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# FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLAN

# THE WARFIELDS II

## SECTION TWO

## BUILDABLE LOTS 6 - 68, OPEN SPACE LOT 69, AND BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

## ZONING: RC-DEO TAX MAP NO. 21 GRID Nos. 23

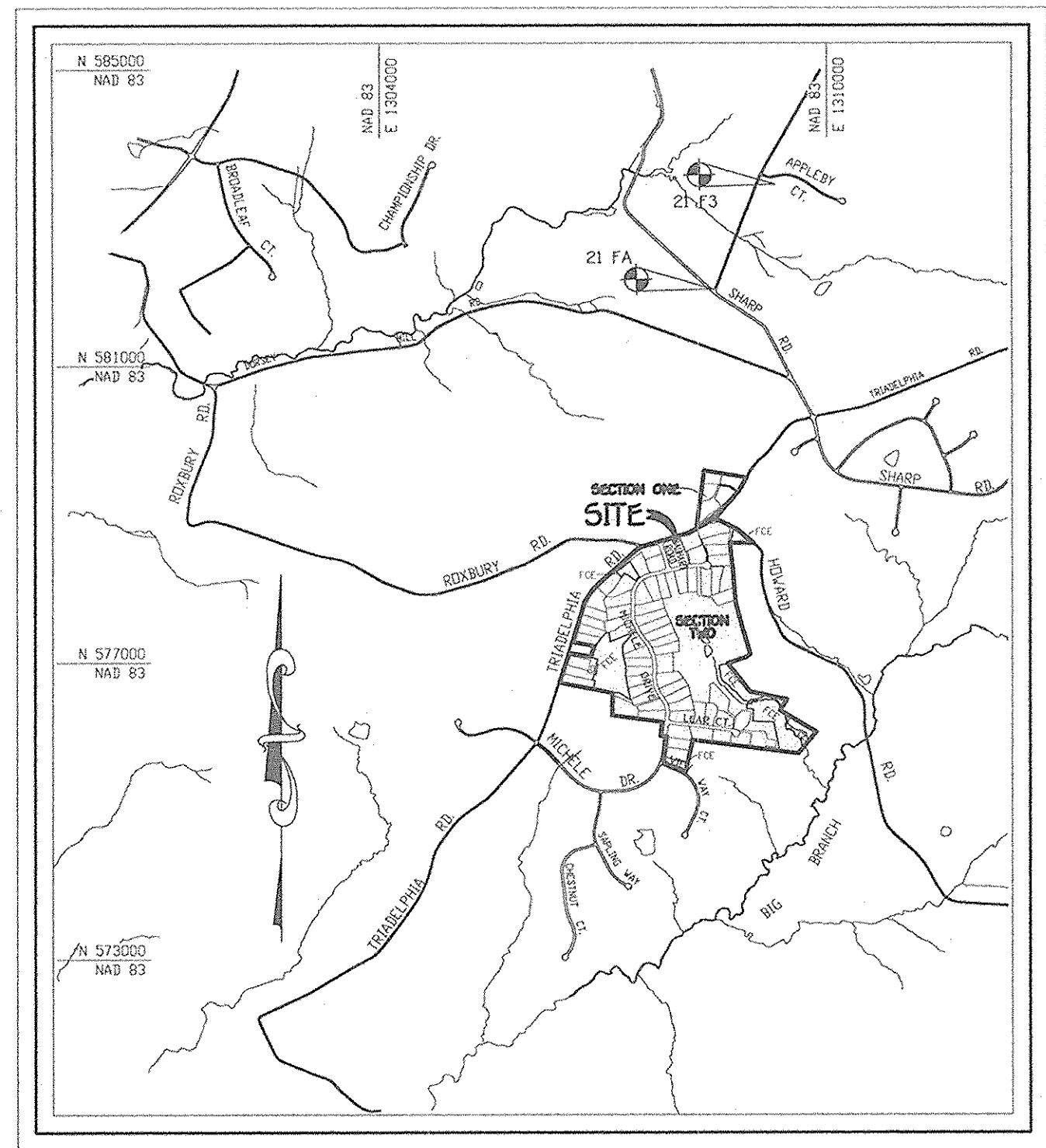
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cathy Reardon*  
 CHIEF, DIVISION OF LAND DEVELOPMENT 3/20/07 DATE  
*William J. McNeil*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 4/20/07 DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William J. McNeil*  
 CHIEF, BUREAU OF HIGHWAYS 4-18-08 DATE

- GENERAL NOTES:**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSA 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.
  - COORDINATES BASED ON NAD83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 21 1A, N 892.208725, E 1,309.84799, ELEV. 528.66 NO. 21 FA, N 583.41186, E 1,309.0757, ELEV. 538.385
  - THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY MARS GROUP, DATED SEPTEMBER, 2005 AND WAS APPROVED ON JUNE 18, 2006.
  - BACKGROUND INFORMATION:  
 A. SUBDIVISION NAME: THE WARFIELDS II  
 B. TAX MAP NO.: 21  
 C. PLOT NO.: 55, 96, 109 & 114  
 D. ZONING: RC-DEO  
 E. ELECTION DISTRICT: FOURTH  
 F. TOTAL TRACT AREA: 133,903 AC.  
 G. NET AREA: 131,710 AC.  
 H. AREA OF STEEP SLOPES 2% AND GREATER: 0.45 AC.  
 I. NO. OF BUILDABLE LOTS: 63  
 J. NO. OF OPEN SPACE LOTS: 0  
 K. NO. OF NON-BUILDABLE PRESERVATION PARCELS: 8  
 L. NO. OF BUILDABLE PRESERVATION PARCELS: 1  
 M. NO. OF NON-BUILDABLE PRESERVATION PARCELS: 7  
 N. AREA OF BUILDABLE LOTS: 69,839 AC.  
 O. AREA OF OPEN SPACE, CEMETERY LOT 69: 0.531 AC.  
 P. AREA OF NON-BUILDABLE PRESERVATION PARCELS: 16,947 AC.  
 Q. AREA OF NON-BUILDABLE PRESERVATION PARCELS: 6,000 AC.  
 R. AREA OF BUILDABLE PRESERVATION PARCELS: 39,097 AC.  
 S. TOTAL AREA OF ROADWAY TO BE DEDICATED: 7,529 AC.  
 T. PREVIOUS FILE NO.: S-02-1A, P-05-1A  
 U. AREA OF FLOODPLAIN: 1.74 AC.

ROAD NAME	CLASSIFICATION	DESIGN SPEED	R/W WIDTH
DALHART ROAD	PUBLIC ACCESS STREET	30 M.P.H.	50'
MICHELE DRIVE	PUBLIC ACCESS STREET	30 M.P.H.	50'
LEAR COURT	PUBLIC ACCESS PLACE	20 M.P.H.	40'

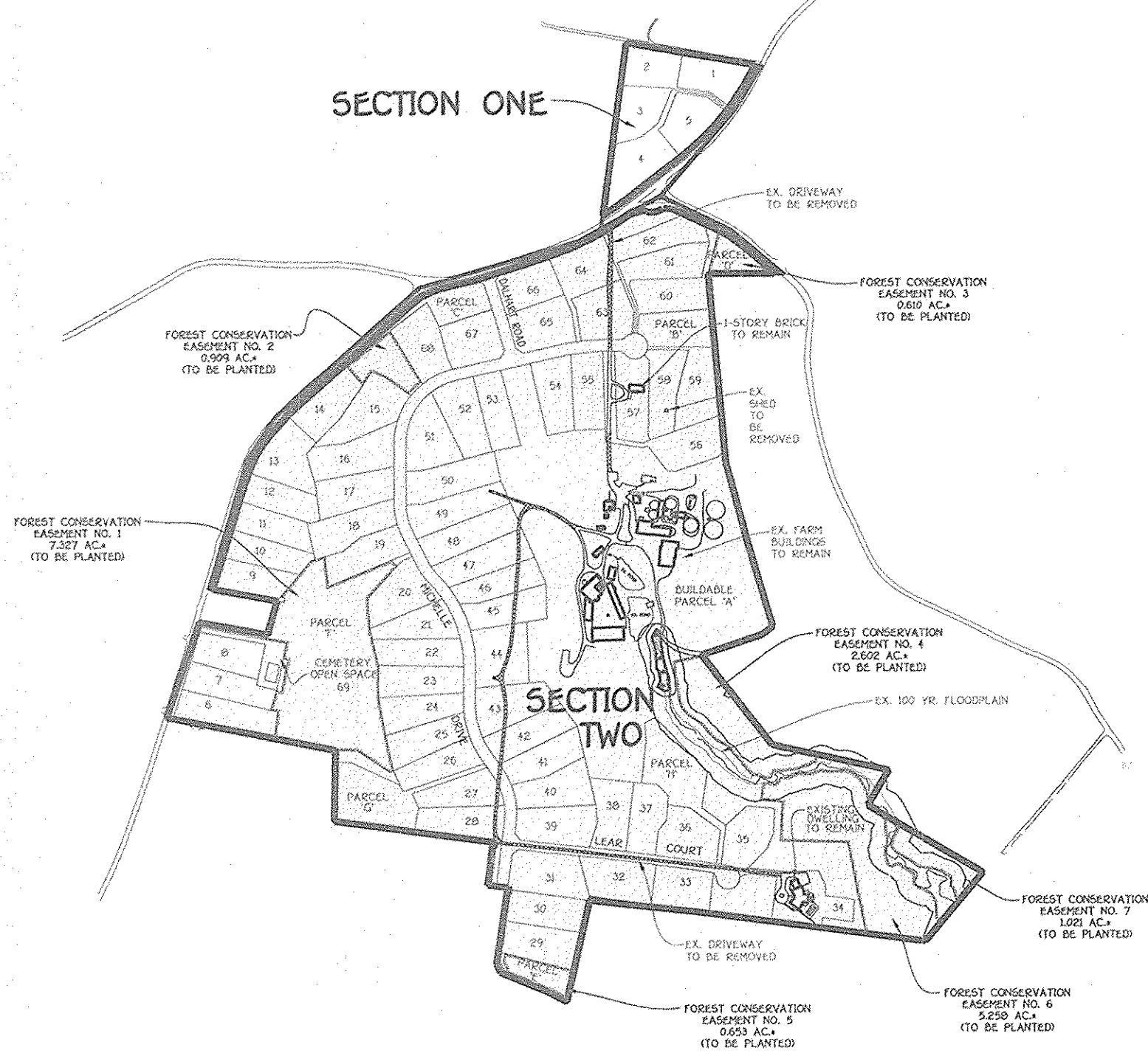
ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
DALHART ROAD	0+38	25' L	STOP	R1-1
DALHART ROAD	1+50	13' R	SPEED LIMIT 25	R2-1
DALHART ROAD	3+00	25' R	STOP	R1-1
DALHART ROAD	3+00	16' L	STOP AHEAD	W3-1a
LEAR COURT	0+28	16' L	STOP	R1-1
MICHELE DRIVE	0+35	14' L	SPEED LIMIT 25	R2-1
MICHELE DRIVE	24+05	14' L	SPEED LIMIT 25	R2-1
MICHELE DRIVE	27+50	14' R	SPEED LIMIT 25	R2-1
MICHELE DRIVE	4+35	14' R	SPEED LIMIT 25	R2-1
PRIVATE DRIVEWAY	0+20	15' L	STOP	R1-1
ROXBURY ROAD	SEE SHEET 11		YIELD	R1-2

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
DALHART ROAD	C.L. STA. 0+43	55' R	150-WATT H.P.S. VAPOR "PREMIER" POST TOP FIXTURE MOUNTED AT 14' ON A BLACK FIBERGLASS POLE.



VICINITY MAP  
SCALE: 1" = 2000'

- GENERAL NOTES CONTINUED:**
- GROUND WATER APPROPRIATION PERMIT SHALL BE ISSUED PRIOR TO SUBMISSION OF RECORD PLAN FOR SIGNATURE.
  - THE EXISTING SEPTIC SYSTEM LOCATED ON LOT 581 SERVING THE RANCHER ON LOT 57 AND THE EXISTING SEPTIC SYSTEM SERVING THE TOWN HOUSE ON PRESERVATION PARCEL 'A' ARE TO BE ABANDONED AND A NEW SYSTEM INSTALLED IN THE APPROPRIATE SEWAGE EASEMENT PRIOR TO SUBMISSION OF RECORD PLAN FOR SIGNATURE.
  - THE EXISTING WELL SERVING THE RANCHER ON LOT 57 IS TO BE PROPERLY FILLED AND SEALED BY A LICENSED WELL DRILLER AND REPLACED IN THE DESIGNATED AREA PRIOR TO SUBMISSION OF RECORD PLAN FOR SIGNATURE.
  - ALL WELLS TO BE DRILLED PRIOR TO FINAL PLAN APPROVAL. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THE WELL DRILLING PRIOR TO FINAL PLAN SUBMISSION. IT WILL NOT BE CONSIDERED "GOVERNMENT DELAY" IF THE WELL DRILLING HOLDS UP THE HEALTH DEPARTMENT SIGNATURE OF THE RECORD PLAN.
  - THE EXISTING DWELLING ON PROPOSED LOT 57 IS TO REMAIN.
  - PLAN SUBJECT TO DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS OF THE WARFIELD HOMEPLACE HOMEOWNERS ASSOCIATION, INC. INCLUDING LOTS 32 THRU 30, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCEL 'I' RECORDED SIMULTANEOUSLY WITH THE FINAL RECORD PLAN AND ALSO THE ARTICLES OF INCORPORATION FILED WITH THE MARYLAND STATE DEPT. OF ASSESSMENTS AND TAXATION ON 04/27/07 IDENTIFIED AS ID #022220331 AND SUBJECT TO WARFIELDS II HOMEOWNERS ASSOCIATION, INC. FIRST AMENDMENT TO DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS INCLUDING LOTS 1 THRU 31, LOTS 39 THRU 69 AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'H' RECORDED SIMULTANEOUSLY WITH THE FINAL RECORD PLAN.
  - NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAM OR THEIR REQUIRED BUFFERS.
  - THE FOREST CONSERVATION REQUIREMENTS PER SECTION 83.02 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY THE ON-SITE AFForestation OF 17.05 ACRES IN FOREST CONSERVATION EASEMENT. THE FOREST CONSERVATION SURETY AMOUNT REQUIRED IS \$371,349.00 AND WILL BE PROVIDED WITH THE DEVELOPER'S AGREEMENT.
  - THE LANDSCAPE SURETY IN THE AMOUNT OF \$122,650.00 FOR PERIMETER LANDSCAPE REQUIREMENTS (201 SHADY TREES, 131 EVERGREEN TREES & 90 SHRUBS) OF SECTION 36.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL IS POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS SUBDIVISION.
  - FINANCIAL SURETY FOR THE 224 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$67,200.00.
  - THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED JANUARY 5, 2005 AND APPROVED UNDER P-05-1A.
  - THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS CARNES ENGINEERING ASSOCIATES, INC. DATED JANUARY 5, 2005.
  - THE EXISTING WELL ON PROPOSED LOT 57 AND THE EXISTING SEPTIC SYSTEM LOCATED ON PROPOSED LOT 581 WILL BE ABANDONED PRIOR TO RECORDATION OF THE FINAL RECORD PLAN.
  - SIGN POSTS ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (8" GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (8" GAUGE). A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
  - ROADWAY SHOULDER SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:  
 A) WIDTH - 10 FEET OR FEET SERVING MORE THAN ONE RESIDENCE  
 B) SURFACE - 3/4" INCHES OF COMPACTED GRANULAR CURB AND CHIP COATING  
 C) GEOMETRY - MAXIMUM 1% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 FOOT TURNING RADIUS  
 D) STRUCTURES GALVANIZED/STEEL CAPABLE OF SUPPORTING 25,000 LBS PER LINEAL FOOT  
 E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE  
 F) STRUCTURE CLEARANCE - MINIMUM 10 FEET  
 G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.



PHASING PLAN  
SCALE: 1" = 600'

# FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENAL SQUARE OFFICE PARK 10773 BALTIMORE NATIONAL PARK  
 ELICOTT CITY, MARYLAND 21042  
 (410) 481-2855

ALDO P. VERDELLI  
 Professional Certification I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 207248, Expiration Date 2-22-09.

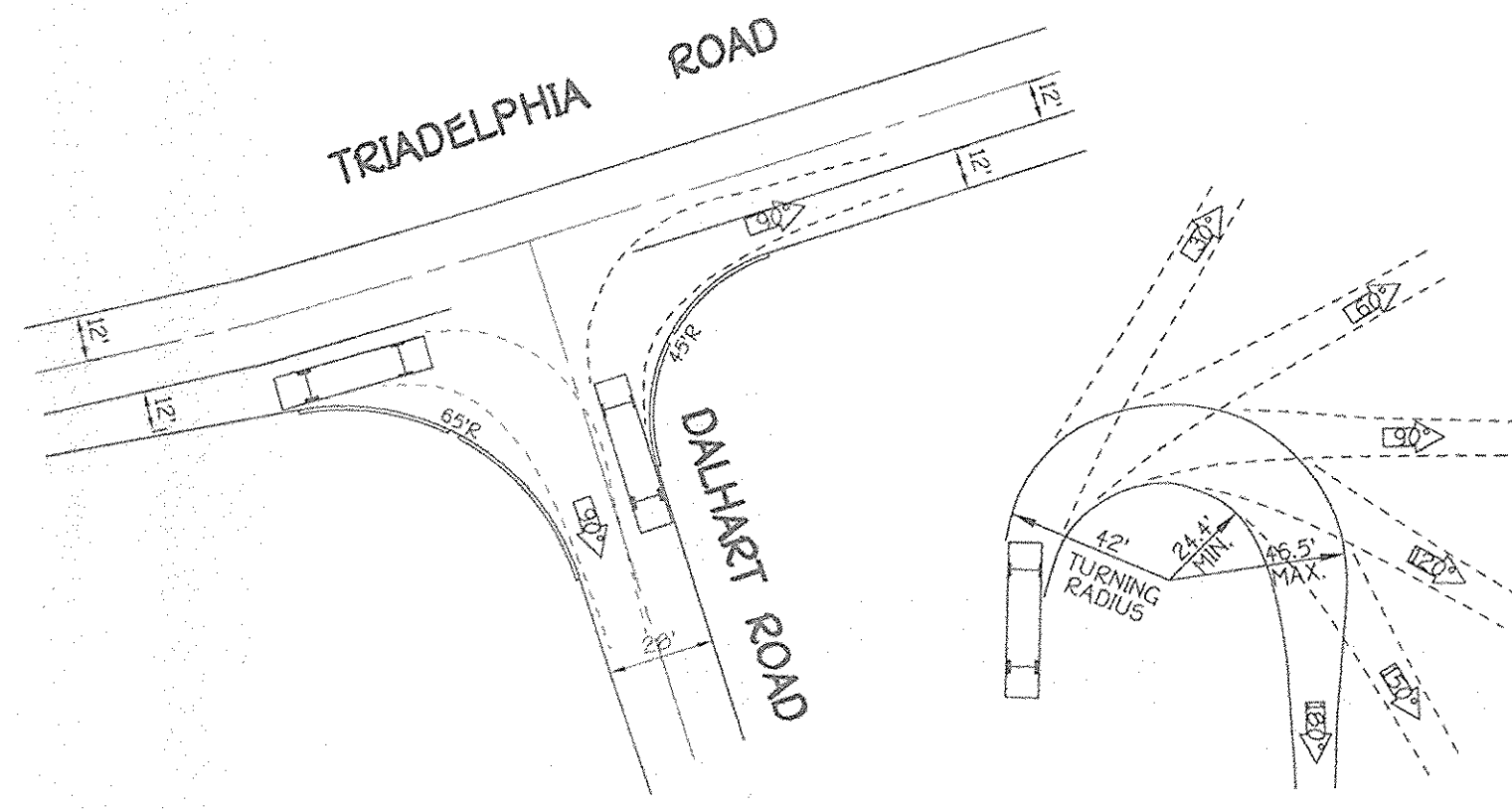
**OWNER**  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337  
 And  
 Warfield Brothers  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337

**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337

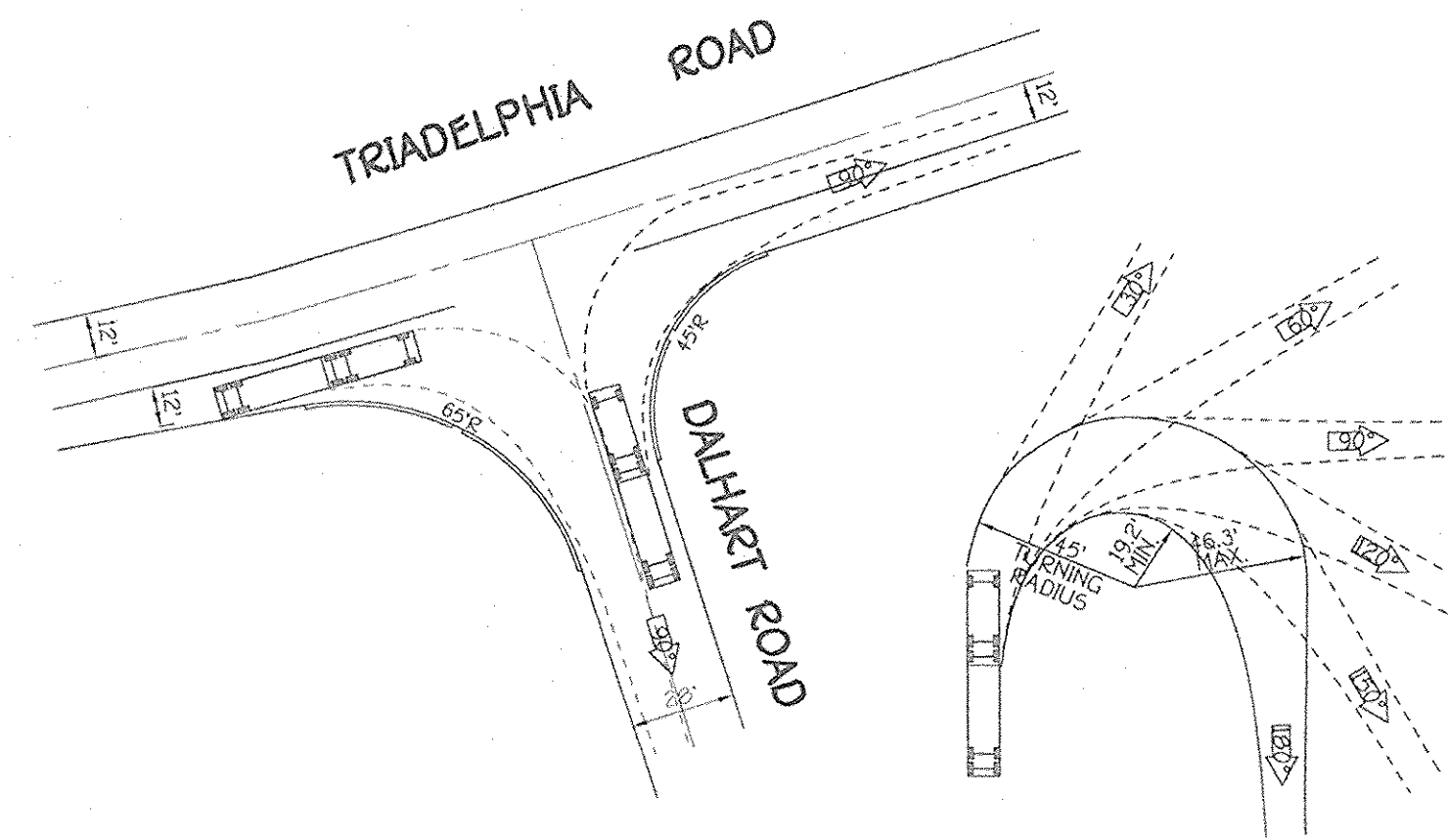
**TITLE SHEET**  
**THE WARFIELDS II**  
**SECTION TWO**  
**BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'**  
 ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 114  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 1 OF 40



FOR CONTINUATION OF TRIADELPHIA ROAD IMPROVEMENTS, SEE SHEET 2



**BUS TURNING MOVEMENT**  
SCALE: 1" = 50'



**WB-50 TURNING MOVEMENT**  
SCALE: 1" = 50'

REVISIONS		
NO.	DESCRIPTION	DATE

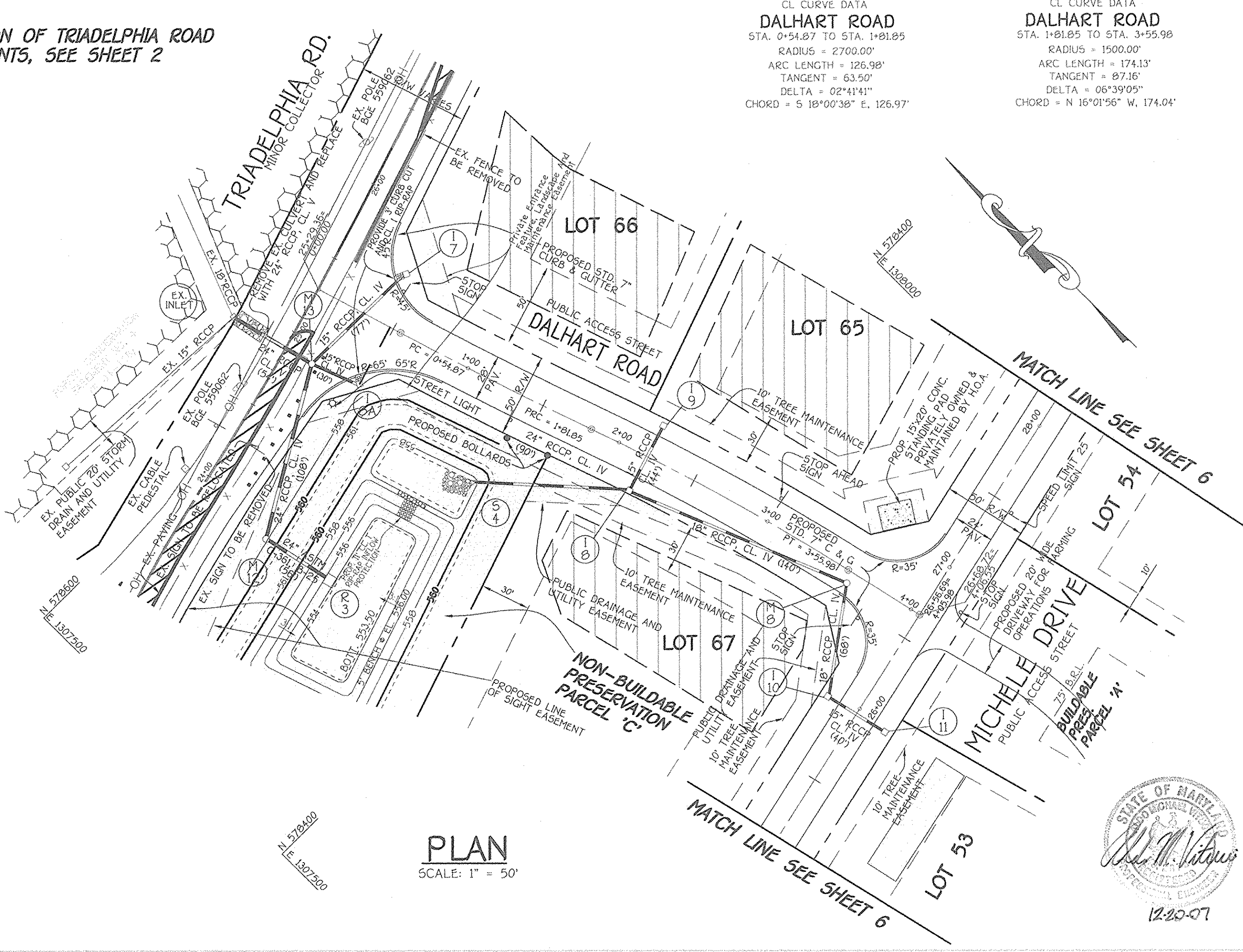
APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Judy Hamer* 4/24/08  
CHIEF, DIVISION OF LAND DEVELOPMENT

