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4	JOHN RANDOLPH COURT PLAN AND PROFILE
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FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

THE OVERLOOK AT CENTENNIAL PARK

LOTS 9 THRU 34
(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8,
DEER PARK ESTATES, PLAT NO. 12580)

ZONED: R-20
TAX MAP NO. 24 GRID NO. 21
PART OF PARCEL NO. 399

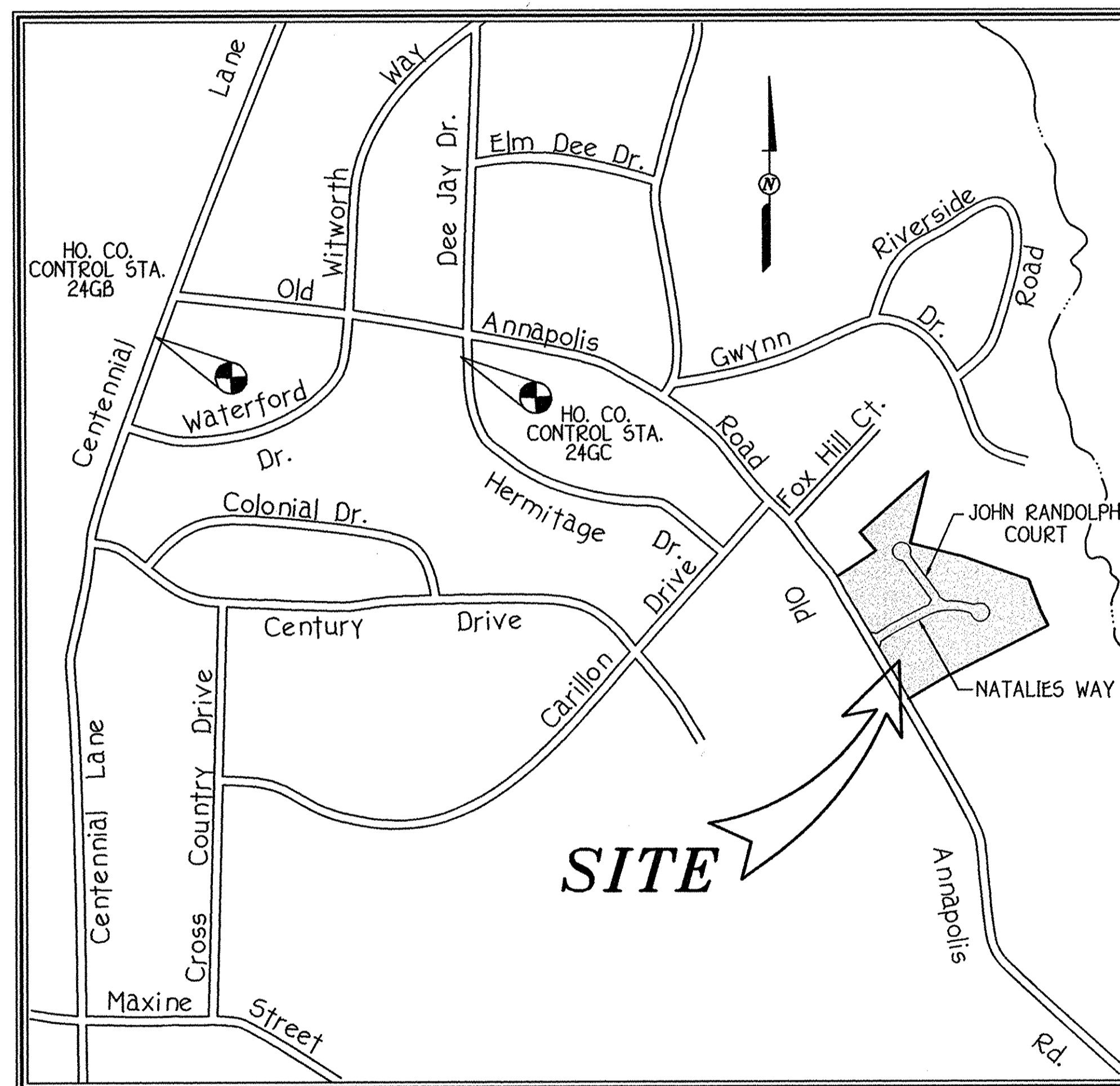
APPROVED: DEPARTMENT OF PUBLIC WORKS
Charles M. Daniels 1-3-99
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cathy Hamilton 1/28/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. ... 1/22/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE AG

TRAFFIC CONTROL SIGNS				
ROAD	CL. STA.	OFFSET	POSTED SIGN	SIGN CODE
NATALIES WAY	0+45	1/4"	STOP	R-1
NATALIES WAY	1+00	1/4"	STOP AHEAD	W-32
NATALIES WAY	1+00	1/4"	HILL 1/2 MI	W-75
JOHN RANDOLPH COURT	0+30	1/4"	STOP	R-1

ROAD CLASSIFICATION CHART				
ROAD	CLASSIFICATION	R/W WIDTH	CL. STA.	
NATALIES WAY	ACCESS STREET	50'	0+00 TO 2+56.83	
NATALIES WAY	ACCESS STREET	40'	2+56.83 TO 4+34.66	
NATALIES WAY	ACCESS PLACE (PUBLIC)	40'	4+34.66 TO 6+72.36	
JOHN RANDOLPH COURT	ACCESS PLACE (PUBLIC)	40'	0+00 TO 3+74.16	



VICINITY MAP
 SCALE 1" = 600'

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)".
 NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO (2) FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED MAY 2, 1998.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT Nos. 24GB AND 24GC WERE USED FOR THIS PROJECT.

24GB N 176500.7269 (meters)
 E 41615.5048 (meters)
 24GC N 176439.5796 (meters)
 E 412127.2125 (meters)

- WATER IS PUBLIC, CONTRACT No. 24-3698-D AND THE DRAINAGE AREA IS THE LITTLE PATUXENT.
- SEWER IS PUBLIC, CONTRACT No. 24-3698-D AND THE DRAINAGE AREA IS THE LITTLE PATUXENT.
- S.W.M. WILL BE PROVIDED BY A PUBLIC FACILITY LOCATED ON OPEN SPACE LOT 22. WATER QUALITY IS PROVIDED BY A WET POOL DESIGN AND QUANTITY MANAGEMENT IS PROVIDED BY DETENTION.
- EXISTING UTILITIES ARE BASED ON CONT. No. 801-W & S AND CONT. No. 24-3226-D.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE ARE NO WETLANDS ON THIS SITE.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY STREET TRAFFIC STUDIES, DATED 11-27-96, AND WAS APPROVED ON 2/4/97 UNDER 597-03. AN ADDENDUM TO THE TRAFFIC STUDY WAS SUBMITTED ON MAY 1998.
- BACKGROUND INFORMATION:
 A. SUBDIVISION NAME: THE OVERLOOK AT CENTENNIAL PARK
 B. TAX MAP NO.: 24
 C. PARCEL NO.: 399
 D. ZONING: R-20
 E. ELECTION DISTRICT: SECOND
 F. TOTAL TRACT AREA: 14,215 AC. +
 G. NO. OF BUILDABLE LOTS: 23
 H. NO. OF OPEN SPACE LOTS: 3
 * I. OPEN SPACE REQUIRED: MIN. LOT SIZE 16,000 SQ. FT. = 11,249 x 20% = 2,250 AC.
 J. OPEN SPACE PROVIDED: 2,316 AC.
 K. RECREATIONAL OPEN SPACE REQUIRED: 20 LOTS x 200 SQ. FT. / LOT = 4,000 SQ. FT.
 L. RECREATIONAL OPEN SPACE PROVIDED: 5,372 SQ. FT.
 M. PRELIMINARY PLAN APPROVAL DATE: 1-22-98 (P98-13)
 N. PREVIOUS FILE Nos.: P97-63, 597-03, P98-13 & W98-125.
- REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF THE PIPE / FLAG STEM AND THE ROAD R/W AND NOT ONTO THE PIPE / FLAG STEM DRIVEWAY.
- NO CEMETERIES EXIST ON THE PROPERTY.
- FOREST STAND DELINEATION PROVIDED BY EXPLORATION RESEARCH, INC. APPROVED ON 2/4/97 (597-03).
- FOREST CONSERVATION PLAN APPROVED UNDER P98-13.
- * 20 LOTS 31, 32 AND 33 ARE INCLUDED IN THIS SUBDIVISION FOR THE PURPOSE OF A LOT LINE ADJUSTMENT. THE AREA OF LOTS 31 - 33 IS NOT COUNTED TOWARDS OPEN SPACE OBLIGATIONS.

MINIMUM LOT SIZE CHART			
Lot No.	Gross Area	Pipestem Area	Minimum Lot Size
28	18,592 Sq.Ft.	2,148 Sq.Ft.	16,444 Sq.Ft.
29	18,343 Sq.Ft.	2,161 Sq.Ft.	16,182 Sq.Ft.

STREET LIGHT CHART			
DWG. No.	STREET NAME	STATION	OFF-SET
3	OLD ANNAPOLIS ROAD	0+33	26'R
3	NATALIES WAY	4+55	15'L
4	JOHN RANDOLPH COURT	L.P. STA. 1+92	3'
3	NATALIES WAY	L.P. STA. 1+10	3'
3	NATALIES WAY	CL. STA. 5+25	9'R
4	JOHN RANDOLPH COURT	CL. STA. 2+50	9'L

NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PkE
 ELLICOTT CITY, MARYLAND 21114
 (410) 661-2955

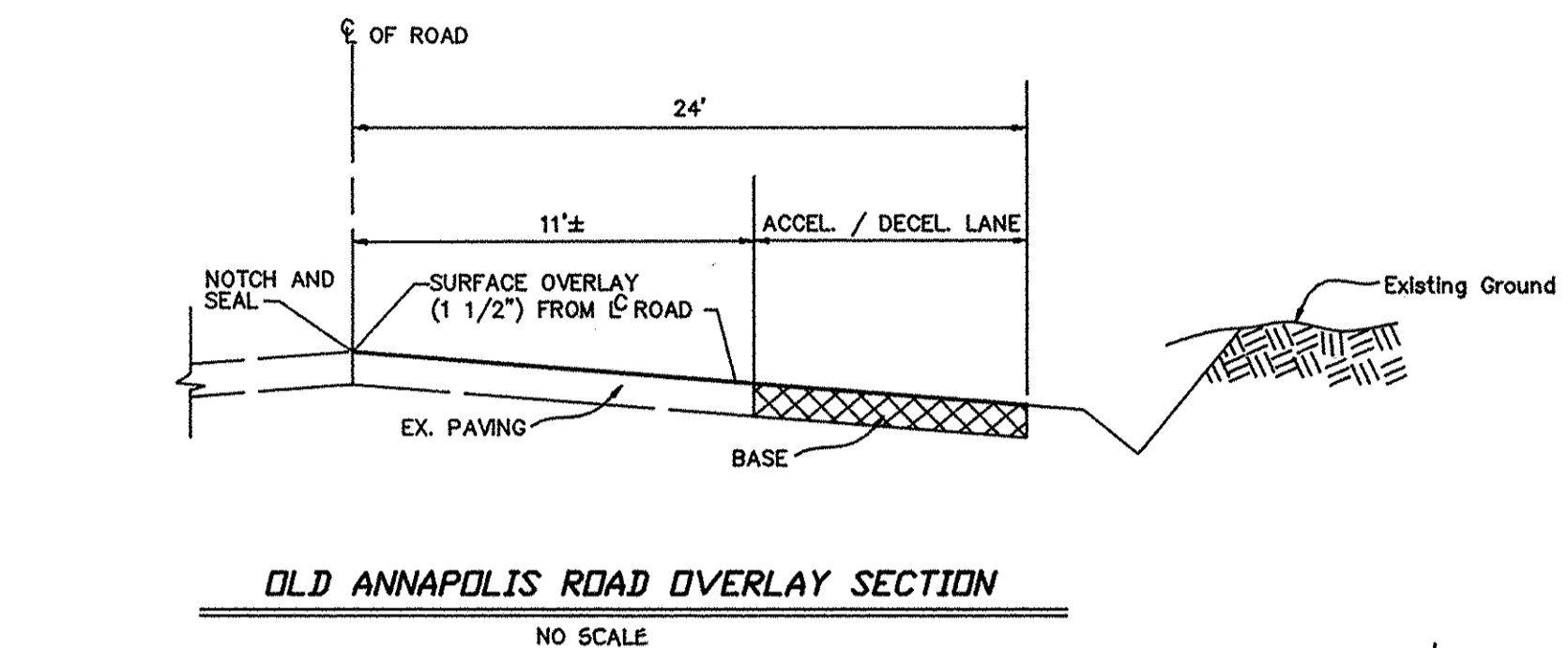
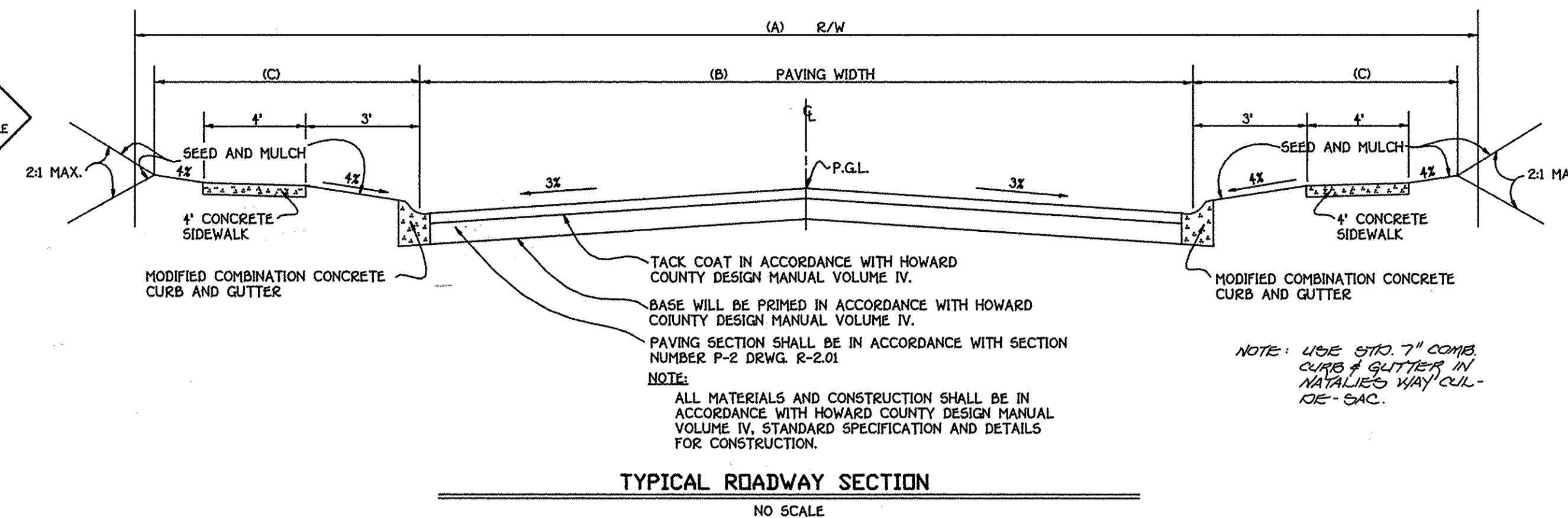
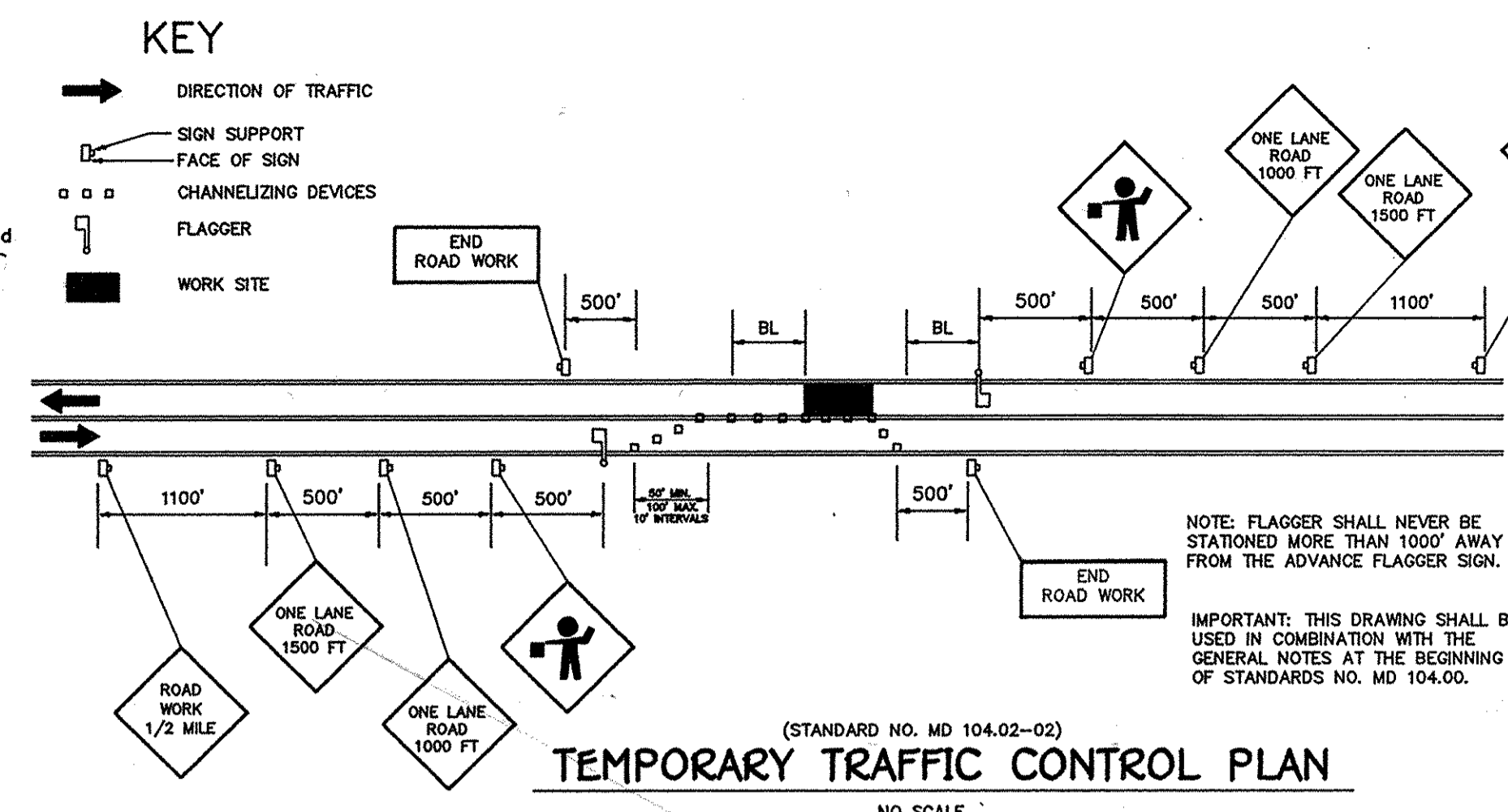
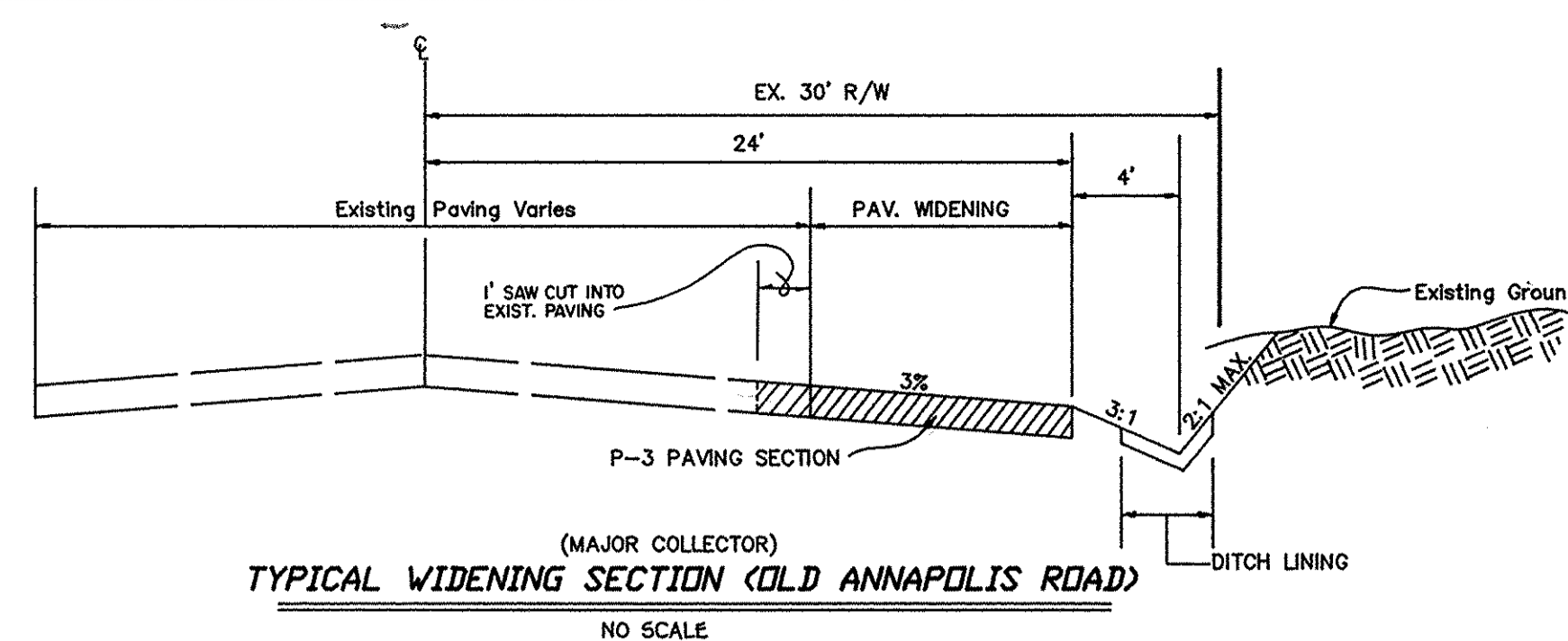
OWNERS
 MR. AND MRS. WILFREDO PEREZ
 9830 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. AND MRS. HENRY MATTHEWS
 9800 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
 C.S.T.L.C. TRADING AS
 JAMESTOWN BUILDERS
 10601 HICKORY BRIDGE ROAD
 SUITE 210
 COLUMBIA, MARYLAND 21044



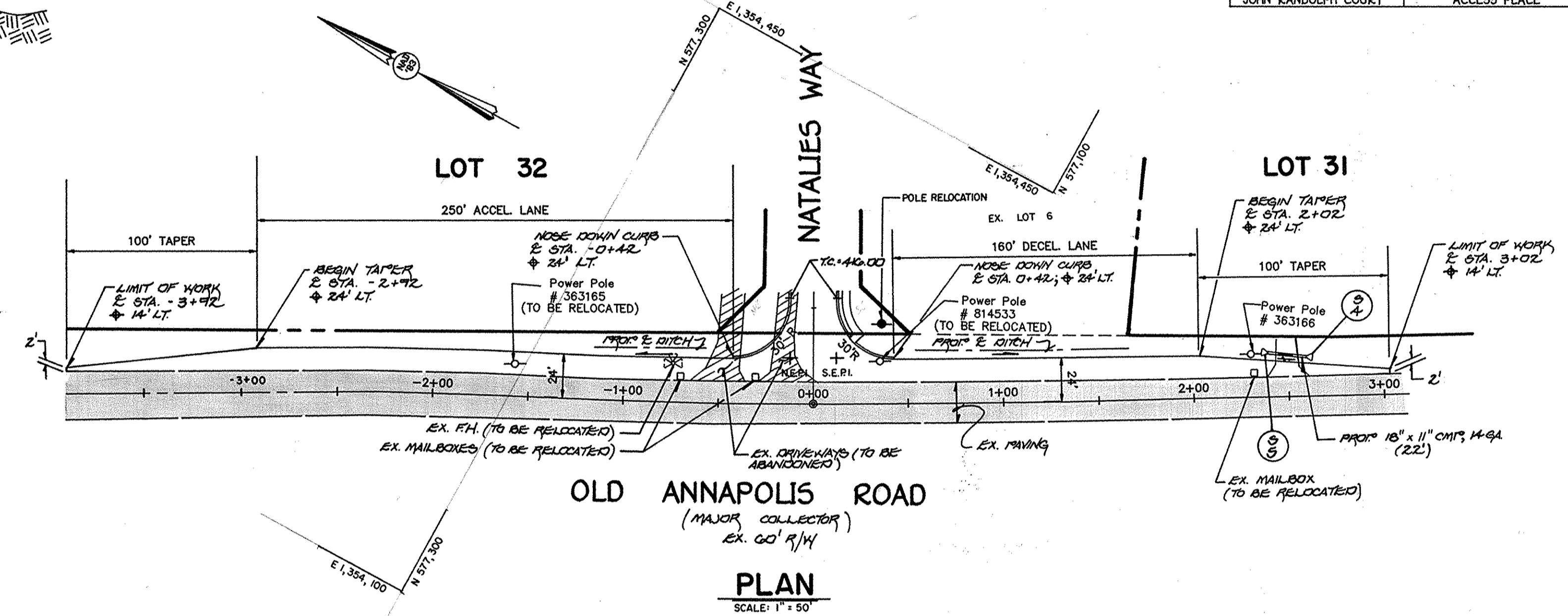
10-9-98
 DATE

THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
 ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 399
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUGUST 7, 1998
 SHEET 1 OF 17



THE IMPROVEMENTS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STD. DETAIL R-10.01

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	(A)	(B)	(C)	PAVING SECTION
NATALIES WAY	ACCESS STREET	25 M.P.H.	R-20	0+00 TO 2+56.83	50'	24'	8'	P-2
NATALIES WAY	ACCESS STREET	25 M.P.H.	R-20	2+56.83 TO 4+34.66	40'	24'	8'	P-2
NATALIES WAY	ACCESS PLACE	25 M.P.H.	R-20	4+34.66 TO 6+72.36	40'	20'	8'	P-2
JOHN RANDOLPH COURT	ACCESS PLACE	20 M.P.H.	R-20	0+00 TO 3+74.16	40'	20'	8'	P-2



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 1/28/99
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John Pannone 1/28/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Stephen M. Daveler 1-8-99
CHIEF, BUREAU OF HIGHWAYS



THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34
(A Resubdivision of Lots 1, 2, 3, 4, 5, 7, and 8 Deer Park Estates Plat No. 12580)
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

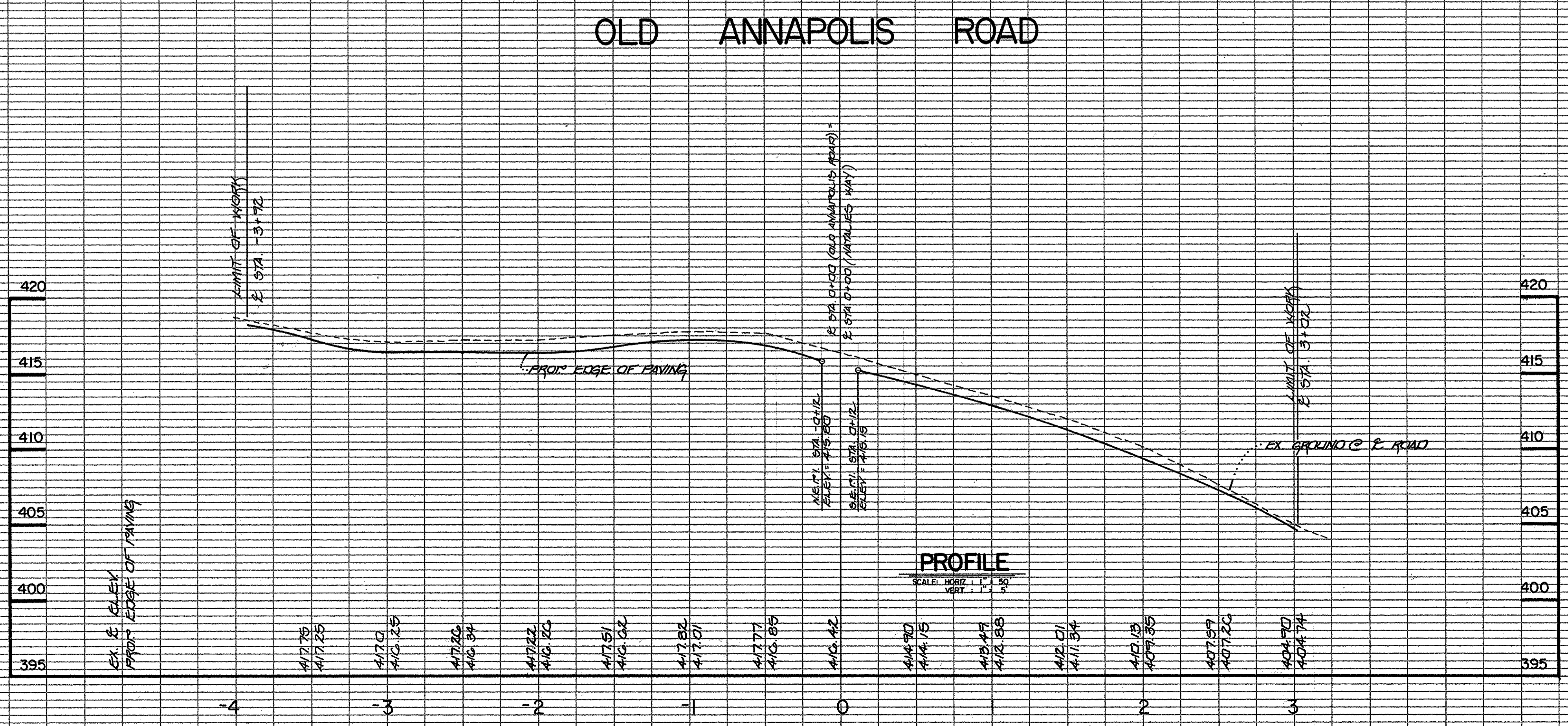
OLD ANNAPOLIS ROAD
PLAN AND PROFILE

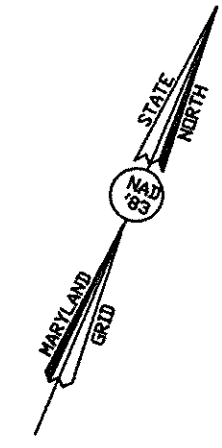
OWNERS
HE AND HIS WIFE MARGARET PEREZ
1800 OLD ANNAPOLIS ROAD
ELLCOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
S.C.E.L.L. TRADING AND DEVELOPMENT BUILDERS
3800 FREDERICK ROAD
COLUMBIA, MARYLAND 21046

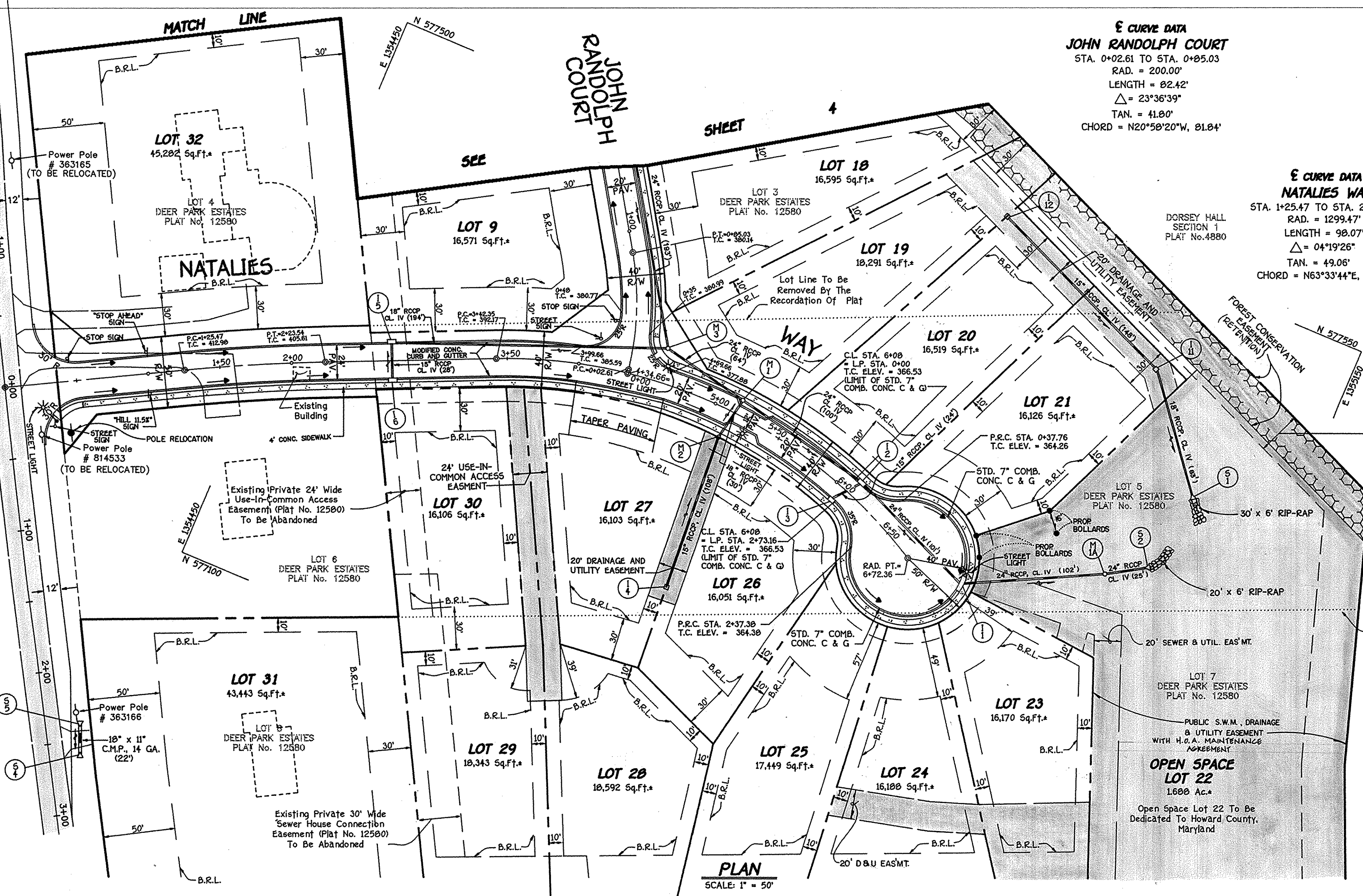
SCALE: AS SHOWN
DATE: AUG. 7, 1998
DWG. NO. 2 OF 17

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461-2955





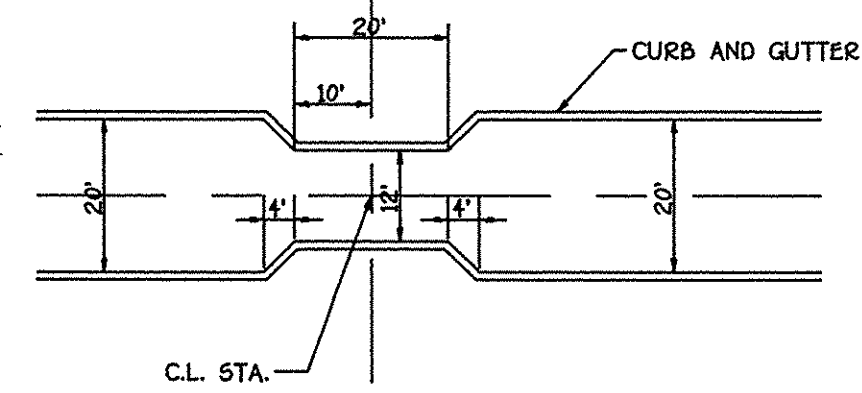
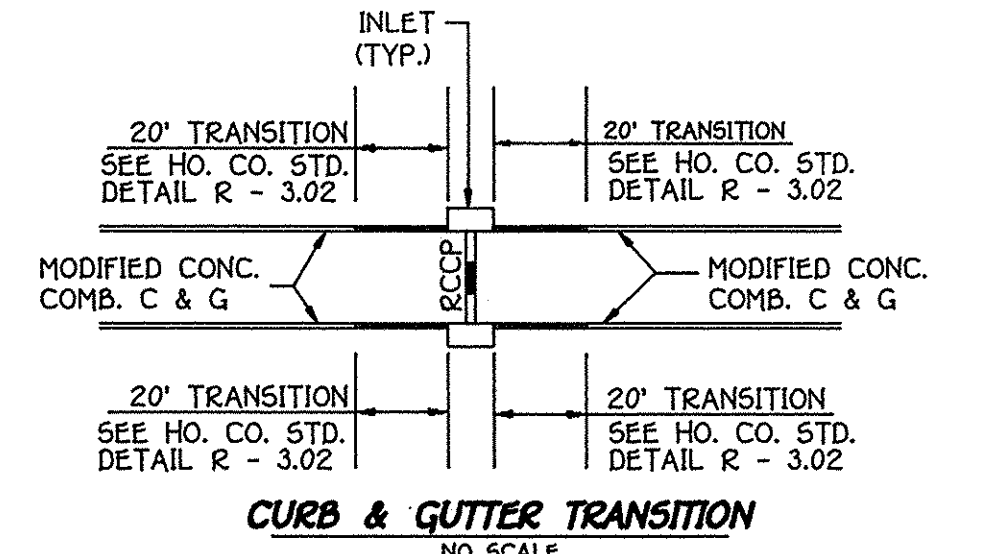
OLD ANNAPOLIS ROAD
(MAJOR COLLECTOR)



E CURVE DATA
JOHN RANDOLPH COURT
STA. 0+02.61 TO STA. 0+05.03
RAD. = 200.00'
LENGTH = 82.42'
 $\Delta = 23^{\circ}36'39''$
TAN. = 41.80'
CHORD = N20°50'20"W, 81.84'

E CURVE DATA
NATALIES WAY
STA. 1+25.47 TO STA. 2+23.54
RAD. = 1299.47'
LENGTH = 98.07'
 $\Delta = 04^{\circ}19'26''$
TAN. = 49.06'
CHORD = N63°33'44"E, 98.04'

E CURVE DATA
NATALIES WAY
STA. 4+34.66 TO STA. 6+72.36
RAD. = 350.00'
LENGTH = 237.70'
 $\Delta = 38^{\circ}54'46''$
TAN. = 123.64'
CHORD = S79°42'37"E, 233.16'



TRAFFIC CALMING DEVICE
NO SCALE

ROAD NAME	C.L. STA.
NATALIES WAY	5+25
JOHN RANDOLPH COURT	2+50

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 1/25/99
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mike Dammann 1/22/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Dwyer 1-8-99
CHIEF, BUREAU OF HIGHWAYS
DATE

THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34
(A Resubdivision of Lots 1, 2, 3, 4, 5, 7, and 8
Deer Park Estates Plat No. 12580)
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

NATALIES WAY
PLAN AND PROFILE
JOHN RANDOLPH COURT
PLAN

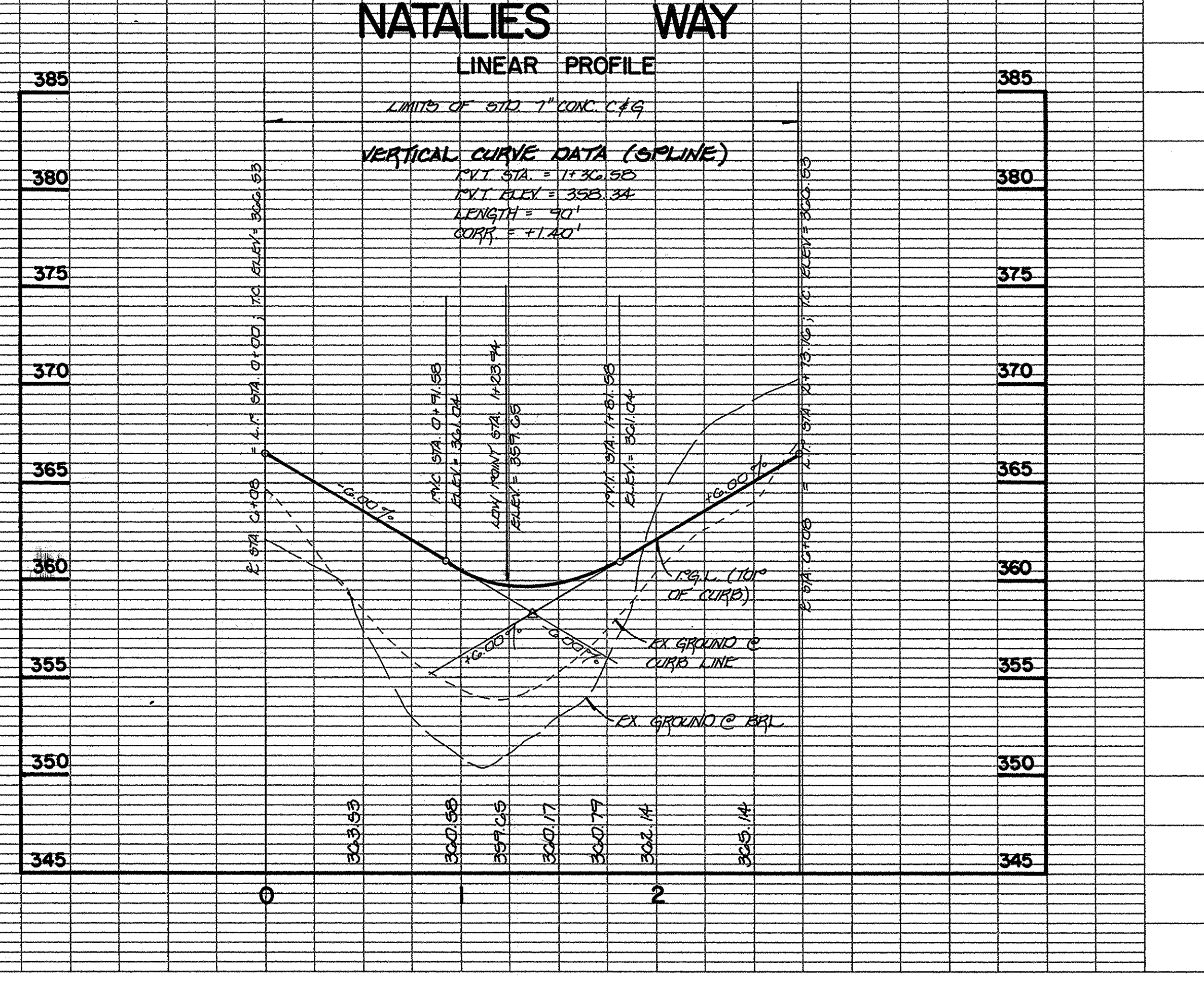
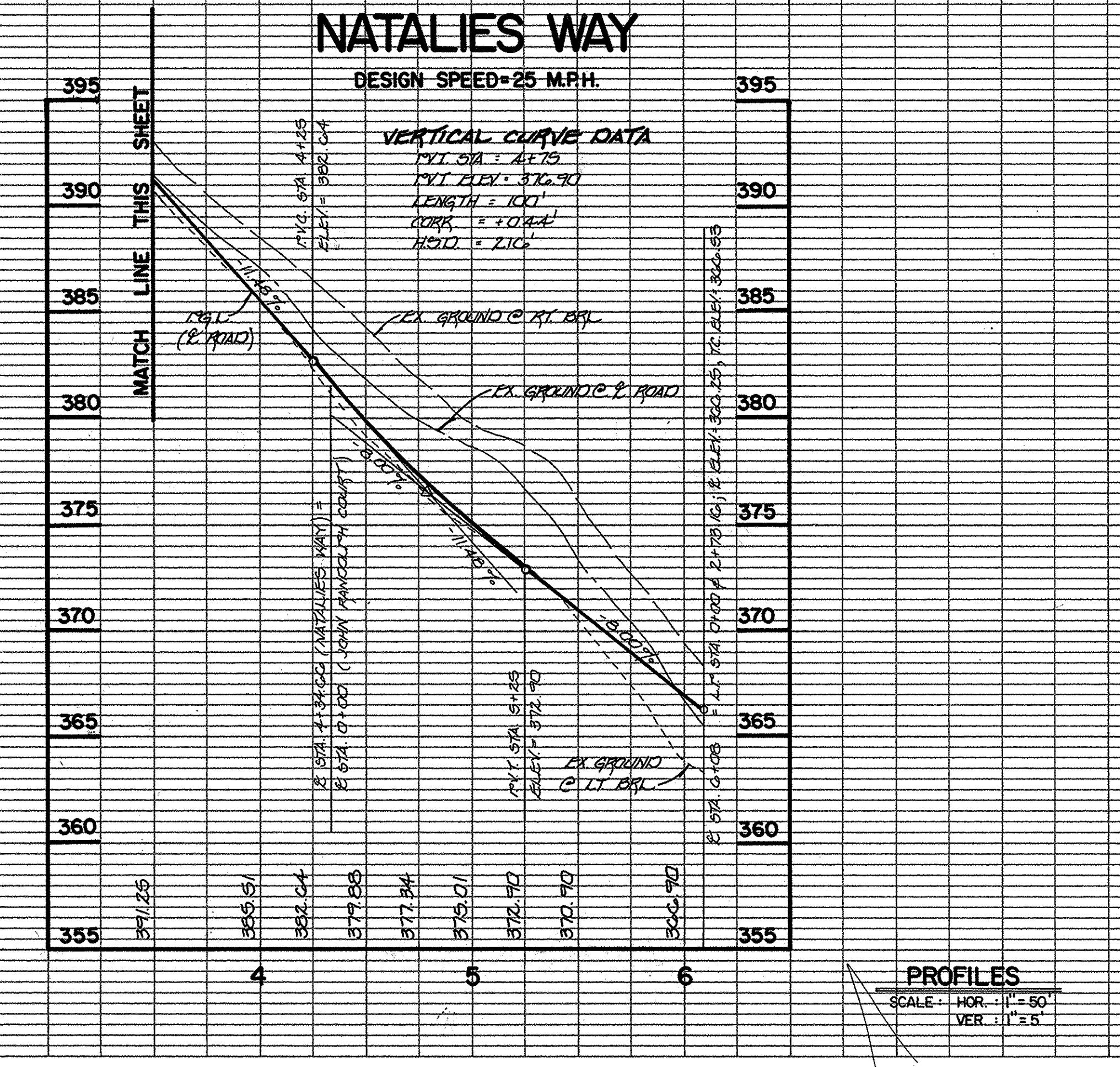
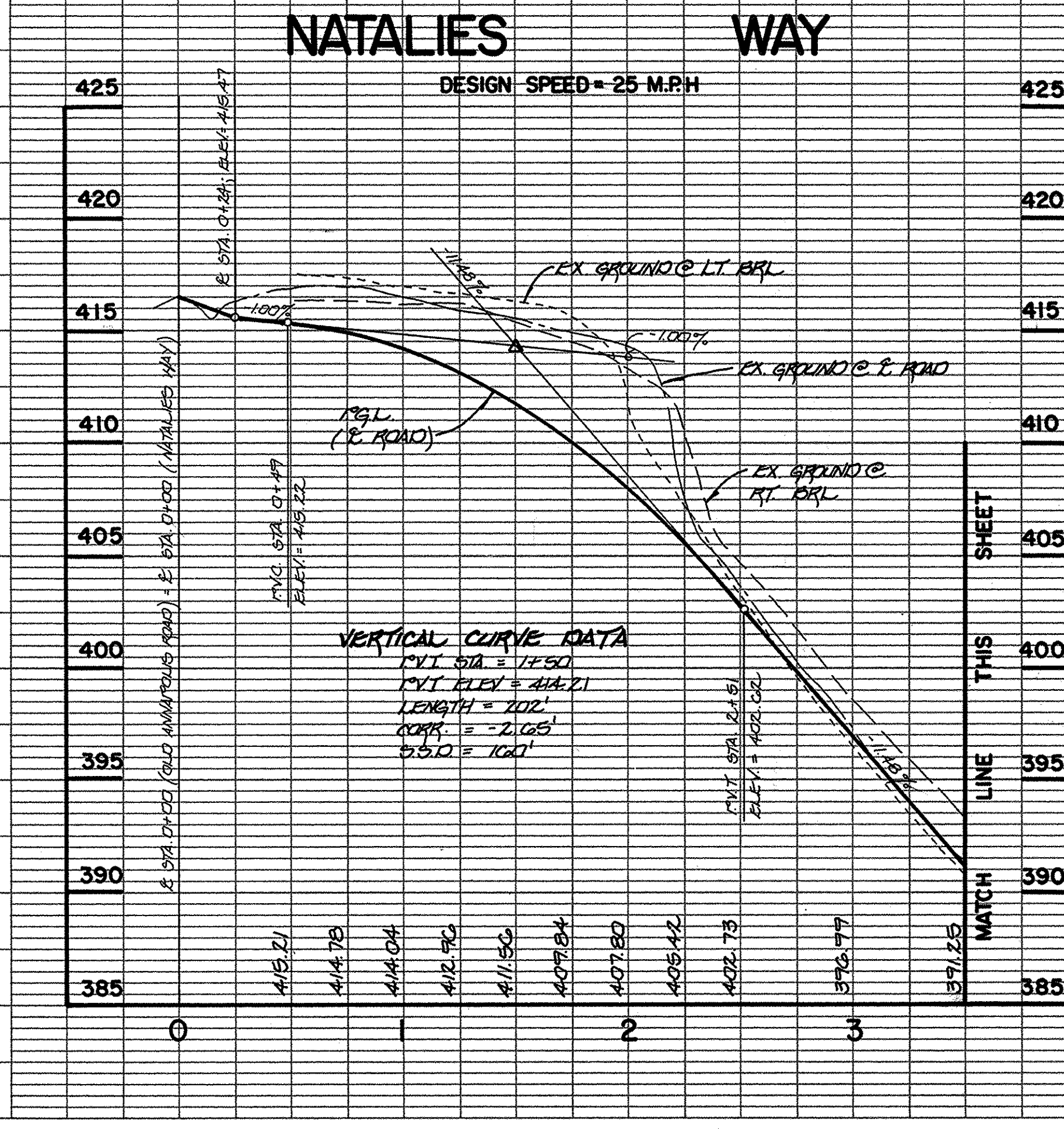
OWNERS
DONALD GEORGE COLE, et al
1800 OLD ANNAPOLIS ROAD
ELLETT CITY, MARYLAND 21828

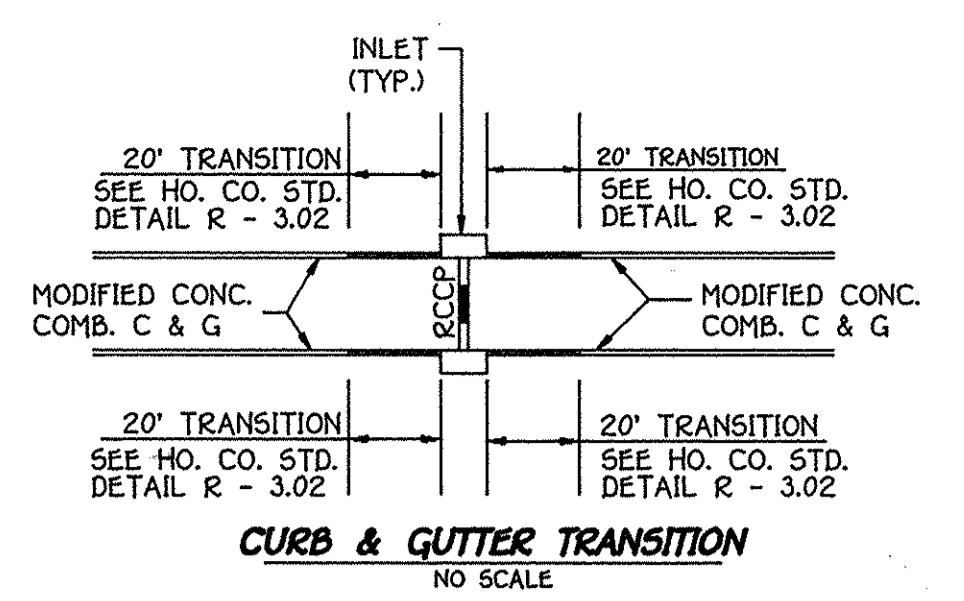
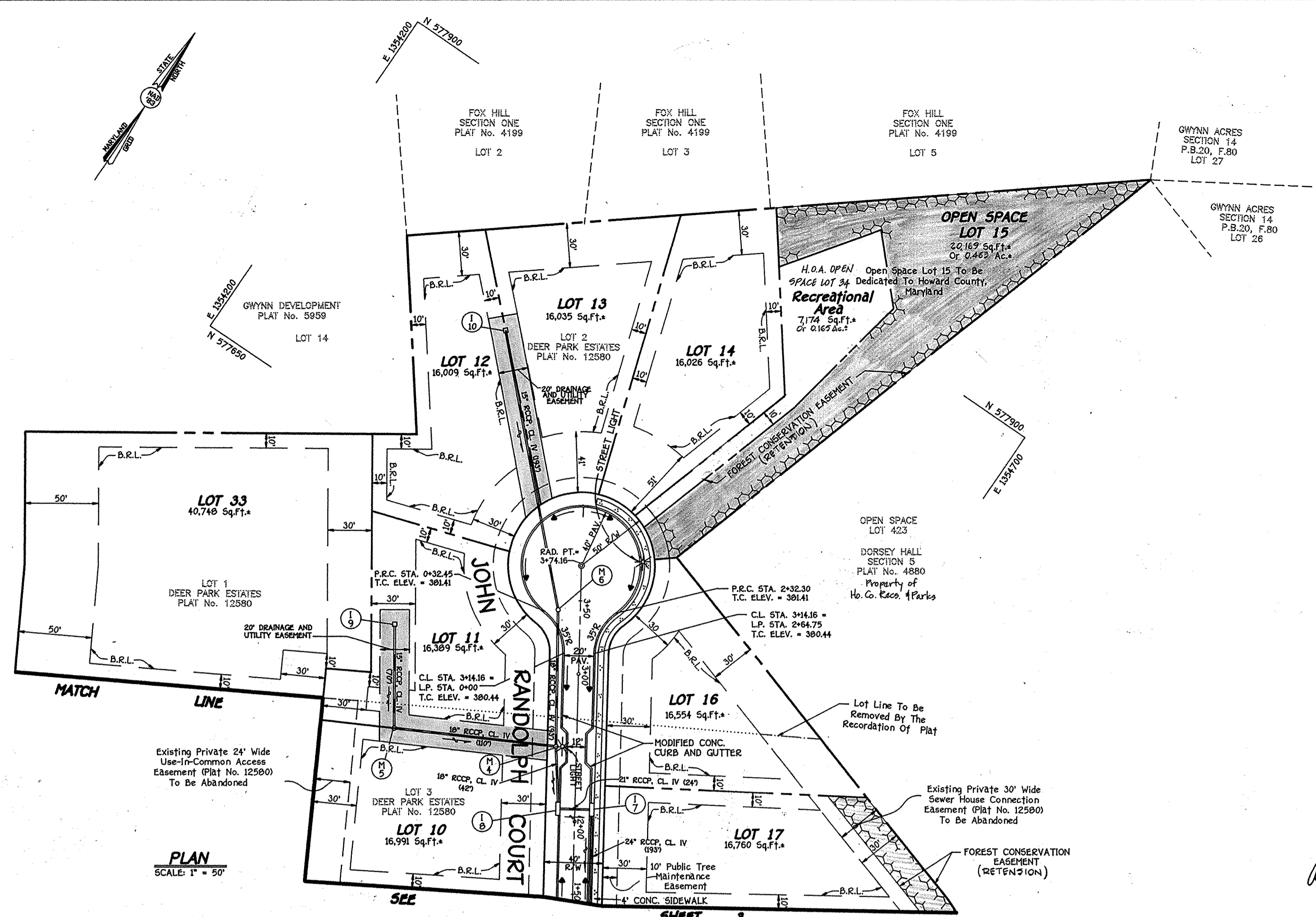
CONTRACT PURCHASER AND DEVELOPER
CELESTIC TRADING AS
INVESTMENT HOLDINGS
1900 HICKORY EDGE ROAD
COLUMBIA, MARYLAND 21044

SCALE: AS SHOWN DATE: AUG. 7, 1998 DWG. NO. 3 OF 17
DES. A.M.V. DRN. J.C.L. CHK. Z.Y.F.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
NATIONAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL Pkwy
ELLETT CITY, MARYLAND 21828
4100 981 - 2955

STATE OF MARYLAND
PROFESSIONAL ENGINEER
No. 20748
8-10-98





APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 1/25/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mike Dammann 1/25/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Donker 1-8-99
 CHIEF, BUREAU OF HIGHWAYS DATE

THE OVERLOOK AT CENTENNIAL PARK
 (A Resubdivision of Lots 1, 2, 3, 4, 5, 7, and 8
 Deer Park Estates Plat No. 12580)
 ZONED R-20
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

JOHN RANDOLPH COURT
 PLAN AND PROFILE

OWNERS
 MS. AND 1985 WILFORD PEREZ
 1800 OLD ANAPOLIS ROAD
 ELLETTT CITY, MARYLAND 21042

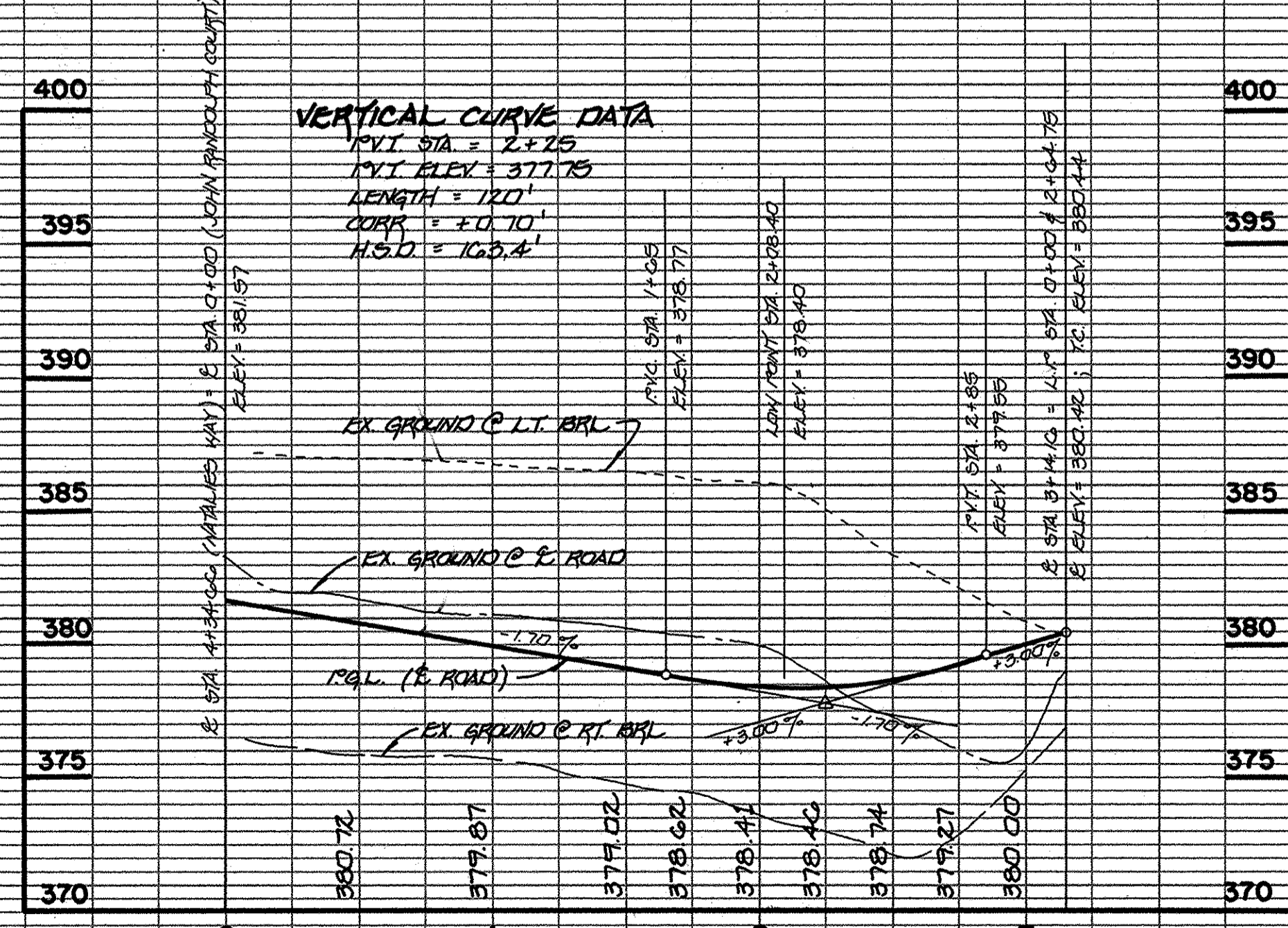
CONTRACT PURCHASER AND DEVELOPER
 CALLIC TRADING AS
 1800 OLD ANAPOLIS ROAD
 ELLETTT CITY, MARYLAND 21042

SCALE: AS SHOWN **DATE: AUG. 7, 1998** **DWG. NO. 4 OF 17**
 DES. A.M.V. **DRN. J.C.L.** **CHK. Z.Y.F.**

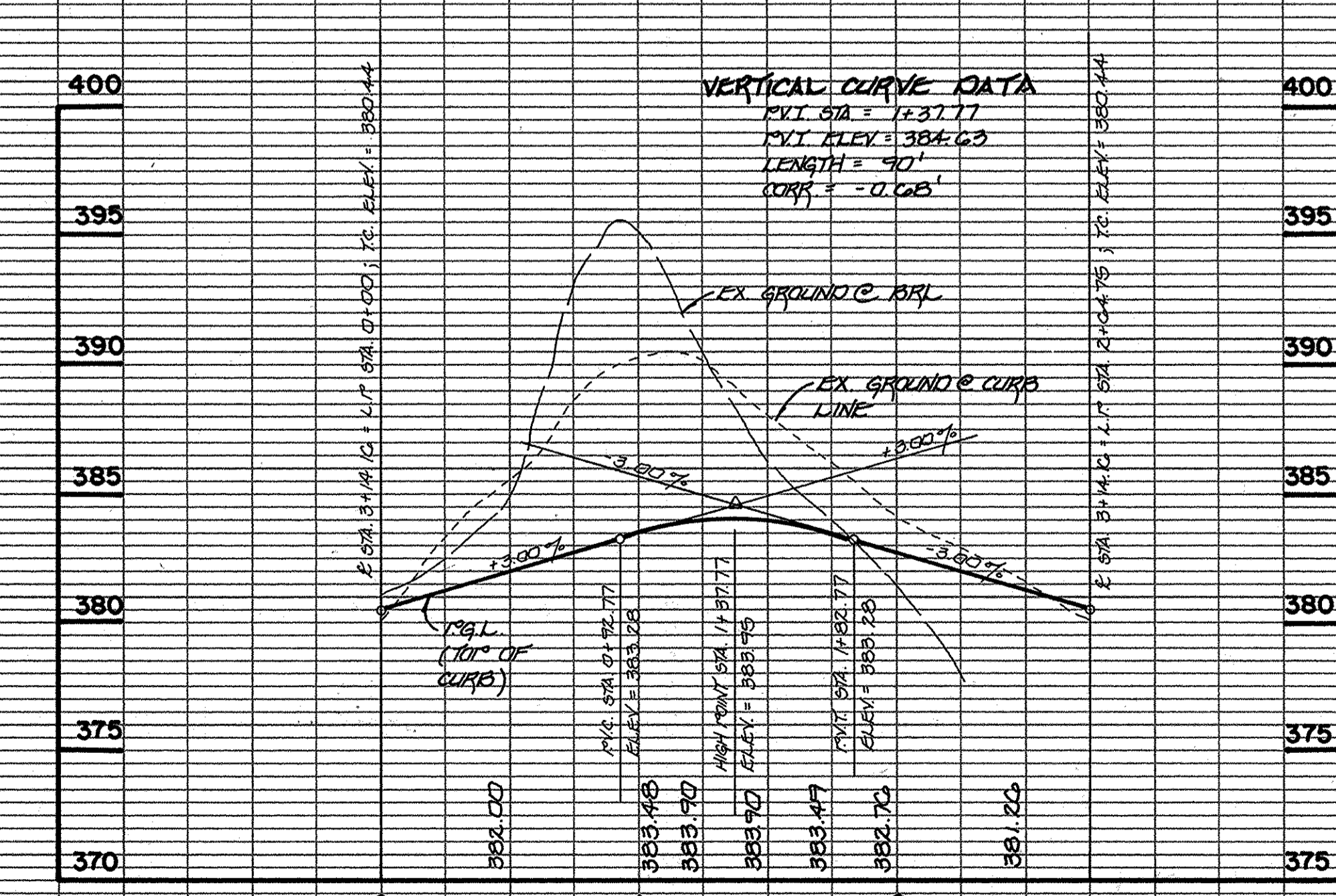
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10772 MALTHOUSE NATIONAL PIKE
 ELLETTT CITY, MARYLAND 21042
 4103 461 - 2855



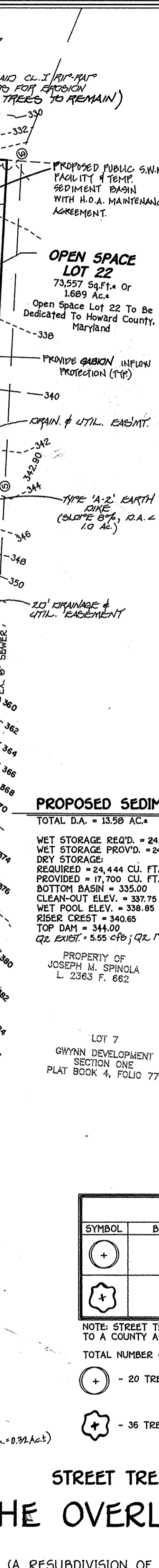
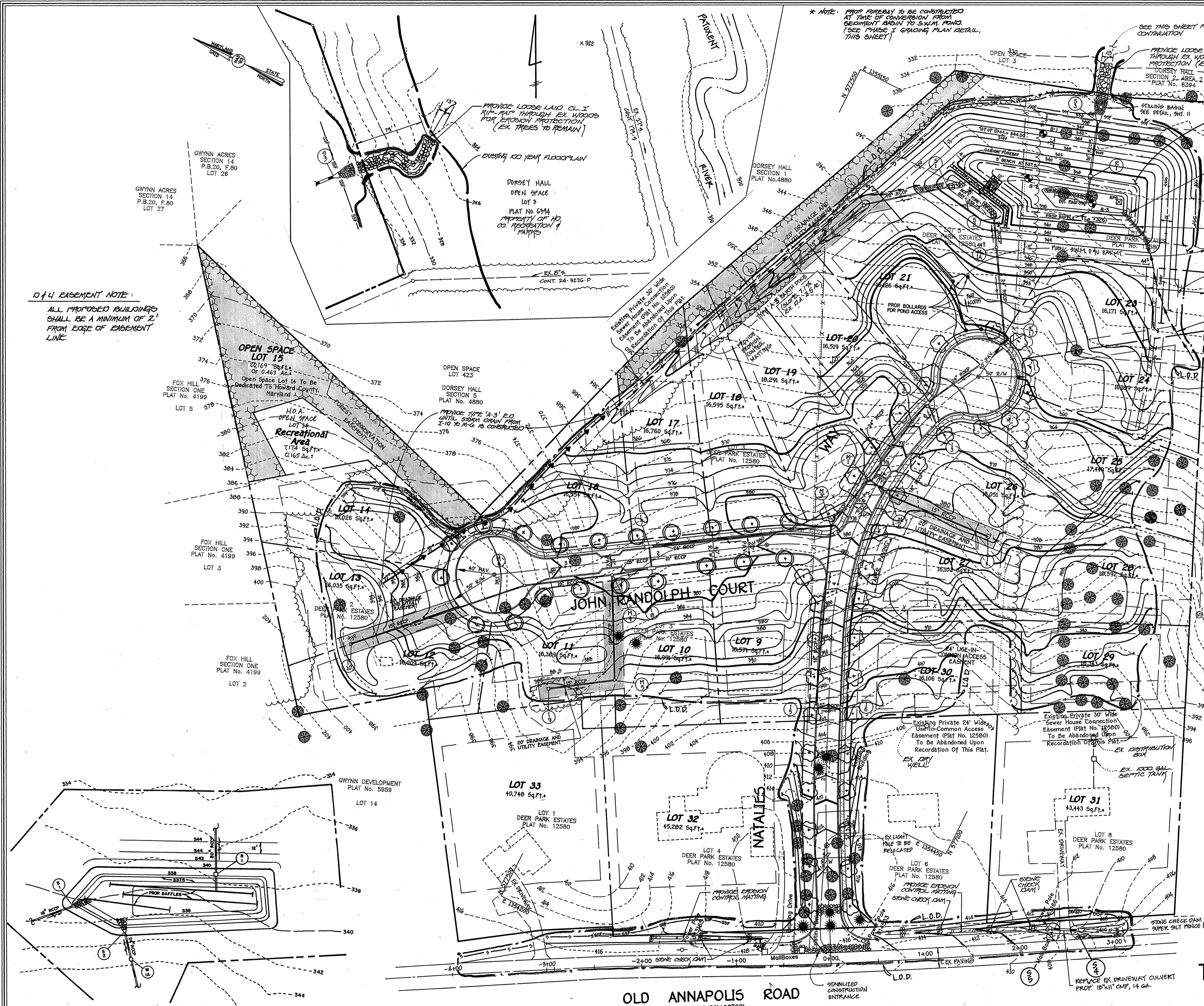
JOHN RANDOLPH COURT
 DESIGN SPEED = 20 M.P.H.



