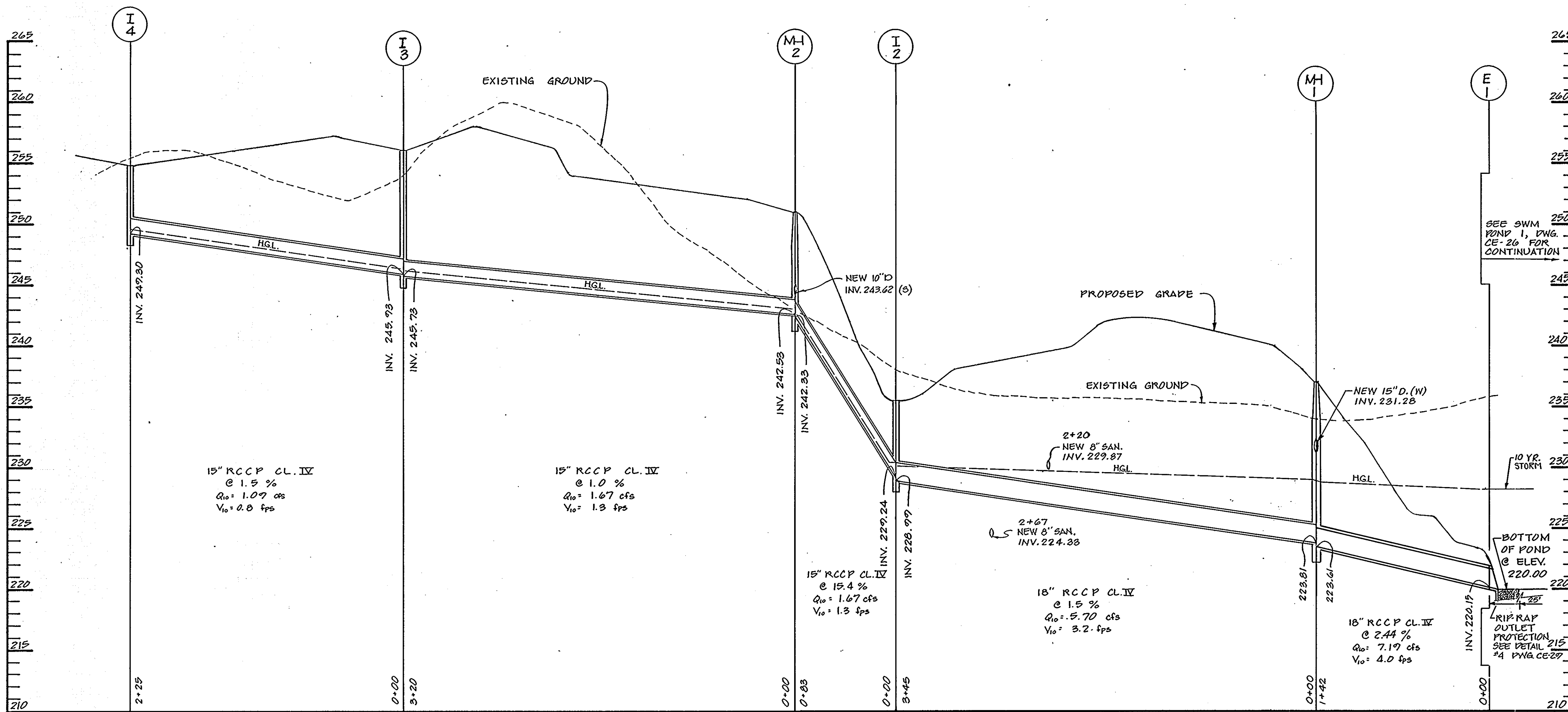
*James Rogers* 1-11-91  
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING  
 AND ZONING

*William S. Kelly* 1/14/91  
 PLANNING DIRECTOR DATE

*David J. P. Campbell* 1/16/91  
 CHIEF, DIVISION OF COMMUNITY  
 PLANNING AND LAND DEVELOPMENT DATE

DATE	NO.	REVISIONS
SHEET TITLE: <b>UTILITY PROFILES</b>		
PROJECT TITLE: <b>NEW ELKRIDGE ELEMENTARY SCHOOL</b>		
ENGINEERS:  Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-6000 <b>WHITNEY, BAILEY, COX &amp; MAGNANI</b>		
DESIGNED:		
DRAWN:		
CHECKED: PD		
DATE: NOVEMBER 29, 1990		
SCALE: AS SHOWN		
DRAWING NO.: CE-36 37 of 42		

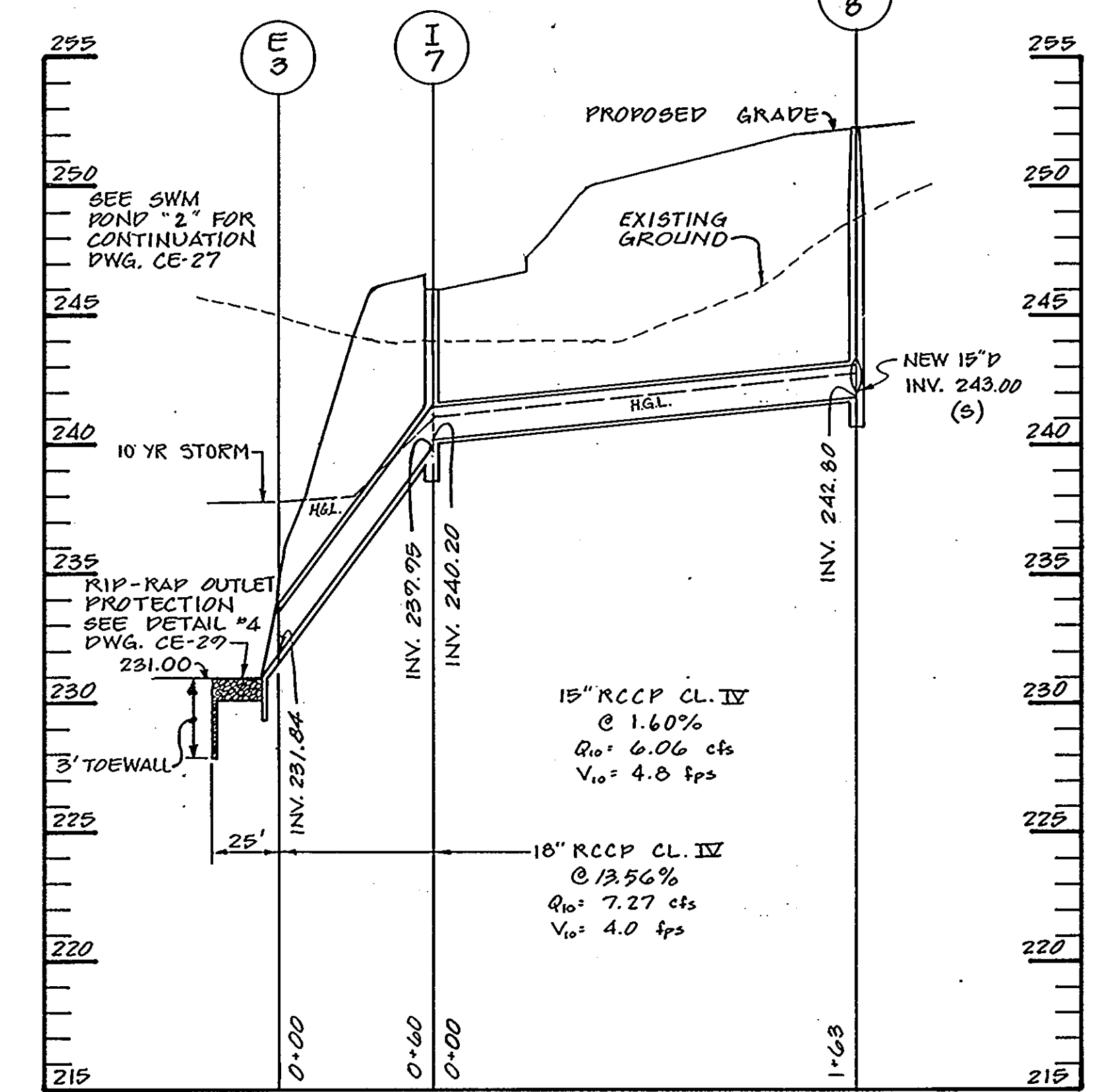
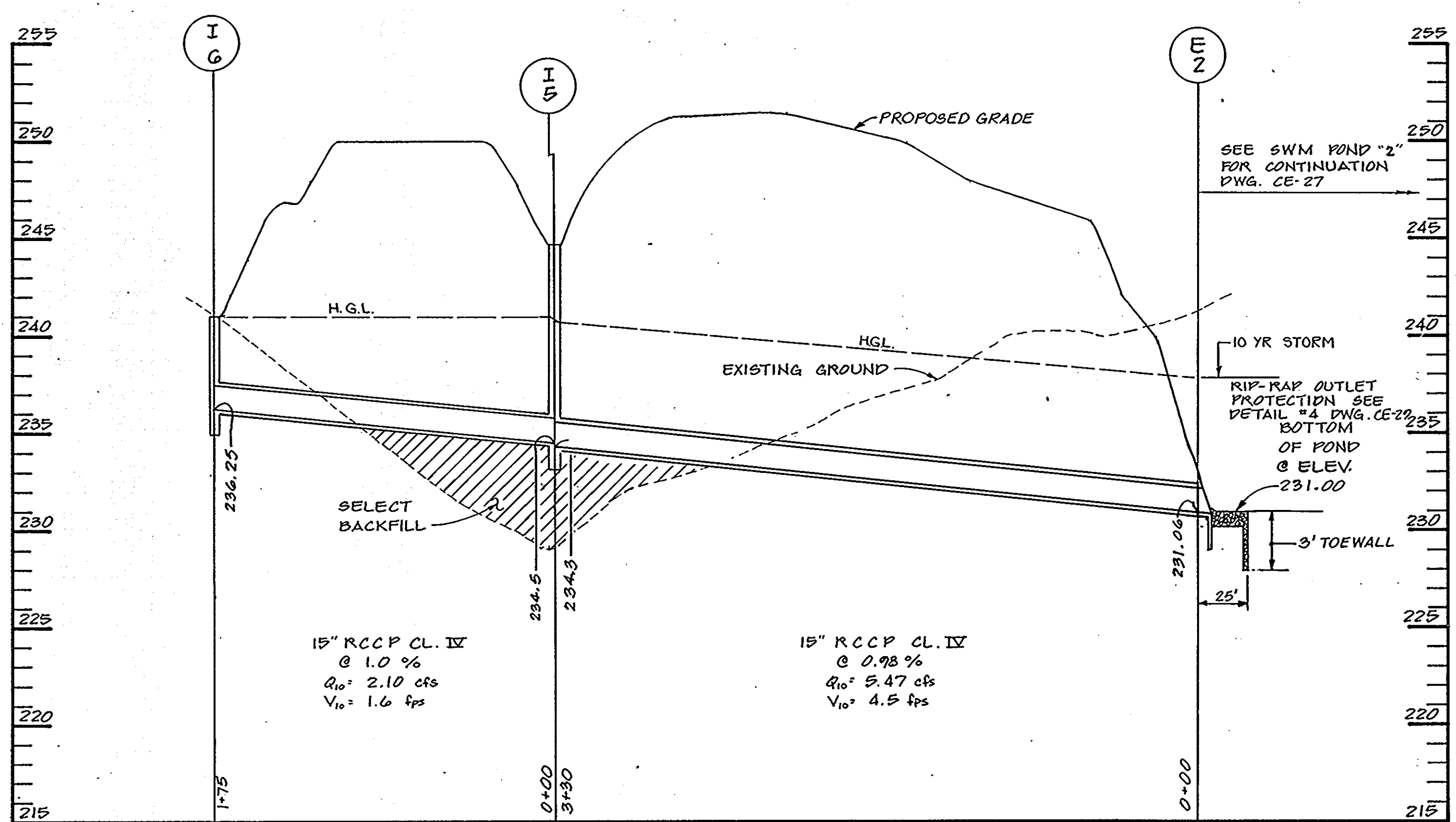