*Chad Dammann* 4/24/08  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

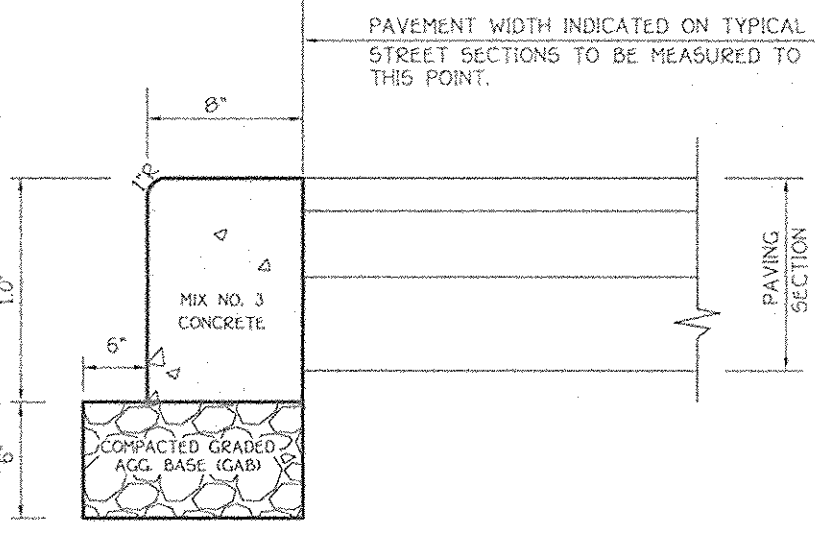
*W. Z. M. M.* 4-10-08  
CHIEF, BUREAU OF HIGHWAYS



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

CL CURVE DATA  
**DALHART ROAD**  
STA. 0+54.87 TO STA. 1+81.85  
RADIUS = 2700.00'  
ARC LENGTH = 126.98'  
TANGENT = 63.50'  
DELTA = 02°41'41"  
CHORD = 5 18'00"38" E. 126.97'

CL CURVE DATA  
**DALHART ROAD**  
STA. 1+81.85 TO STA. 3+95.98  
RADIUS = 1500.00'  
ARC LENGTH = 174.13'  
TANGENT = 87.16'  
DELTA = 06°39'09"  
CHORD = N 16°01'56" W. 174.04'



**FLUSH CURB (R-3.07)**  
NO SCALE

**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**DALHART ROAD**  
PLAN AND PROFILE

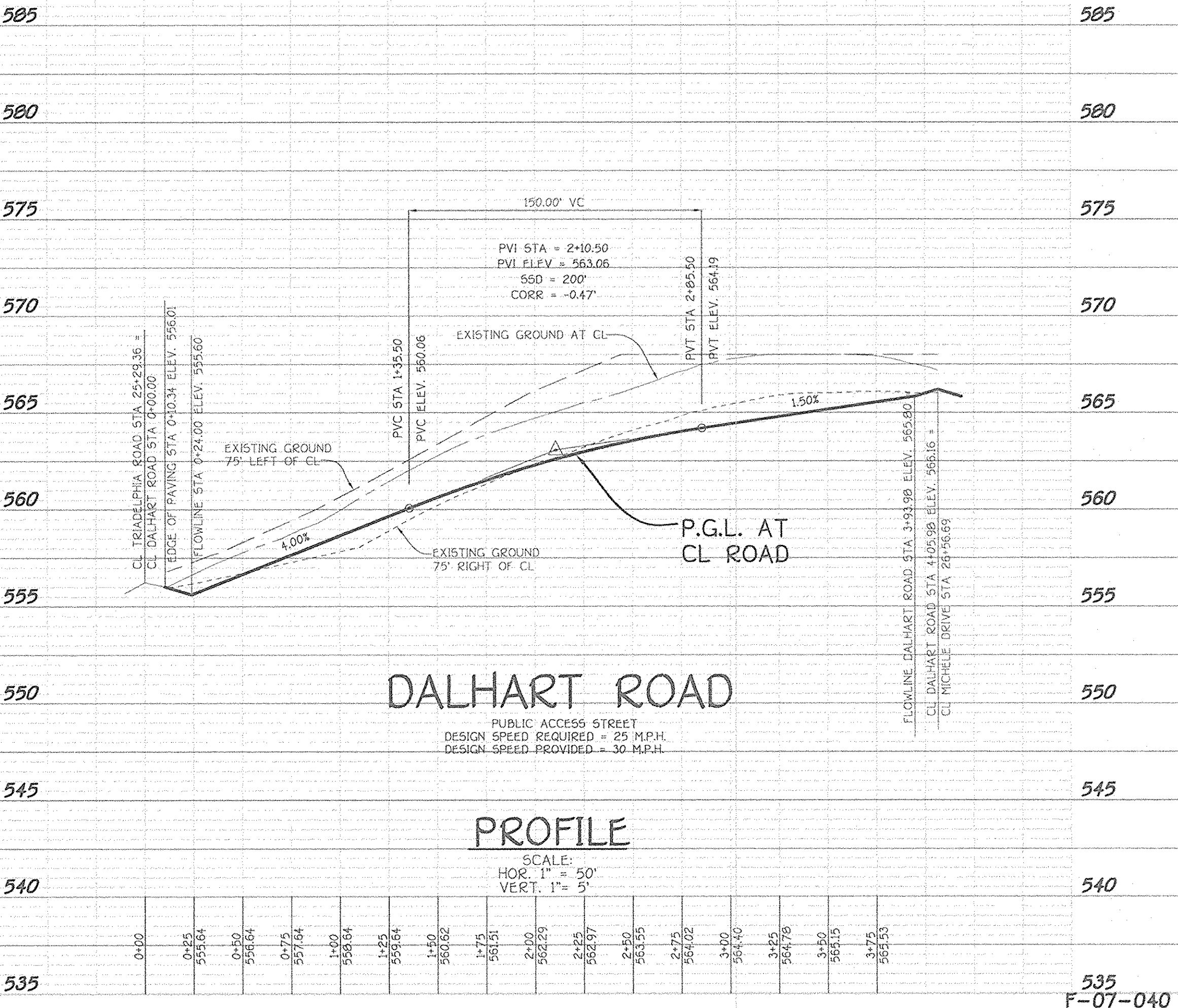
**OWNER**  
Mr. Kenneth Warfield, Jr., Pkwy. Ellen Warfield  
14451 Triadelphia Road  
Glenely, Maryland 21737  
410-442-2337

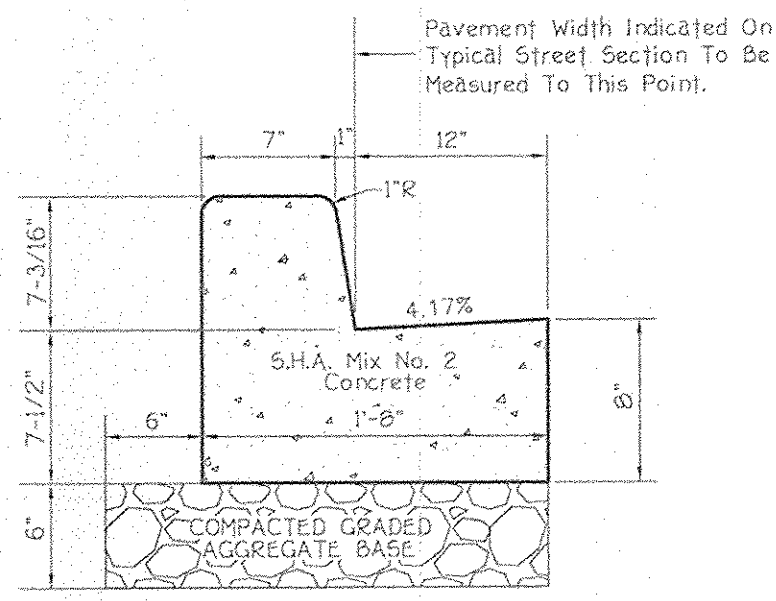
**DEVELOPER**  
Ten Oaks Properties, Inc.  
C/O Mr. Kenneth Warfield, Jr., President  
14451 Triadelphia Road  
Glenely, Maryland 21737  
410-442-2337

And  
Warfield Brothers  
14451 Triadelphia Road  
Glenely, Maryland 21737  
410-442-2337

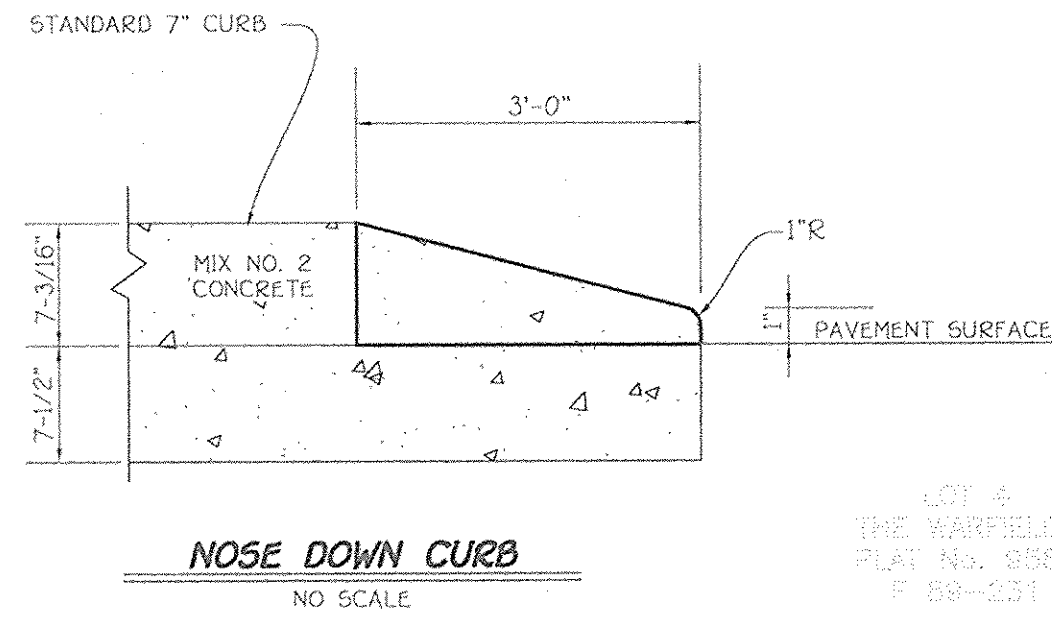
SCALE: AS SHOWN DATE: DEC. 2007 DWG. NO. 3 OF 40  
DES: DAM DSN: DAM CHK: A.M.V.

**FISHER, COLLINS & CARTER, INC.**  
ENGINEERING, ARCHITECTURE & LAND SURVEYING  
14451 TRIADELPHIA ROAD, GLENELY, MARYLAND 21737  
410-442-2337  
WWW.FISHERCOLLINSANDCARTER.COM





(DETAIL R-3.01)  
**STANDARD 7" COMB. CONC. CURB AND GUTTER**  
NO SCALE

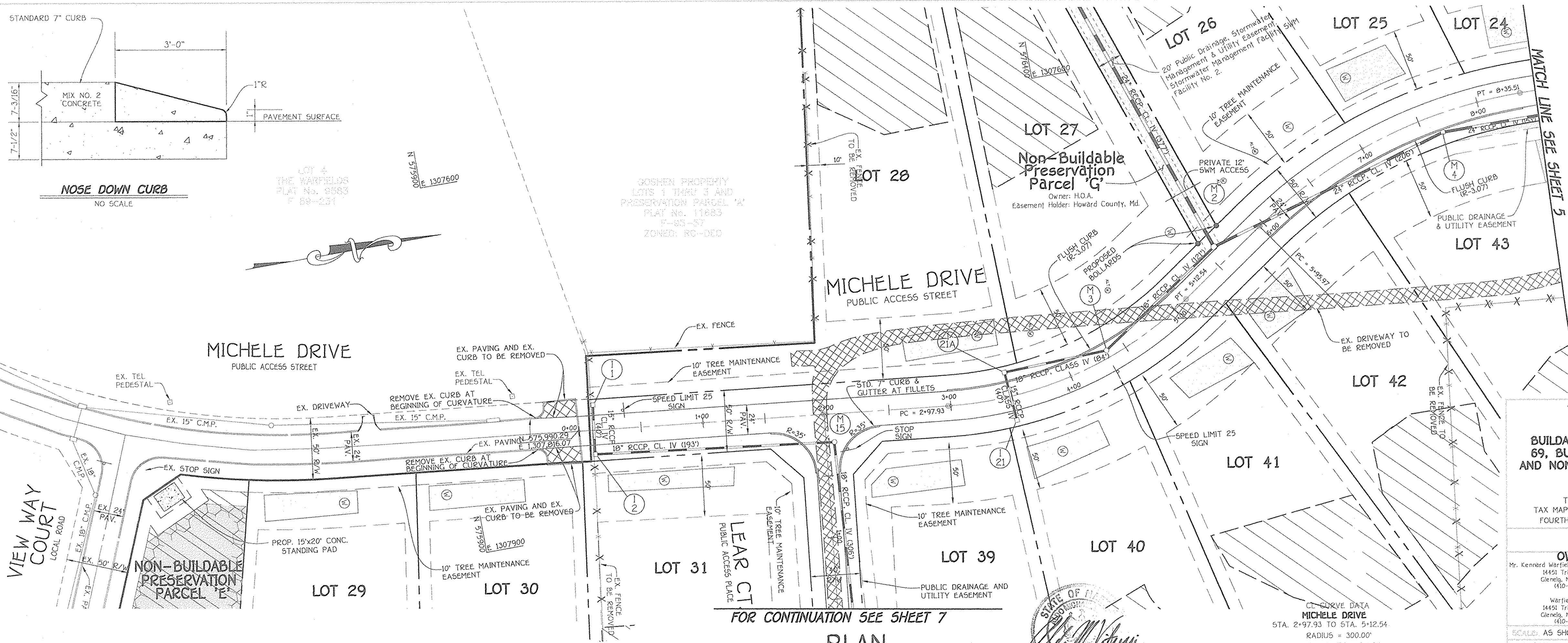


**NOSE DOWN CURB**  
NO SCALE

NO.	REVISIONS	DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING	
<i>Cindy Hamrick</i> 4/24/08	DATE
<i>John DeWitt</i> 4/22/08	DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>William R. White Jr.</i> 4-10-08	DATE



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

**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-08, OPEN SPACE LOT 09, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

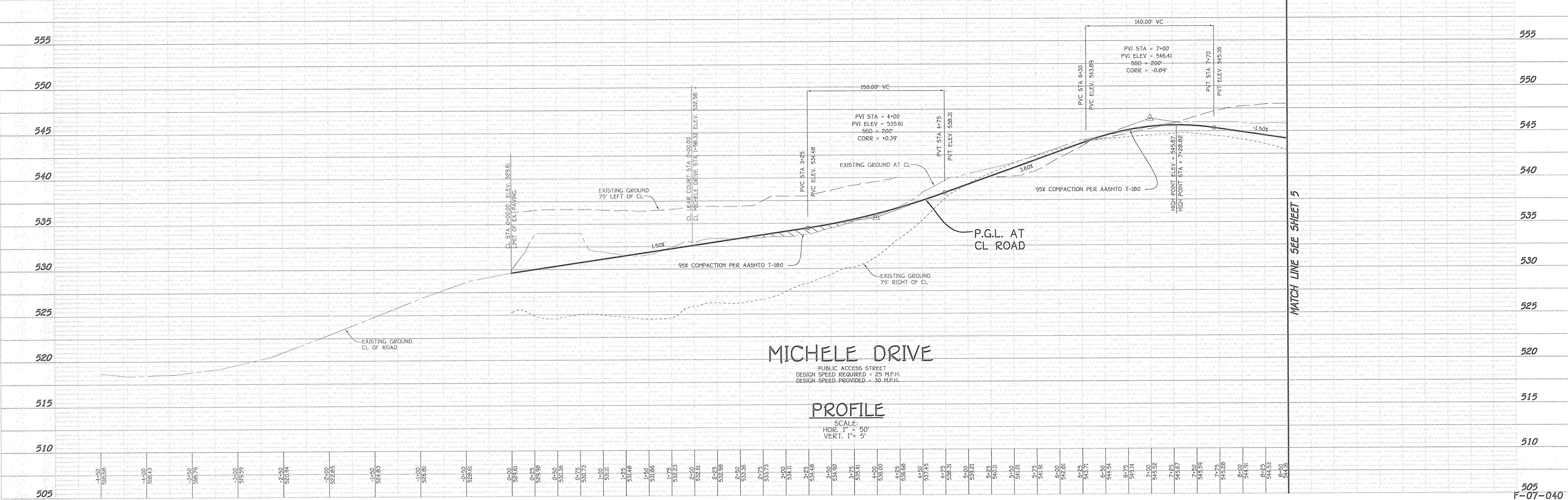
ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**MICHELE DRIVE**  
PLAN AND PROFILE

**OWNER**  
Mr. Kenneth Warfield, Jr., Mary Ellen Warfield  
14451 Tradapha Road  
Glenens, Maryland 21737  
(410) 442-2337

**DEVELOPER**  
Ten Oaks Properties, Inc.  
C/O Mr. Kenneth Warfield, Jr., President  
14451 Tradapha Road  
Glenens, Maryland 21737  
(410) 442-2337

SCALE: AS SHOWN	DATE: DEC. 2007	DWG. NO. 4 OF 40
DES. DAM	DEK	CSE. AMV.



K:\Drawings\310310 Warfield Homes\310310 SECT-2 SHEET-4 ROAD PLAN-MICHELE.dwg, 12/19/2007 8:43:15 AM

CL CURVE DATA  
**MICHELE DRIVE**  
 STA. 9+86.16 TO STA. 13+93.85  
 RADIUS = 525.00'  
 ARC LENGTH = 407.70'  
 TANGENT = 214.74'  
 DELTA = 44°29'30"  
 CHORD = N 21°41'13" W, 397.53'

NO.	REVISIONS DESCRIPTION	DATE

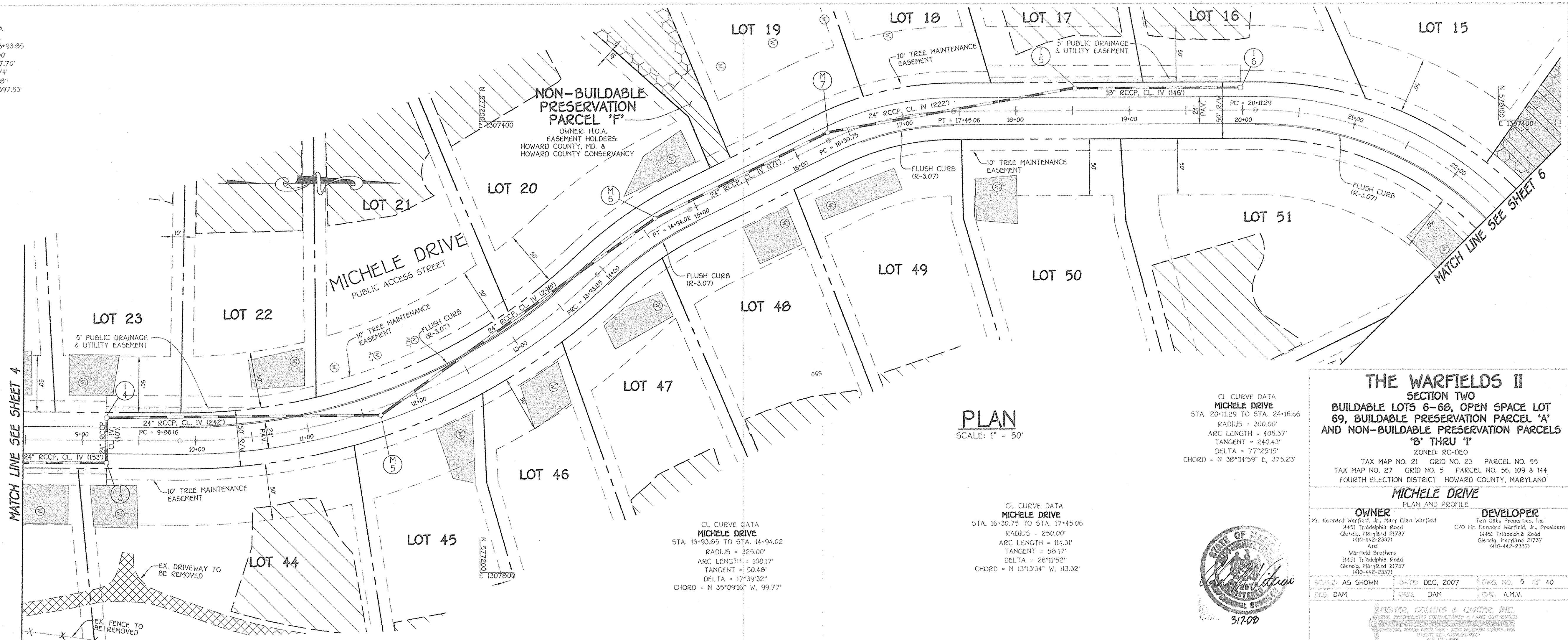
APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Cindy Hamer* 4/24/08  
 CHIEF, BUREAU OF LAND DEVELOPMENT

*John Deane* 4/22/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Wills Z. Marshall* 4-10-08  
 CHIEF, BUREAU OF HIGHWAYS



**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 96, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

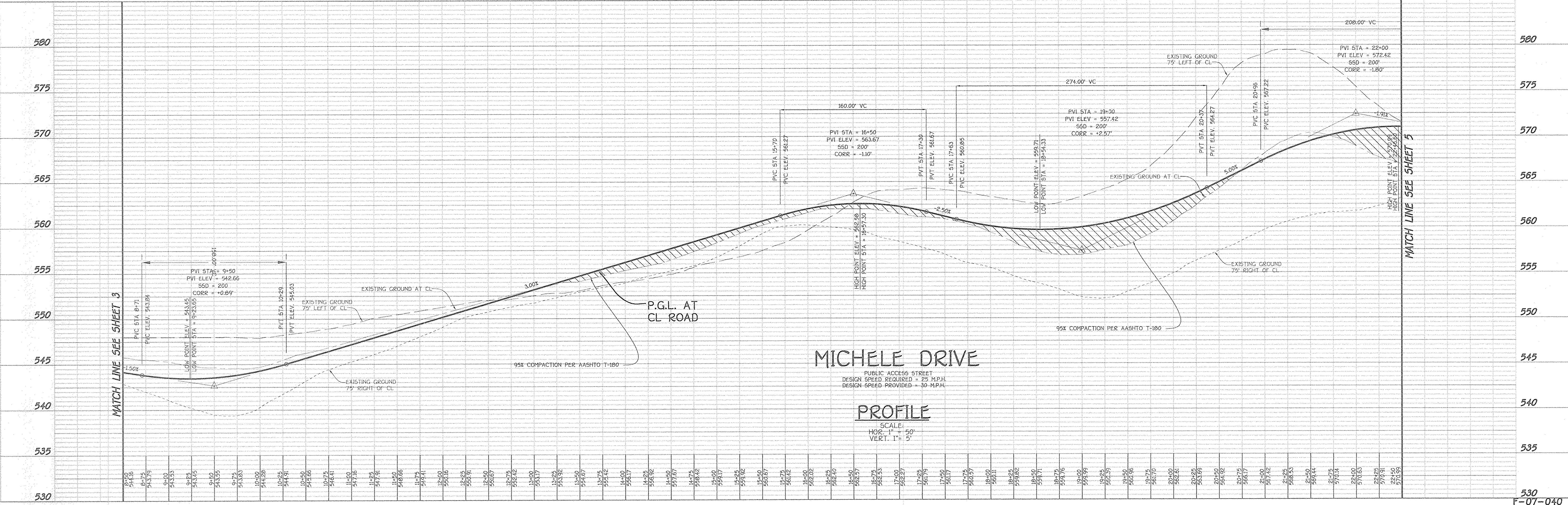
**MICHELE DRIVE**  
 PLAN AND PROFILE

**OWNER**  
 Mr. Kenneth Warfield, Jr. & Mary Ellen Warfield  
 14451 Tradepha Road  
 Glenro, Maryland 21737  
 (410) 442-2337

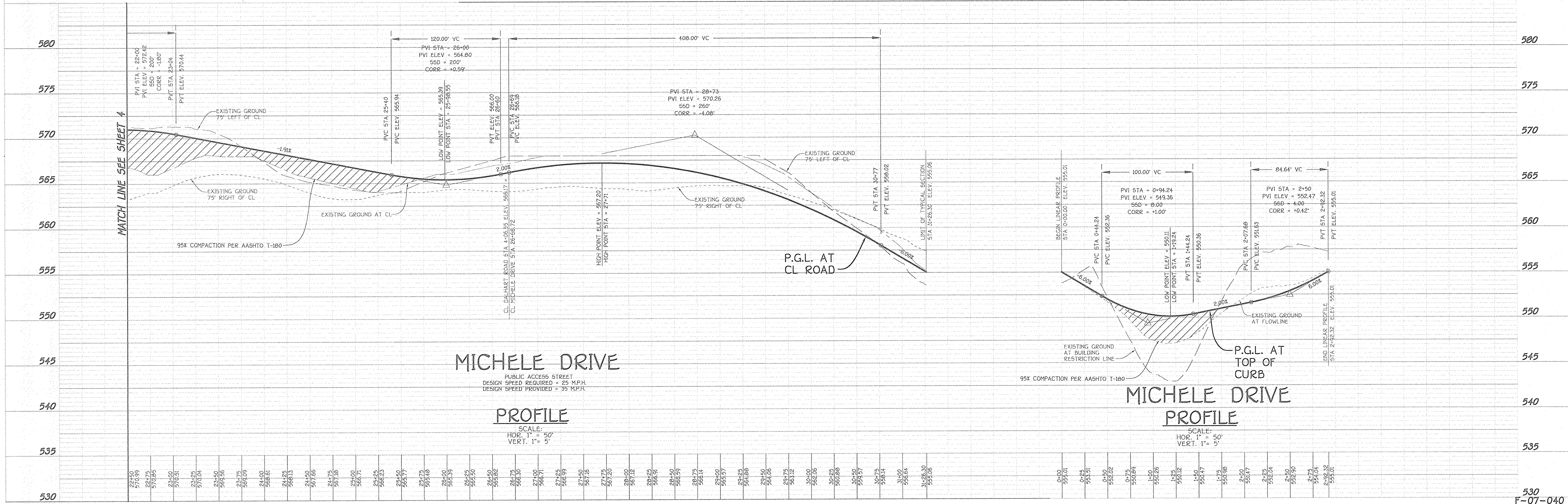
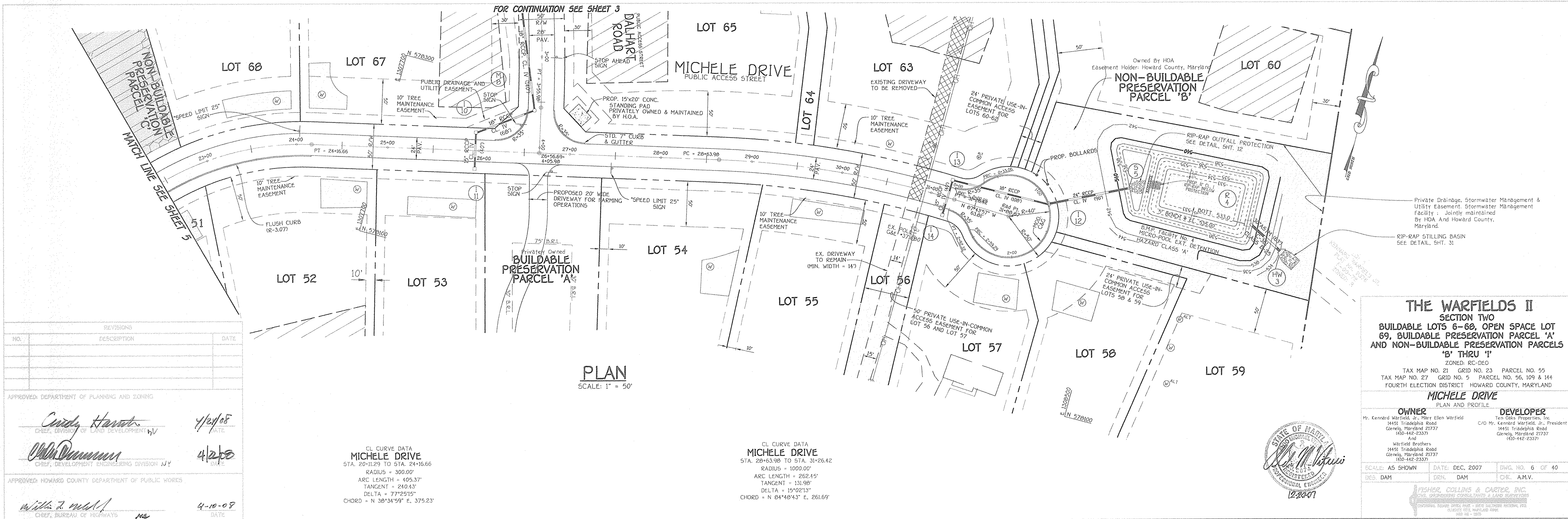
**DEVELOPER**  
 Tery Oaks Properties, Inc.  
 C/O Mr. Kenneth Warfield, Jr., President  
 14451 Tradepha Road  
 Glenro, Maryland 21737  
 (410) 442-2337

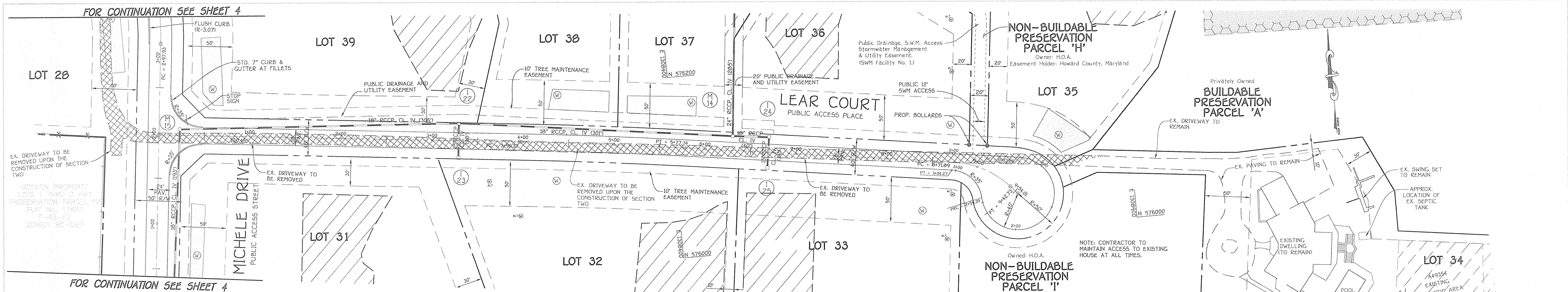
SCALE: AS SHOWN DATE: DEC. 2007 DWG. NO. 5 OF 40  
 DES. DAM DES. DAM CH. A.M.V.