JOHN RANDOLPH COURT
 LINEAR PROFILE



PROFILES
 SCALE: HOR. 1" = 50'
 VER. 1" = 5'



D & U EASEMENT NOTE:
 ALL PROPOSED BUILDINGS SHALL BE A MINIMUM OF 2' FROM EDGE OF EASEMENT LINE.

* NOTE: PROP FOREBAY TO BE CONSTRUCTED AT TIME OF CONVERSION FROM SEDIMENT BASIN TO SUMP POND. (SEE PHASE I GRADING PLAN DETAIL, THIS SHEET)

PROVIDE LOOSE LAID CL. I RIP-RAP THROUGH EX. WOODS FOR EROSION PROTECTION (EX. TREES TO REMAIN)

OPEN SPACE LOT 22
 73,557 Sq.Ft. Or 1.689 Ac.
 Open Space Lot 22 To Be Dedicated To Howard County, Maryland

PROPOSED SEDIMENT BASIN
 TOTAL D.A. = 13,520 AC.
 WET STORAGE REQ'D. = 24,444 CU. FT.
 DRY STORAGE REQ'D. = 24,444 CU. FT.
 PROVIDED = 17,700 CU. FT.
 BOTTOM BASIN = 335.00
 CLEAN-OUT ELEV. = 337.75
 WET POOL ELEV. = 338.85
 RISER CREST = 340.65
 TOP DAM = 344.00
 Q₁₀ EXIST. = 6.55 cfs; Q₁₀ PROP. = 6.28 cfs

By The Developer:
 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And 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.

Christopher Carlyle
 Signature Of Developer
 12-9-98
 Date

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based Upon 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 I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Cheryl Simon
 Signature Of Engineer
 12/15/98
 Date

Printed Name Of Engineer
 Cheryl Simon
 USDA-Natural Resources Conservation Service

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. These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

John S. Lewis
 Signature Of Department Of Public Works
 12/15/98
 Date

Approved Department Of Public Works
 John S. Lewis
 Chief, Bureau Of Highways

Approved Department Of Planning And Zoning
David Hamilton
 Signature
 1/25/99
 Date

Approved Department Of Planning And Zoning
 David Hamilton
 Chief, Division Of Land Development

AS-BUILT CERTIFICATION
 I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature _____ P.E. No. _____
 Date _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

LEGEND

- EXISTING TREES
- SILT FENCE
- SUPER SILT FENCE
- TREE PROTECTION FENCE
- LIMIT OF DISTURBANCE
- PROPOSED EARTH DIKE
- EROSION CONTROL MATTING

STREET TREE SCHEDULE

SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
	PLATANUS OCCIDENTALIS 'BLOODSOON' LONDON PLANETREE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

NOTE: STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.

TOTAL NUMBER OF STREET TREES: 56 TREES

- 20 TREES
- 36 TREES

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
 ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 399
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUGUST 7, 1998
 SHEET 5 OF 17

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FPK
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2955

PHASE I GRADING PLAN DETAIL
 SCALE: 1" = 50'

OWNERS
 MR. AND MRS. WILFREDO PEREZ
 9830 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. WILLIAM GABLE
 9820 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 DONALD GREGORY COLE, et al
 9810 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. AND MRS. HENRY MATTHEWS
 9800 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
 C.S.T.L.C. TRADING AS
 JAMESTOWN BUILDERS
 10801 HICKORY RIDGE ROAD
 SUITE 210
 COLUMBIA, MARYLAND 21044

PLAN
 SCALE: 1" = 50'

F-98-152

CATEGORY	PERIMETER EDGE							
	P1	P2	P3	P4	P5	P6	P7	P8
LANDSCAPE TYPE	A	A	A	A	A	A	A	A
LINEAR FEET OR ROADWAY FRONTAGE/PERIMETER	239'	193'	185'	507'	412'	540'	460'	352'
CREDIT FOR EXISTING VEGETATION (YES, NO LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	YES 490'	YES 412'	YES 540'	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF TREES REQUIRED: SHADE TREES	4	3	3	0	0	0	0	6
EVERGREEN TREES	---	---	---	---	---	---	---	---
OTHER TREES (2:1 SUBSTITUTION)	---	---	---	---	---	---	---	---
NUMBER OF TREES PROVIDED: SHADE TREES	4	3	3	0	0	0	0	6
EVERGREEN TREES	---	---	---	---	---	---	---	---
OTHER TREES (2:1 SUBSTITUTION)	---	---	---	---	---	---	---	---

Approved: Department of Public Works
Richard M. Douko 1-8-99
 Chief, Bureau of Highways MS Date

Approved: Department of Planning And Zoning
Andy Hamilton 1/28/99
 Chief, Division Of Land Development MS Date

William D. Danvers 1/22/99
 Chief, Development Engineering Division MS Date

GWYNN ACRES SECTION 14 P.B.20, F.80 LOT 26

GWYNN ACRES SECTION 14 P.B.20, F.80 LOT 27

OPEN SPACE LOT 15 22,187 S.F. (0.465 AC.)
 Open Space Lot 14 To Be Dedicated To Howard County, Maryland

H.O.A. OPEN SPACE LOT 24 Recreational Area 7,174 S.F. (0.165 AC.)

FOX HILL SECTION ONE PLAT No. 4189 LOT 3

FOX HILL SECTION ONE PLAT No. 4189 LOT 2

GWYNN DEVELOPMENT PLAT No. 5858 LOT 14

LOT 33 10,748 S.F. DEER PARK ESTATES PLAT No. 12580

LOT 32 45,282 S.F. DEER PARK ESTATES PLAT No. 12580

LOT 4 DEER PARK ESTATES PLAT No. 12580

LOT 6 DEER PARK ESTATES PLAT No. 12580

LOT 8 DEER PARK ESTATES PLAT No. 12580

PROPERTY OF JOSEPH M. SPINOLA L. 2363 F. 662

LOT 7 GWYNN DEVELOPMENT SECTION ONE PLAT BOOK 4, FOLIO 77

DRAINAGE AREA DATA					
INLET	D.A.#	AREA AC.	'C	ZONED	XIMP
I-1	I-1	1.03	0.51	R-20	26
I-2	I-2	0.23	0.52	R-20	47
I-3	I-3	0.39	0.55	R-20	33
I-4	I-4	1.32	0.47	R-20	17
I-5	I-5	0.22	0.54	R-20	31
I-6	I-6	0.42	0.51	R-20	26
I-7	I-7	0.46	0.54	R-20	31
I-8	I-8	2.16	0.47	R-20	20
I-9	I-9	1.99	0.42	R-20	6
I-10	I-10	1.99	0.39	R-20	0
I-11	I-11	0.93	0.48	R-20	18
I-12	I-12	0.80	0.47	R-20	17

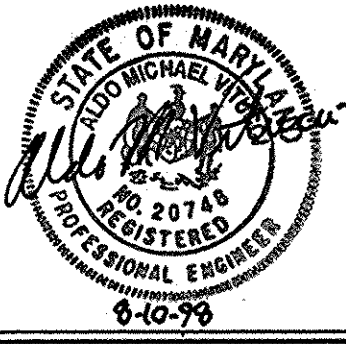
SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING					
LINEAR FEET OF PERIMETER	D1	D2	D3	D4	D5
		145'	277'	180'	262'
NUMBER OF TREES REQUIRED:					
SHADE TREES	0	6	4	5	4
EVERGREEN TREES	4	7	4	7	6
CREDIT FOR EXISTING VEGETATION (NO, YES AND X)	YES 145'	YES 50'	NO	NO	YES 30'
CREDIT FOR OTHER LANDSCAPING (NO, YES AND X)	NO	NO	NO	NO	NO
NUMBER OF TREES PROVIDED:					
SHADE TREES	0	6	4	5	4
EVERGREEN TREES	4	7	4	7	6
OTHER TREES (2:1 SUBSTITUTION)	---	---	---	---	---

LANDSCAPE TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2'-3' CAL.	24 TREES B&B
	ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE	2 1/2'-3' CAL.	19 TREES B&B
	CEDRUS DEODORA/ CEDAR CEDAR	6'-8' HT.	29 TREES B&B

NOTE: THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE D.P.W. DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$17,250.00.

DRAINAGE AREA MAP AND LANDSCAPE PLAN
THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
 ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 399
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUGUST 7, 1998
 SHEET 6 OF 17

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 4101 481 - 2855



OWNERS
 MR. AND MRS. WILFREDO PEREZ
 9830 OLD ANNAPOLIS ROAD
 ELICOTT CITY, MARYLAND 21042

MR. WILLIAM GABLE
 9820 OLD ANNAPOLIS ROAD
 ELICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
 C.S.T.L.C. TRADING AS
 LAMESTOWN BUILDERS
 10001 HICKORY RIDGE ROAD
 SUITE 210
 COLUMBIA, MARYLAND 2104

PLAN
 SCALE: 1" = 50'

STRUCTURE SCHEDULE

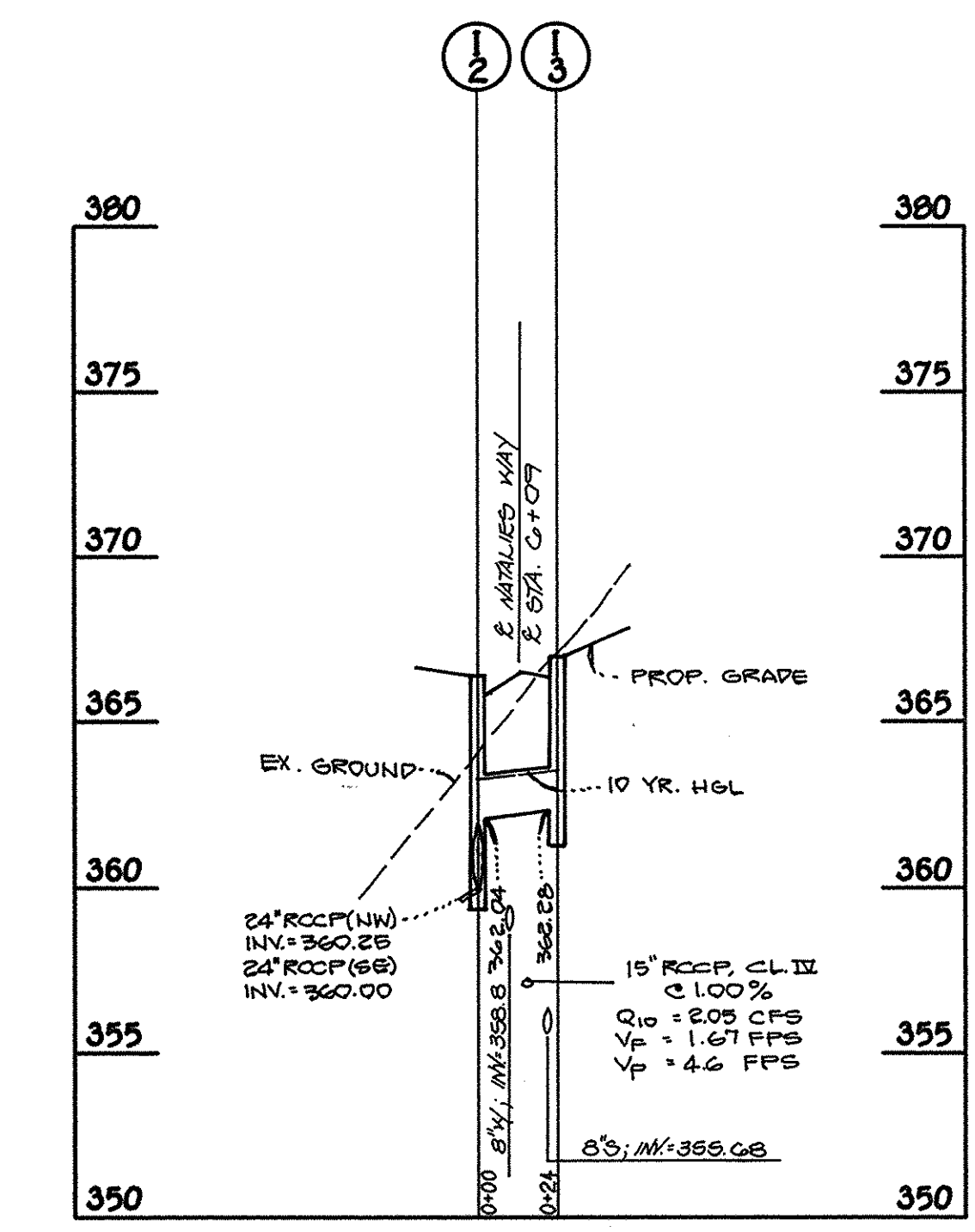
STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	359.65	354.00	352.00	NATALIES WAY	LP. STA. 1+23.94	---	A-10	S.D. 4.41
I-2	369.97	362.04, 360.25	360.00	NATALIES WAY	CL. STA. 6+13	10.43' L	A-5	S.D. 4.40
I-3	370.21	---	362.28	NATALIES WAY	CL. STA. 6+05	10.43' R	A-5	S.D. 4.40
I-4	* 375.00	---	371.25	---	N 277,208.98 E 1,354,032.59	---	'D' INLET	S.D. 4.39
I-5	400.65	394.04	394.59	NATALIES WAY	CL. STA. 2+70	12.43' L	A-5	S.D. 4.40
I-6	400.65	---	395.40	NATALIES WAY	CL. STA. 2+70	12.43' R	A-5	S.D. 4.40
I-7	378.68	372.54	372.28	JOHN RANDOLPH COURT	CL. STA. 2+08.40	10.43' R	A-10	S.D. 4.41
I-8	378.68	373.15	372.90	JOHN RANDOLPH COURT	CL. STA. 2+08.40	10.43' L	A-10	S.D. 4.41
I-9	* 387.00	---	383.50	---	N 277,253.07 E 1,354,032.59	---	'D' INLET	S.D. 4.39
I-10	* 393.00	---	383.50	---	N 277,750.54 E 1,354,032.59	---	'D' INLET	S.D. 4.39
I-11	* 343.50	339.89	339.64	---	N 277,541.10 E 1,354,032.59	---	'D' INLET	S.D. 4.39
I-12	* 350.50	---	345.00	---	N 277,208.98 E 1,354,032.59	---	'D' INLET	S.D. 4.39
M-1	376.60	370.00, 369.46	369.21	NATALIES WAY	CL. STA. 5+16	10.5' L	STD. MANHOLE	G. 5.01
M-1A	344.00	339.56	339.31	---	N 277,339.71 E 1,354,216.98	---	STD. MANHOLE	G. 5.01
M-2	379.50	370.17	369.92	NATALIES WAY	CL. STA. 5+12	20' R	STD. MANHOLE	G. 5.01
M-3	380.00	370.85, 370.35	370.10	JOHN RANDOLPH COURT	CL. STA. 0+22	24' R	STD. MANHOLE	G. 5.01
M-4	379.50	373.82, 373.82	373.57	JOHN RANDOLPH COURT	CL. STA. 2+51	14' L	STD. MANHOLE	G. 5.01
M-5	390.00	382.80	382.55	---	N 277,452.03 E 1,354,198.22	---	STD. MANHOLE	G. 5.01
M-6	380.85	375.00	374.75	JOHN RANDOLPH COURT	CL. STA. 3+43.50	15' L	STD. MANHOLE	G. 5.01
S-1	340.31	338.81	338.81	---	N 877,418.60 E 1,355,079.34	---	CONC. END SECTION	S.D. 5.52
S-2	340.81	338.81	338.81	---	N 877,351.81 E 1,355,088.98	---	CONC. END SECTION	S.D. 5.52
S-3	336.58	334.08	334.08	---	N 277,622.48 E 1,354,216.98	---	CONC. END SECTION	S.D. 5.52
S-4	406.17	405.25	405.25	OLD ANNAPOLIS ROAD	CL. STA. 2+61	21.5' L	METAL END SECTION	S.D. 5.61
S-5	407.52	406.60	406.60	OLD ANNAPOLIS ROAD	CL. STA. 2+39	23.5' L	METAL END SECTION	S.D. 5.61
R-1	342.25	335.00	334.75	---	N 277,208.98 E 1,354,032.59	---	CONC. RISER	---

* DENOTES THROAT ELEVATION
NOTE: OFFSET DIMENSION FOR I-2, I-3 & I-5 THRU I-8 IS FROM C. TO FACE OF INLET

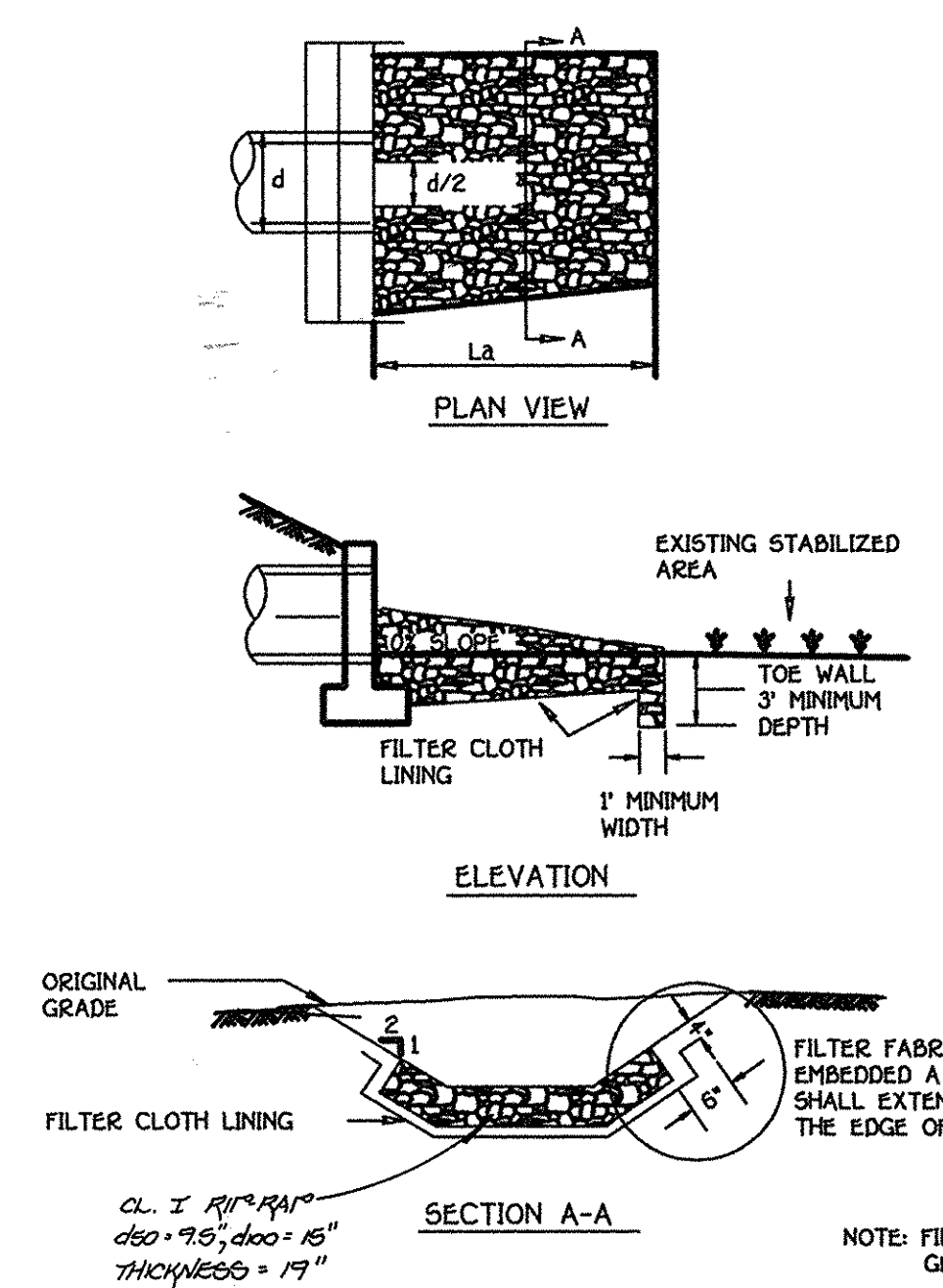
Approved: Department of Public Works
Richard M. Duerksen 1-9-99
 Chief, Bureau of Highways
 Date

Approved: Department of Planning and Zoning
Cindy Kamstra 1/28/99
 Chief, Division of Land Development
 Date

William J. ... 1/22/99
 Chief, Development Engineering Division
 Date

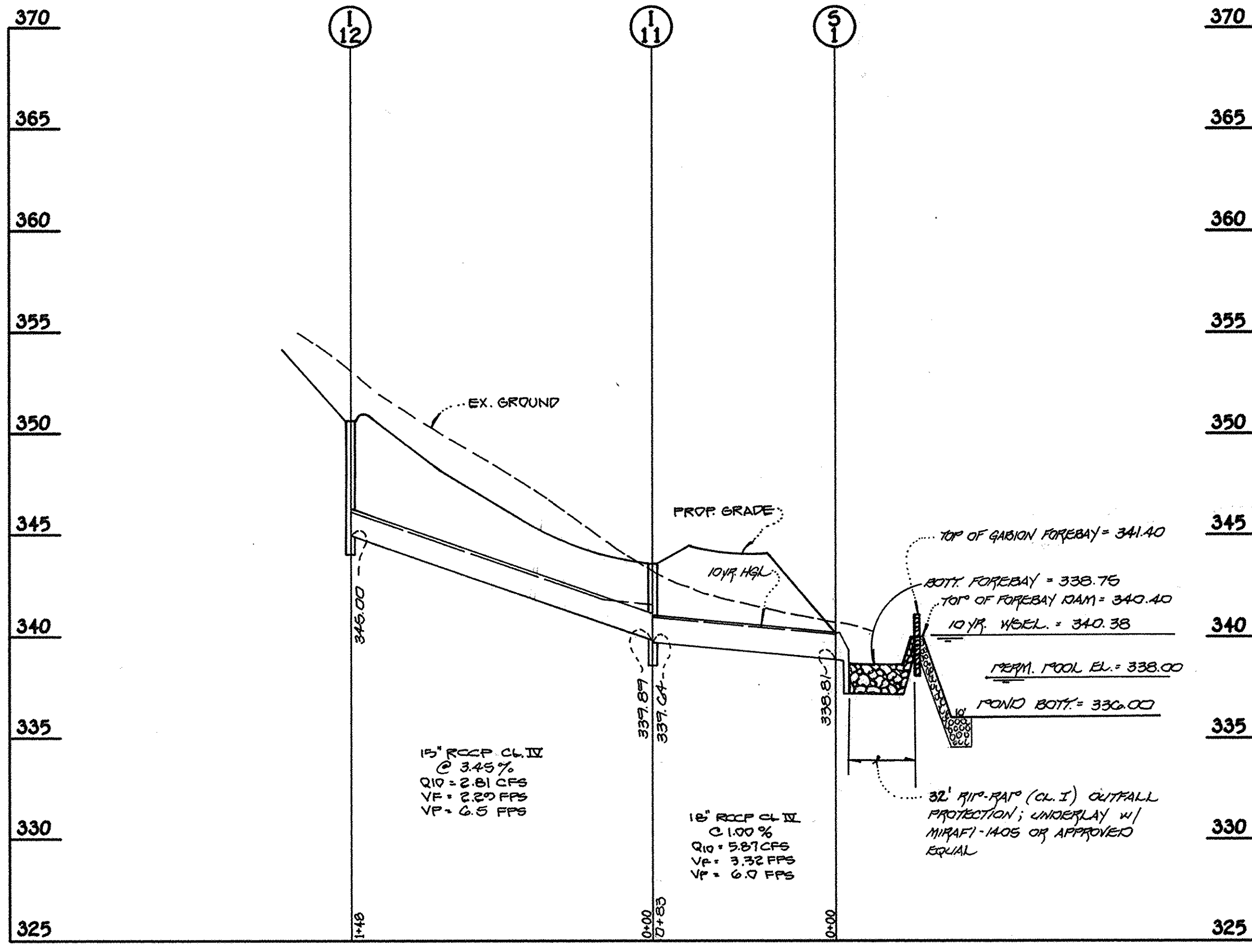


PROFILE
 SCALE: HORIZ. : 1" = 50'
 VERT. : 1" = 5'

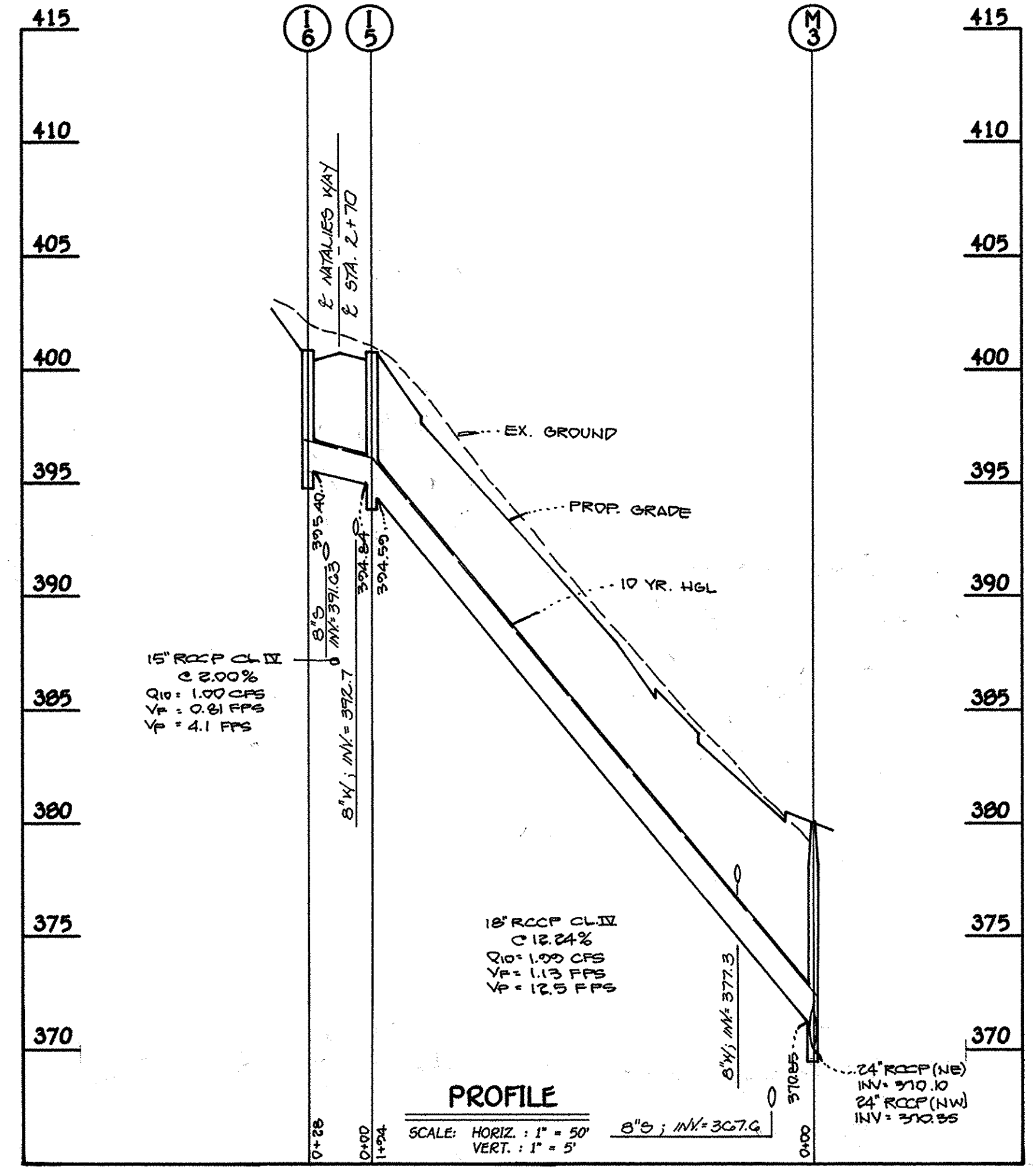


ROCK OUTLET PROTECTION III
 NO SCALE

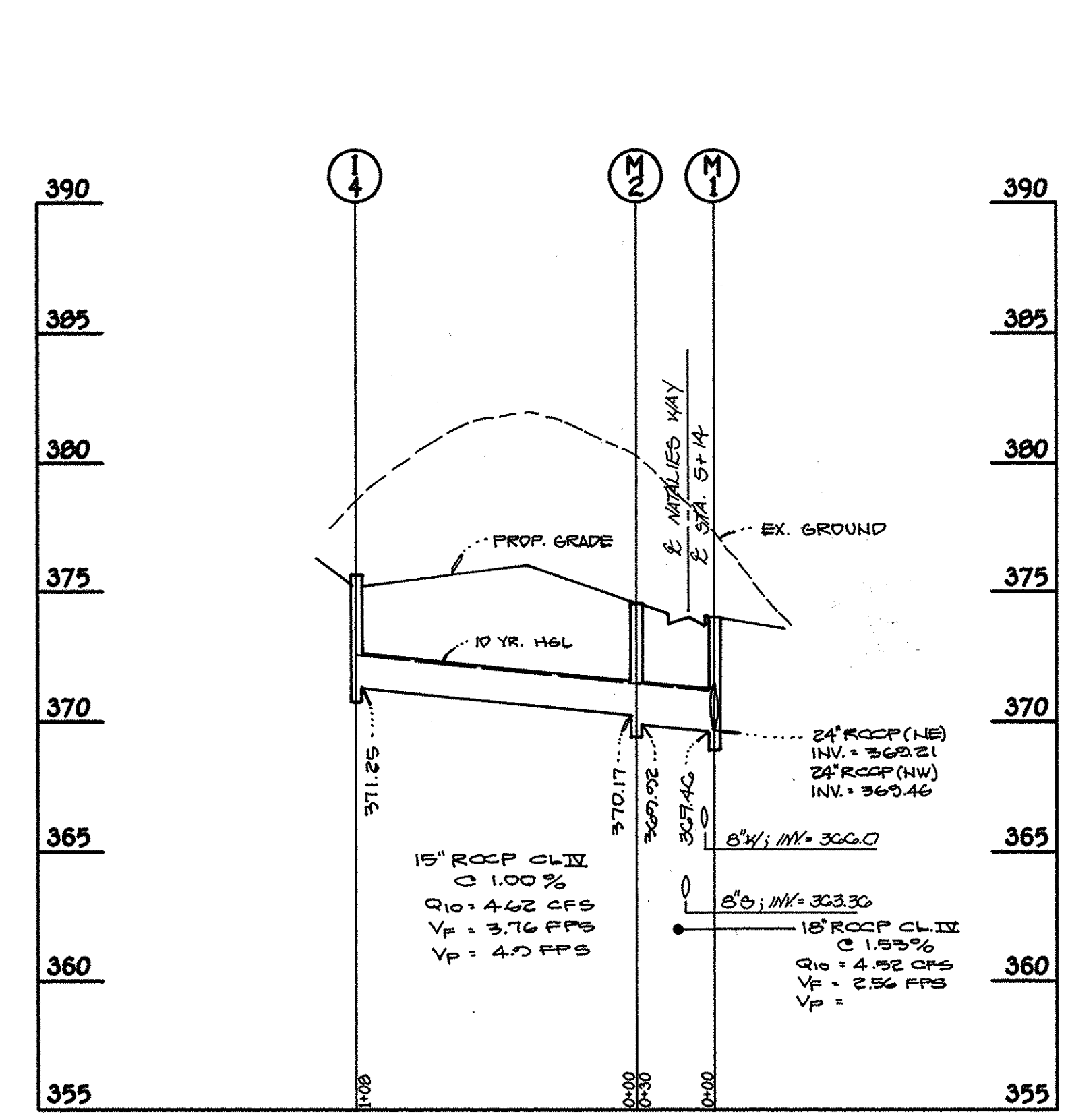
- CONSTRUCTION SPECIFICATIONS**
- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
 - The rock or gravel shall conform to the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



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



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



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

STORM DRAIN PROFILES
THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
 ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 399
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUGUST 7, 1998
 SHEET 7 OF 17

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTONAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2929



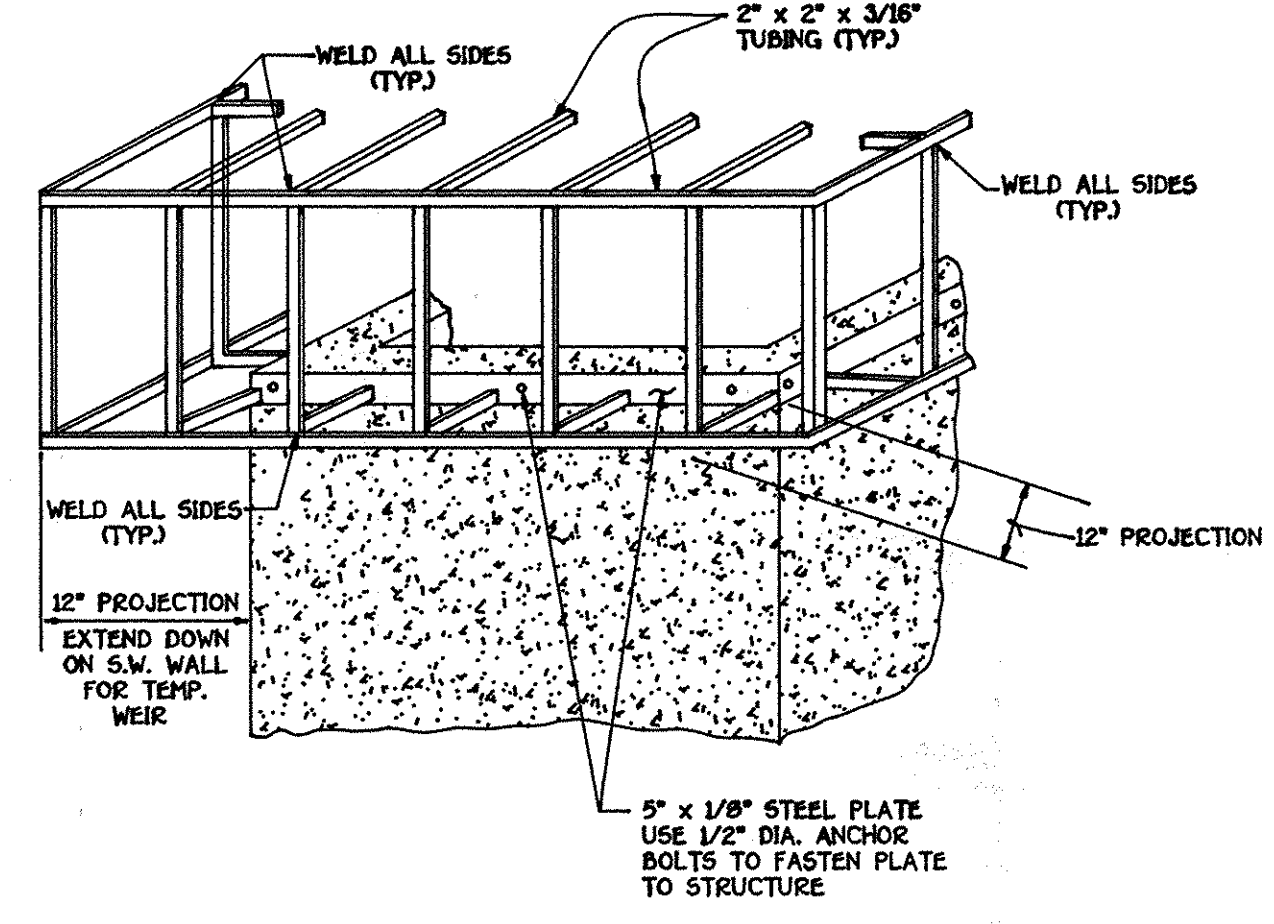
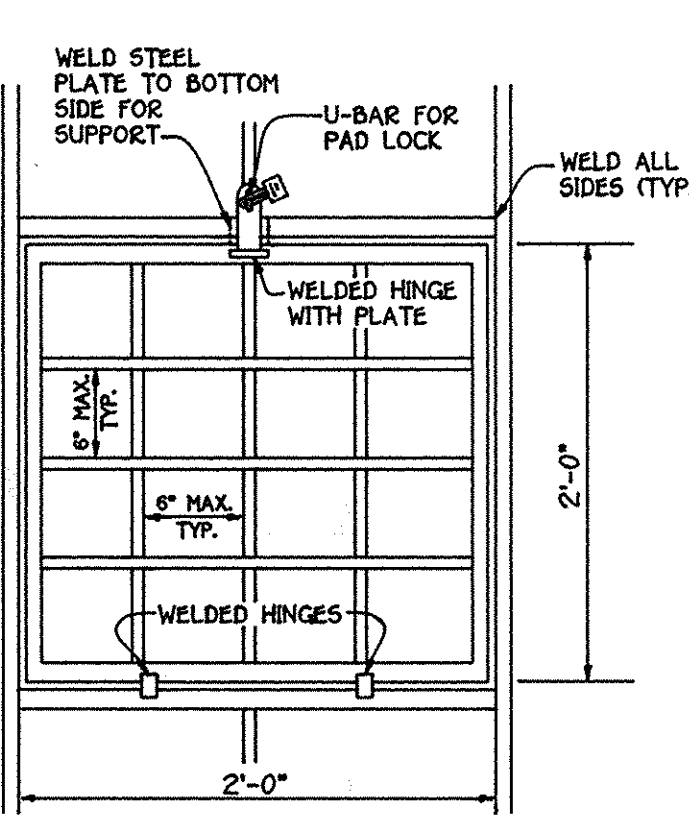
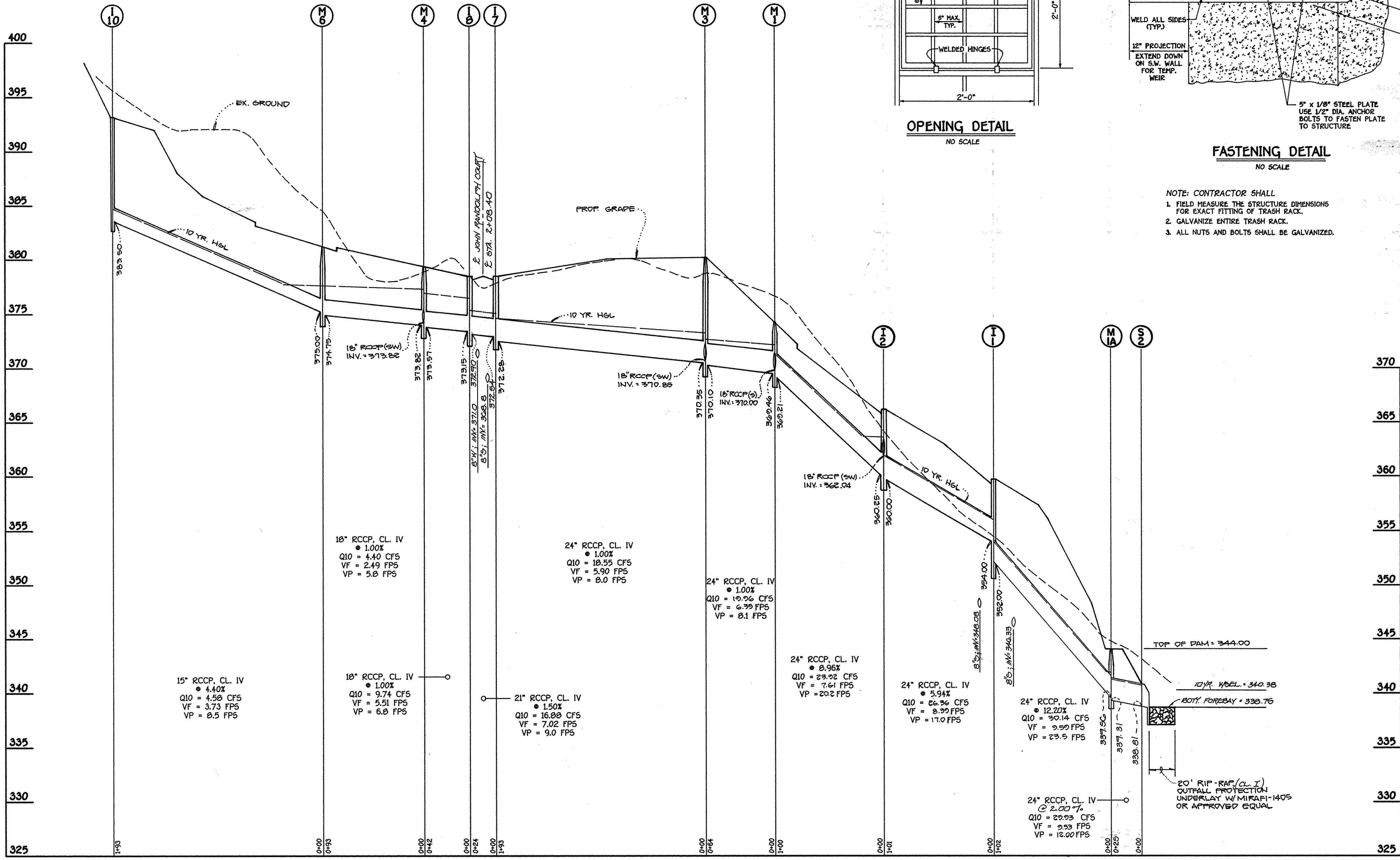
OWNERS
 MR. AND MRS. WILFREDO PEREZ
 9830 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 DONALD GREGORY COLE, et al
 9810 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. WILLIAM GABLE
 9820 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. AND MRS. HENRY MATTHEWS
 9800 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
 C.S.T.L.C. TRADING AS
 JAMESTOWN BUILDERS
 10801 HICKORY RIDGE ROAD
 SUITE 210
 COLUMBIA, MARYLAND 21044

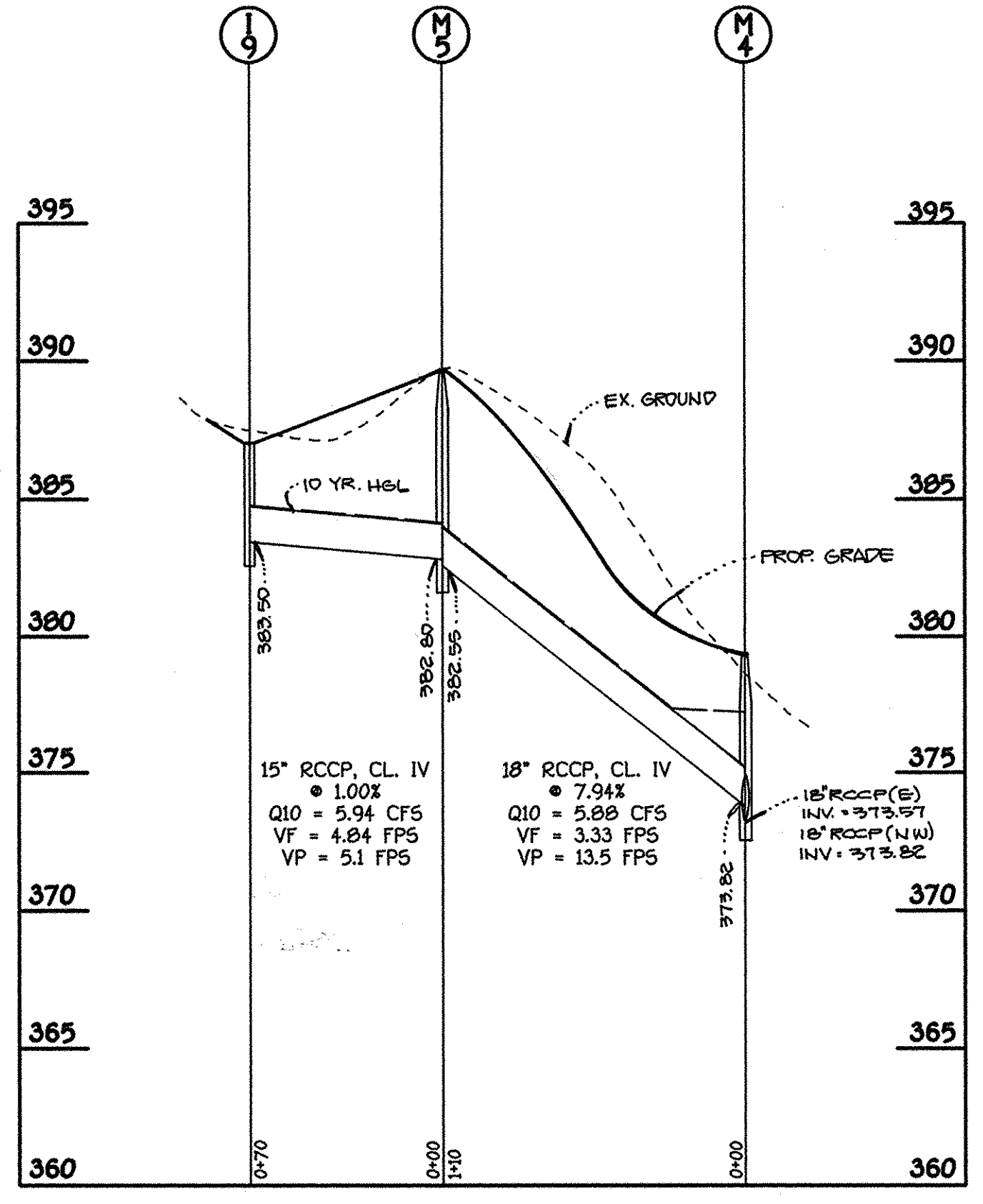
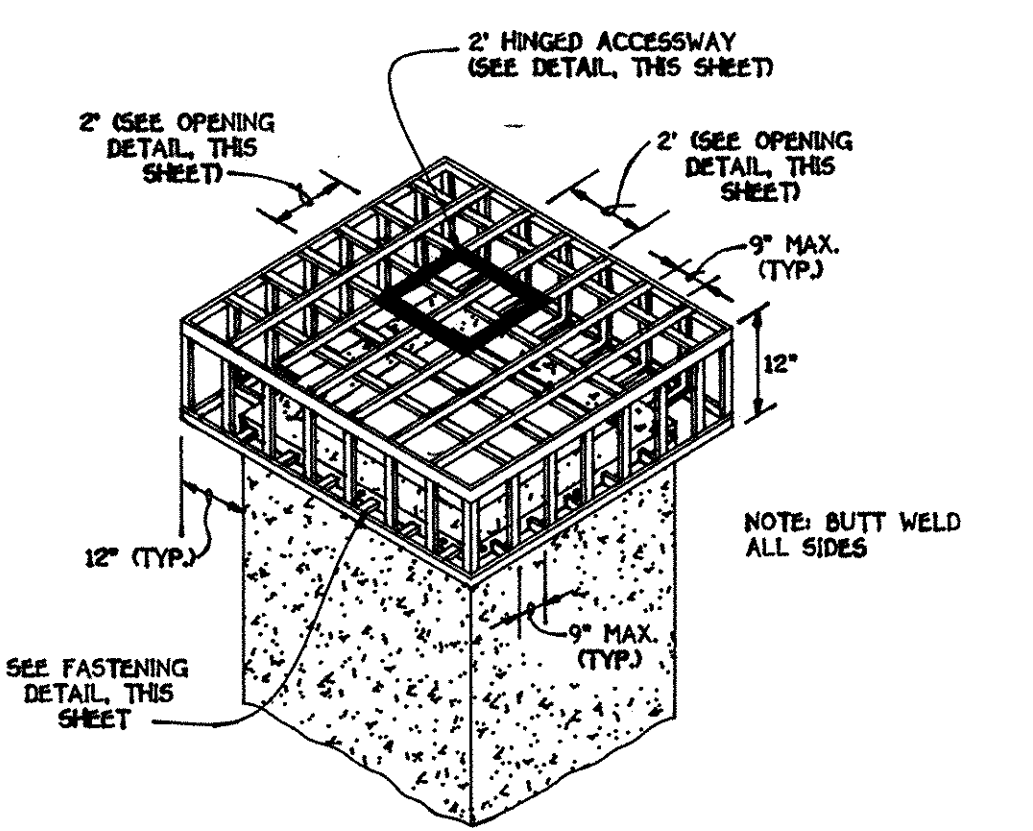
Approved Department of Public Works
 Chief, Bureau of Highways
 Date: 1-9-99

Approved Department of Planning and Zoning
 Chief, Division of Land Development
 Date: 1/25/99

Chief, Development Engineering Division
 Date: 1/22/99



NOTE: CONTRACTOR SHALL
 1. FIELD MEASURE THE STRUCTURE DIMENSIONS FOR EXACT FITTING OF TRASH RACK.
 2. GALVANIZE ENTIRE TRASH RACK.
 3. ALL NUTS AND BOLTS SHALL BE GALVANIZED.



SIZE	CLASS	TOTAL LENGTH
15" RCCP	CL. IV	571 L.F.
18" RCCP	CL. IV	552 L.F.
21" RCCP	CL. IV	24 L.F.
24" RCCP	CL. IV	505 L.F.

STORM DRAIN PROFILES
THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)

ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 399
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUGUST 7, 1998
 SHEET 8 OF 17

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL Fwy
 ELLICOTT CITY, MARYLAND 21042
 410.461.2995

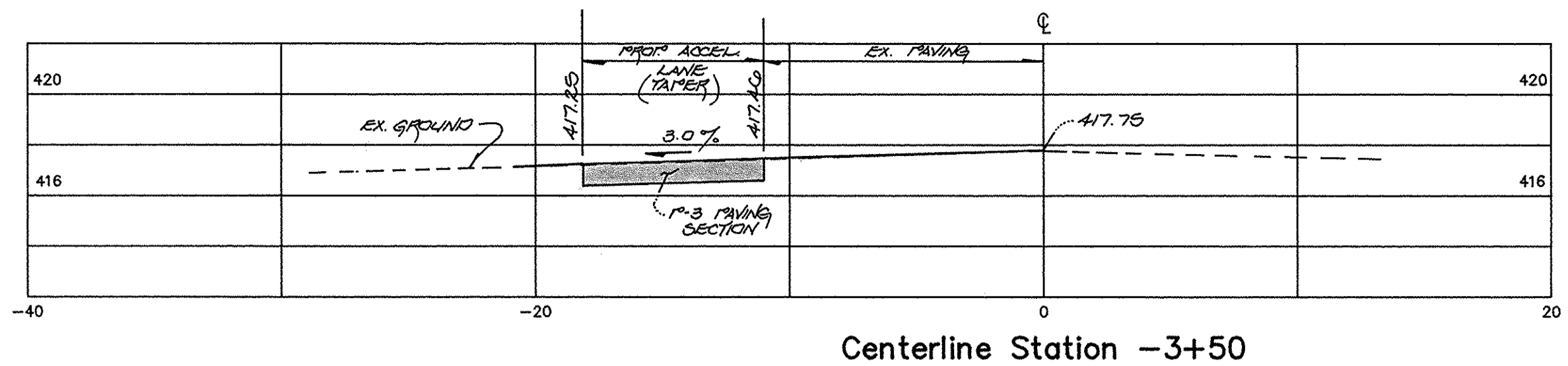
OWNERS
 MR. AND MRS. WILFREDO PEREZ
 9830 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. WILLIAM GABLE
 9820 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
 C.S.T.L.C. TRADING AS
 JAMESTOWN BUILDERS
 10801 HICKORY RIDGE ROAD
 SUITE 210
 COLUMBIA, MARYLAND 21044

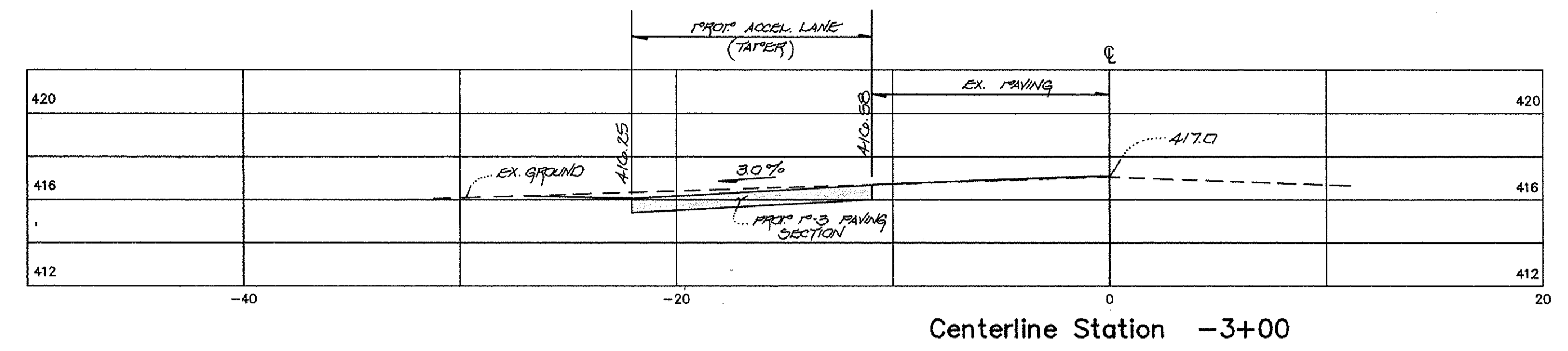
APPROVED
DEPARTMENT OF PLANNING AND ZONING
Candy Hamilton 1/25/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED
DEPARTMENT OF PLANNING AND ZONING
Bill Dammann 1/22/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

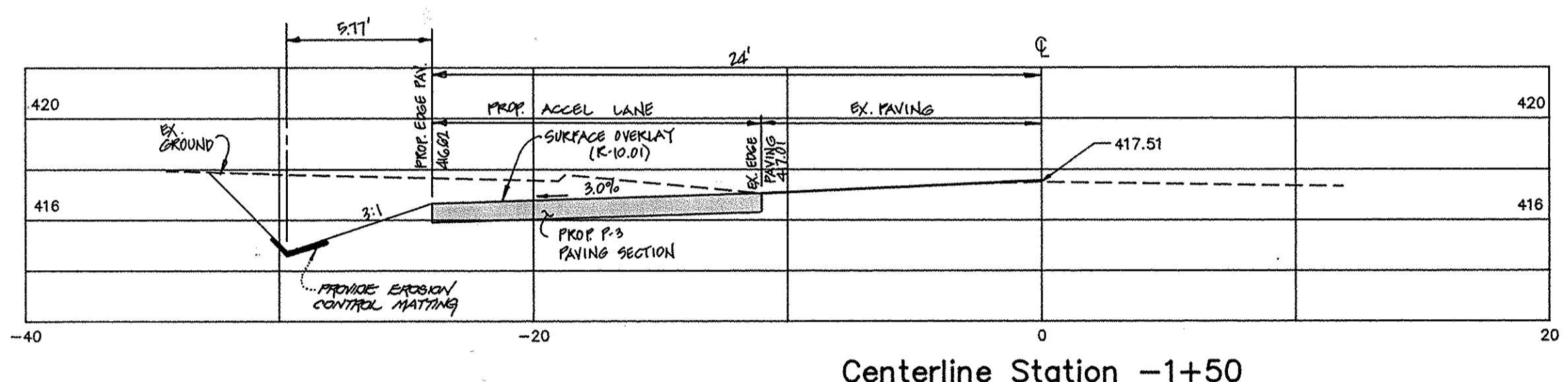
APPROVED
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Charles M. Davelos 1-8-99
CHIEF, BUREAU OF HIGHWAYS DATE



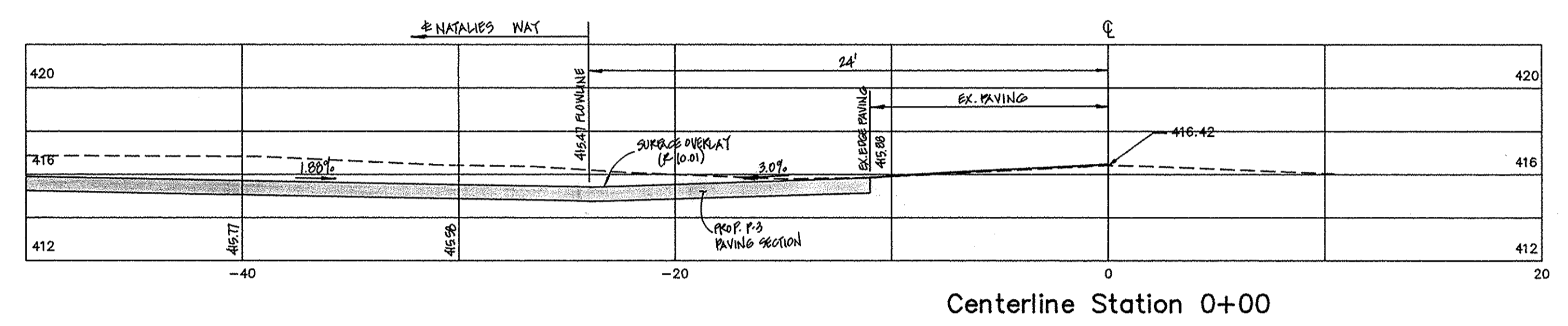
Centerline Station -3+50



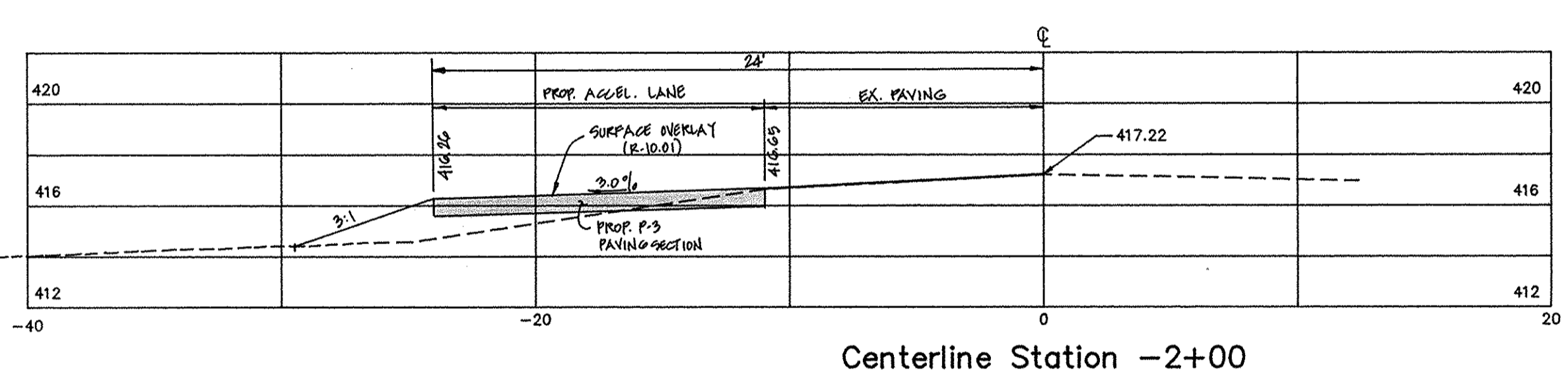
Centerline Station -3+00



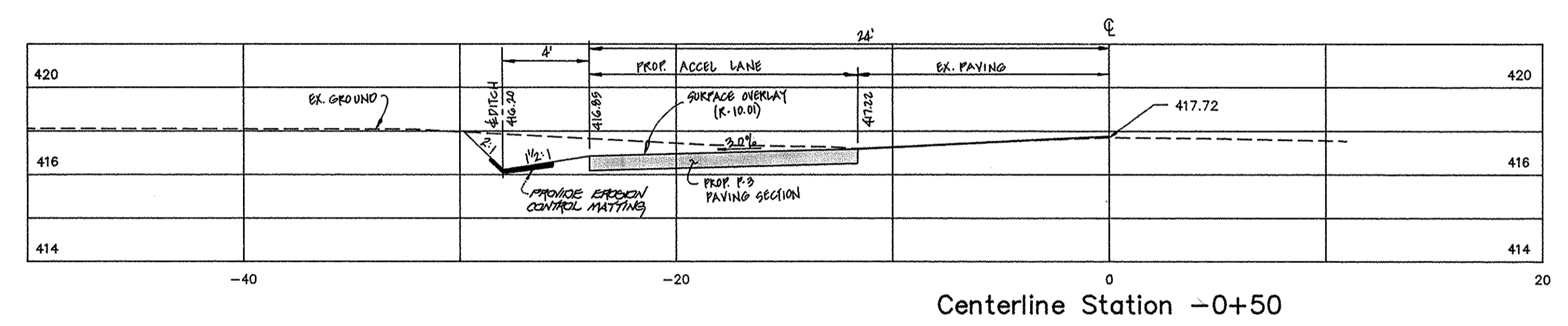
Centerline Station -1+50



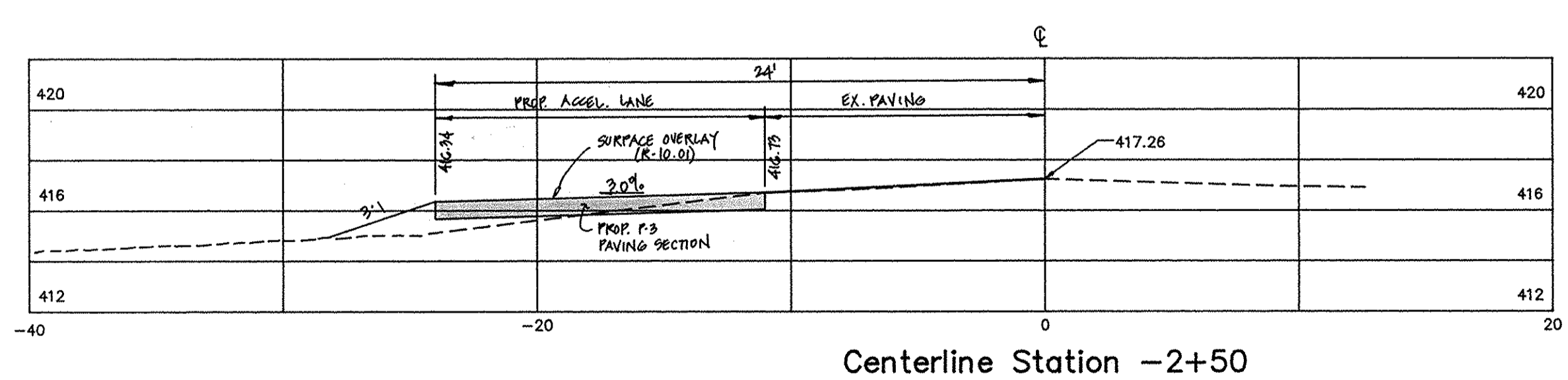
Centerline Station 0+00



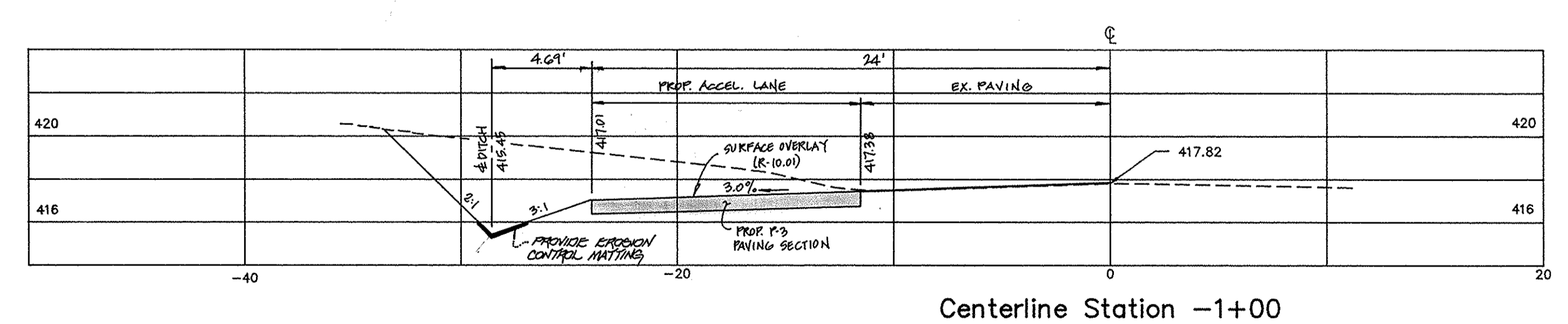
Centerline Station -2+00



Centerline Station -0+50



Centerline Station -2+50



Centerline Station -1+00

CROSS-SECTIONS
SCALE: HORIZ. : 1" = 5'
VERT. : 1" = 5'