STORM DRAIN PROFILES

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

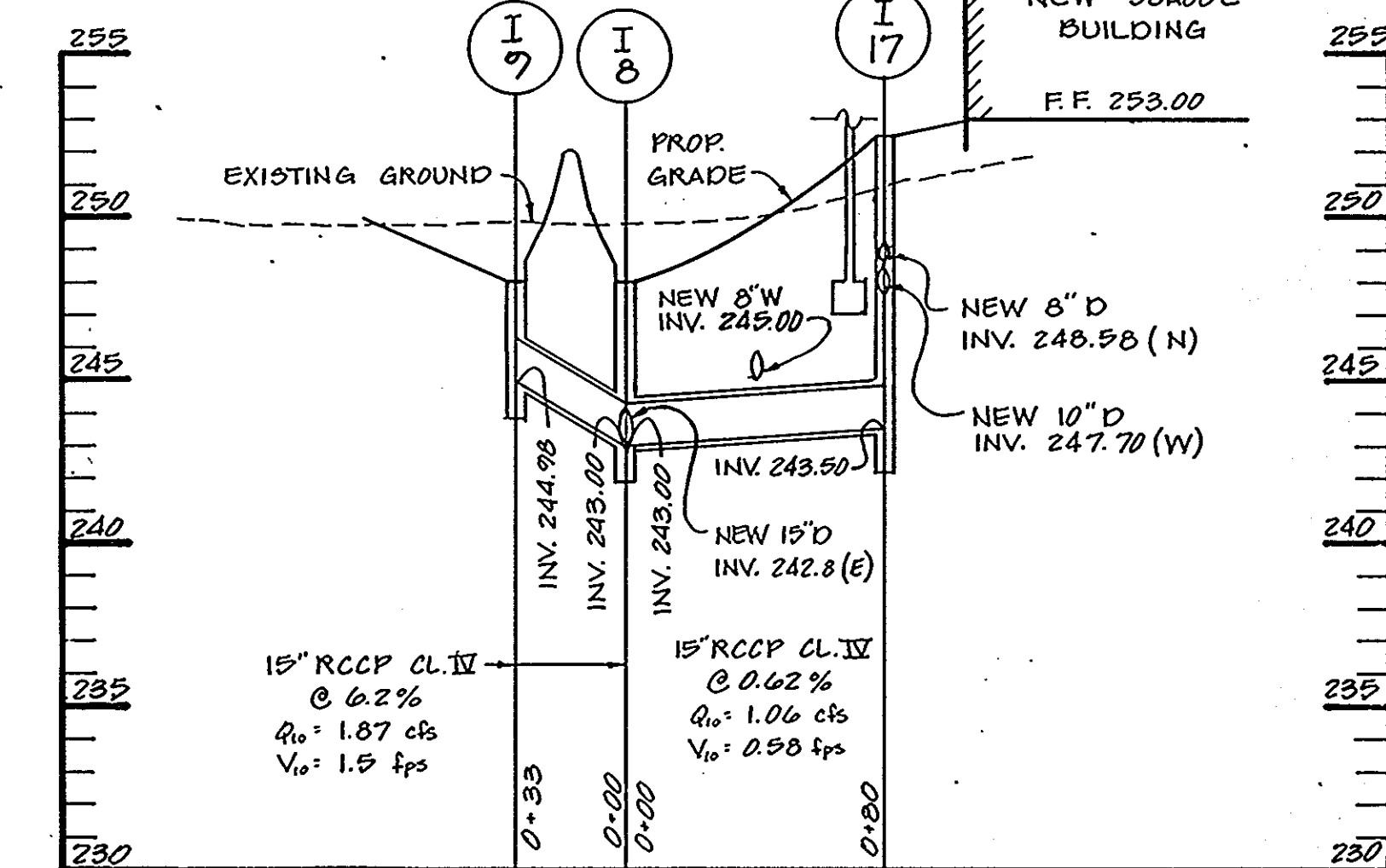
STORM DRAIN PROFILES

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



STORM DRAIN PROFILES

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



STORM DRAIN PROFILES

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

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald W. Saper*  
DIRECTOR  
DATE: 1/10/91

*William B. Ray*  
CHIEF, BUREAU OF ENGINEERING  
DATE: 1-10-91

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

*James Ford*  
COUNTY HEALTH OFFICER  
DATE: 1-11-91

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Robert L. Taylor*  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
DATE: 1/11/91

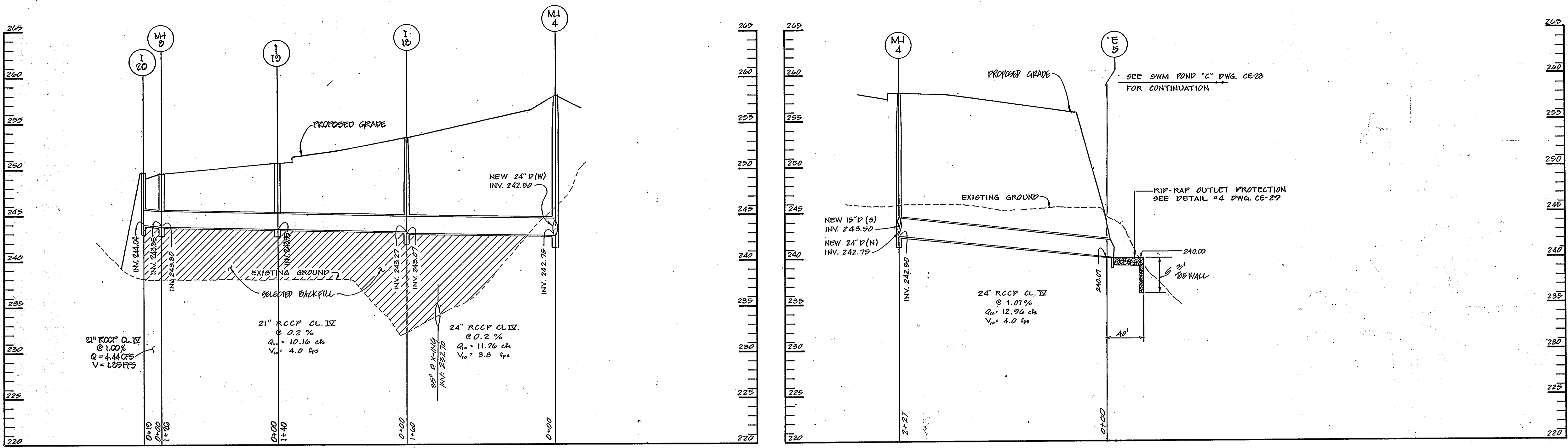
DATE	NO.	REVISIONS

SHEET TITLE: UTILITY PROFILES

PROJECT TITLE: NEW ELKRIDGE ELEMENTARY SCHOOL

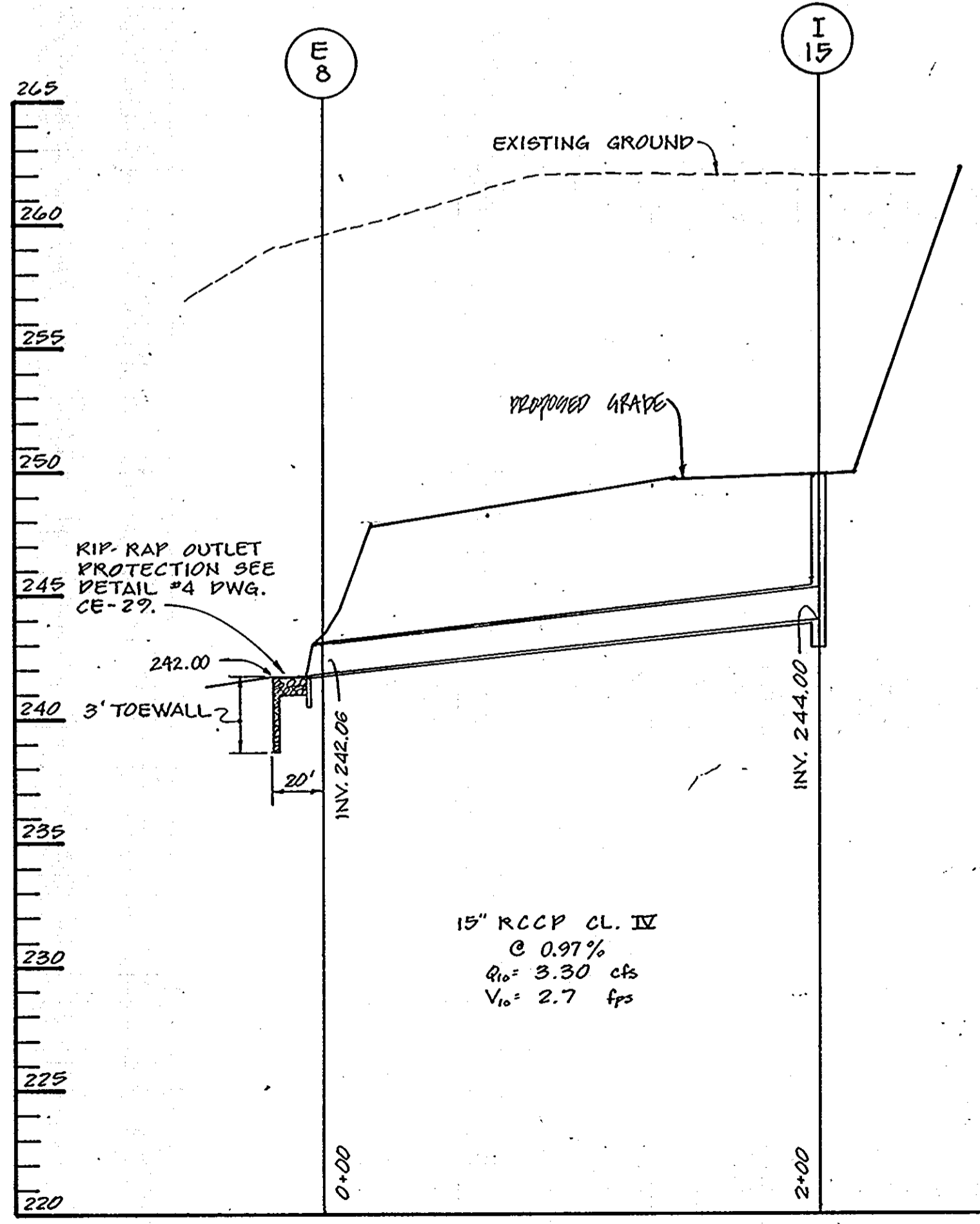
ENGINEERS: **WR** Consulting Engineers  
1850 York Road  
Timonium, Maryland 21093  
301-252-0000  
WHITNEY, BAILEY, COX & MAGNANI