**FISHER, COLLINS & CARTER, INC.**  
 REGISTERED PROFESSIONAL ENGINEERS & LAND SURVEYORS  
 10000 WOODBURN ROAD, SUITE 200, GREENBELT, MARYLAND 21740  
 (301) 441-1100



K:\Drawings\310310 Warfield Homestead\FINALS\310310 SECT 2 SHEET 5 ROAD PLAN-MICHELE.Dwg, 3/14/2008 10:33:38 AM





NO.	REVISIONS DESCRIPTION	DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*C. Williams* 4/24/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*A. Williams* 4/24/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*W. J. M. A.* 4-10-08  
 CHIEF, BUREAU OF HIGHWAYS

CL CURVE DATA  
**LEAR COURT**  
 STA. 3+96.37 TO STA. 5+77.34  
 RADIUS = 5500.00'  
 ARC LENGTH = 180.96'  
 TANGENT = 90.49'  
 DELTA = 01°53'07"  
 CHORD = 5 82'49"02" E. 180.96'

CL CURVE DATA  
**LEAR COURT**  
 STA. 8+71.89 TO STA. 9+42.73  
 RADIUS = 101.44'  
 ARC LENGTH = 70.83'  
 TANGENT = 36.93'  
 DELTA = 40°00'33"  
 CHORD = 5 61'48"12" E. 69.40'

**THE WARFIELDS II SECTION TWO**  
 BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

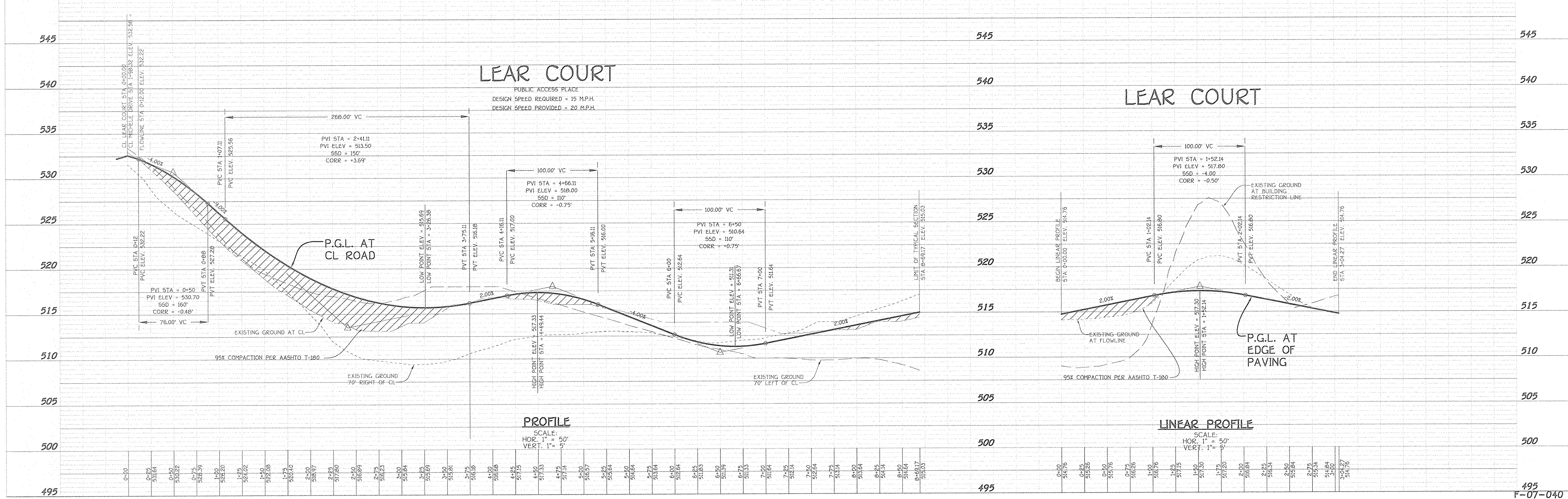
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**LEAR COURT**  
 PLAN AND PROFILE

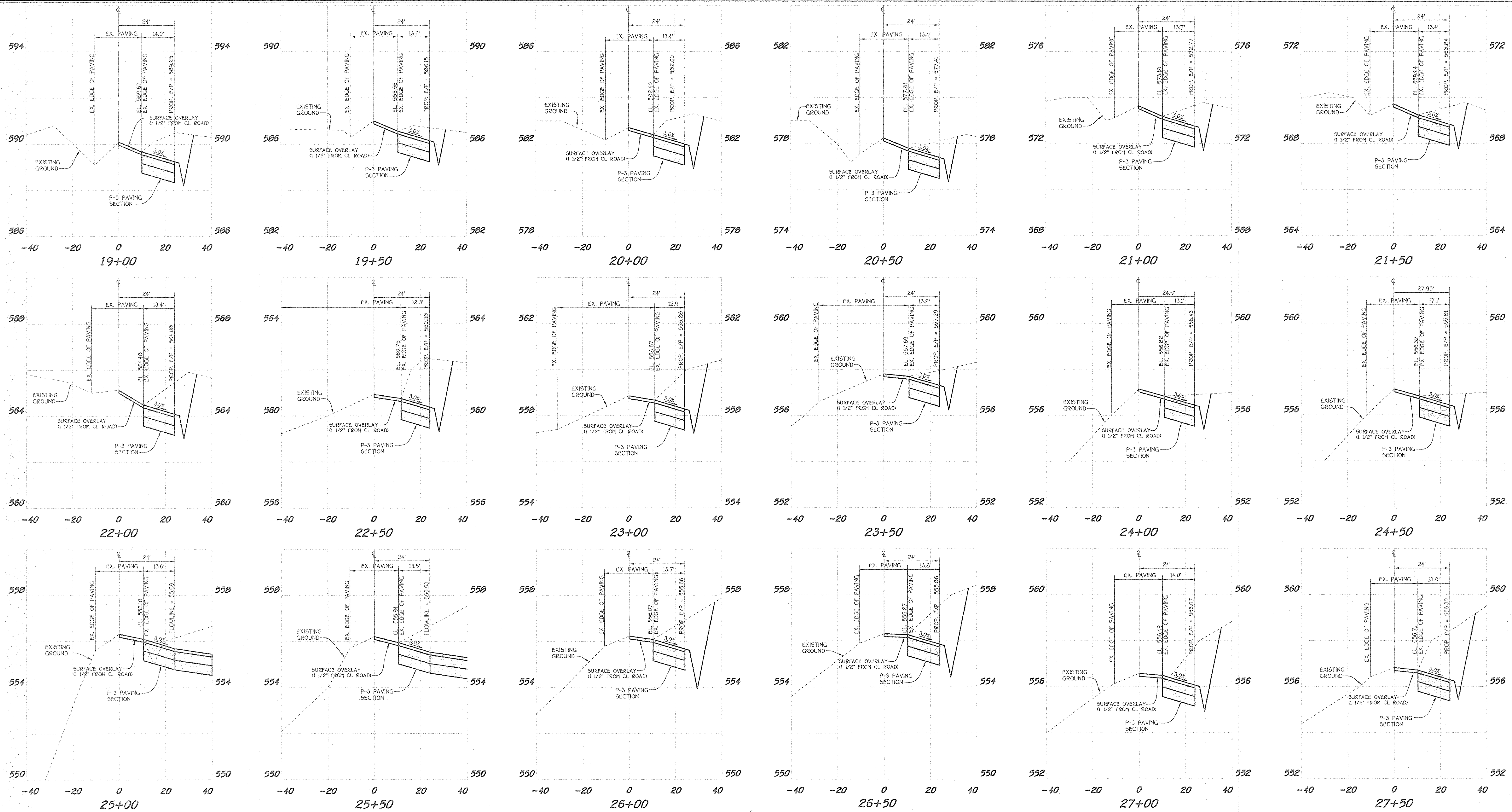
<b>OWNER</b> Mr. Kenneth Warfield, Jr., Mary Ellen Warfield 1455 Tridapha Road Glenely, Maryland 21737 (410-442-2337)	<b>DEVELOPER</b> Ten Oaks Properties, Inc. C/O Mr. Kenneth Warfield, Jr., President 1455 Tridapha Road Glenely, Maryland 21737 (410-442-2337)
---	--

SCALE: AS SHOWN DATE: DEC. 2007 DWG. NO. 7 OF 40  
 DES. DAM: BSK DAM CHK. DAM: AMV

*Fisher, Collins & Carter, P.C.*  
 REGISTERED PROFESSIONAL ENGINEERS  
 12-22-07

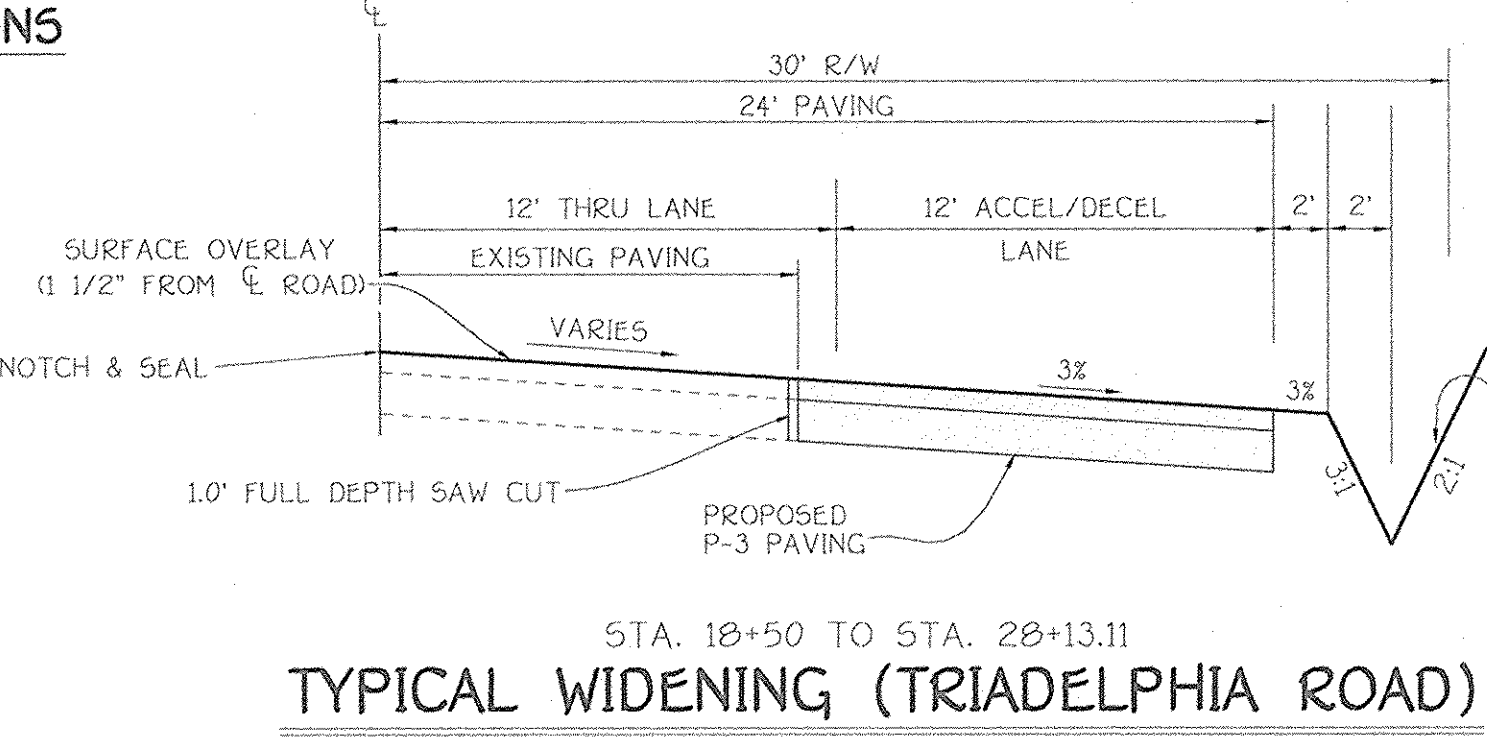


K:\Drawings\130310\Warfield\Homesite\FINALS\30310 SECT 2 SHEET 7 ROAD BLDG.dwg, 12/19/2007 8:57:48 AM



**CROSS-SECTIONS**

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



STA. 18+50 TO STA. 28+13.11  
**TYPICAL WIDENING (TRIADELPHIA ROAD)**  
NO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*William J. ...* 4-10-08 DATE  
CHIEF, BUREAU OF HIGHWAYS  
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Judy Hand* 4/24/08 DATE  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*...* 4/24/08 DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
1800.465.7892



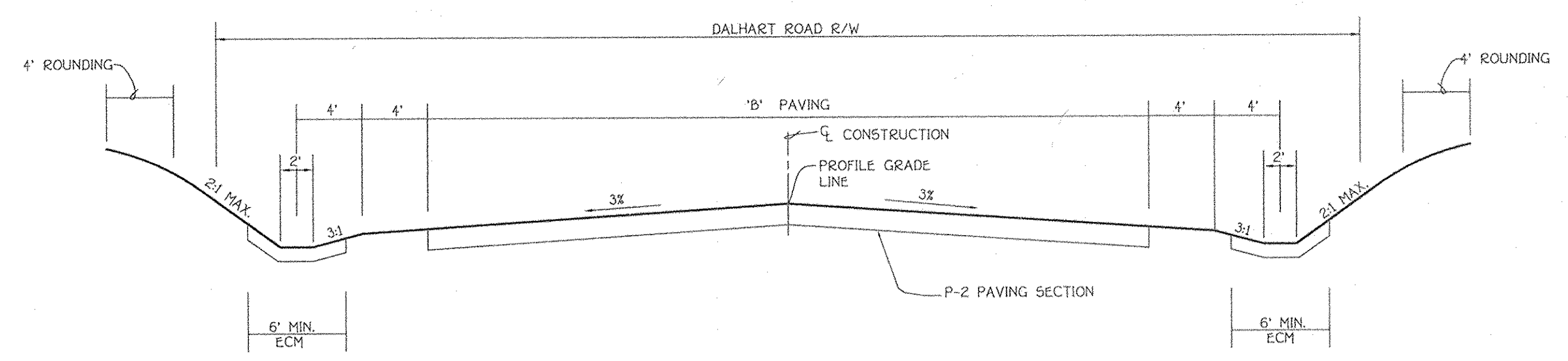
**OWNER**  
Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Gleneta, Maryland 21737  
(410-442-2337)  
And  
Warfield Brothers  
14451 Triadelphia Road  
Gleneta, Maryland 21737  
(410-442-2337)

**DEVELOPER**  
Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Gleneta, Maryland 21737  
(410-442-2337)

**TRIADELPHIA ROAD - ROAD SECTIONS**  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-6B, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'  
ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET # OF 40



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cindy Hamm* 4/23/05  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Mike Dorman* 4/23/05  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William R. Wall* 4-18-09  
 CHIEF, BUREAU OF HIGHWAYS DATE



NOTE:  
 SEE HOWARD COUNTY STD. DETAILS FOR PAVING SECTION.

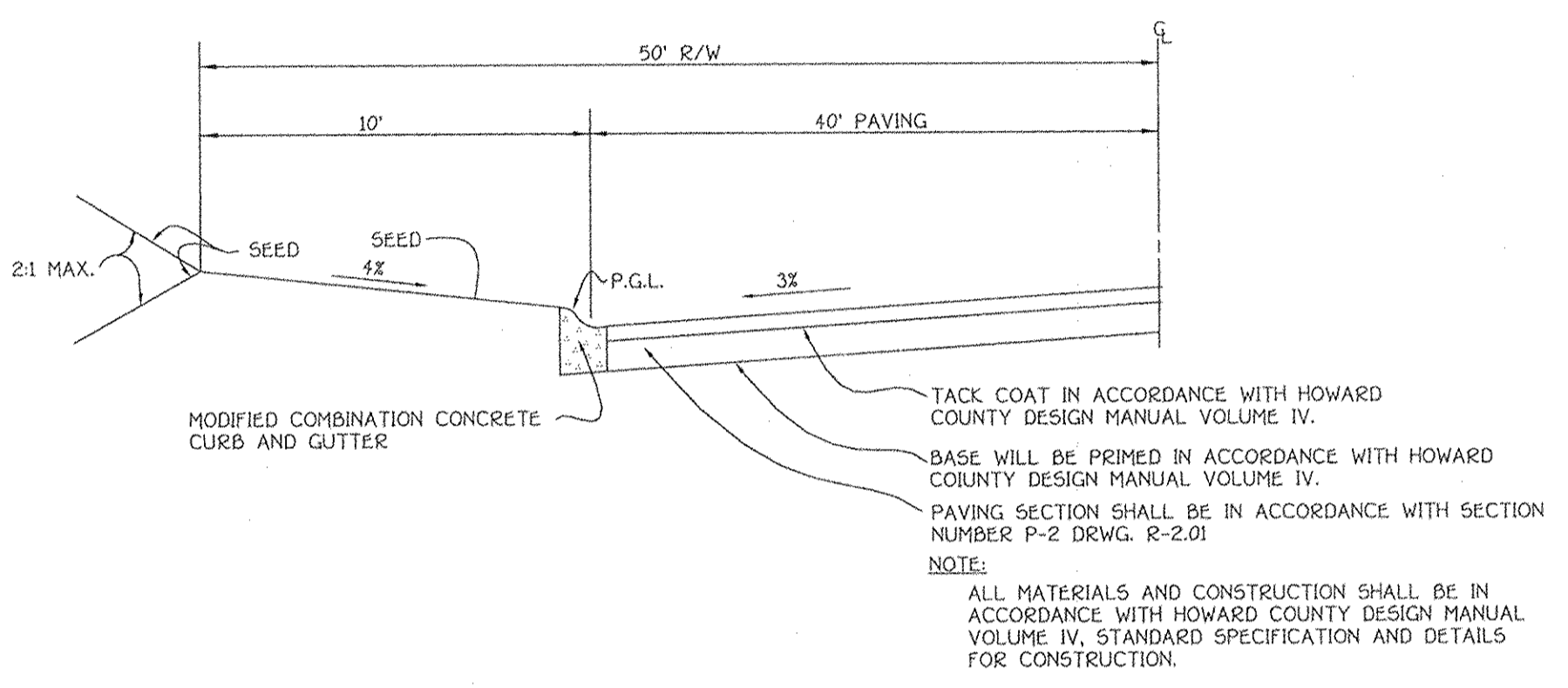
TYPICAL ROADWAY SECTION

ECM - DENOTES EROSION CONTROL MATTING

ROADWAY INFORMATION CHART

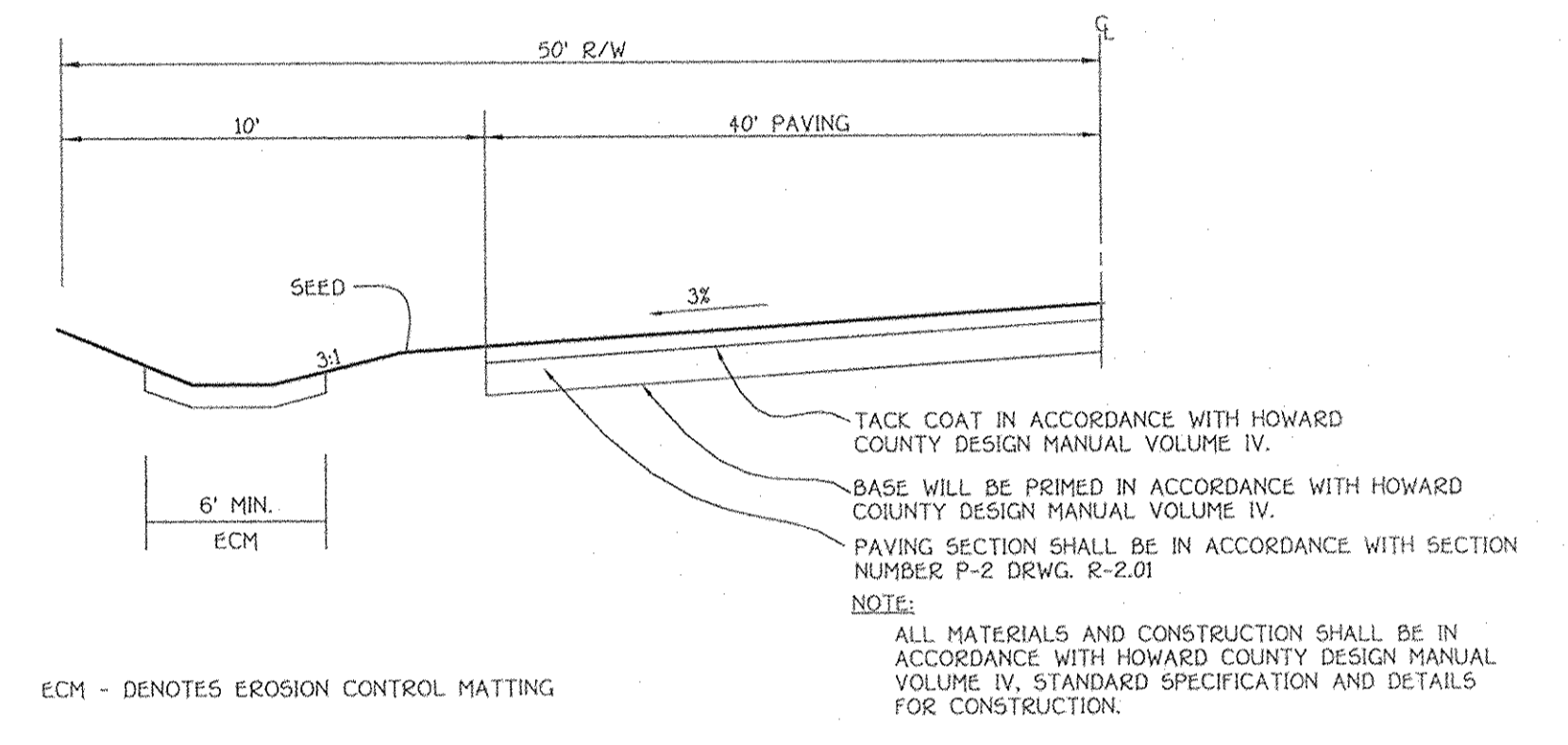
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	A	B	CL STATION LIMITS	PAVING SECTION
DALHART ROAD	PUBLIC ACCESS STREET	25 MPH *	RC-DEO	50'	20'	0+00 TO 4+05.98	P-2
MICHELE DRIVE	PUBLIC ACCESS STREET	25 MPH *	RC-DEO	50'	24'	0+00 TO 31+26.42	P-2
LEAR COURT	PUBLIC ACCESS PLACE	25 MPH *	RC-DEO	40'	18'	0+00 TO 8+71.89	P-2

\* VERTICAL CURVE SUBJECT TO SECTION 2.3.3.A OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME III



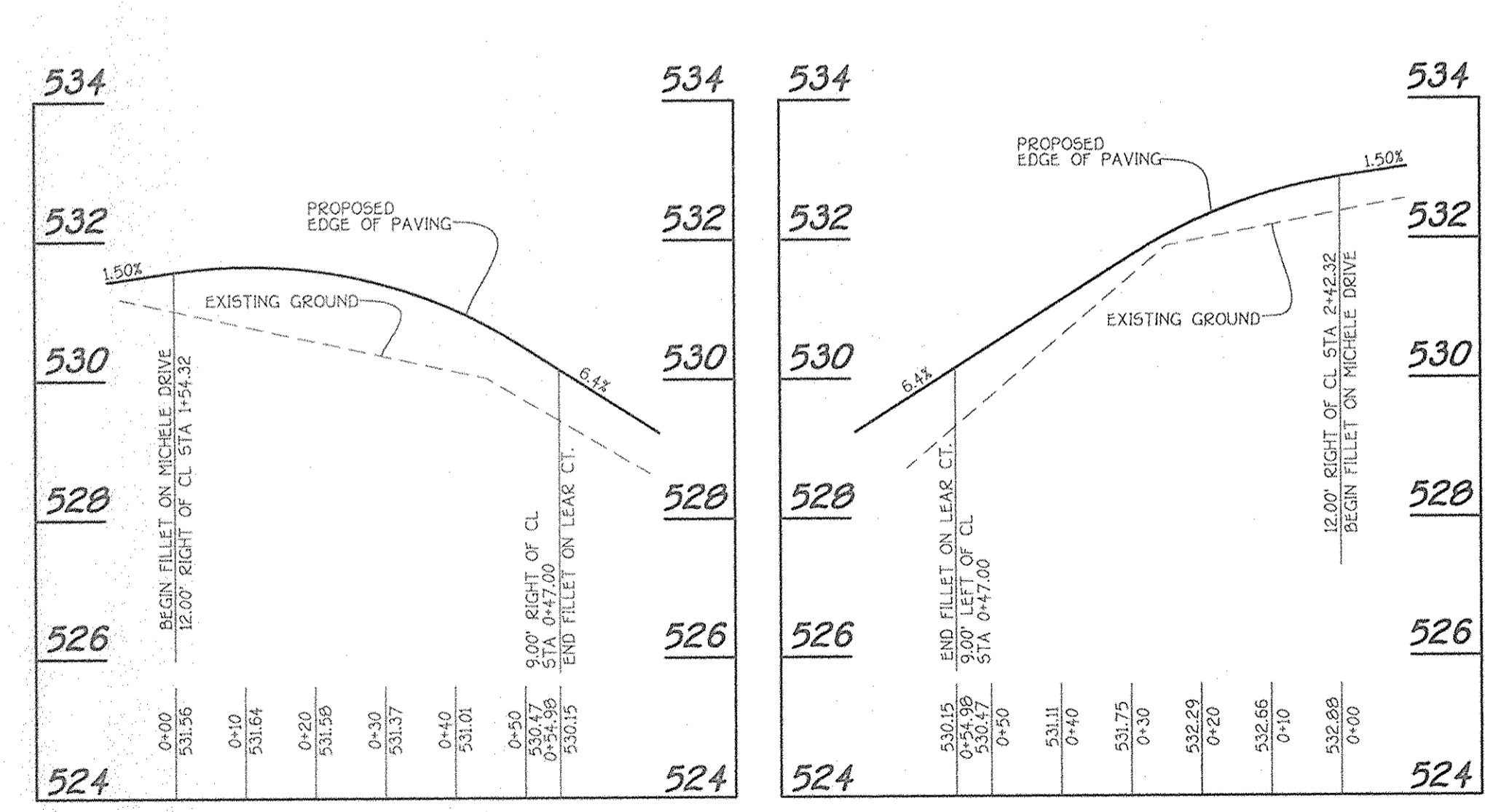
TYPICAL CUL-DE-SAC SECTION (DALHART ROAD)