CROSS SECTIONS
OLD ANNAPOLIS ROAD
STATIONS -2+75 THRU 0+00
THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34

(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
ZONED R-20
GRID NO. 21
TAX MAP NO. 24 PART OF PARCEL NO. 399
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET 9 OF 17

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
1000 NATIONAL SQUARE PARK - 10772 BALTIMORE NATIONAL FREE
ELLICOTT CITY, MARYLAND 21114
4100 101 - 2295



OWNERS
MR. AND MRS. WILFREDO PEREZ
8930 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
MR. WILLIAM GABLE
9820 OLD ANNAPOLIS ROAD
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9800 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
C.S.T.L.C. TRADING AS
JAMESTOWN BUILDERS
10801 FOXGROVE RIDGE ROAD
SUITE 210
COLUMBIA, MARYLAND 21044

APPROVED
DEPARTMENT OF PLANNING AND ZONING
Civild Hamilton
CHIEF, DIVISION OF LAND DEVELOPMENT

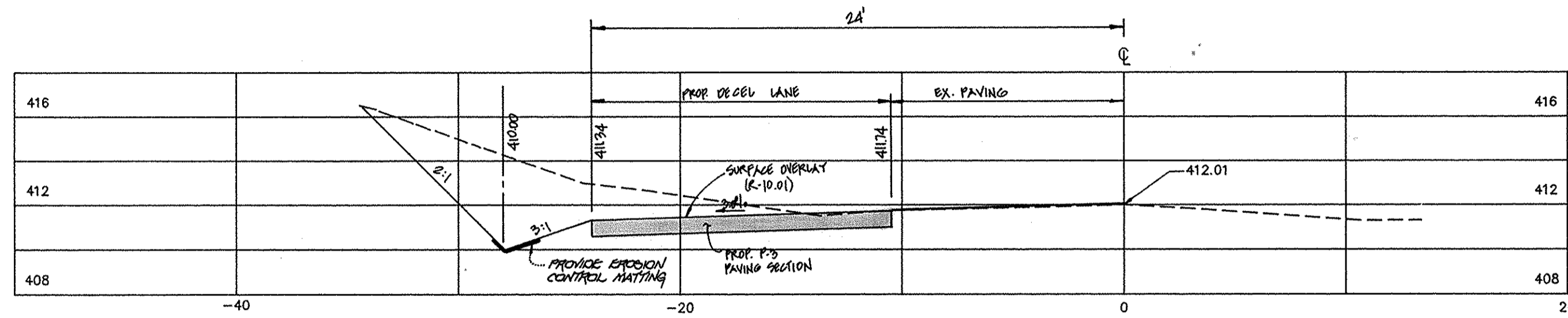
1/25/99
DATE

APPROVED
DEPARTMENT OF PLANNING AND ZONING
W. J. ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

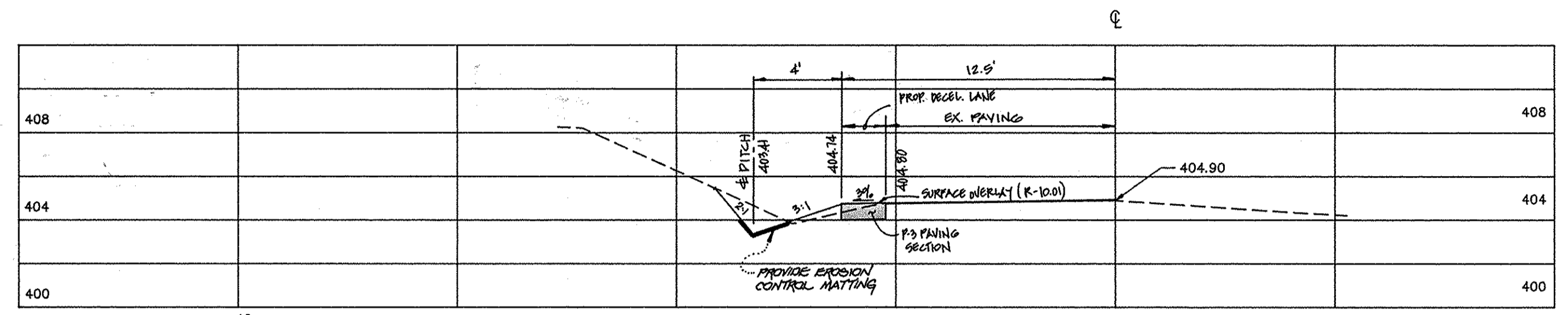
DATE

APPROVED
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. ...
CHIEF, BUREAU OF HIGHWAYS

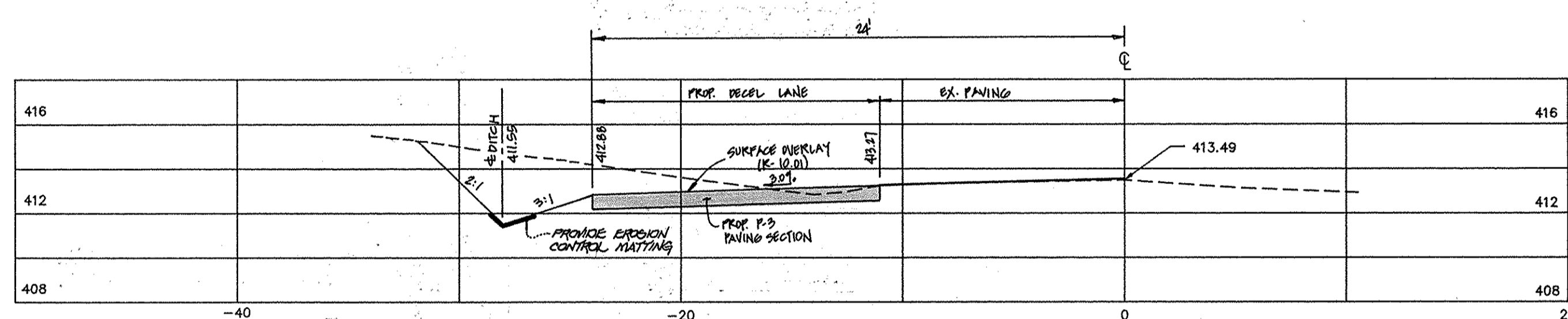
1-8-99
DATE



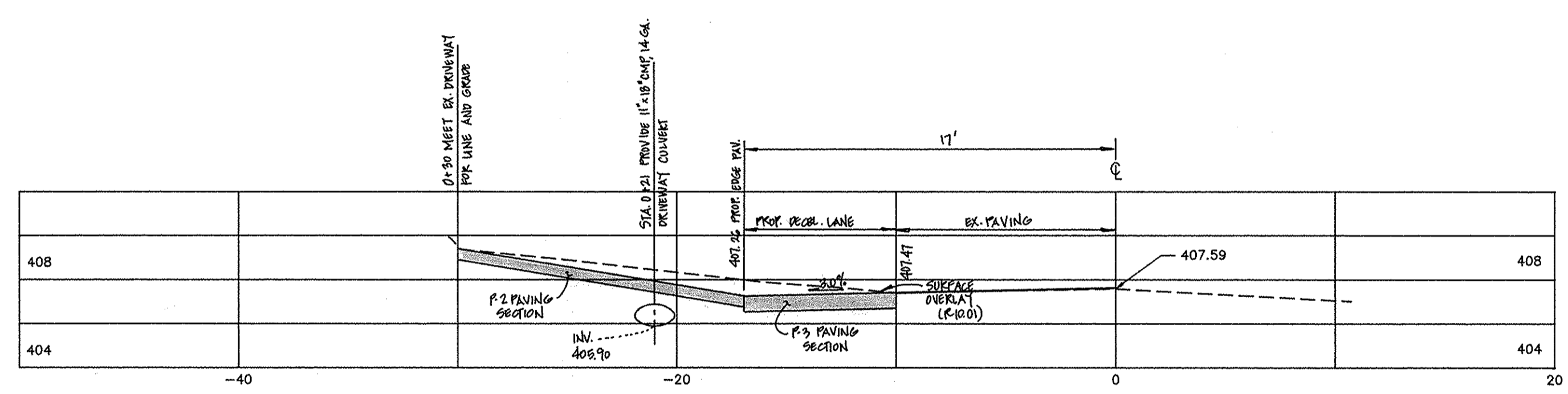
Centerline Station 1+50



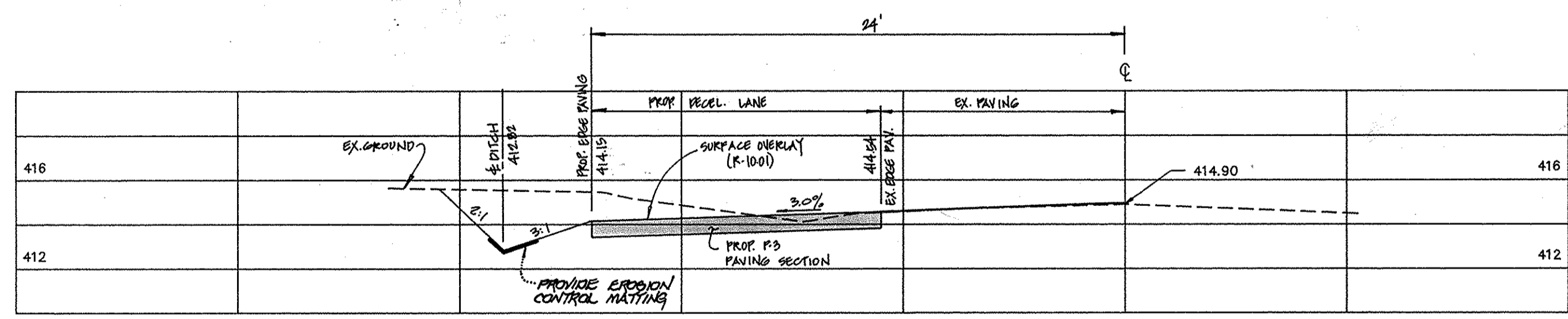
Centerline Station 3+00



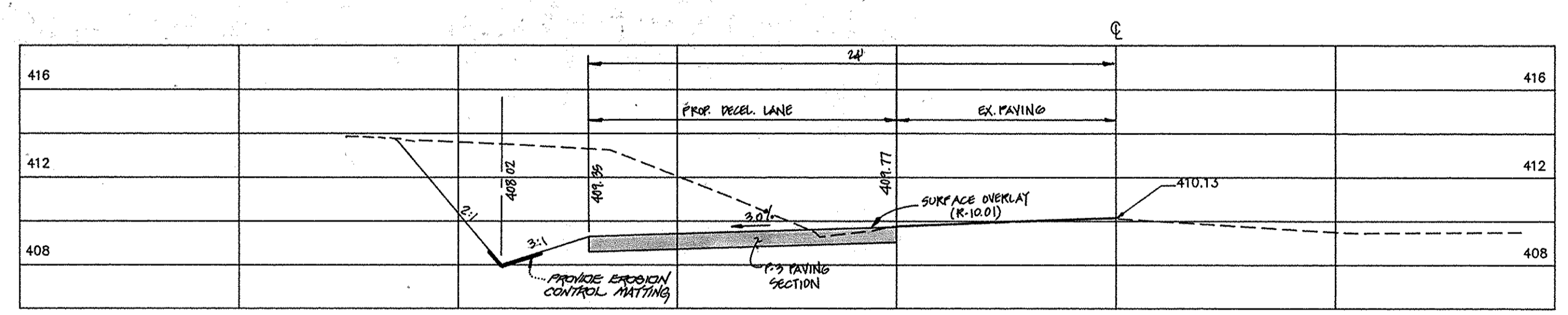
Centerline Station 1+00



Centerline Station 2+50



Centerline Station 0+50

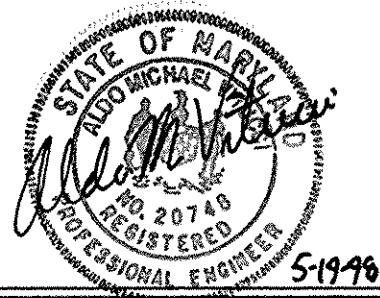


Centerline Station 2+00

CROSS-SECTIONS
SCALE: HORIZ. : 1" = 5'
VERT. : 1" = 5'

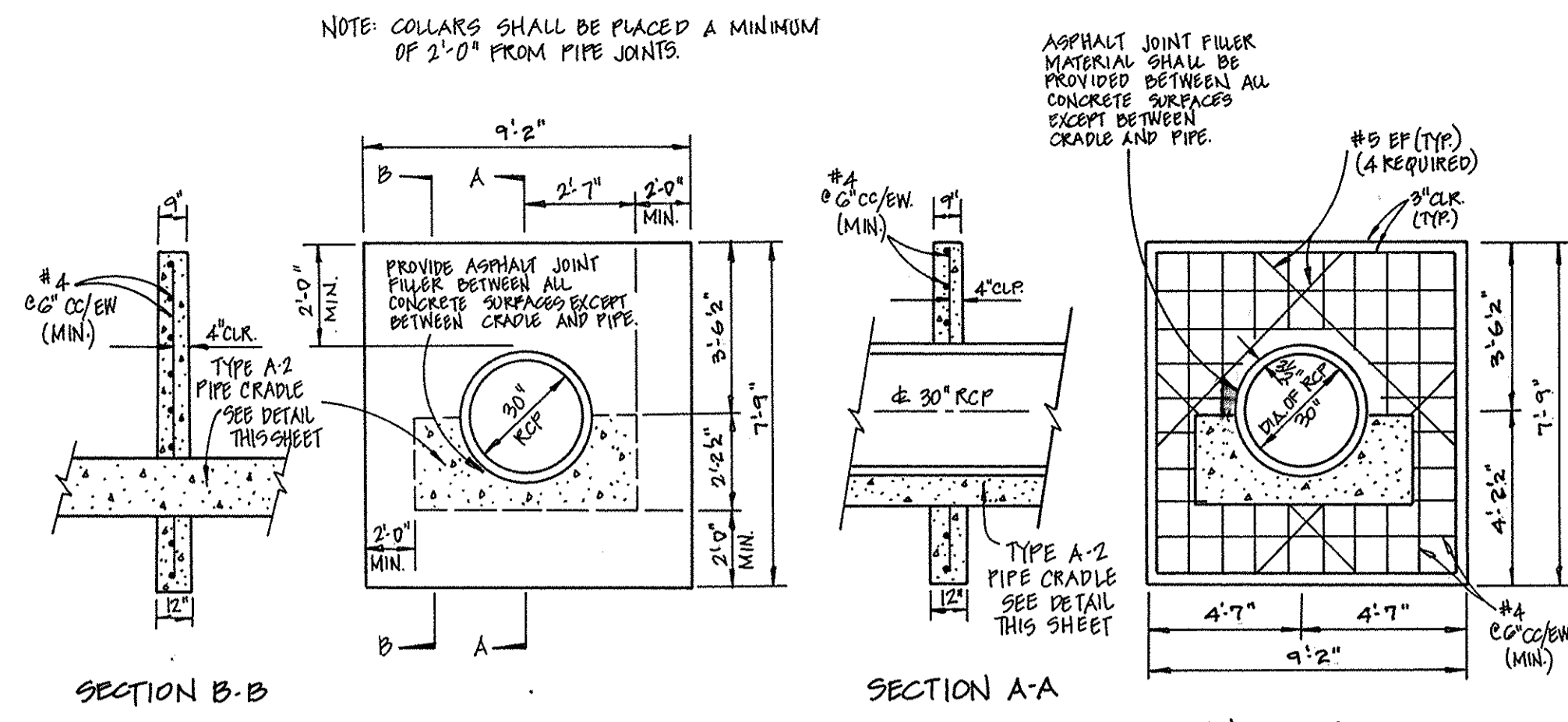
CROSS SECTIONS
OLD ANNAPOLIS ROAD
STATIONS 0+25 THRU 3+00
THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34
(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
ZONED R-20
TAX MAP NO. 24 GRID NO. 21
PART OF PARCEL NO. 399
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET 10 OF 17

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONTINENTAL SQUARE OFFICE PARK - 10722 BALTHAZORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
410 481 - 2995



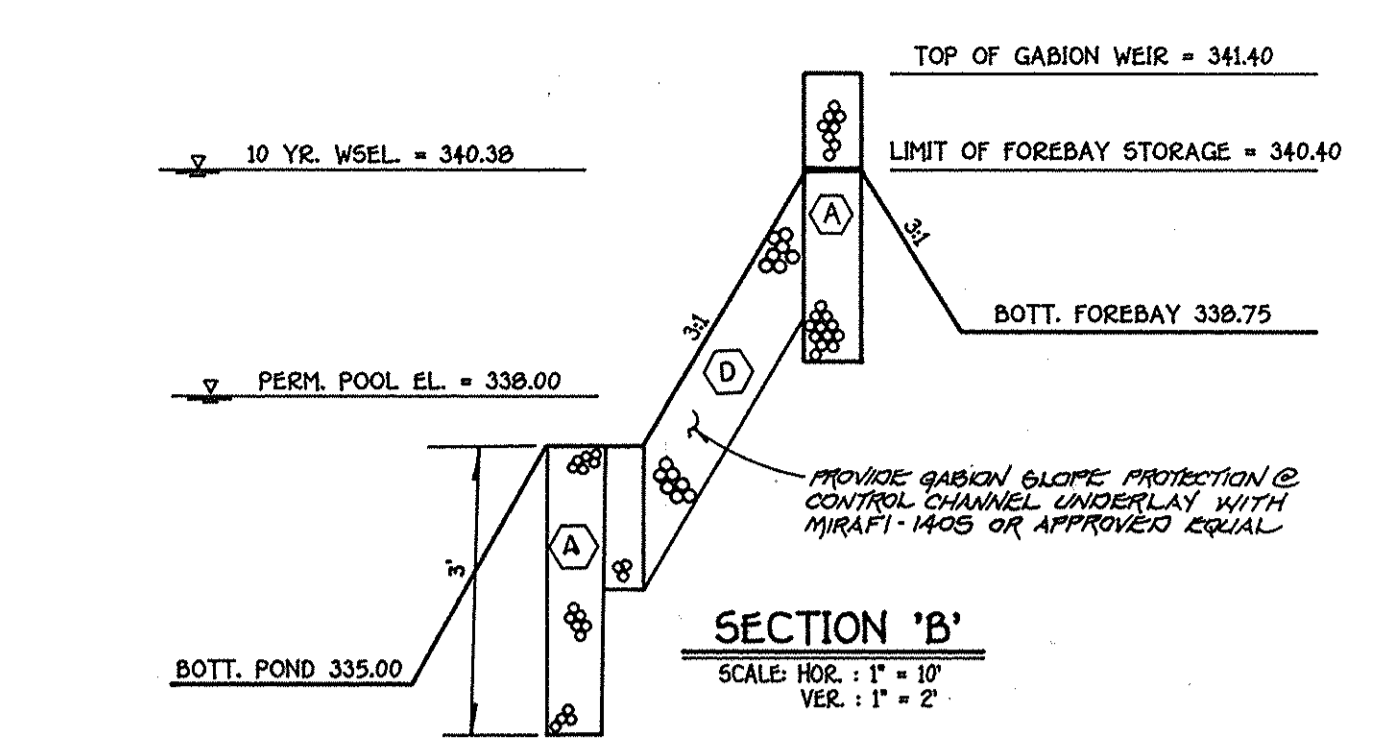
OWNERS
MR. AND MRS. WILFREDO PEREZ
9800 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
MR. WILLIAM GABLE
9820 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
DONALD GREGORY COLE, ET AL
9800 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
MR. AND MRS. HENRY MATTHEWS
9800 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
C.S.T.L.C. TRADING AS
JAMESTOWN BUILDERS
10801 HICKORY RIDGE ROAD
SUITE 210
COLUMBIA, MARYLAND 21044

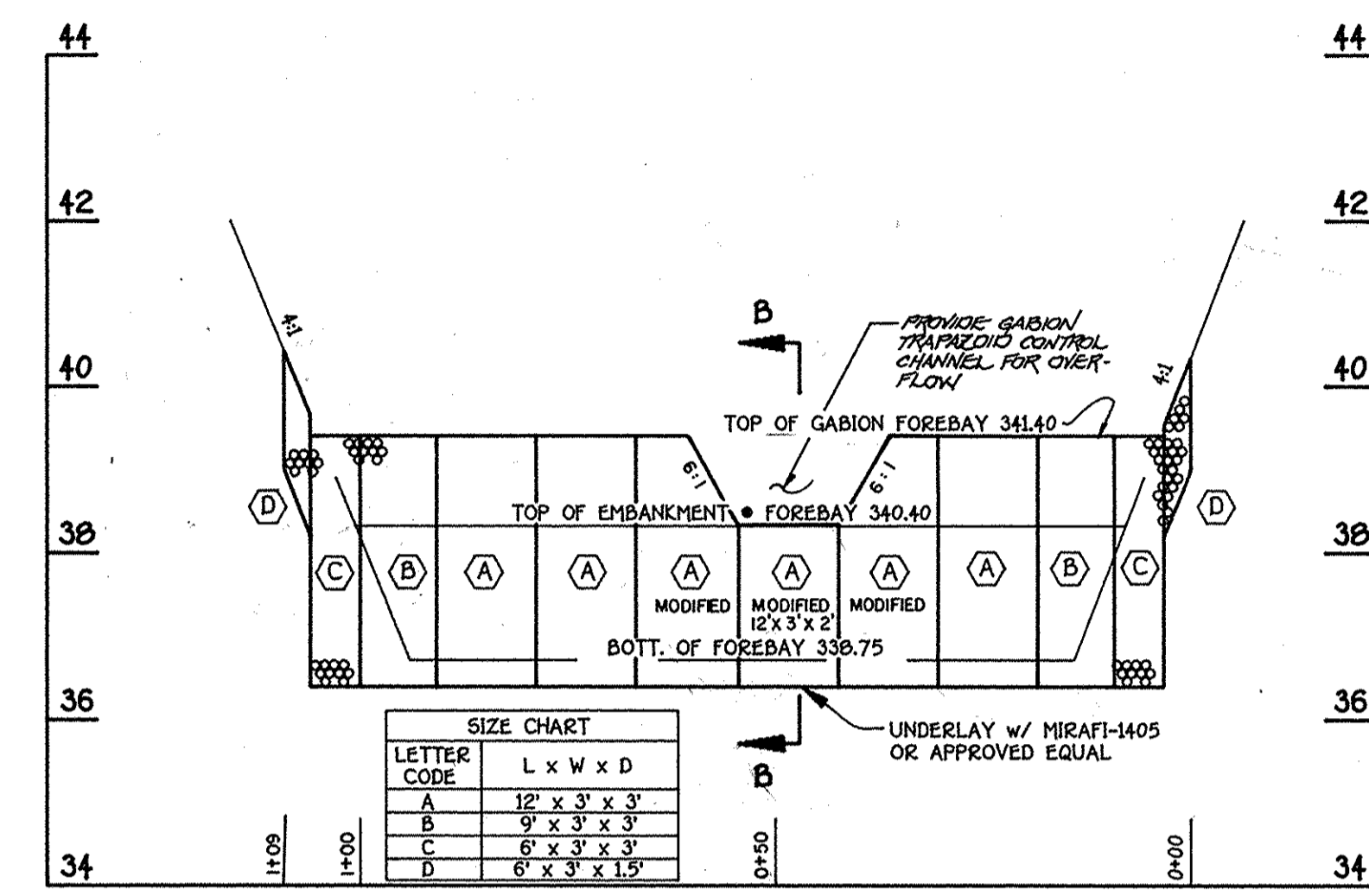


TYPICAL SECTION THROUGH BARREL, CRADLE & ANTI-SEEP COLLAR
NOT TO SCALE

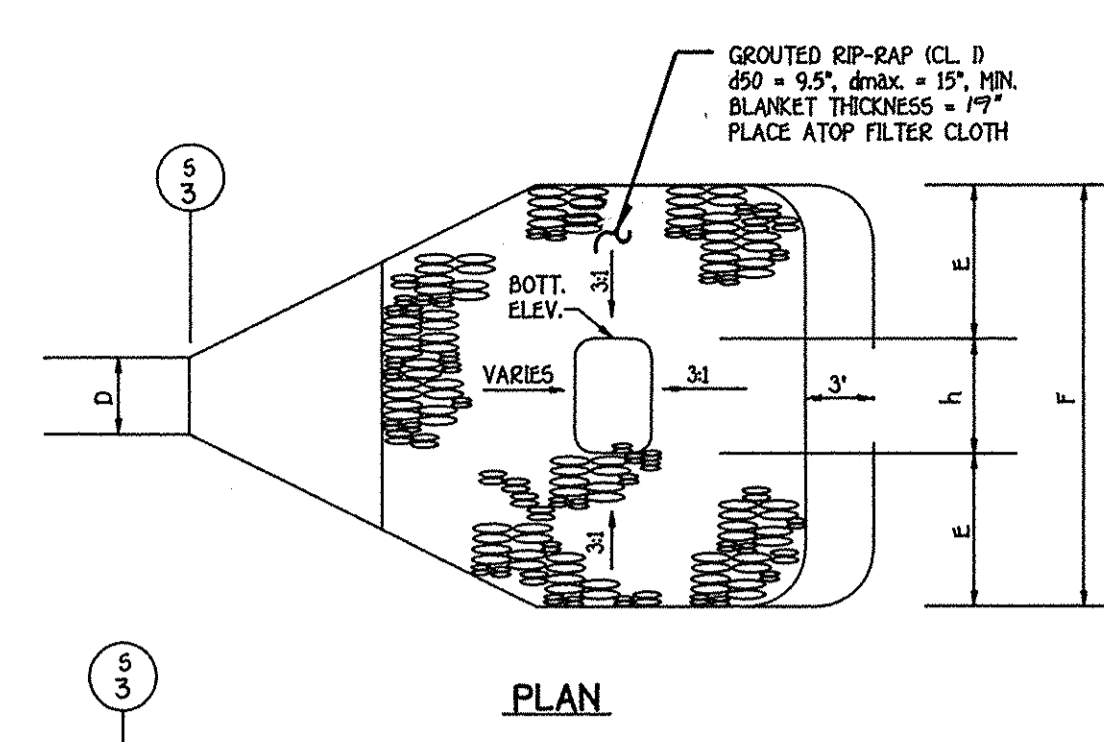
- NOTES:
1. CONCRETE SHALL BE MSHA MIX NO. 3 (FC > 3,500 P.S.I.)
 2. REINFORCING STEEL = GRADE 60
 3. FOR WALLS OF STRUCTURE SHALL UTILIZE L.M. SCOFIELD CO. FORM LINERS (RANDOM SPLIT-FACE ROCK) (OPTIONAL)
 4. PROVIDE ROUGH BROOM FINISH
 5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECIFICATIONS.
 6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS SHOWN OTHERWISE.



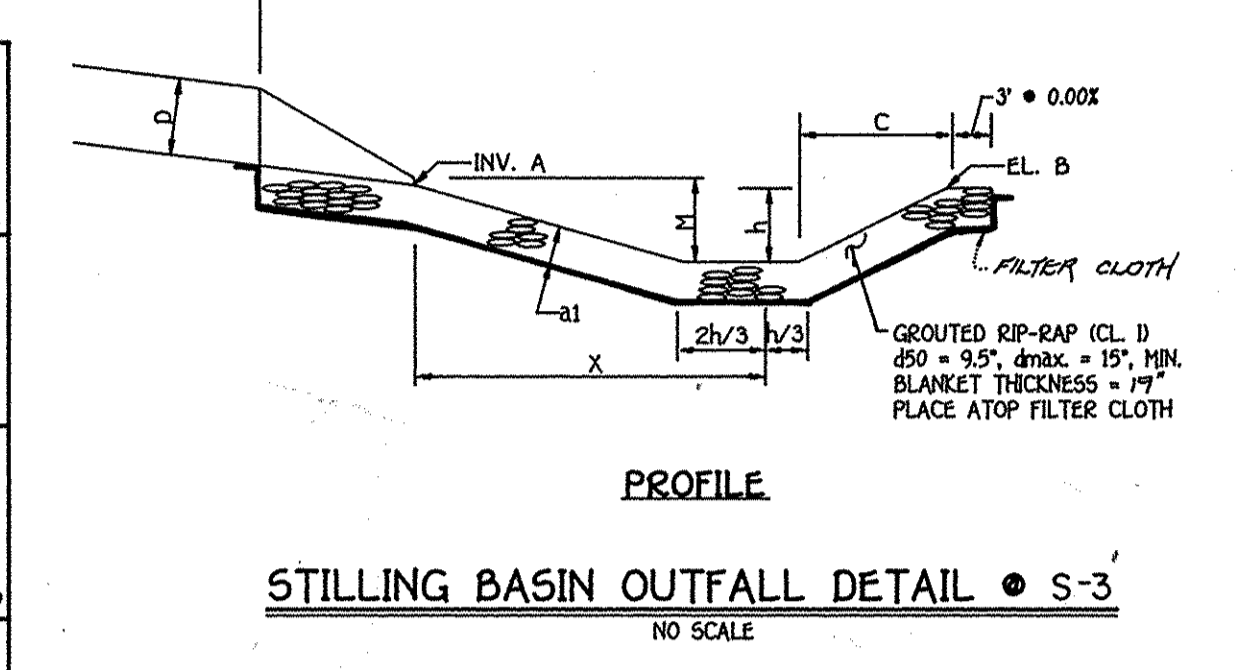
SECTION 'B'
SCALE: HOR. 1" = 10'
VER. 1" = 2'



FOREBAY PROFILE
SCALE: HOR. 1" = 20'
VER. 1" = 2'



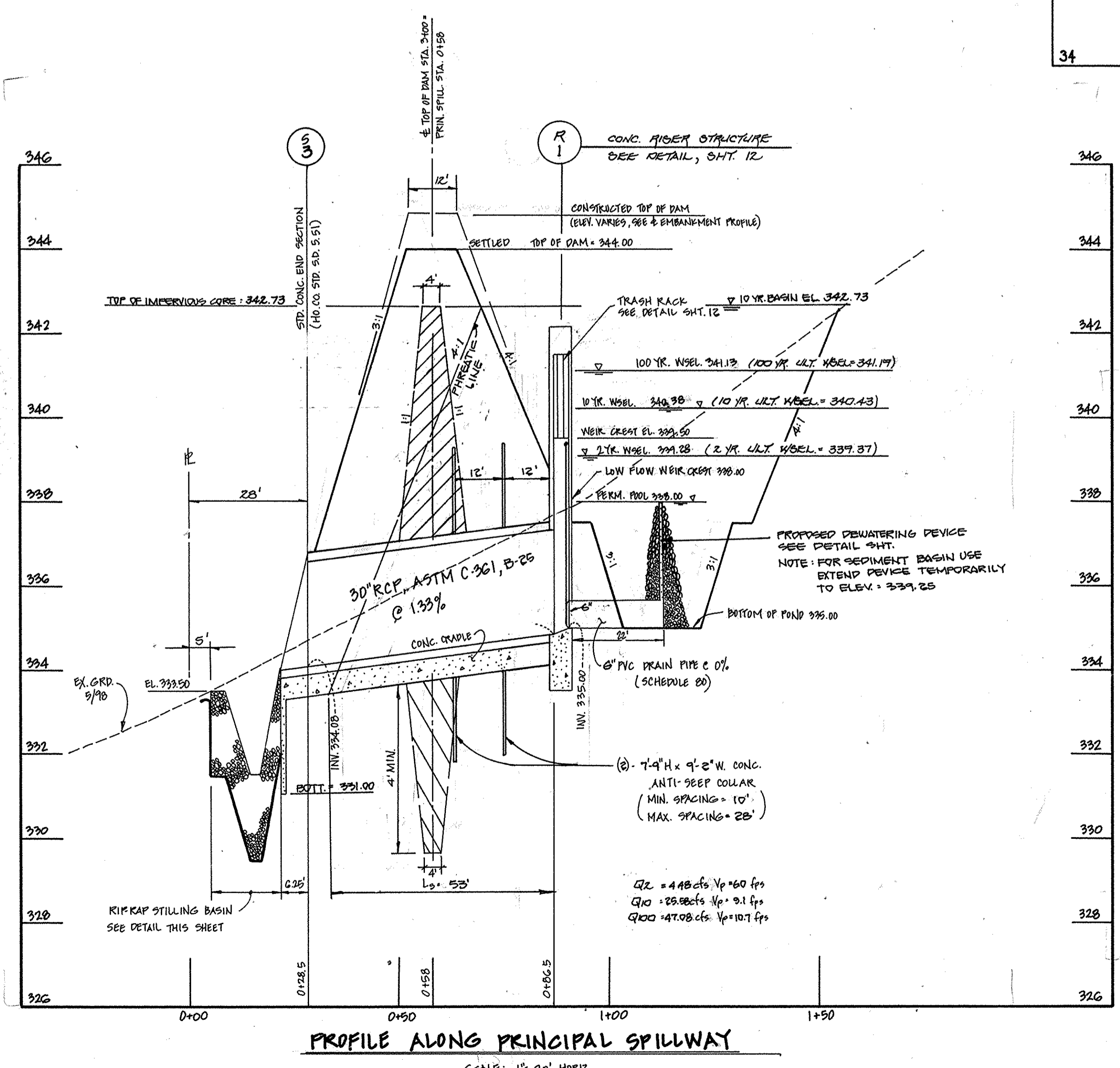
PLAN



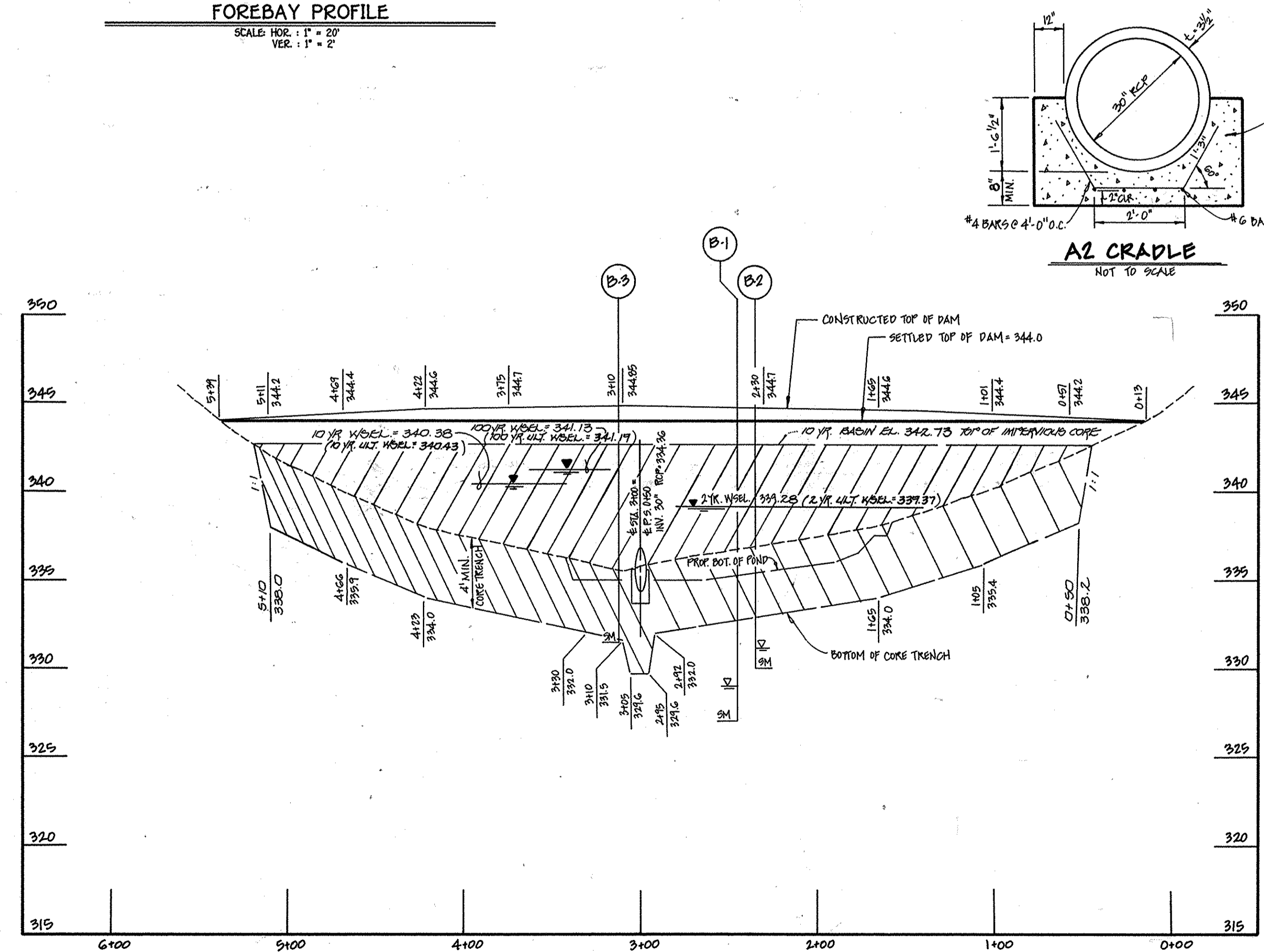
PROFILE

STILLING BASIN OUTFALL DETAIL - S-3
NO SCALE

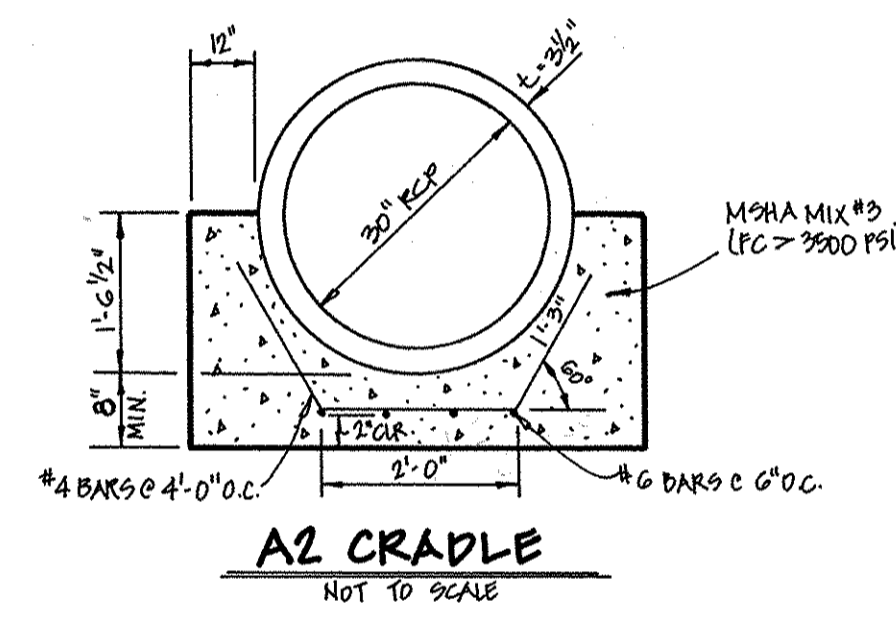
STILLING BASIN DATA										
STRUCTURE NO.	INV. A	EL. B	C	D	E	F	h	M	di	X
S-3	334.00	333.50	6.0'	2.5'	6.0'	14.0'	2.0'	2.5'	2.0'	6.0'



PROFILE ALONG PRINCIPAL SPILLWAY
SCALE: 1" = 20' HORIZ.
1" = 2' VERT.



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

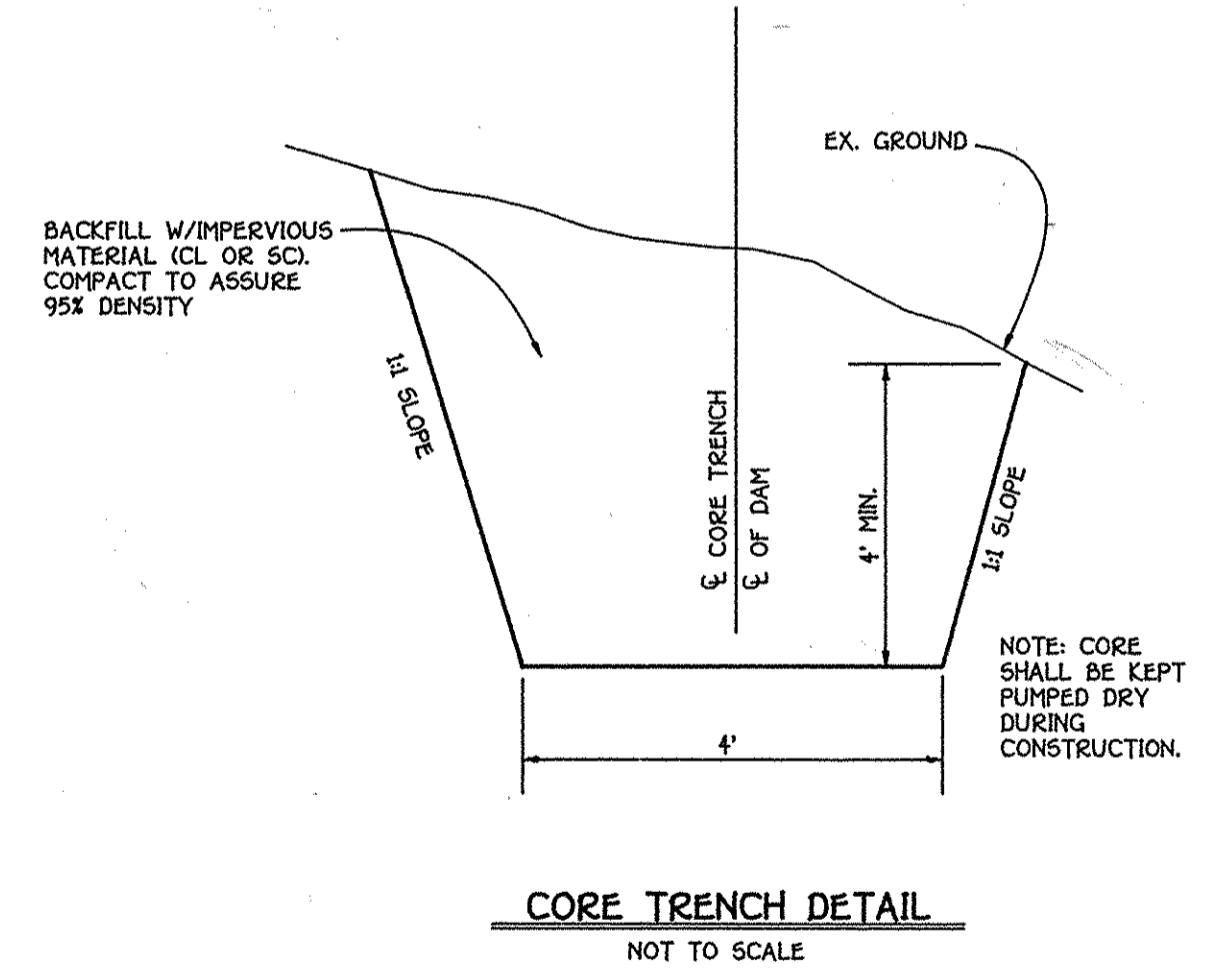


A2 CRADLE
NOT TO SCALE

AS-BUILT CERTIFICATION
I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" Plans and meets the approved plans and specifications.

Signature: _____ P.E. No. _____
Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



CORE TRENCH DETAIL
NOT TO SCALE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
410-981-2855

OWNERS
MR. AND MRS. WILFREDO PEREZ
9830 OLD ANNAPOLIS ROAD
ELICOTT CITY, MARYLAND 21042
MR. WILLIAM GABLE
9820 OLD ANNAPOLIS ROAD
ELICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
G.S.T.L.C. TRADING AS
JAMESTOWN BUILDINGS
10801 HICKORY RIDGE ROAD
SUITE 210
COLUMBIA, MARYLAND 21044

STORMWATER MANAGEMENT DETAILS
THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34
(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
ZONED R-20
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TAX MAP NO. 24
PART OF PARCEL NO. 399
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET II OF 17

BORING NO. 1

Table with 4 columns: ELEVATION, DEPTH, DESCRIPTION OF MATERIALS, REMARKS. Shows data for Boring No. 1 at 338.50 and 11.5 depth.

BORING NO. 2

Table with 4 columns: ELEVATION, DEPTH, DESCRIPTION OF MATERIALS, REMARKS. Shows data for Boring No. 2 at 341.50 and 11.5 depth.

BORING NO. 3

Table with 4 columns: ELEVATION, DEPTH, DESCRIPTION OF MATERIALS, REMARKS. Shows data for Boring No. 3 at 341.50 and 10.0 depth.

378 - 12 Pond

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for Practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans.

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.

Earth Fill

Material-The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, brush, wood, rubbish, stones greater than 6" frozen or other objectionable materials.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick before compaction layers.

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.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans.

Structure Backfill

Backfill adjacent to pipes or structures 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 tampers or other manually directed compaction equipment.

Pipe Conduits

All pipes shall be circular in cross section.

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

- 1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.
2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length.
3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

- 1. Materials-PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 609; Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works.

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 berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

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

STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

A. ROUTINE MAINTENANCE

- 1. Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September.
3. Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.

B. NON-ROUTINE MAINTENANCE

- 1. Structural components of the pond such as the dam, forebay riser structure and the pipes shall be inspected upon the detection of any damage.
2. Sediment should be removed when it has accumulated 6 inches or more in depth within the forebay, or when deemed necessary by the Howard County's Department of Public Works.

By The Developer:

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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project.

Signature of Developer: Charles L. Lutz Date: 12-9-96

By The Engineer:

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 District That I Am A Registered Professional Engineer And That I Am Authorized To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature of Engineer: [Signature] Date: 5-17-99

Printed Name Of Engineer: [Name]
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: Cheryl Simmons Date: 12/15/98
USDA-Natural Resources Conservation Service

Signature: [Signature] Date: 12/15/98
Howard Soil Conservation District

Approved Department Of Public Works: [Signature] Date: 6-8-99
Chief, Bureau Of Highways

Approved Department Of Planning And Zoning: [Signature] Date: 1/25/99
Chief, Division Of Land Development

Signature: [Signature] Date: 1/25/99
Chief, Development Engineering Division

AS-BUILT CERTIFICATION

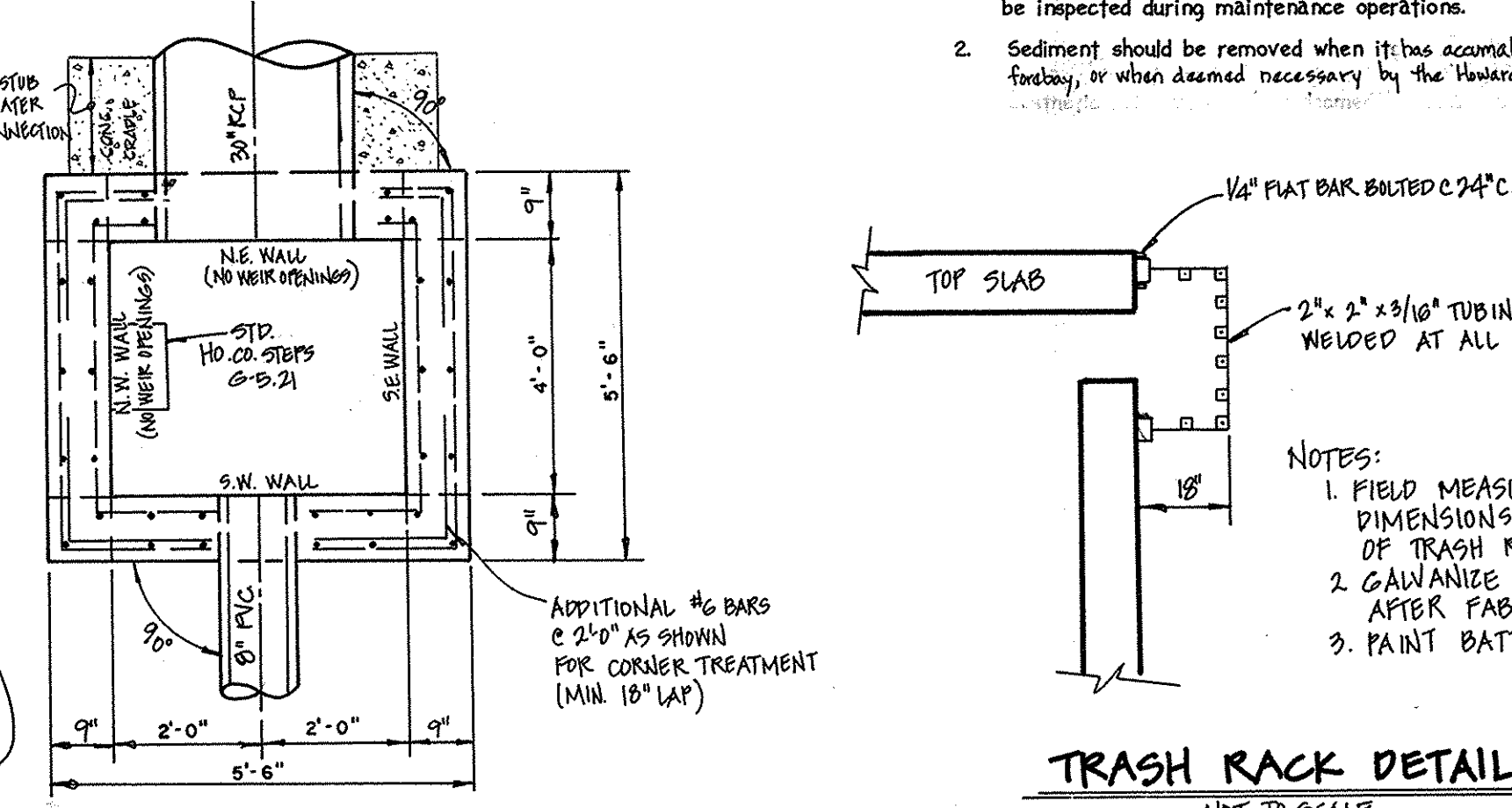
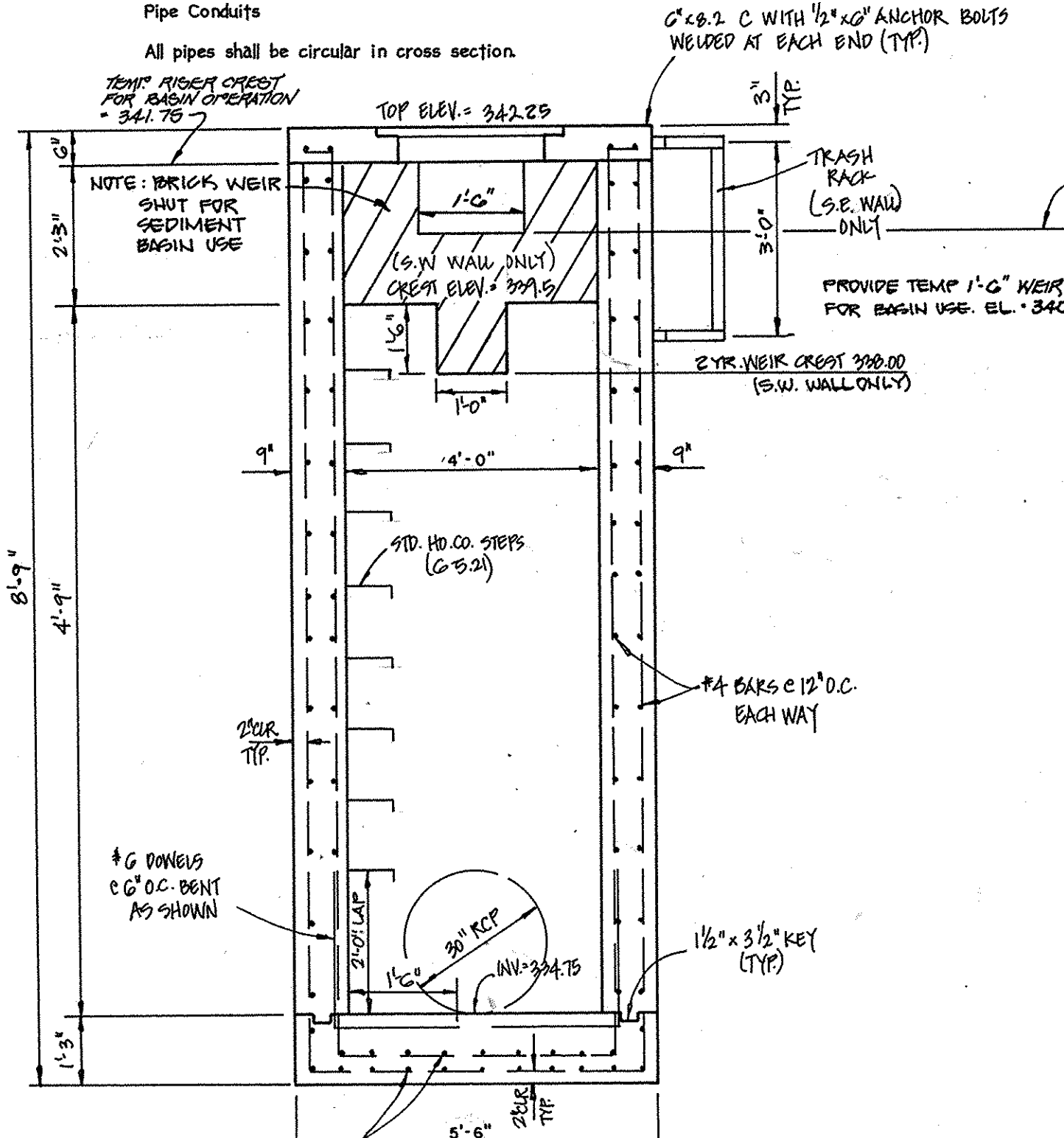
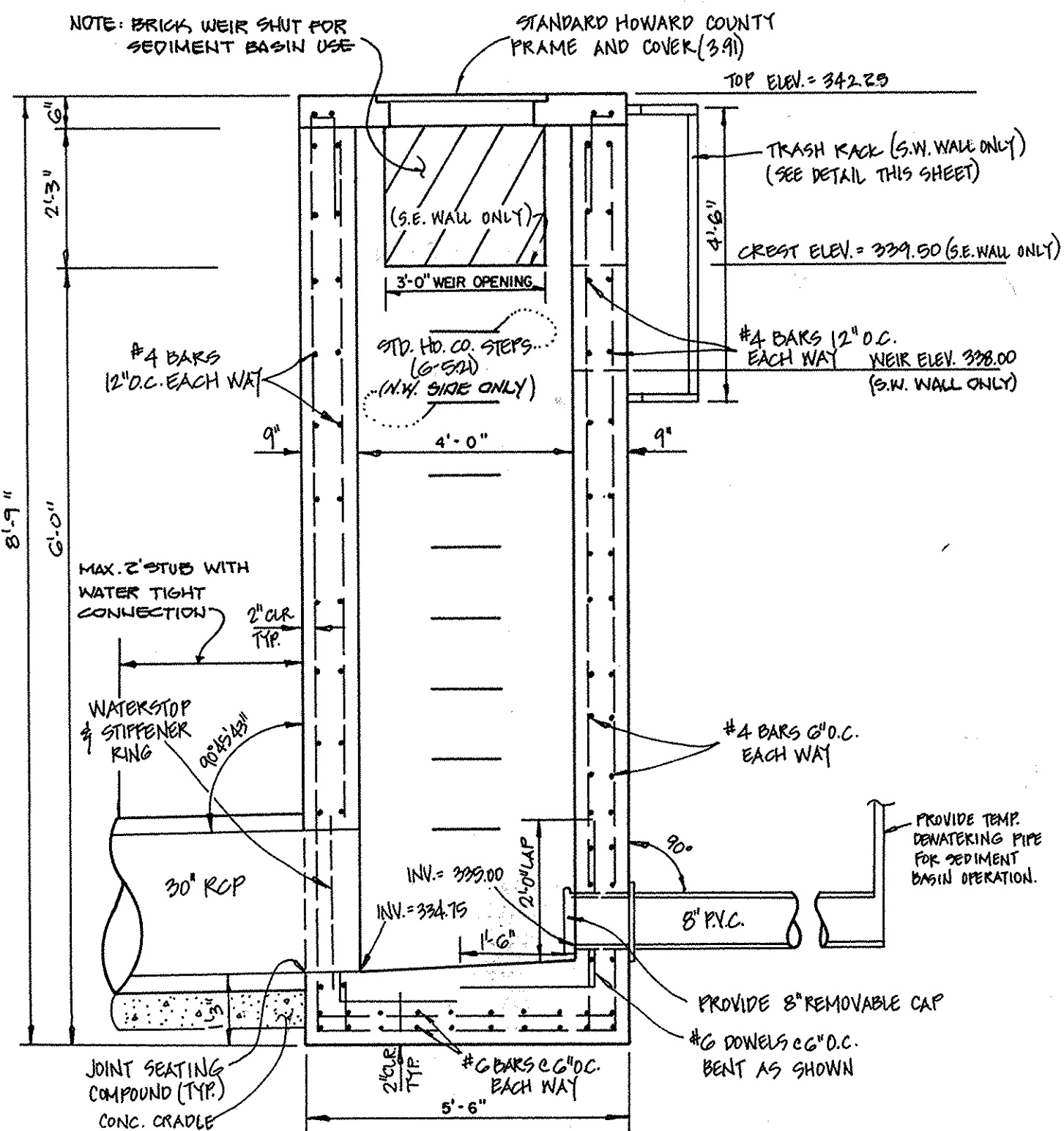
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature: [Signature] P.E. No.: [Number] Date: [Date]

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards.

OPERATION, MAINTENANCE AND INSPECTION

Inspection of the pond(s) shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards and Specifications for Ponds" (MD-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection and maintenance thereof.



- NOTES: 1. FIELD MEASURE THE STRUCTURE DIMENSIONS TO INSURE EXACT FIT OF TRASH RACK. 2. GALVANIZE ENTIRE TRASH RACK AFTER FABRICATION. 3. PAINT BATTLESHIP GRAY.

DESIGN SUMMARY table with columns: DESIGN STORM, ALLOWABLE RELEASE RATE, FACILITY INFLOW, FACILITY DISCHARGE, WATER SURFACE ELEVATION, STORAGE VOLUME (Ac-ft). Rows for 2 YEAR, 10 YEAR, and 100 YEAR storms.

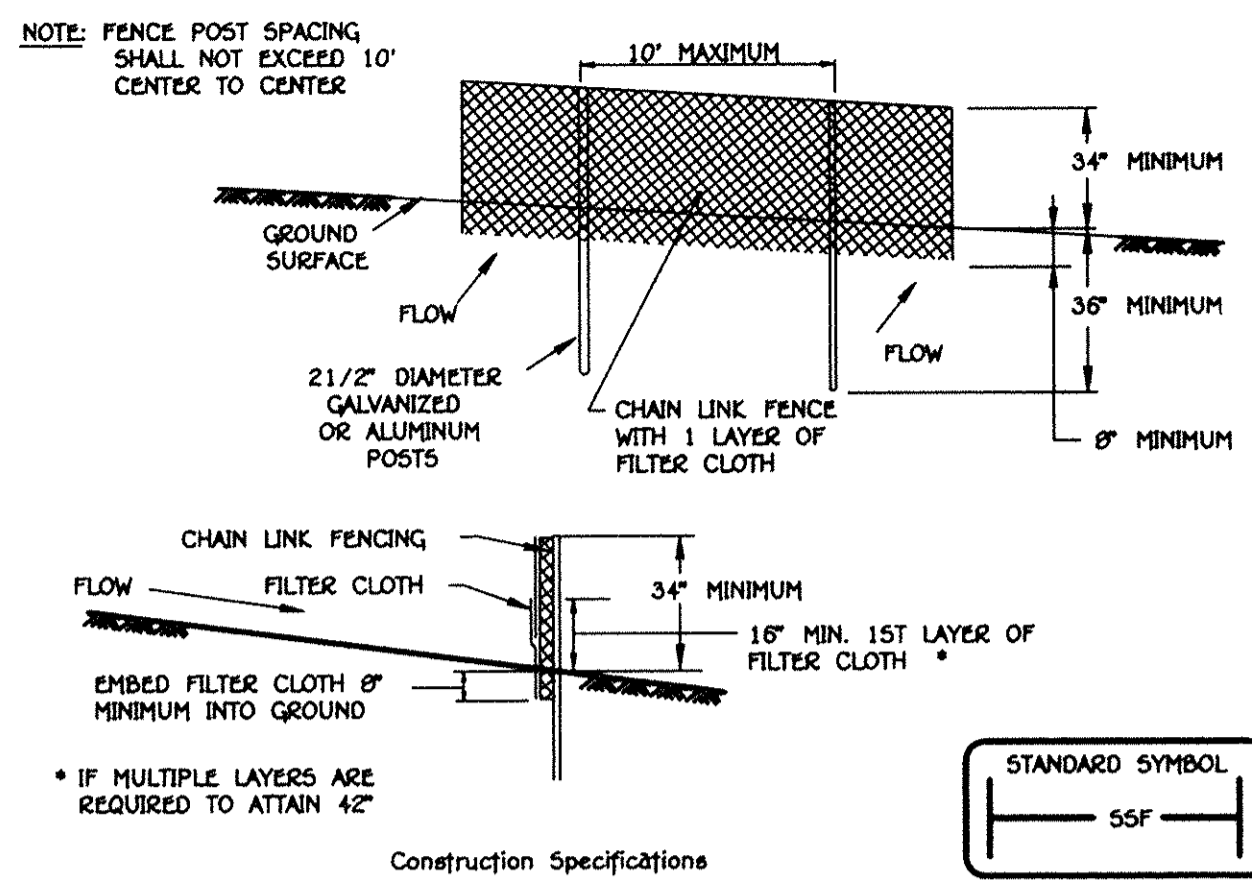
OWNER INFORMATION: MR. AND MRS. WILFREDO PEREZ, DONALD GREGORY COLE, JR., MR. WILLIAM GABLE, MR. AND MRS. HENRY MATTHEWS.

CONTRACT PURCHASER AND DEVELOPER: C.S.T.L.C. TRADING AS JAMESTOWN BUILDERS, 10801 HICKORY RIDGE ROAD, SUITE 210, COLUMBIA, MARYLAND 21044.

EMBAKMENT AND CUT-OFF TRENCH CONSTRUCTION: THE SITE SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBAKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES.

STORMWATER MANAGEMENT DETAILS: THE OVERLOOK AT CENTENNIAL PARK, LOTS 9 THRU 34. (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580). ZONED R-20. SHEET 12 OF 17.