DESIGNED: A.R.  
DRAWN: R.W.B.  
CHECKER: PD  
DATE: NOVEMBER 29, 1990  
SCALE: AS SHOWN  
DRAWING NO.: CE-37  
38 of 42

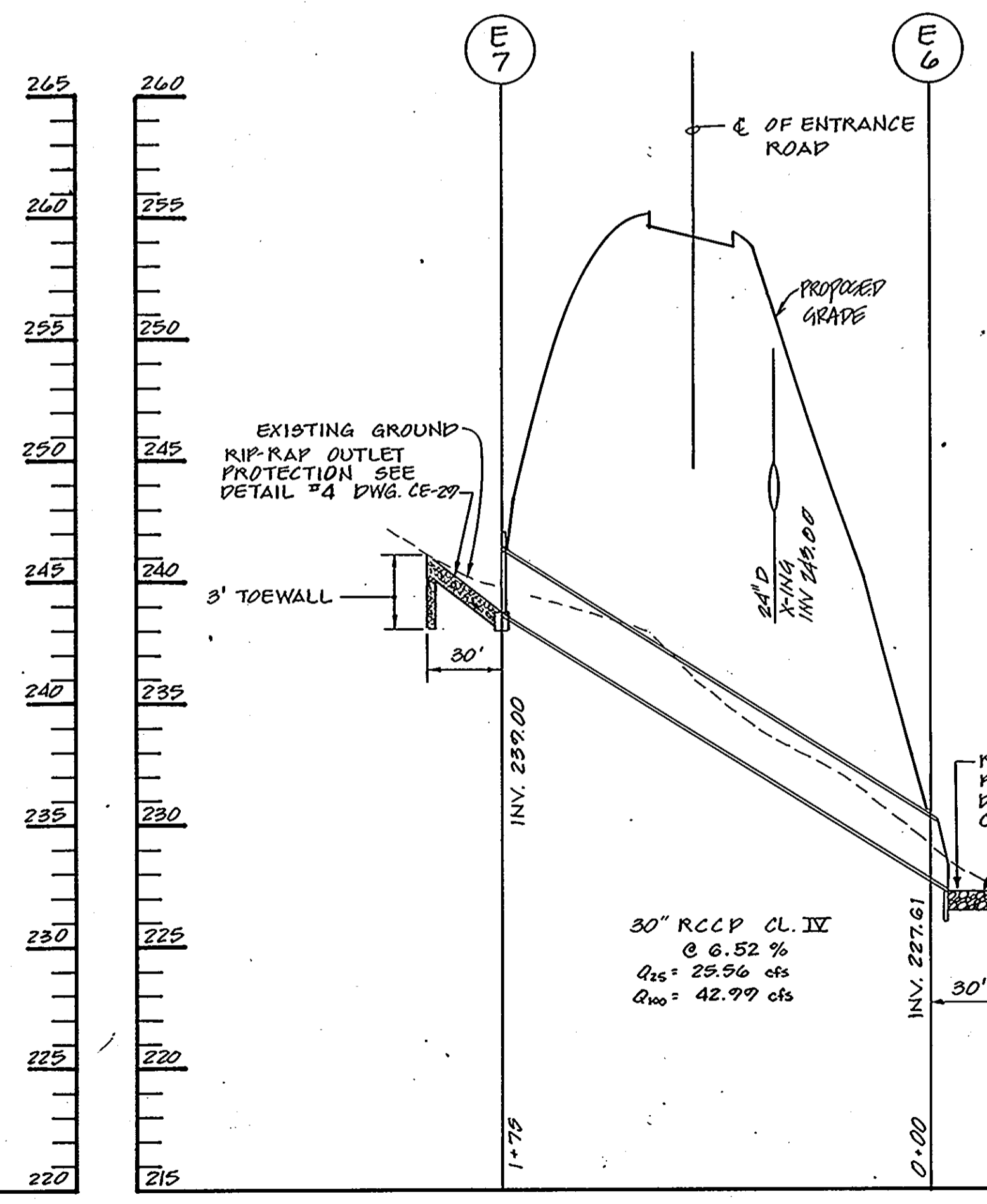


**STORM DRAIN PROFILES**

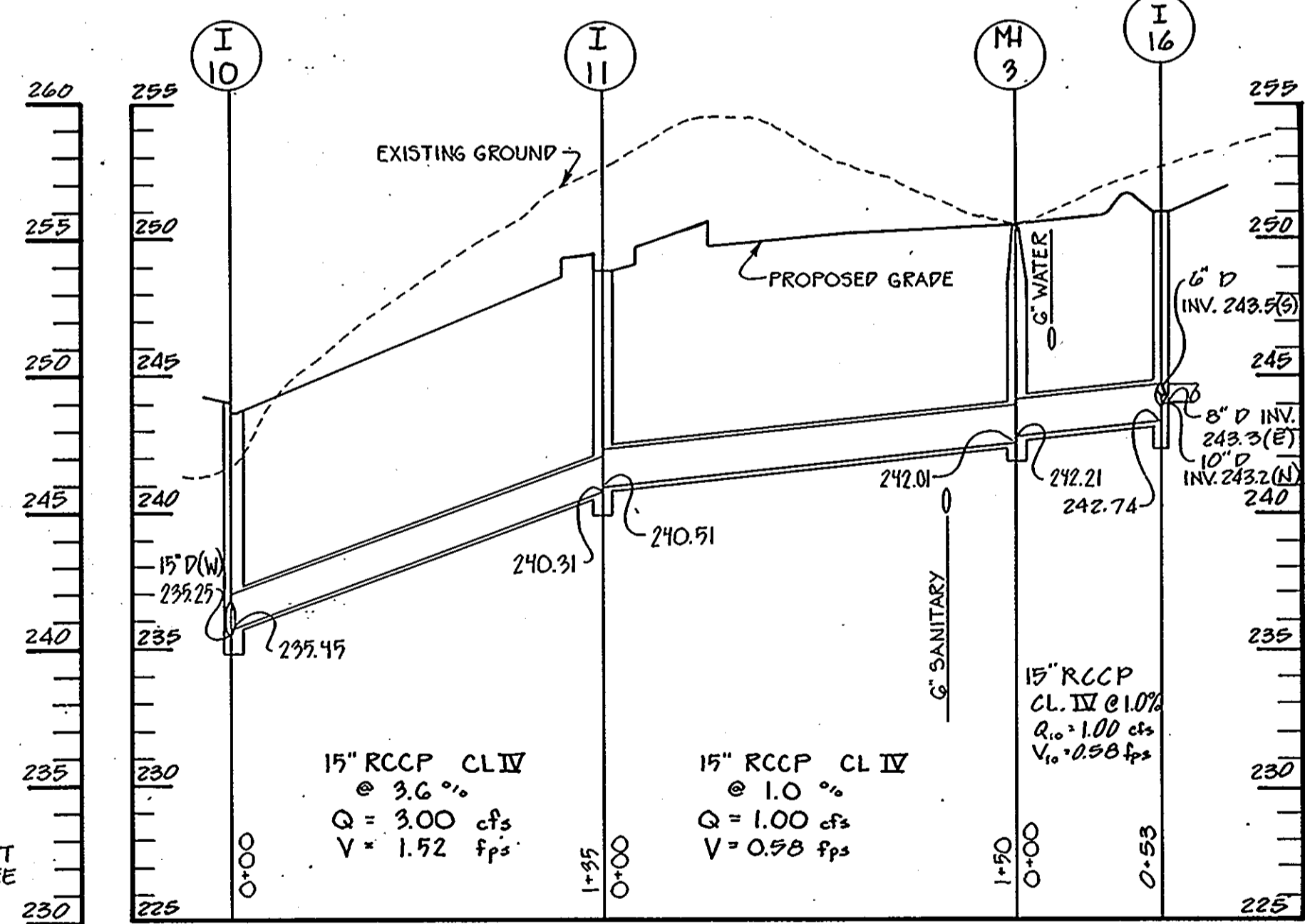
SCALE: 1" = 50' HORIZ.  
1" = 5' VERT.



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



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



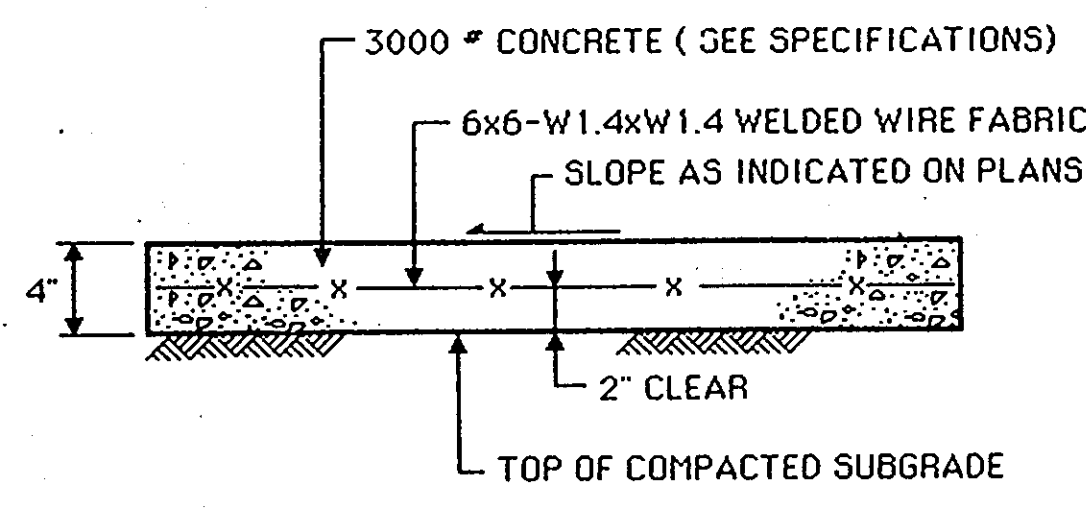
**STORM DRAIN PROFILE**  
SCALE: 1" = 50' HORIZ.  
1" = 5' VERT.



I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 13204 EXPIRATION DATE: NOVEMBER 3, 2008.  
CHARLES J. CRAVO, SR., P.E. 9/2/08 DATE

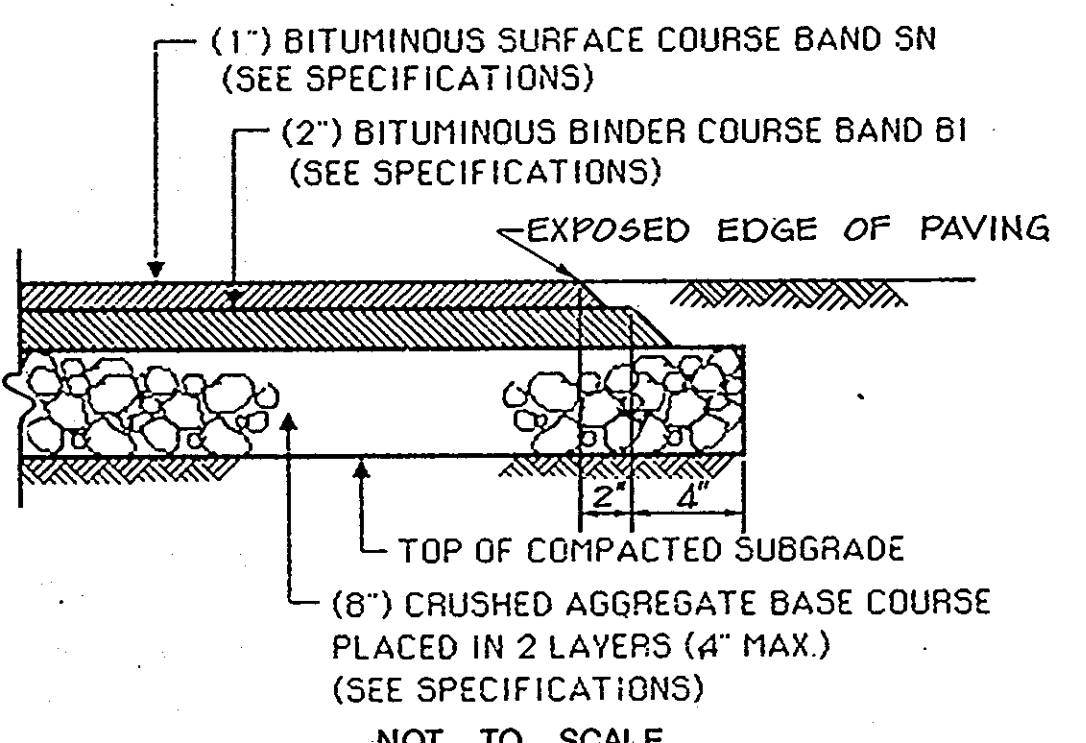
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
DIRECTOR: *Richard J. Sporn* 1/10/91 DATE  
CHIEF, BUREAU OF ENGINEERING AND PLANNING: *William B. Ray* 1-10-91 DATE  
APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS AND ZONING  
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
PLANNING DIRECTOR: *William B. Ray* 1-11-91 DATE  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: *William B. Ray* 1/11/91 DATE

DATE	NO.	REVISIONS
9/2/08	1	REVISED STORM DRAIN PROFILES
SHEET TITLE:		
UTILITY PROFILES		
PROJECT TITLE:		
NEW ELKRIDGE ELEMENTARY SCHOOL		
ENGINEERS:	 Consulting Engineers 1850 York Road Timonium, Maryland 21093 301-252-6000 DESIGNED: A.R. DRAWN: R.V.B. CHECKED: P.D. DATE: NOVEMBER 29, 1990 SCALE: AS SHOWN DRAWING NO.: CE-38-39 of 42	

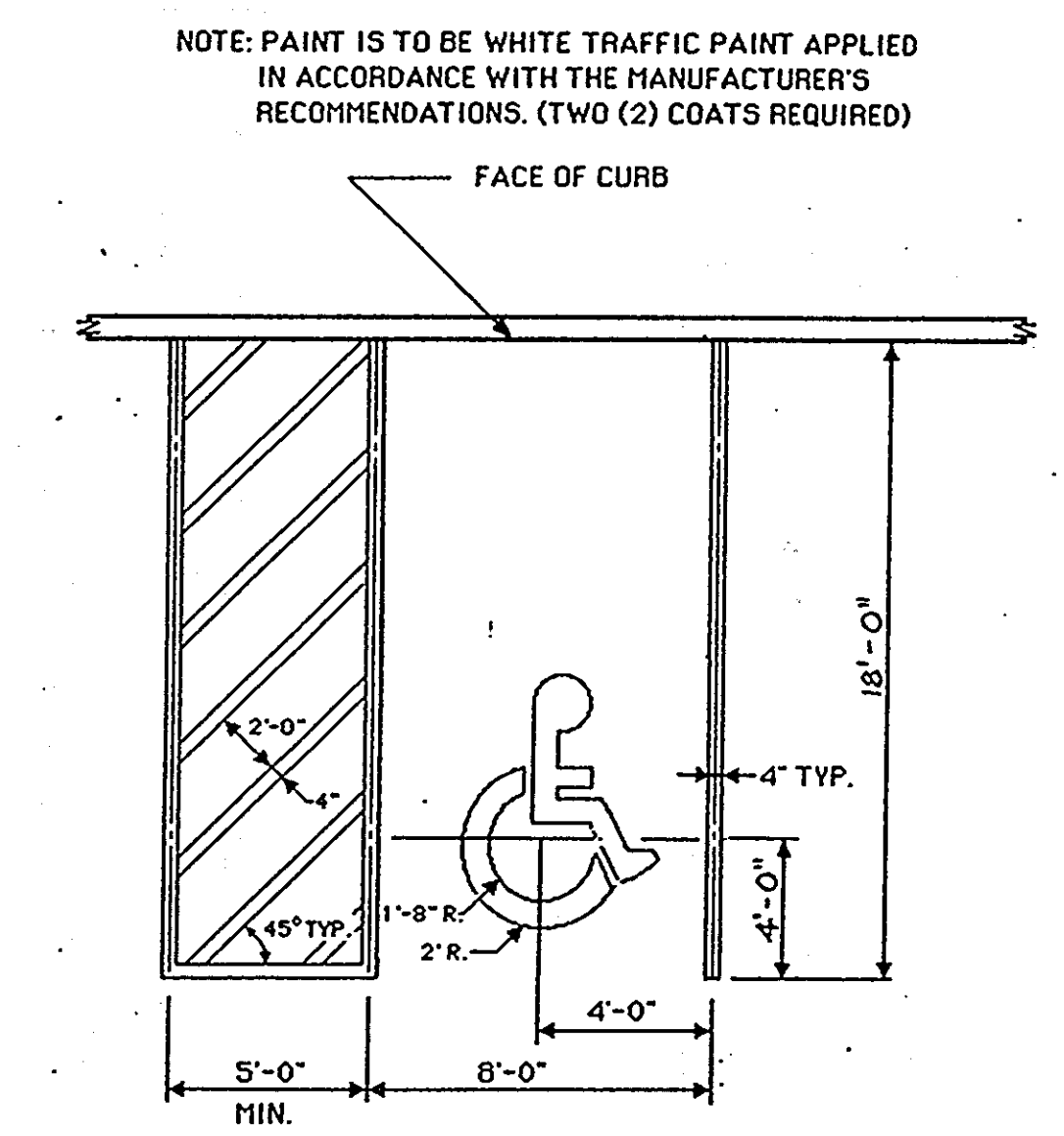


**NOTE:**  
 1. 1/2" PREMOLDED EXPANSION JOINT MATERIAL TO BE PLACED WHERE WALKS ABOUT CURBS, STEPS, BUILDINGS, OTHER WALKS, ETC. AND AT A MAXIMUM OF 20' INTERVALS ALONG THE WALK.  
 2. SCORING SHALL BE AS PROVIDED AT 4' ON CENTER FOR 4' & 8' WALKS, 5' ON CENTER FOR 5' & 10' WALKS, AND 6' ON CENTER FOR 6' AND LARGER, NOT PREVIOUSLY MENTIONED.  
 NOT TO SCALE