NO SCALE



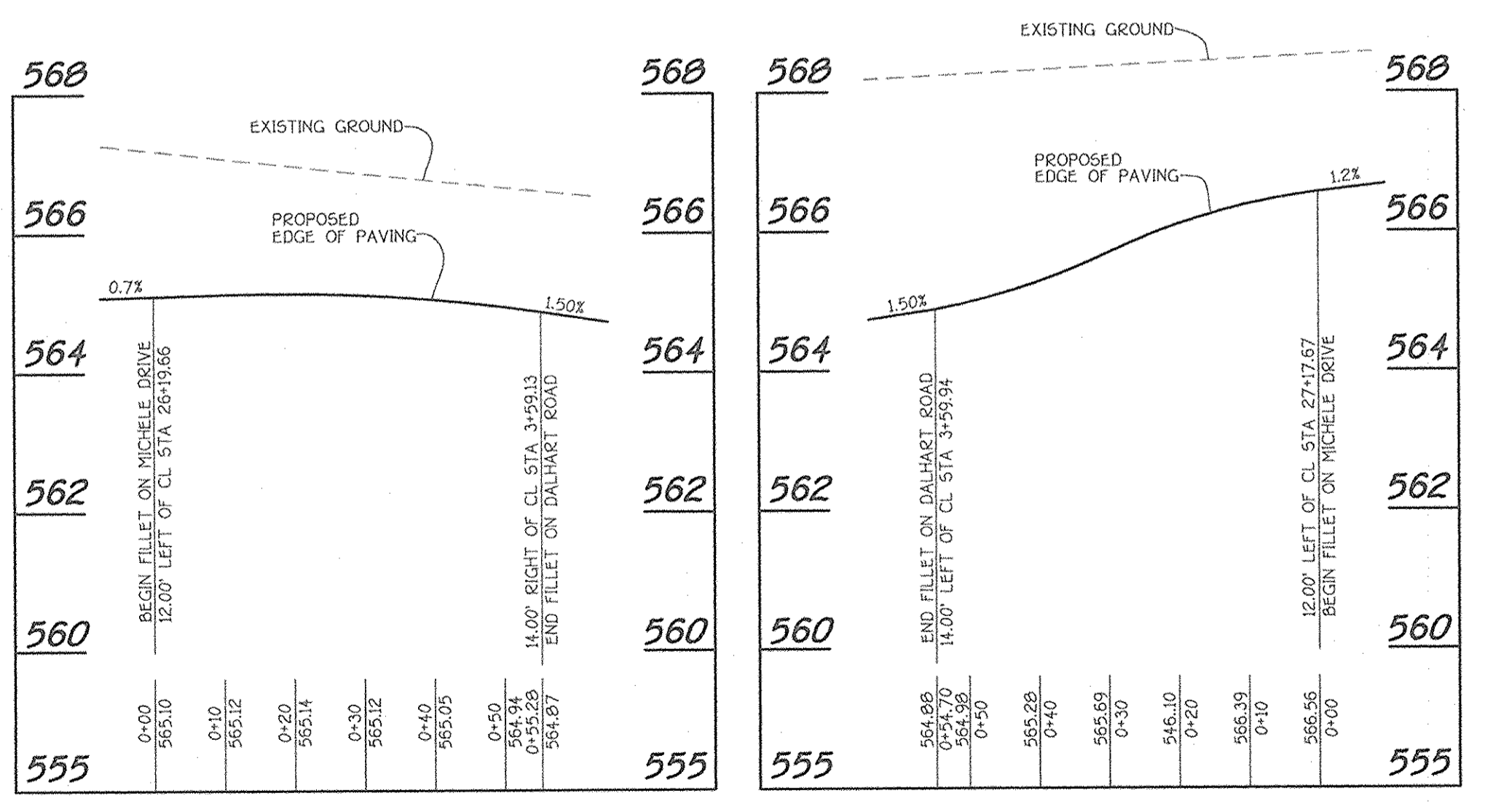
TYPICAL CUL-DE-SAC SECTION (ROAD B)

NO SCALE



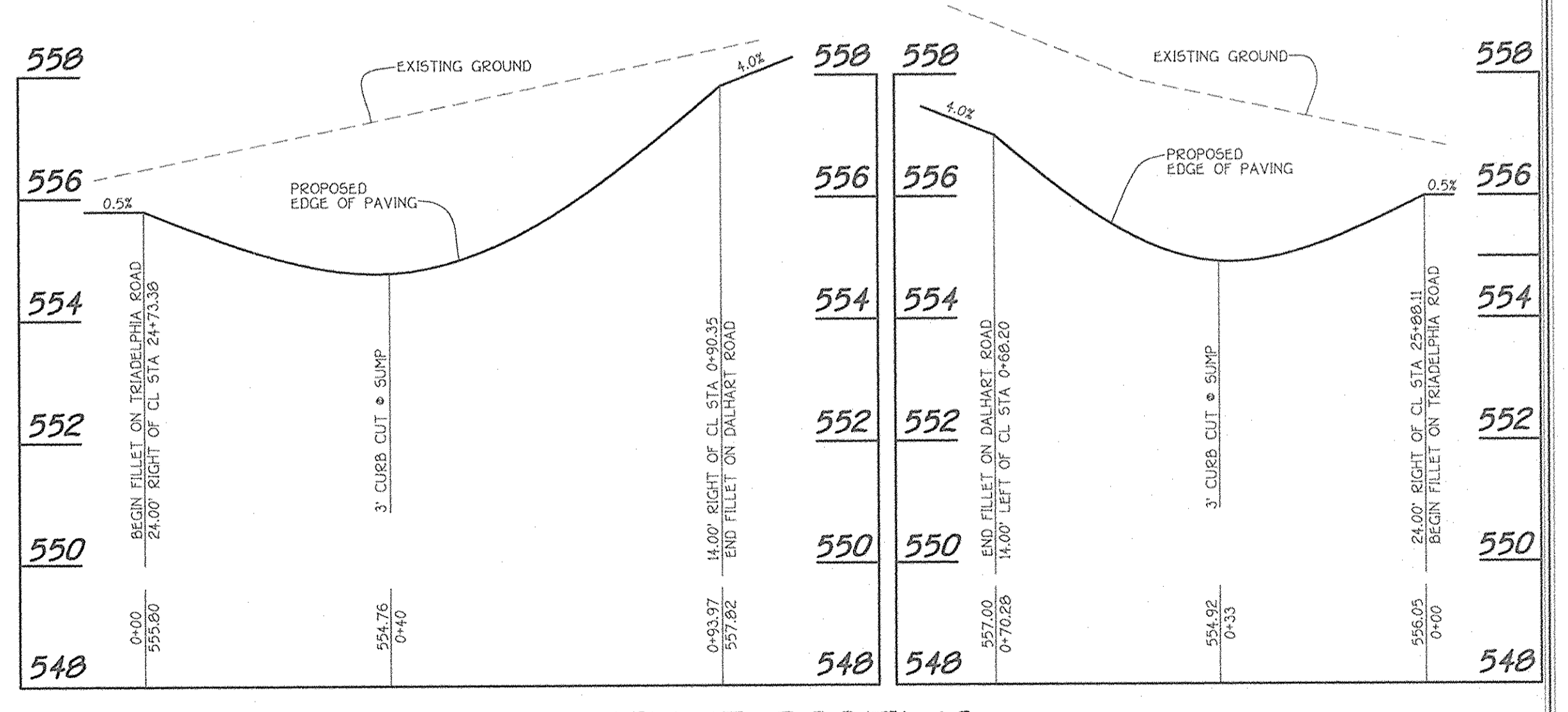
FILLET PROFILES

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



FILLET PROFILES

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



FILLET PROFILES

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

NOTE: PROPOSED GRADE AT FILLETS IS AT BOTTOM OF CURB.



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 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 10779 BALTIMORE NATIONAL PIKE  
 ELLETTT CITY, MARYLAND 21042  
 410-442-2337

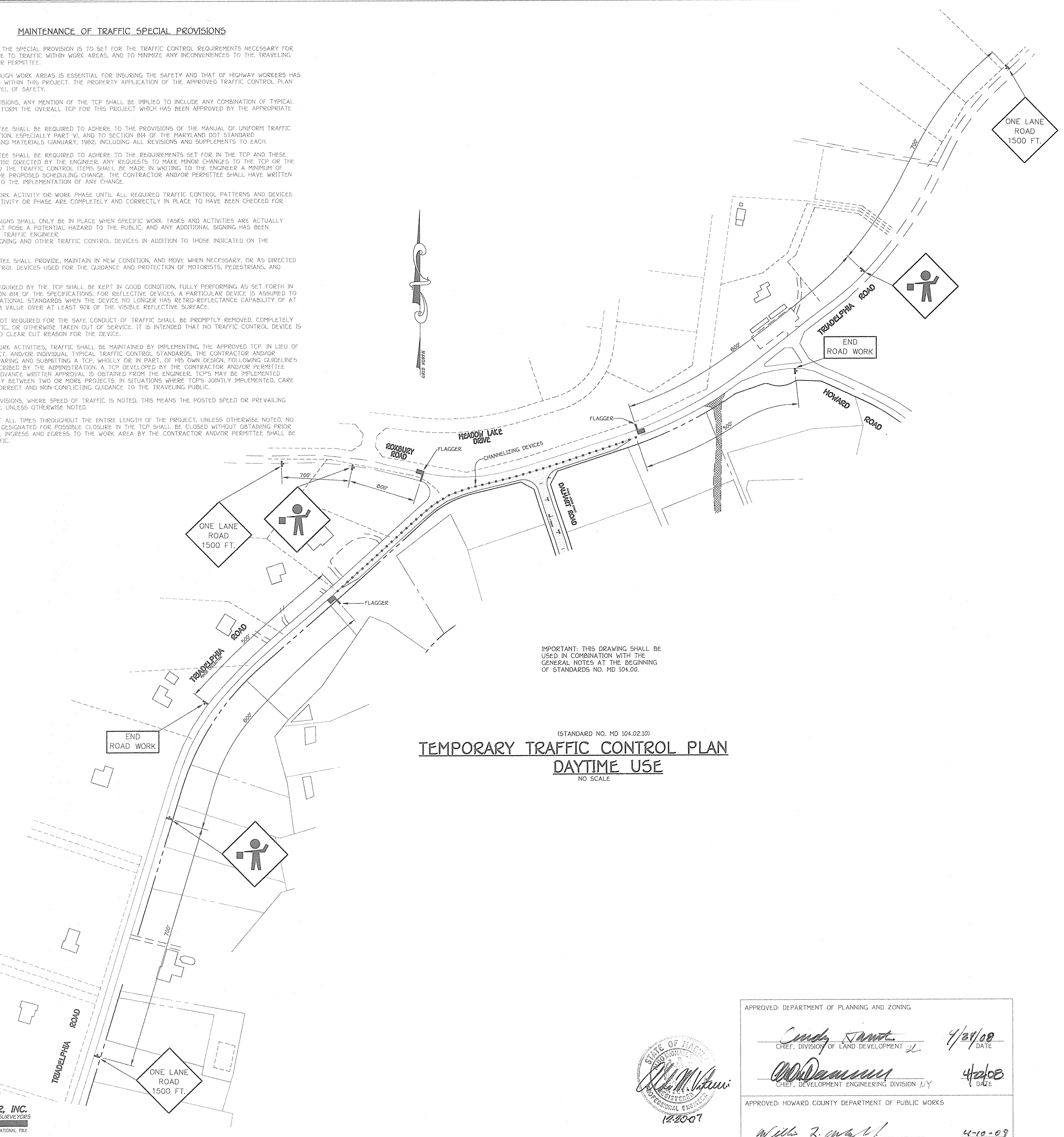
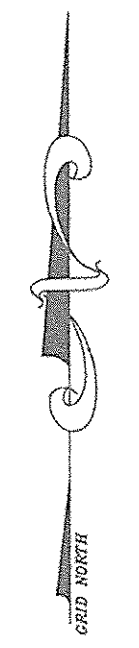
OWNER  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)  
 And  
 Warfield Brothers  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

DEVELOPER  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

ROAD DETAILS  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-68, OPEN PARCEL 69,  
 BUILDABLE PRESERVATION PARCEL 'A'  
 AND NON-BUILDABLE PRESERVATION PARCELS  
 'B' THRU 'I'  
 ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 9 OF 40

**MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS**

1. THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FOR THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE OF TRAFFIC WITHIN WORK AREAS, AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
2. PROPERTY TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR INSURING THE SAFETY AND THAT OF HIGHWAY WORKERS HAS THE HIGHEST PRIORITY OF ALL TASKS WITHIN THIS PROJECT. THE PROPER APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN (TCP) WILL PROVIDE THE DESIRED LEVEL OF SAFETY.
3. THROUGHOUT THESE SPECIAL PROVISIONS, ANY MENTION OF THE TCP SHALL BE IMPLIED TO INCLUDE ANY COMBINATION OF TYPICAL TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TCP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.
4. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 1988 EDITION, ESPECIALLY PART VI, AND TO SECTION 804 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JANUARY, 1982, INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH).
5. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FOR IN THE TCP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUESTS TO MAKE MINOR CHANGES TO THE TCP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER A MINIMUM OF THREE(3) WORKING DAYS PRIOR TO THE PROPOSED SCHEDULING CHANGE. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
6. NO WORK SHALL BEGIN ON ANY WORK ACTIVITY OR WORK PHASE UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TCP FOR THAT ACTIVITY OR PHASE ARE COMPLETELY AND CORRECTLY IN PLACE TO HAVE BEEN CHECKED FOR APPROVED USAGE.
7. GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACE WHEN SPECIFIC WORK TASKS AND ACTIVITIES ARE ACTUALLY UNDERWAY OR CONDITIONS EXIST THAT POSE A POTENTIAL HAZARD TO THE PUBLIC, AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.  
NOTE: THE PRACTICE OF PLACING SIGNING AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TCP IS NOT PERMITTED.
8. THE CONTRACTOR AND/OR PERMITTEE SHALL PROVIDE, MAINTAIN IN NEW CONDITION, AND MOVE WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS.
9. ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE TCP SHALL BE KEPT IN GOOD CONDITION, FULLY PERFORMING AS SET FORTH IN THE TCP, THE MUTCD, AND/OR SECTION 804 OF THE SPECIFICATIONS FOR REFLECTIVE DEVICES. A PARTICULAR DEVICE IS ASSUMED TO HAVE FAILED TO MEET MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO-REFLECTANCE CAPABILITY OF AT LEAST 60% OF THE SPECIFIED MINIMUM VALUE OVER AT LEAST 90% OF THE VISIBLE REFLECTIVE SURFACE.
10. ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROMPTLY REMOVED, COMPLETELY COVERED, TURNED AWAY FROM TRAFFIC, OR OTHERWISE TAKEN OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICE IS TO BE IN SERVICE WHEN THERE IS NO CLEAR CUT REASON FOR THE DEVICE.
11. THROUGHOUT THE PERIOD(S) OF WORK ACTIVITIES, TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TCP, IN LIEU OF THE TCP PREPARED FOR THIS PROJECT, AND/OR INDIVIDUAL TYPICAL TRAFFIC CONTROL STANDARDS, THE CONTRACTOR AND/OR PERMITTEE HAS THE OPTION OF PREPARING AND SUBMITTING A TCP, WHOLLY OR IN PART, OF HIS OWN DESIGN, FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND PRESCRIBED BY THE ADMINISTRATION. A TCP DEVELOPED BY THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TCP'S MAY BE IMPLEMENTED WITHIN A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS IN SITUATIONS WHERE TCP'S JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PRESENT CORRECT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
12. THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED, THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
13. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT, UNLESS OTHERWISE NOTED. NO TRAVEL LANES OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TCP SHALL BE CLOSED WITHOUT OBTAINING PRIOR APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.



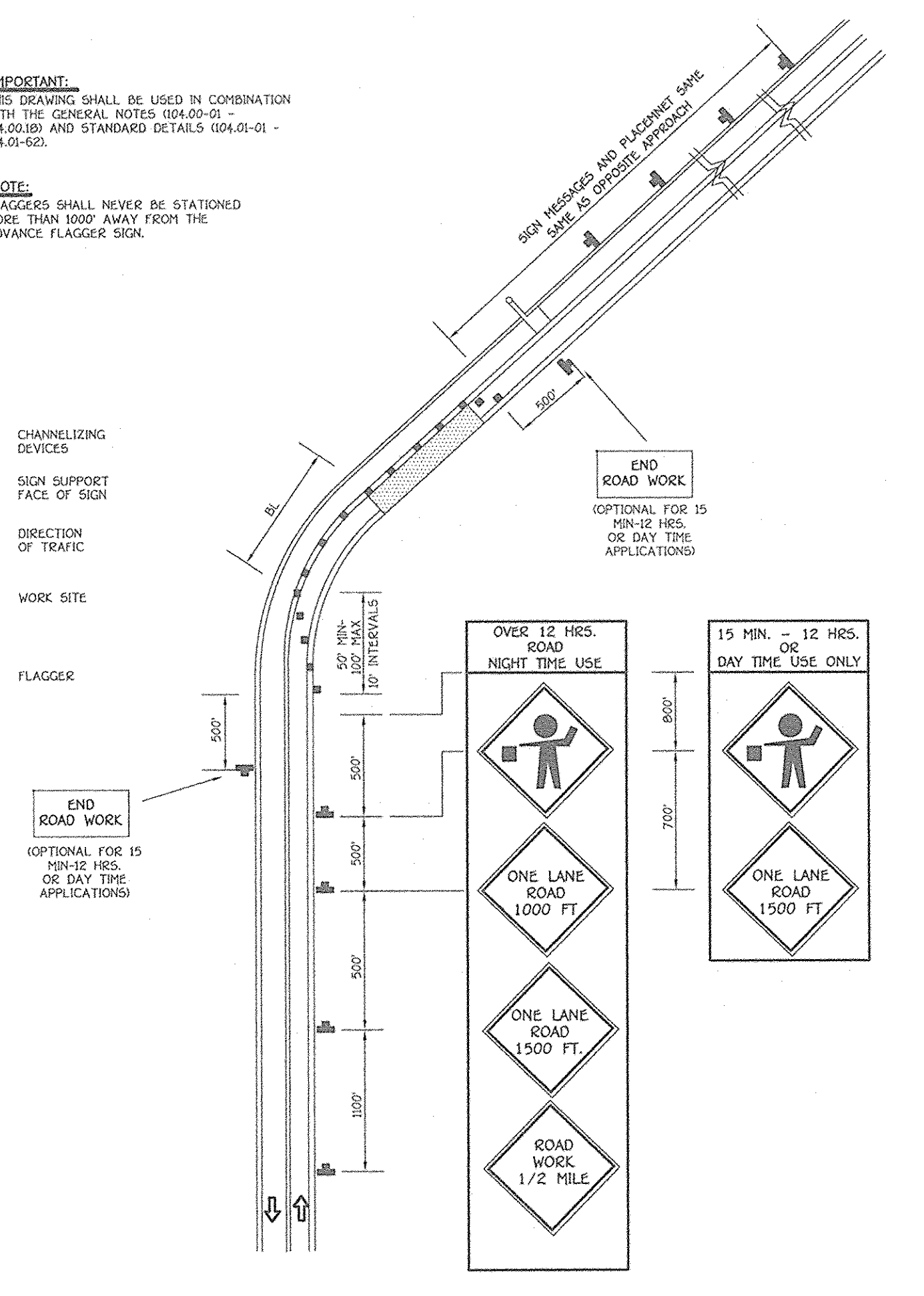
IMPORTANT: THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES AT THE BEGINNING OF STANDARDS NO. MD 104.00.

(STANDARD NO. MD 104.02.10)  
**TEMPORARY TRAFFIC CONTROL PLAN**  
**DAYTIME USE**  
 NO SCALE

**IMPORTANT:**  
 THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES 104.00-01, 104.00-02 AND STANDARD DETAILS 104.01-01 - 104.01-02.

**NOTE:**  
 FLAGGERS SHALL NEVER BE STATIONED MORE THAN 1000' AWAY FROM THE ADVANCE FLAGGER SIGN.

- KEY:**
- CHANNELIZING DEVICES
  - SIGN SUPPORT FACE OF SIGN
  - ↑ DIRECTION OF TRAFFIC
  - ▭ WORK SITE
  - ⏏ FLAGGER



**FLAGGING OPERATION 1/2-LANE, 2-WAY**  
**EQUAL/LESS THAN 40 MPH**  
 NO SCALE

STD. MD 104.02-10

**KEY**

- SIGN SUPPORT FACE OF SIGN
- CHANNELIZING DEVICES
- ▭ WORK SITE

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTONAL SQUARE OFFICE PARK - 1872 BALTIMORE NATIONAL PIKE  
 ELLESDOTT CITY, MARYLAND 21042  
 (410) 481-2855



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Cindy Kuntz* 4/21/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT 2L DATE

*W. R. Smith* 4/21/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 1J DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William R. Smith* 4-10-09  
 CHIEF, BUREAU OF HIGHWAYS 46 DATE

**OWNER**  
 Mr. Kennard Warfield, Jr., Marr Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)  
 And  
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**DEVELOPER**  
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 C/O Mr. Kennard Warfield, Jr., President  
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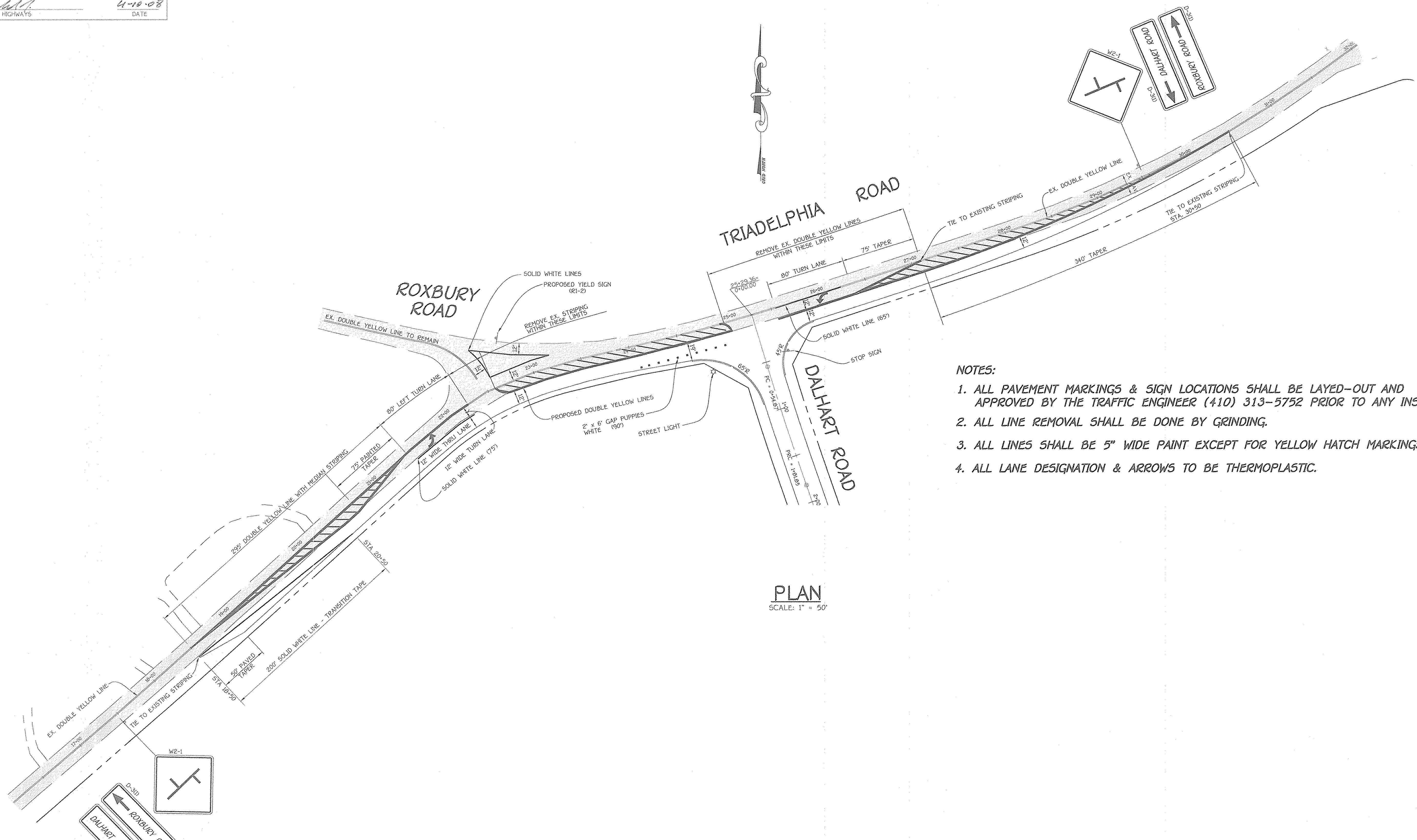
**TRAFFIC CONTROL PLAN**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 10 OF 40

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cindy K. Smith* 4/21/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*W. J. Williams* 4/22/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION NY DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*W. J. Williams* 4-10-08  
 CHIEF, BUREAU OF HIGHWAYS DATE



- NOTES:**
1. ALL PAVEMENT MARKINGS & SIGN LOCATIONS SHALL BE LAYED-OUT AND APPROVED BY THE TRAFFIC ENGINEER (410) 313-5752 PRIOR TO ANY INSTALLATION.
  2. ALL LINE REMOVAL SHALL BE DONE BY GRINDING.
  3. ALL LINES SHALL BE 5" WIDE PAINT EXCEPT FOR YELLOW HATCH MARKINGS WHICH ARE 12" WIDE.
  4. ALL LANE DESIGNATION & ARROWS TO BE THERMOPLASTIC.