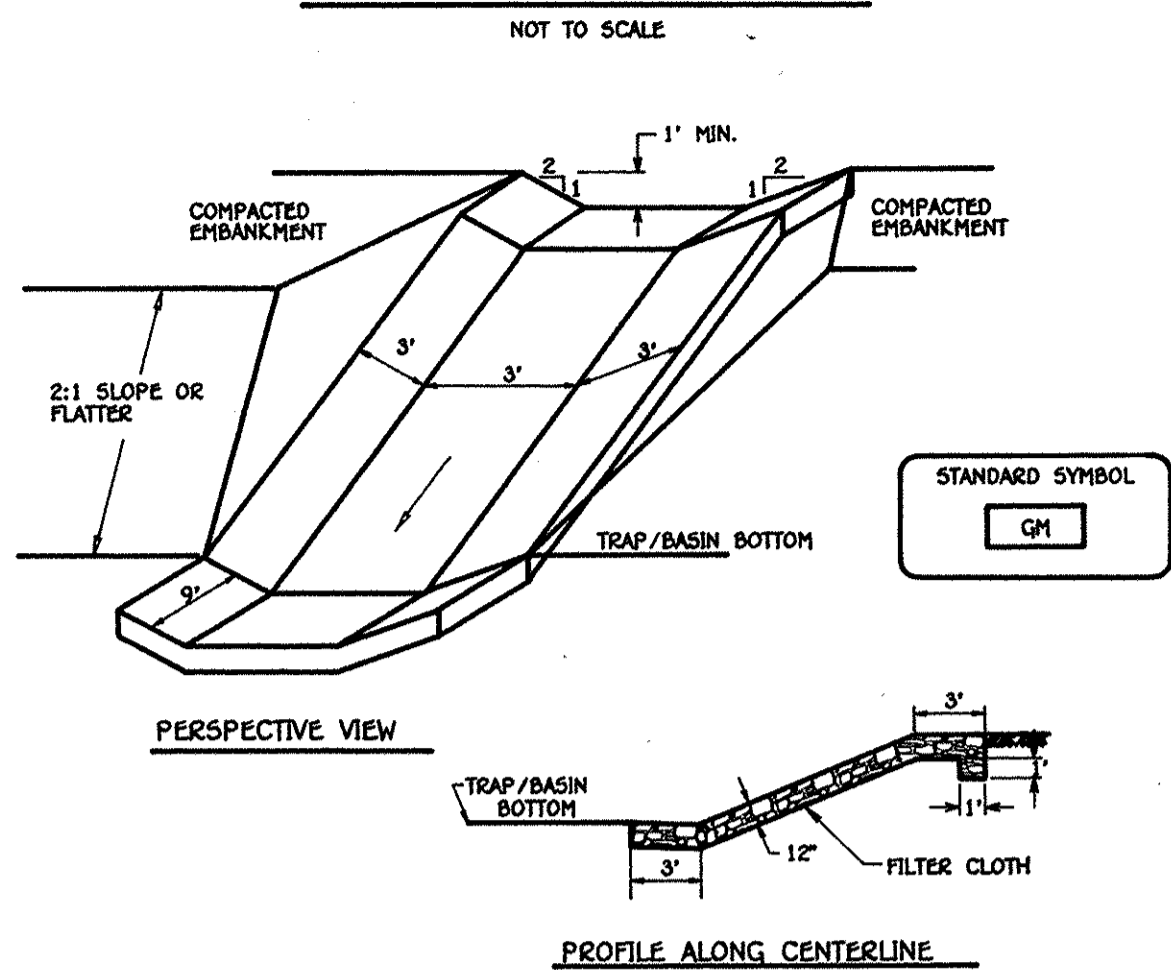
DETAIL 33 - SUPER SILT FENCE



- Construction Specifications**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 6" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

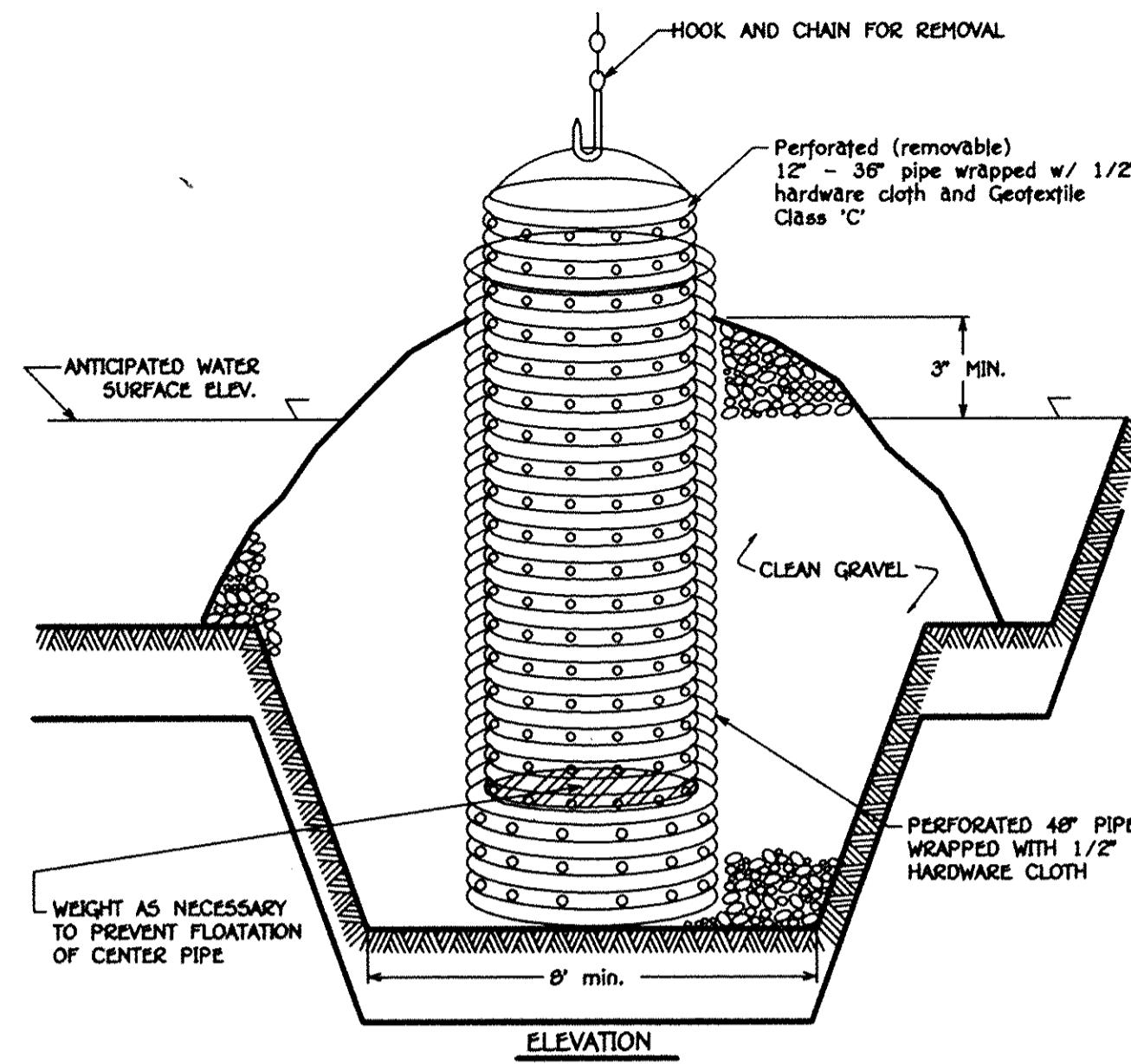
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

GABION INFLOW PROTECTION



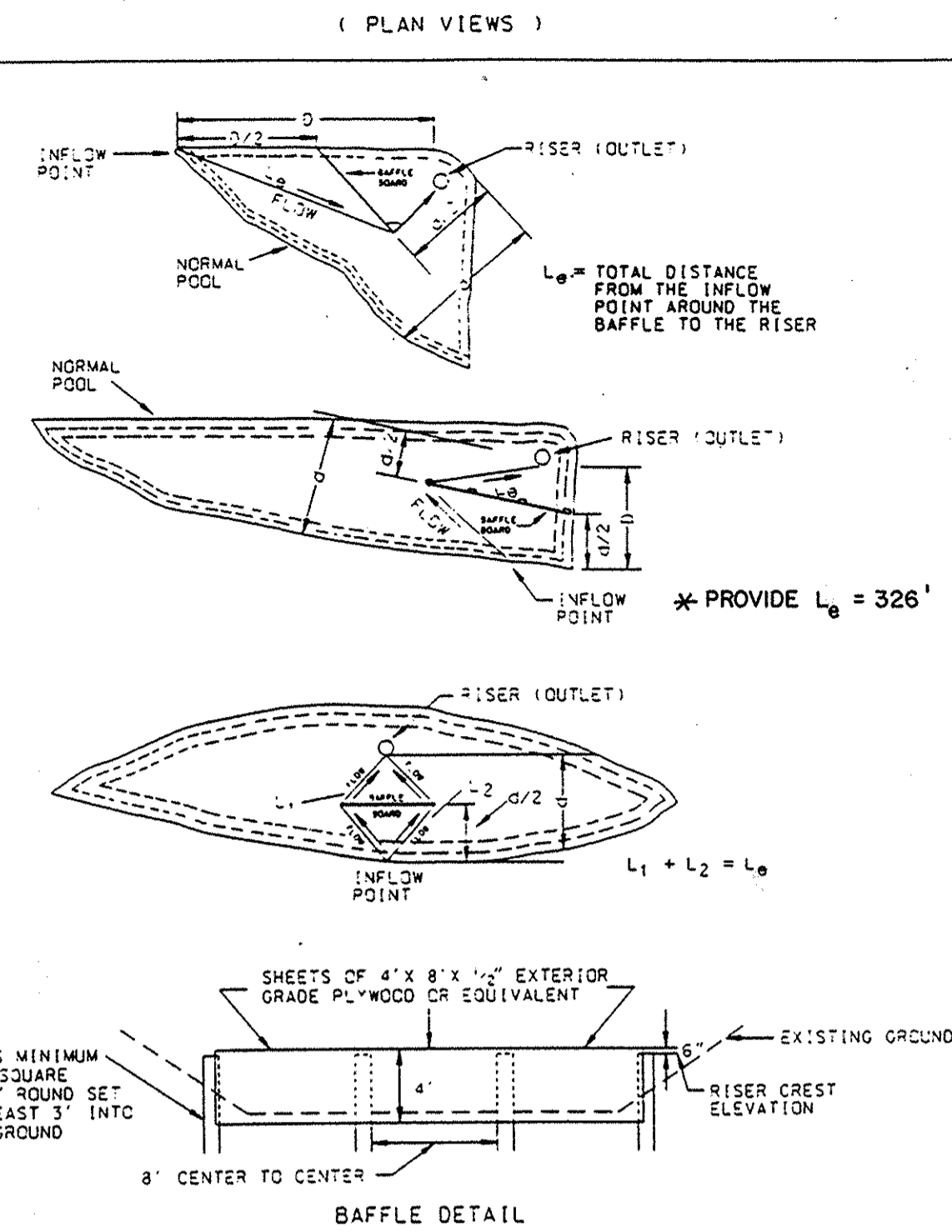
- Construction Specifications**
- Gabion inflow protection shall be constructed of 9' x 3' x 9' gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
 - Geotextile Class C shall be installed under all gabion baskets.
 - The stone used to fill the gabion baskets shall be 4" - 7".
 - Gabions shall be installed in accordance with manufacturers recommendations.
 - Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

DETAIL 20A - REMOVABLE PUMPING STATION



- Construction Specifications**
- The outer pipe should be 48" dia, or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
 - After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
 - The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 8" slots or 1" diameter holes 8" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.
 - The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

DETAIL 18 SEDIMENT BASIN BAFFLES



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE C-10-28 | MARYLAND DEPARTMENT OF ENVIRONMENTAL WATER MANAGEMENT ADMINISTRATION

DEVELOPER'S CERTIFICATE

I HAVE CERTIFIED THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Andrew M. Jewell 12-9-98
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

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

Andrew M. Jewell 11-10-98
SIGNATURE OF ENGINEER REGISTERED DATE

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
Andrew M. Jewell 12/15/98
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Andrew M. Jewell 12/15/98
APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andrew M. Jewell 1/28/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

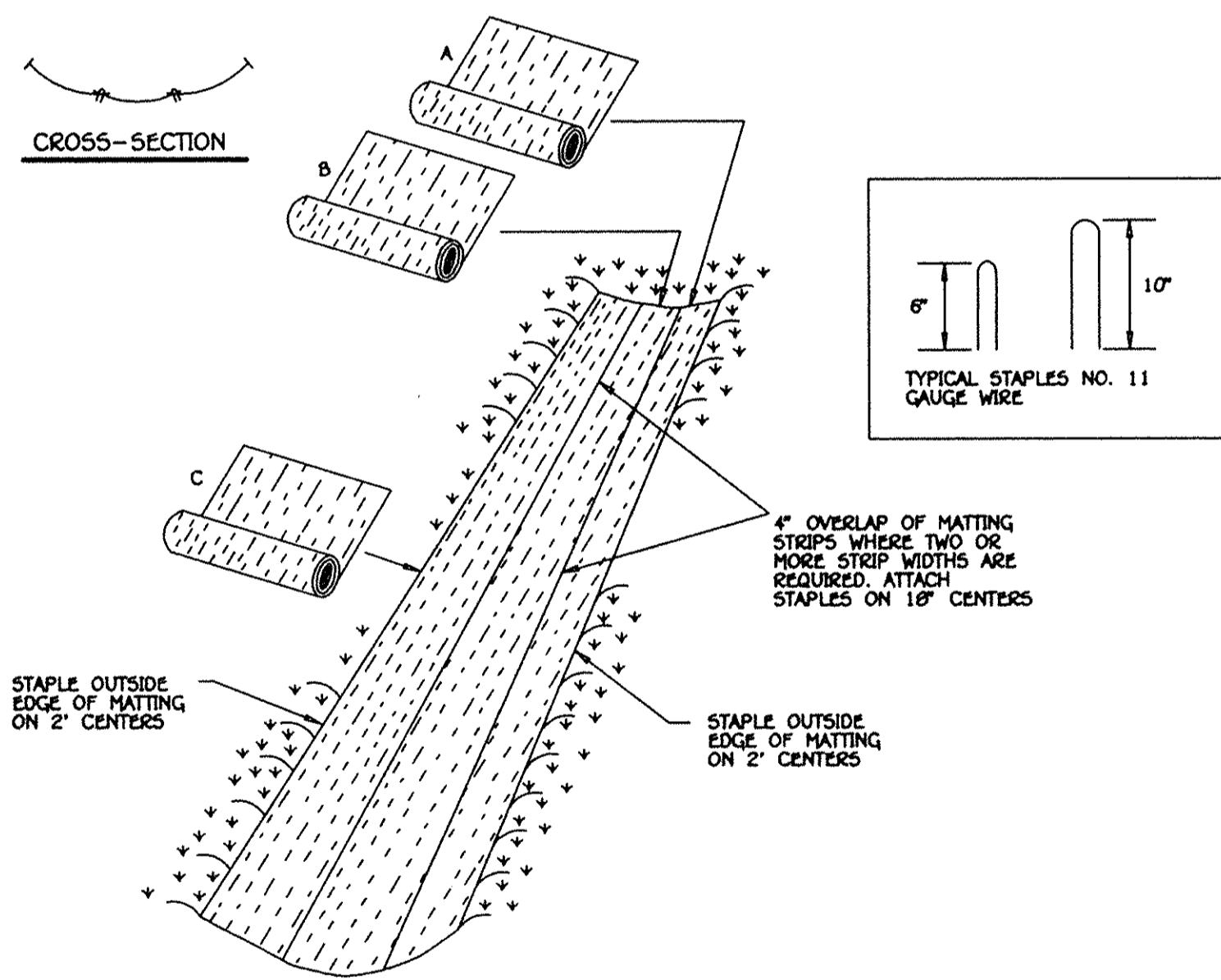
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andrew M. Jewell 1/28/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Jewell 1-9-99
CHIEF, BUREAU OF HIGHWAYS DATE

SEQUENCE OF CONSTRUCTION

- OBTAIN ALL REQUIRED GRADING PERMITS, APPROVALS AND LICENSES FROM APPROPRIATE AGENCIES.
- NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION (410) 343-8970 AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK ON THESE PLANS. NOTIFY "866 UTILITY" 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777.
- INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE UNDISTURBED AS INDICATED ON THE RELOCATE EXISTING UTILITIES WITHIN OLD ANNAPOLIS ROAD (5 DAYS)
- CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE (3 DAYS)
- INSTALL REMAINING SEDIMENT CONTROL MEASURES, SEDIMENT BASIN/SUMP FACILITY, EARTH DRES AND SILT FENCE AS INDICATED ON THE PLANS. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF THE PROPOSED BASIN, WHEN NECESSARY, BERRYING AND SACK HANDBLING SHOULD BE UTILIZED IN THE EXCAVATION OF THE FACILITY. WITH PERMISSION FROM THE INSPECTOR, AFTER ALL E/S CONTROLS ARE IN PLACE, THE CONTRACTOR MAY PROCEED (30 DAYS). DO NOT CONSTRUCT FORECAST AT THIS TIME.
- CLEAR AND GRUB THE REMAINDER OF THE SITE (5 DAYS)
- GRADE SITE TO THE PROPOSED SUB-GRADE AND INSTALL THE PROPOSED STORM DRAIN SYSTEMS. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING (4 WEEKS)
- THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM ALL TRAPS WHEN CLEANOUT ELEVATIONS ARE REACHED. ALL SEDIMENTS MUST BE PLACED UPSTREAM OF AN APPROVED TRAPPING DEVICE.
- INSTALL TRAFFIC MAINTENANCE DEVICES ALONG OLD ANNAPOLIS ROAD
- CONSTRUCT CURB AND GUTTERS AND ROAD BASE COURSE (10 DAYS)
- STABILIZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTORS TO PROCEED.
- WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND BASIN HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICE MAY BE DEMOLISHED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL DESIGN GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES (30 DAYS)
- NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

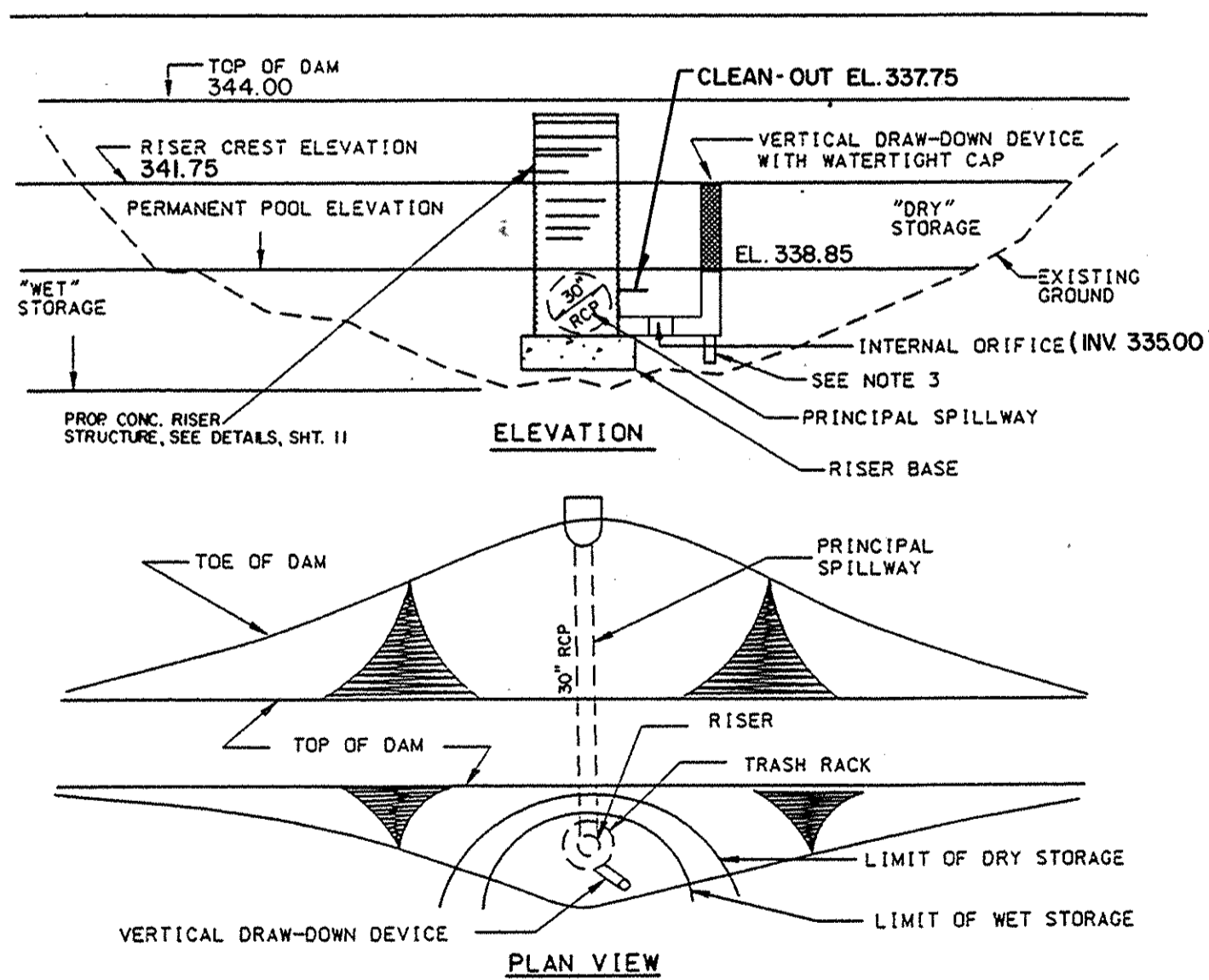
DETAIL 30 - EROSION CONTROL MATTING



EROSION CONTROL MATTING

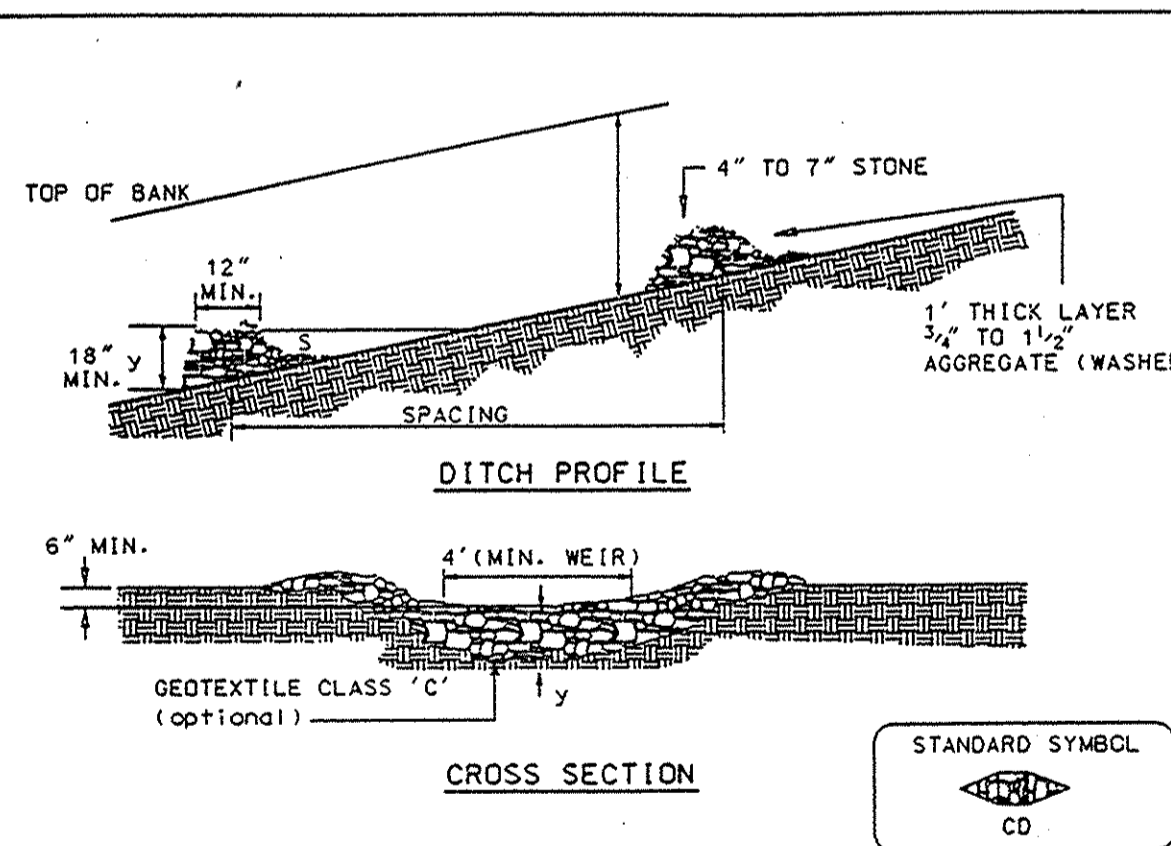
- Construction Specifications**
- Ker-in the matting by placing the top ends of the matting in a narrow trench 6" in depth. Backfill the trench and tamping firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
 - Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 2" apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shingle fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - The discharge end of the matting liner should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area effected by the flow must be ker-in.

Basin Drawdown Schematic Vertical Draw-down Device



- Construction Specifications**
- Perforations in the draw-down device may not extend into the wet storage.
 - The total area of the perforations must be greater than 4 times the area of the internal orifice.
 - The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class C.
 - Provide support of draw-down device to prevent sagging and floatation. An acceptable preventative measure is to stake both sides of draw-down device with 1" steel angle, or 1" by 4" square or 2" round wooden posts set 3' minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

DETAIL 7 - STONE CHECK DAM

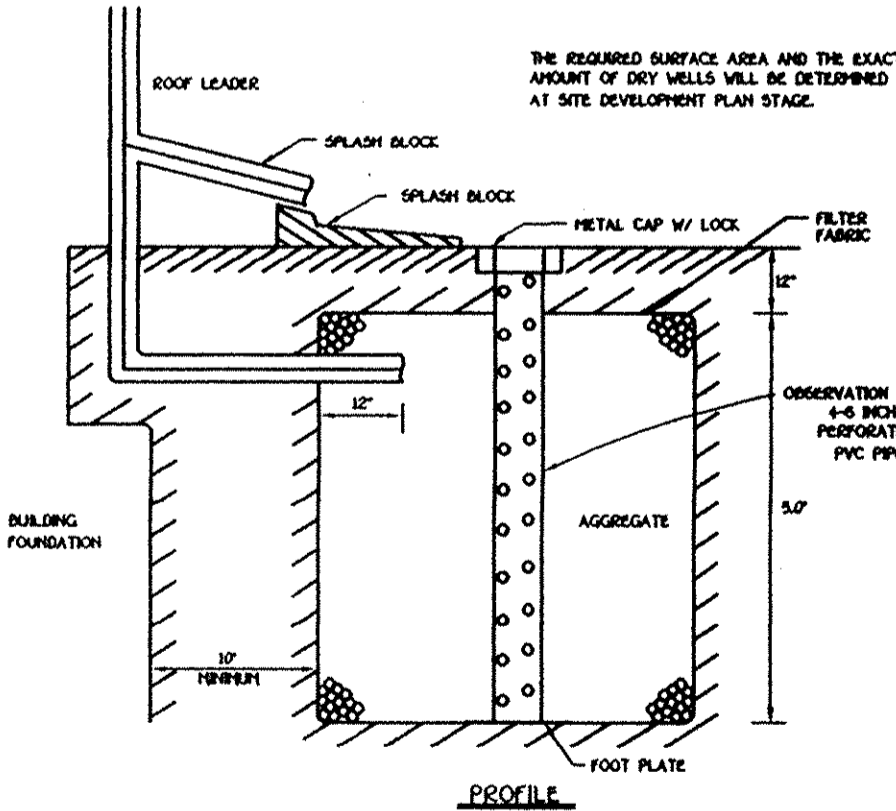


STANDARD STONE CHECK DAM DESIGN

SLOPE	SPACING
2% or less	80'
2.1% to 7%	40'
7.1% to 10%	25'
over 10%	15'

Use lined waterway design

- Construction Specifications**
- Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2. Standards and Specifications for temporary Swales.
 - The check dam shall be constructed of 4"-7" stone. The stone shall be placed so that it completely covers the width of the channel and is keyed into the channel banks.
 - The top of the check dam shall be constructed so the the center is approximately 6" lower than the outer edges, forming a weir that water can flow across.
 - The maximum height of the check dam at the center shall not exceed 2'.
 - The upstream side of the check dam shall be lined with approximately 1" of 3/4" to 1 1/2" aggregate.
 - Accumulated sediment shall be removed when it has built up to 1/2 of the original height of the weir crest.



TYPICAL DRY WELL CROSS SECTION INFILTRATION MANUAL
APPLICABLE TO LOTS 13 AND 14 ONLY

SEDIMENT CONTROL NOTES AND DETAILS

THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34

(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)

ZONED R-20
TAX MAP NO. 24 GRID NO. 21
PART OF PARCEL NO. 399

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET 14 OF 17

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 12777 BALTIC NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 481-2955

OWNERS

MR. AND MRS. WILFREDO PEREZ
9830 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

MR. WILLIAM GABLE
9820 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

MR. AND MRS. HENRY MATTHEWS
9800 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER

C.S.T.L.C. TRADING AS JAMESTOWN BUILDERS
10801 HICKORY RIDGE ROAD
SUITE 210
COLUMBIA, MARYLAND 21044

FOREST MANAGEMENT NOTES

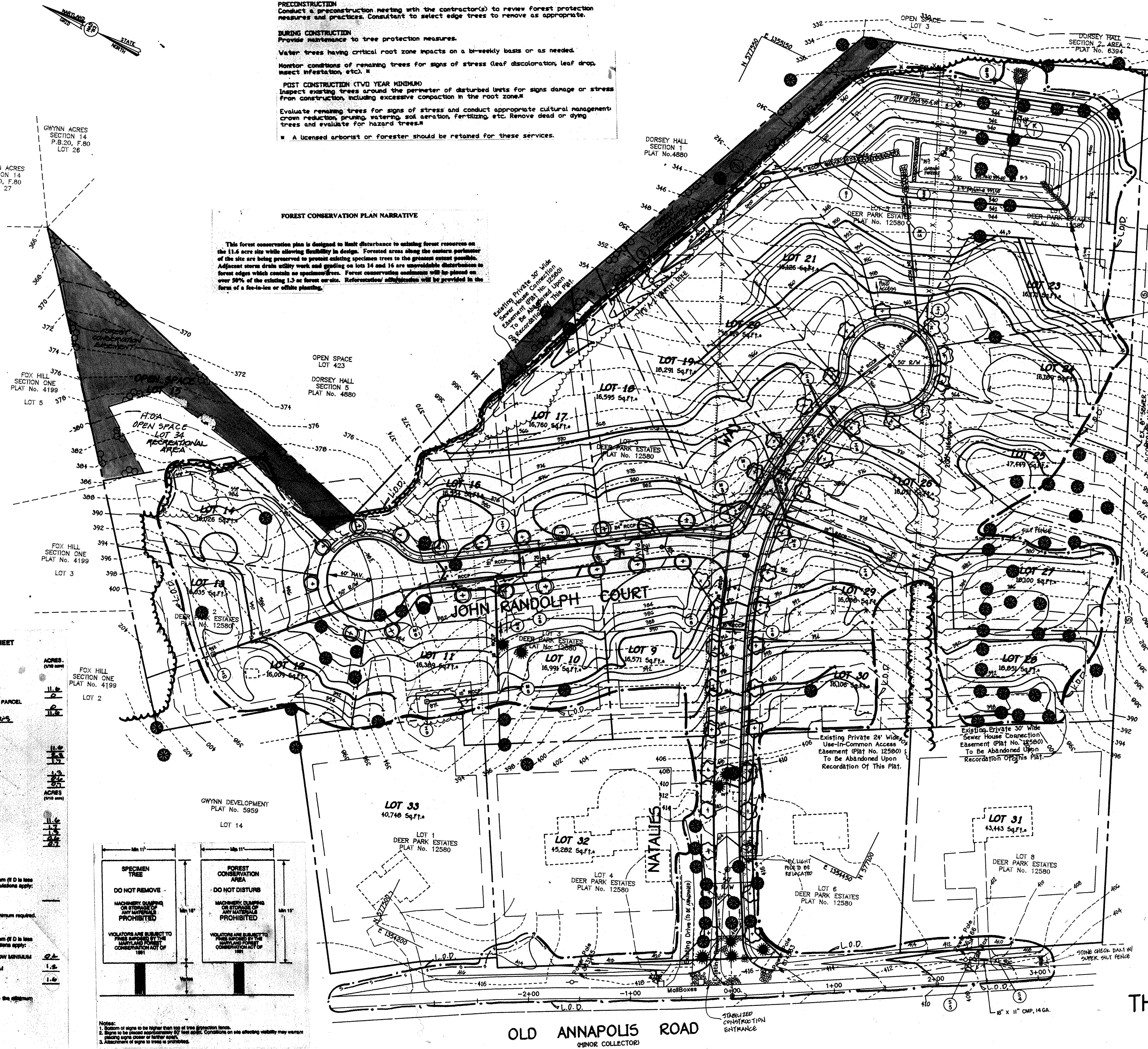
PRECONSTRUCTION
 Conduct a preconstruction meeting with the contractor(s) to review forest protection measures and practices. Consultant to select edge trees to remove as appropriate.

DURING CONSTRUCTION
 Provide maintenance to tree protection measures.
 Water trees having critical root zone impacts on a bi-weekly basis or as needed.
 Monitor conditions of remaining trees for signs of stress (leaf discoloration, leaf drop, insect infestation, etc.).

POST CONSTRUCTION (TWO YEAR MINIMUM)
 Inspect existing trees around the perimeter of disturbed units for signs damage or stress from construction, including excessive compaction in the root zone.
 Evaluate remaining trees for signs of stress and conduct appropriate cultural management: crown reduction, pruning, watering, soil aeration, fertilizing, etc. Remove dead or dying trees and evaluate for hazard trees.
 * A licensed arborist or forester should be retained for these services.

FOREST CONSERVATION PLAN NARRATIVE

This forest conservation plan is designed to limit disturbance to existing forest resources on the 11.6 acre site while allowing flexibility in design. Forested areas along the eastern perimeter of the site are being preserved to prevent existing specimen trees to the greatest extent possible. Adjacent storm drain utility work and grading on lots 14 and 16 are unavoidable disturbances to forest edges which contain no specimen trees. Forest conservation easements will be placed on over 50% of the existing 1.3 ac forest on site. Restoration/afforestation will be provided in the form of a fee-in-lieu or offset planting.



By The Developer:
 Signature of Developer: *Christopher Calver* Date: 12-0-98
 Printed Name of Developer: CHRISTOPHER CALVER

By The Engineer:
 Signature of Engineer: *William M. Spingola* Date: 11-10-98
 Printed Name of Engineer: WILLIAM M. SPINGOLA
 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.

USDA-Natural Resources Conservation Service Date: *12-0-98*
 These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Howard Soil Conservation District Date: *12-0-98*
 Approved Department of Public Works
 Signature: *Andrew M. Sauer* Date: 1-8-99
 Chief, Bureau of Highways

Approved Department of Planning And Zoning
 Signature: *Cindy Hamilton* Date: 1/25/99
 Chief, Division of Land Development
 Signature: *John D. Williams* Date: 1/22/99
 Chief, Development Engineering Division

AS-BUILT CERTIFICATION
 I Herewith Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature: _____ P.E. No. _____
 Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Physical Tests Which Are Conducted During Construction. The Onsite Inspections And Physical Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean To Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Another Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

**APPENDIX G
 FOREST CONSERVATION WORKSHEET**

BASIC SITE DATA

GROSS SITE AREA: 11.6 ACRES
 AREA WITHIN 100 YEAR FLOODPLAIN: 0.0 ACRES
 AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE): 0.0 ACRES
 NET TRACT AREA: 11.6 ACRES
 LAND USE CATEGORY (FARL, FARW, R&E, C&I, R-2S): R-2S

INFORMATION FOR CALCULATIONS

A. NET TRACT AREA: 11.6
 B. REFORESTATION THRESHOLD (1.5% ± A): 1.74
 C. AFFORESTATION MINIMUM (1.5% ± A): 1.74
 D. EXISTING FOREST ON NET TRACT AREA: 1.3
 E. FOREST AREAS TO BE CLEARED: 0.4
 F. FOREST AREAS TO BE RETAINED: 0.9

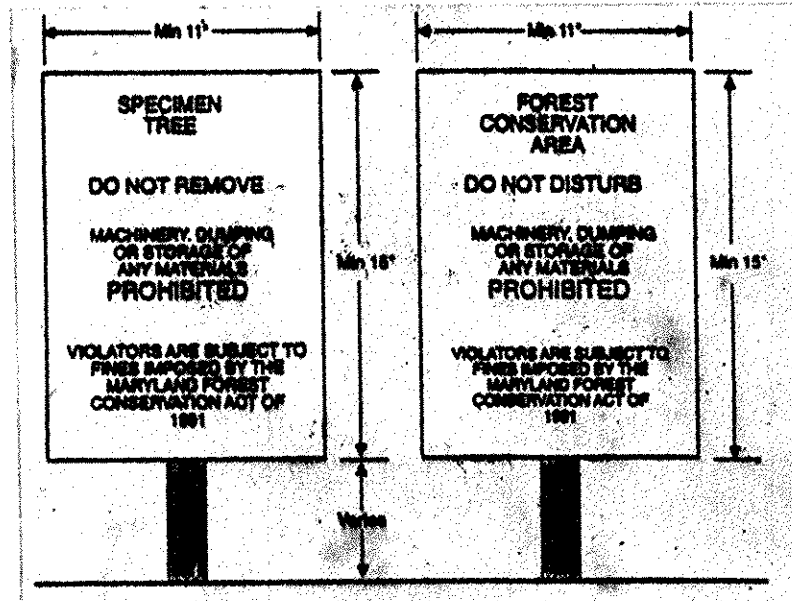
AFFORESTATION CALCULATIONS

A. NET TRACT AREA: 11.6
 B. REFORESTATION THRESHOLD (1.5% ± A): 1.74
 C. EXISTING FOREST ON NET TRACT AREA: 1.3
 D. FOREST AREAS TO BE CLEARED: 0.4
 E. FOREST AREAS TO BE RETAINED: 0.9

Select the alternative that applies:

1. **No clearing below the minimum:**
 If existing forests are less than the afforestation minimum (E) or less than (F) and no clearing is proposed, the following calculations apply:
 TOTAL AFFORESTATION REQUIRED: 0.4
 Afforestation must make total forest area equal the minimum required.

2. **Clearing below the minimum:**
 If existing forests are less than the afforestation minimum (E) or less than (F) and clearing is proposed, the following calculations apply:
 REFORESTATION FOR UNFORESTED AREAS, BELOW MINIMUM: 0.4
 REFORESTATION FOR CLEARED AREAS, BELOW MINIMUM: 0.4
 TOTAL AFFORESTATION REQUIRED: 0.8
 Afforestation requires the total forest area be equal to the afforestation minimum (E) requires compensation for clearing.



Notes:
 1. Bottom of signs to be higher than top of tree protection fence.
 2. Signs to be placed approximately 50 feet apart. Conditions on site affecting visibility may warrant placing signs closer or further apart.
 3. Placement of signs to trees is prohibited.

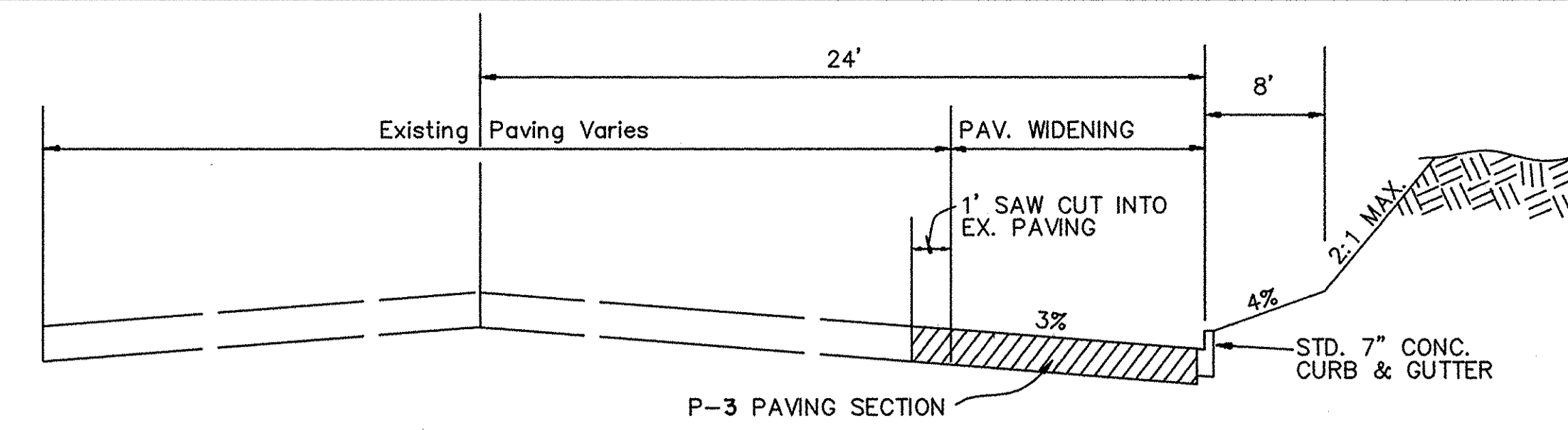
OLD ANNAPOLIS ROAD
 (POND COLLECTOR)

OWNERS
 MR. AND MRS. WILFREDO PEREZ
 9830 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. WILLIAM GABLE
 9820 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
 DONALD GREGORY COLE, JR.
 9810 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. AND MRS. HENRY MATTHEWS
 9800 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

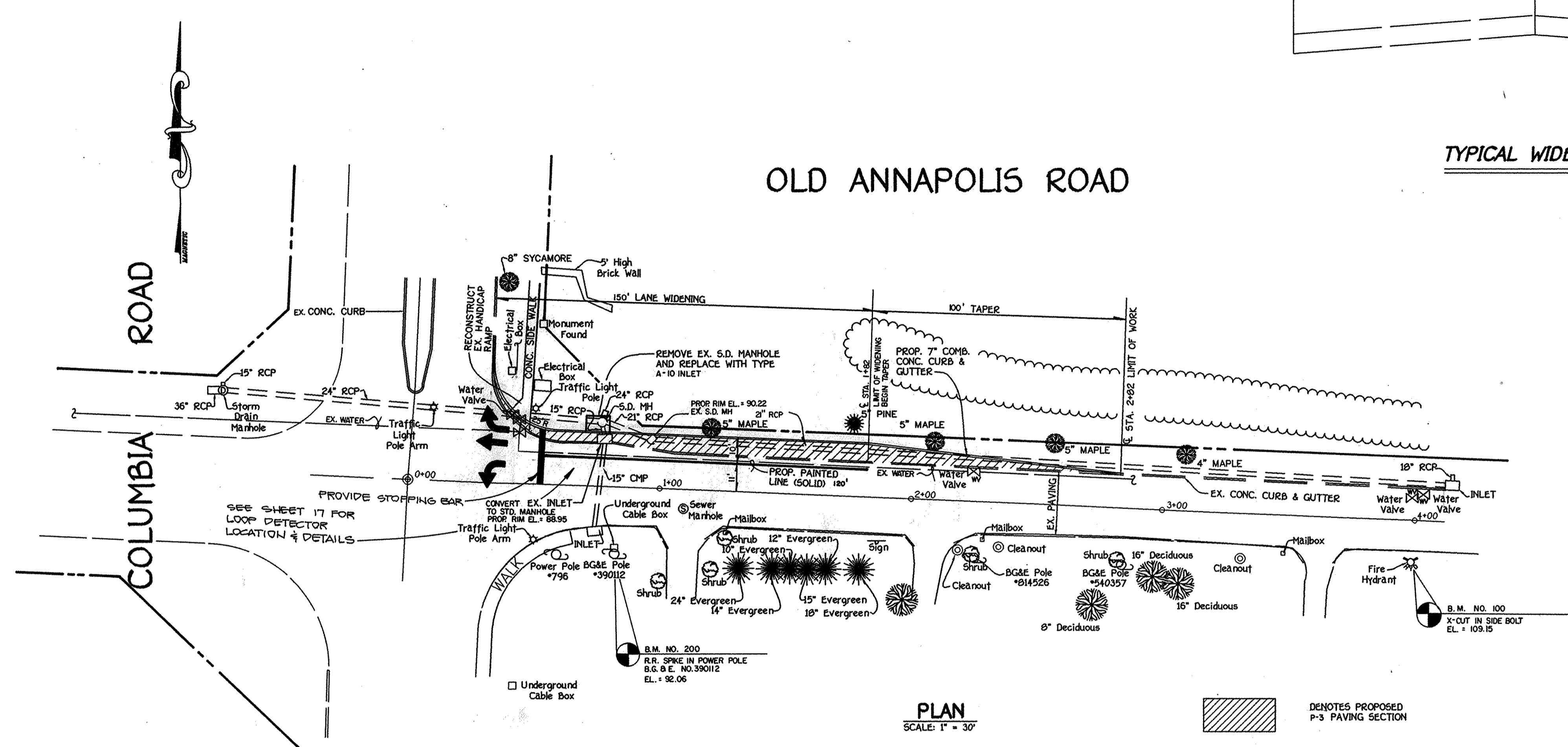
PLAN
 SCALE: 1" = 50'

FOREST CONSERVATION PLAN
THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
 ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 399
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUG. 7, 1998
 SHEET 15 OF 17



TYPICAL WIDENING SECTION (OLD ANNAPOLIS ROAD)
NO SCALE

OLD ANNAPOLIS ROAD



PLAN
SCALE: 1" = 30'

Denotes Proposed P-3 Paving Section

APPROVED DEPARTMENT OF PLANNING AND ZONING
Cindy Kamstra 1/25/99
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED DEPARTMENT OF PLANNING AND ZONING
[Signature] 1/26/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 1/27/99
 CHIEF, BUREAU OF HIGHWAYS

**THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 33**
 (A RESUBDIVISION OF LOTS 1, 2, 3, 4, 5, 6, 7 AND 8
 DEER PARK ESTATES, PLAT NO. 12580)
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

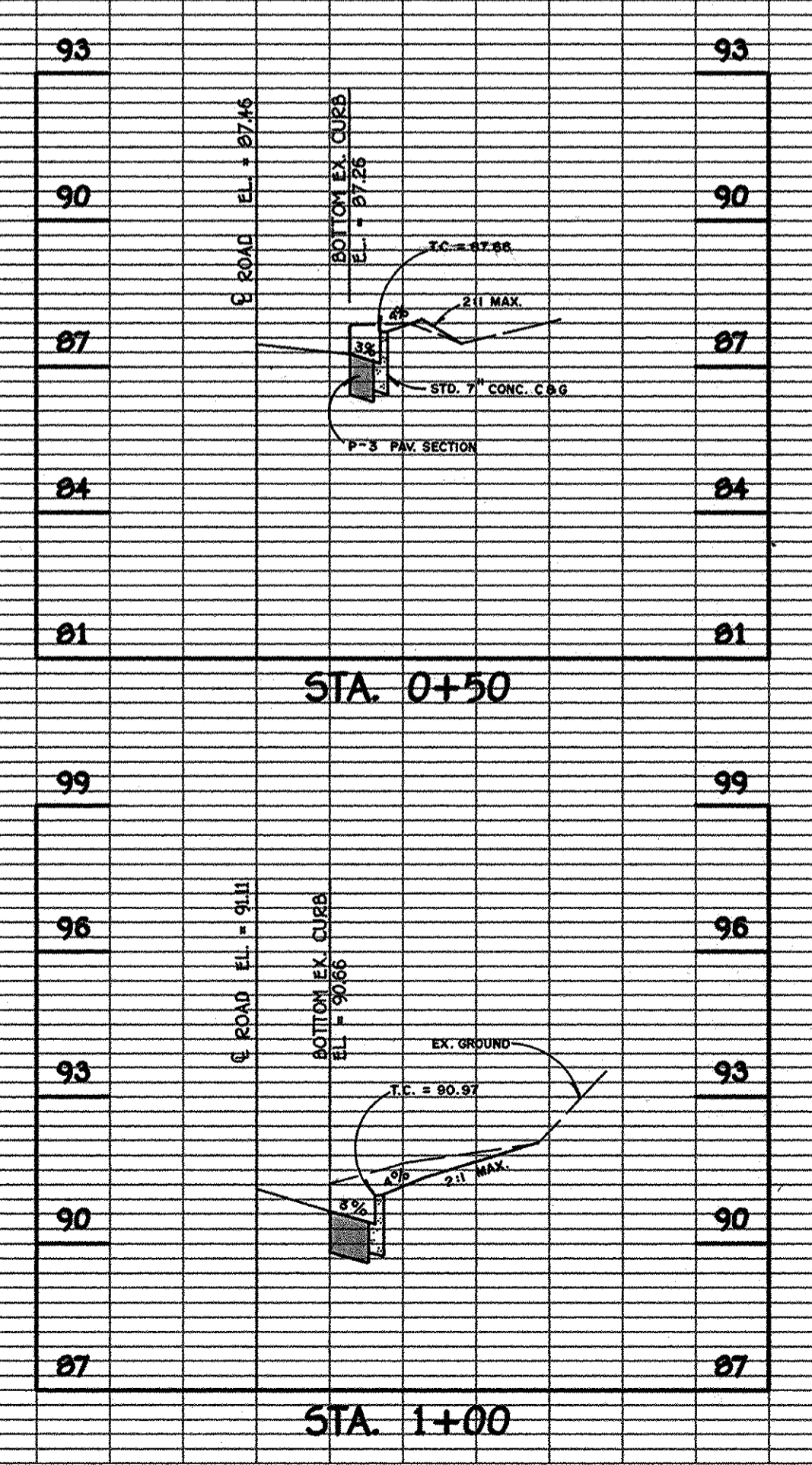
PROPOSED APFO MITIGATION PLAN

OWNERS
 MR. AND MRS. WILFRED PEREZ
 1800 OLD ANNAPOLIS ROAD
 ELICOTT CITY, MARYLAND 21042

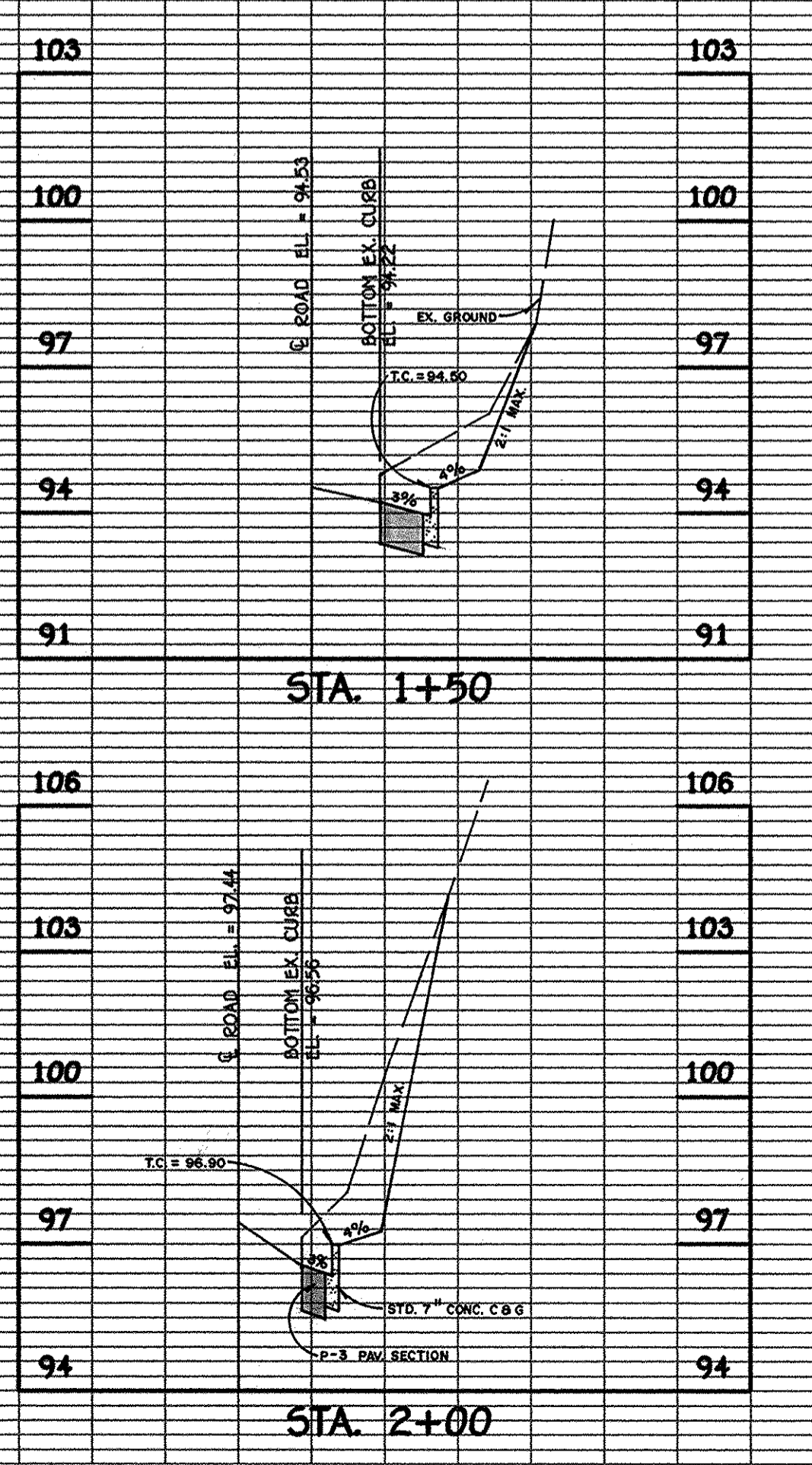
CONTRACT PURCHASER AND DEVELOPER
 CES, L.L.C. TRADING AS
 JONATHAN BUILDINGS
 1800 PEREZ ROAD
 ELICOTT CITY, MARYLAND 21042

SCALE: AS SHOWN **DATE: OCT. 21, 1998** **DWG. NO. 18 OF 17**
DES. A.M.V. **DRN. J.C.L./D.A.N.** **CHK. A.M.V.**

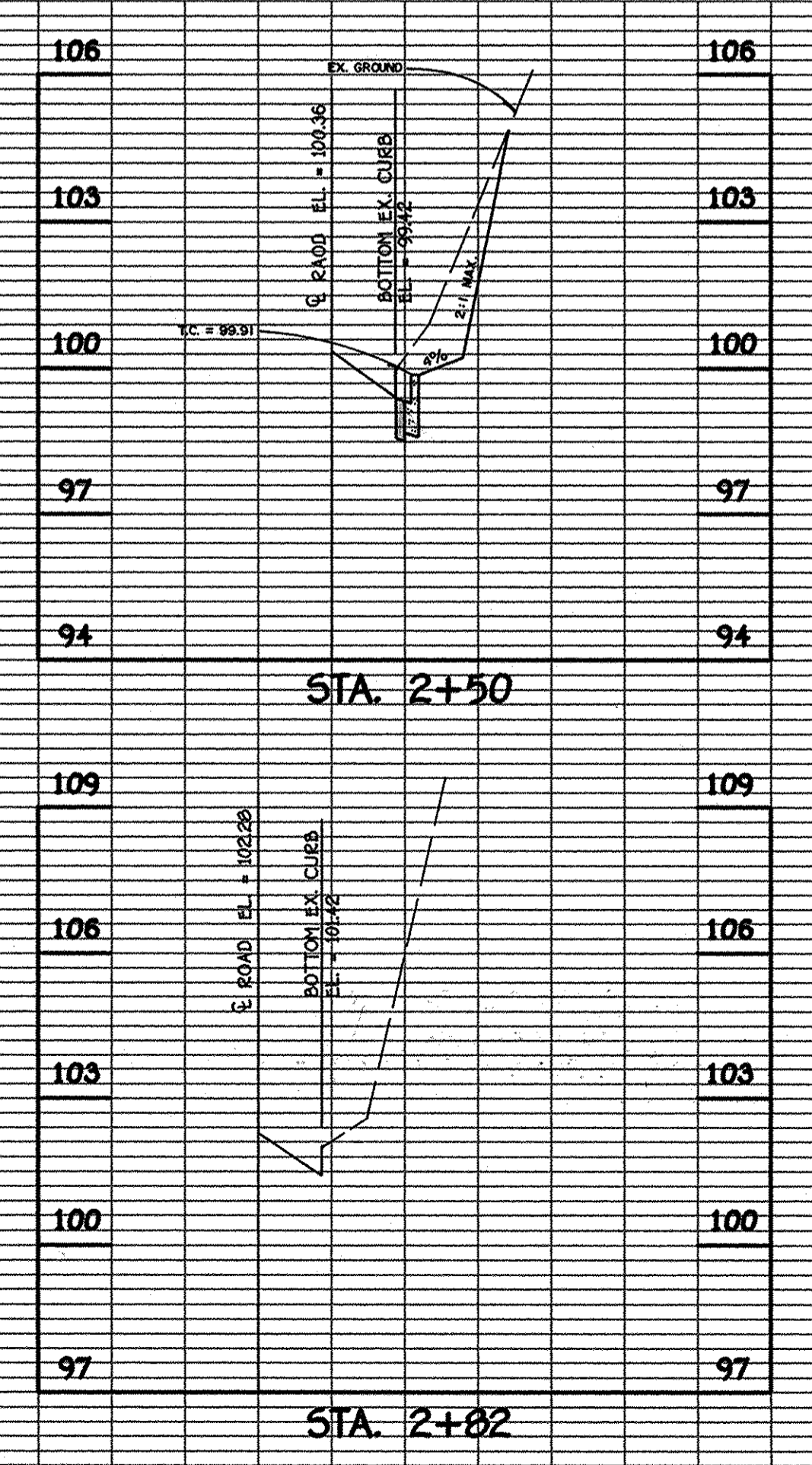
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 MD 402 - 2829



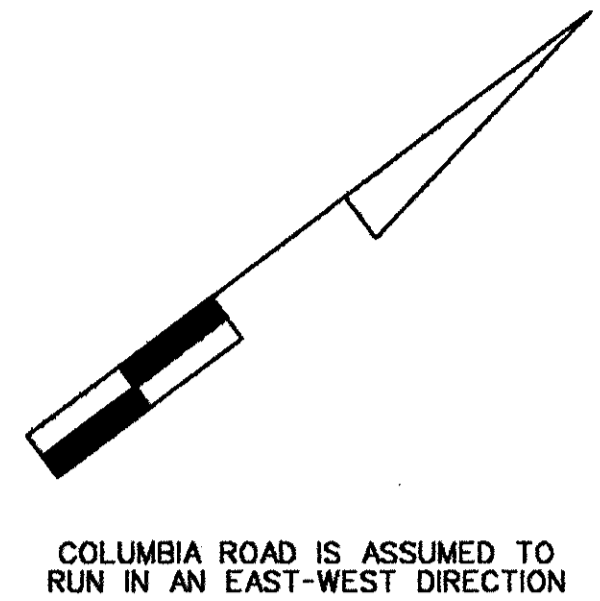
CROSS-SECTIONS
 SCALE: HOR: 1" = 30'
 VER: 1" = 3'



CROSS-SECTIONS
 SCALE: HOR: 1" = 30'
 VER: 1" = 3'



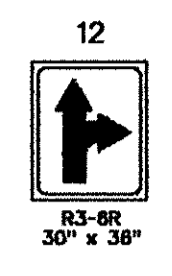
CROSS-SECTIONS
 SCALE: HOR: 1" = 30'
 VER: 1" = 3'



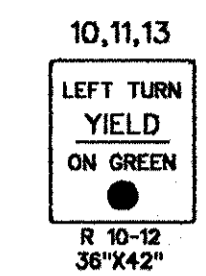
COLUMBIA ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

PHASE AND SEQUENCE DIAGRAM	SIGNAL HEADS				MIN. GREEN	PASSAGE	YELLOW	RED CLEAR	MAX. 1	SECONDS PER ACTUATION	TIME TO REDUCE TO RED CLEAR	MINIMUM REDUCED SPEED	MINIMUM GAP	RECALL	MEMORY
	1-2	4	3-5	6-8											
PHASE 1-6	R	G	G	R	5	1								OFF	OFF
PHASE 1-6 CLEAR	R	Y	G	R			4	0							
PHASE 2-6	G	G	G	R	10	5			55	2.5	5	10	3.5	OFF	ON
PHASE 2-6 CLEAR	Y	Y	Y	R			4	1							
PHASE 4-8	R	R	R	G	5	1			60					OFF	OFF
PHASE 4-8 CLEAR	R	R	R	R			4	1							
FLASH	FL/Y	FL/Y	FL/Y	FL/R											

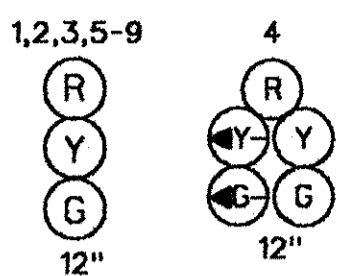
PROPOSED SIGN



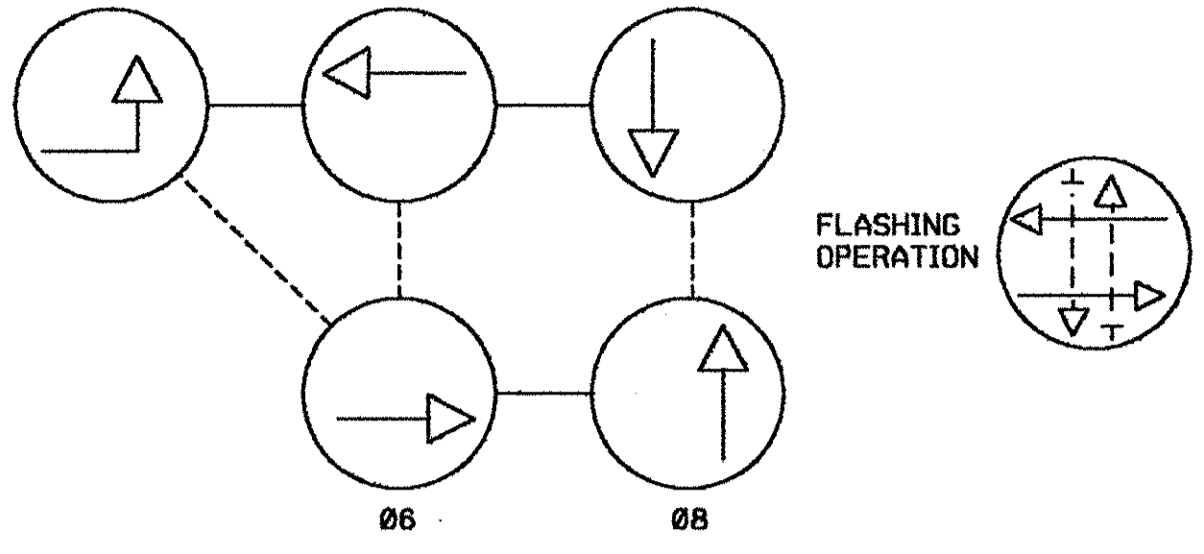
EXISTING SIGNS



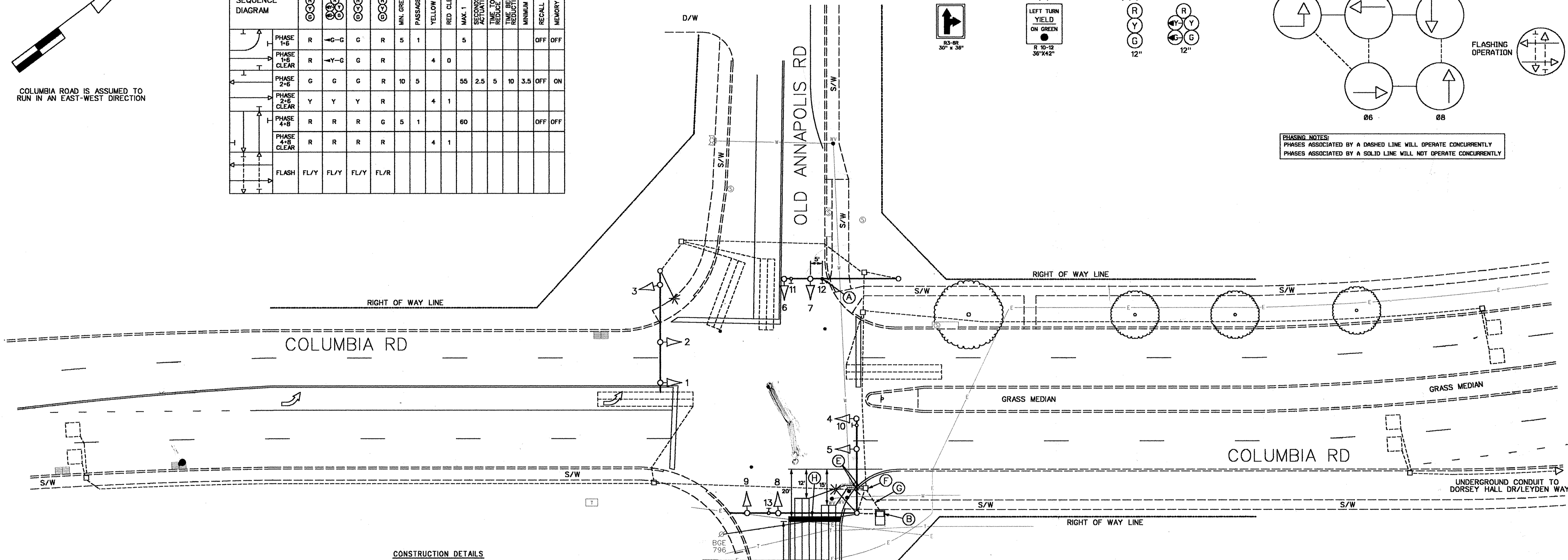
EXISTING SIGNALS



NEMA PHASING



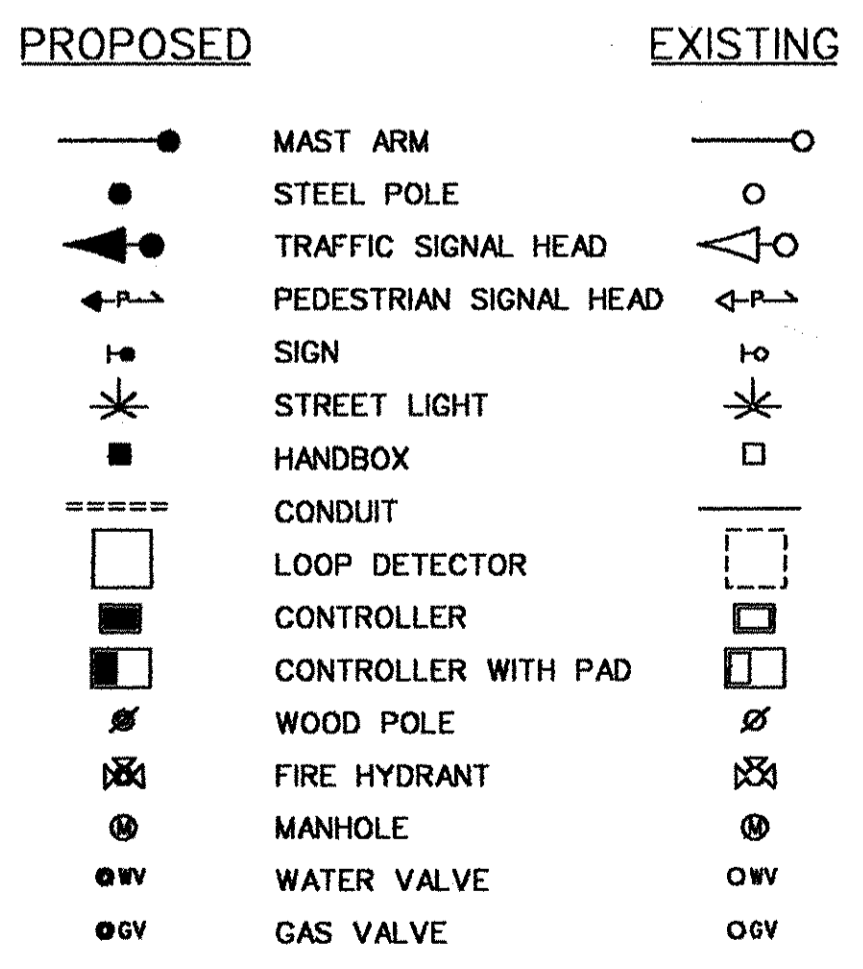
PHASING NOTES:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY



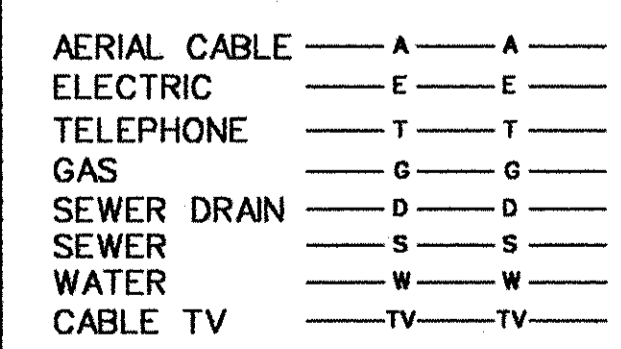
CONSTRUCTION DETAILS

- A. Install proposed sign as shown.
- B. Use existing base-mounted cabinet.
- C. Install 6' x 40' loop detector encased in 1/4" flexible tubing quadrupole type (2-4-2).
- D. Install 6' x 28' loop detector encased in 1/4" flexible tubing quadrupole type (2-4-2).
- E. Install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).
- F. Use existing handhole.
- G. Use existing conduit.
- H. Install pavement markings as shown.