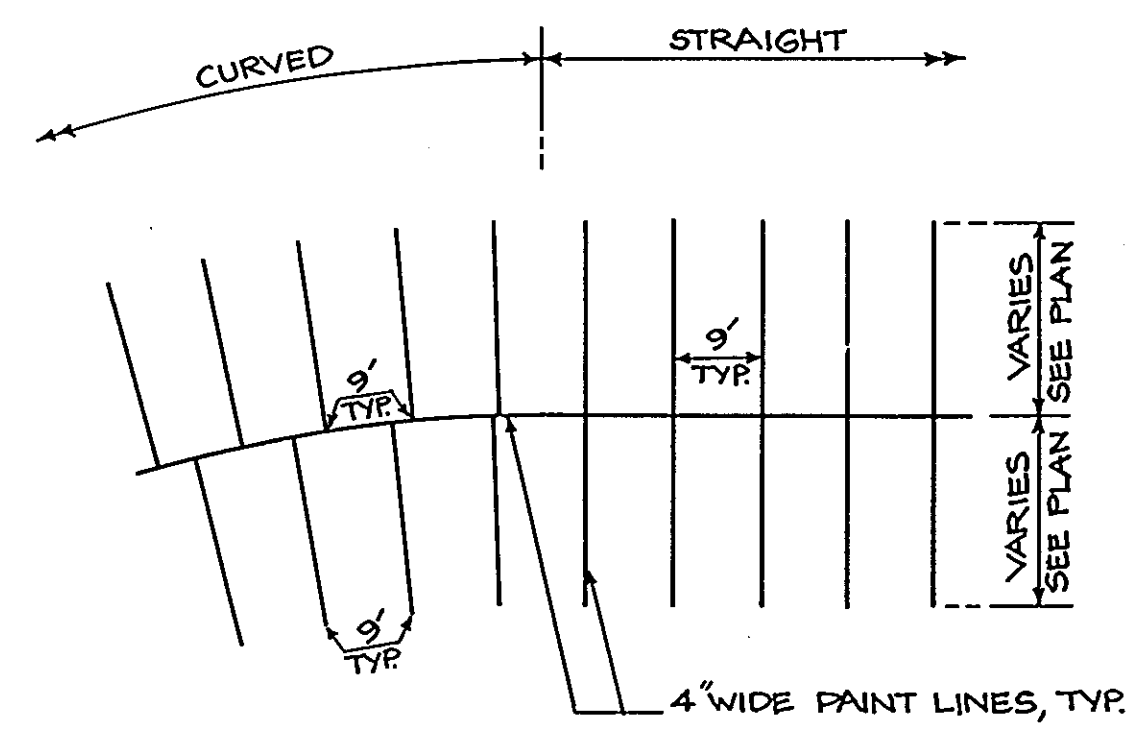
1 CONCRETE SIDEWALK (REINFORCED)



2 BITUMINOUS PAVING (LIGHT DUTY)

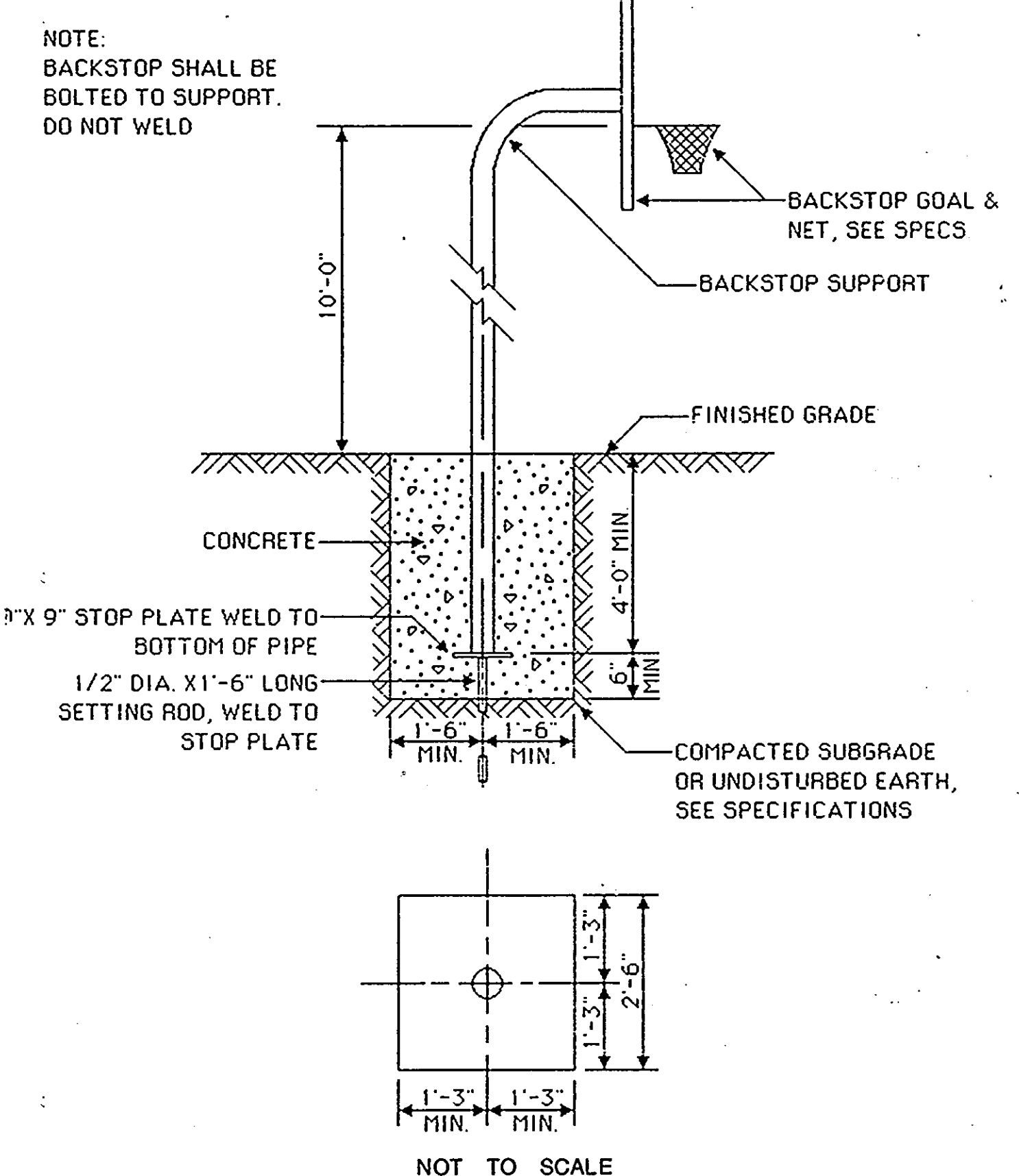


3 HANDICAPPED PARKING



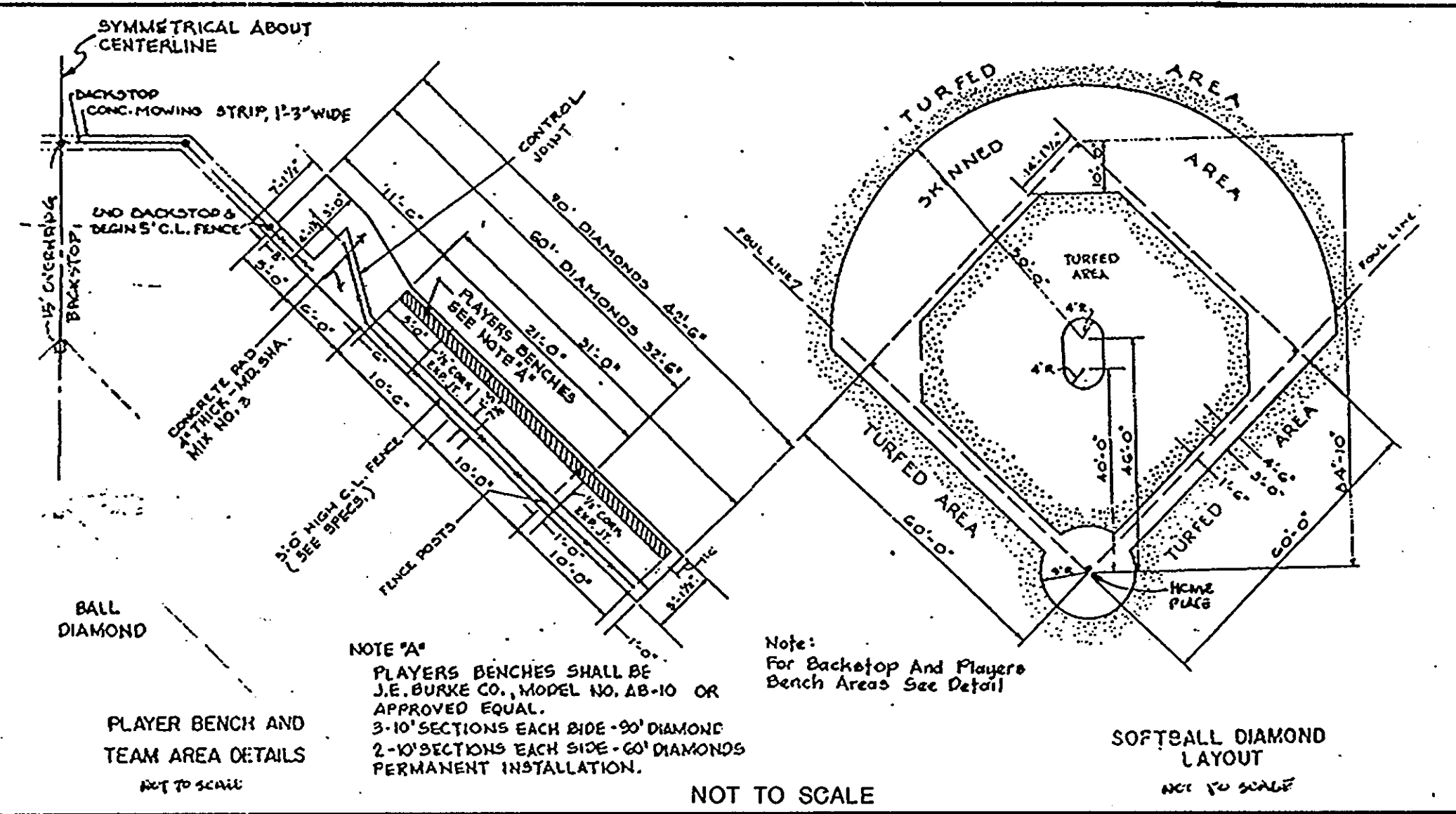
**NOTE:** PAINT IS TO BE WHITE TRAFFIC PAINT APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. (TWO (2) COATS REQUIRED)  
 NOT TO SCALE