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

K:\Drawings - 2010\10 Warfield Homebase\FINALS\0310 SECT 2 SHEET 11 STRIPING PLAN.dwg, 12/19/2007 9:15:45 AM

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10279 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461-3355



**OWNER**  
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 14451 Triadelphia Road  
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 (410-442-2337)  
 And  
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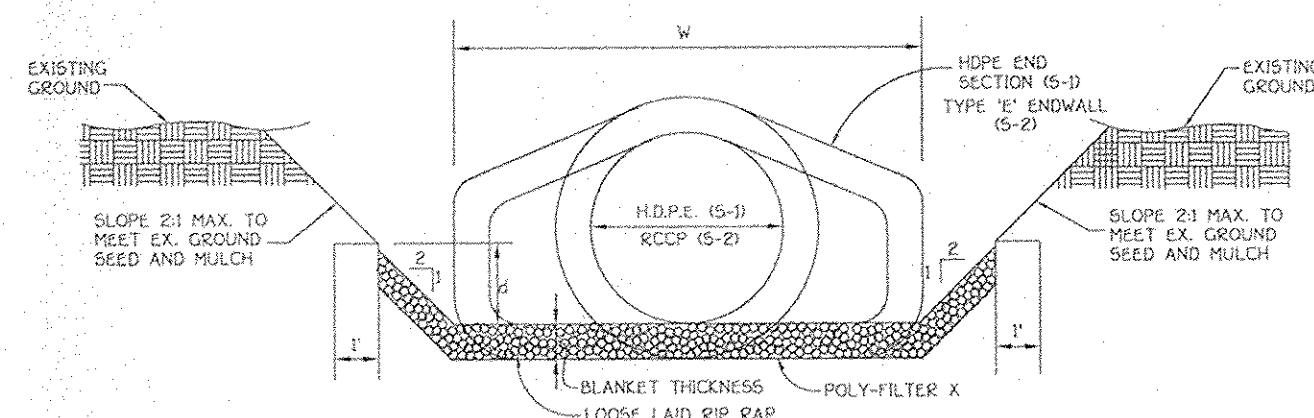
**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

**STRIPING PLAN**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL "A" AND NON-BUILDABLE PRESERVATION PARCELS "B" THRU "I"  
 ZONED: RC-DEO  
 TAX MAP NO. 27 GRID NO. 23 PARCEL NO. 55  
 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 11 OF 40

**STRUCTURE SCHEDULE**

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	COORDINATES OR CL. STATION	WIDTH	TYPE	REMARKS
I-1	528.32	-	525.56	20' LEFT OF CL STA 0+12.50 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-2	528.32	525.16	524.91	20' RIGHT OF CL STA 0+12.50 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-3	541.97	537.92	537.42	20' LEFT OF CL STA 9+23.65 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-4	541.97	537.82	537.72	20' RIGHT OF CL STA 9+23.65 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-5	558.23	555.16	554.66	20' LEFT OF CL STA 10+54.33 (MICHELE DRIVE)	36"	D INLET	D - 4.11
I-6	561.15	-	557.50	20' LEFT OF CL STA 20+00.50 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-7	553.50	-	550.27	32' LEFT OF CL STA 0+41 (DALHART ROAD)	-	D INLET	D - 4.11
I-8	561.29	558.16, 558.14	557.64	22' RIGHT OF CL STA 2+19.50 (DALHART ROAD)	-	D INLET	D - 4.11
I-9	561.29	-	558.38	22' LEFT OF CL STA 2+19.50 (DALHART ROAD)	-	D INLET	D - 4.11
I-10	563.91	560.76	560.51	20' LEFT OF CL STA 25+98.55 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-11	563.91	-	561.16	20' RIGHT OF CL STA 25+98.55 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-12	550.39	545.77	538.72	LINEAR PROFILE STA 1+19.24 (MICHELE DRIVE)	36"	A-5	D - 4.01
I-13	554.00	550.56	550.31	20' LEFT OF CL STA 31+21 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-14	554.00	-	551.00	20' RIGHT OF CL STA 31+21 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-15	518.70	514.70	506.15	N 576703 E 1308225	42"	D INLET	D - 4.11
I-16	520.50	516.50	516.40	N 576820 E 1308111	36"	D INLET	D - 4.11
I-17	523.00	519.49	518.99	N 576911 E 1308023	36"	D INLET	D - 4.11
I-18	530.00	526.97	526.47	N 577485 E 1307931	-	D INLET	D - 4.11
I-19	536.20	532.24	531.99	N 577727 E 1307826	-	D INLET	D - 4.11
I-20	540.50	-	535.75	N 577840 E 1307900	-	D INLET	D - 4.11
I-21	533.42	-	530.67	20' RIGHT OF CL STA 3+50.00 (MICHELE DRIVE)	36"	D INLET	D - 4.11
I-22	514.30	507.51	507.41	17' LEFT OF CL STA 3+26.38 (LEAR COURT)	-	D INLET	D - 4.11
I-23	514.30	-	511.55	17' RIGHT OF CL STA 3+26.38 (LEAR COURT)	-	D INLET	D - 4.11
I-24	509.92	506.81	506.56	17' LEFT OF CL STA 6+66.67 (LEAR COURT)	-	D INLET	D - 4.11
I-25	509.92	-	507.15	17' RIGHT OF CL STA 6+66.67 (LEAR COURT)	-	D INLET	D - 4.11
I-26	559.80	556.25	556.00	20.5' RIGHT OF CL STA 6+43.00 (TRIADELPHIA ROAD)	-	D INLET	D - 4.11
I-26A	554.50	-	550.00	38' RIGHT OF CL STA 0+48 (DALHART ROAD)	36"	D INLET	D - 4.11
I-21A	533.42	530.27	530.02	20' LEFT OF CL STA 3+50.00 (MICHELE DRIVE)	-	D INLET	D - 4.11
I-27	499.00	494.75	494.50	N 576491 E 1308425	-	D INLET	D - 4.11
I-28A	562.45	558.44	559.19	18' RIGHT OF CL STA 9+03.00 (TRIADELPHIA ROAD)	-	D INLET	D - 4.11
I-28B	575.50	-	570.00	18' RIGHT OF CL STA 11+55 (TRIADELPHIA ROAD)	-	D INLET	D - 4.11
I-28C	554.25	-	550.00	38' RIGHT OF CL STA 0+48 (DALHART ROAD)	-	D INLET	D - 4.11
M-1	SET 6' ABOVE EX. GROUND	524.69	524.93	N 576397 E 1307403	-	4" STD. MANHOLE	G - 5.12
M-2	540.96	528.90, 535.53	528.40	14' LEFT OF CL STA 5+60.40 (MICHELE DRIVE)	-	5" STD. MANHOLE	G - 5.13
M-3	536.83	529.60	529.50	7.67' LEFT OF CL STA 4+37.50 (MICHELE DRIVE)	-	4" STD. MANHOLE	G - 5.12
M-4	544.97	536.65	536.56	14' RIGHT OF CL STA 7+67.90 (MICHELE DRIVE)	-	4" STD. MANHOLE	G - 5.12
M-5	548.98	545.50	542.90	6.20' RIGHT OF CL STA 11+66.90 (MICHELE DRIVE)	-	4" STD. MANHOLE	G - 5.12
M-6	557.92	552.60	552.50	7' LEFT OF CL STA 14+65.40 (MICHELE DRIVE)	-	4" STD. MANHOLE	G - 5.12
M-7	562.29	553.55	553.45	7' LEFT OF CL STA 18+35.60 (MICHELE DRIVE)	-	4" STD. MANHOLE	G - 5.12
M-8	565.09	560.17	560.07	7' RIGHT OF CL STA 3+59.90 (DALHART ROAD)	-	4" STD. MANHOLE	G - 5.12
M-9	SET 6' ABOVE EX. GROUND	498.57	498.47	N 576412 E 1308495	-	4" STD. MANHOLE	G - 5.12
M-10	535.60	525.40	525.30	N 577289 E 1308016	-	4" STD. MANHOLE	G - 5.12
M-12	SET 6' ABOVE EX. GROUND	592.00	591.75	N 578934 E 1307827	-	4" STD. MANHOLE	G - 5.12
M-13	555.90	547.75, 549.50, 549.50	547.50	18' RIGHT OF CL STA 24+88 (TRIADELPHIA ROAD)	-	5" STD. MANHOLE	G - 5.11
M-14	510.40	506.36, 505.91	505.41	16' LEFT OF CL STA 6+26.85 (LEAR COURT)	-	4" STD. MANHOLE	G - 5.12
M-15	531.67	523.95	523.85	7' LEFT OF CL STA 0+20.00 (LEAR COURT)	-	4" STD. MANHOLE	G - 5.12
S-1	526.56	524.56	-	N 576381 E 1307379	-	24" CONC. END SECT	D - 5.51
S-2	496.58	494.08	-	N 576582 E 1308468	-	30" CONC. END SECT	D - 5.51
S-3	496.02	494.02	-	N 576526 E 1308462	-	24" CONC. END SECT	D - 5.51
S-4	558.50	557.06	-	N 578477 E 1307737	-	24" CONC. END SECT	D - 5.51
S-5	537.58	536.08	-	N 578362 E 1308594	-	24" CONC. END SECT	D - 5.51
S-6	555.28	553.78	-	N 577225 E 1308678	-	18" CONC. END SECT	D - 5.51
R-1	498.75	491.25	490.96	N 576461 E 1308596	-	CONCRETE RISER	SEE SHEET 28
R-2	528.00	522.50	522.34	N 576349 E 1307254	-	CONCRETE RISER	SEE SHEET 29
R-3	560.00	553.50	553.25	N 578496 E 1307636	-	CONCRETE RISER	SEE SHEET 30
R-4	539.00	553.65	533.40	N 578357 E 1308639	-	CONCRETE RISER	SEE SHEET 31
HW-1	492.52	490.00	-	N 576498 E 1308636	-	TYPE 'A' HEADWALL	D - 5.11
HW-2	524.52	522.00	-	N 576313 E 1307249	-	TYPE 'A' HEADWALL	D - 5.11
HW-3	535.01	532.75	-	N 578337 E 1308681	-	TYPE 'A' HEADWALL	D - 5.11

\* - DENOTES THROUGH OPENING ELEVATION  
 (D) - DENOTES NUMBER OF PIPES WITH THAT ELEVATION

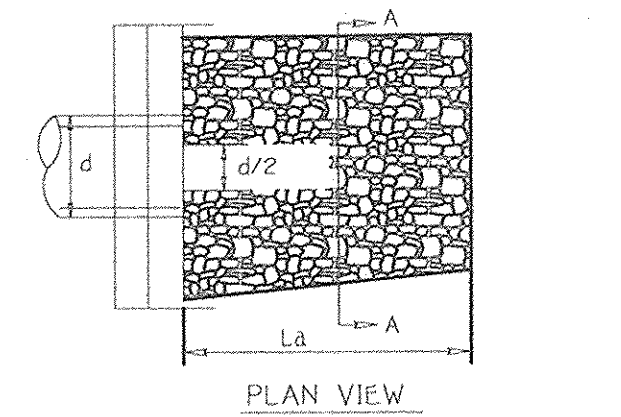


**RIP-RAP CHANNEL DESIGN DETAIL**  
 NO SCALE

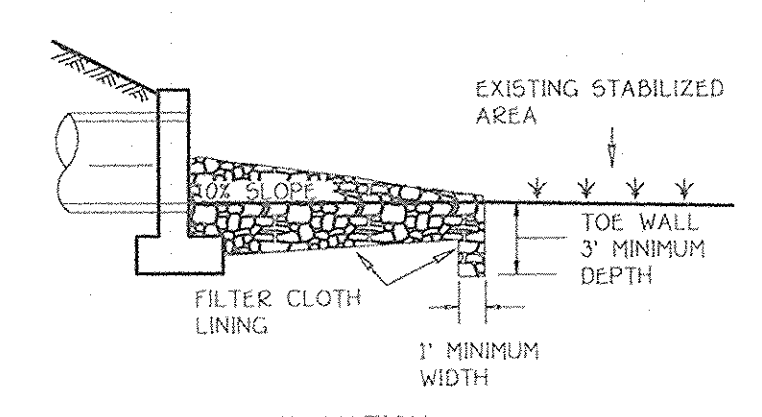
STRUCTURE	AREA	WETTED PERIMETER	R	R <sup>2/3</sup>	S	S <sup>1/2</sup>	W	d	N	V (f.p.s.)	Q (c.f.s.)	BLANKET THICKNESS
S-2	8.89	13.44	0.6815	0.7581	0.005	0.0707	10'	0.72'	0.04	1.99	17.64	15"
S-3	5.98	12.41	0.4819	0.6132	0.005	0.0707	10'	0.54'	0.04	1.61	9.49	15"
S-4	4.67	11.92	0.3918	0.5338	0.005	0.0707	10'	0.43'	0.04	1.41	6.51	15"
S-5	3.97	11.65	0.3408	0.4861	0.005	0.0707	10'	0.37'	0.04	1.28	4.88	15"
S-6	4.55	11.88	0.3830	0.5257	0.005	0.0707	10'	0.42'	0.04	1.39	6.23	15"

**CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS**

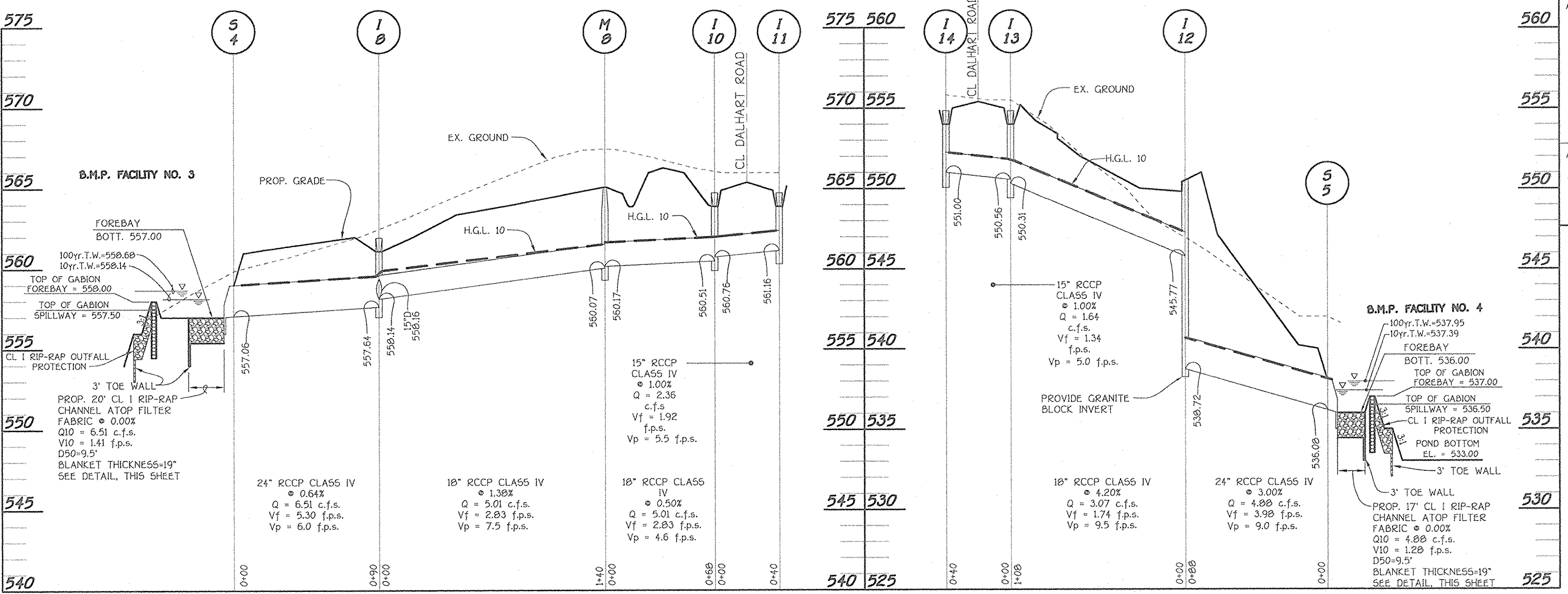
- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth 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 cloth shall be a minimum of one foot.
- Stones 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 homogeneous 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 and placement will be required to the extent necessary to prevent damage to the permanent works.



**ROCK OUTLET PROTECTION III**  
 NO SCALE



ELEVATION

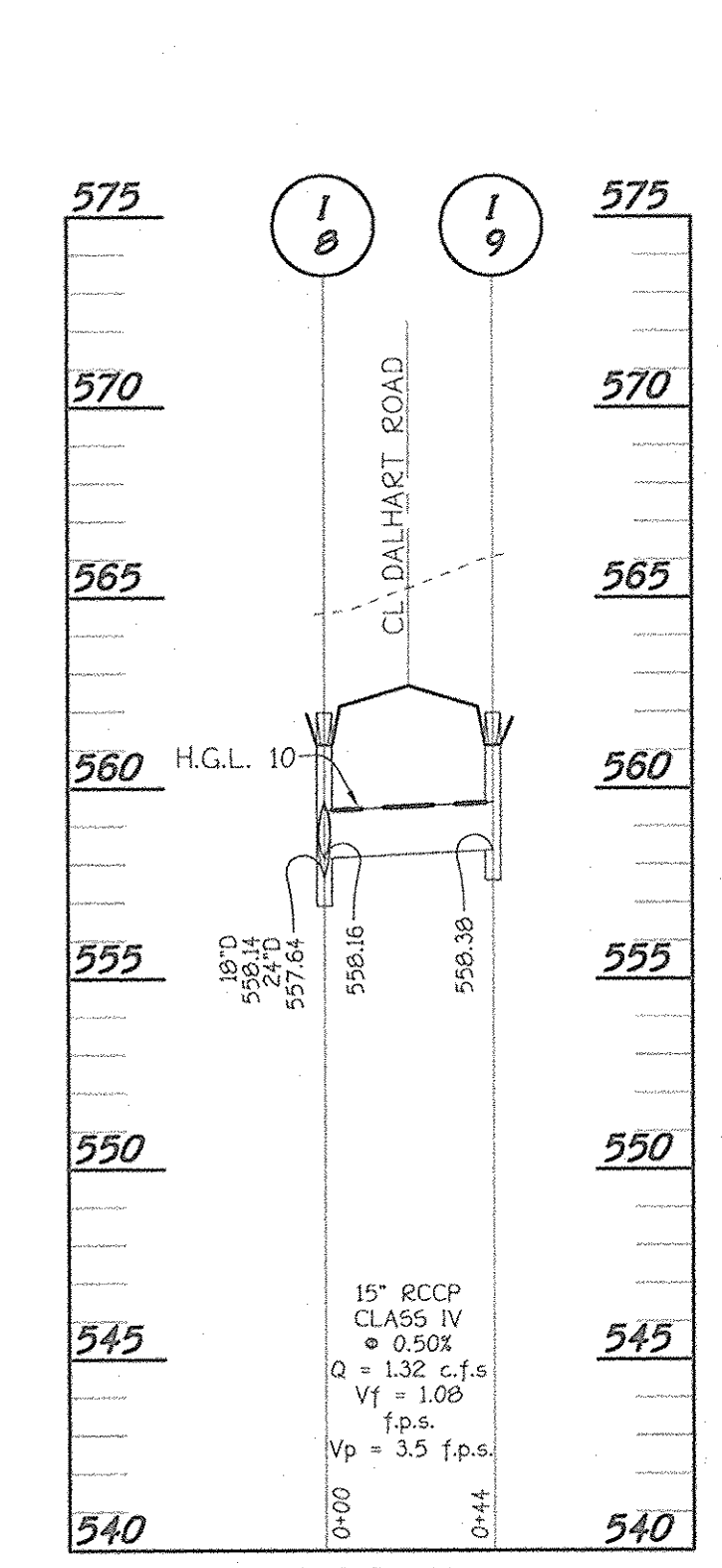


**PROFILE**

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

**PROFILE**

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



**PROFILE**

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] CHIEF, DIVISION OF LAND DEVELOPMENT 1/21/08 DATE  
 [Signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION 4/22/08 DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] CHIEF, BUREAU OF HIGHWAYS 4-10-08 DATE

**PIPE SCHEDULE**

SIZE	CLASS	LENGTH
6"	PVC SCH. 40	47 L.F.
15"	RCCP, CLASS IV	500 L.F.
18"	RCCP, CLASS IV	2499 L.F.
24"	RCCP, CLASS IV	2921 L.F.
30"	RCCP, CLASS IV	559 L.F.
24"	ASIM C-361, B-25	85 L.F.
36"	ASIM C-361, B-25	82 L.F.

**PROFILE**

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

**STORM DRAIN PROFILES AND STRUCTURE SCHEDULE**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

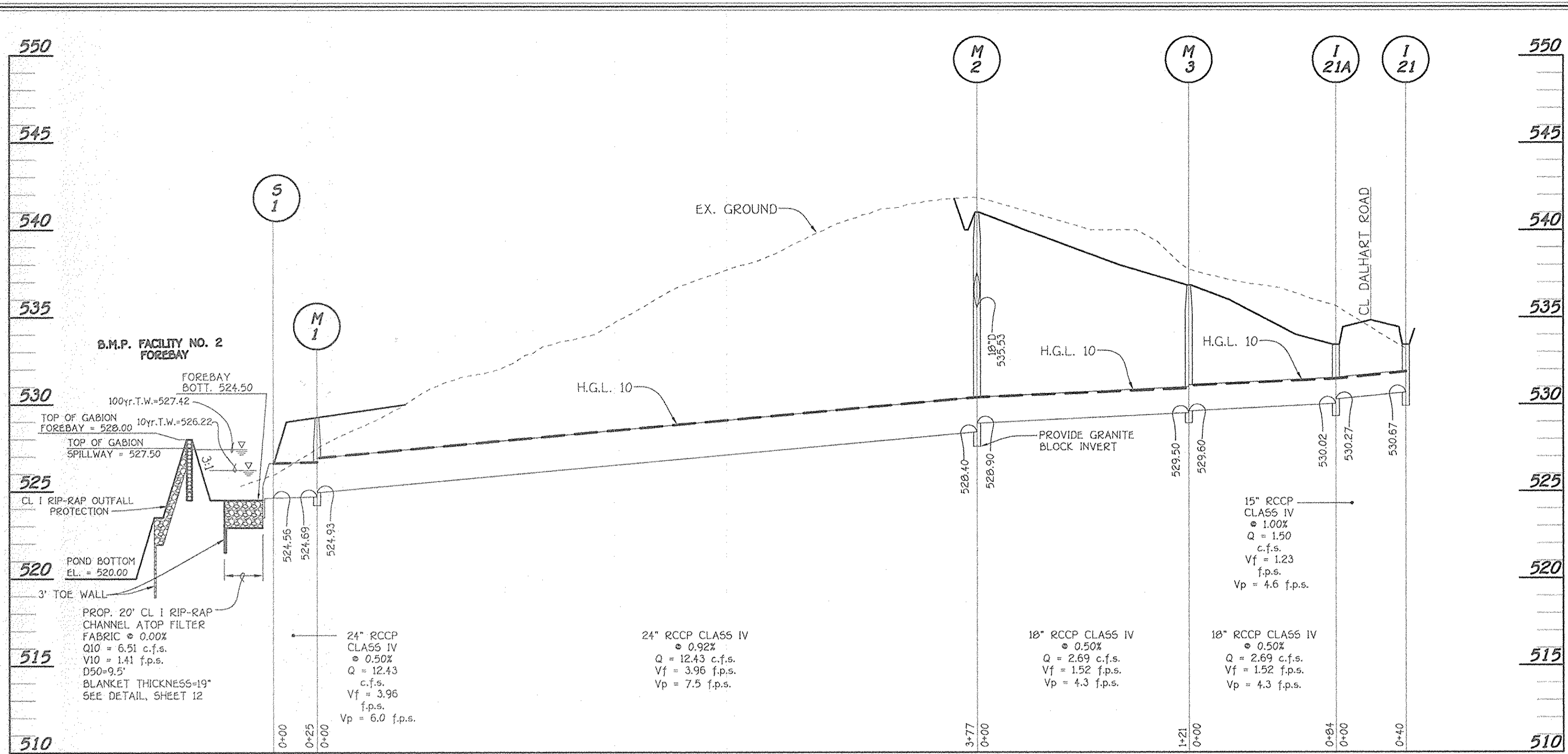
**OWNER**  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)  
 And  
 Warfield Brothers  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 12 OF 40

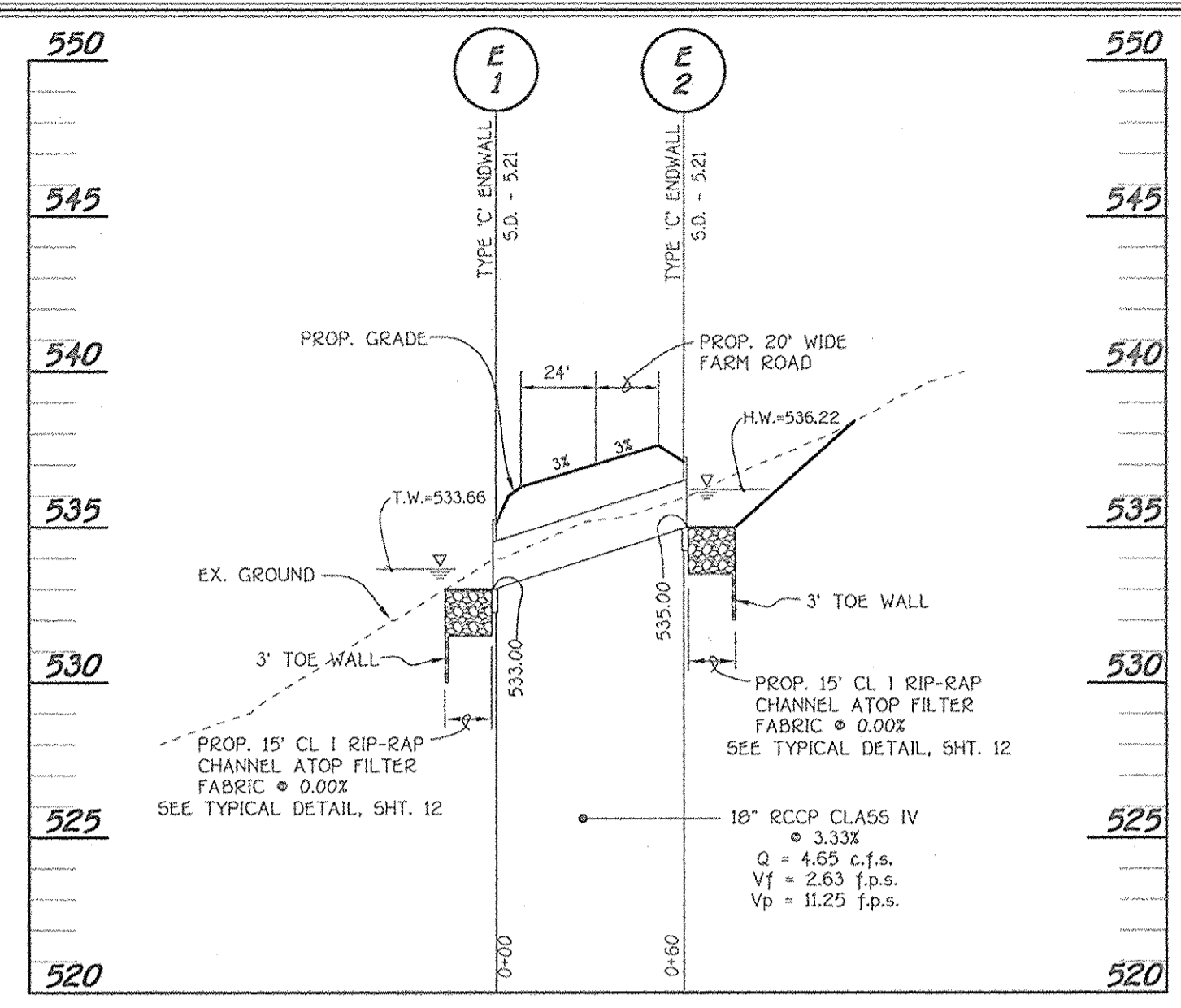
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10728 DALYWOOD NATIONAL FEE  
 LELICOTT CITY, MARYLAND 21844  
 HDL 65 - 2995