LEGEND

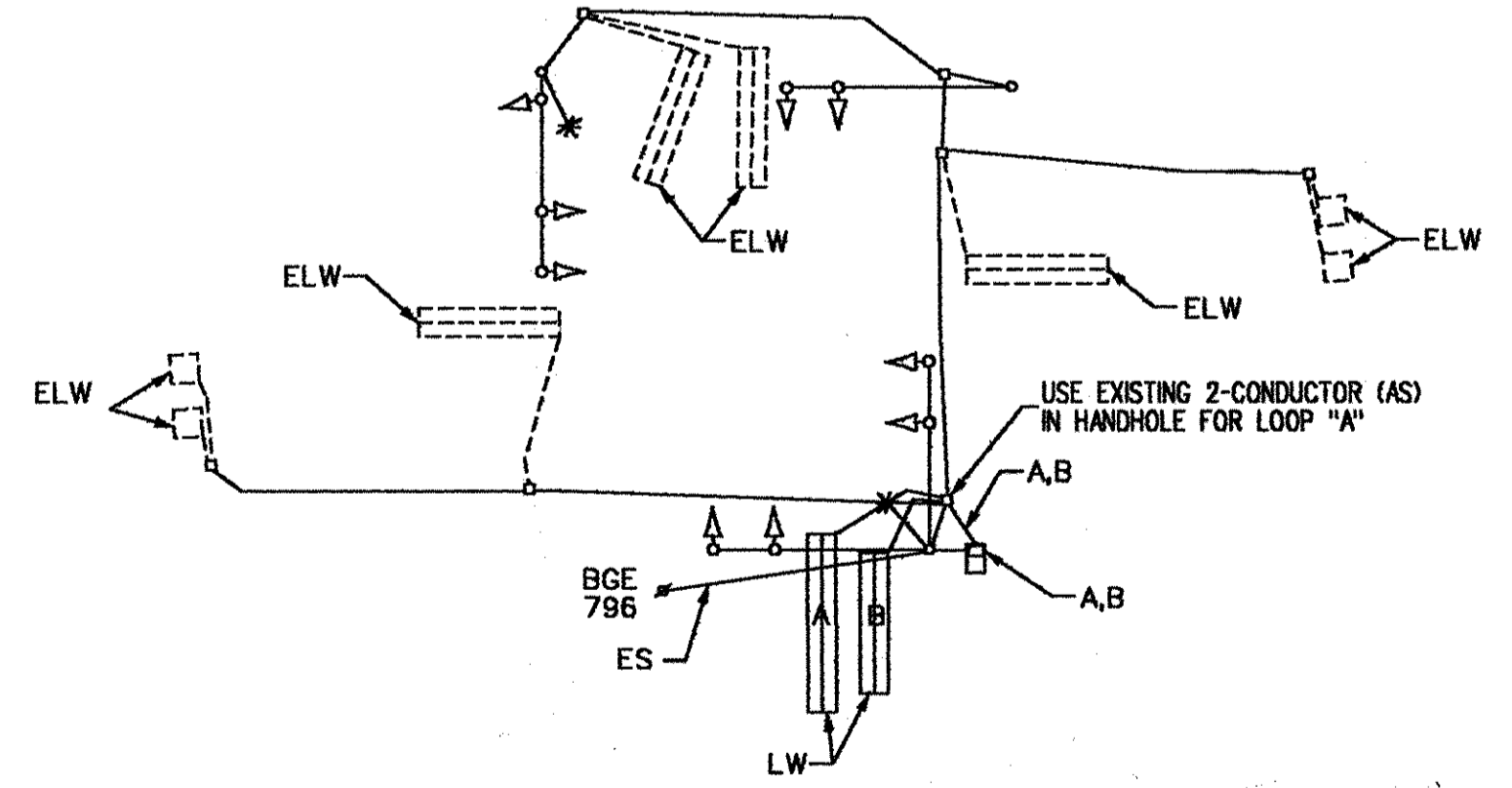


UTILITY LEGEND



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Deirdre Hamilton 1/28/99
 CHIEF, DIVISION OF LAND DEVELOPMENT
John Dammann 1/28/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

WIRING KEY
 A - USE EXISTING 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)
 B - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)
 LW - LOOP WIRE (NO. 14 A.W.G.)
 ELW - EXISTING LOOP WIRE (NO. 14 A.W.G.)
 ES - EXISTING OVERHEAD SERVICE TO BE MAINTAINED BY BGE
 NOTE: ALL EXISTING ELECTRICAL CABLES NOT SHOWN ARE TO BE MAINTAINED.

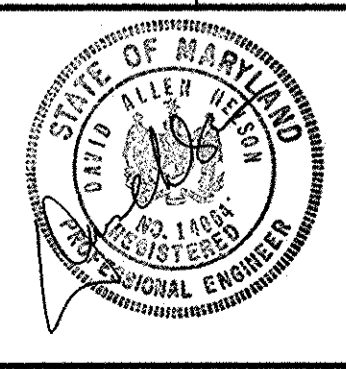


PROPOSED APFO MITIGATION PLAN
THE OVERLOOK AT CENTENNIAL PARK

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Jan A. Wilson 1/21/99
 DEPARTMENT OF PUBLIC WORKS DATE
William Z. Walker Jr. 1-12-99
 CHIEF, TRAFFIC ENGINEERING DIVISION DATE

Paul B. Szymon 1/19/99
 CHIEF, BUREAU OF ENGINEERING DATE
Leonard S. Shick 1/19/99
 CHIEF, BUREAU OF HIGHWAYS DATE

STREET TRAFFIC STUDIES, LTD.
 Gateway International
 1302 Concourse Drive, Suite 104
 Linthicum, Maryland 21090
 Ph (410) 859-3553
 Fax (410) 859-3579



DES: ZAYDEL	RFS	A	ASBULT	3/7/91
	RRZ	B	MODIFICATION TO TRAFFIC SIGNAL DUE TO GEOMETRIC CHANGES	1/4/98
DRN: ZAYDEL				
CHK:				
DATE: 5/18/88	BY	NO.	REVISION	DATE

CAPITAL PROJECT NO.
 600' SCALE MAP NO. DATE:

COLUMBIA ROAD AND OLD ANNAPOLIS ROAD

SCALE: 1" = 20'
 SHEET 17 OF 17

SHEET INDEX	
SHEET No.	DESCRIPTION
1	TITLE SHEET
2	OLD ANNAPOLIS ROAD PLAN AND PROFILE
3	NATALIES WAY PLAN AND PROFILE, JOHN RANDOLPH COURT PLAN
4	JOHN RANDOLPH COURT PLAN AND PROFILE
5	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
6	DRAINAGE AREA MAP AND LANDSCAPE PLAN
7	STORM DRAIN PROFILES
8	STORM DRAIN PROFILES
9	CROSS-SECTIONS (OLD ANNAPOLIS ROAD)
10	CROSS-SECTIONS (OLD ANNAPOLIS ROAD)
11	STORMWATER MANAGEMENT DETAILS
12	STORMWATER MANAGEMENT DETAILS
13	SEDIMENT CONTROL NOTES AND DETAILS
14	SEDIMENT CONTROL NOTES AND DETAILS
15	FOREST CONSERVATION PLAN
16	PROPOSED APFO MITIGATION PLAN
17	COLUMBIA ROAD & OLD ANNAPOLIS ROAD PLAN

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

THE OVERLOOK AT CENTENNIAL PARK

LOTS 9 THRU 34

(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8,
DEER PARK ESTATES, PLAT NO. 12580)

ZONED: R-20

TAX MAP NO. 24 GRID NO. 21

PART OF PARCEL NO. 399

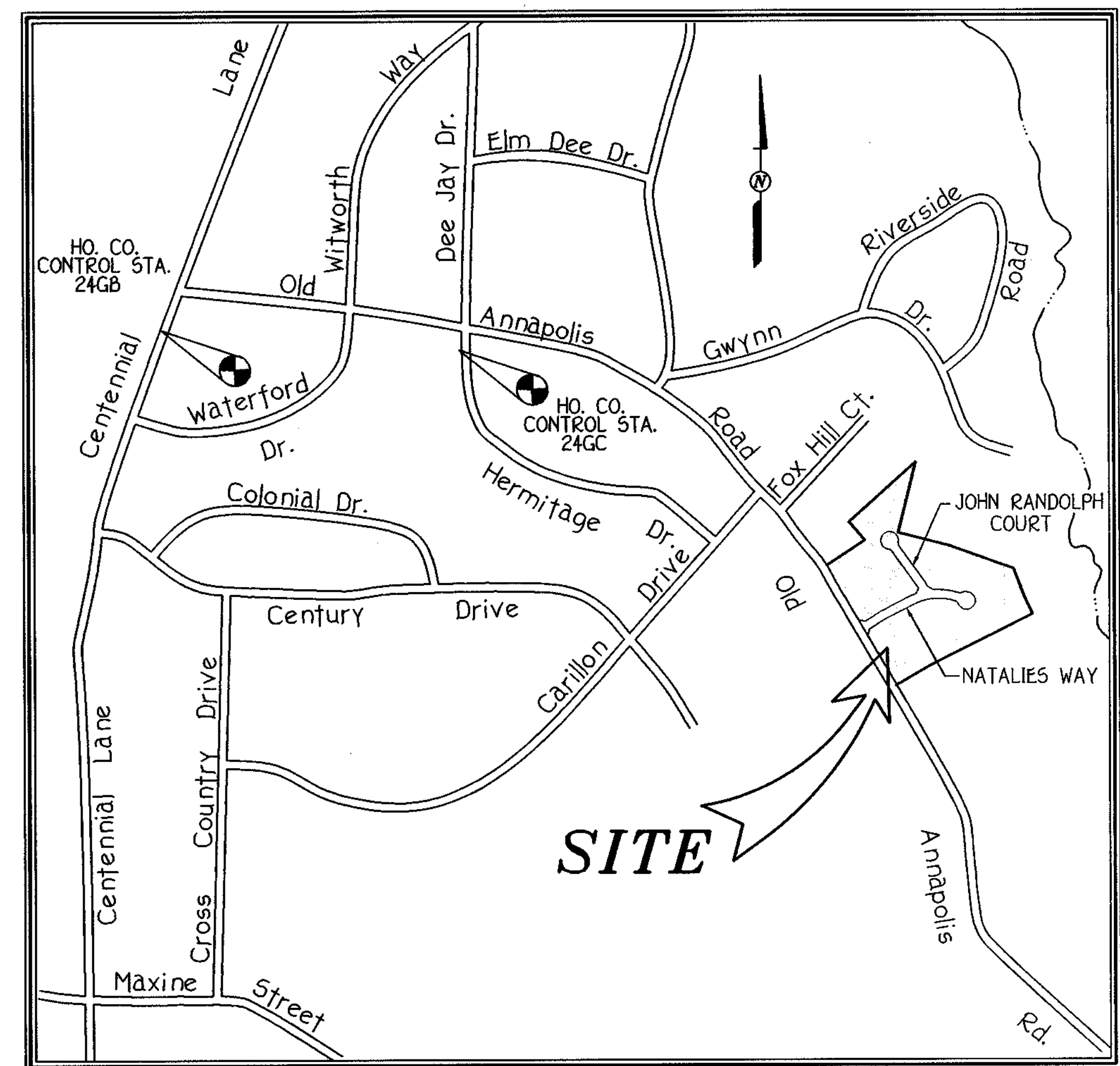
APPROVED: DEPARTMENT OF PUBLIC WORKS
Aldo Michael Vitucci 1-8-99
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Hamilton 1/28/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Bill Dorman 1/22/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

TRAFFIC CONTROL SIGNS				
ROAD	CL. STA.	OFFSET	POSTED SIGN	SIGN CODE
NATALIES WAY	0+45	10'L	STOP	RS-1
NATALIES WAY	1+00	14'L	STOP AHEAD	WS-12
NATALIES WAY	1+00	14'R	HILL 1LS	W7-16
JOHN RANDOLPH COURT	0+30	14'E	STOP	RS-1

ROAD CLASSIFICATION CHART			
ROAD	CLASSIFICATION	R/W WIDTH	CL. STA.
NATALIES WAY	ACCESS STREET	50'	0+00 TO 2+56.83
NATALIES WAY	ACCESS STREET	40'	2+56.83 TO 4+34.66
NATALIES WAY	ACCESS PLACE (PUBLIC)	40'	4+34.66 TO 6+72.36
JOHN RANDOLPH COURT	ACCESS PLACE (PUBLIC)	40'	0+00 TO 3+74.16



- ### GENERAL NOTES
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 - TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
 - STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)".
 NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
 - THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO (2) FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED MAY 2, 1998.
 - THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT Nos. 24GB AND 24GC WERE USED FOR THIS PROJECT.
 24GB N 176500.7269 (meters)
 E 41815.5048 (meters)
 24GC N 176439.5796 (meters)
 E 412127.2125 (meters)
 - WATER IS PUBLIC, CONTRACT No. 24-3698-D AND THE DRAINAGE AREA IS THE LITTLE PATUKENT.
 - SEWER IS PUBLIC, CONTRACT No. 24-3698-D AND THE DRAINAGE AREA IS THE LITTLE PATUKENT.
 - S.W.M. WILL BE PROVIDED BY A PUBLIC FACILITY LOCATED ON OPEN SPACE LOT 22. WATER QUALITY IS PROVIDED BY A WET POOL DESIGN AND QUANTITY MANAGEMENT IS PROVIDED BY DETENTION.
 - EXISTING UTILITIES ARE BASED ON CONT. No. 801-W & 5 AND CONT. No. 24-3226-D.
 - THERE IS NO FLOODPLAIN ON THIS SITE.
 - THERE ARE NO WETLANDS ON THIS SITE.
 - THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY STREET TRAFFIC STUDIES, DATED 11-27-96, AND WAS APPROVED ON 2/4/97 UNDER 597-03. AN ADDENDUM TO THE TRAFFIC STUDY WAS SUBMITTED ON MAY 1998.
 - BACKGROUND INFORMATION:
 A. SUBDIVISION NAME: THE OVERLOOK AT CENTENNIAL PARK
 B. TAX MAP NO.: 24
 C. PARCEL NO.: 399
 D. ZONING: R-20
 E. ELECTION DISTRICT: SECOND
 F. TOTAL TRACT AREA: 14.215 AC.
 G. NO. OF BUILDABLE LOTS: 23
 H. NO. OF OPEN SPACE LOTS: 3
 * I. OPEN SPACE REQUIRED: (MIN. LOT SIZE 16,000 SQ. FT.) = 11,249 x 20% = 2,250 AC*
 J. OPEN SPACE PROVIDED: 2,316 AC*
 K. RECREATIONAL OPEN SPACE REQUIRED: 20 LOTS x 200 SQ. FT. / LOT = 4,000 SQ. FT.
 L. RECREATIONAL OPEN SPACE PROVIDED: 5,372 SQ. FT.
 M. PRELIMINARY PLAN APPROVAL DATE: 1-22-98 (P98-13)
 N. PREVIOUS FILE Nos.: F97-63, 597-03, P98-13 & W98-126.
 - REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF THE PIPE / FLAG STEM AND THE ROAD R/W AND NOT ONTO THE PIPE / FLAG STEM DRIVEWAY.
 - NO CEMETERIES EXIST ON THE PROPERTY.
 - FOREST STAND DELINEATION PROVIDED BY EXPLORATION RESEARCH, INC. APPROVED ON 2/4/97 (597-03).
 - FOREST CONSERVATION PLAN APPROVED UNDER P98-13.
 - 20, LOTS 31, 32 AND 33 ARE INCLUDED IN THIS SUBDIVISION FOR THE PURPOSE OF A LOT LINE ADJUSTMENT. THE AREA OF LOTS 31 - 33 IS NOT COUNTED TOWARDS OPEN SPACE OBLIGATIONS.

STREET LIGHT CHART			
DWG. No.	STREET NAME	STATION	OFF-SET
3	OLD ANNAPOLIS ROAD	0+33	26'R
3	NATALIES WAY	4+55	15'L
4	JOHN RANDOLPH COURT	LP. STA. 1+92	3'
3	NATALIES WAY	LP. STA. 1+10	3'
3	NATALIES WAY	CL. STA. 5+25	9'R
4	JOHN RANDOLPH COURT	CL. STA. 2+50	9'L

NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

VICINITY MAP
 SCALE 1" = 600'

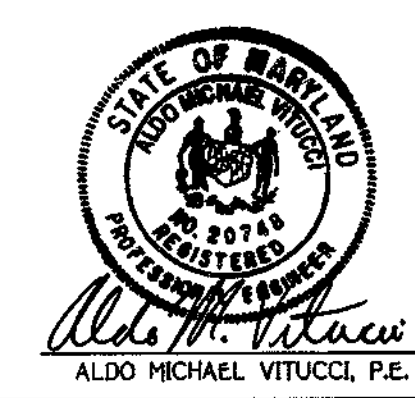
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

MINIMUM LOT SIZE CHART			
Lot No.	Gross Area	Pipesstem Area	Minimum Lot Size
28	18,592 Sq.Ft.	2,148 Sq.Ft.	15,444 Sq.Ft.
29	18,343 Sq.Ft.	2,161 Sq.Ft.	16,182 Sq.Ft.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 481-2395

OWNERS
 MR. AND MRS. WILFREDO PEREZ
 9830 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. WILLIAM GABLE
 9820 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

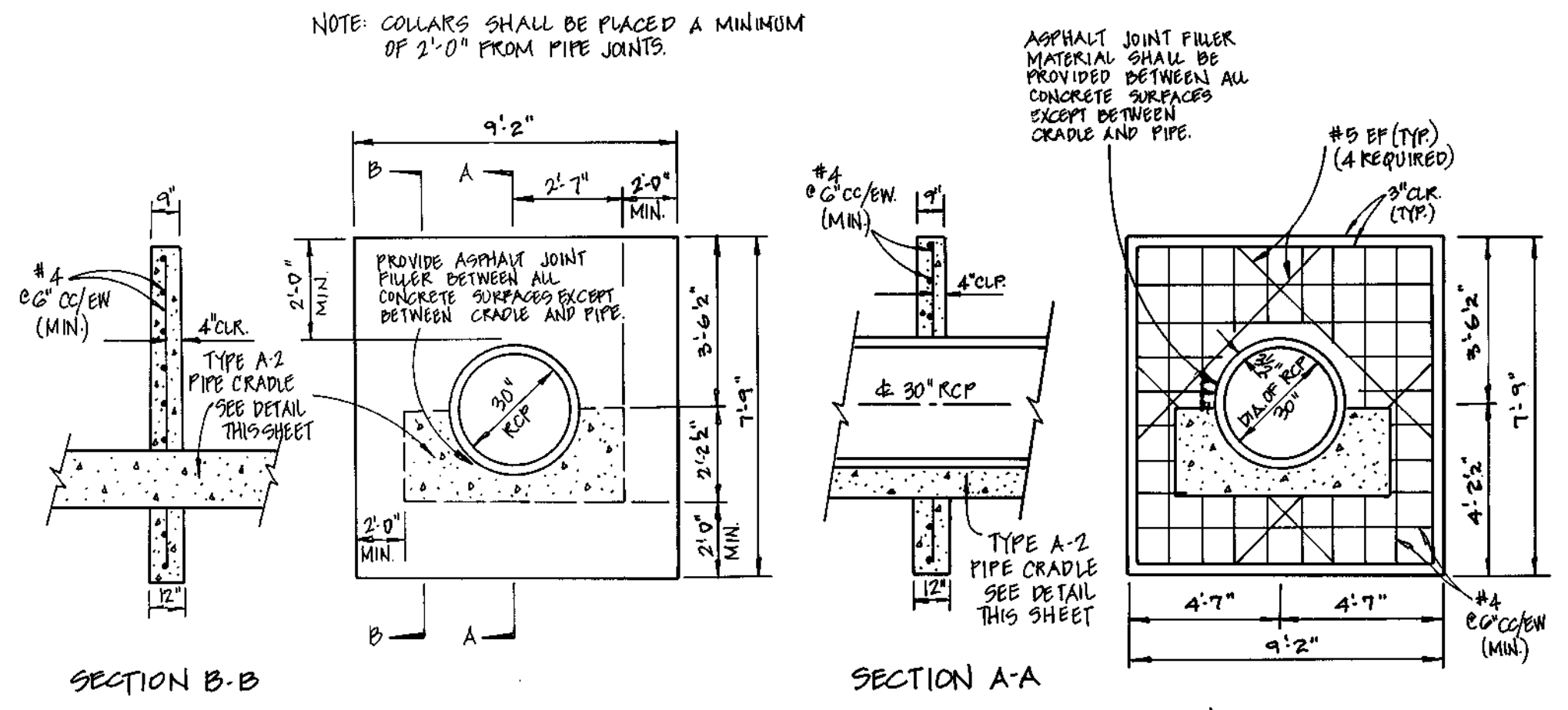
CONTRACT PURCHASER AND DEVELOPER
 DONALD GREGORY COLE, et al
 9810 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 C.S.T.L.C. TRADING AS
 JAMESTOWN BUILDERS
 10801 ROCKY RIDGE ROAD
 SUITE 210
 COLUMBIA, MARYLAND 21044



Aldo Michael Vitucci
 ALDO MICHAEL VITUCCI, P.E.
 10-9-98
 DATE

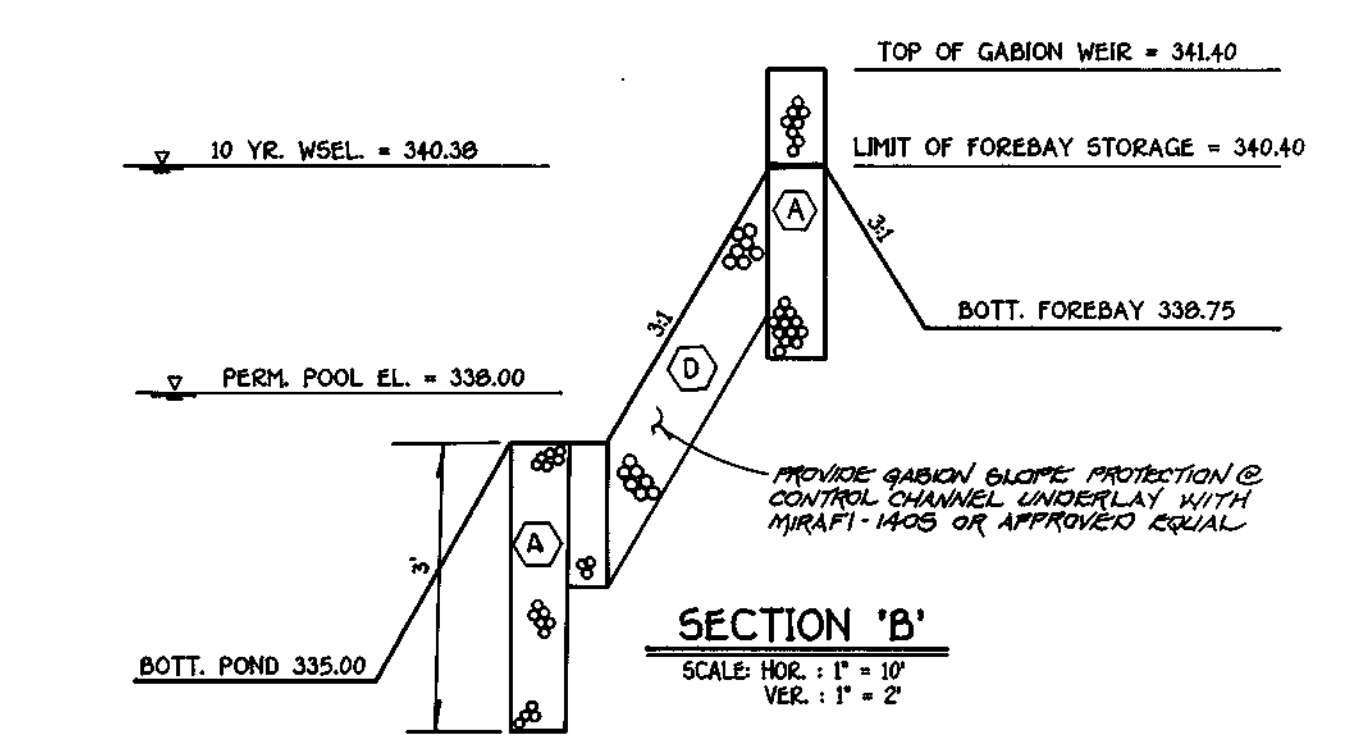
THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)

ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 399
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUGUST 7, 1998
 SHEET 1 OF 17

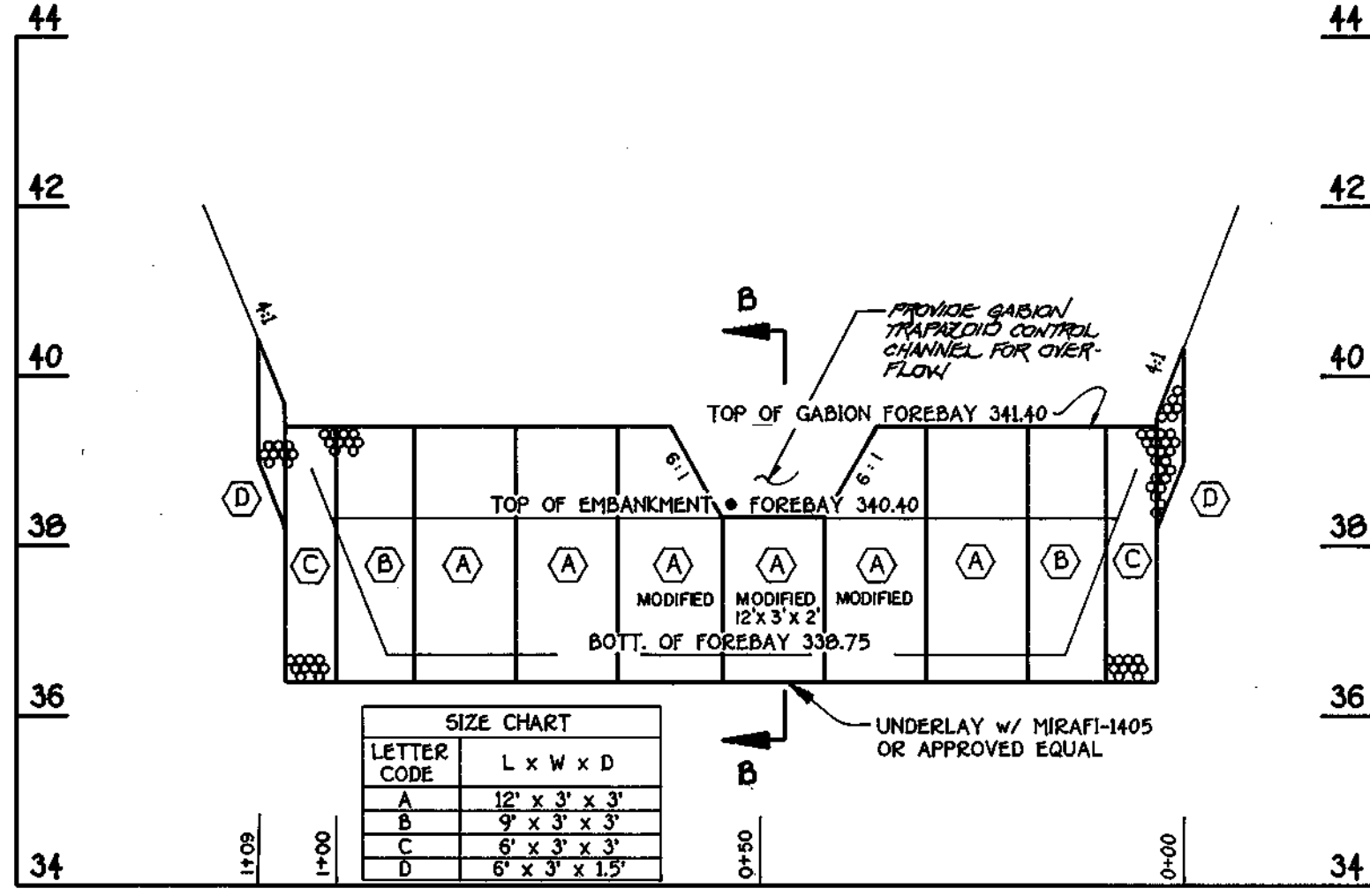


TYPICAL SECTION THROUGH BARREL, CRADLE & ANTI-SEEP COLLAR
NOT TO SCALE

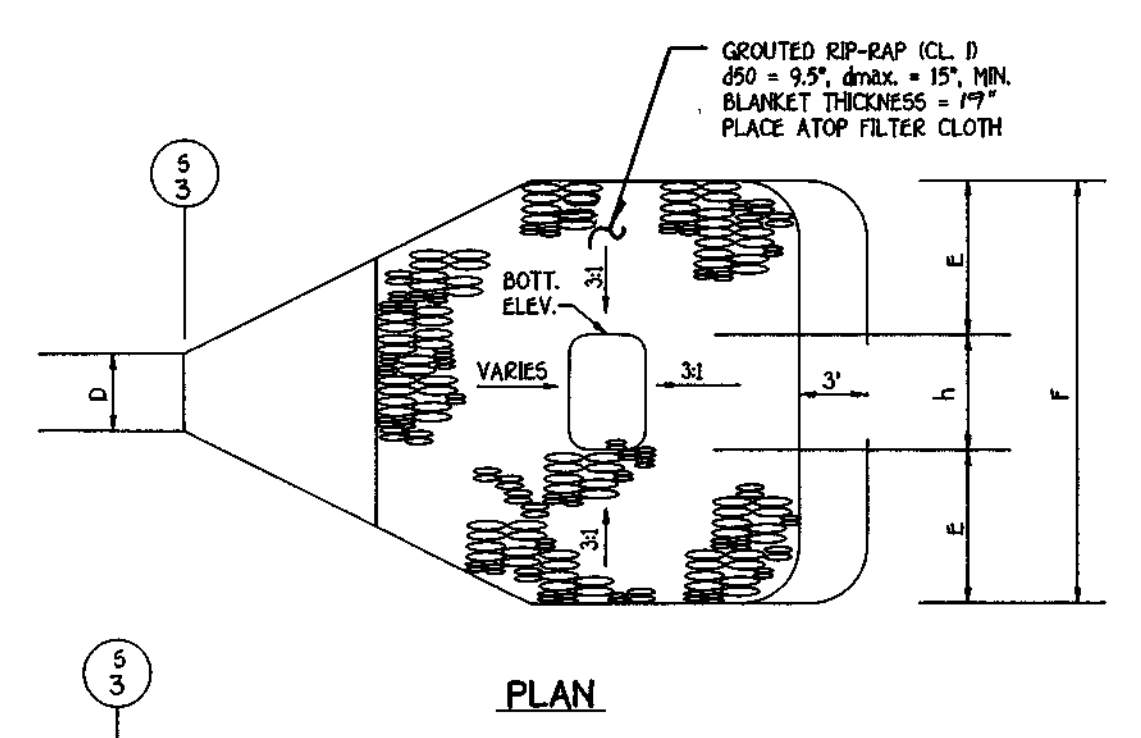
- NOTES:
1. CONCRETE SHALL BE MSHA MIX NO. 3 (FC > 3,500 P.S.I.)
 2. REINFORCING STEEL = GRADE 60
 3. FOR WALLS OF STRUCTURE SHALL UTILIZE L.H. SCOFIELD CO. FORM LINERS (RANDOM SPLIT-FACE ROCK) (OPTIONAL)
 4. PROVIDE ROUGH BROOM FINISH
 5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECIFICATIONS.
 6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS SHOWN OTHERWISE.



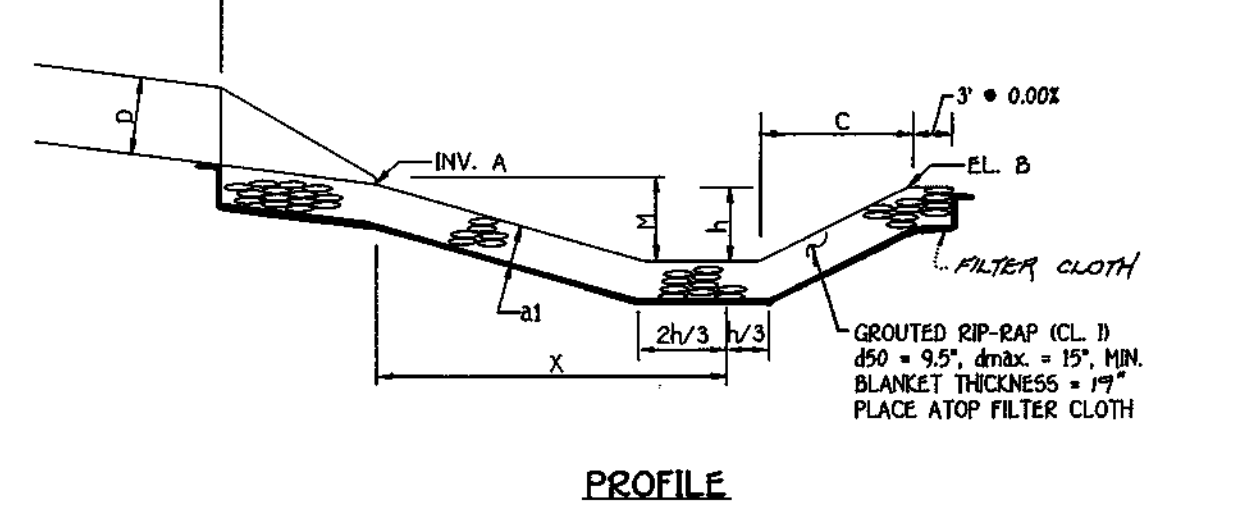
SECTION 'B'
SCALE: HOR. 1" = 10'
VER. 1" = 2'



FOREBAY PROFILE
SCALE: HOR. 1" = 20'
VER. 1" = 2'



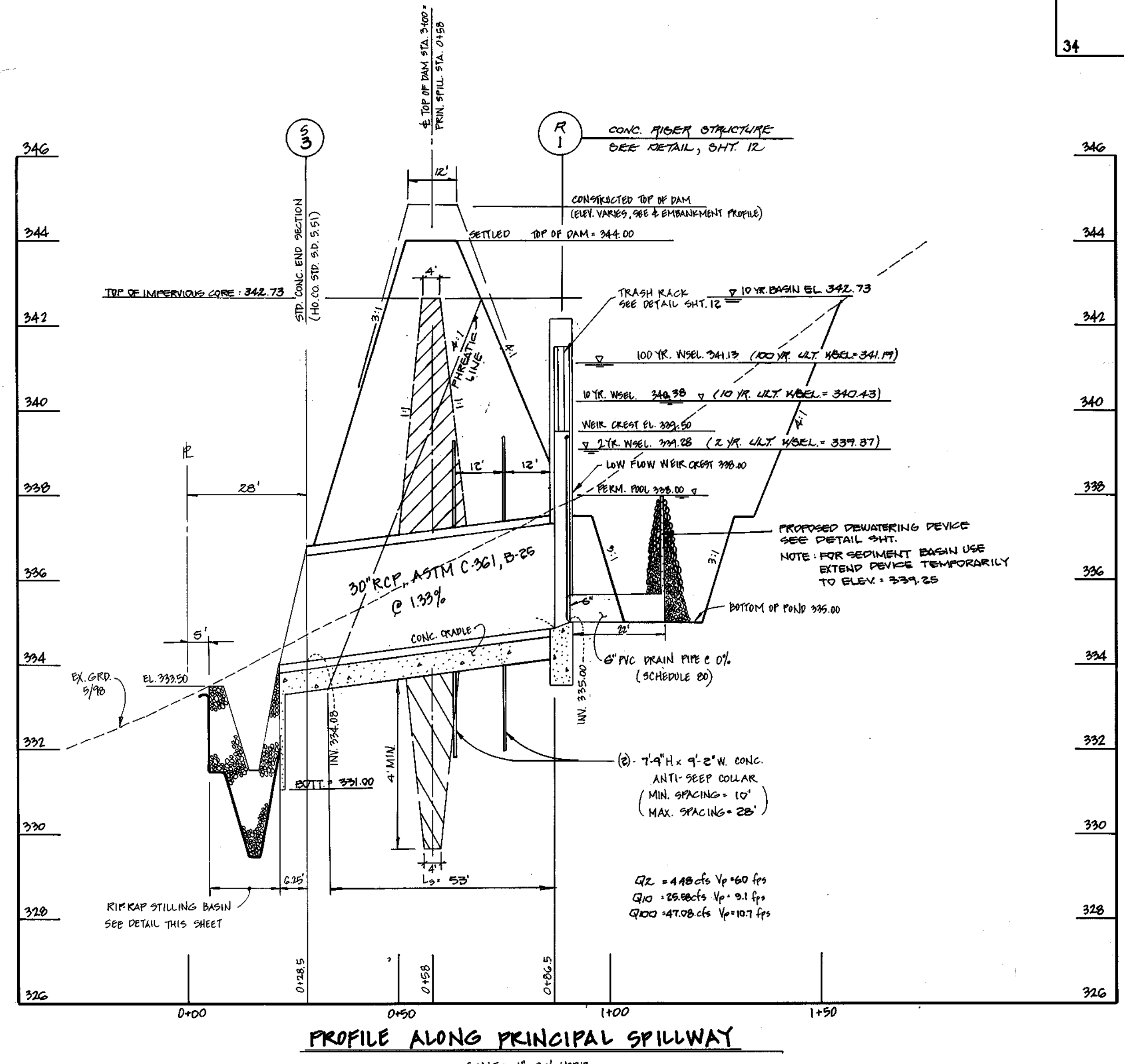
PLAN



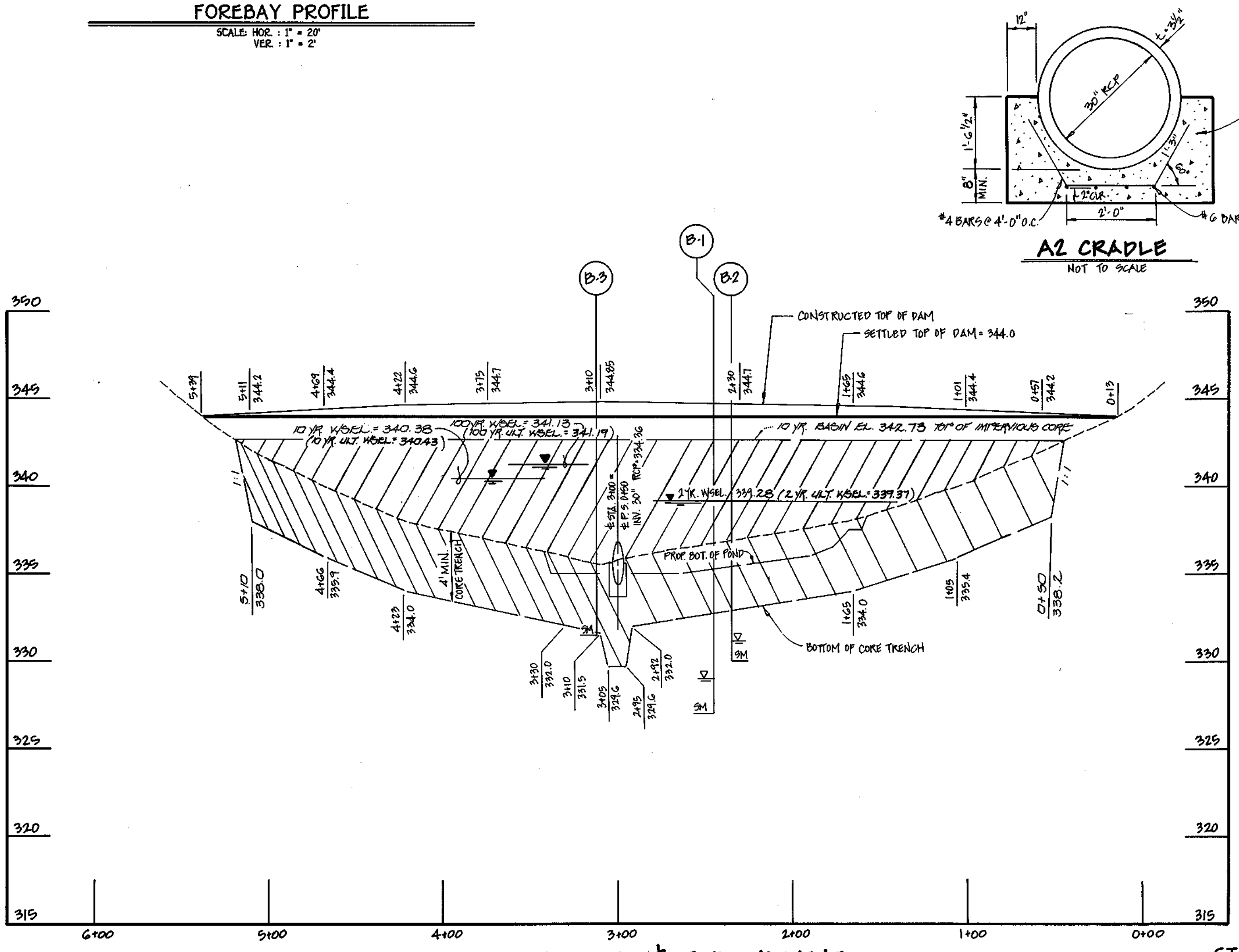
PROFILE

STILLING BASIN OUTFALL DETAIL • S-3
NO SCALE

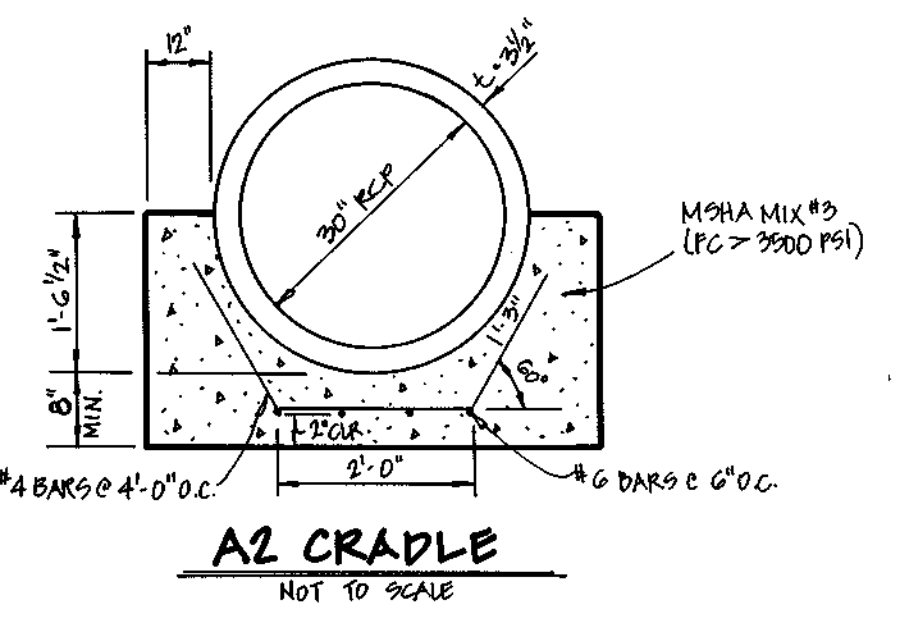
STILLING BASIN DATA										
STRUCTURE NO.	INV.	EL.	C	D	E	F	H	M	at	X
S-3	334.00	333.50	6.0'	2.5'	6.0'	14.0'	2.0'	2.5'	2.0'	6.0'



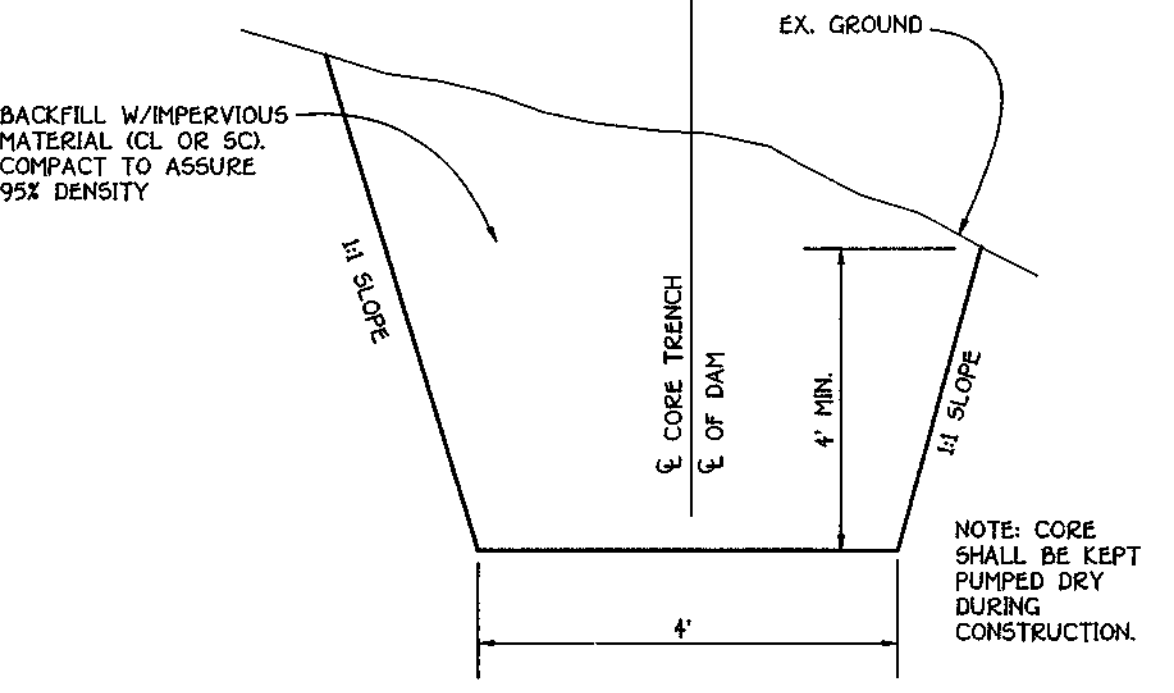
PROFILE ALONG PRINCIPAL SPILLWAY
SCALE: 1" = 20' HORIZ.
1" = 2' VERT.



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



A2 CRADLE
NOT TO SCALE



CORE TRENCH DETAIL
NOT TO SCALE

AS-BUILT CERTIFICATION
I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" Plans and meets the approved plans and specifications.

Signature _____ P.E. No. _____
Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

By The Developer:
"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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And 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: *Charles C. ...* Date: 12-8-98
Printed Name Of Developer: _____

By The Engineer:
"I Certify That The Plans For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Reviewed The Plans With The Requirements Of The Howard Soil Conservation District. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Within 30 Days Of Completion."

Signature: *...* Date: 5-19-99
Printed Name Of Engineer: _____

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.

Signature: *...* Date: 12/15/98
Printed Name Of Engineer: _____
USDA-Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: *...* Date: 10/15/98
Printed Name Of Engineer: _____
Howard Soil Conservation District

Approved Department Of Public Works
Signature: *...* Date: 1-8-99
Printed Name Of Engineer: _____
Chief, Bureau Of Highways

Approved Department Of Planning And Zoning
Signature: *...* Date: 1/25/99
Printed Name Of Engineer: _____
Chief, Division Of Land Development

Signature: *...* Date: 1/22/99
Printed Name Of Engineer: _____
Chief, Development Engineering Division

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
4100 461 - 3292

OWNERS

MR. AND MRS. WILFREDO PEREZ
9830 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

MR. WILLIAM GABLE
9820 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

MR. DONALD GREGORY COLE, ET AL
9830 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

MR. AND MRS. HENRY MATTHEWS
9800 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER

C.S.T.L.C. TRADING AS
JAMESTOWN BUILDERS
10801 HICKORY RIDGE ROAD
SUITE 210
COLUMBIA, MARYLAND 21044

STORMWATER MANAGEMENT DETAILS
THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34
(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
ZONED R-20
TAX MAP NO. 24 GRID NO. 21
PART OF PARCEL NO. 359
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET 11 OF 17

BORING NO. 1

Table with 4 columns: ELEVATION, DEPTH, DESCRIPTION OF MATERIALS, REMARKS. Data includes elevation 338.50, depth 11.5, and bottom of hole at 11.5'.

BORING NO. 2

Table with 4 columns: ELEVATION, DEPTH, DESCRIPTION OF MATERIALS, REMARKS. Data includes elevation 341.50, depth 11.5, and bottom of hole at 11.5'.

BORING NO. 3

Table with 4 columns: ELEVATION, DEPTH, DESCRIPTION OF MATERIALS, REMARKS. Data includes elevation 341.50, depth 10.0, and bottom of hole at 10.0'.

378 - 12 Pond

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans.

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.

Earth Fill

Material: The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones, frozen or other objectionable materials.

Placement: Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers.

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.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/-2 of the optimum.

Cut Off Trench: The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans.

Structure Backfill

Backfill adjacent to pipes or structures 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 tampers or other manually directed compaction equipment.

Pipe Conduits

All pipes shall be circular in cross section.

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

- 1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.
2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length.
3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream.
4. Backfilling shall conform to "Structure Backfill".
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

- 1. Material-PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.
2. Joints and connections to anti-seep collars shall be completely watertight.
3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length.
4. Backfilling shall conform to "Structure Backfill".
5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 606; MIX No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be controlled and placed in a manner that will insure the riprap in place shall reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works.

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 berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations shall be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution minimized. State and local laws concerning pollution abatement will be followed.

STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

A. ROUTINE MAINTENANCE

- 1. Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September.
3. Debris and litter near the outlet structure shall be removed during regular mowing operations and as needed.
4. Visible signs of erosion in the pond as well as rip-rap putlet area shall be repaired as soon as it is noticed.

B. NON-ROUTINE MAINTENANCE

- 1. Structural components of the pond such as the dam, spillway riser structure and the pipes shall be inspected upon the detection of any damage.
2. Sediment should be removed when it has accumulated 6 inches of depth within the facility, or when deemed necessary by the Howard County's Department of Public Works.

By The Developer:

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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project.

Signature of Developer: [Signature] Date: 12-8-98

By The Engineer:

I Certify That This Plan And Construction, Erosion And Sediment Control Represents A Practical And Workable Solution 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 District Of My Intent To Undertake The Work And Have Obtained The District's Approval For Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorized On-Site Inspections By The Howard Soil Conservation District.

Signature of Engineer: [Signature] Date: 5-17-99

Printed Name Of Engineer: Cheryl Simms, Inc. Date: 12/15/98

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: [Signature] Date: 12/15/98

Signature: [Signature] Date: 6-8-99

Signature: [Signature] Date: 1/25/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

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Signature: [Signature] Date: 1/22/99

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Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

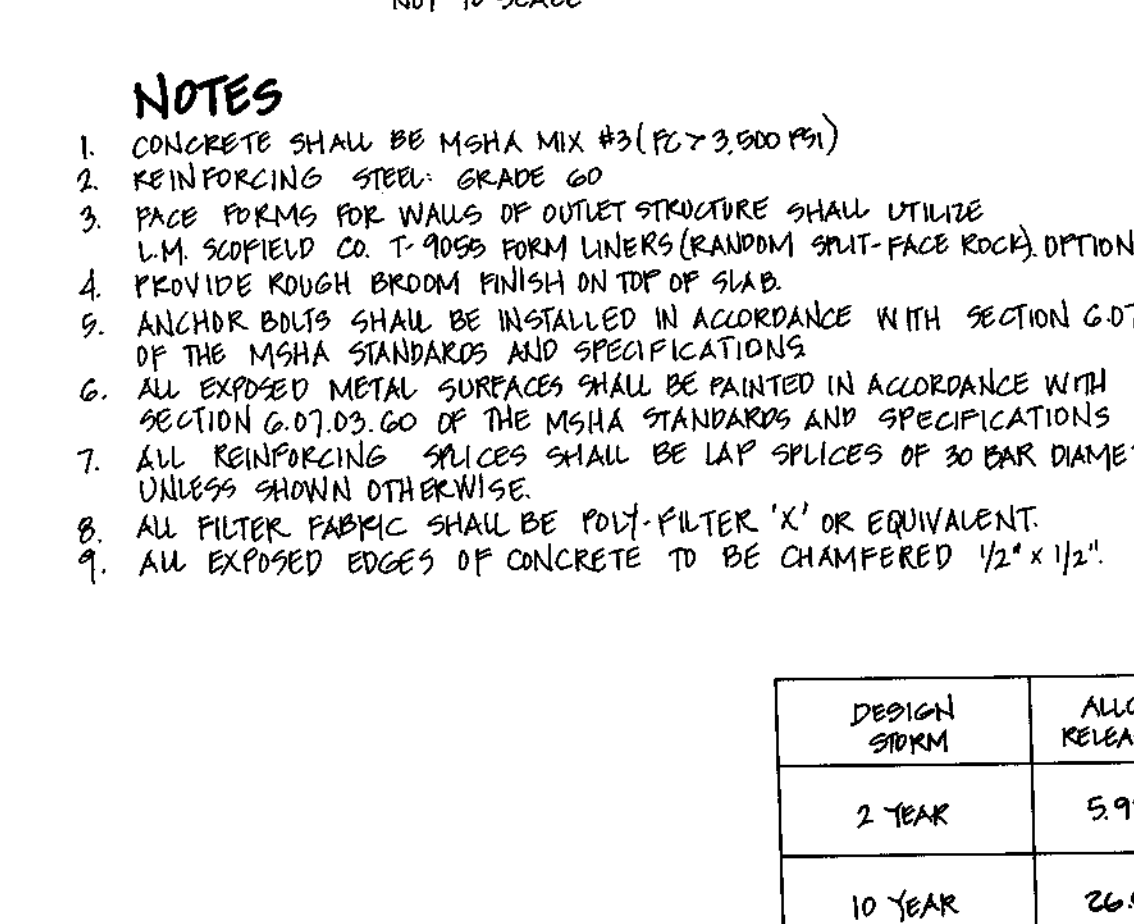
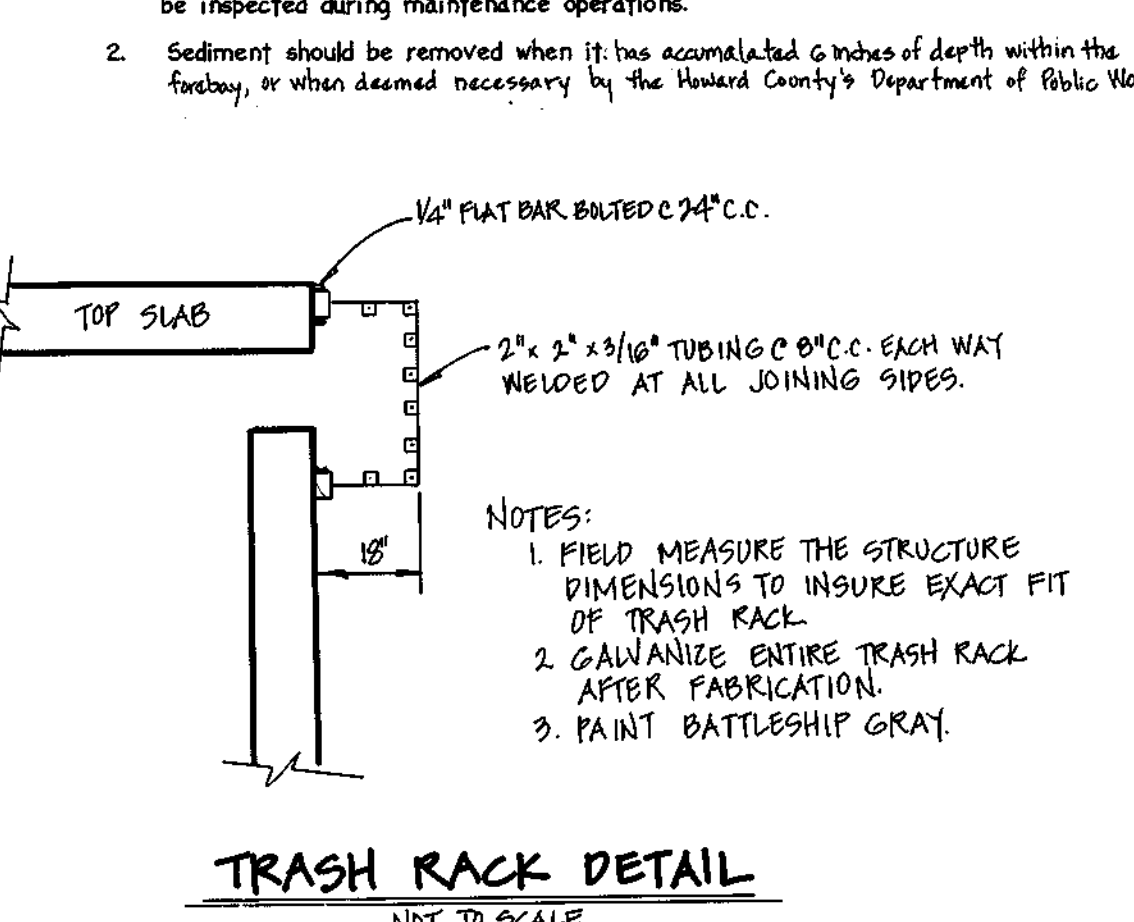
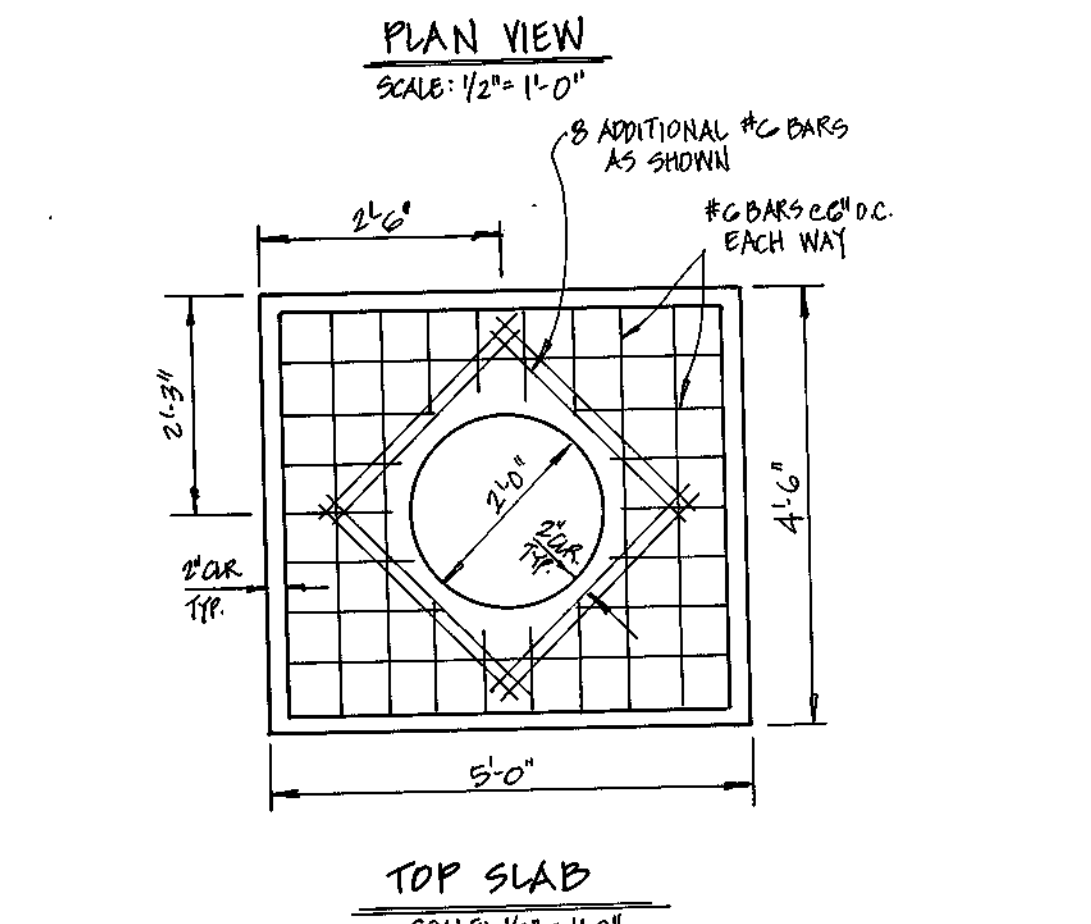
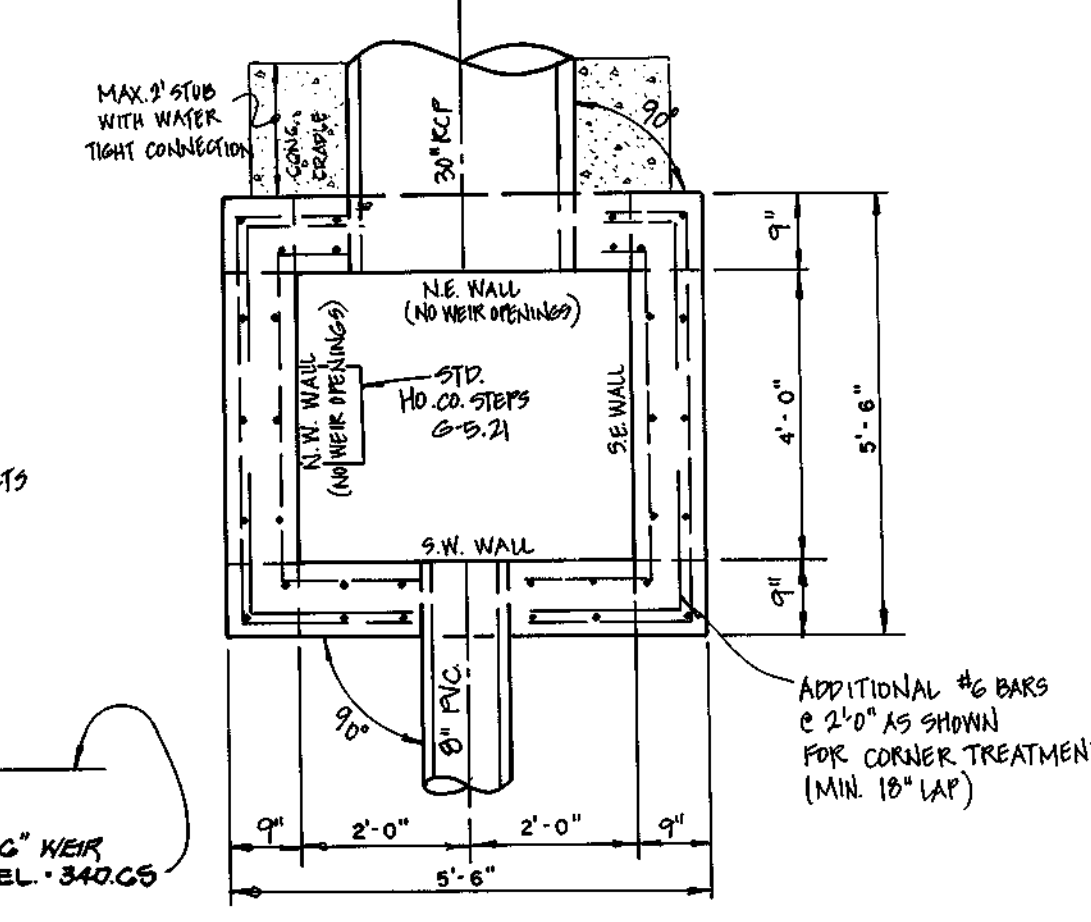
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Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99

Signature: [Signature] Date: 1/22/99



DESIGN SUMMARY table with columns: DESIGN STORM, ALLOWABLE RELEASE RATE, FACILITY INFLOW, FACILITY DISCHARGE, WATER SURFACE ELEVATION, STORAGE VOLUME (AC.FT.).