4 PAINT PARKING LINES

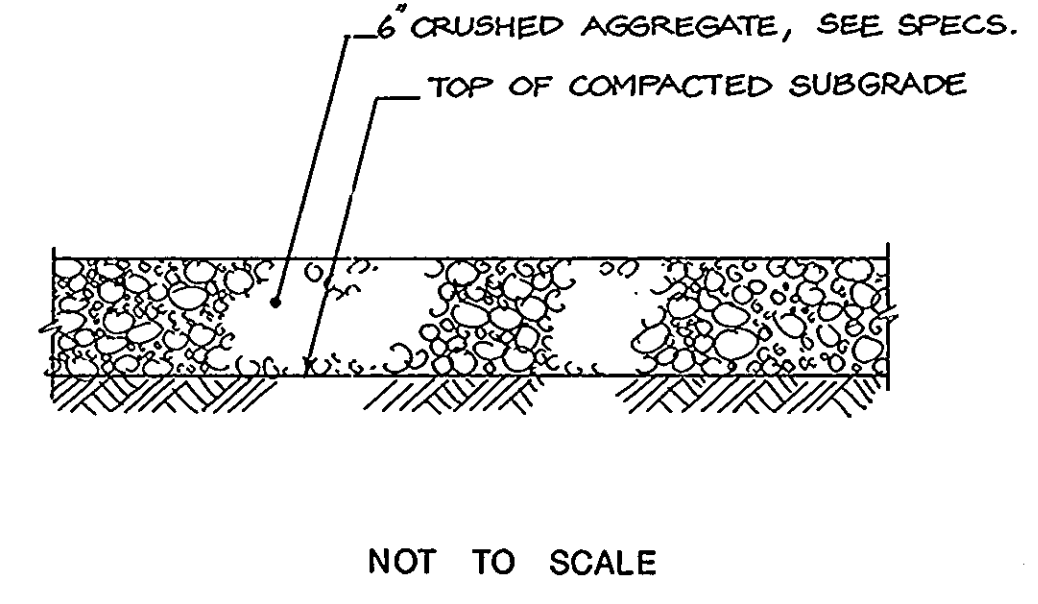


**NOTE:** BACKSTOP SHALL BE BOLTED TO SUPPORT. DO NOT WELD

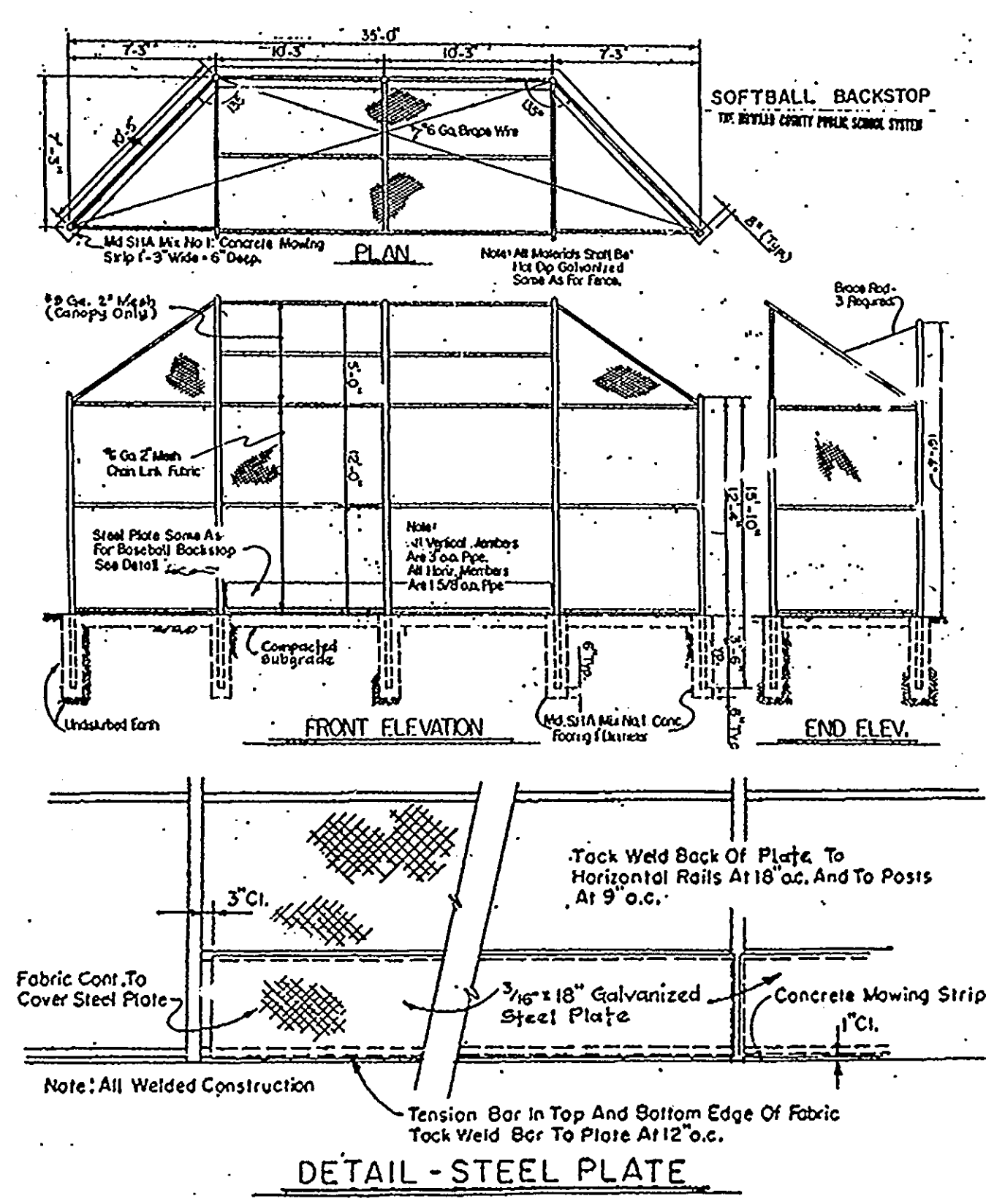
6 BASKETBALL GOAL DETAIL



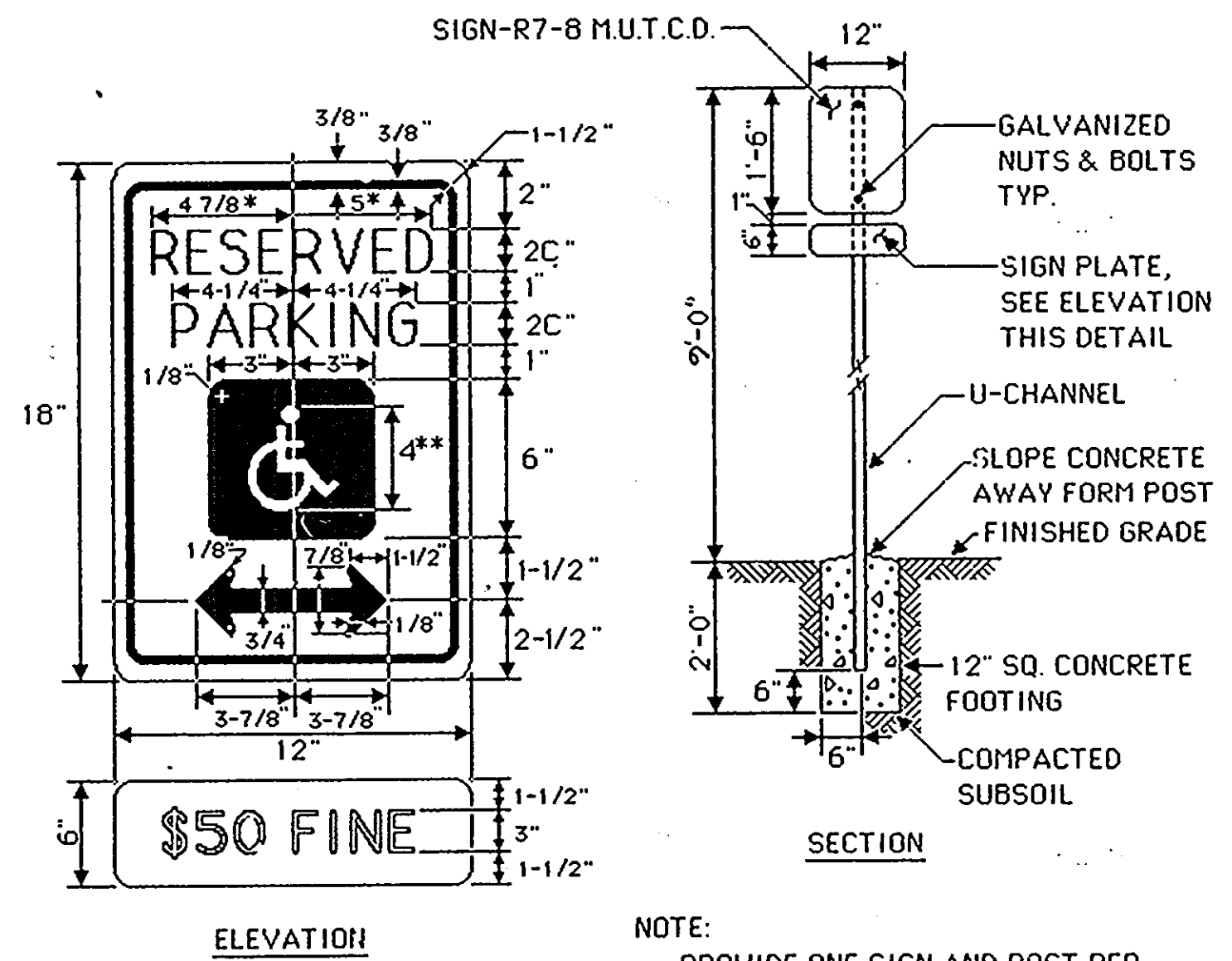
8 SOFTBALL FIELD DETAIL



9 AGGREGATE PAVING



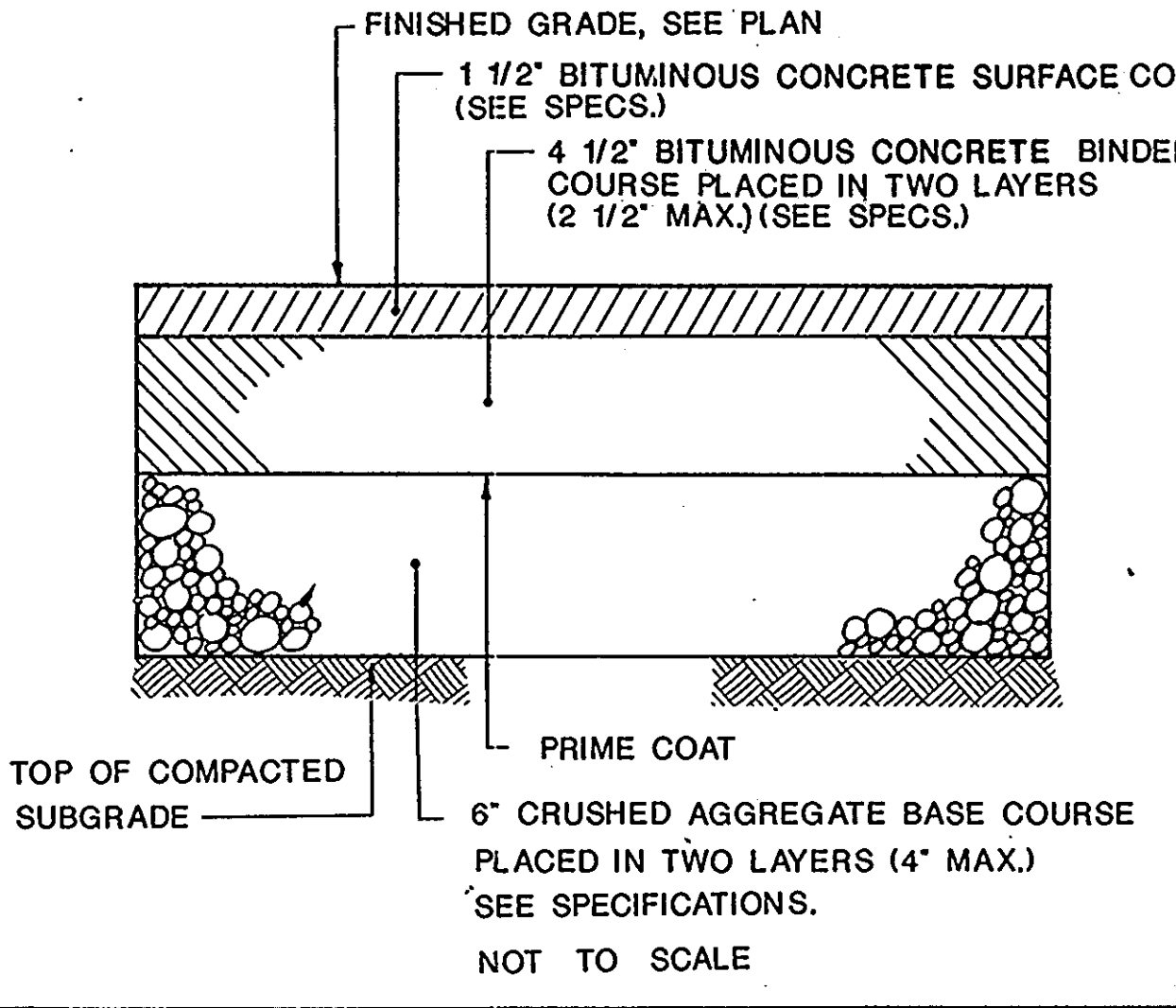
5 BACKSTOP DETAIL NOT TO SCALE



**NOTE:** PROVIDE ONE SIGN AND POST PER HANDICAP PARKING SPACE, SEE PLAN.  
**COLORS:**  
 LEGEND & BORDER- GREEN  
 WHITE SYMBOL ON BLUE BACKGROUND  
 BACKGROUND- WHITE

\* REDUCE SPACING 50%  
 \*\* SEE SYMBOL 186d FOR SYMBOL DESIGN  
 NOT TO SCALE

7 HANDICAP SIGN



10 BITUMINOUS PAVEMENT SECTION (HEAVY DUTY)

DATE	NO.	REVISIONS

SHEET TITLE: **SITE DETAILS**

PROJECT TITLE: **NEW ELK RIDGE ELEMENTARY SCHOOL**

ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Richard S. Saper* 1/10/91  
 DIRECTOR DATE

*William J. Kelly* 1-10-91  
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT

*James R. Boyle* 1-11-91  
 COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James R. Boyle* 1/10/91  
 PLANNING DIRECTOR DATE