**PROFILE**

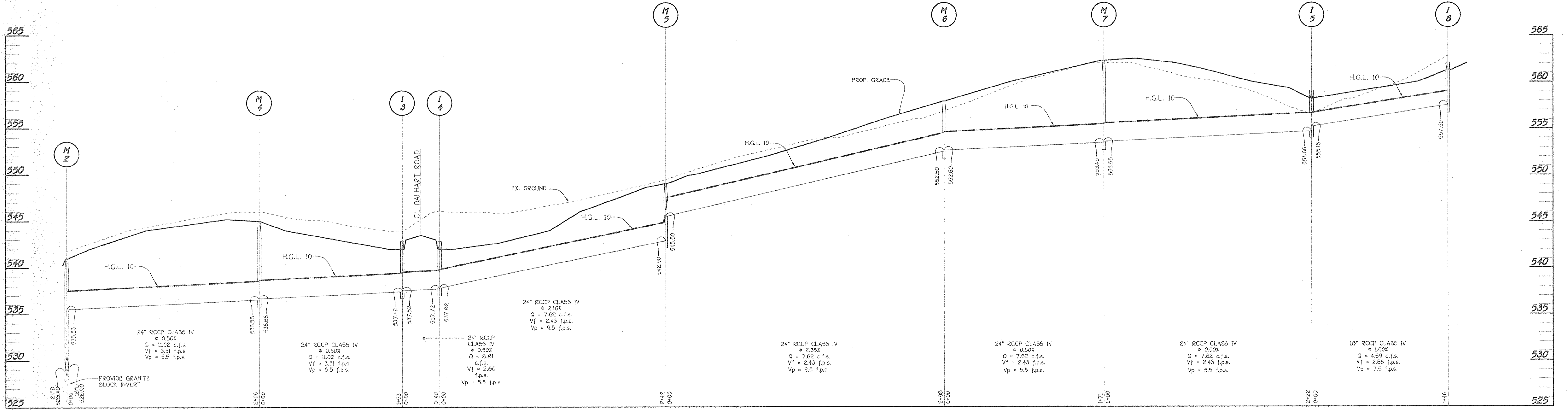
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'



**CULVERT PROFILE**

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

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Judy Harris* 4/24/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Mike Dunning* 4/22/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Willis R. Wall* 4-10-08  
 CHIEF, BUREAU OF HIGHWAYS DATE



**PROFILE**

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



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 651-2995

**OWNER**  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)  
 And  
 Warfield Brothers  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

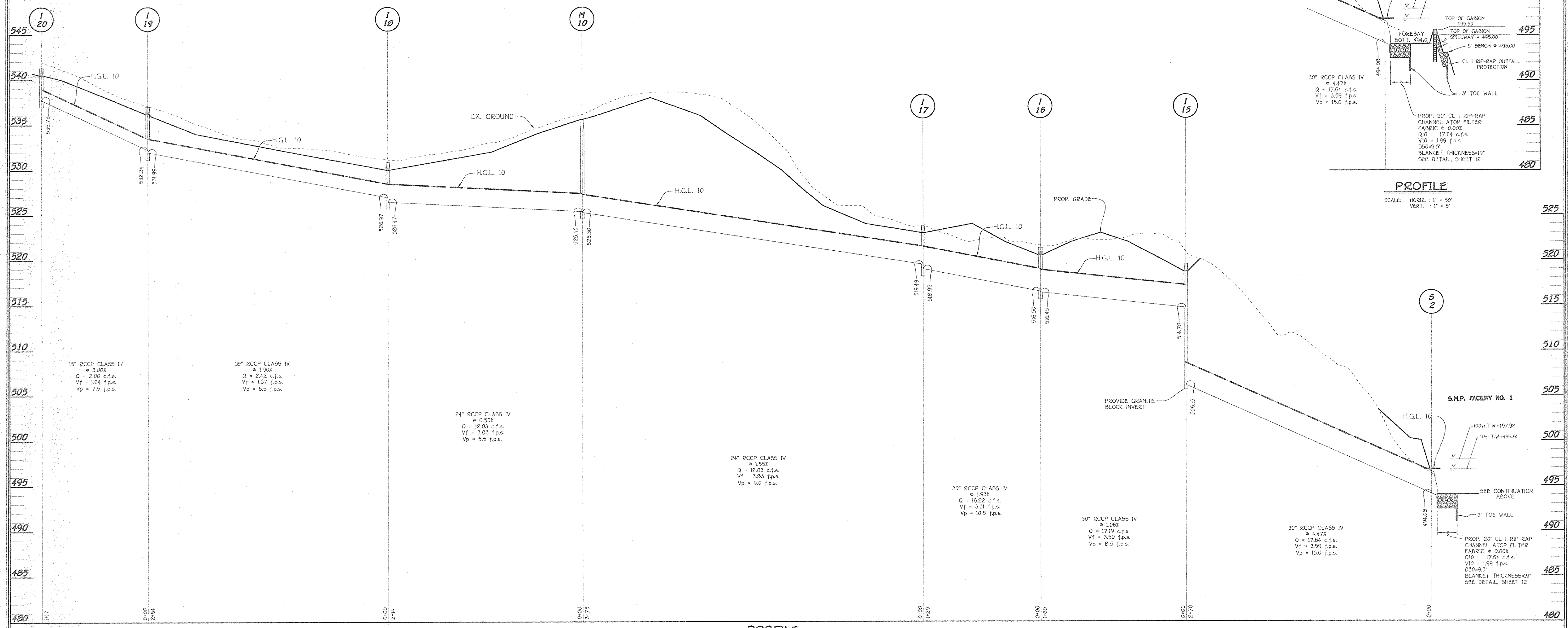
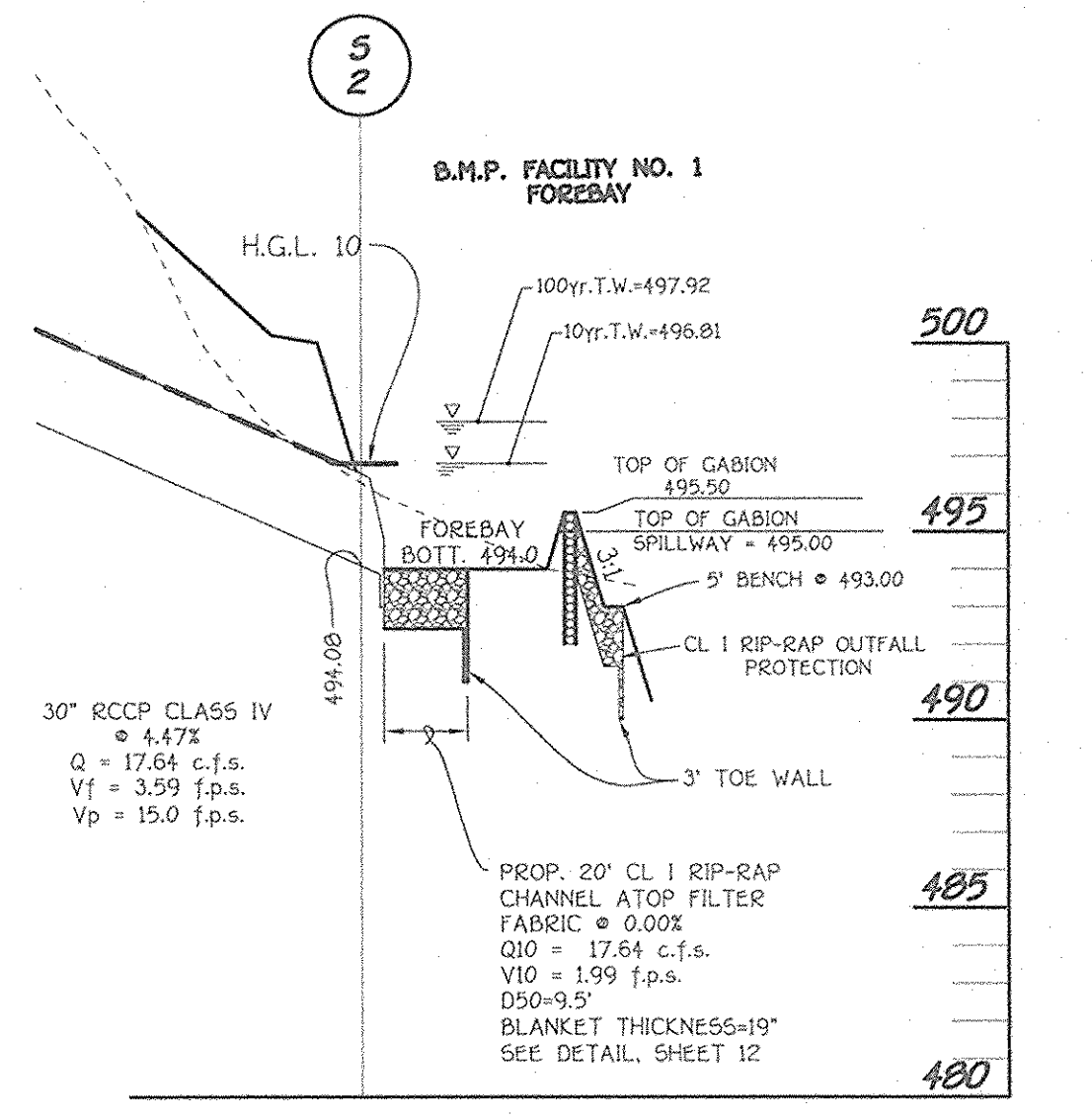
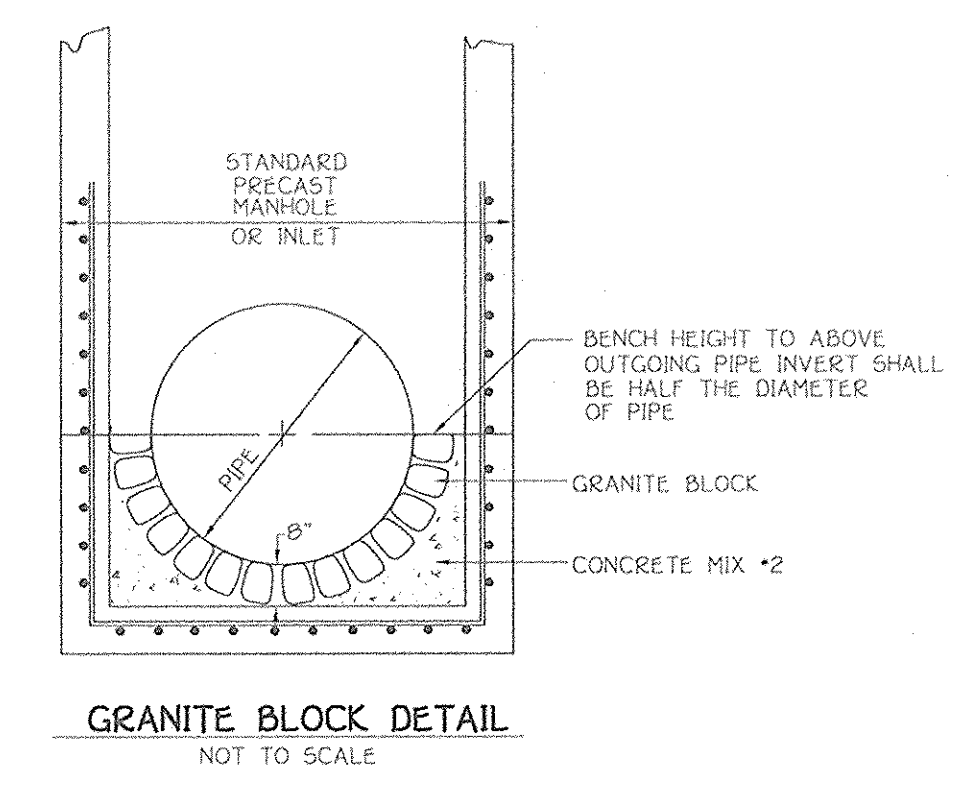
**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

**STORM DRAIN PROFILES**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'  
 ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 13 OF 40

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cindy Kamm* 4/28/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT 150 DATE

*W. Demum* 4/22/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 150 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*W. R. G. G. G.* 4-10-07  
 CHIEF, BUREAU OF HIGHWAYS 150 DATE



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

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



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 33 CENTENNIAL SQUARE OFFICE PARK • 10712 BALTIMORE NATIONAL FREE  
 ELLICOTT CITY, MARYLAND 21114  
 MD-RES - 2200

**OWNER**  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Gleneta, Maryland 21737  
 (410) 442-2337  
 And  
 Warfield Brothers  
 14451 Triadelphia Road  
 Gleneta, Maryland 21737  
 (410) 442-2337

**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Gleneta, Maryland 21737  
 (410) 442-2337

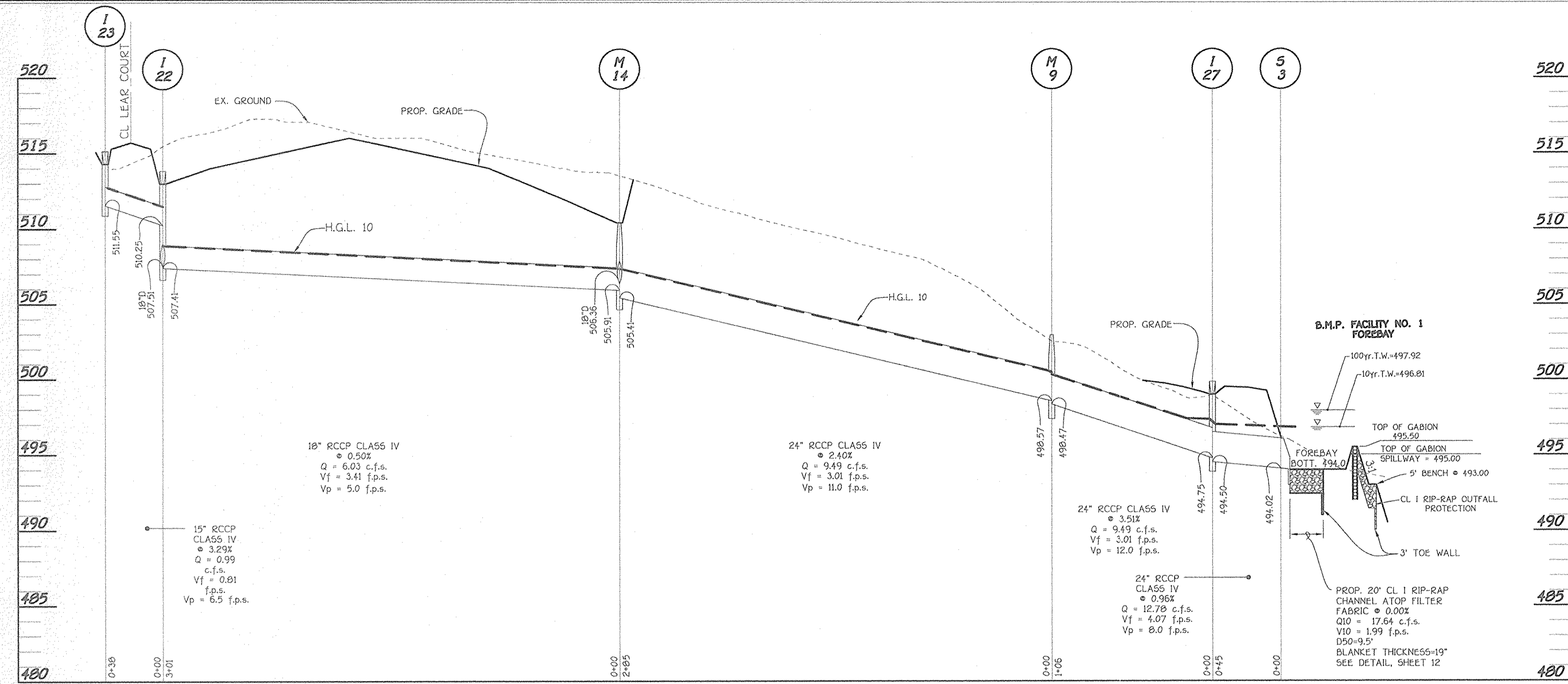
**STORM DRAIN PROFILES**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-68, OPEN SPACE LOT  
 69, BUILDABLE PRESERVATION PARCEL 'A'  
 AND NON-BUILDABLE PRESERVATION PARCELS  
 'B' THRU 'I'

ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 14 OF 40

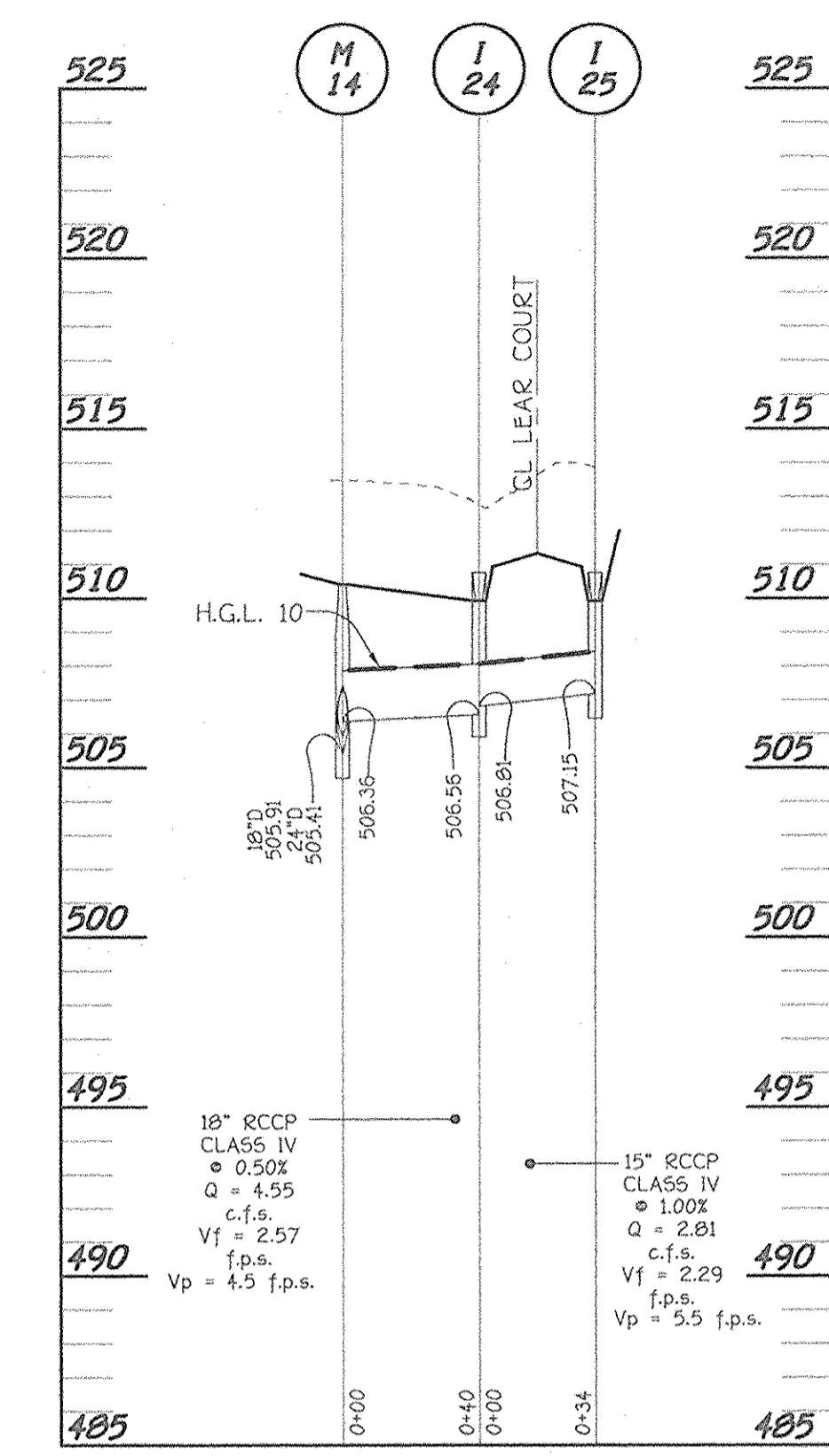
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Cindy Kamber* 4/24/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Mike Dorman* 4/22/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

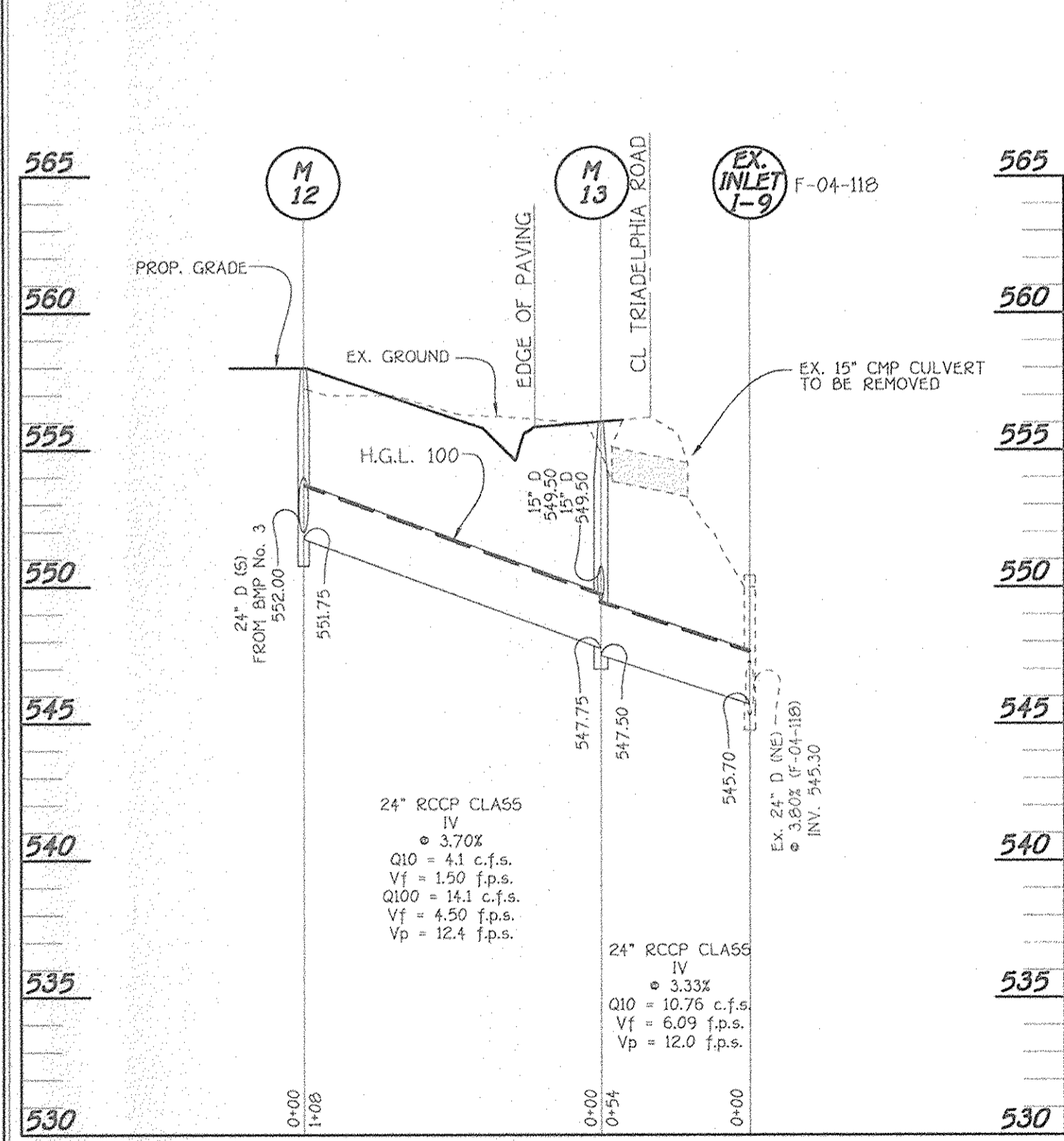
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Walter Z. Whit* 4-16-08  
 CHIEF, BUREAU OF HIGHWAYS DATE



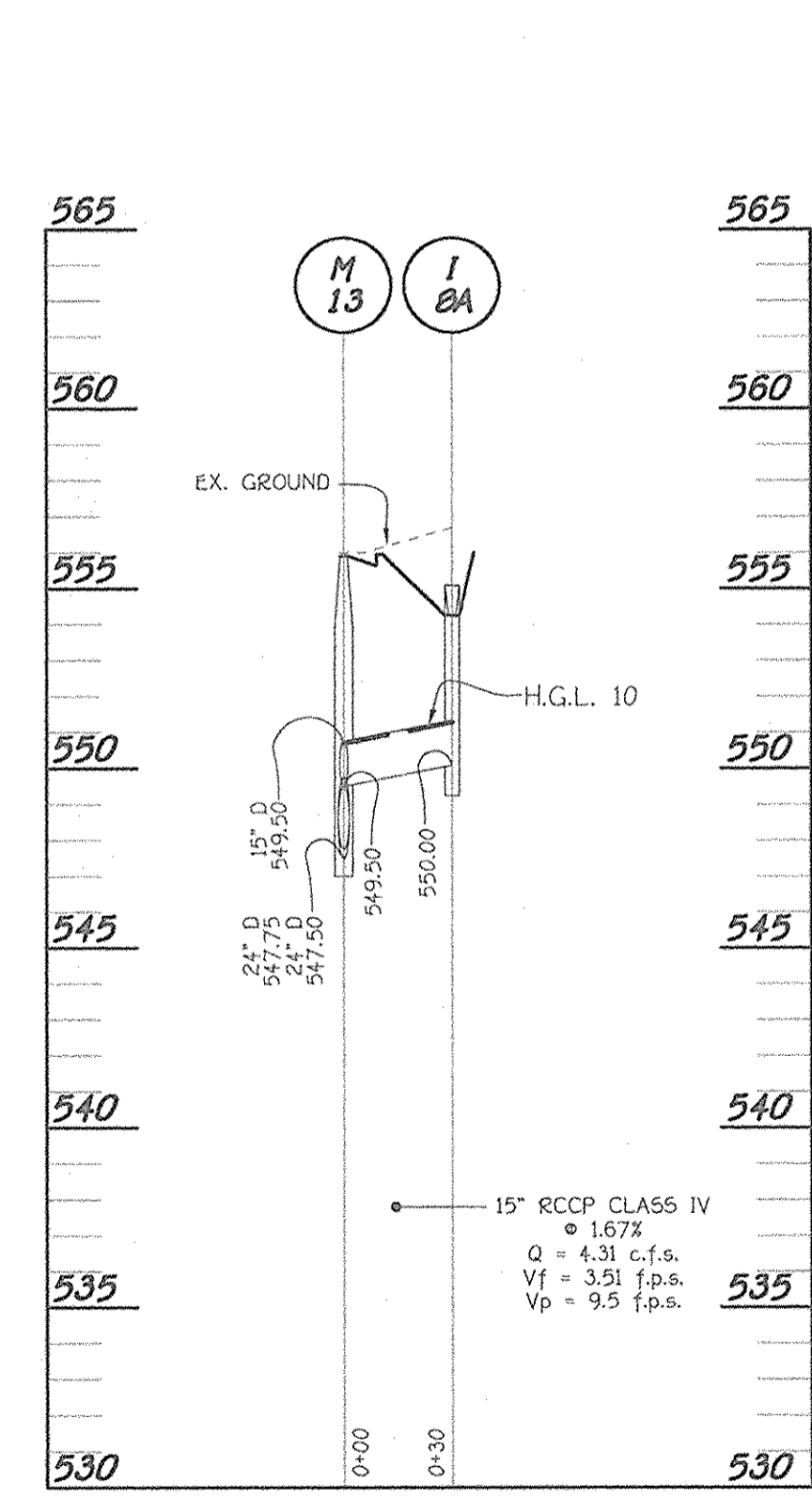
**PROFILE**  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 5'