OPERATION, MAINTENANCE AND INSPECTION: Inspection of the ponds shown herein shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS Standards and Specifications for Ponds (MD-378).

DESIGNER: FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

OWNER: MR. AND MRS. WILFREDO PEREZ, DONALD GREGORY COLE, et al

CONTRACT PURCHASER AND DEVELOPER: C.E.T.L. TRADING AS JAMESTOWN BUILDINGS

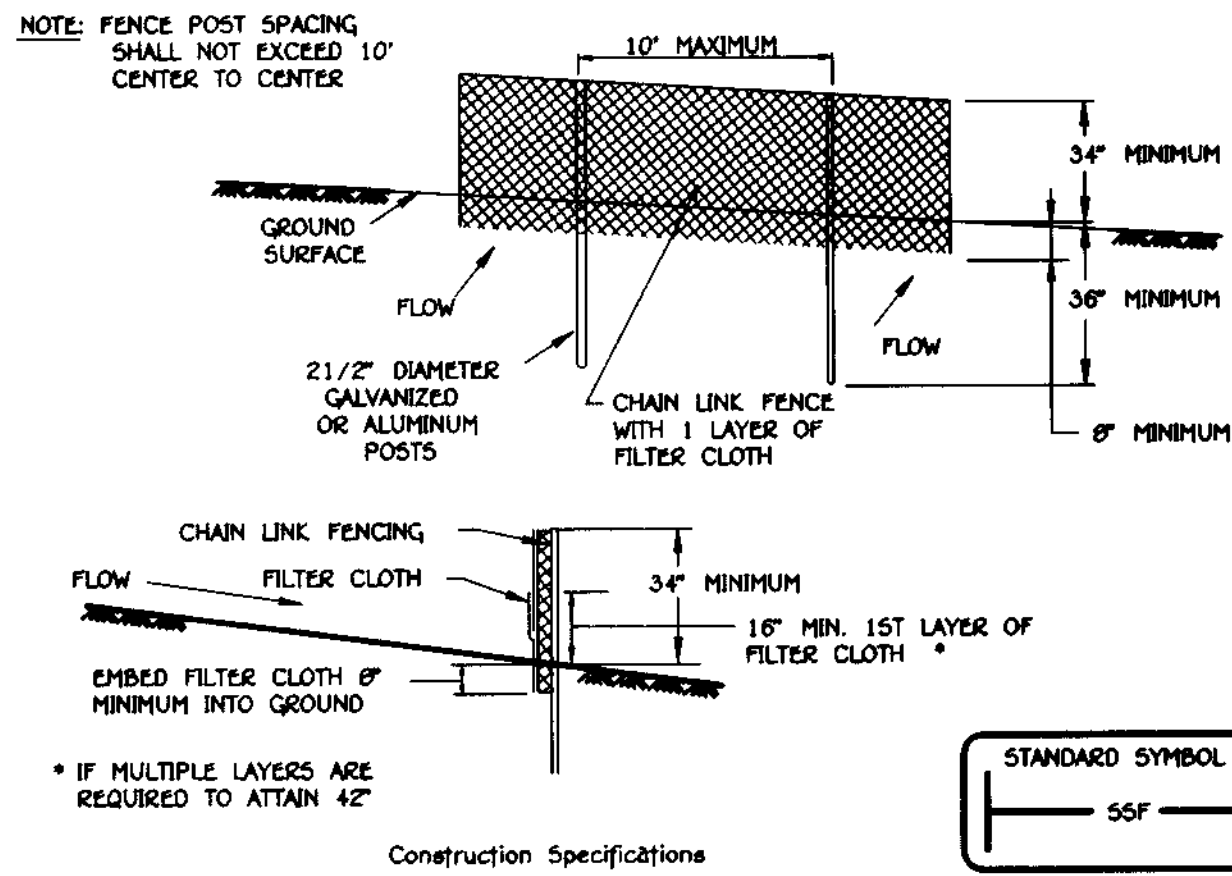
ADDRESS: 10801 ROCKCROFT RIDGE ROAD, SUITE 210, COLUMBIA, MARYLAND 21044

DATE: AUG. 7, 1998

SHEET 12 OF 17

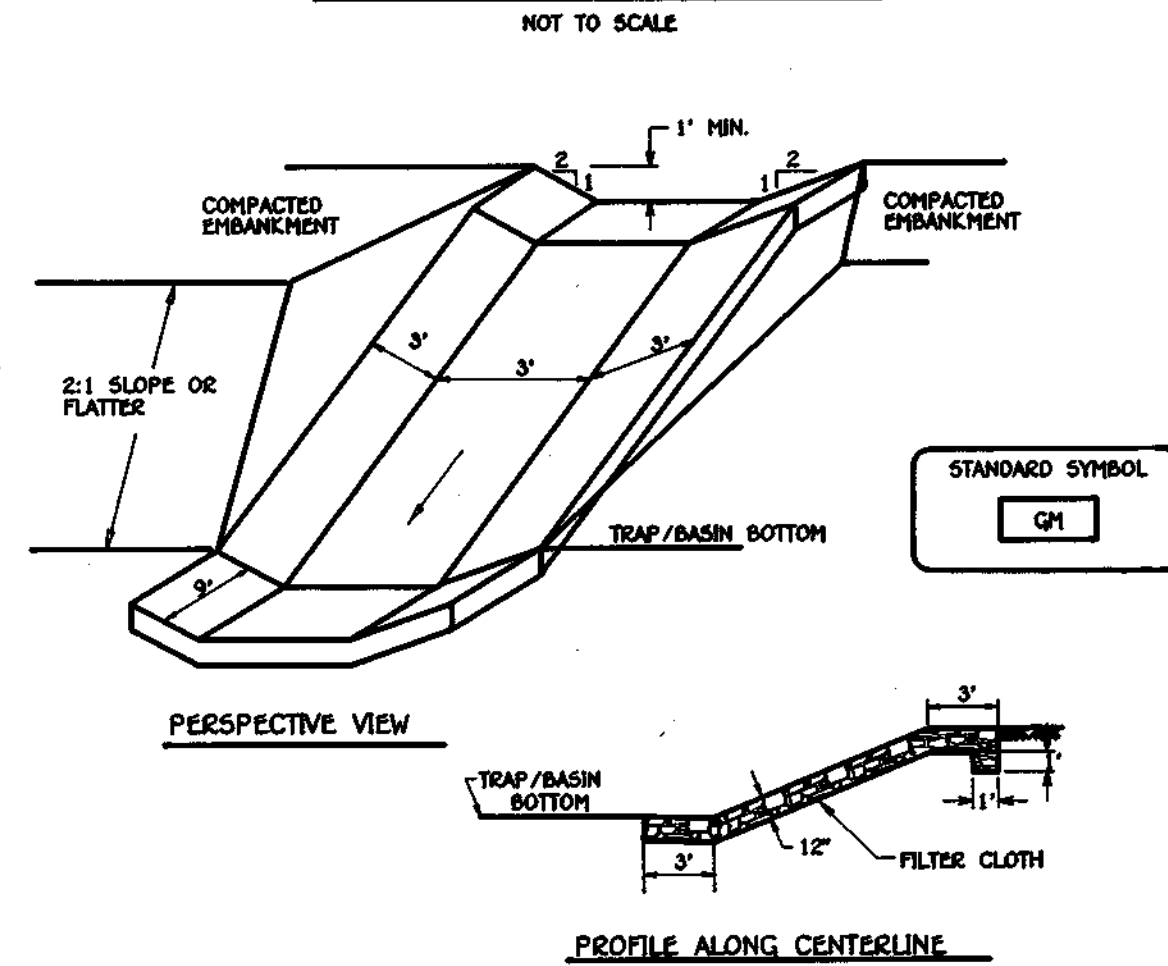
F-98-152

DETAIL 33 - SUPER SILT FENCE



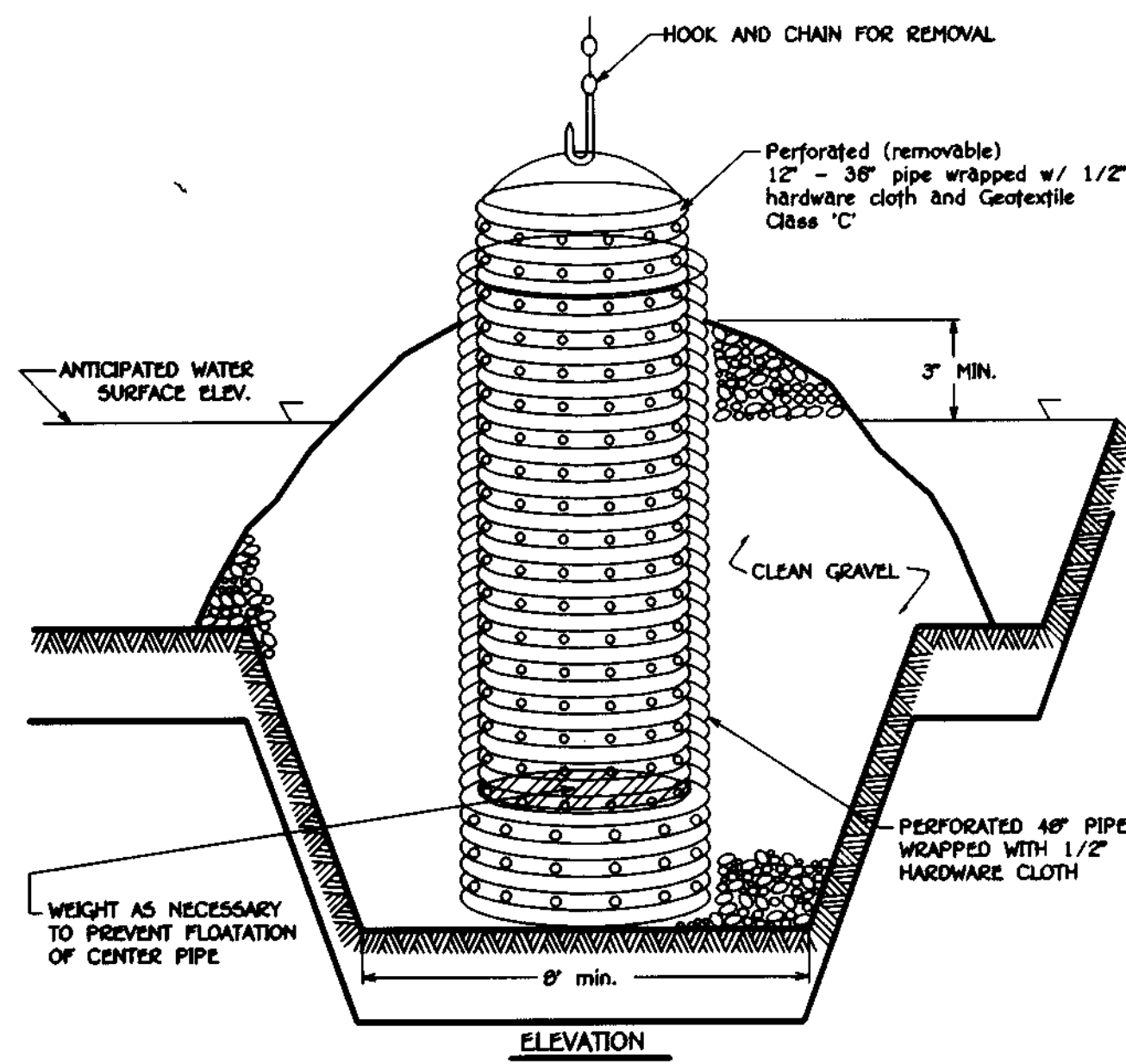
- NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER
- Construction Specifications
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 6" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
- | | | |
|----------------------|---------------------------|----------------|
| Tensile Strength | 50 lbs/in. (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in. (min.) | Test: MSMT 509 |
| Flow Rate | 0.3 gal/ft /minute (max.) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min.) | Test: MSMT 322 |

GABION INFLOW PROTECTION



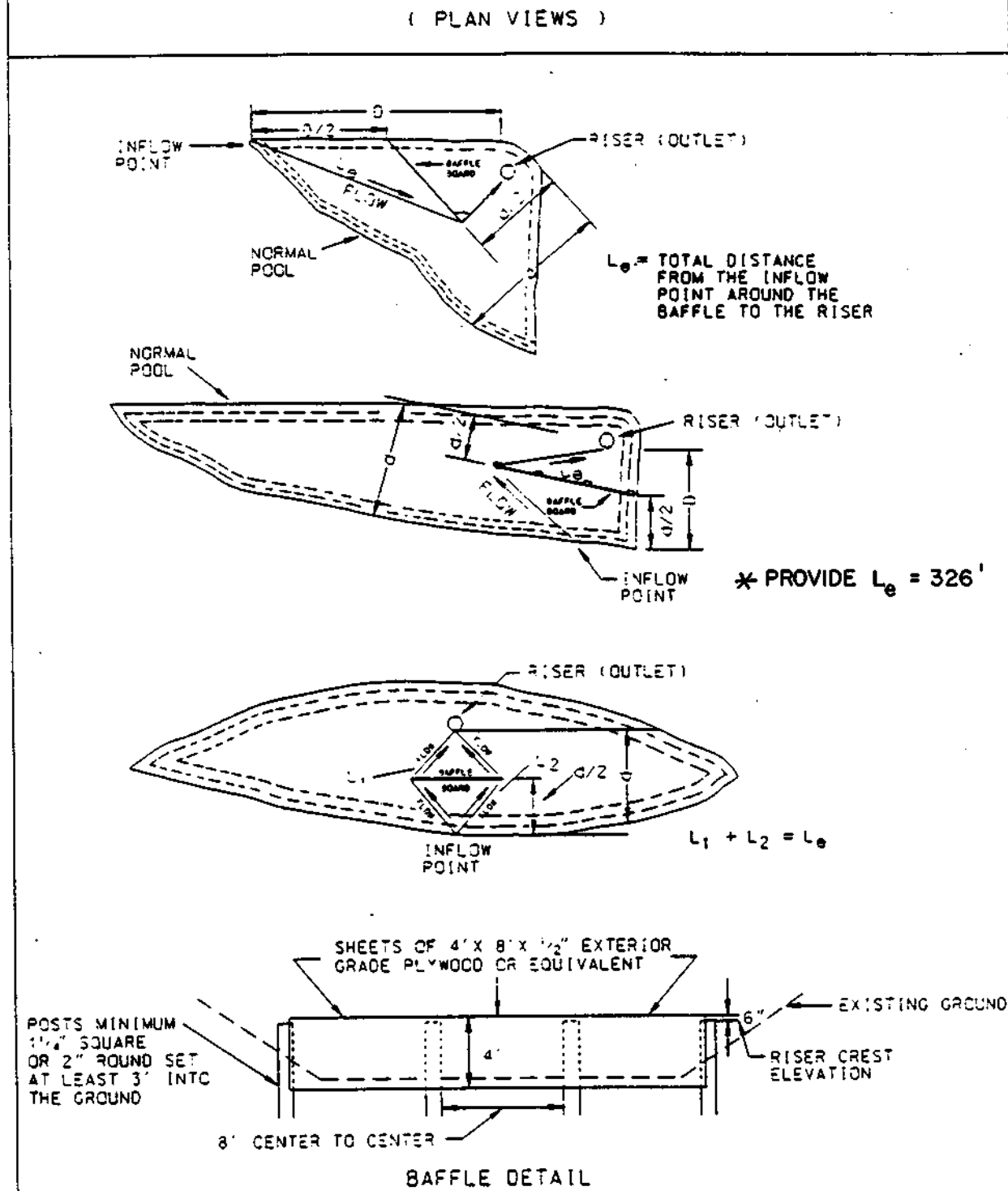
- Construction Specifications
- Gabion inflow protection shall be constructed of 9' x 9' x 9' gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
 - Geotextile Class C shall be installed under all gabion baskets.
 - The stone used to fill the gabion baskets shall be 4" - 7".
 - Gabions shall be installed in accordance with manufacturers recommendations.
 - Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

DETAIL 20A - REMOVABLE PUMPING STATION



- Construction Specifications
- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
 - After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
 - The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 8" slots or 1" diameter holes @ on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.
 - The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when diverting a basin.

DETAIL 18 SEDIMENT BASIN BAFFLES



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE C-10-28 | MARYLAND DEPARTMENT OF ENVIRONMENT & WATER MANAGEMENT ADMINISTRATION

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Signature of Developer: *Chris Cagle* | DATE: 12-9-98

ENGINEER'S CERTIFICATE

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

Signature of Engineer: *Michael J. Simons* | DATE: 11-10-98

Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

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Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

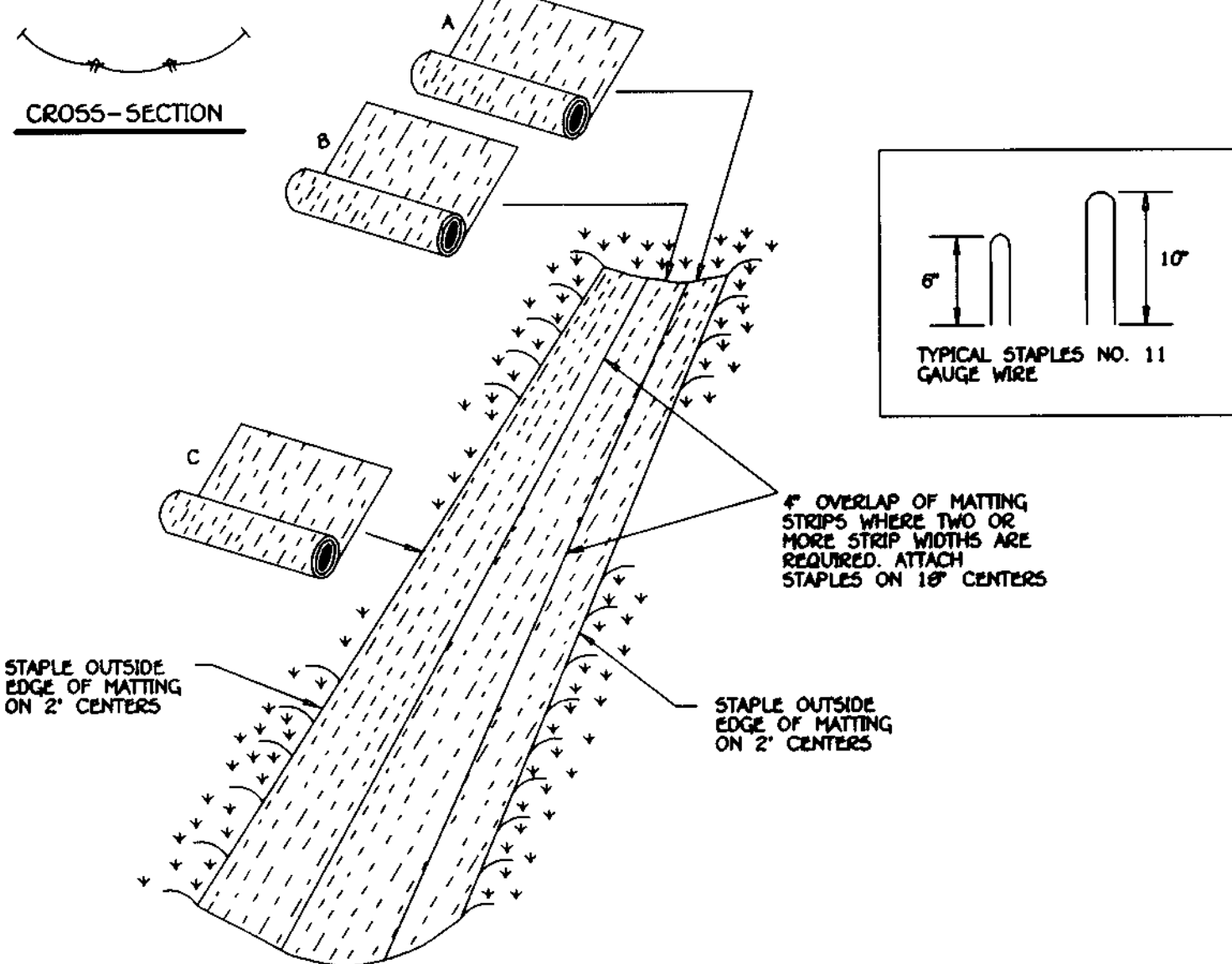
Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

Signature of Professional Engineer: *Michael J. Simons* | DATE: 12/15/98

SEQUENCE OF CONSTRUCTION

- OBTAIN ALL REQUIRED GRADING PERMITS, APPROVALS AND LICENSES FROM APPROPRIATE AGENCIES.
- NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION (440-313-8770) AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK ON THESE PLANS. NOTIFY 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-957-7777
- INSTALL ALL THREE PROTECTION FENCE FOR ROADS TO BE UNSTRUCTURED AS INDICATED ON THE LOCATE EXISTING UTILITIES WITH OLD ANNAPOLIS ROAD (5 DAYS)
- CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE (3 DAYS)
- INSTALL REMAINING SEDIMENT CONTROL MEASURES, SEDIMENT BASIN/SUM. FACILITY, EARTH DIES AND SILT FENCE AS INDICATED ON THE PLANS. NO BLASTING SHALL BE PERMITTED FOR THE EXCAVATION OF THE PROPOSED BASIN, UNLESS NECESSARY. EXISTING AND NEW IMPROVING SHOULD BE UTILIZED IN THE EXCAVATION OF THE FACILITY, WITH PERMISSION FROM THE INSPECTOR. AFTER ALL E/S CONTROLS ARE IN PLACE, THE CONTRACTOR MAY PROCEED (30 DAYS). DO NOT CONSULT FOREMAN AT THIS TIME. CLEAR AND GRUB THE REMAINDER OF THE SITE (5 DAYS)
- GRADE SITE TO THE PROPOSED SUB-GRADE AND INSTALL THE PROPOSED STORM DRAIN SYSTEMS. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING (4 WEEKS)
- THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM ALL TRAPS WHEN CLEANOUT ELEVATIONS ARE REACHED. ALL SEDIMENTS MUST BE PLACED UPSTREAM OF AN APPROVED TRAPPING DEVICE.
- INSTALL TRAFFIC MAINTENANCE DEVICES ALONG OLD ANNAPOLIS ROAD
- CONSTRUCT CURBS AND GUTTER AND ROAD BASE COURSE (10 DAYS)
- STABILIZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTORS TO PROCEED.
- WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND BASIN HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICE MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL DESIGN GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES (30 DAYS)
- NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

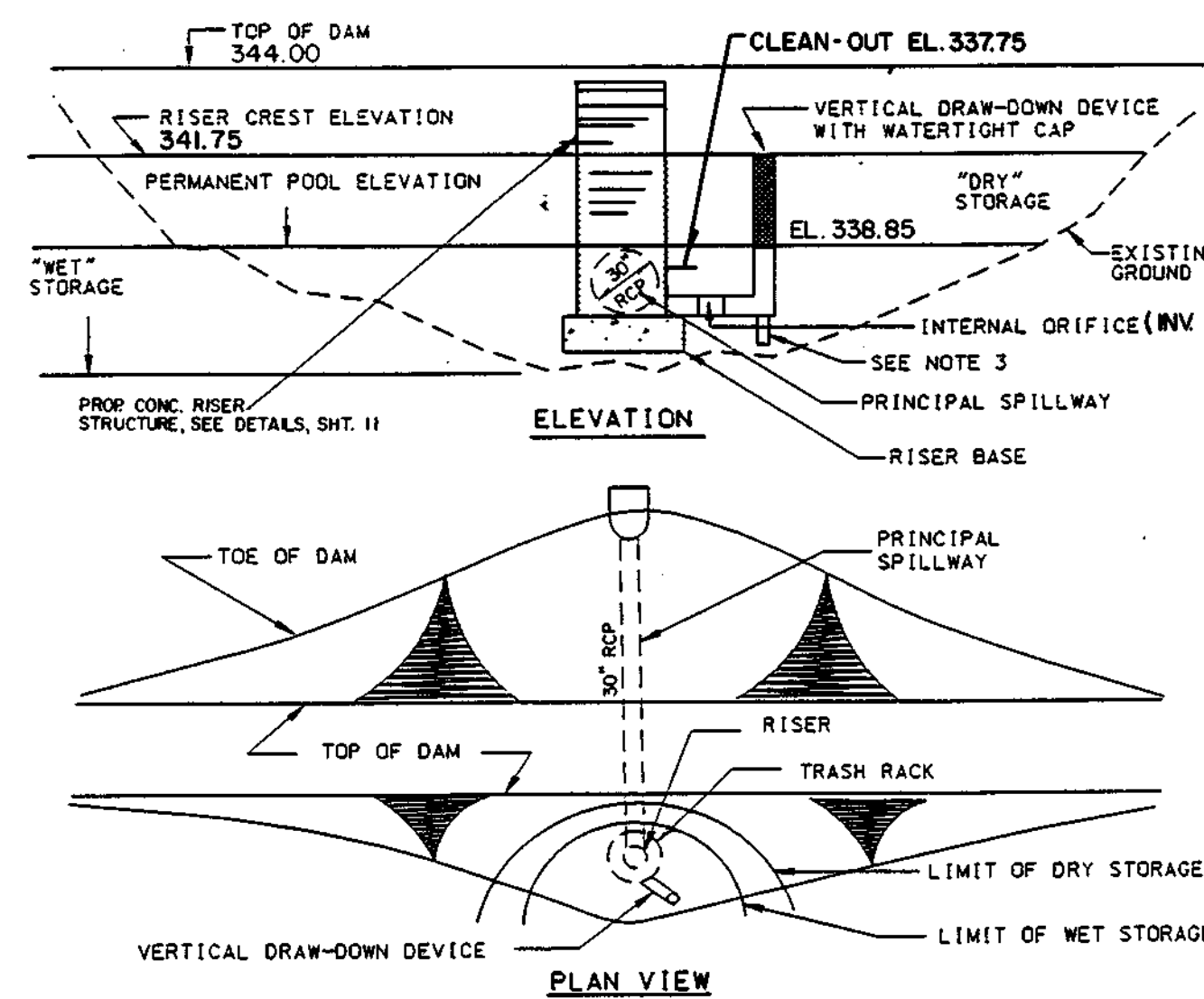
DETAIL 30 - EROSION CONTROL MATTING



EROSION CONTROL MATTING

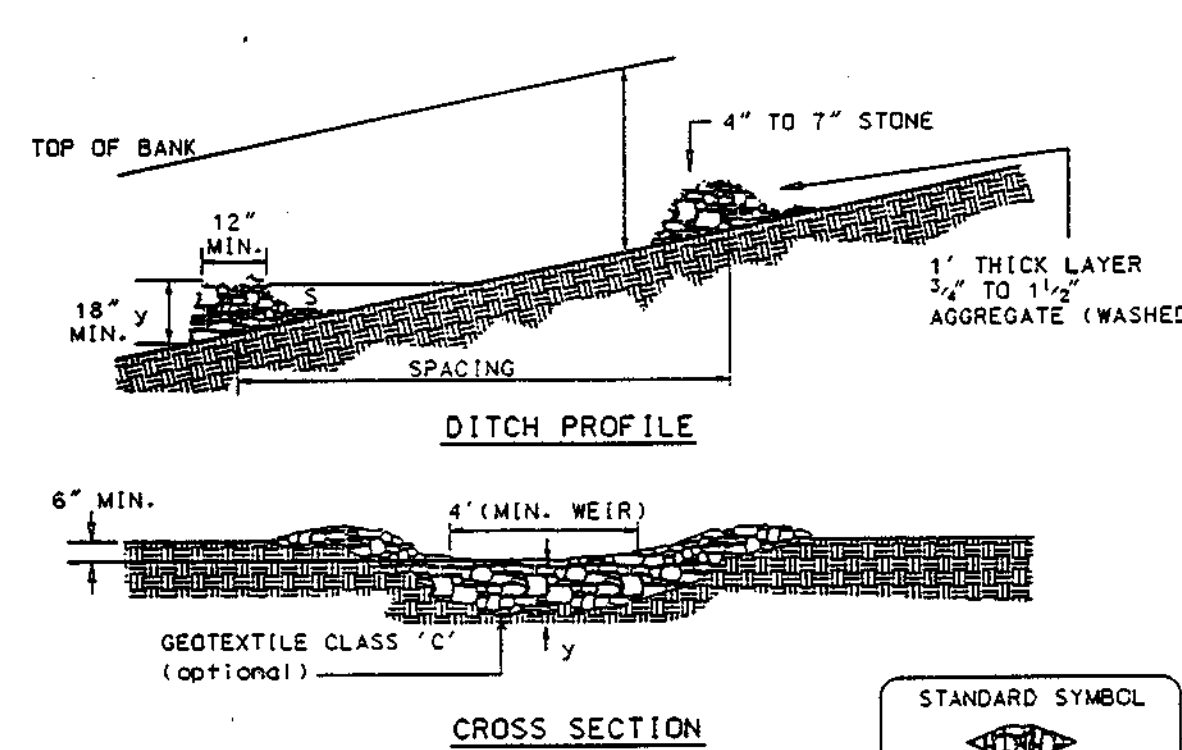
- Construction Specifications
- Key-in the matting by placing the top ends of the matting in a narrow trench, 5" in depth. Backfill the trench and tamping firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
 - Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shingle fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - The discharge end of the matting liner should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area effected by the flow must be key-in.

BASIN DRAWDOWN SCHEMATIC VERTICAL DRAW-DOWN DEVICE



- Construction Specifications
- Perforations in the draw-down device may not extend into the wet storage.
 - The total area of the perforations must be greater than 4 times the area of the internal orifice.
 - The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class C.
 - Provide support of draw-down device to prevent sagging and flotation. An acceptable preventative measure is to stake both sides of draw-down device with 1" steel angle, or 1" by 4" square or 2" round wooden posts set 3' minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

DETAIL 7 - STONE CHECK DAM

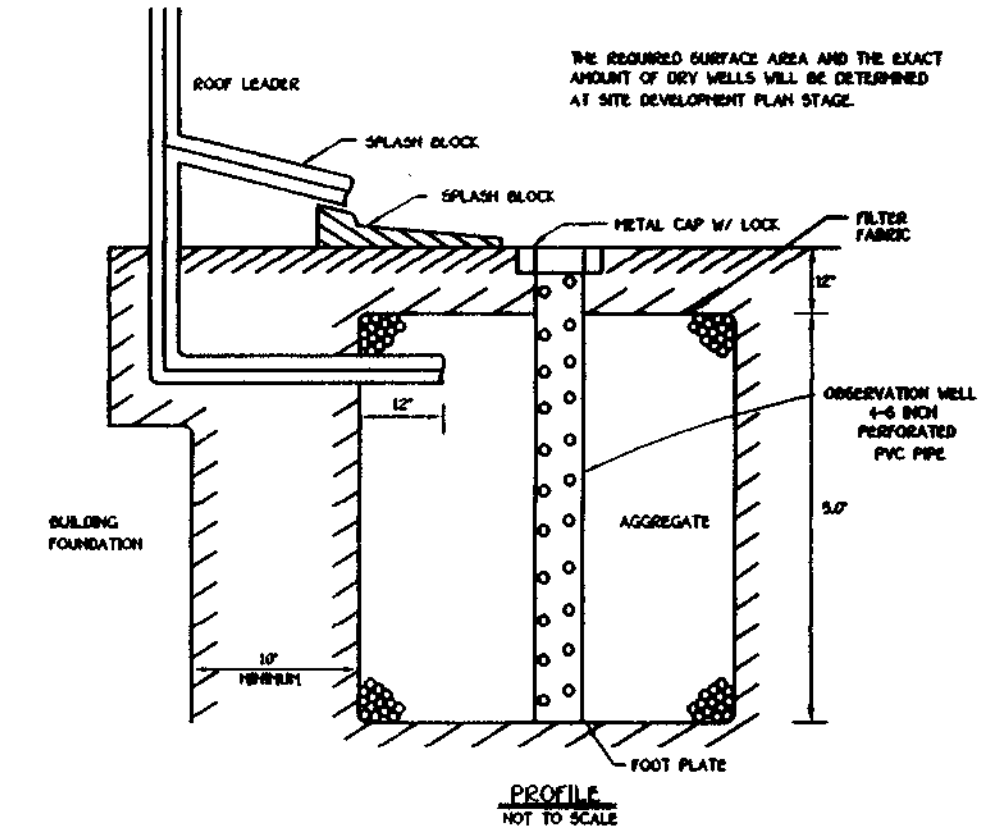


STANDARD STONE CHECK DAM DESIGN

SLOPE	SPACING
2% or less	80'
2.1% to 4%	40'
4.1% to 7%	25'
7.1% to 10%	15'
over 10%	Use lined waterway design

- Construction Specifications
- Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2, Standards and Specifications for Temporary Swale.
 - The check dam shall be constructed of 4"-7" stone. The stone shall be placed so that it completely covers the width of the channel and is keyed into the channel banks.
 - The top of the check dam shall be constructed so the center is approximately 6" lower than the outer edges, forming a weir that water can flow across.
 - The maximum height of the check dam at the center shall not exceed 2'.
 - The upstream side of the check dam shall be lined with approximately 1' of 1/2" to 1 1/2" aggregate.
 - Accumulated sediment shall be removed when it has built up to 1/2 of the original height of the weir crest.

TYPICAL DRY WELL CROSS SECTION INFILTRATION MANUAL



SEDIMENT CONTROL NOTES AND DETAILS

THE OVERLOOK AT CENTENNIAL PARK

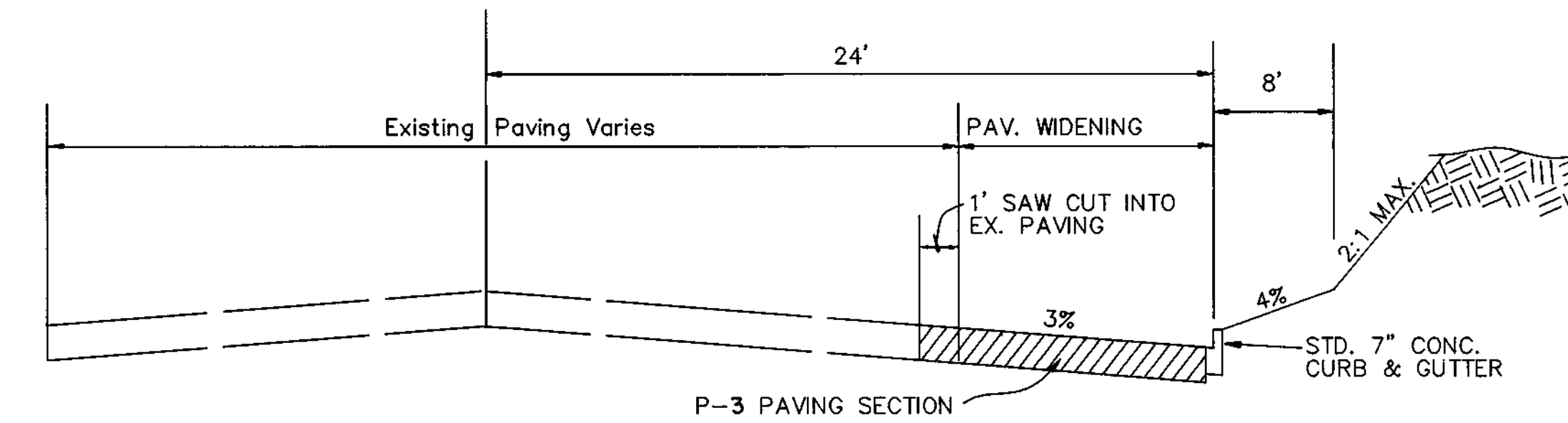
LOTS 9 THRU 34 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND B, DEER PARK ESTATES, PLAT NO. 12580)

ZONED R-20
GRID NO. 21
PART OF PARCEL NO. 399
TAX MAP NO. 24
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET 14 OF 17

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK 10775 BALTIMORE NATIONAL Fwy.
ELLICOTT CITY, MARYLAND 21042
(410) 981-2555

OWNERS
MR. AND MRS. WILFREDO PEREZ
9830 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
MR. WILLIAM GABLE
9820 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
DONALD GREGORY COLE, et al
9800 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
MR. AND MRS. HENRY MATTHEWS
9800 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

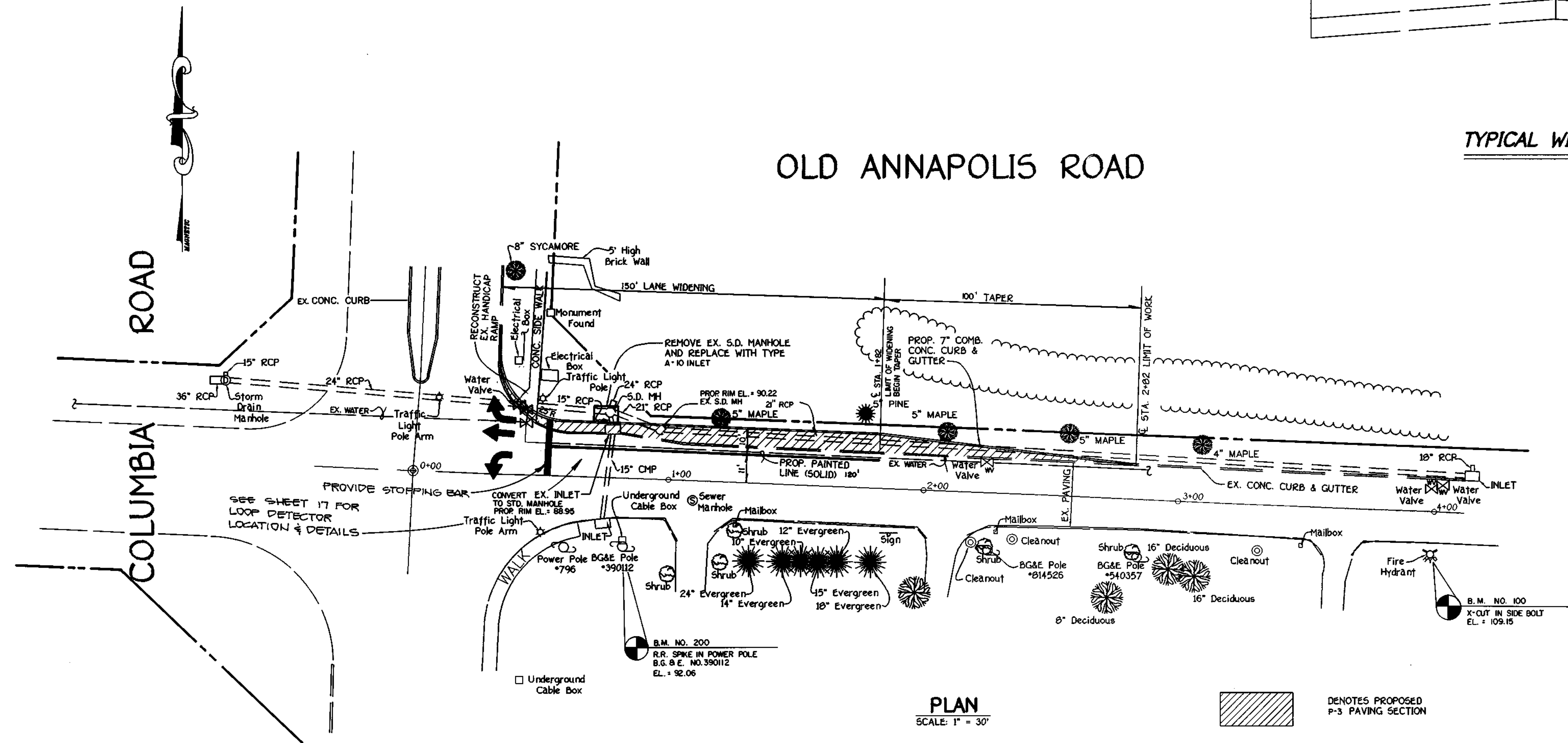
CONTRACT PURCHASER AND DEVELOPER
C.S.T.L.C. TRADING AS JANTRESTOWN BUILDERS
10801 HICKORY RIDGE ROAD
SUITE 210
COLUMBIA, MARYLAND 21044



TYPICAL WIDENING SECTION (OLD ANNAPOLIS ROAD)

NO SCALE

OLD ANNAPOLIS ROAD



PLAN
SCALE: 1" = 30'

▨ DENOTES PROPOSED P-3 PAVING SECTION

THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 33

(A RESUBDIVISION OF LOTS 1, 2, 3, 4, 5, 6, 7 AND 8
DEER PARK ESTATES, PLAT NO. 12580)
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PROPOSED APFO MITIGATION PLAN

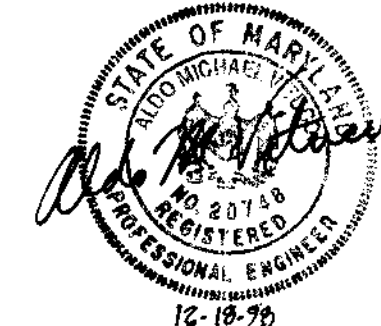
OWNERS
MR. AND MRS. WILFRED PEREZ
1800 OLD ANNAPOLIS ROAD
ELLSWORTH CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
C.F.C. TRADING, AS
INVESTMENT BUREAU
1000 WEST RIDGE ROAD
COLUMBIA, MARYLAND 21044

DATE: OCT. 21, 1998
CHK: J.C.L./D.A.N.

DWG. NO: 16 OF 17
DES: AM.V.

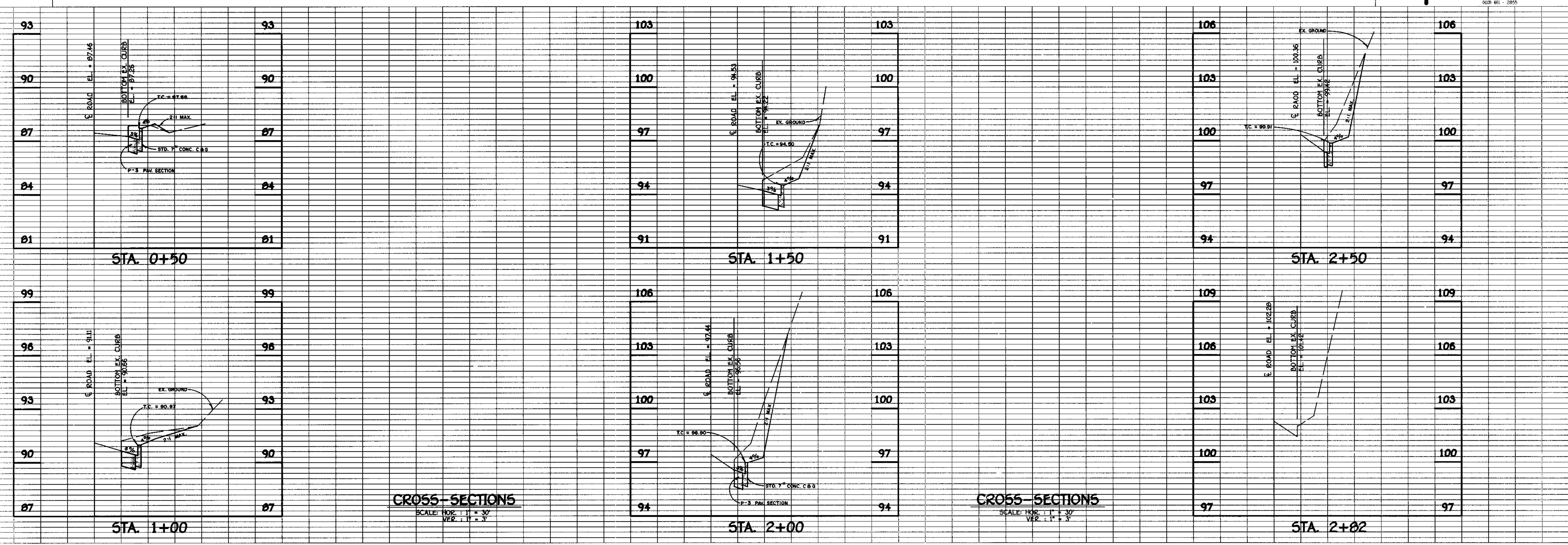
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2995



APPROVED
DEPARTMENT OF PLANNING AND ZONING
Cindy Kamstra 1/25/99
DATE

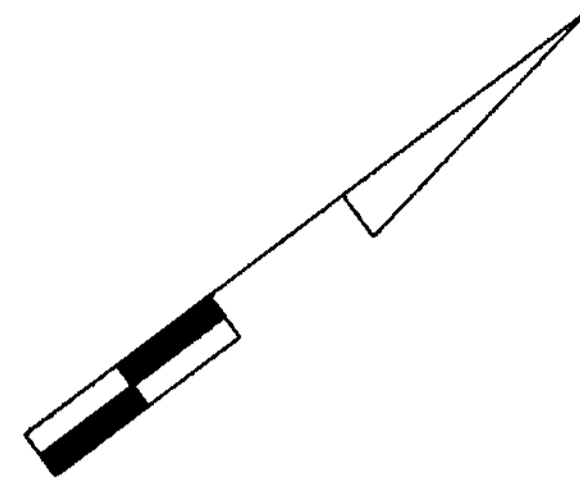
APPROVED
DEPARTMENT OF PLANNING AND ZONING
W.D. ... 1/26/99
DATE

APPROVED
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard ... 1/2/99
DATE



CROSS-SECTIONS
SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

CROSS-SECTIONS
SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'



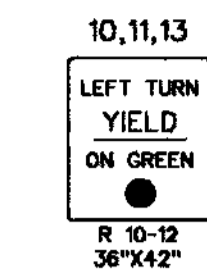
COLUMBIA ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

PHASE AND SEQUENCE DIAGRAM	SIGNAL HEADS				MIN. GREEN	PASSAGE	YELLOW	RED CLEAR.	MAX. 1	SECONDS PER ACTUATION	RECALL TO REDUCE	TIME BEFORE REDUCTION	MINIMUM GAP	RECALL	MEMORY
	1-2	4	3-5	6-9											
PHASE 1-6 CLEAR	R	G	G	R	5	1			5					OFF	OFF
PHASE 2-6 CLEAR	R	Y	G	R			4	0							
PHASE 3-6 CLEAR	G	G	G	R	10	5			55	2.5	5	10	3.5	OFF	ON
PHASE 4-6 CLEAR	Y	Y	Y	R			4	1							
PHASE 1-6 CLEAR	R	R	R	G	5	1			60					OFF	OFF
PHASE 4-6 CLEAR	R	R	R	R			4	1							
FLASH	FL/Y	FL/Y	FL/Y	FL/R											

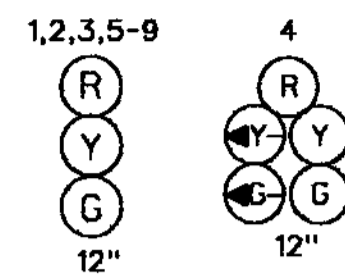
PROPOSED SIGN



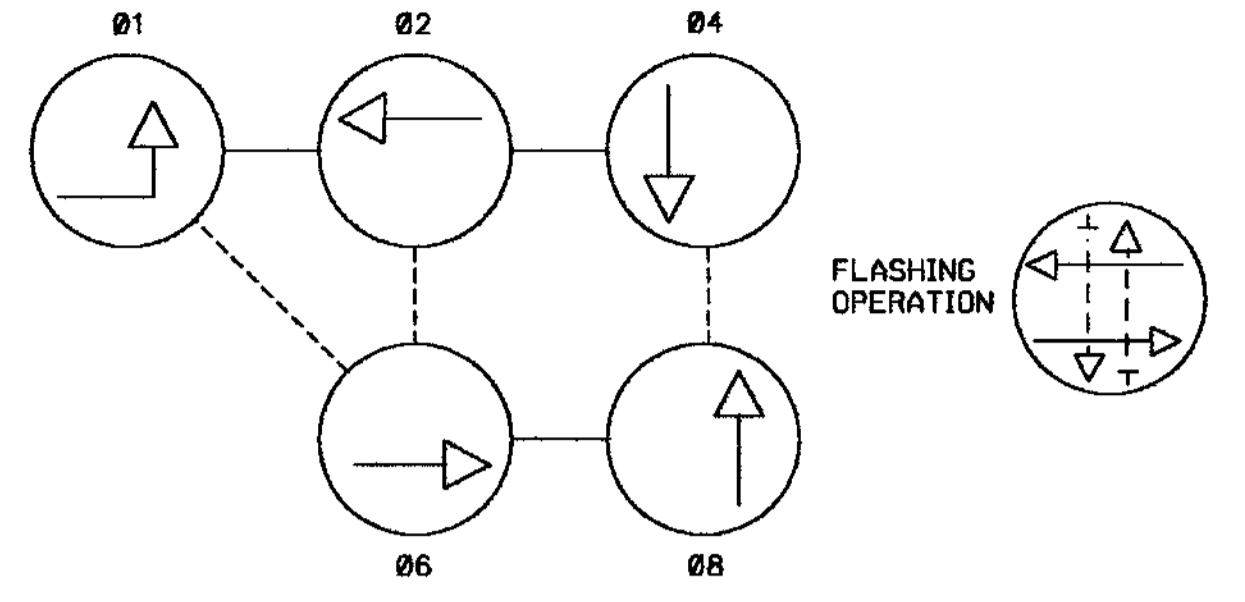
EXISTING SIGNS



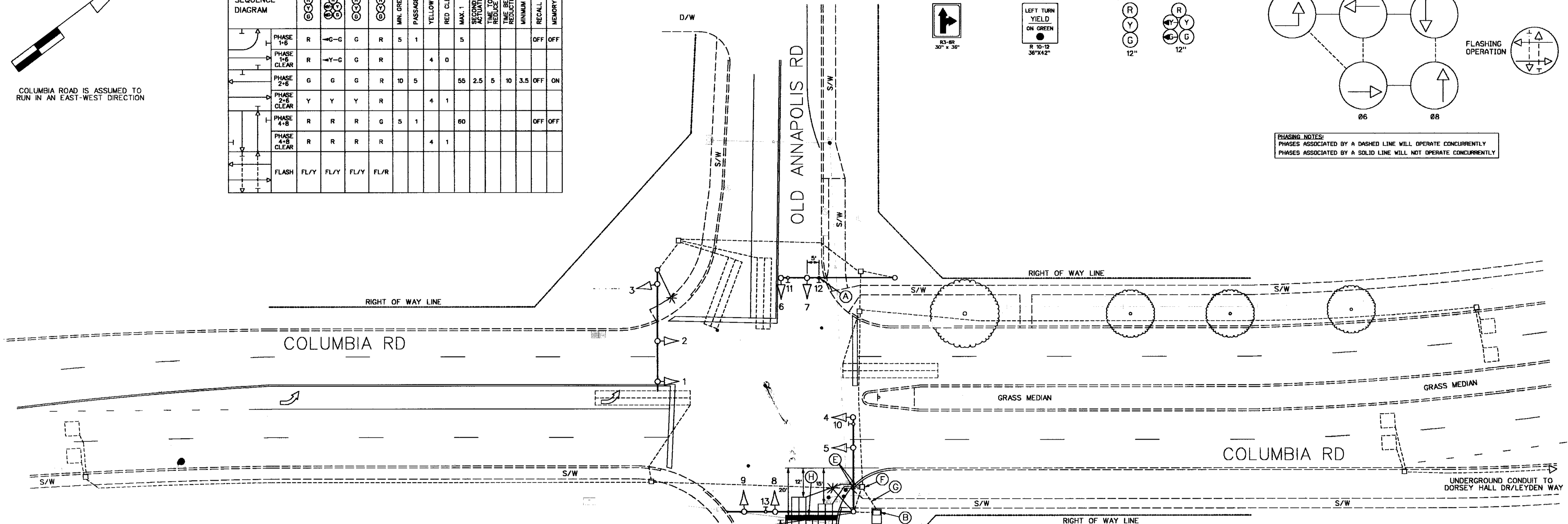
EXISTING SIGNALS



NEMA PHASING



PHASING NOTES:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY



CONSTRUCTION DETAILS

- A. Install proposed sign as shown.
- B. Use existing base-mounted cabinet.
- C. Install 6' x 40' loop detector encased in 1/4" flexible tubing quadrupole type (2-4-2).
- D. Install 6' x 28' loop detector encased in 1/4" flexible tubing quadrupole type (2-4-2).
- E. Install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).
- F. Use existing handhole.
- G. Use existing conduit.
- H. Install pavement markings as shown.

LEGEND

PROPOSED	EXISTING

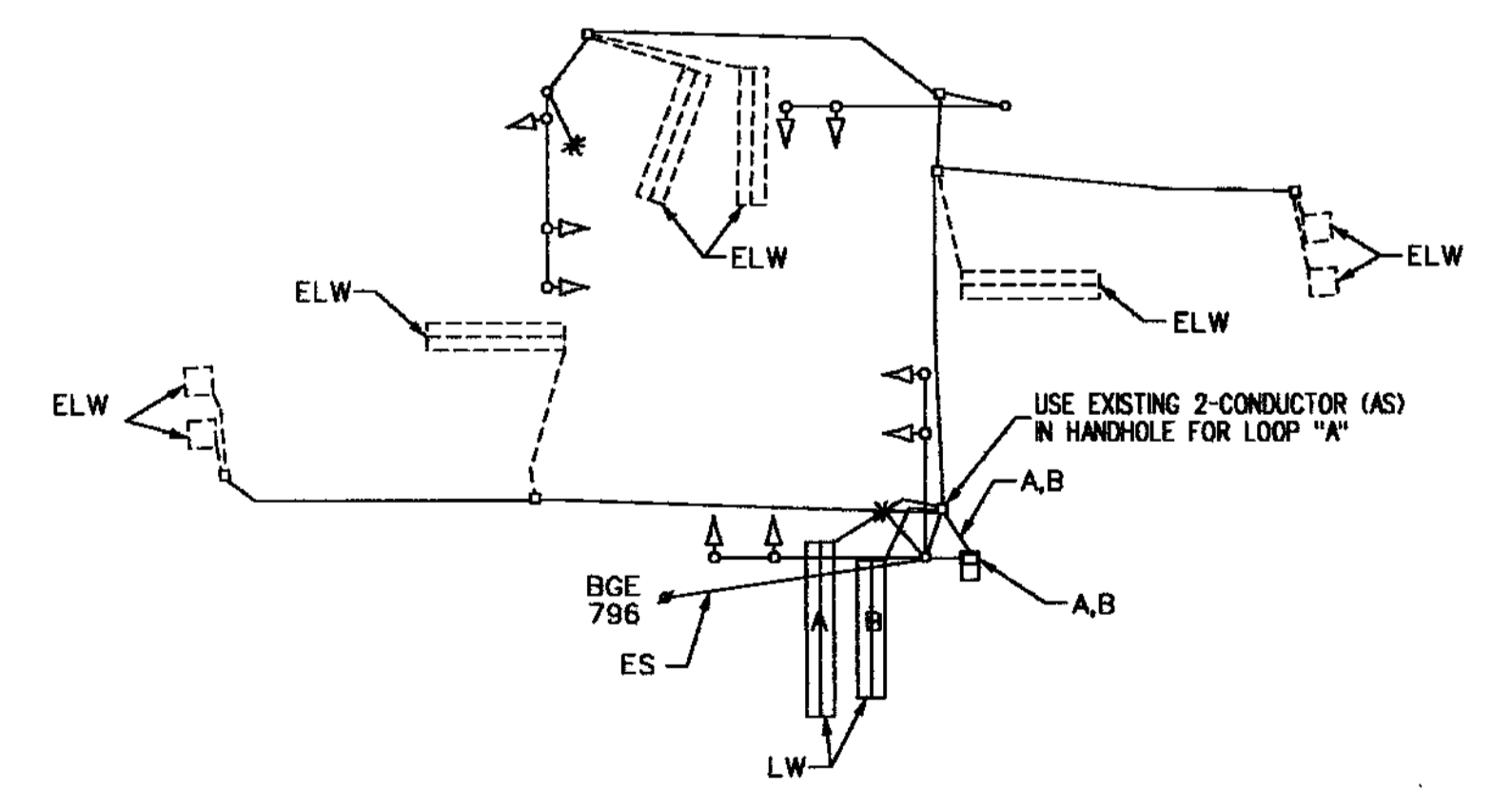
UTILITY LEGEND

	A	A
	E	E
	T	T
	G	G
	D	D
	S	S
	W	W
	TV	TV

APPROVED, DEPARTMENT OF PLANNING AND ZONING
Carla Hamilton 1/28/99
 CHIEF, DIVISION OF LAND DEVELOPMENT
John Pennington 1/28/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

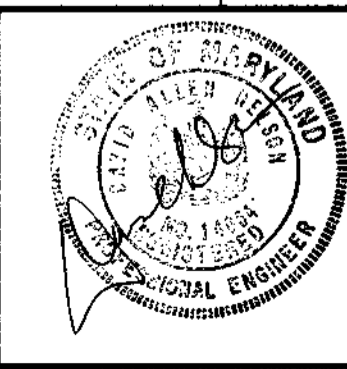
WIRING KEY

- A - USE EXISTING 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)
 - B - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)
 - LW - LOOP WIRE (NO. 14 A.W.G.)
 - ELW - EXISTING LOOP WIRE (NO. 14 A.W.G.)
 - ES - EXISTING OVERHEAD SERVICE TO BE MAINTAINED BY BGE
- NOTE: ALL EXISTING ELECTRICAL CABLES NOT SHOWN ARE TO BE MAINTAINED.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

William Z. Mahoney Jr. 1-12-99
CHIEF, TRAFFIC ENGINEERING DIVISION
Carla Hamilton 1/19/99
CHIEF, BUREAU OF ENGINEERING
John Pennington 1/19/99
CHIEF, BUREAU OF HIGHWAYS



DES:	RFS:	A:	ASBUILT:	DATE:
ZAYDEL				3/7/91
	RRZ	⊕	MODIFICATION TO TRAFFIC SIGNAL DUE TO GEOMETRIC CHANGES	1/4/99
DRN:	ZAYDEL			
CHK:				
DATE:	5/18/99			
BY:	NO.		REVISION	DATE:

PROPOSED APFO MITIGATION PLAN
THE OVERLOOK AT CENTENNIAL PARK

CAPITAL PROJECT NO. _____

COLUMBIA ROAD AND OLD ANNAPOLIS ROAD

SCALE: 1" = 20'

SHEET 17 OF 17

600' SCALE MAP NO. _____ DATE: _____

SHEET INDEX	
SHEET No.	DESCRIPTION
1	TITLE SHEET
2	OLD ANNAPOLIS ROAD PLAN AND PROFILE
3	NATALIES WAY PLAN AND PROFILE, JOHN RANDOLPH COURT PLAN
4	JOHN RANDOLPH COURT PLAN AND PROFILE
5	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
6	DRAINAGE AREA MAP AND LANDSCAPE PLAN
7	STORM DRAIN PROFILES
8	STORM DRAIN PROFILES
9	CROSS-SECTIONS (OLD ANNAPOLIS ROAD)
10	CROSS-SECTIONS (OLD ANNAPOLIS ROAD)
11	STORMWATER MANAGEMENT DETAILS
12	STORMWATER MANAGEMENT DETAILS
13	SEDIMENT CONTROL NOTES AND DETAILS
14	SEDIMENT CONTROL NOTES AND DETAILS
15	FOREST CONSERVATION PLAN
16	PROPOSED AFFO MITIGATION PLAN
17	COLUMBIA ROAD & OLD ANNAPOLIS ROAD PLAN

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

THE OVERLOOK AT CENTENNIAL PARK

LOTS 9 THRU 34

(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)

ZONED: R-20

TAX MAP NO. 24 GRID NO. 21

PART OF PARCEL NO. 399

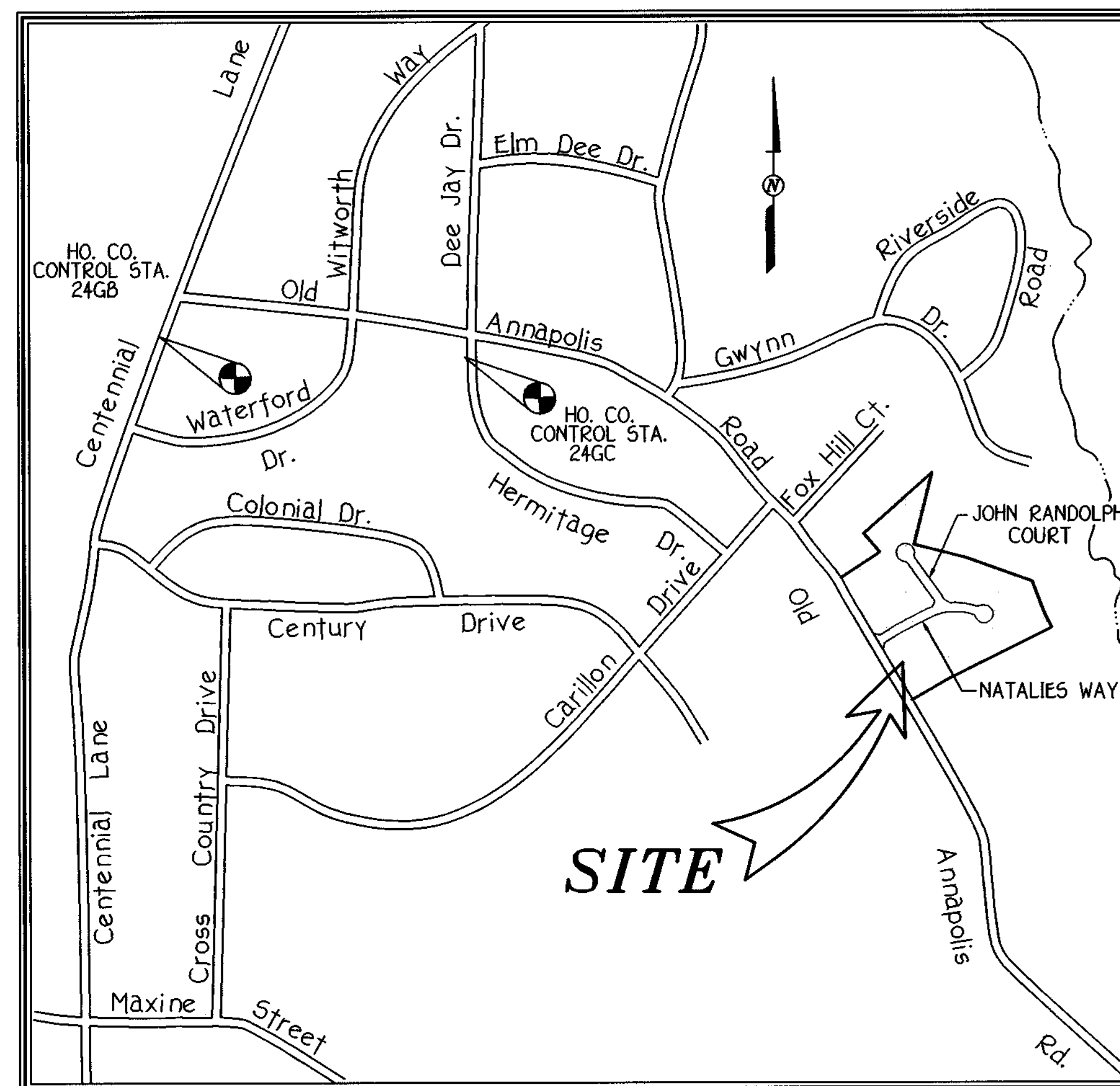
APPROVED: DEPARTMENT OF PUBLIC WORKS
Charles M. Conely 1-8-99
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John Hanahan 1/28/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Michael J. DeWitt 1/22/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

TRAFFIC CONTROL SIGNS				
ROAD	CL. STA.	OFFSET	POSTED SIGN	SIGN CODE
NATALIES WAY	0+45	16'L	STOP	SI-1
NATALIES WAY	1+00	14'L	STOP AHEAD	W-12
NATALIES WAY	1+00	14'R	HILL 11.5%	W7-16
JOHN RANDOLPH COURT	0+30	14'R	STOP	SI-1

ROAD CLASSIFICATION CHART			
ROAD	CLASSIFICATION	R/W WIDTH	CL. STA.
NATALIES WAY	ACCESS STREET	50'	0+00 TO 2+56.63
NATALIES WAY	ACCESS STREET	40'	2+56.63 TO 4+34.58
NATALIES WAY	ACCESS PLACE (PUBLIC)	40'	4+34.58 TO 6+72.36
JOHN RANDOLPH COURT	ACCESS PLACE (PUBLIC)	40'	0+00 TO 3+74.36



GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT (410) 313-1800 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)".
 NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO (2) FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED MAY 2, 1998.
- THE COORDINATES SHOWN HEREON ARE BASED UPON HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM, HOWARD COUNTY MONUMENT Nos. 24GB AND 24GC WERE USED FOR THIS PROJECT.