*James R. Boyle* 1/1/91  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

DESIGNED: \_\_\_\_\_

DRAWN: \_\_\_\_\_

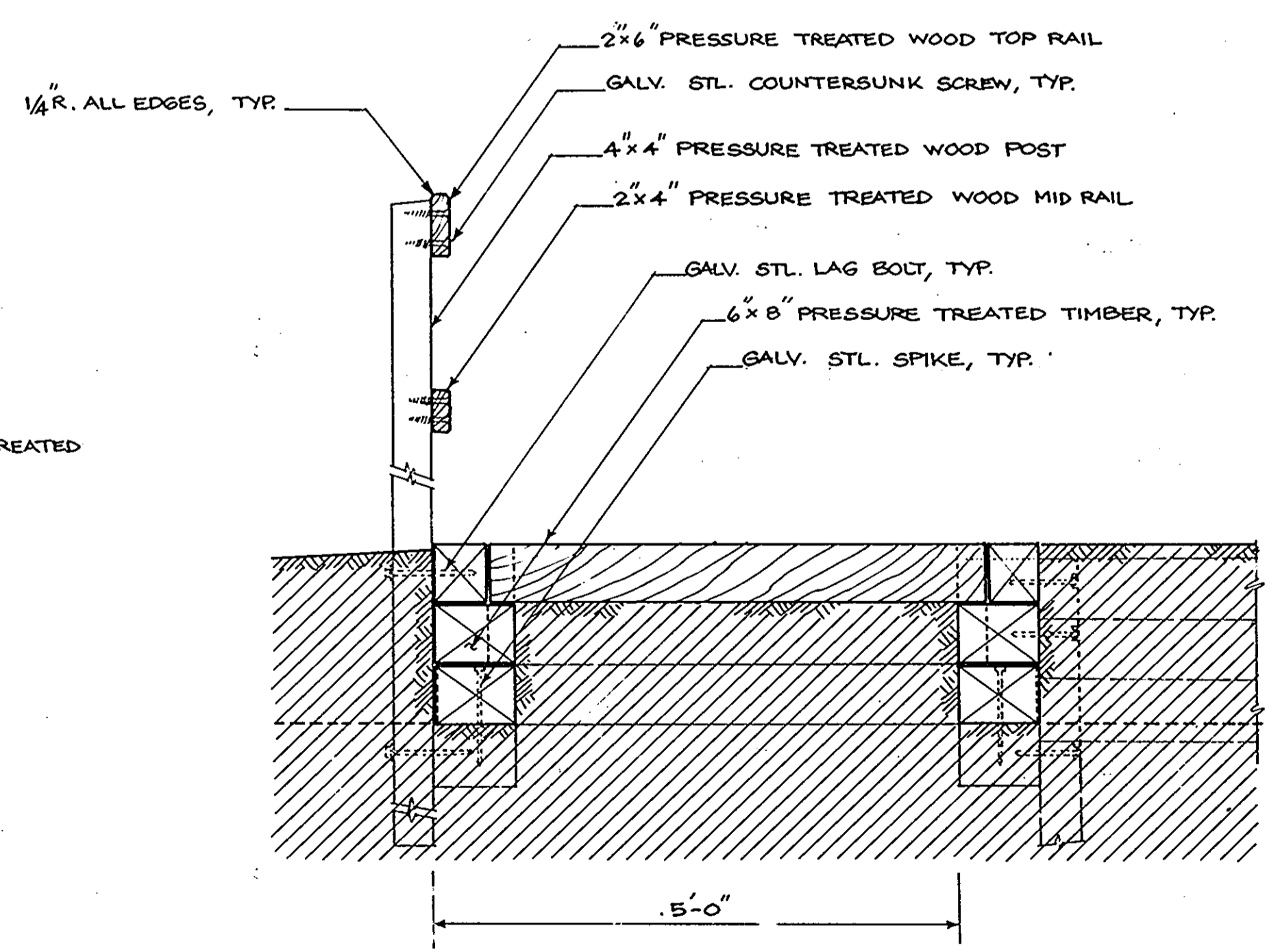
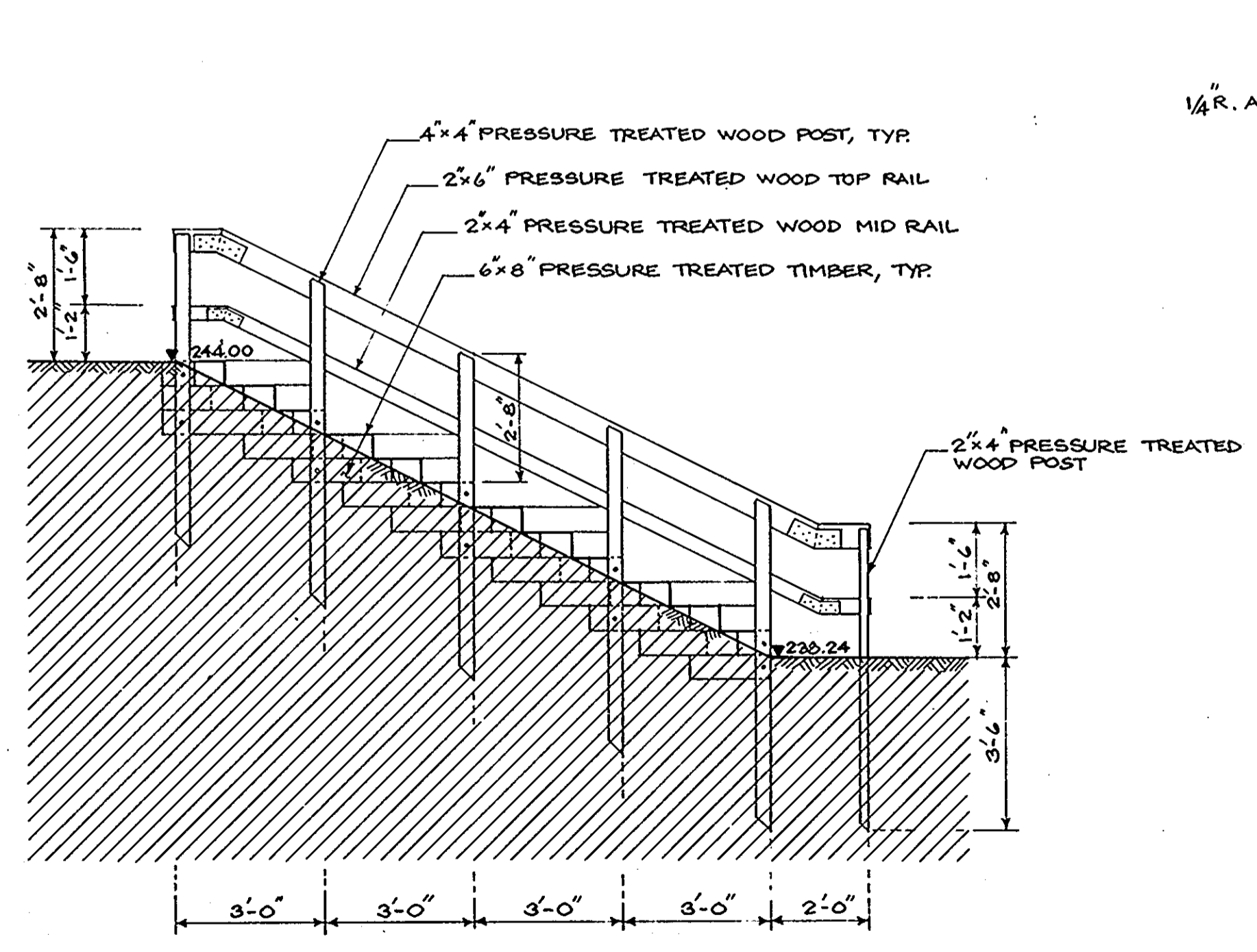
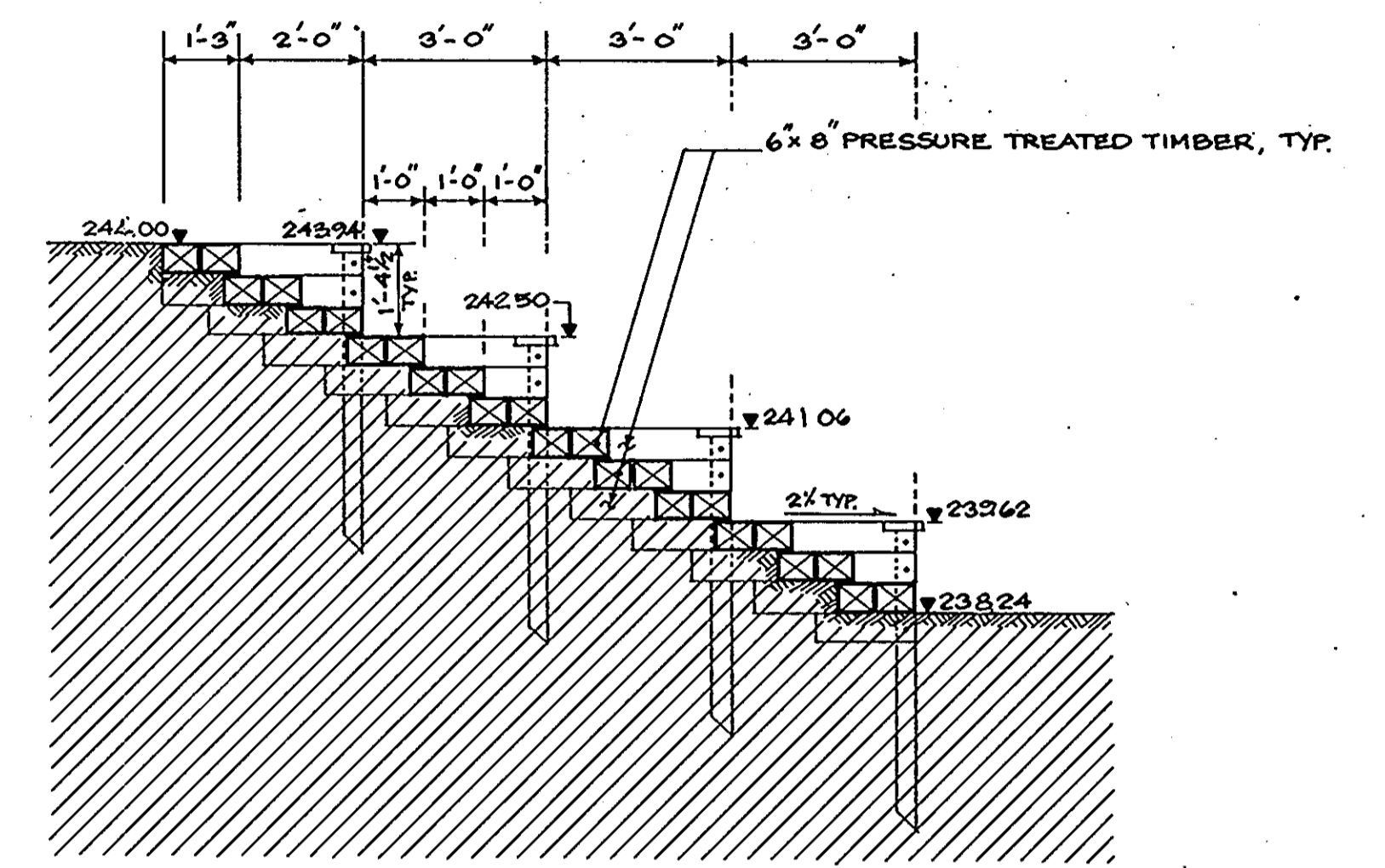
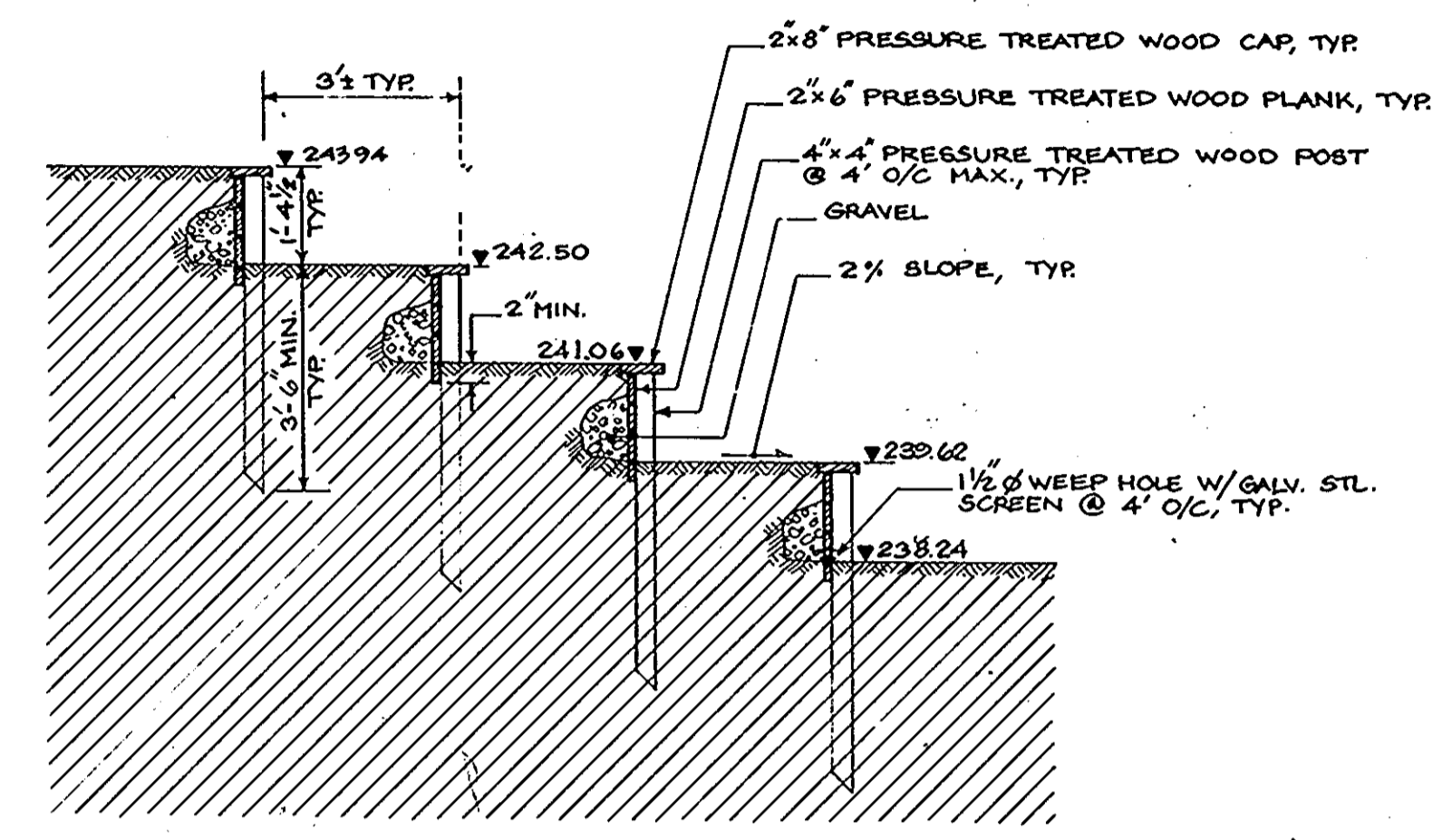
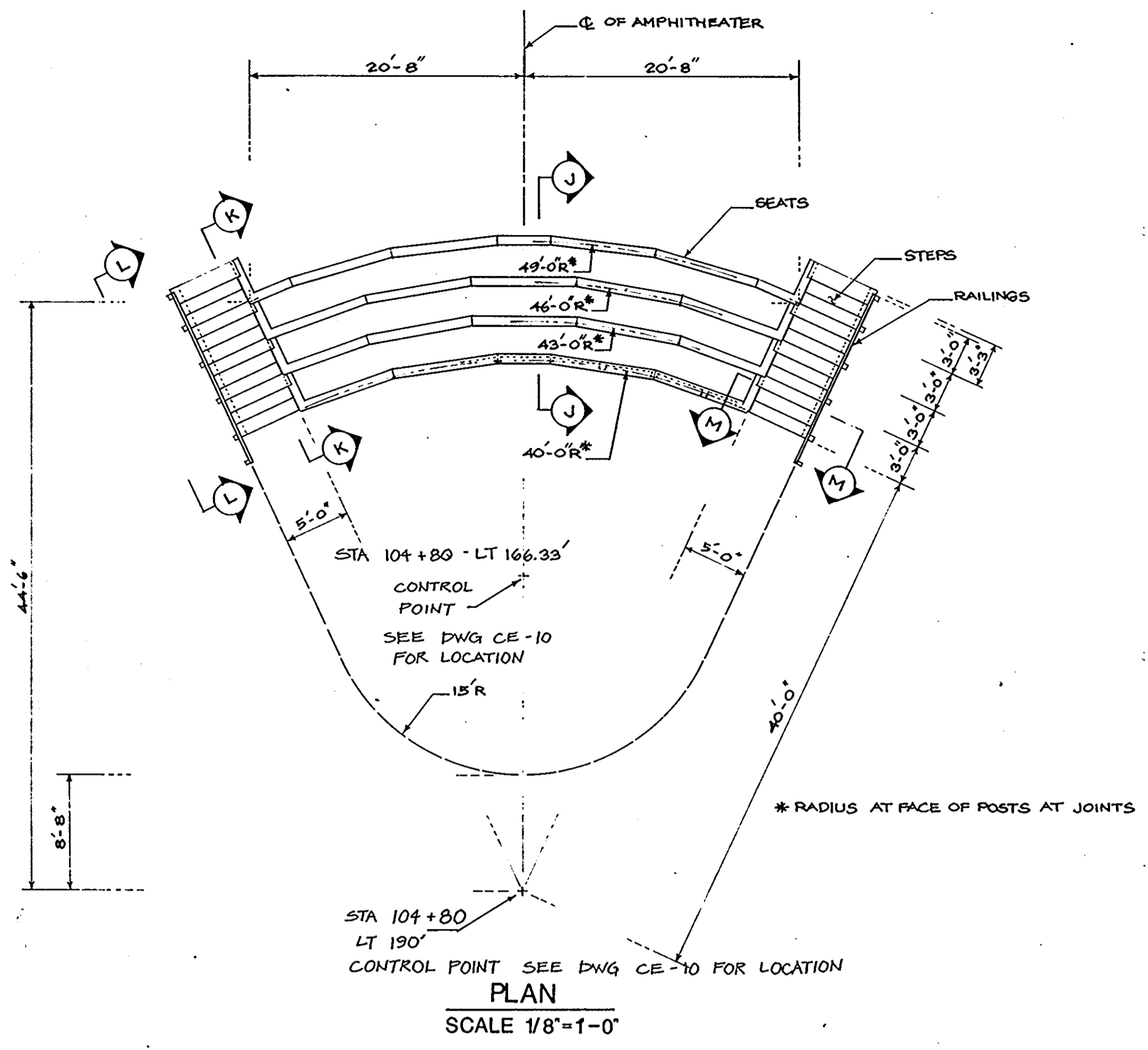
CHECKED: PD