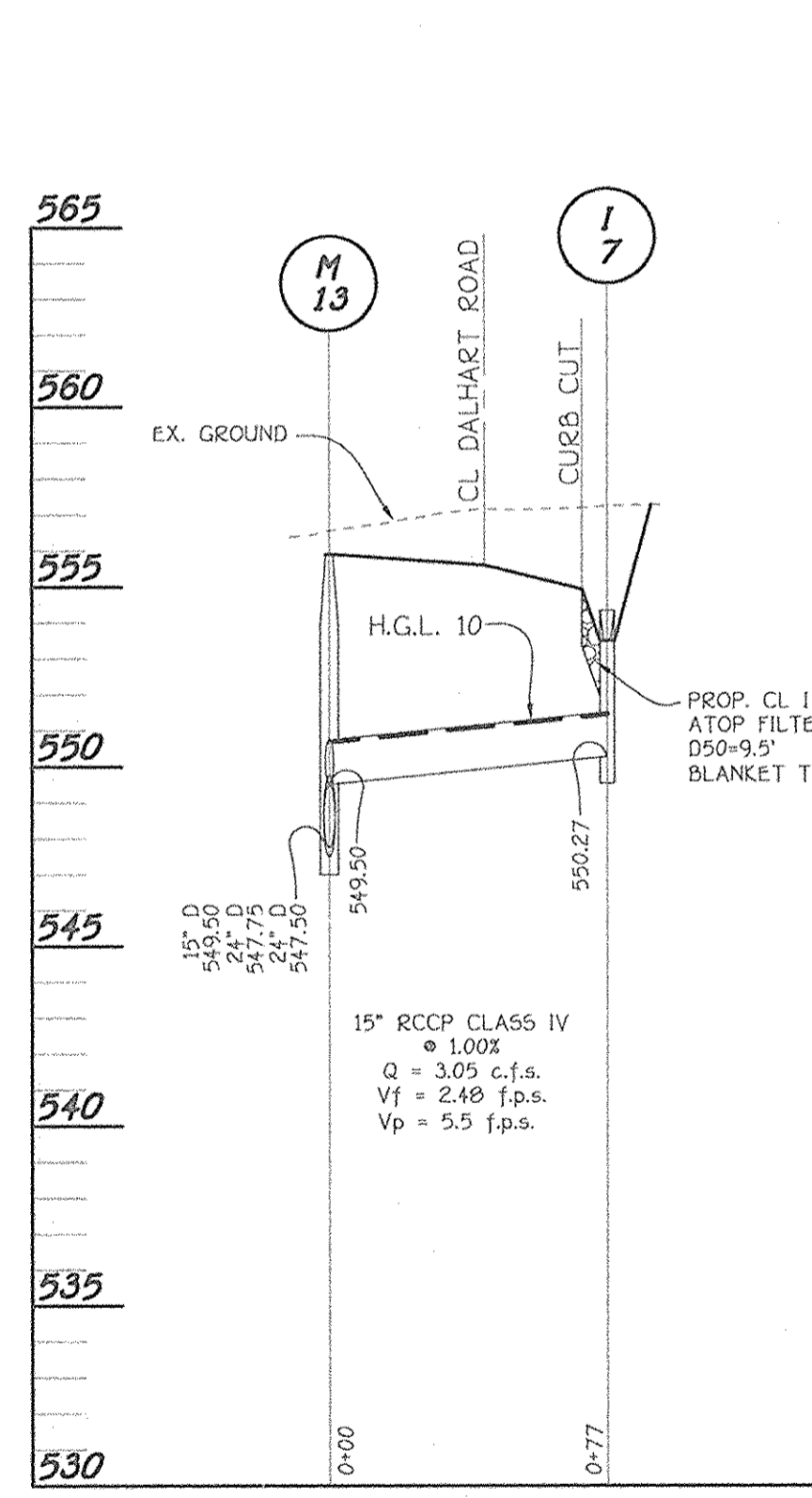
**PROFILE**  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 5'



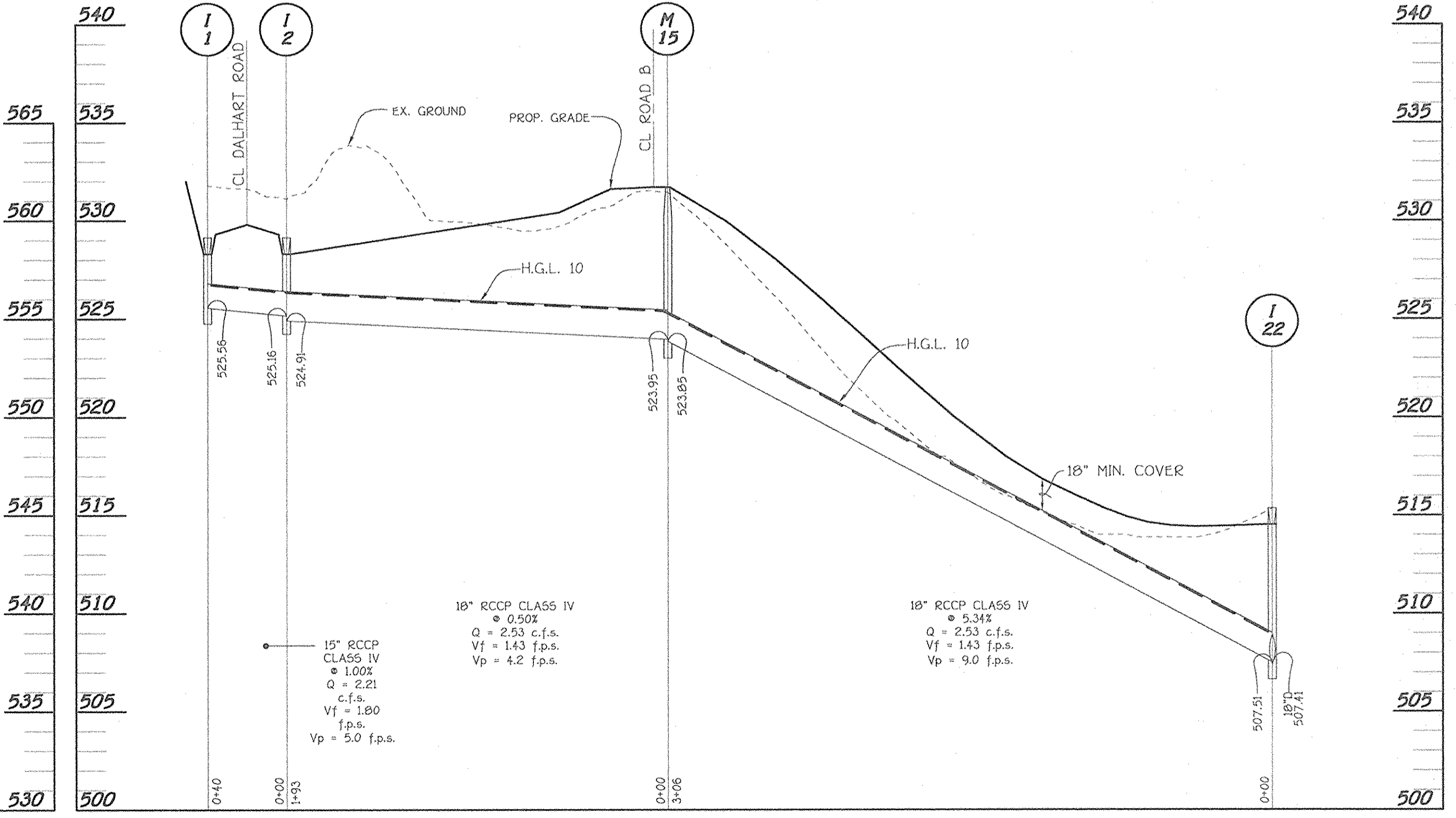
**PROFILE**  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 5'



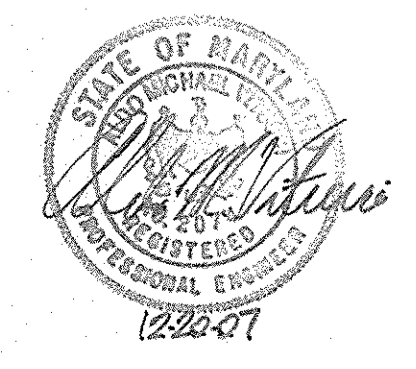
**PROFILE**  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 5'



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



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10712 BALTIMORE NATIONAL PIKE  
 ELKDDIT CITY, MARYLAND 21042  
 410-442-2337

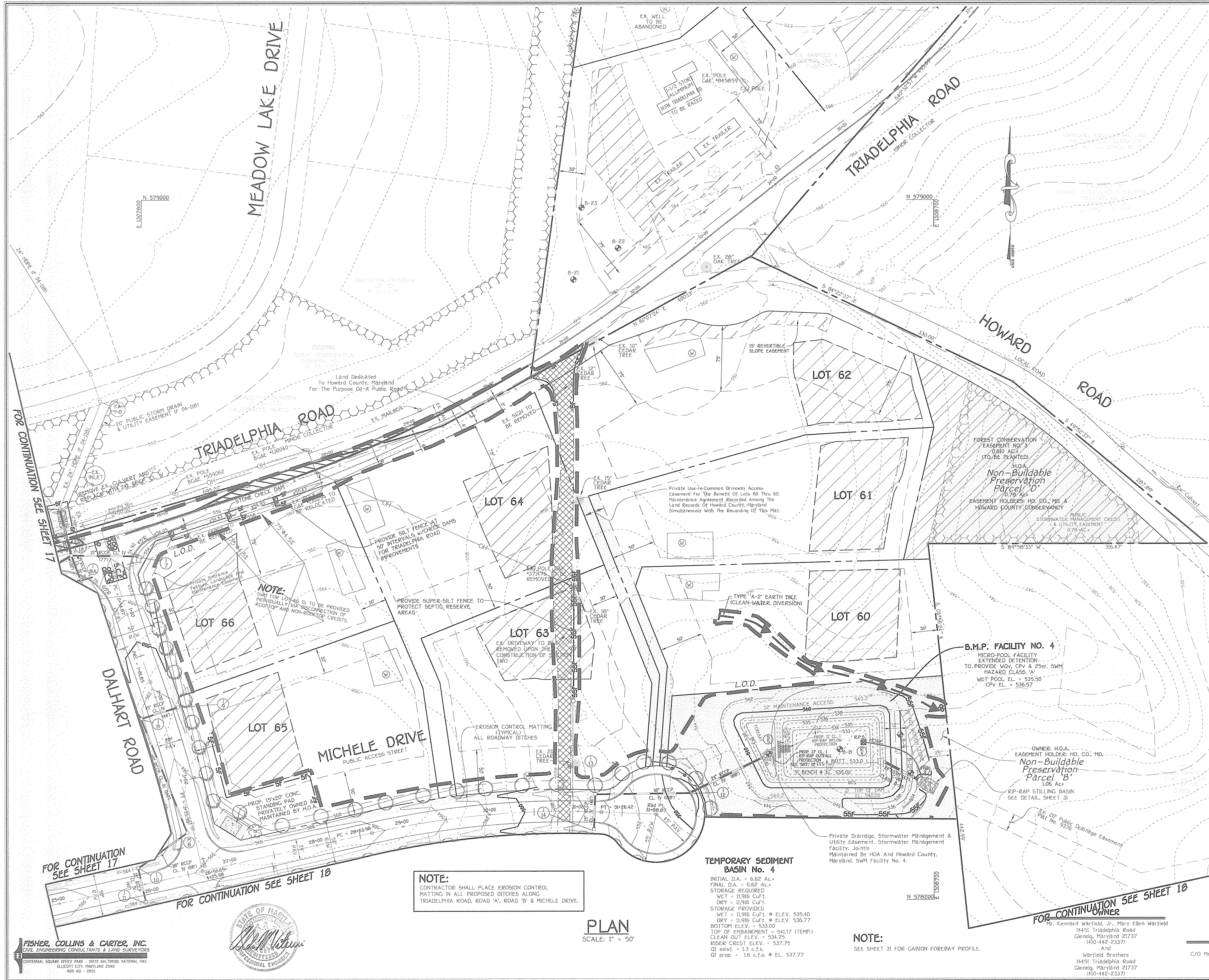
**OWNER**  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Gleneta, Maryland 21737  
 (410) 442-2337

**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Gleneta, Maryland 21737  
 (410) 442-2337

**STORM DRAIN PROFILES**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

ZONED: RC-DEO

TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 15 OF 40



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 Reseize Periodic On-Site Inspections By The Howard Soil Conservation District."  
 Signature Of Developer: *Kennard Warfield, Jr.* Date: 12-20-07  
 Printed Name Of Developer: **Kennard Warfield, Jr.**

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 Developer That He/She Must 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."  
 Signature Of Engineer: *Alvin M. Sturges* Date: 12-20-07  
 Printed Name Of Engineer: **Alvin M. Sturges**

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Pond Construction, Soil Erosion And Sediment Control.  
 Date: *4/7/08*

Approved Department Of Public Works  
 Signature: *William Z. ...* Date: 4-10-08  
 Chief, Bureau Of Highways

Approved Department Of Planning And Zoning  
 Signature: *...* Date: 4/20/08  
 Chief, Division Of Land Development

Signature: *...* Date: 4/20/08  
 Chief, Development Engineering Division

**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.

- LEGEND**
- SSF—SSF—SSF— SUPER-SILT FENCE
  - SF—SF—SF— SILT FENCE
  - TP—TP—TP— TREE PROTECTION FENCE
  - S.C.E.— STABILIZED CONSTRUCTION ENTRANCE
  - E.D.— EARTH DIKE
  - L.O.D.— DENOTES L.O.D. LIMITS OF DISTURBANCE
  - E.C.M.— DENOTES EROSION CONTROL MATTING
  - G.I.P.— GABION INFLOW PROTECTION
  - R.P.S.— REMOVABLE PUMPING STATION
  - I.P.— INLET PROTECTION
  - S.T.M.— DENOTES STORMWATER MANAGEMENT CREDIT & UTILITY EASEMENT
  - S.C.D.— STONE CHECK DAM

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-66, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

**DEVELOPER**  
 Ken Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

**ZONED: RC-DEO**  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 16 OF 40

K:\Drawings\31031010 Warfield Homes\Drawings\FINALS\31031010 SECT 2 SHEET 16-21 STREET TREE AND SEDIMENT CONTROL PLAN.dwg, 12/19/2007 3:02:08 PM

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK • 10272 BALDORNE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 401-2855







N 578600  
E 1307900

NOTE:  
SEE SHEET 30 FOR GABION FOREBAY PROFILE.

**TEMPORARY SEDIMENT BASIN No. 3**  
 INITIAL D.A. = 3.70 AC.  
 FINAL D.A. = 5.54 AC.  
 STORAGE REQUIRED  
 WET = 9,972 CU.F.  
 DRY = 9,972 CU.F.  
 STORAGE PROVIDED  
 WET = 9,972 CU.F. @ ELEV. 556.16  
 DRY = 10,977 CU.F. @ ELEV. 557.75  
 BOTTOM ELEV. = 553.50  
 TOP OF EMBANKMENT = 561.00  
 CLEAN OUT ELEV. = 555.00  
 RISER CREST ELEV. = 557.75  
 Q1 exist. = 0.8 c.f.s.  
 Q1 prop. = 0.5 c.f.s. @ EL. 557.73

- LEGEND**
- SSF—SSF—SSF— SUPER-SILT FENCE
  - SF—SF—SF— SILT FENCE
  - TP—TP—TP— TREE PROTECTION FENCE
  - [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
  - EARTH DIKE
  - L.O.D. — DENOTES L.O.D. LIMITS OF DISTURBANCE
  - E.C.M. — DENOTES EROSION CONTROL MATTING
  - [G.I.P.] GABION INFLOW PROTECTION
  - [Hatched] DENOTES STORMWATER MANAGEMENT CREDIT & UTILITY EASEMENT

STREET TREE SCHEDULE				
SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
[Tree Symbol]	133	ACER RUBRUM "OCTOBER GLORY" RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W (MICHELLE DRIVE) 2656.69 x 2 / 40 = 132.83 TREES
[Tree Symbol]	27	PRUNUS SARGENTII SARGENT CHERRY	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W (MICHELLE DRIVE) 532.18 x 2 / 40 = 26.61 TREES
[Tree Symbol]	20	PLATANUS OCCIDENTALIS "BOODGWOOD" LONDON PLANETREE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W (ROAD "A") 405.98 x 2 / 40 = 20.30 TREES
[Tree Symbol]	44	QUERCUS RUBRA NORTHERN RED OAK	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W (ROAD "B") 871.89 x 2 / 40 = 43.60 TREES

NOTE: STREET TREE TYPES ARE ONLY A RECOMMENDATION AND MAY BE SUBSTITUTED WITH A COUNTY ACCEPTED EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE 224 REQUIRED STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$67,200.00.

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 Of Developer: *Kennard Warfield, Jr.*  
 Printed Name Of Developer: **Kennard Warfield, Jr.**  
 Date: **12-20-07**

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 Noted The Developer That He/She Must 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.  
 Signature Of Engineer: *Alpo M. Vassera*  
 Printed Name Of Engineer: **Alpo M. Vassera**  
 Date: **12-20-07**

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: **12-20-07**

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: *[Signature]*  
 Date: **4/2/08**

Approved: Department Of Public Works  
 Signature: *[Signature]*  
 Chief, Bureau Of Highways  
 Date: **4-10-08**

Approved: Department Of Planning And Zoning  
 Signature: *[Signature]*  
 Chief, Division Of Land Development  
 Date: **4/24/08**

Signature: *[Signature]*  
 Chief, Development Engineering Division  
 Date: **4/22/08**

**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.

NOTE:  
CONTRACTOR SHALL PLACE EROSION CONTROL MATTING IN ALL ROADWAY DITCHES.

PLAN  
SCALE: 1" = 50'

**OWNER**  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)  
 And  
 Warfield Brothers  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, AND NON-BUILDABLE PRESERVATION PARCELS 'A' & 'B' THRU 'I'  
 ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 17 OF 40

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10972 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 22802  
 (410) 401-1855



K:\Drawings\3303310 Warfield Home\3303310 SECT 2 SHEET 16-24 STREET TREE AND SEDIMENT CONTROL PLAN.dwg, 12/19/2007 3:02:24 PM

**NOTE:**  
SWM FOR LOTS 54 & 55 IS TO BE PROVIDED INDIVIDUALLY VIA DISCONNECTION OF ROOFTOP AND NON-ROOFTOP CREDITS.

**NOTE:**  
SWM FOR LOT 59 IS TO BE PROVIDED INDIVIDUALLY VIA A BIO-RETENTION CELL AS A STAND ALONE LOT. THIS BMP DEVICE WILL BE CONSTRUCTED DURING THE SITE PLAN PROCESS FOR THIS LOT.

**NOTE:**  
SWM FOR LOT 56 IS TO BE PROVIDED INDIVIDUALLY VIA DISCONNECTION OF ROOFTOP AND NON-ROOFTOP CREDITS.

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."

*Kennard Warfield, Jr.*  
Signature Of Developer  
**Kennard Warfield, Jr.**  
Printed Name Of Developer  
Date: **12-20-07**

By The Engineer:  
"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Verifiable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must 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."

*Alfred M. Vitucci*  
Signature Of Engineer  
**Alfred M. Vitucci**  
Printed Name Of Engineer  
Date: **12-20-07**

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: **4/7/08**

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.  
*Shelly Sh...*  
Signature  
Date: **4/7/08**

Approved: Department Of Public Works  
*William Z. ...*  
Signature  
Date: **4-10-08**  
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning  
*Cindy Hamilton*  
Signature  
Date: **4/24/08**  
Chief, Division Of Land Development

*William ...*  
Signature  
Date: **4/22/08**  
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: \_\_\_\_\_ 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**
- 55F — 55F — 55F — SUPER-SILT FENCE
  - SF — SF — SF — SILT FENCE
  - TP — TP — TP — TREE PROTECTION FENCE
  - [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
  - → → → EARTH DIKE
  - L.O.D. — L.O.D. — DENOTES L.O.D. LIMITS OF DISTURBANCE
  - [E.C.M.] DENOTES EROSION CONTROL MATTING
  - [G.I.P.] GABION INFLOW PROTECTION
  - [Hatched Box] DENOTES STORMWATER MANAGEMENT CREDIT & UTILITY EASEMENT

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

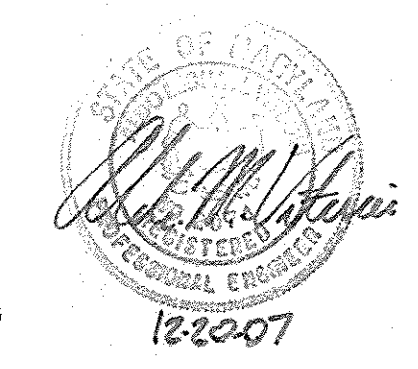
ZONED: RC-DEO  
Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 18 OF 40



N 578300  
E 1307282

N 577400  
E 1307282



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
233 CENTENNIAL SQUARE, OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 401-2899

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

Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)  
And  
Warfield Brothers  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

**DEVELOPER**  
Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

K:\Drawings\131010 Warfields Home\131010 SEC 2 SHEET 18-24 STREET TREE AND SEDIMENT CONTROL PLAN.dwg 12/20/07 2:46:13 PM



NOTE:  
SEE SHEET 27 FOR TYPICAL DITCH SECTION AND CROSS-SECTIONS FOR TRIADELPHIA ROAD.

NOTE:  
GRADING FOR LOTS 12 AND 13 WILL BE DEFERRED TO THE INDIVIDUAL SITE PLAN STAGE FOR EACH LOT.

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.

*Kennard Warfield, Jr.*  
Signature Of Developer  
Kennard Warfield, Jr.  
Printed Name Of Developer  
3-18-08  
Date

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 Developer That He/She Must 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.

*Alfred M. Vitucci*  
Signature Of Engineer  
Alfred M. Vitucci  
Printed Name Of Engineer  
3-17-08  
Date

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

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

*[Signature]*  
Howard Soil Conservation District  
Date: 4/7/08

Approved: Department Of Public Works  
*Willie Z. Marshall*  
Chief, Bureau Of Highways  
Date: 4-10-07

Approved: Department Of Planning And Zoning  
*Cathy [Signature]*  
Chief, Division Of Land Development  
Date: 4/24/05

*[Signature]*  
Chief, Development Engineering Division  
Date: 4/22/08

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**
- SF—SF—SF— SUPER-SILT FENCE
  - SF—SF—SF— SILT FENCE
  - TP—TP—TP— TREE PROTECTION FENCE
  - [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
  - EARTH DIKE
  - L.O.D. — DENOTES L.O.D. LIMITS OF DISTURBANCE
  - E.C.M. --- DENOTES EROSION CONTROL MATTING
  - [G.I.P.] GABION INFLOW PROTECTION
  - [Hatched Box] DENOTES STORMWATER MANAGEMENT CREDIT & UTILITY EASEMENT

NOTE:  
CONTRACTOR SHALL PLACE EROSION CONTROL MATTING IN ALL ROADWAY DITCHES.

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

OWNER  
Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

DEVELOPER  
Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

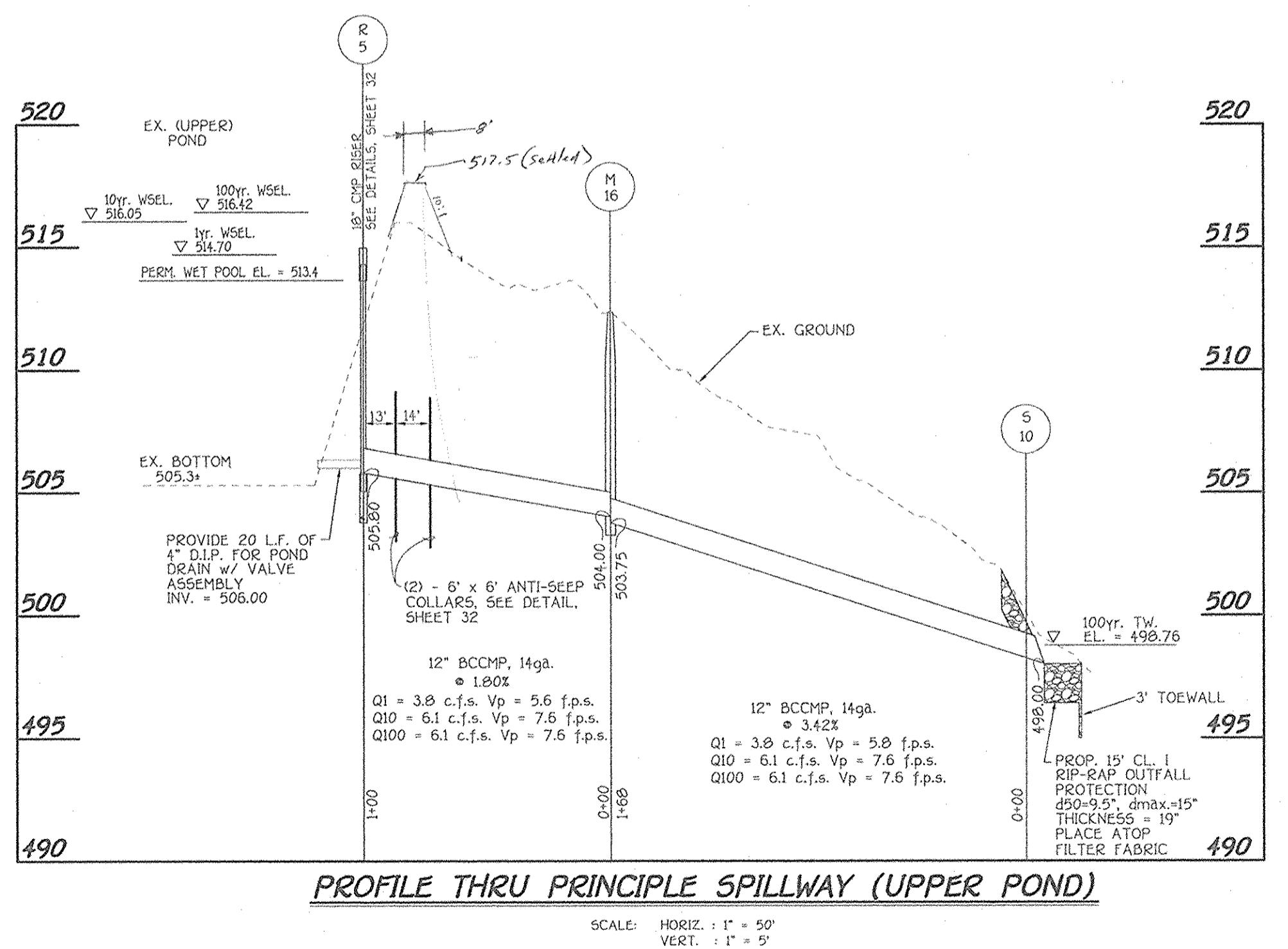
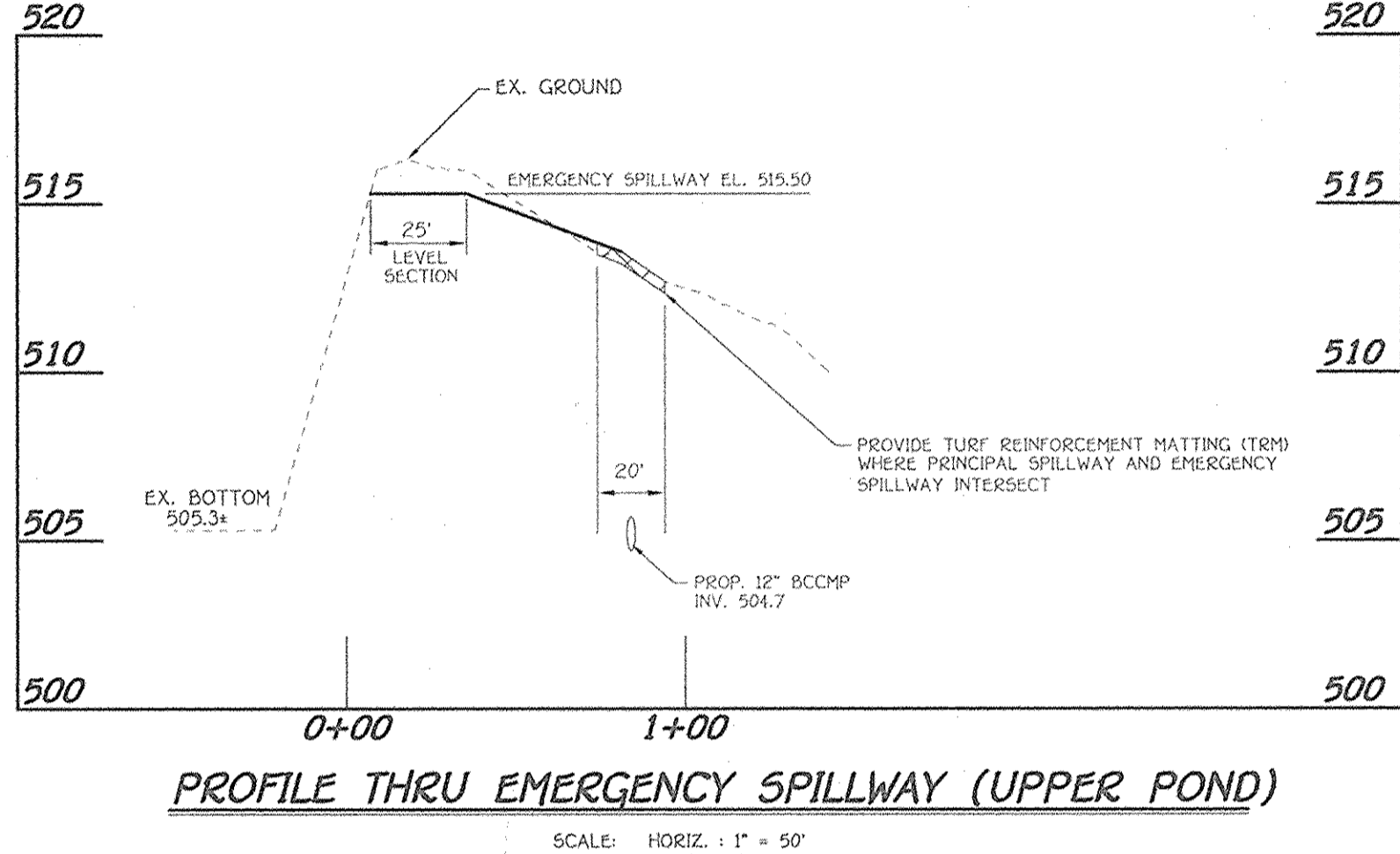
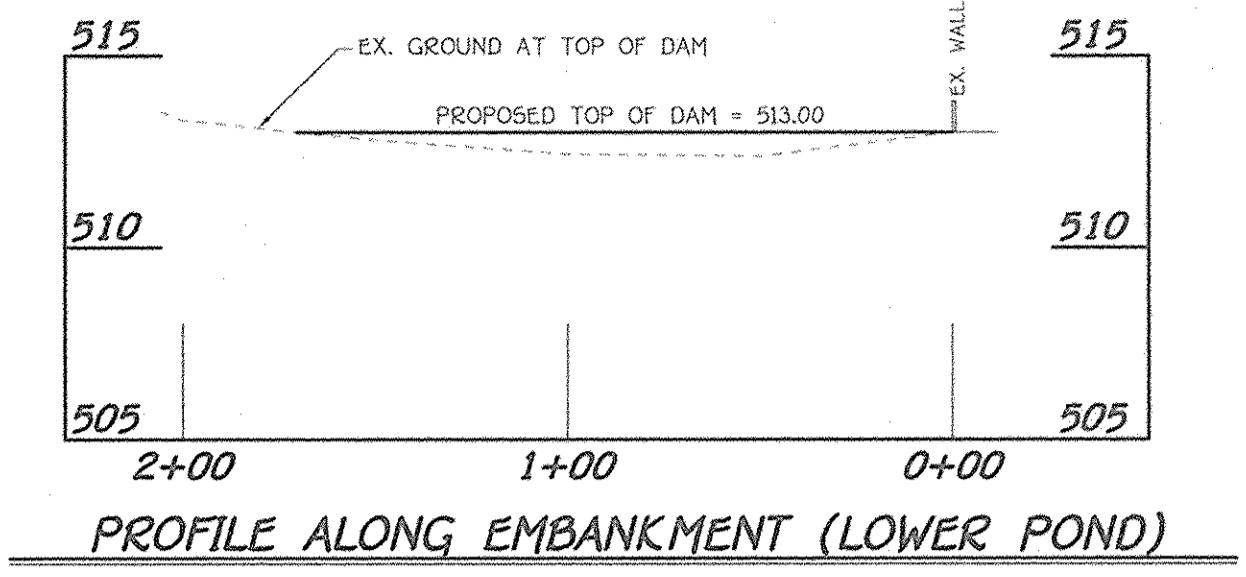
ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 19 OF 40