24GB N 176500.7269 (meters)
 E 418165.5048 (meters)
 24GC N 176439.5796 (meters)
 E 412127.2125 (meters)

- WATER IS PUBLIC, CONTRACT No. 24-3698-D AND THE DRAINAGE AREA IS THE LITTLE PATUXENT.
- SEWER IS PUBLIC, CONTRACT No. 24-3698-D AND THE DRAINAGE AREA IS THE LITTLE PATUXENT.
- S.W.M. WILL BE PROVIDED BY A PUBLIC FACILITY LOCATED ON OPEN SPACE LOT 22. WATER QUALITY IS PROVIDED BY A WET POOL DESIGN AND QUANTITY MANAGEMENT IS PROVIDED BY DETENTION.
- EXISTING UTILITIES ARE BASED ON CONT. No. 801-W & 5 AND CONT. No. 24-3225-D.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE ARE NO WETLANDS ON THIS SITE.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY STREET TRAFFIC STUDIES, DATED 11-27-96, AND WAS APPROVED ON 2/4/97 UNDER 597-03. AN ADDENDUM TO THE TRAFFIC STUDY WAS SUBMITTED ON MAY 1998.
- BACKGROUND INFORMATION:
 A. SUBDIVISION NAME: THE OVERLOOK AT CENTENNIAL PARK
 B. TAX MAP NO.: 24
 C. PARCEL NO.: 399
 D. ZONING: R-20
 E. ELECTION DISTRICT: SECOND
 F. TOTAL TRACT AREA: 11.215 AC.
 G. NO. OF BUILDABLE LOTS: 23
 H. NO. OF OPEN SPACE LOTS: 3
 * I. OPEN SPACE REQUIRED: (MIN. LOT SIZE 16,000 SQ. FT.) = 11,249 x 20% = 2,250 AC.
 J. OPEN SPACE PROVIDED: 2,316 AC.
 K. RECREATIONAL OPEN SPACE REQUIRED: 20 LOTS x 200 SQ. FT. / LOT = 4,000 SQ. FT.
 L. RECREATIONAL OPEN SPACE PROVIDED: 5,372 SQ. FT.
 M. PRELIMINARY PLAN APPROVAL DATE: 1-22-98 (P98-13)
 N. PREVIOUS FILE Nos.: F97-63, 597-03, P98-13 & W98-126.
- REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF THE PIPE / FLAG STEM AND THE ROAD R/W AND NOT ONTO THE PIPE / FLAG STEM DRIVEWAY.
- NO CEMETERIES EXIST ON THE PROPERTY.
- FOREST STAND DELINEATION PROVIDED BY EXPLORATION RESEARCH, INC. APPROVED ON 2/4/97 (597-03).
- FOREST CONSERVATION PLAN APPROVED UNDER P98-13.
20. LOTS 31, 32 AND 33 ARE INCLUDED IN THIS SUBDIVISION FOR THE PURPOSE OF A LOT LINE ADJUSTMENT. THE AREA OF LOTS 31 - 33 IS NOT COUNTED TOWARDS OPEN SPACE OBLIGATIONS.

STREET LIGHT CHART				
DWG. No.	STREET NAME	STATION	OFF-SET	FIXTURE/POLE TYPE
3	OLD ANNAPOLIS ROAD	0+33	26'R	150-WATT H.P.S. VAPOR PENDANT (OUT-OFF) MOUNTED ON A 30-FOOT BRONZE FIBERGLASS POLE USING A 12" ARM
3	NATALIES WAY	4+55	15'L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
4	JOHN RANDOLPH COURT	L.P. STA. 1+92	3'	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
3	NATALIES WAY	L.P. STA. 1+10	3'	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
3	NATALIES WAY	C.L. STA. 5+25	9'R	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
4	JOHN RANDOLPH COURT	C.L. STA. 2+50	9'L	100-WATT "TRADITIONAIRE" H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.

NOTE: MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

VICINITY MAP
 SCALE 1" = 600'

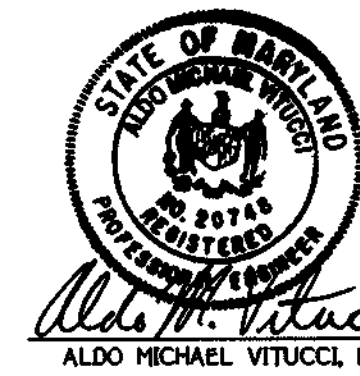
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

MINIMUM LOT SIZE CHART			
Lot No.	Gross Area	Pipestem Area	Minimum Lot Size
28	18,592 Sq.Ft.	2,148 Sq.Ft.	16,444 Sq.Ft.
29	18,343 Sq.Ft.	2,161 Sq.Ft.	16,182 Sq.Ft.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

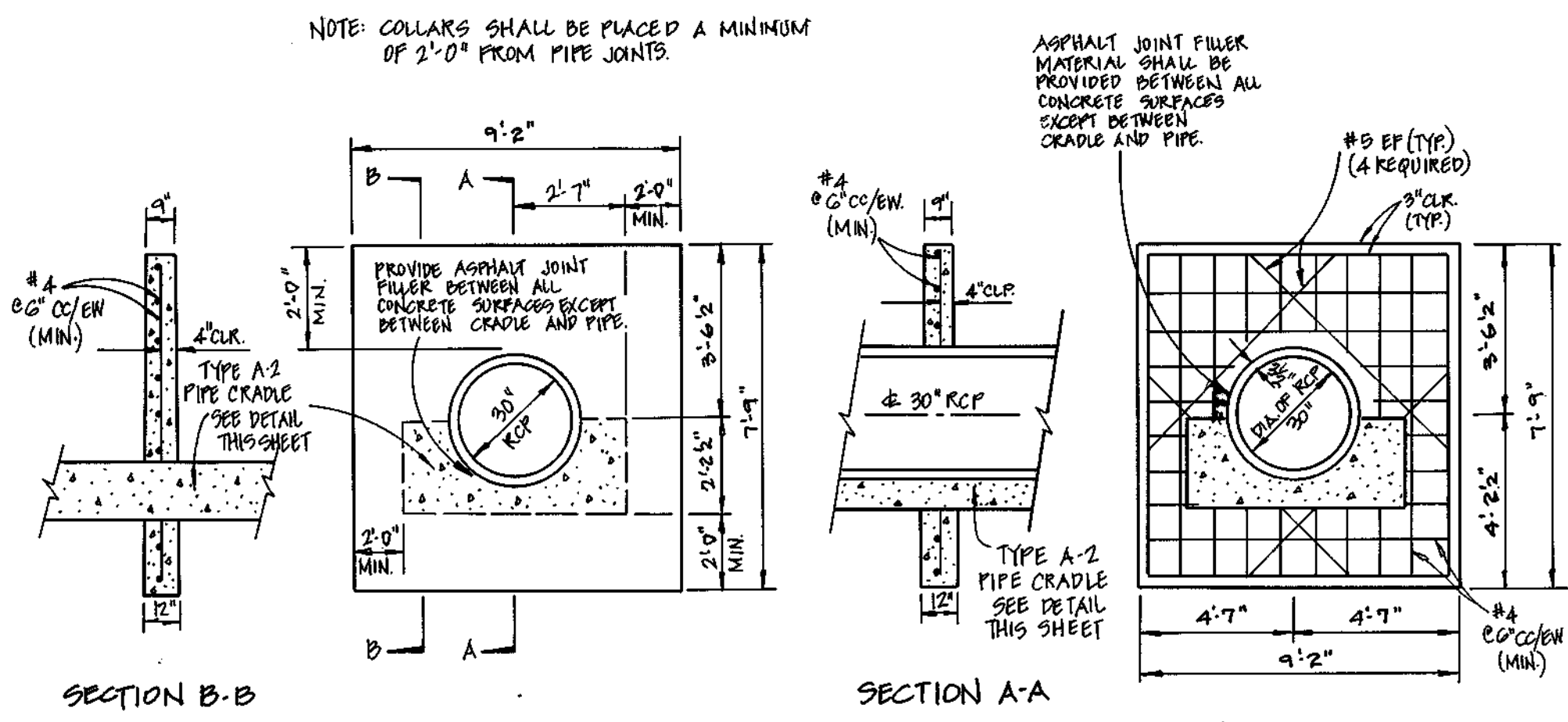
OWNERS
 MR. AND MRS. WILFREDO PEREZ
 9830 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
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 9820 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER
 AND DEVELOPER
 DONALD GREGORY COLE, ET AL
 9810 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 C.S.T.L.C. TRADING AS
 ANHEIMSTOWN BUILDERS
 10801 HICKORY RIDGE ROAD
 SUITE 210
 COLUMBIA, MARYLAND 21044



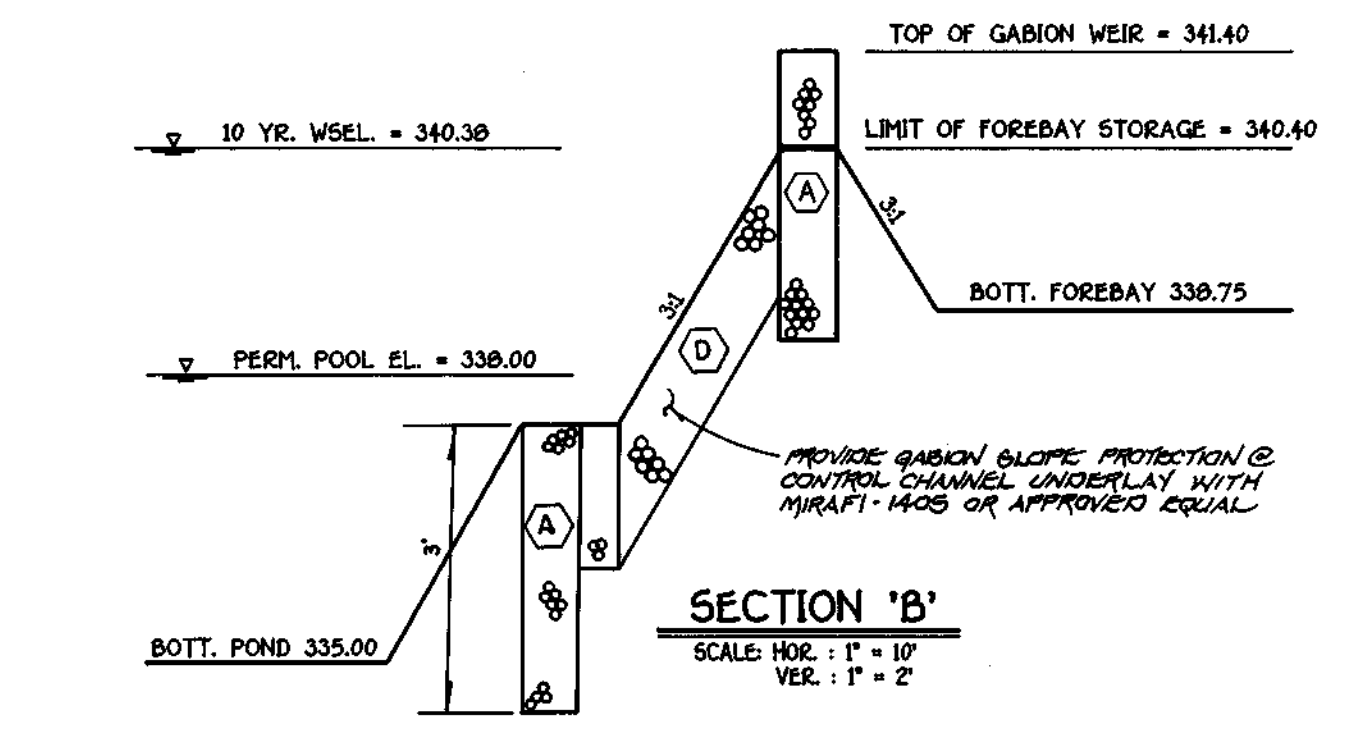
10-9-99
 DATE

THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)
 ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 399
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUGUST 7, 1998
 SHEET 1 OF 17

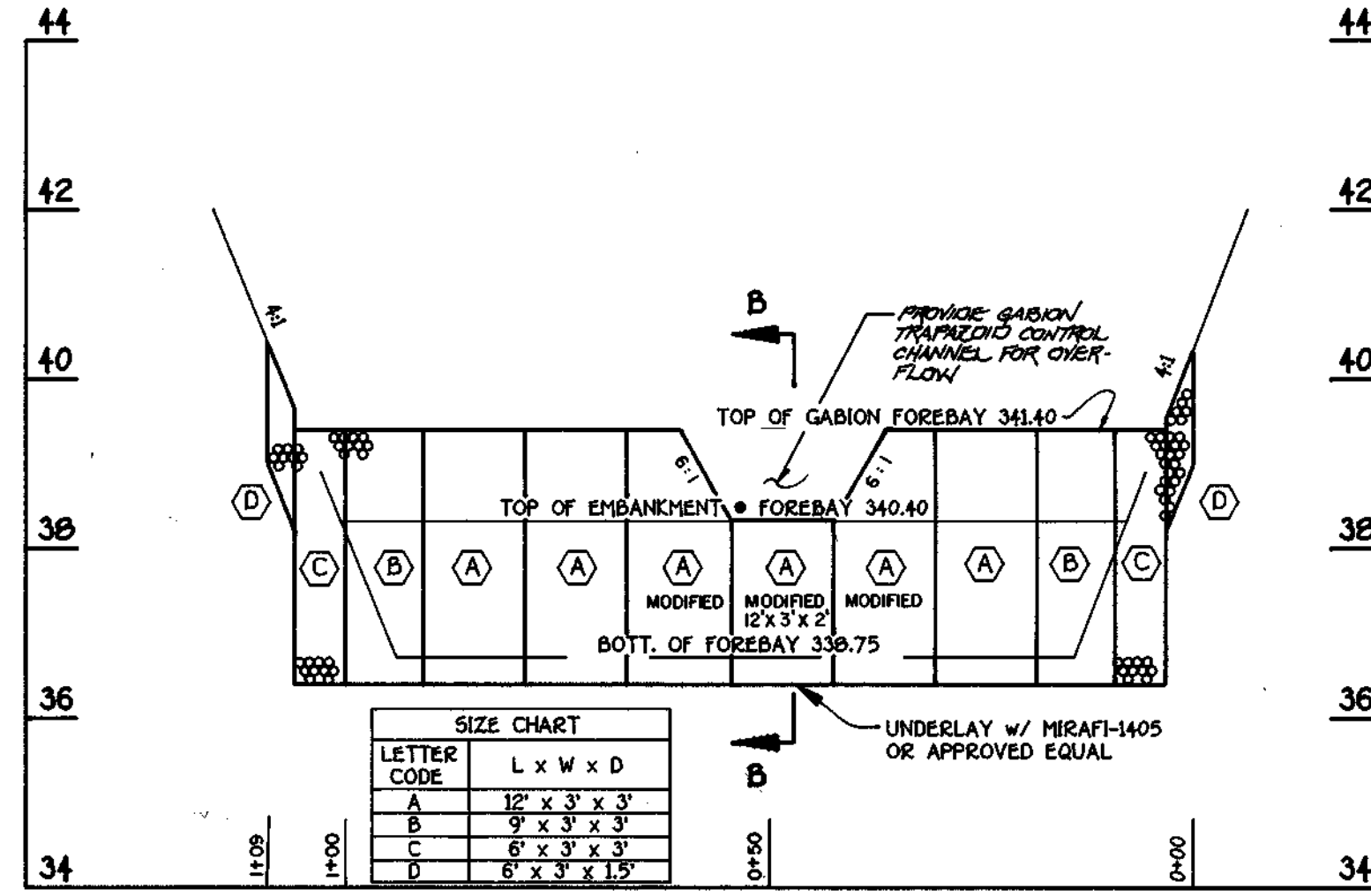


TYPICAL SECTION THROUGH BARREL, CRADLE & ANTI-SEEP COLLAR
NOT TO SCALE

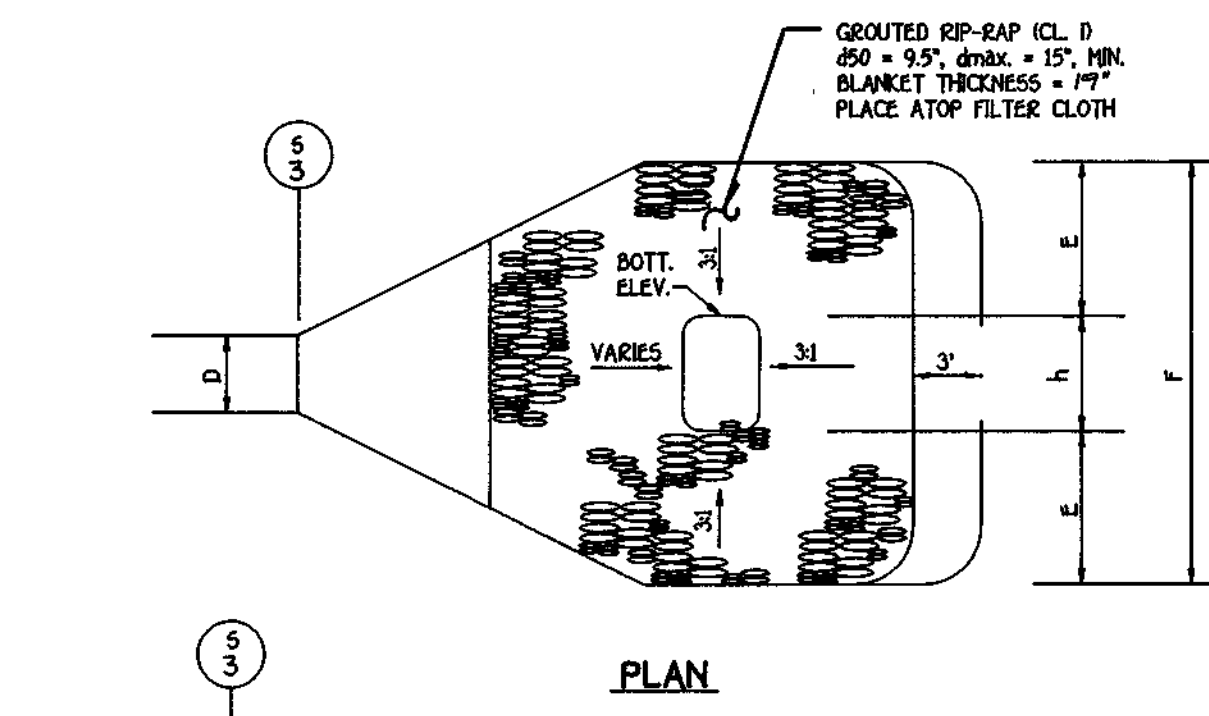
- NOTES:
1. CONCRETE SHALL BE MSHA MIX NO. 3 (FC > 3500 P.S.I.)
 2. REINFORCING STEEL = GRADE 60
 3. FOR WALLS OF STRUCTURE SHALL UTILIZE L.M. SCOFIELD CO. FORM LINERS (RANDOM SPLIT-FACE ROCK) (OPTIONAL)
 4. PROVIDE ROUGH BROOM FINISH
 5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECIFICATIONS.
 6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS SHOWN OTHERWISE.



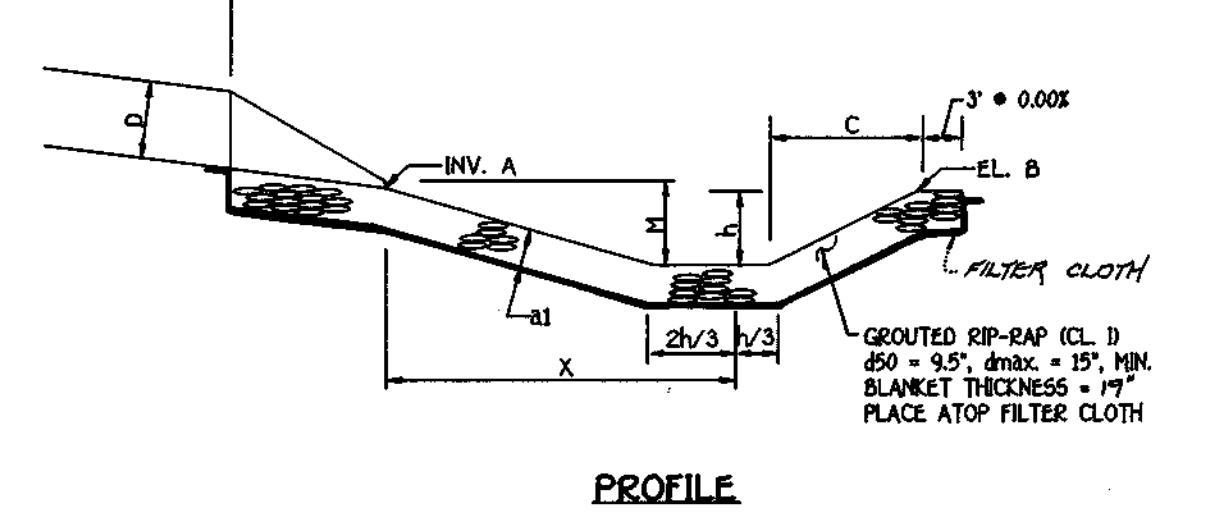
SECTION 'B'
SCALE HOR: 1" = 10'
VER: 1" = 2'



FOREBAY PROFILE
SCALE HOR: 1" = 20'
VER: 1" = 2'



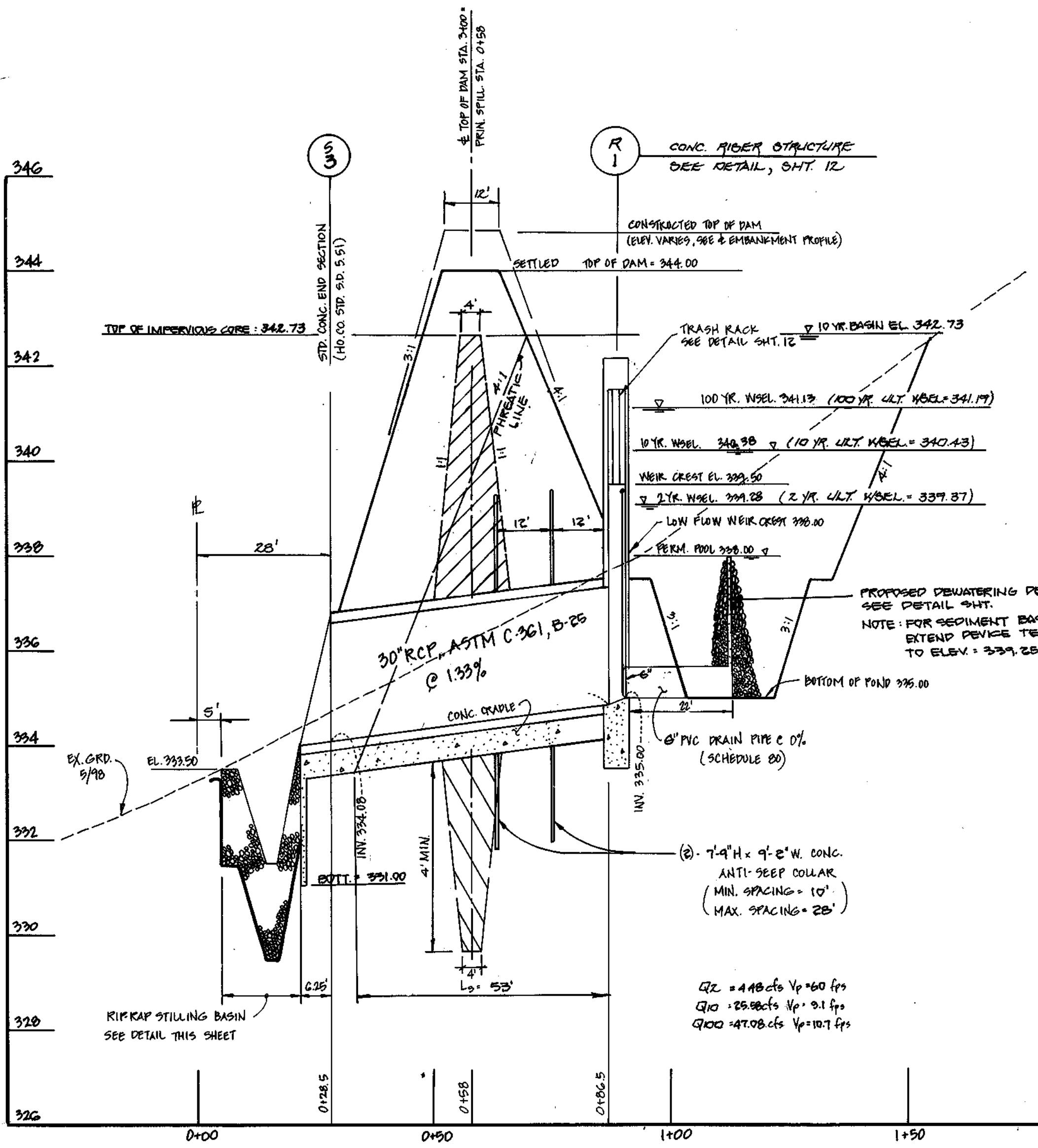
PLAN



PROFILE

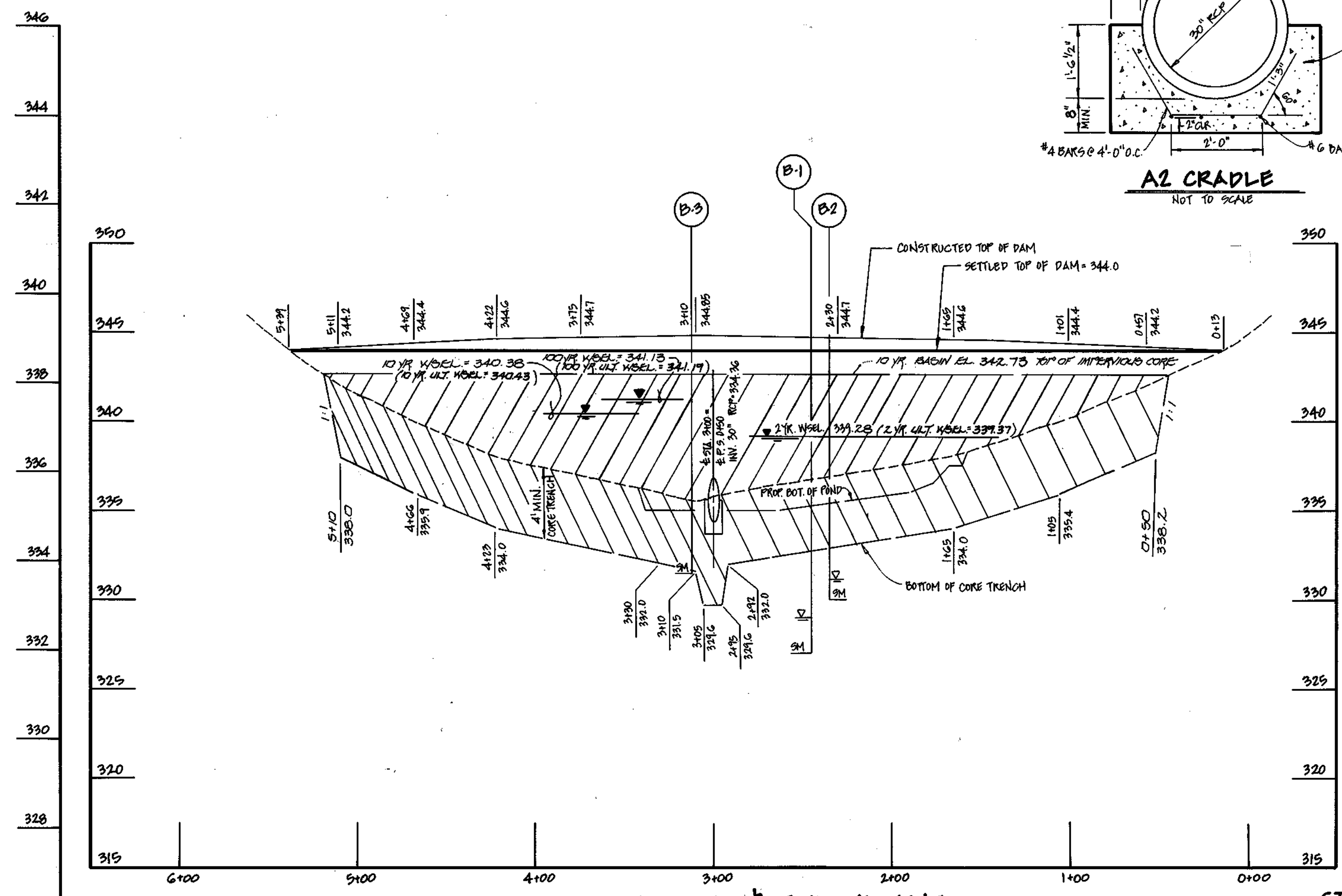
STILLING BASIN OUTFALL DETAIL • S-3
NO SCALE

STILLING BASIN DATA										
STRUCTURE NO.	INV. A	EL. B	C	D	E	F	H	M	al	X
S-3	334.00	333.50	6.0'	2.5'	6.0'	14.0'	2.0'	2.5'	2.0'	6.0'



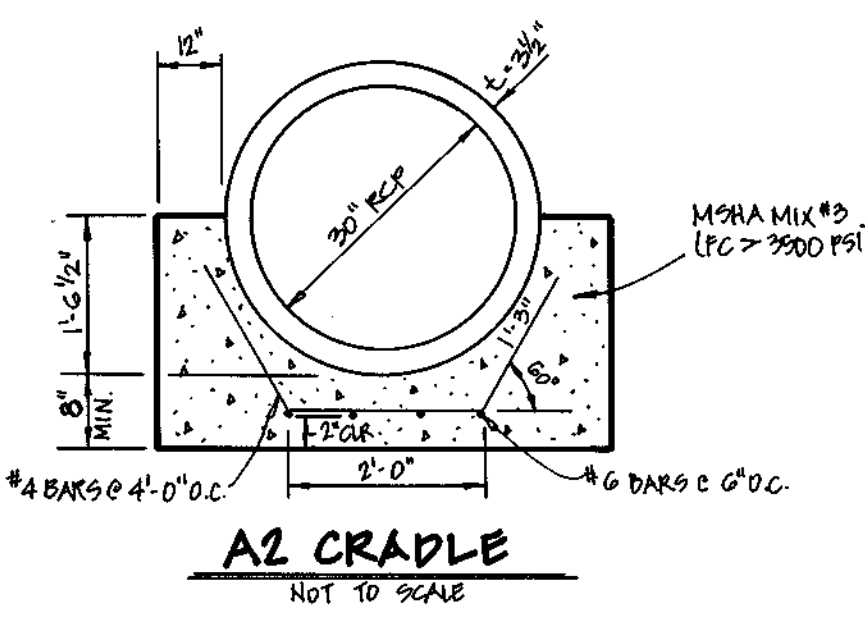
PROFILE ALONG PRINCIPAL SPILLWAY

SCALE: 1" = 20' HORIZ.
1" = 2' VERT.



PROFILE ALONG EMBANKMENT

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

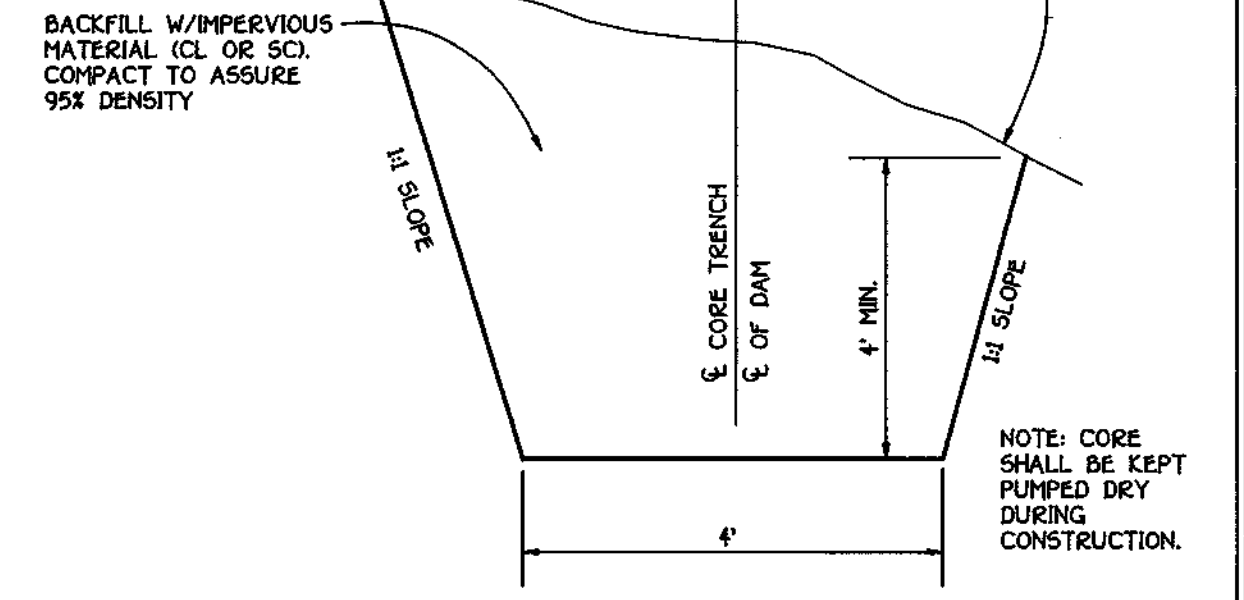


A2 CRADLE
NOT TO SCALE

AS-BUILT CERTIFICATION
I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" Plans and Meets the Approved Plans and Specifications.

Signature _____ P.E. No. _____
Date: _____

Certify Means to State or Declare a Professional Opinion Based Upon Onsite Inspections and Material Tests Which are Conducted During Construction. The Onsite Inspections and Material Tests are Those Inspections and Tests Deemed Sufficient and Appropriate Commonly Accepted Engineering Standards. Certify Does Not mean or imply a Guarantee by the Engineer nor Does an Engineer's Certification Relieve Any Other Party from Meeting Requirements Imposed by Contract, Employment or Other Means, Including Meeting Commonly Accepted Industry Practices.



CORE TRENCH DETAIL
NOT TO SCALE

NOTE: CORE SHALL BE KEPT PUMPED DRY DURING CONSTRUCTION.



STORMWATER MANAGEMENT DETAILS
THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34

(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)

ZONED R-20
TAX MAP NO. 24 GRID NO. 21
PART OF PARCEL NO. 399
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET 11 OF 17

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 18272 BALTIMORE NATIONAL FREE
ELLICOTT CITY, MARYLAND 21042
4100 661 - 2935

OWNERS
MR. AND MRS. WILFREDO PEREZ
3820 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
MR. WILLIAM GABLE
3820 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
DONALD GREGORY COLE, et al
3820 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042
MR. AND MRS. HENRY MATTHEWS
3820 OLD ANNAPOLIS ROAD
ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
C.S.T.L.C. TRADING AS
JAMESTOWN BUILDINGS
10801 HICKORY RIDGE ROAD
SUITE 210
COLUMBIA, MARYLAND 21044

BORING NO. 1

ELEVATION	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
338.50		Brown moist to wet, loose to medium dense, micaceous silty sand (SM) (Sandy Loam)	7' Topsoil Groundwater encountered at 9.5' while drilling Caved in at 9.5' at completion Caved in at 9' after 24 hours
11.5		Bottom of hole at 11.5'	

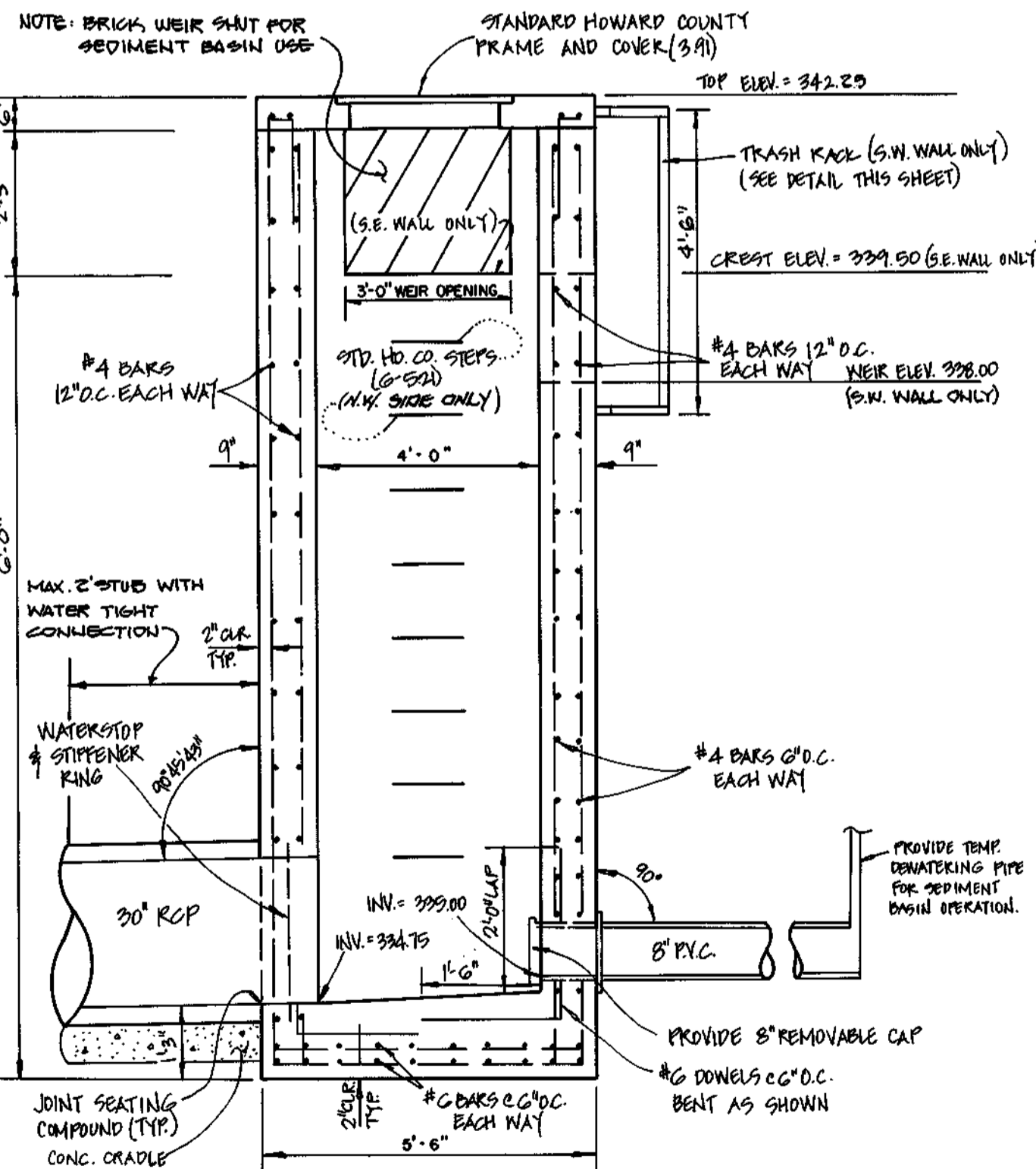
BORING NO. 2

ELEVATION	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
341.50		Brown moist to wet, loose to medium dense, micaceous silty sand (SM) (Sandy Loam)	7' Topsoil Groundwater encountered at 9.5' while drilling Caved in at 9.5' at completion Caved in at 9' after 24 hours
11.5		Bottom of hole at 11.5'	

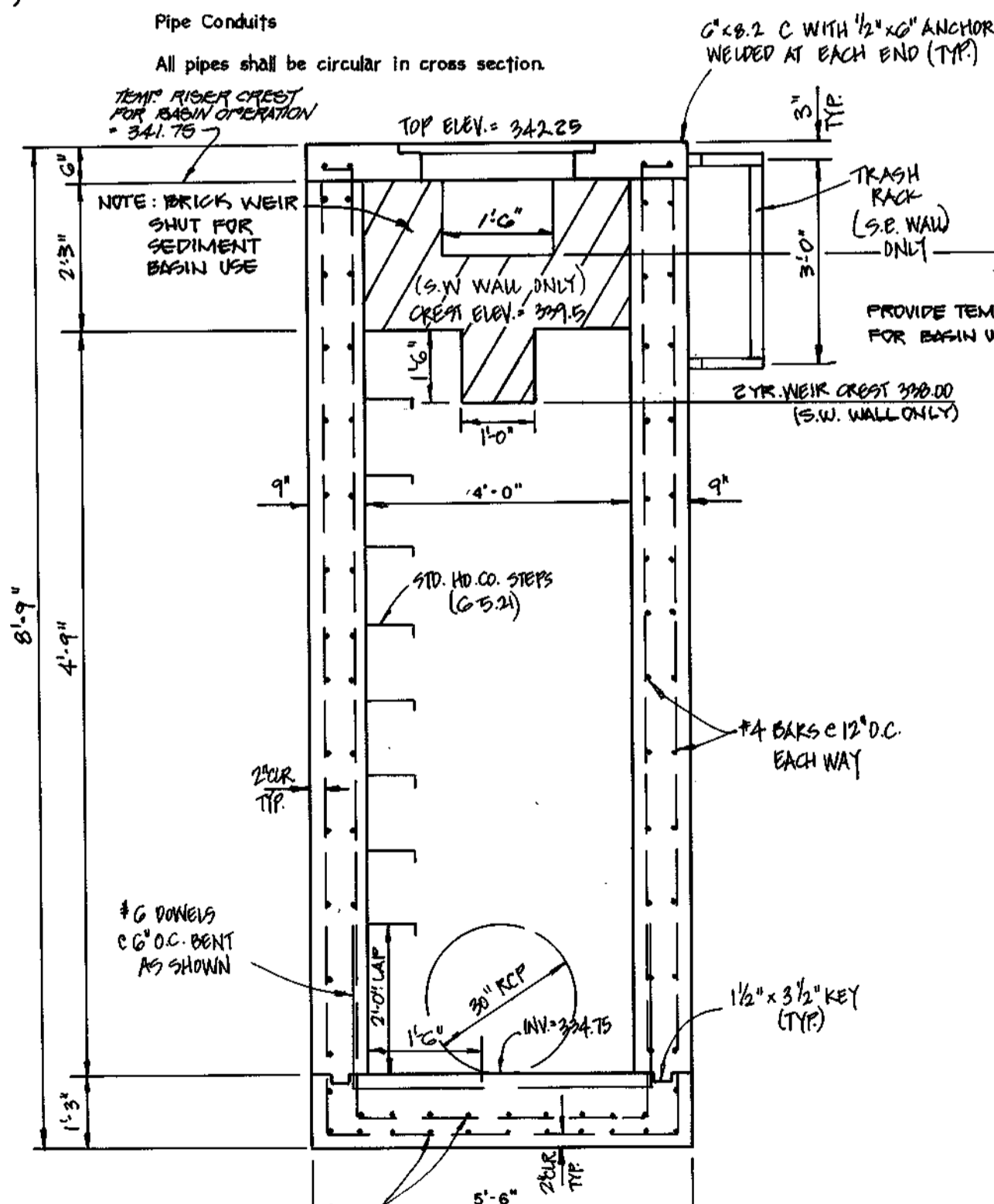
BORING NO. 3

ELEVATION	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
341.50		Brown moist to wet, loose to medium dense, micaceous silty sand (SM) (Sandy Loam)	7' Topsoil Groundwater encountered at 10.0' while drilling Caved in to 5' at completion Caved in at 5' after 24 hours
10.0		Bottom of hole at 10.0'	

NOTE: FOR SEDIMENT BASIN USE REPLACE TOP SLAB WITH TEMP. TRASH RACK (SEE DET B FOR DETAIL)



**PROFILE VIEW A
CONCRETE RISER DETAIL**
NO SCALE



**PROFILE VIEW B
CONCRETE RISER DETAIL**
NO SCALE

370 - 12 Pond

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-370. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

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

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

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

Earth Fill

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

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

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

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/-2 of the optimum. Each layer of fill shall be compacted and placed in a manner that will insure the riprap in place shall reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 915.12.

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

Structure Backfill

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

Pipe Conduits

All pipes shall be circular in cross section.

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

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

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

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials-PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. 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.

4. Backfilling shall conform to "Structure Backfill".

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

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 606: Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 915.12.

Care of Water during Construction

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

Stabilization

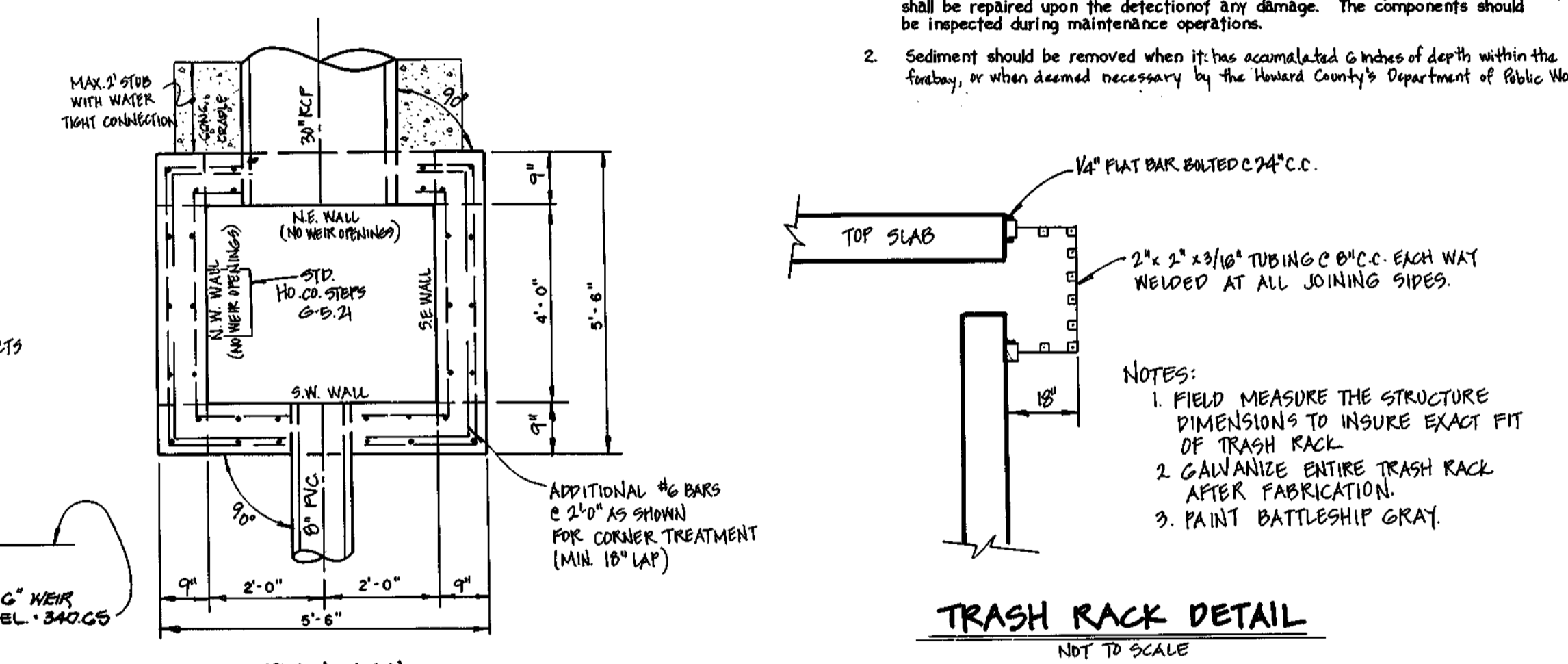
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service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

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local law concerning 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.

STORMWATER MANAGEMENT POND MAINTENANCE SCHEDULE

- A. ROUTINE MAINTENANCE
 1. Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
 2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed. At no time shall the vegetation exceed 18 inches in height.
 3. Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
 4. Visible signs of erosion in the pond as well as rip-rap putlet area shall be repaired as soon as it is noticed.
- B. NON-ROUTINE MAINTENANCE
 1. Structural components of the pond such as the dam, riser, outlet and the pipes should be inspected and upon the detection of any damage. The components should be repaired as soon as it is noticed.
 2. Sediment should be removed when it has accumulated a depth of 6 inches within the facility, or when deemed necessary by the Howard County's Department of Public Works.



- NOTES**
1. CONCRETE SHALL BE MSHA MIX #3 (FC-7,900 PS)
 2. REINFORCING STEEL: GRADE 60
 3. FACE FORMS FOR WALLS OF OUTLET STRUCTURE SHALL UTILIZE L.M. SCOFIELD CO. T-1055 FORM LINERS (RANDOM SHUT-FACE ROCK). OPTIONAL PROVIDE ROUGH BROWN FINISH ON TOP OF SLAB.
 4. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION G.07.03(B) OF THE MSHA STANDARDS AND SPECIFICATIONS.
 5. ALL EXPOSED METAL SURFACES SHALL BE PAINTED IN ACCORDANCE WITH SECTION G.07.03.G OF THE MSHA STANDARDS AND SPECIFICATIONS.
 6. ALL REINFORCING SLICES SHALL BE LAP SLICES OF 30 BAR DIAMETERS UNLESS SHOWN OTHERWISE.
 7. ALL FILTER FABRIC SHALL BE POLY-FILTER 'X' OR EQUIVALENT.
 8. ALL EXPOSED EDGES OF CONCRETE TO BE CHAMFERED 1/2" x 1/2".

AS-BUILT CERTIFICATION

I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" Plans and meets the Approved Plans and Specifications.

Signature: _____ P.E. No. _____
Date: _____

Certify Means to State or Declare a Professional Opinion Based Upon Onsite Inspections and Material Tests Which are Conducted During Construction. The Onsite Inspections and Material Tests are Those Inspections and Tests Deemed Sufficient and Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean or Imply a Guarantee by the Engineer Nor Does An Engineer's Certification Relieve Any Other Party from Meeting Requirements Imposed by Contract, Employment, or Other Means, Including Meeting Commonly Accepted Industry Practices.

OPERATION, MAINTENANCE AND INSPECTION

Inspection of the ponds shown herein shall be performed at least 8 annually, in accordance with the standards and requirements contained within USDA, SCS Standards and Specifications for Ponds (MD-370B). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

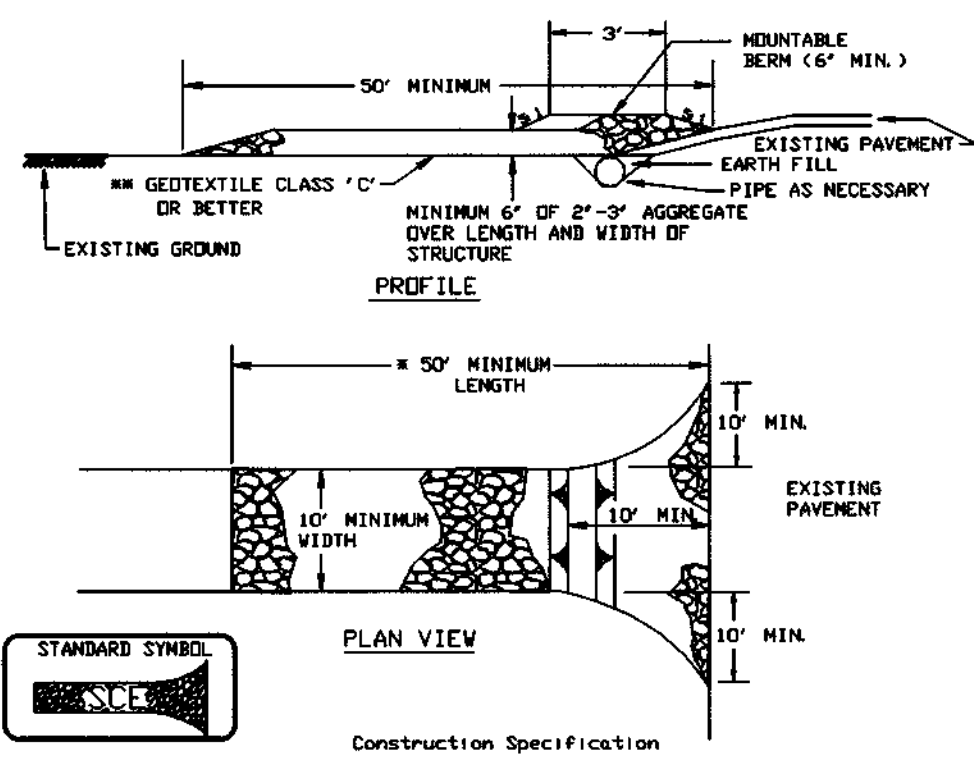
DESIGN SUMMARY

DESIGN STORM	ALLOWABLE RELEASE RATE	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE ELEVATION	STORAGE VOLUME (AC-FT)
2 YEAR	5.92 CFS	13.90 CFS	4.40 CFS	339.28	0.281
10 YEAR	26.58 CFS	35.36 CFS	28.58 CFS	340.38	0.598
100 YEAR	N/A	62.81 CFS	47.08 CFS	341.13	0.847

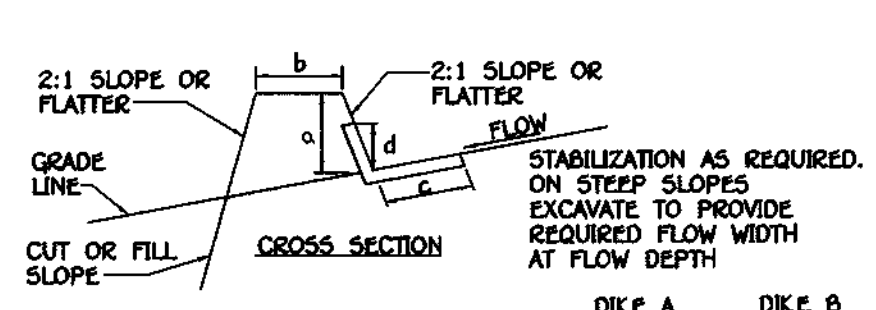
STORMWATER MANAGEMENT DETAILS

THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34
(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND B, DEER PARK ESTATES, PLAT NO. 12580)

ZONED R-20
TAX MAP NO. 24 GRID NO. 21
PART OF PARCEL NO. 399
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET 12 OF 17



1. Length - minimum of 50' (30' for single residence lot).
 2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 3. Geotextile Fabric (Filter cloth) shall be placed over the existing ground prior to placing stone. The pipe approval authority may not require single family residences to use geotextile.
 4. Stone - crushed aggregate (2" to 3") or recycled or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
 5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with a 2:1 slope and a minimum of 5" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
 6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



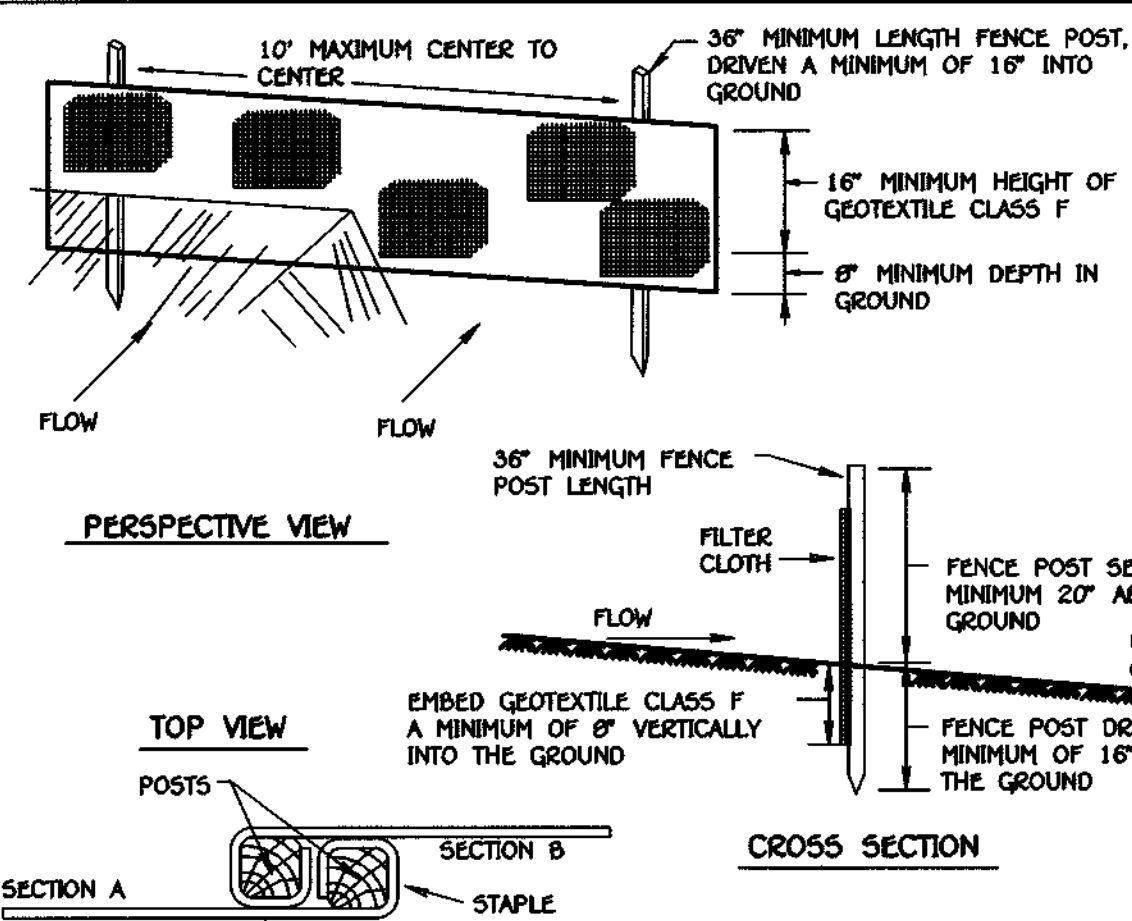
STANDARD SYMBOL
A-2 B-3

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

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSDOR; 50"; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4'-8"
4	8.1-20%	LINED RIP-RAP 4'-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
 B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 6 INCHES THICKNESS AND PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
 C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.



1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard 1" or U section weighting not less than 1.00 pound per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
 Tensile Strength 50 lbs/in (min.) Test: MSMT 509
 Tensile Modulus 2.0 lbs/in (min.) Test: MSMT 509
 Flow Rate 0.3 gal ft / minute (max) Test: MSMT 322
 Filtering Efficiency 75% (min.) Test: MSMT 322
3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

DETAIL 22 - SILT FENCE
NOT TO SCALE

D. Seed Specifications

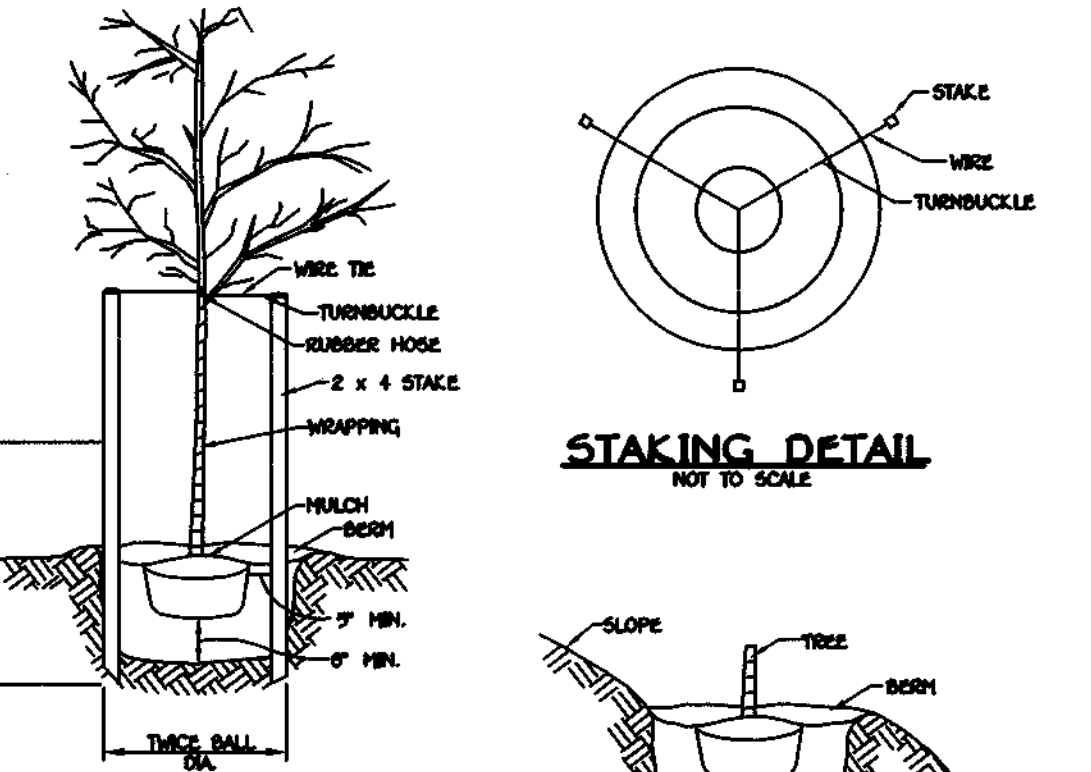
1. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed testing laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
 Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
 i. Inoculant - The inoculant for treating legume seeds in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate of application. It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80° F. can weaken bacteria and make the inoculant less effective.
2. Methods of Seeding
 i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker seeder.
 a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous); 200 lbs./ac. K2O (potassium); 200 lbs./ac.
 b. Lime - use only ground agricultural limestone. Up to 3 tons per acre may be applied by hydroseeding. Limes should be applied after fertilization. Do not use burn or hydrated lime when hydroseeding.
 c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
 ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
 a. Seed spread dry shall be incorporated into the soil at the rates prescribed on the Temporary or Permanent Seeding Summary or Tables 209 or 250. The seeded area shall be rolled with a weighted roller to provide good seed to soil contact.
 b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
3. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
 a. Cultipacker seeding shall be used on sites with a firm surface and a topsoil depth of at least 1/4 inch of soil covering. Seeded must be firm after planting.
 b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications

1. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be made of moist, clumpy, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
2. Wood Cellulose Fiber Mulch (WCFF)
 a. WCFF shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
 b. WCFF shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
 c. WCFF, including dye, shall contain no germination or growth inhibiting factors.
 d. WCFF material shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and wicking ability for 2 to 3 weeks and shall hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 e. WCFF material shall contain no elements or compounds at concentration levels that will be phytotoxic.
 f. WCFF must conform to the following physical requirements: fiber length to approximately 1.0 mm, dry fiber length to approximately 1.0 mm to 0.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.
 Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

G. Mulching Seeded Areas

1. If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
2. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
3. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber mulch shall be mixed with water and the mixture shall contain a minimum of 90 lbs. of wood cellulose fiber per 100 gallons of water.
4. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
 i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface to a depth of 2 inches. The rate of application shall be 1/2 cubic foot per square yard, but is limited to flatter slopes where equipment can operate safely. If used on sloping areas, this practice should be used on the contour if possible.
 ii. Wood cellulose fiber and one fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a minimum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and around tree trunks. The remainder of first should be applied uniformly after binder application. Synthetic binders - such as Acrylic DLE (Agra-Tack), DCA-70 Petrosol, Terra Tack II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
 iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.