DATE: NOVEMBER 29, 1990

SCALE: AS SHOWN

DRAWING NO.: CE-39  
 40 of 42





NAME: BOARD OF EDUCATION - HOWARD CO. Y  
 OWNER: ADDRESS: 10910 ROUTE 108  
 DEED REF.: LIBER 279 FOLIO 448  
 ELECTION DISTRICT NO. 1 HOWARD CO., MD.  
 CENSUS TRACT NO. 6012  
 TAX MAP 28 PARCEL NO. 20  
 WATER CODE \_\_\_\_\_ SEWER CODE \_\_\_\_\_

DATE	NO.	REVISIONS

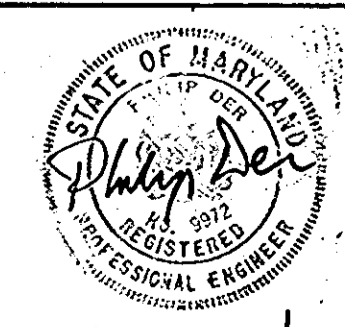
SHEET TITLE: SITE DETAILS

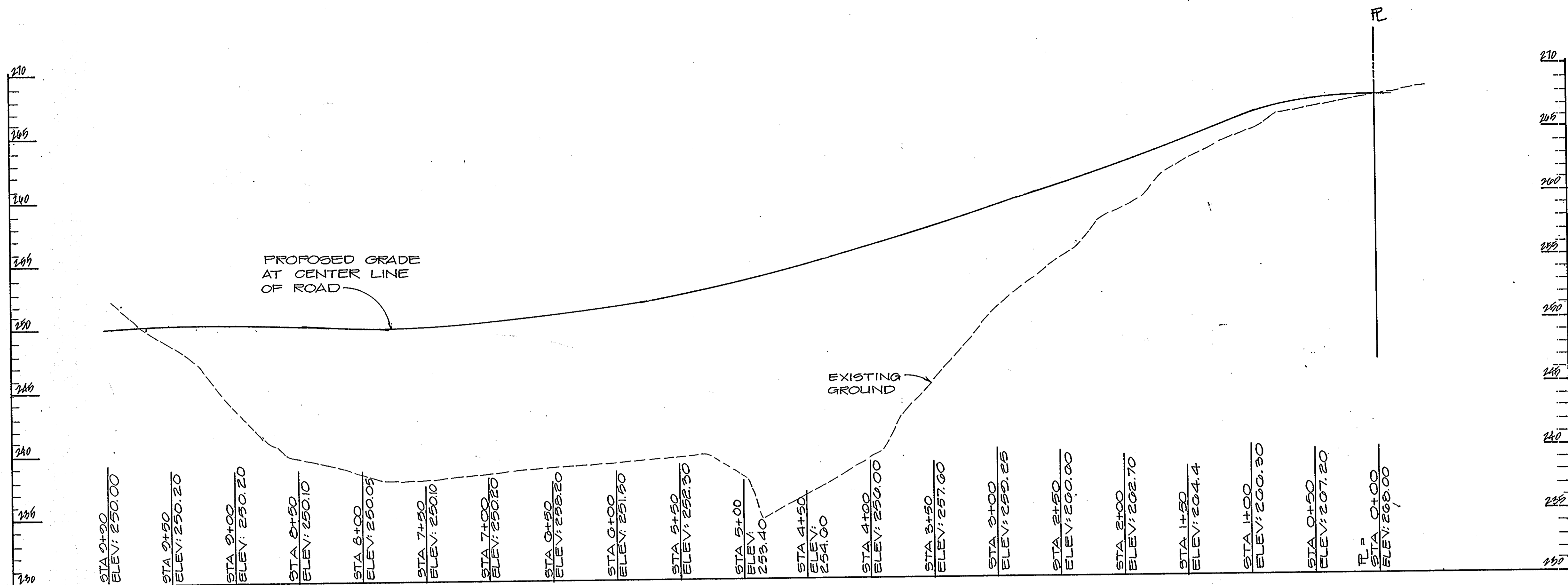
PROJECT TITLE: NEW ELKCRIDGE ELEMENTARY SCHOOL

ENGINEERS: Consulting Engineers  
 1550 York Road  
 Timonium, Maryland 21093 301-252-6000  
 WHITNEY, BAILEY, COX & MAGNANI

DESIGNED: R.Z.B.  
 DRAWN: C.W.G.III  
 CHECKED: P.D.  
 DATE: NOVEMBER 29, 1990  
 SCALE: AS NOTED  
 DRAWING NO.: CE-40  
 41 of 42

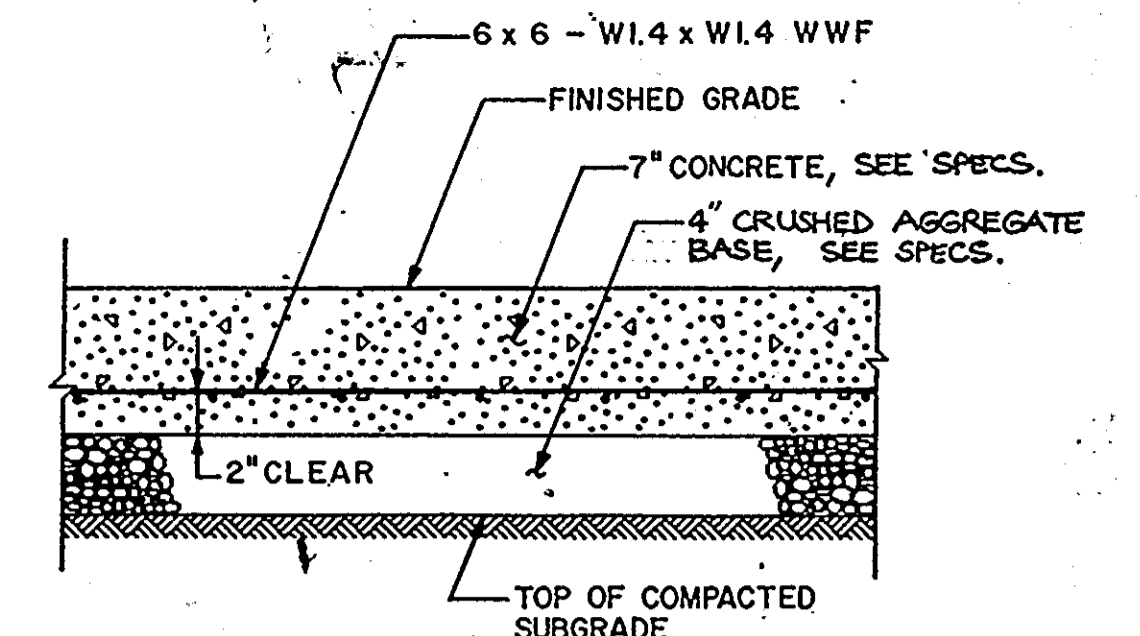
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DIRECTOR: *Donald J. Seaman* 1/10/91 DATE  
 CHIEF, BUREAU OF ENGINEERING: *William R. Seaman* 1-10-91 DATE  
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
 HOWARD COUNTY HEALTH DEPARTMENT  
 COUNTY HEALTH OFFICER: *Joseph J. ...* 1-11-91 DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 PLANNING DIRECTOR: *James S. ...* 1/14/91 DATE  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: *David C. ...* 1/16/91 DATE





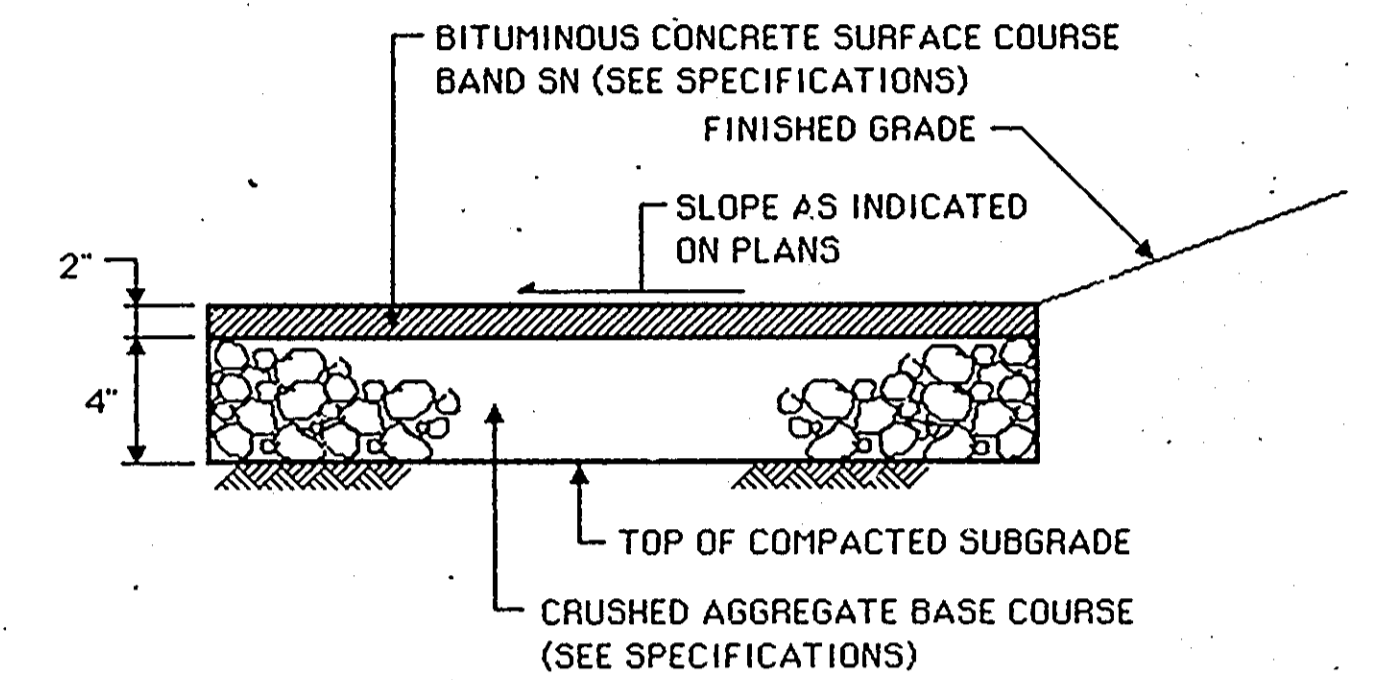
**ACCESS ROAD PROFILE**

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

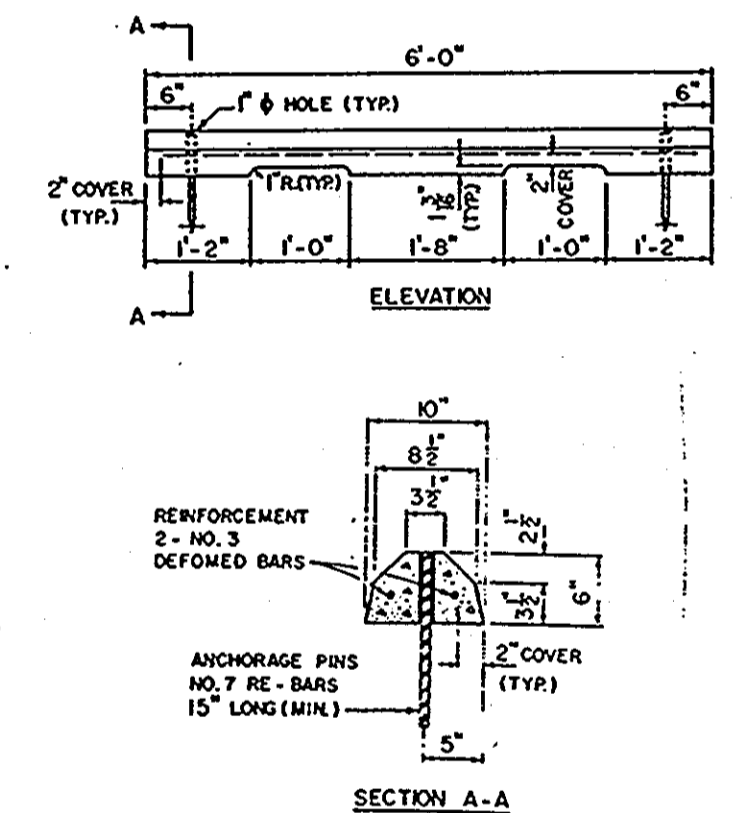


NOTE: 1/2" PREFORMED EXPANSION JOINT MATERIAL TO BE PLACED WHERE CONC. PAVING ABUTS CURBS, WALKS, WALLS, AND STRUCTURES, AND AT MAX. 20' INTERVALS.