- NOTE: REMOVE MULCH FROM TOP 1/3 OF BALL.
1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1895).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS PLAN AND ARE TO BE IN COMPLIANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR SOIL DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES AND ALL SLOPES STEEPER 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 PERMETER 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONG 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 ANALYSES:
 TOTAL AREA OF SITE 14,215 ACRES
 AREA DISTURBED 9,03 ACRES
 AREA TO BE GRADED OR PAVED 2,53 ACRES
 AREA TO BE VEGETATIVELY STABILIZED 6,30 ACRES
 TOTAL CUT 13,000 CU.YDS.
 TOTAL FILL 14,000 CU.YDS.
 OFFSITE WHITE/BROWN AREA LOCATION N/A CU.YDS.
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING, ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL MEASURES MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY 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 PERMETER 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. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 1877 BALTIMORE NATIONAL FEE
 ELLICOTT CITY, MARYLAND 21042
 (410) 481-2959

OWNERS
 MR. AND MRS. WILFRED PEREZ
 9820 DLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. WILLIAM GARLE
 9820 DLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER
 DONALD GREGORY COLE, et al
 9810 OLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042
 MR. AND MRS. HENRY MATTHEWS
 9800 DLD ANNAPOLIS ROAD
 ELLICOTT CITY, MARYLAND 21042

C.S.T.L.C. TRADING AS
 JAMESTOWN BUILDERS
 10801 HUCKLEBERRY RIDGE ROAD
 SUITE 210
 COLUMBIA, MARYLAND 21044

SEDIMENT CONTROL NOTES AND DETAILS
THE OVERLOOK AT CENTENNIAL PARK
 LOTS 9 THRU 34
 (A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND B, DEER PARK ESTATES, PLAT NO. I2500)
 ZONED R-20
 TAX MAP NO. 24 GRID NO. 21
 PART OF PARCEL NO. 369
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: MAY 11, 1998
 SHEET 13 OF 17

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

Signature of Developer: [Signature]
 Date: 12/8/98

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THE PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A FEASIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE PROJECT AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature of Engineer: [Signature]
 Date: 5-17-99

Signature of Reviewer: [Signature]
 U.S.D.A. NATIONAL RESOURCES CONSERVATION SERVICE
 Date: 12/15/98

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

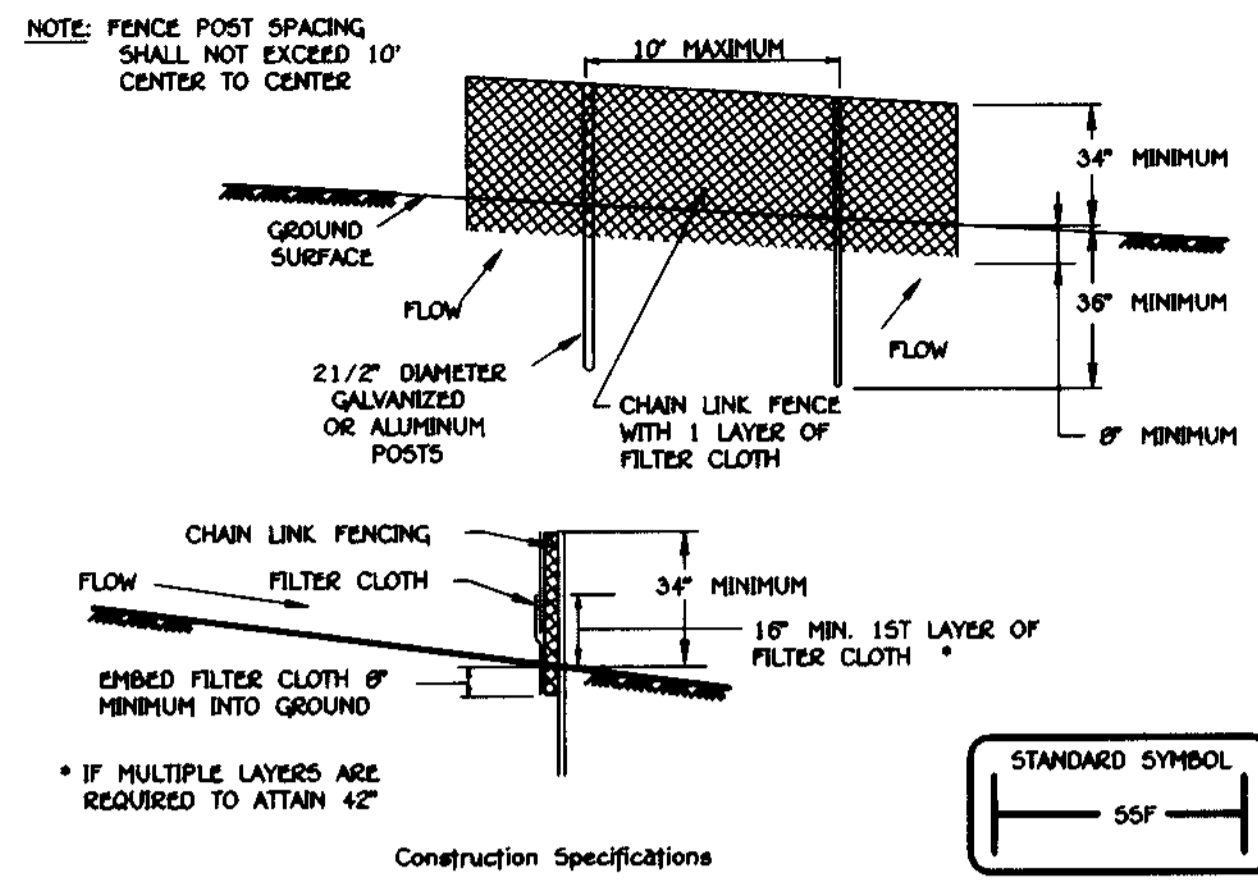
Signature of Approval: [Signature]
 Date: 12/15/98

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: [Signature]
 Date: 1/25/99

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: [Signature]
 Date: 1/22/99

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Signature: [Signature]
 Date: 1-8-99

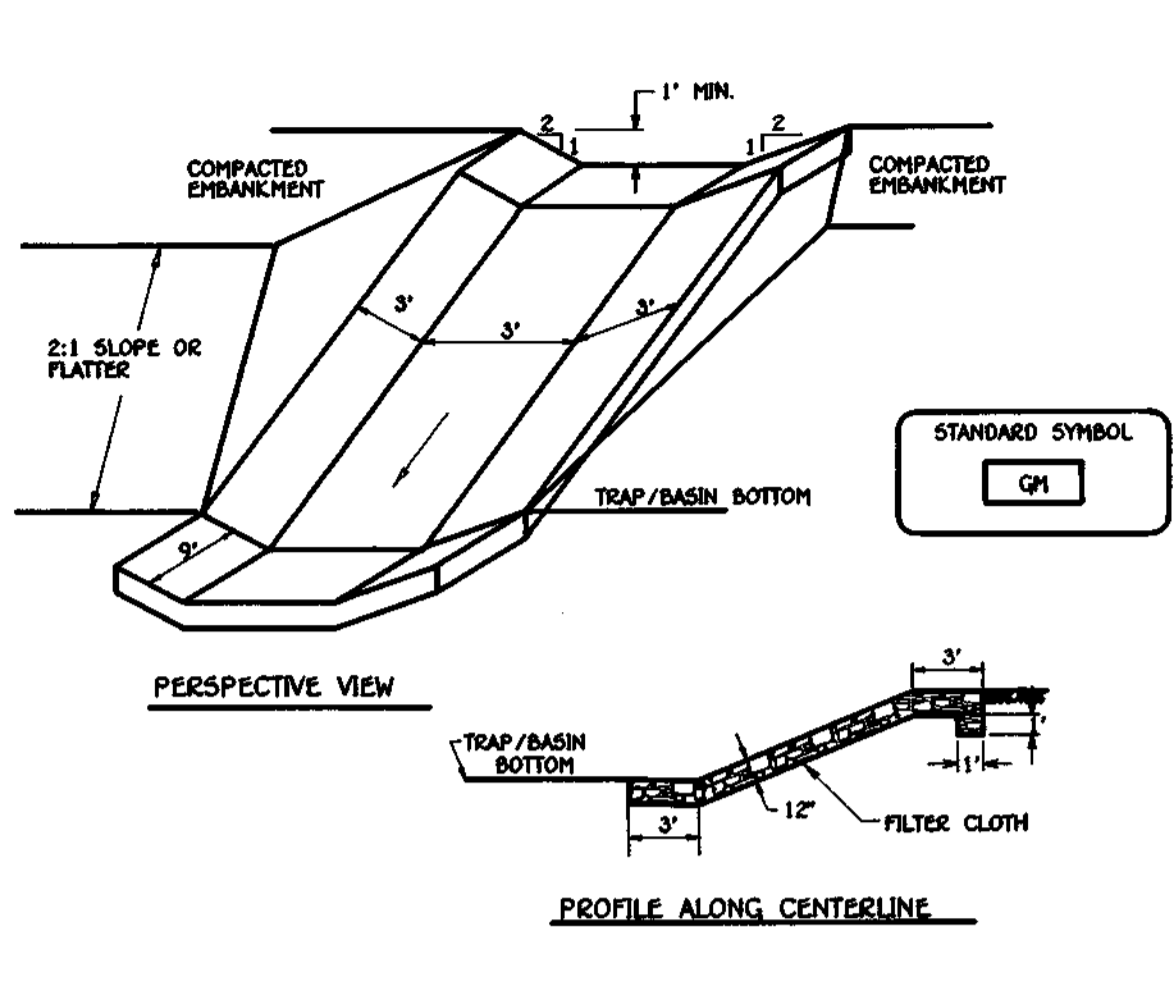
DETAIL 33 - SUPER SILT FENCE



- Construction Specifications**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 6" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and all buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

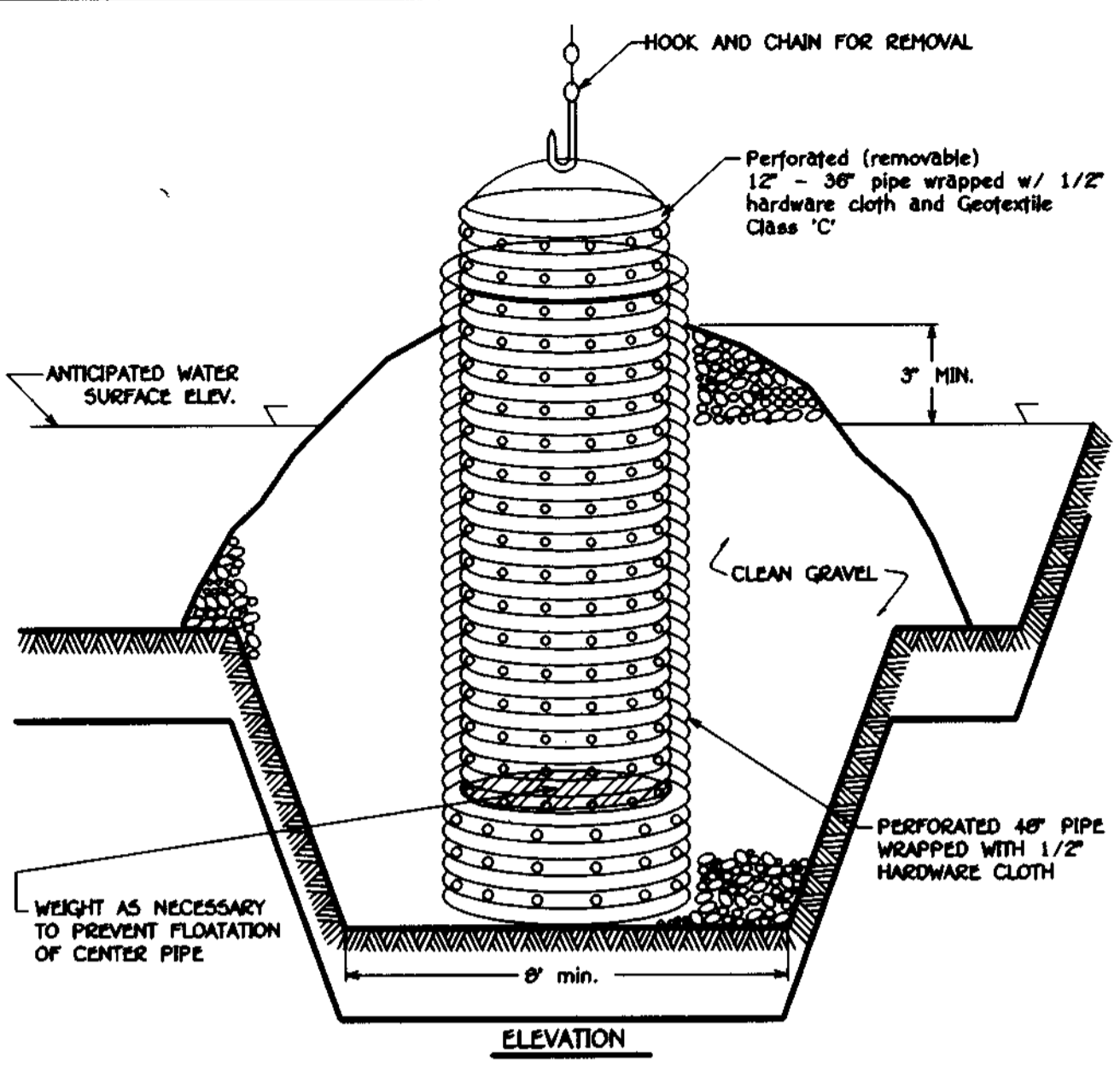
Tensile Strength	50 lbs/in. (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in. (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

GABION INFLOW PROTECTION



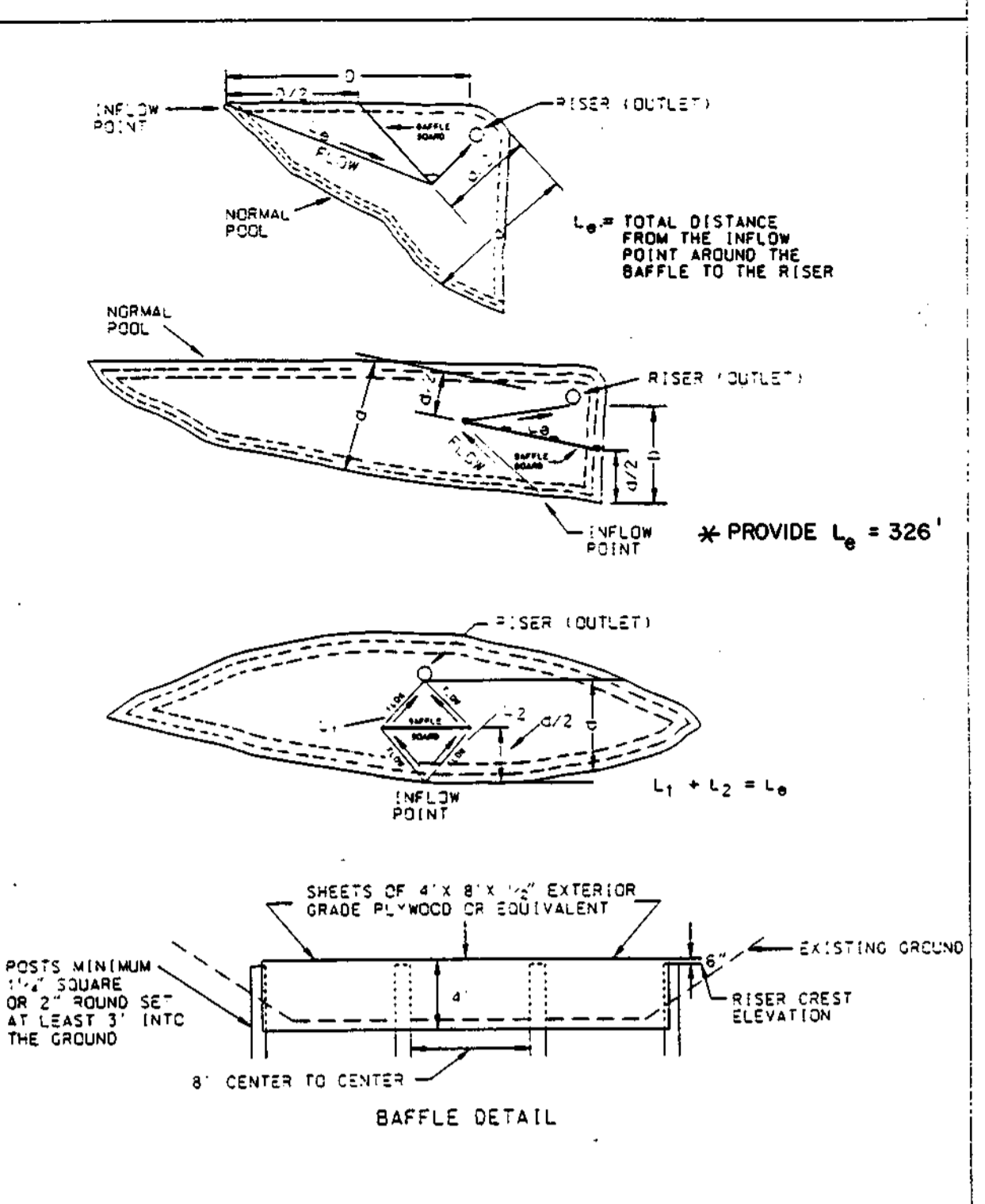
- Construction Specifications**
- Gabion inflow protection shall be constructed of 9' x 3' x 9' gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
 - Geotextile Class C shall be installed under all gabion baskets.
 - The stone used to fill the gabion baskets shall be 4" - 7".
 - Gabions shall be installed in accordance with manufacturers recommendations.
 - Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

DETAIL 20A - REMOVABLE PUMPING STATION



- Construction Specifications**
- The outer pipe should be 46" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
 - After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
 - The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" slots or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.
 - The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

DETAIL 18 SEDIMENT BASIN BAFFLES



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE C-10-28 | MARYLAND DEPARTMENT OF ENVIRONMENTAL WATER MANAGEMENT ADMINISTRATION

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Charles Eagle 12-9-98
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

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

Andrew M. Danville 11-16-98
SIGNATURE OF ENGINEER DATE

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

David Sumner 12/16/98
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John M. ... 1/15/99
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Guido Hamatta 1/28/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Andrew M. Danville 1/28/99
CHIEF, DEPARTMENT ENGINEERING DIVISION DATE

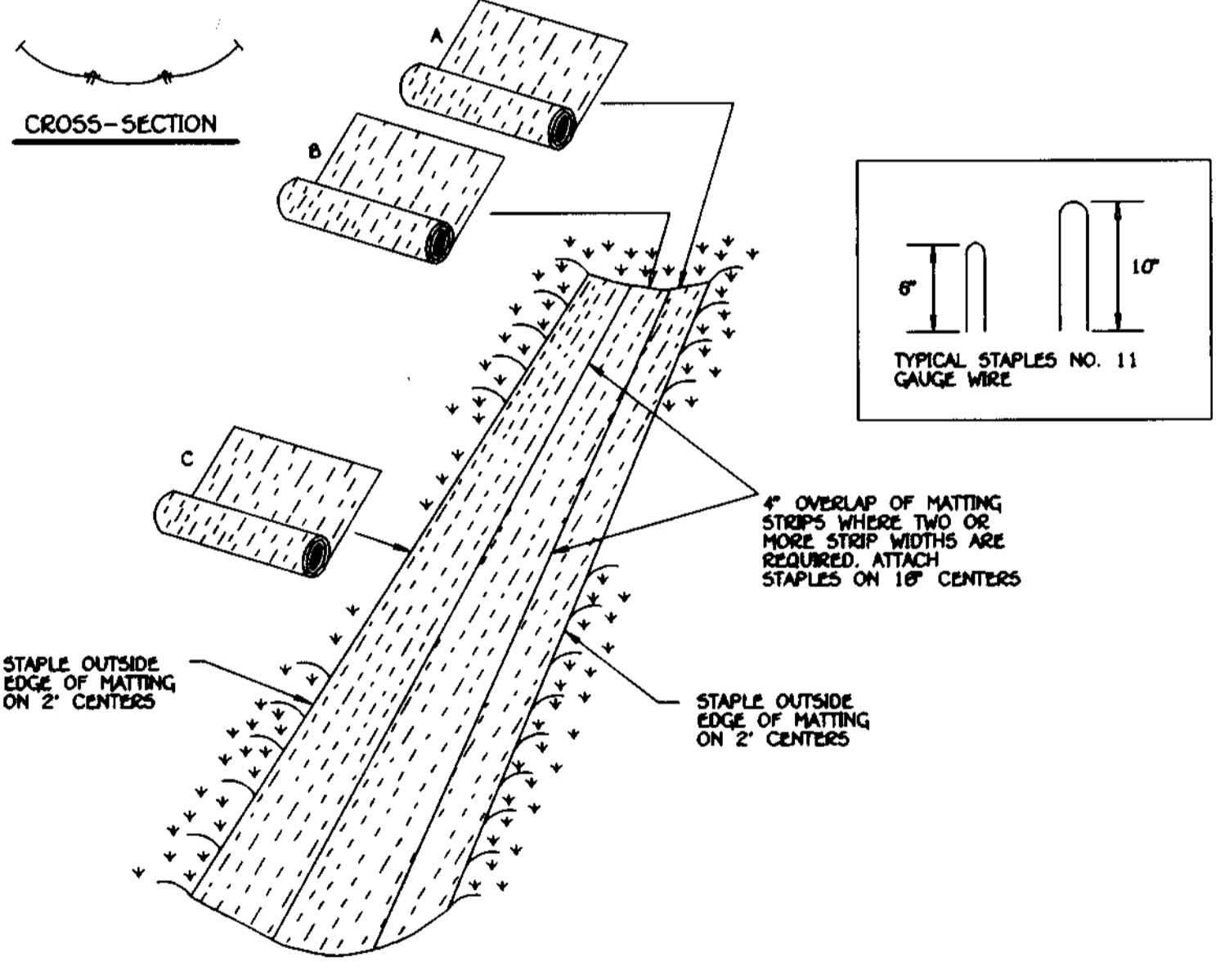
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Danville 1-9-99
CHIEF, BUREAU OF HIGHWAYS DATE

SEQUENCE OF CONSTRUCTION

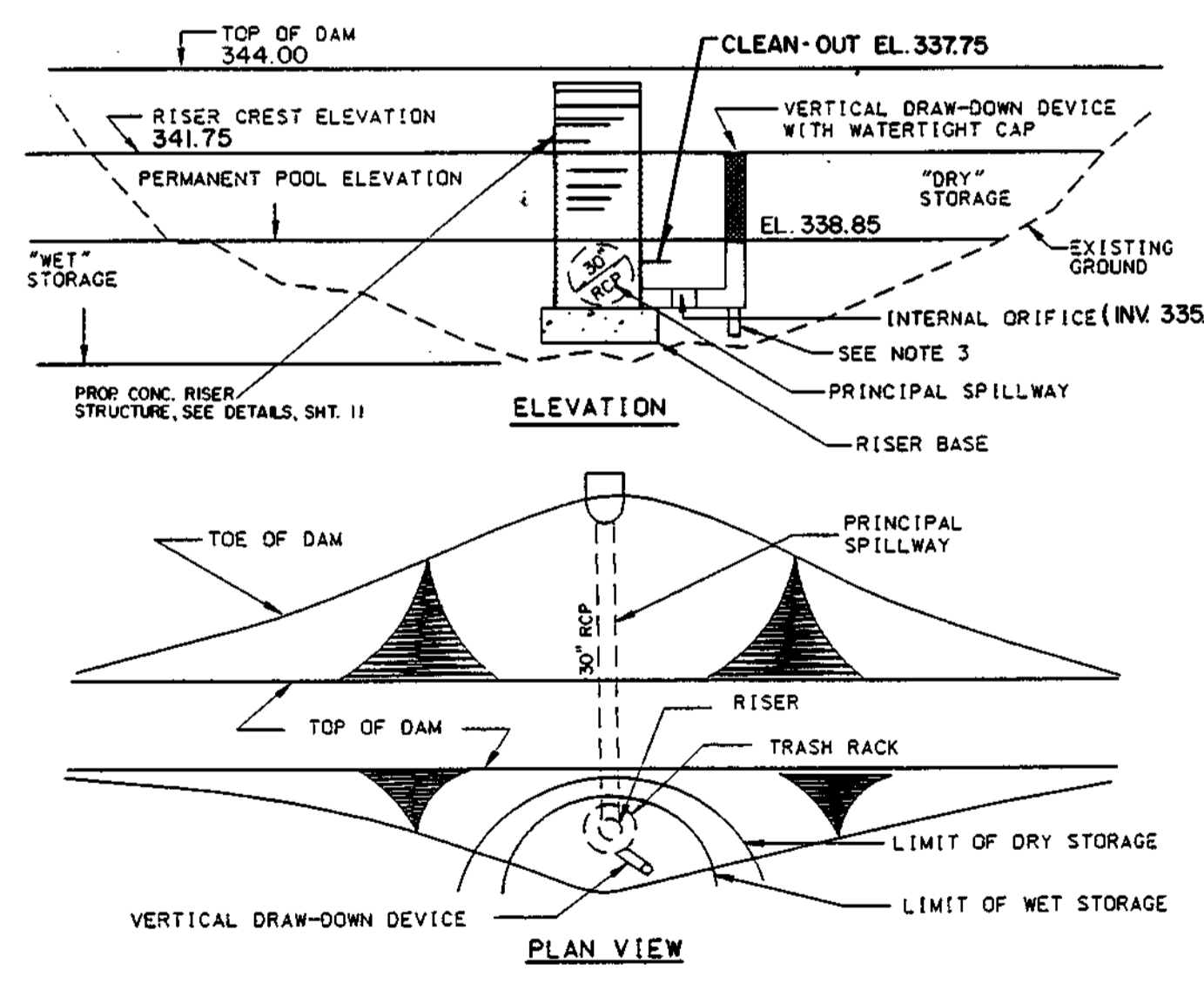
- OBTAIN ALL REQUIRED GRADING PERMITS, APPROVALS AND LICENSES FROM APPROPRIATE AGENCIES.
- NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION DIVISION (410-361870) AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING WORK ON THESE PLANS. NOTIFY THIS UTILITY 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777.
- INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE MAINTAINED AS INDICATED ON THE RELOCATE EXISTING UTILITIES WITHIN OLD ANNAPOLIS ROAD (5) DAYS.
- CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION DISTANCE (5) DAYS.
- INSTALL REMAINING SEDIMENT CONTROL MEASURES, SEDIMENT BASIN/SWA FACILITY, EARTH DICES AND SILT FENCE AS INDICATED ON THE PLANS. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF THE PROPOSED BASIN. WHEN NECESSARY, REMOVAL AND SOIL HANDLING SHOULD BE UTILIZED IN THE EXCAVATION OF THE FACILITY. WITH PERMISSION FROM THE INSPECTOR, AFTER ALL E/S CONTROLS ARE IN PLACE, THE CONTRACTOR MAY PROCEED (6) DAYS. DO NOT CONSTRUCT FORECAST AT THIS TIME.
- CLEAR AND GRUB THE REMAINDER OF THE SITE (5) DAYS.
- GRADE SITE TO THE PROPOSED SUB-GRADE AND INSTALL THE PROPOSED STORM DRAIN SYSTEMS. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING, IF NECESSARY.
- THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES THROUGHOUT EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM ALL TRAPS WHEN CLEANOUT ELEVATIONS ARE REACHED. ALL SEDIMENTS MUST BE PLACED UPSTREAM OF AN APPROVED TRAPPING DEVICE.
- INSTALL TRAFFIC MAINTENANCE DEVICES ALONG OLD ANNAPOLIS ROAD.
- CONTRACT GRUB AND GUTTER AND ROAD BASE COURSE (1) (6) DAYS.
- STABILIZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTORS TO PROCEED.
- WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND BASIN HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICE MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL DESIGN GRADE. STABILIZE ALL REMAINING AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES (3) (6) DAYS.
- NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

DETAIL 30 - EROSION CONTROL MATTING



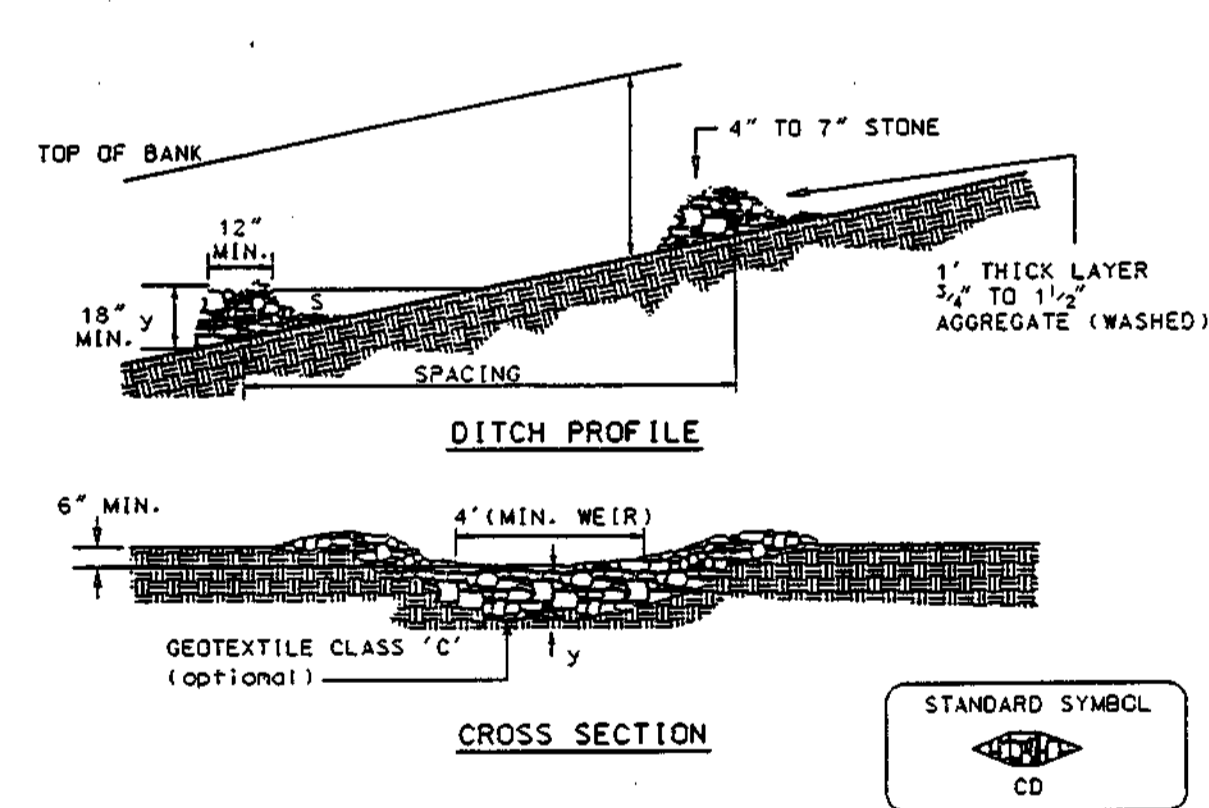
- Construction Specifications**
- Key-in the matting by placing the top ends of the matting in a narrow trench 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6'.
 - Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 2" apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - The discharge end of the matting liner should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area affected by the flow must be keyed-in.

BASIN DRAWDOWN SCHEMATIC VERTICAL DRAW-DOWN DEVICE



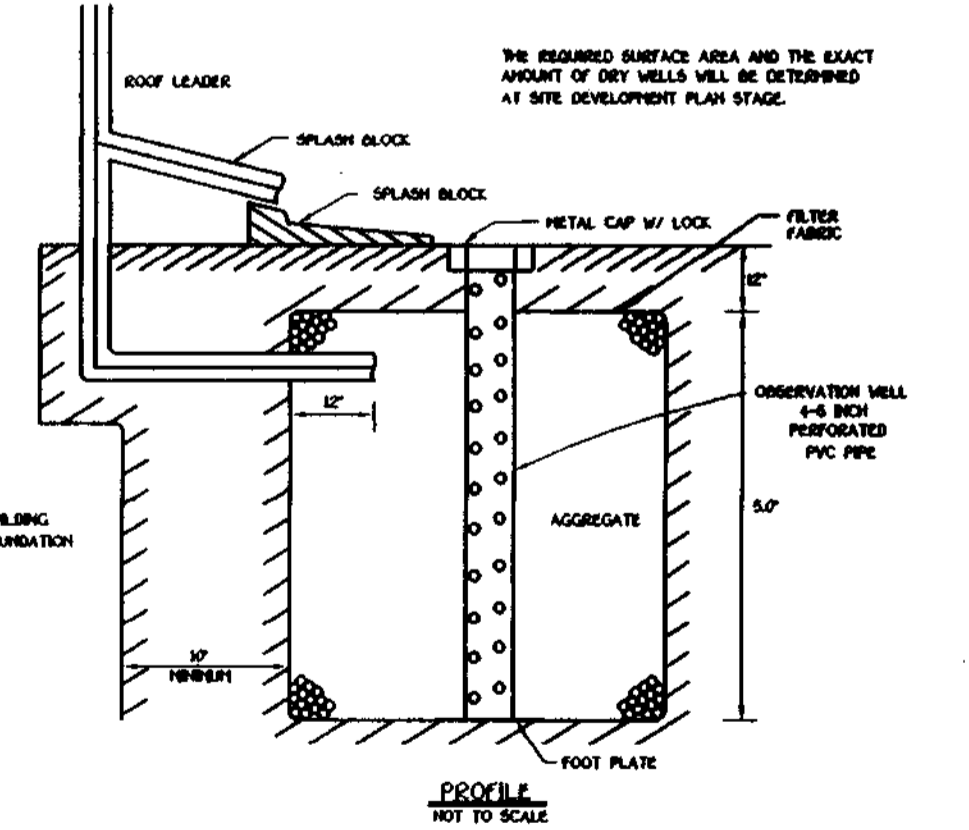
- Construction Specifications**
- Perforations in the draw-down device may not extend into the wet storage.
 - The total area of the perforations must be greater than 4 times the area of the internal orifice.
 - The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class E.
 - Provide support of draw-down device to prevent sagging and flotation. An acceptable preventative measure is to stake both sides of draw-down device with 1" steel angle, or 1 by 4" square or 2" round wooden posts set 3' minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

DETAIL 7 - STONE CHECK DAM



- STANDARD STONE CHECK DAM DESIGN**
- | SLOPE | SPACING |
|-------------|---------------------------|
| 2% or less | 80' |
| 2.1% to 3% | 40' |
| 4.1% to 7% | 25' |
| 7.1% to 10% | 15' |
| over 10% | Use lined waterway design |
- Construction Specifications**
- Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2. Standards and Specifications for Temporary Swale.
 - The check dam shall be constructed of 4"-12" stone. The stone shall be placed so that it completely covers the width of the channel and is keyed into the channel banks.
 - The top of the check dam shall be constructed so the the center is approximately 6" lower than the outer edges, forming a weir that water can flow across.
 - The maximum height of the check dam at the center shall not exceed 2'.
 - The upstream side of the check dam shall be lined with approximately 1' of 1/2" to 1 1/2" aggregate.
 - Accumulated sediment shall be removed when it has built up to 1/2 of the original height of the weir crest.

TYPICAL DRY WELL CROSS SECTION INFILTRATION MANUAL



SEDIMENT CONTROL NOTES AND DETAILS

THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 34
(A RESUBDIVISION OF LOTS 1,2,3,4,5,7 AND 8, DEER PARK ESTATES, PLAT NO. 12580)

ZONED R-20
GRID NO. 21
PART OF PARCEL NO. 399
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: AUG. 7, 1998
SHEET 14 OF 17

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 18272 BALDWIN NATIONAL Pk.
ELLCOTT CITY, MARYLAND 21042
(410) 461 - 2955

OWNERS

MR. AND MRS. WILFREDO PEREZ
9830 OLD ANNAPOLIS ROAD
ELLCOTT CITY, MARYLAND 21042

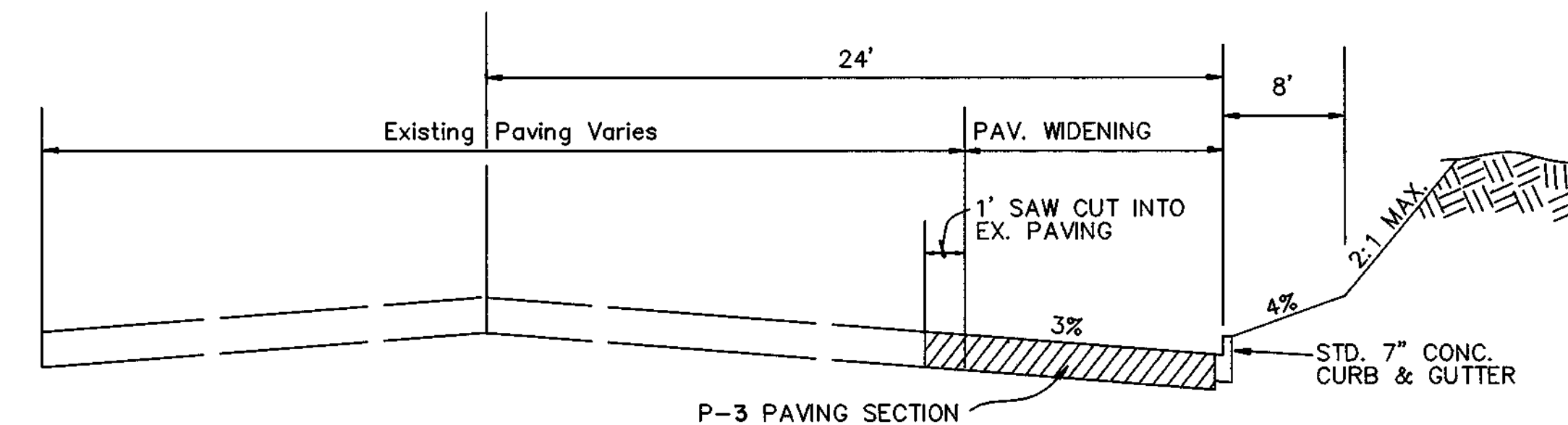
MR. WILLIAM GABLE
9830 OLD ANNAPOLIS ROAD
ELLCOTT CITY, MARYLAND 21042

DONALD GREGORY COLE, et al
9830 OLD ANNAPOLIS ROAD
ELLCOTT CITY, MARYLAND 21042

MR. AND MRS. HENRY MATTHEWS
9830 OLD ANNAPOLIS ROAD
ELLCOTT CITY, MARYLAND 21042

CONTRACT PURCHASER AND DEVELOPER

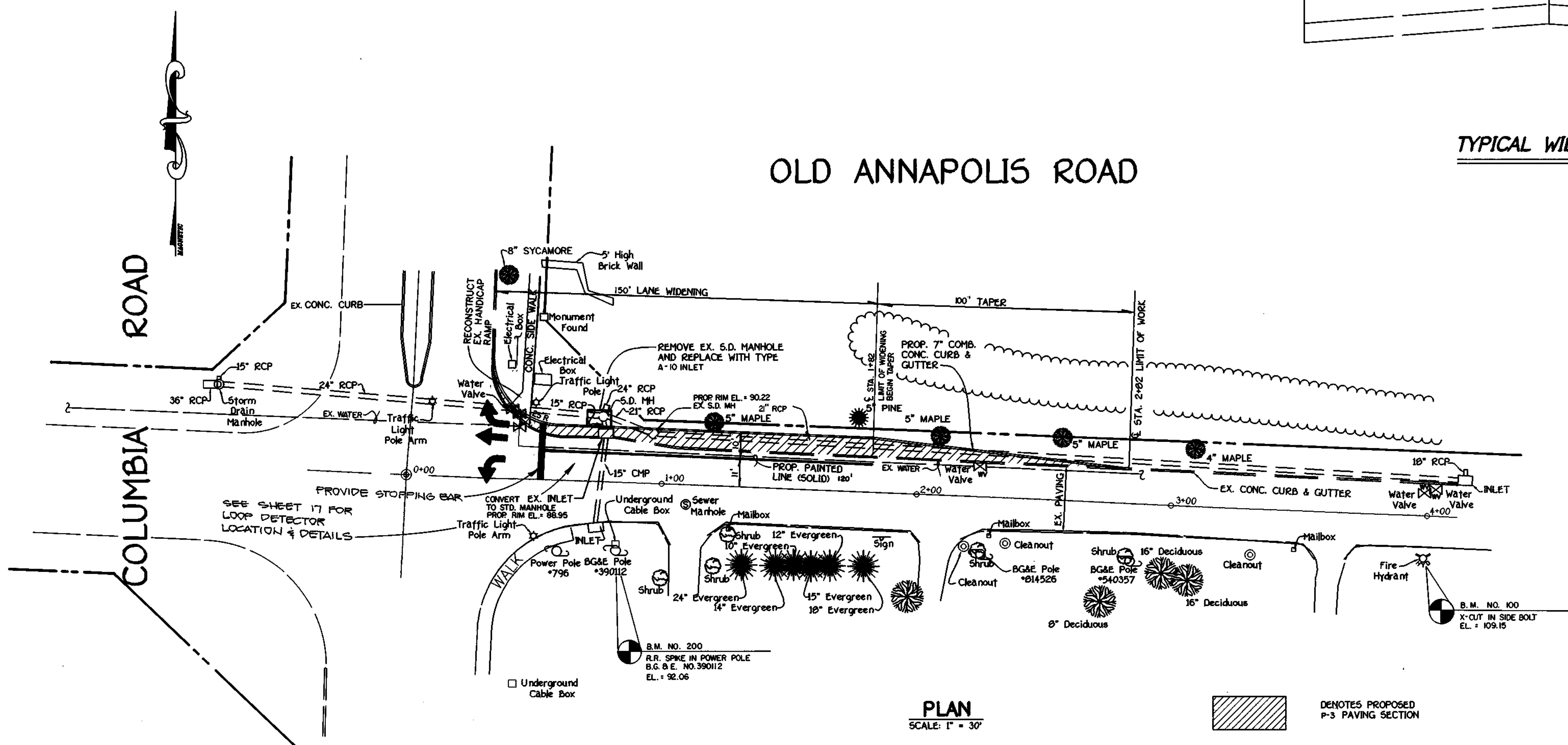
C.S.T.L.C. TRADING AS
JAMESTOWN BUILDERS
10601 HICKORY RIDGE ROAD
SUITE 210
COLUMBIA, MARYLAND 21044



TYPICAL WIDENING SECTION (OLD ANNAPOLIS ROAD)

NO SCALE

OLD ANNAPOLIS ROAD



PLAN
SCALE: 1" = 30'

DENOTES PROPOSED
P-3 PAVING SECTION

APPROVED
DEPARTMENT OF PLANNING AND ZONING
Cindy Kamstra 1/25/99
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

APPROVED
DEPARTMENT OF PLANNING AND ZONING
John Dammann 1/25/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

APPROVED
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Schick 1/25/99
CHIEF, BUREAU OF HIGHWAYS
DATE

THE OVERLOOK AT CENTENNIAL PARK
LOTS 9 THRU 33
(A RESUBDIVISION OF LOTS 1, 2, 3, 4, 5, 6, 7 AND 8
DEER PARK ESTATES, PLAT NO. 12580)
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

PROPOSED APFO MITIGATION PLAN

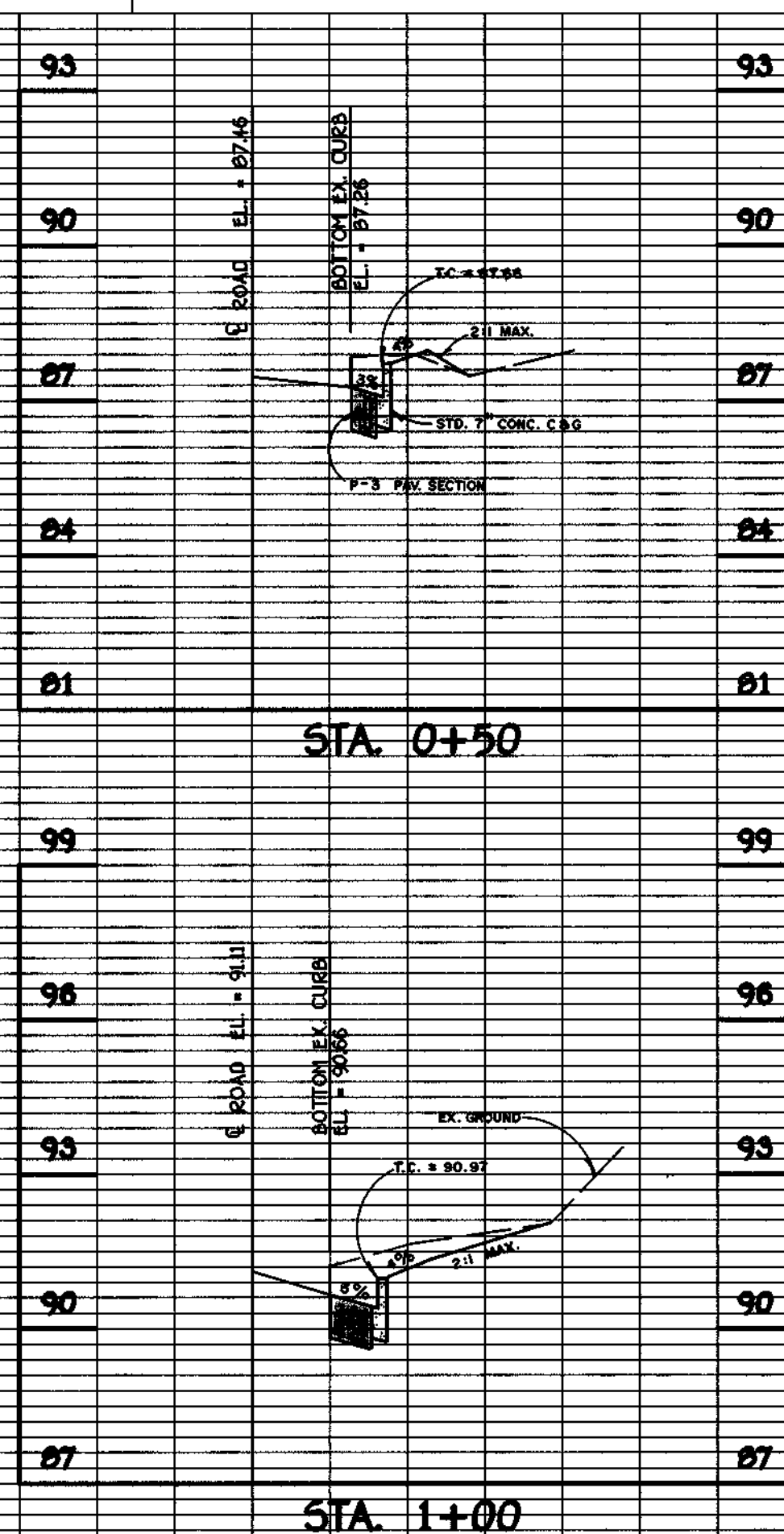
OWNERS: HE AND HIS WIFE PEREZ, 1900 OLD ANNAPOLIS ROAD, ELLETTTOWN CITY, MARYLAND 20626; THE MARYLAND GARAGE, 1000 WOODLEY ROAD, ELLETTTOWN CITY, MARYLAND 20626; DONALD GREGORY COLE, ET AL, 1000 OLD ANNAPOLIS ROAD, ELLETTTOWN CITY, MARYLAND 20626; THE MARYLAND GARAGE, 1000 WOODLEY ROAD, ELLETTTOWN CITY, MARYLAND 20626; THE MARYLAND GARAGE, 1000 WOODLEY ROAD, ELLETTTOWN CITY, MARYLAND 20626.

CONTRACT PURCHASER AND DEVELOPER: C.E.C. TRADING AND INVESTMENT SERVICES, 1000 WOODLEY ROAD, ELLETTTOWN CITY, MARYLAND 20626.

SCALE: AS SHOWN DATE: OCT. 21, 1998 DWG. NO. 18 OF 17
DES. A.M.V. DRN. J.C.L./D.A.N. CHK. A.M.V.

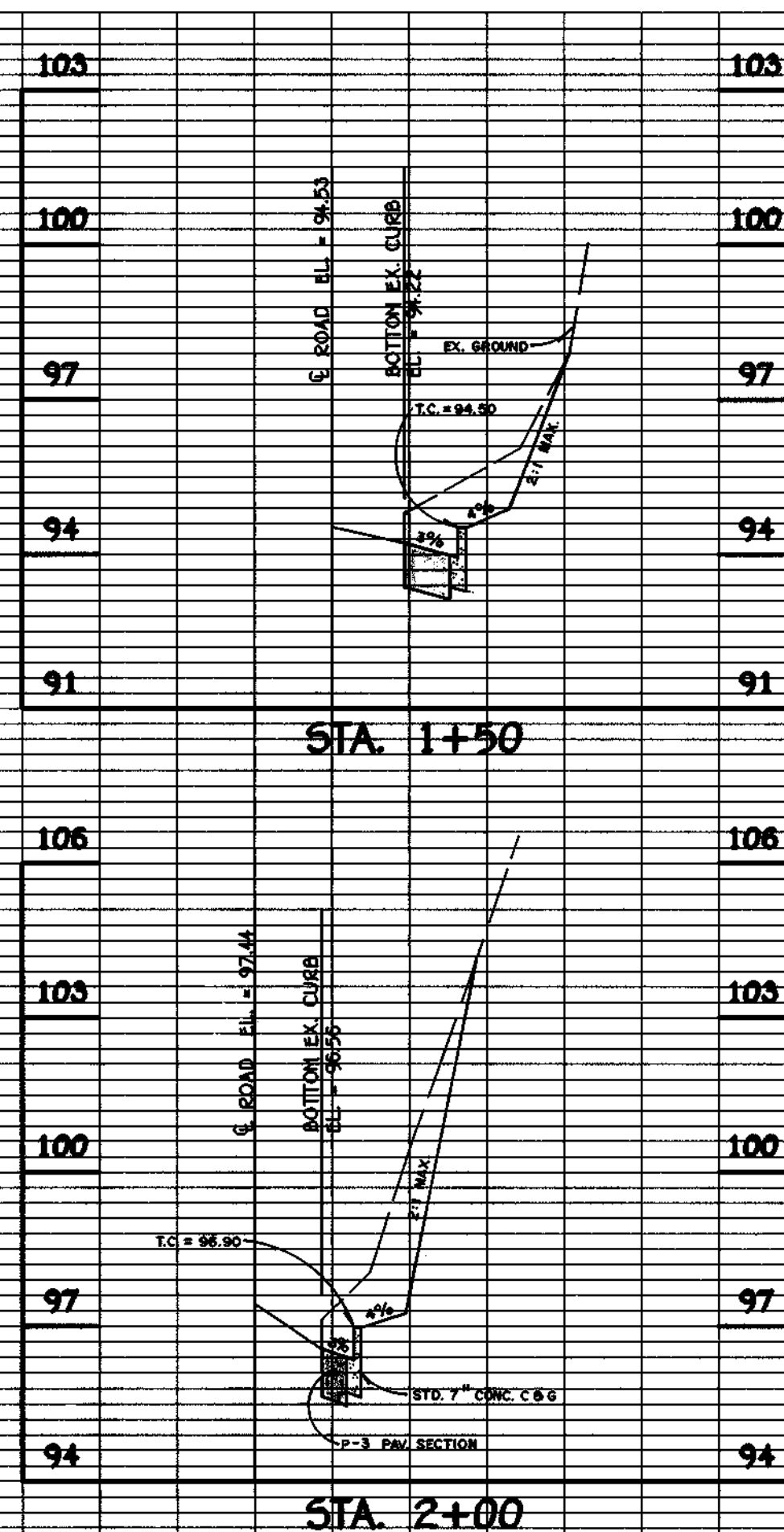


FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 1072 BALTIMORE NATIONAL PIKE
ELLETTTOWN CITY, MARYLAND 20626
4101 661 - 2000



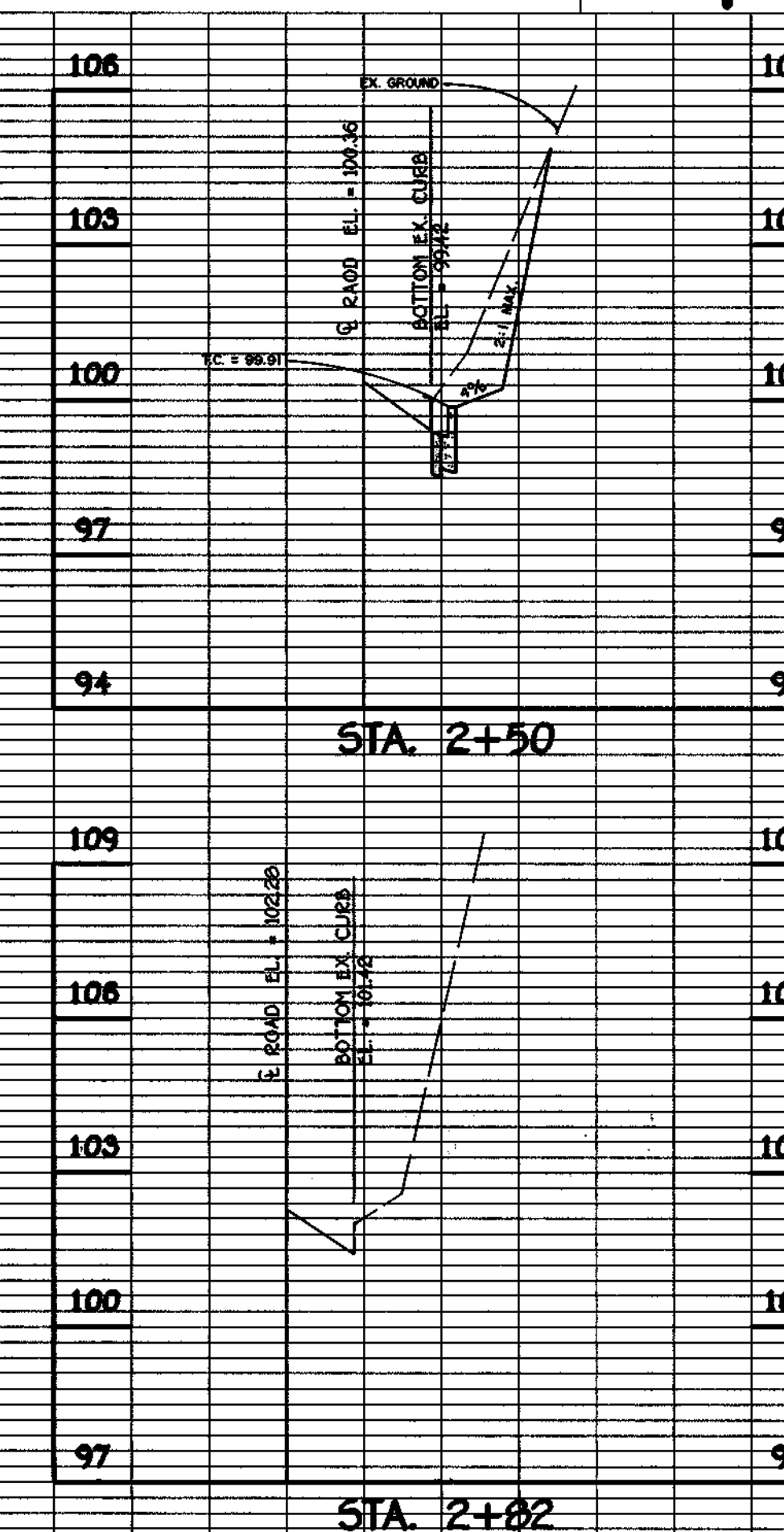
CROSS-SECTIONS

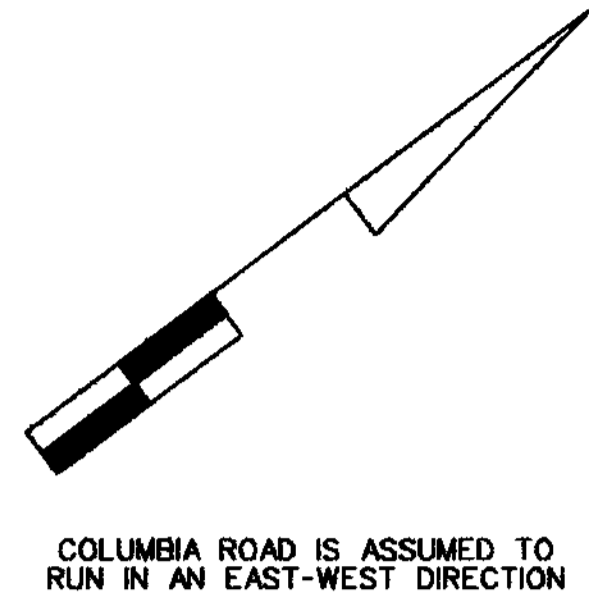
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VERT. 1" = 3'



CROSS-SECTIONS

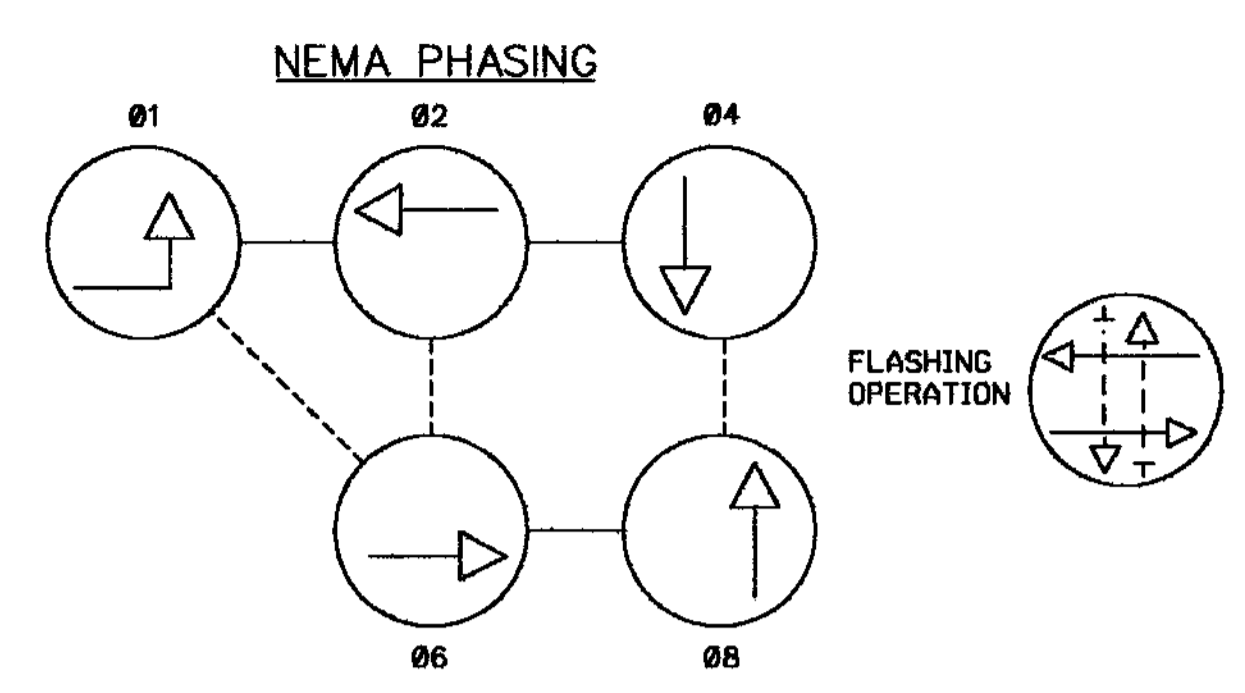
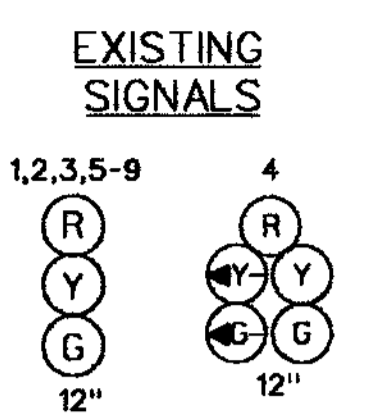
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VERT. 1" = 3'



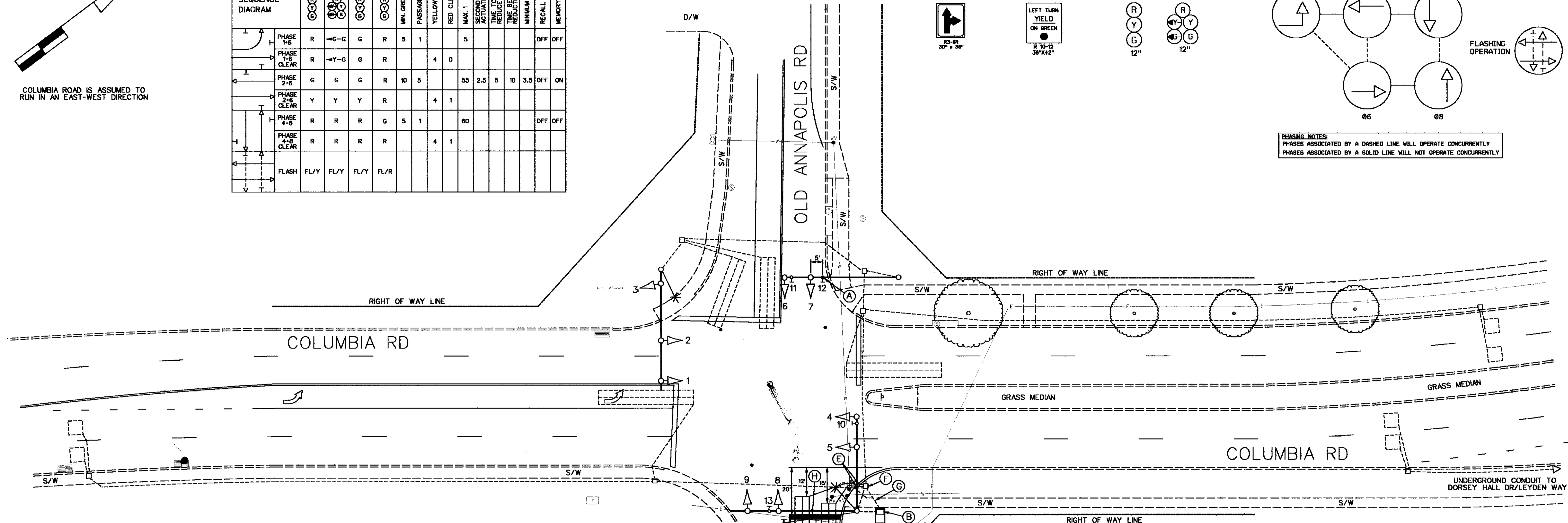


COLUMBIA ROAD IS ASSUMED TO RUN IN AN EAST-WEST DIRECTION

PHASE AND SEQUENCE DIAGRAM	SIGNAL HEADS				MIN. GREEN	PASSAGE	YELLOW	RED CLEAR	MAX. 1 SECONDS PER ACTUATION	TIME TO REDUCE	TIME BEFORE REDUCTION	MINIMUM GAP	RECALL	MEMORY	
	1-2	4	3-5	6-8											
PHASE 1+6	R	G-G	G	R	5	1			5				OFF	OFF	
PHASE 1+6 CLEAR	R	Y-G	G	R			4	0							
PHASE 2+6	G	G	G	R	10	5			55	2.5	5	10	3.5	OFF	ON
PHASE 2+6 CLEAR	Y	Y	Y	R			4	1							
PHASE 4+8	R	R	R	G	5	1			60				OFF	OFF	
PHASE 4+8 CLEAR	R	R	R	R			4	1							
FLASH	FL/Y	FL/Y	FL/Y	FL/R											



PHASING NOTES:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY



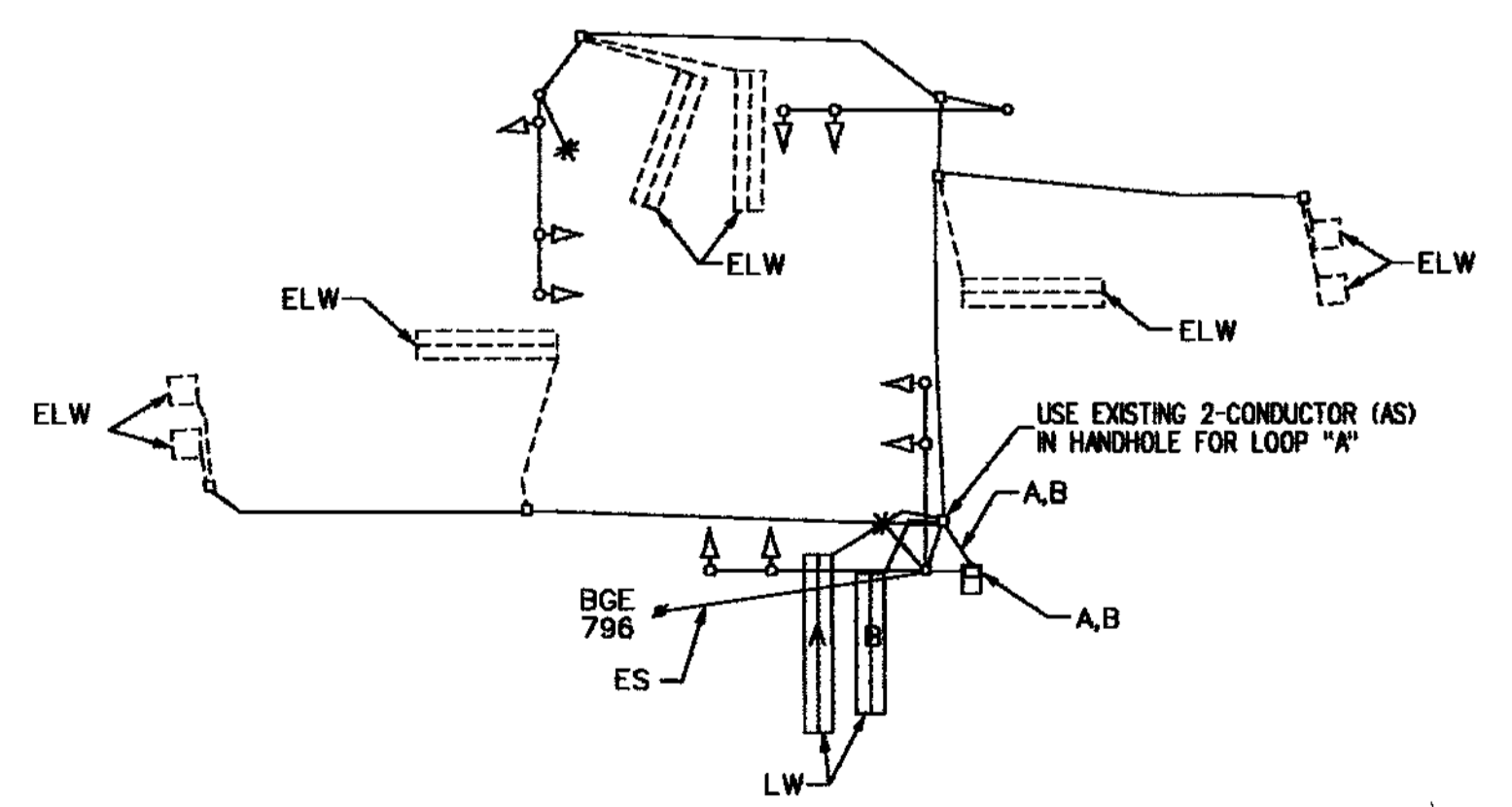
CONSTRUCTION DETAILS

- A. Install proposed sign as shown.
- B. Use existing base-mounted cabinet.
- C. Install 6' x 40' loop detector encased in 1/4" flexible tubing quadrupole type (2-4-2)
- D. Install 6' x 28' loop detector encased in 1/4" flexible tubing quadrupole type (2-4-2).
- E. Install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).
- F. Use existing handhole.
- G. Use existing conduit.
- H. Install pavement markings as shown.

PROPOSED	EXISTING

UTILITY LEGEND	
AERIAL CABLE	A - A
ELECTRIC	E - E
TELEPHONE	T - T
GAS	G - G
SEWER DRAIN	D - D
SEWER	S - S
WATER	W - W
CABLE TV	TV - TV

APPROVED: DEPARTMENT OF PLANNING AND ZONING
David Hamilton 1/28/99
 CHIEF, DIVISION OF LAND DEVELOPMENT
John Dammann 1/28/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



WIRING KEY
 A - USE EXISTING 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)
 B - 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) (ALUMINUM SHIELDED)
 LW - LOOP WIRE (NO. 14 A.W.G.)
 ELW - EXISTING LOOP WIRE (NO. 14 A.W.G.)
 ES - EXISTING OVERHEAD SERVICE TO BE MAINTAINED BY BGE
 NOTE: ALL EXISTING ELECTRICAL CABLES NOT SHOWN ARE TO BE MAINTAINED.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
William Z. Mahon Jr. 1-12-99
 CHIEF, TRAFFIC ENGINEERING DIVISION
Paul G. Johnson 1/19/99
 CHIEF, BUREAU OF ENGINEERING
Donald S. Hill 1/13/99
 CHIEF, BUREAU OF HIGHWAYS

STREET TRAFFIC STUDIES, LTD.
 Gateway International
 1302 Concourse Drive, Suite 104
 Littleton, Maryland 20850
 PH (410) 859-3553
 FAX (410) 859-3578

DES:	RFS:	A:	ASBULT:	DATE:
ZAYDEL				3/7/91
	RRZ	B	MODIFICATION TO TRAFFIC SIGNAL DUE TO GEOMETRIC CHANGES	1/4/98
DRN:	ZAYDEL			
CHK:				
DATE:	5/19/98			
BY:	NO.		REVISION	DATE

CAPITAL PROJECT NO. _____
 600' SCALE MAP NO. _____ DATE: _____

PROPOSED APFO MITIGATION PLAN
 THE OVERLOOK AT CENTENNIAL PARK
 COLUMBIA ROAD
 AND
 OLD ANNAPOLIS ROAD
 SCALE: 1" = 20'
 SHEET 17 OF 17