11 CONCRETE PAVING NOT TO SCALE

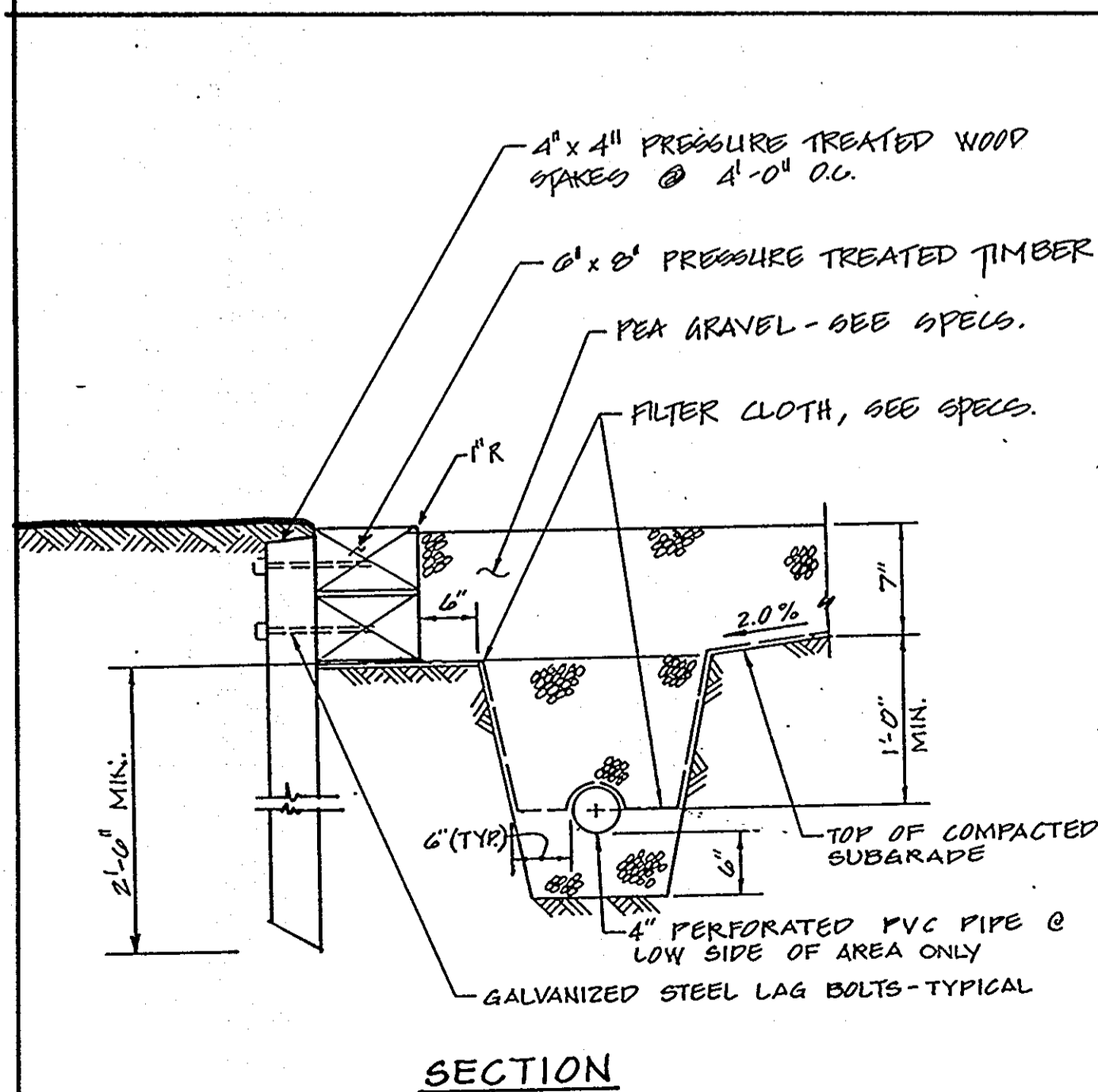


12 BITUMINOUS CONC. WALK NOT TO SCALE

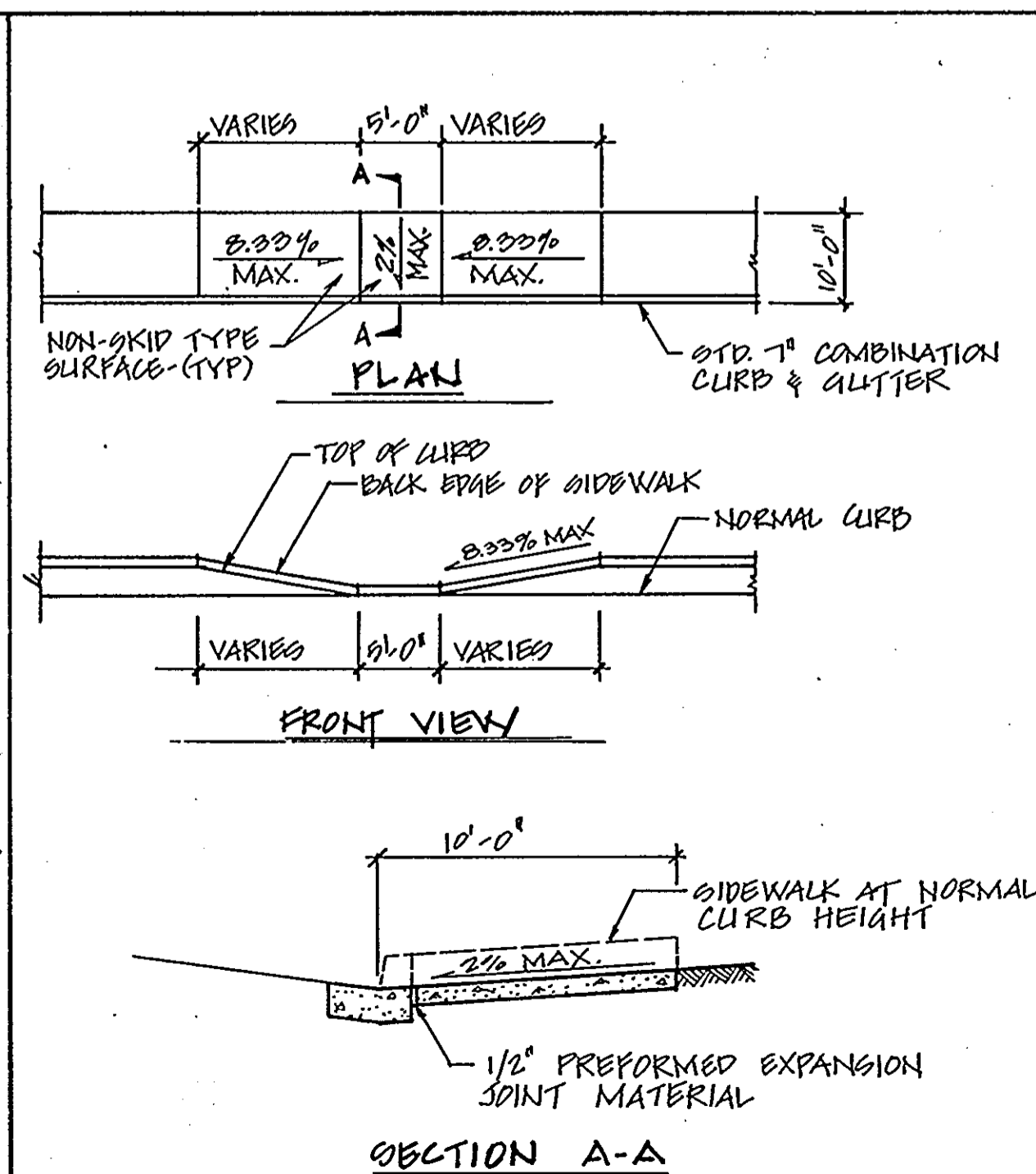


NOTE: PRECAST CONCRETE WHEEL STOPS SHALL BE LOCATED AS SHOWN ON THE PLANS, THEN SECURED IN PLACE WITH TWO (2) NO. 7 REINFORCEMENT BARS PER WHEEL STOP.

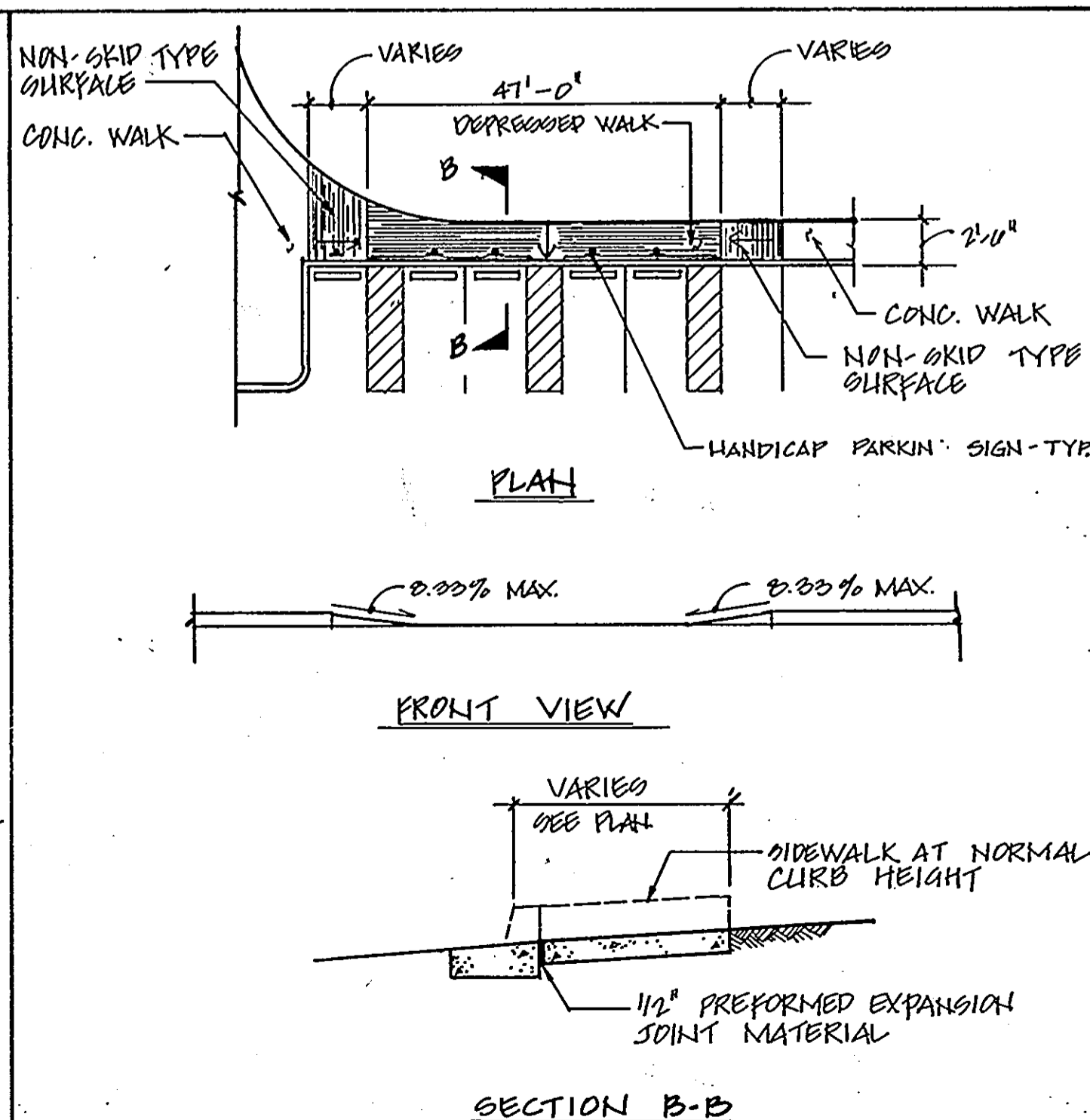
13 PRECAST CONC. WHEEL STOP NOT TO SCALE



14 PLAY EQUIPMENT AREA NOT TO SCALE



15 SIDEWALK RAMP NOT TO SCALE



16 SIDEWALK RAMP NOT TO SCALE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS  
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Donald J. Sepan* 1/10/91  
DIRECTOR DATE

*Michael J. Kelly* 1-10-91  
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS  
HOWARD COUNTY HEALTH DEPARTMENT

*James J. Brown* 1-11-91  
COUNTY HEALTH OFFICER DATE

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*James J. Brown* 1/14/91  
PLANNING DIRECTOR DATE

*Michael J. Kelly* 1/16/91  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

DATE	NO.	REVISIONS

SHEET TITLE: **SITE DETAILS AND ACCESS ROAD PROFILE**

PROJECT TITLE: **NEW ELKRIDGE ELEMENTARY SCHOOL**

ENGINEERS: **WHITNEY, BAILEY, COX & MAGNANI**

DESIGNED: **PD**

CHECKED: **PD**

DATE: **NOVEMBER 29, 1990**

SCALE: **AS SHOWN**

DRAWING NO.: **CE-41 42 of 42**