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10792 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2999

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



**NOTE:**  
SEE SHEET 27 FOR TYPICAL DITCH SECTION  
AND CROSS-SECTIONS FOR TRIADELPHIA ROAD.



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 of Developer: *Kennard Warfield, Jr.* Date: 3-18-08  
Printed Name Of Developer: **Kennard Warfield, Jr.**

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 Noted The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature of Engineer: *Michael J. Miller* Date: 3-17-08  
Printed Name Of Engineer: **Michael J. Miller**

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: *4/7/08*

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

Signature: *John Selig* Date: 4/7/08  
Howard Soil Conservation District

Approved: Department Of Public Works  
Signature: *William J. Malt* Date: 4-10-08  
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning  
Signature: *Judy Hamer* Date: 4/21/08  
Chief, Division Of Land Development

Signature: *Chris Dammann* Date: 4/21/08  
Chief, Development Engineering Division

**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 Release Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

- LEGEND**
- S—S—S— SUPER-SILT FENCE
  - SF—SF—SF— SILT FENCE
  - TF—TF—TF— TREE PROTECTION FENCE
  - [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
  - EARTH DIKE
  - L.O.D. — DENOTES L.O.D. LIMITS OF DISTURBANCE
  - E.C.M. — DENOTES EROSION CONTROL MATTING
  - [G.I.P.] GABION INFLOW PROTECTION

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A', AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

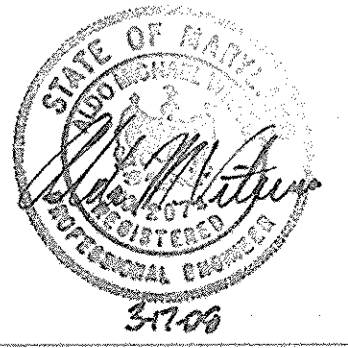
**OWNER**  
Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

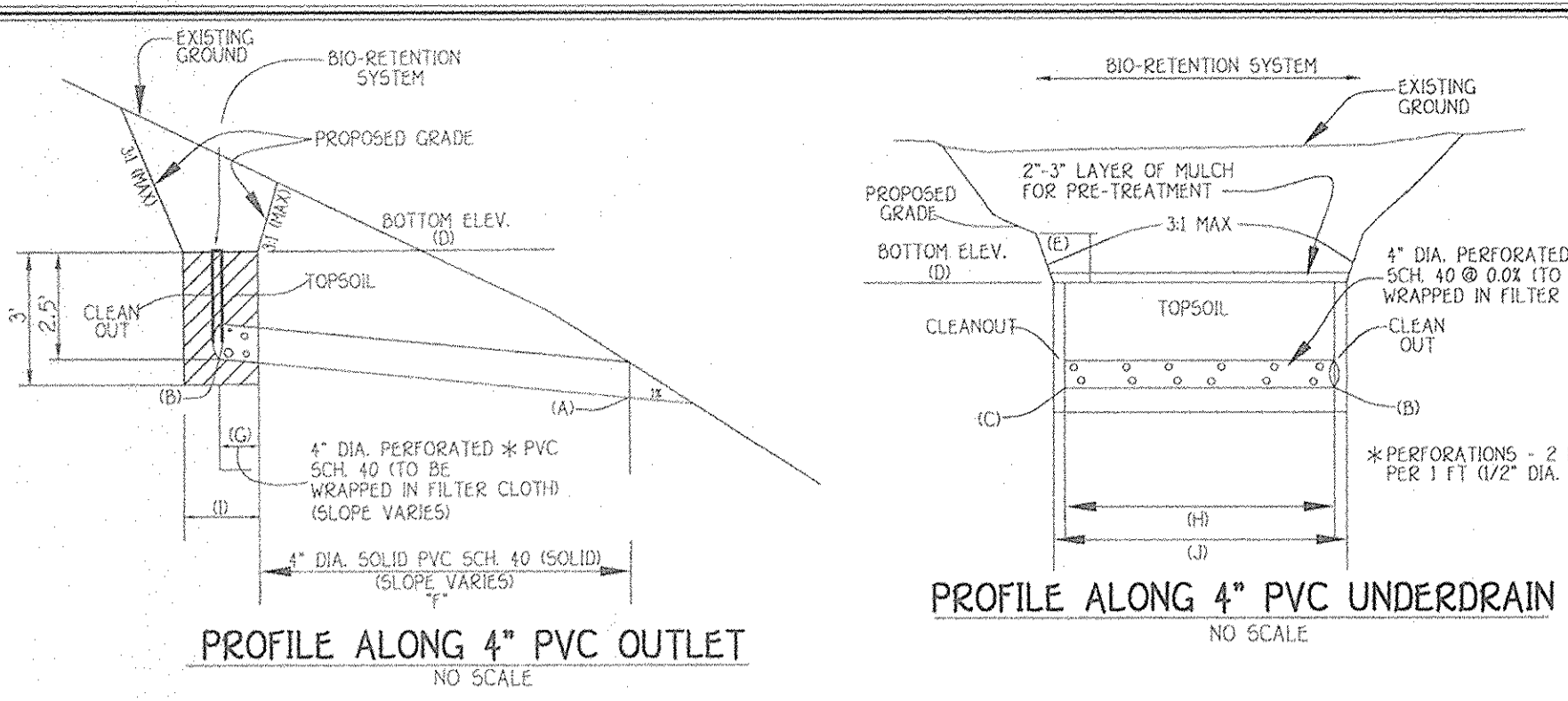
**DEVELOPER**  
Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 20 OF 40

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK 10779 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21114  
410-431-2955

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





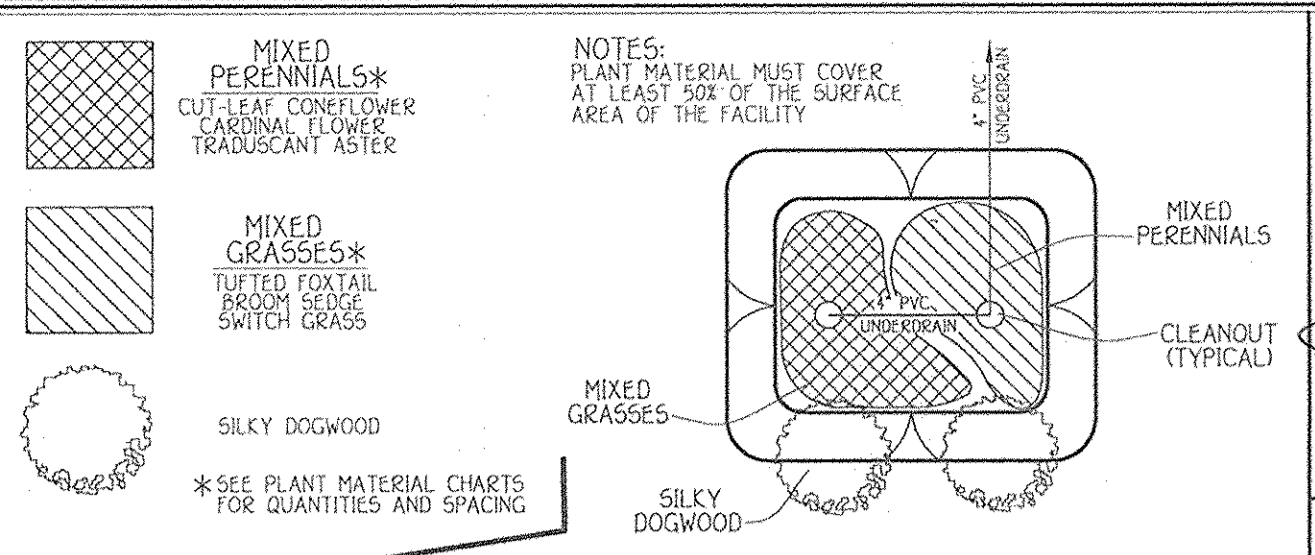
BIO-RETENTION FILTER DATA										
LOT NO.	A	B	C	D	E	F	G	H	I	J
29	500.00	500.50	500.50	503.00	503.50	40'	8.0'	25'	16'	35'
30	502.00	503.00	503.00	505.50	506.00	40'	8.0'	25'	16'	35'
31	503.00	504.00	504.00	506.50	507.00	60'	8.0'	25'	16'	35'
33	508.00	508.50	510.00	511.50	515.00	50'	8.0'	25'	16'	35'
99	531.00	532.50	532.50	535.00	535.50	50'	7.5'	70'	15'	80'

**PRIVATE BIO-RETENTION FILTER OPERATION & MAINTENANCE SCHEDULE**

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STRAINS AND VINES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

BIO-RETENTION FILTER PLANT MATERIAL (LOT 59)		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
150	MIXED PERENNIALS	2 FT.
150	MIXED PERENNIALS	2 FT.
2	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

BIO-RETENTION FILTER PLANT MATERIAL (LOTS 29-31 & 33)		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
70	MIXED PERENNIALS	2 FT.
70	MIXED PERENNIALS	2 FT.
1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION



**BIO-RETENTION FILTER PLANTING DETAIL**  
NOT TO SCALE

By The Developer:  
 "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 Of Developer: *Kenard Warfield, Jr.* 12-30-07  
 Printed Name Of Developer: **Kenard Warfield, Jr.**  
 Date: 12-30-07

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 Developer That He/She Must 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."  
 Signature Of Engineer: *W. M. Vitore* 12-20-07  
 Printed Name Of Engineer: **W. M. Vitore**  
 Date: 12-20-07

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  
 Signature: *John Selig* 9/2/08  
 Date: 9/2/08  
 Approved: Department Of Public Works  
 Signature: *Patricia J. ...* 4-18-07  
 Date: 4-18-07  
 Approved: Department Of Planning And Zoning  
 Signature: *Cindy Hambley* 4/24/08  
 Date: 4/24/08  
 Signature: *John ...* 4/22/08  
 Date: 4/22/08

**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.

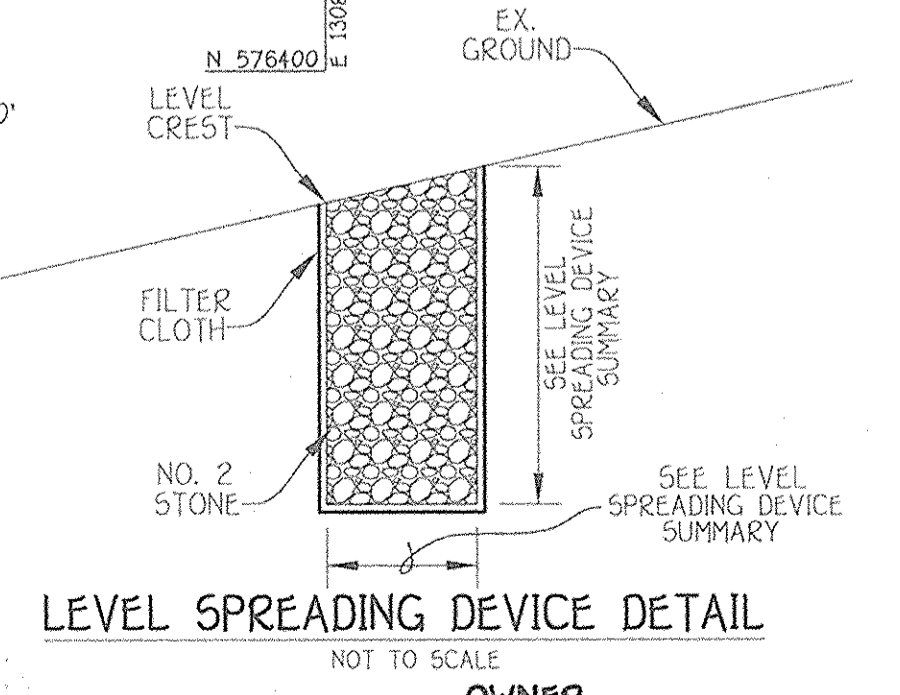
Signature: \_\_\_\_\_ P.E. No. \_\_\_\_\_  
 Date: \_\_\_\_\_

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.

**LEGEND**

- SSP-SSP-SSP SUPER-SILT FENCE
- SF-SF-SF SILT FENCE
- TP-TP-TP TREE PROTECTION FENCE
- S.C.E. STABILIZED CONSTRUCTION ENTRANCE
- Earth Dike
- Denotes L.O.D. LIMITS OF DISTURBANCE
- E.C.M. DENOTES EROSION CONTROL MATTING
- G.I.P. GABION INFLOW PROTECTION
- R.P.S. REMOVABLE PUMPING STATION
- Denotes Stormwater Management Credit & Utility Easement

LEVEL SPREADING DEVICE SUMMARY					
LOT NO.	TRENCH LENGTH	TRENCH WIDTH & DEPTH	WQV VOLUME REQUIRED	WQV VOLUME PROVIDED	CREST ELEVATION
32	106'	2' X 3'	636 CU. FT.	636 CU. FT.	503.00
35	67'	2' X 3'	636 CU. FT.	636 CU. FT.	500.00



**LEVEL SPREADING DEVICE DETAIL**  
NOT TO SCALE

**OWNER**  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenela, Maryland 21737  
 (410-442-2337)  
 And  
 Warfield Brothers  
 14451 Triadelphia Road  
 Glenela, Maryland 21737  
 (410-442-2337)

**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenela, Maryland 21737  
 (410-442-2337)



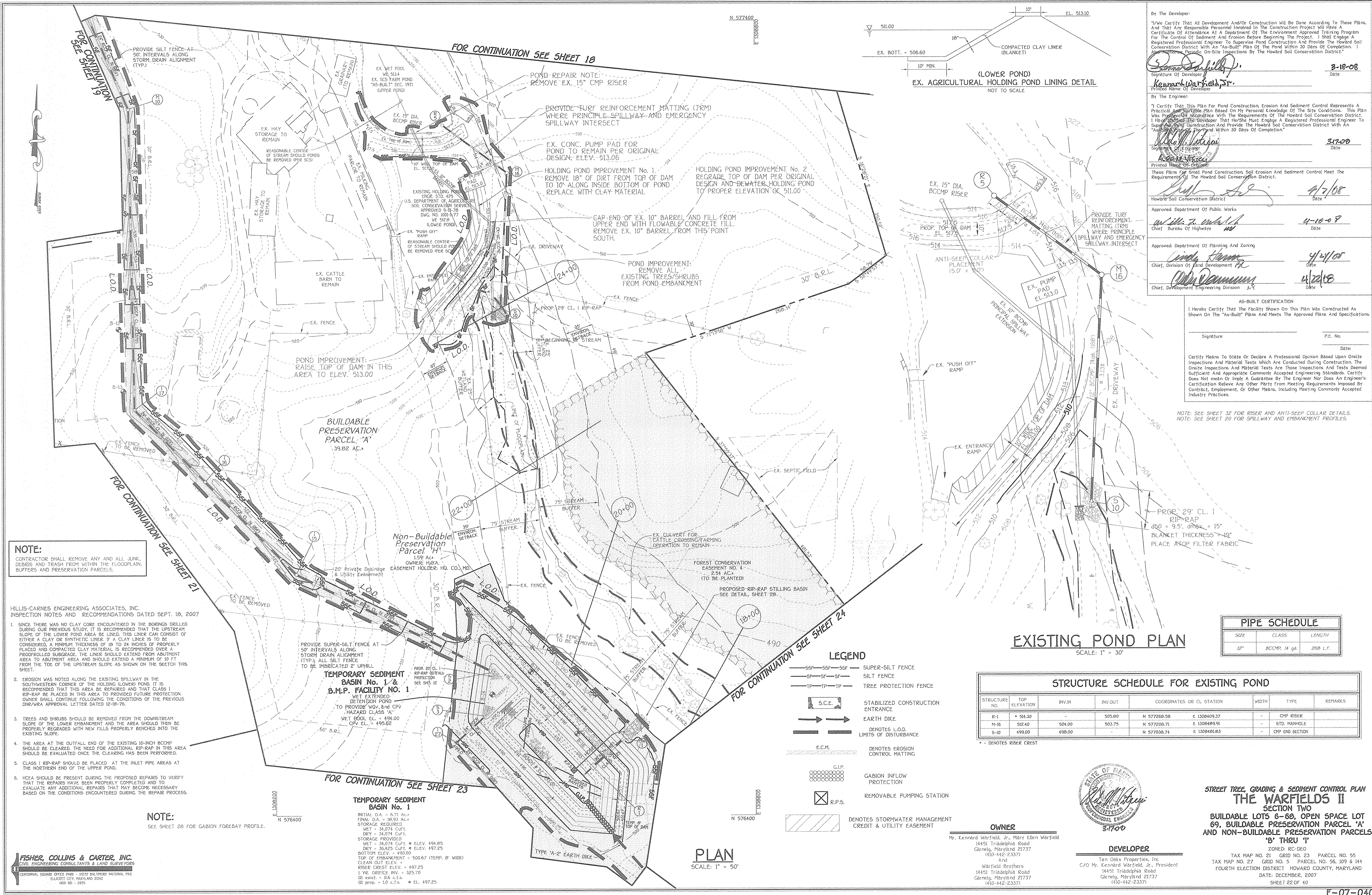
**TEMPORARY SEDIMENT BASIN No. 2**  
 INITIAL D.A. = 27.21 Ac.  
 FINAL D.A. = 36.3 Ac.  
 STORAGE REQUIRED  
 WET = 65,340 Cu Ft.  
 DRY = 65,340 Cu Ft.  
 STORAGE PROVIDED  
 WET = 65,340 Cu Ft. @ ELEV. 524.18  
 DRY = 75,210 Cu Ft. @ ELEV. 526.50  
 BOTTOM ELEV. = 521.00  
 TOP OF EMBANKMENT = 529.00  
 CLEAN OUT ELEV. = 523.83  
 RISER CREST ELEV. = 526.50  
 @ exist. = 2.9 c.f.s.  
 @ prop. = 2.5 c.f.s. @ EL. 526.55

**NOTE:**  
 SEE SHEET 29 FOR GABION FOREBAY PROFILE.



**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 1827 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 451-1899

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-80, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'  
 ZONED: RC-DCO  
 TAX MAP NO. 27 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 509 & 144  
 FOURTH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 21 OF 40



**NOTE:**  
CONTRACTOR SHALL REMOVE ANY AND ALL JUNK, DEBRIS AND TRASH FROM WITHIN THE FLOODPLAIN, BUFFERS AND PRESERVATION PARCELS.

HILLIS-CARNEE ENGINEERING ASSOCIATES, INC.  
INSPECTION NOTES AND RECOMMENDATIONS DATED SEPT. 18, 2007

- SINCE THERE WAS NO CLAY CORE ENCOUNTERED IN THE BORINGS DRILLED DURING OUR PREVIOUS STUDY, IT IS RECOMMENDED THAT THE UPSTREAM SLOPE OF THE LOWER POND AREA BE LINED. THIS LINDER CAN CONSIST OF EITHER A CLAY OR SYNTHETIC LINDER. IF A CLAY LINDER IS TO BE CONSIDERED, A MINIMUM THICKNESS OF 18 TO 24 INCHES OF PROPERLY PLACED AND COMPACTED CLAY MATERIAL IS RECOMMENDED OVER A PROOFROLLED SUBGRADE. THE LINDER SHOULD EXTEND FROM ABUTMENT AREA TO ABUTMENT AREA AND SHOULD EXTEND A MINIMUM OF 10 FT FROM THE TOE OF THE UPSTREAM SLOPE AS SHOWN ON THE SKETCH THIS SHEET.
- EROSION WAS NOTED ALONG THE EXISTING SPILLWAY IN THE SOUTHWESTERN CORNER OF THE HOLDING POND. IT IS RECOMMENDED THAT THIS AREA BE REPAIRED AND THAT CLASS I RIP-RAP BE PLACED IN THIS AREA TO PROVIDE FUTURE PROTECTION. OWNER SHALL CONTINUE FOLLOWING THE CONDITIONS OF THE PREVIOUS DNR/WCA APPROVAL LETTER DATED 12-18-76.
- TREES AND SHRUBS SHOULD BE REMOVED FROM THE DOWNSTREAM SLOPE OF THE LOWER EMBANKMENT AND THE AREA SHOULD THEN BE PROPERLY REGRADED WITH NEW FILLS PROPERLY BENCHED INTO THE EXISTING SLOPE.
- THE AREA AT THE OUTFALL END OF THE EXISTING 10-INCH BCCMP SHOULD BE CLEARED. THE NEED FOR ADDITIONAL RIP-RAP IN THIS AREA SHOULD BE EVALUATED ONCE THE CLEARING HAS BEEN PERFORMED.
- CLASS I RIP-RAP SHOULD BE PLACED AT THE INLET PIPE AREAS AT THE NORTHERN END OF THE UPPER POND.
- HCEA SHOULD BE PRESENT DURING THE PROPOSED REPAIRS TO VERIFY THAT THE REPAIRS HAVE BEEN PROPERLY COMPLETED AND TO EVALUATE ANY ADDITIONAL REPAIRS THAT MAY BECOME NECESSARY BASED ON THE CONDITIONS ENCOUNTERED DURING THE REPAIR PROCESS.

**NOTE:**  
SEE SHEET 28 FOR GABION FOREBAY PROFILE.

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK • 10772 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 20624  
410-461-8995

**TEMPORARY SEDIMENT BASIN No. 1**  
INITIAL D.A. = 6.71 AC.  
FINAL D.A. = 18.93 AC.  
STORAGE REQUIRED  
WET = 34,074 CU FT.  
DRY = 34,074 CU FT.  
STORAGE PROVIDED  
WET = 34,074 CU FT. @ ELEV. 494.85  
DRY = 38,425 CU FT. @ ELEV. 497.25  
BOTTOM ELEV. = 490.00  
TOP OF EMBANKMENT = 500.67 (TEMP. B' WIDE)  
CLEAN OUT ELEV. =  
RISER CREST ELEV. = 497.25  
1 YR. ORIFICE INV. = 325.70  
01 EXIST. = 0.6 C.F.S.  
01 PROP. = 1.0 C.F.S. @ EL. 497.25

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

- LEGEND**
- S—S—S— SUPER-SILT FENCE
  - S—S—S— SILT FENCE
  - TP—TP—TP— TREE PROTECTION FENCE
  - [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
  - EARTH DIKE
  - DENOTES L.O.D.
  - DENOTES DISTURBANCE
  - E.C.M. DENOTES EROSION CONTROL MATTING
  - G.I.P. GABION INFLOW PROTECTION
  - R.P.S. REMOVABLE PUMPING STATION
  - [Hatched Box] DENOTES STORMWATER MANAGEMENT CREDIT & UTILITY EASEMENT

**STRUCTURE SCHEDULE FOR EXISTING POND**

STRUCTURE NO.	TOP ELEVATION	IN.VIN	INV.OUT	COORDINATES OR CL. STATION	WIDTH	TYPE	REMARKS
R-1	514.30	-	505.80	N 577260.58 E 1308409.37	-	CMP RISER	
M-16	512.40	504.00	503.75	N 577208.71 E 1308489.91	-	STD. MANHOLE	
S-10	498.00	498.00	-	N 577038.74 E 1308481.83	-	CMP END SECTION	

\* - DENOTES RISER CREST

**PIPE SCHEDULE**

SIZE	CLASS	LENGTH
12"	BCCMP, 14 ga.	268 LF.

**OWNER**  
Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Tridaphnia Road  
Glenn, Maryland 21737  
(410-442-2337)  
And  
Warfield Brothers  
14451 Tridaphnia Road  
Glenn, Maryland 21737  
(410-442-2337)

**DEVELOPER**  
Ten Oaks Properties, Inc  
C/O Mr. Kennard Warfield, Jr., President  
14451 Tridaphnia Road  
Glenn, Maryland 21737  
(410-442-2337)  
3/7/00

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-80, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'  
ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 22 OF 40

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 Will Provide Periodic On-Site Inspections By The Howard Soil Conservation District."  
*Kennard Warfield, Jr.*  
Signature Of Developer  
Printed Name Of Developer  
3-18-08  
Date

By The Engineer:  
"I Certify That This Plan 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 Verified The Developer That He/She Must 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."  
*William H. Warren*  
Signature Of Engineer  
Printed Name Of Engineer  
3/7/00  
Date

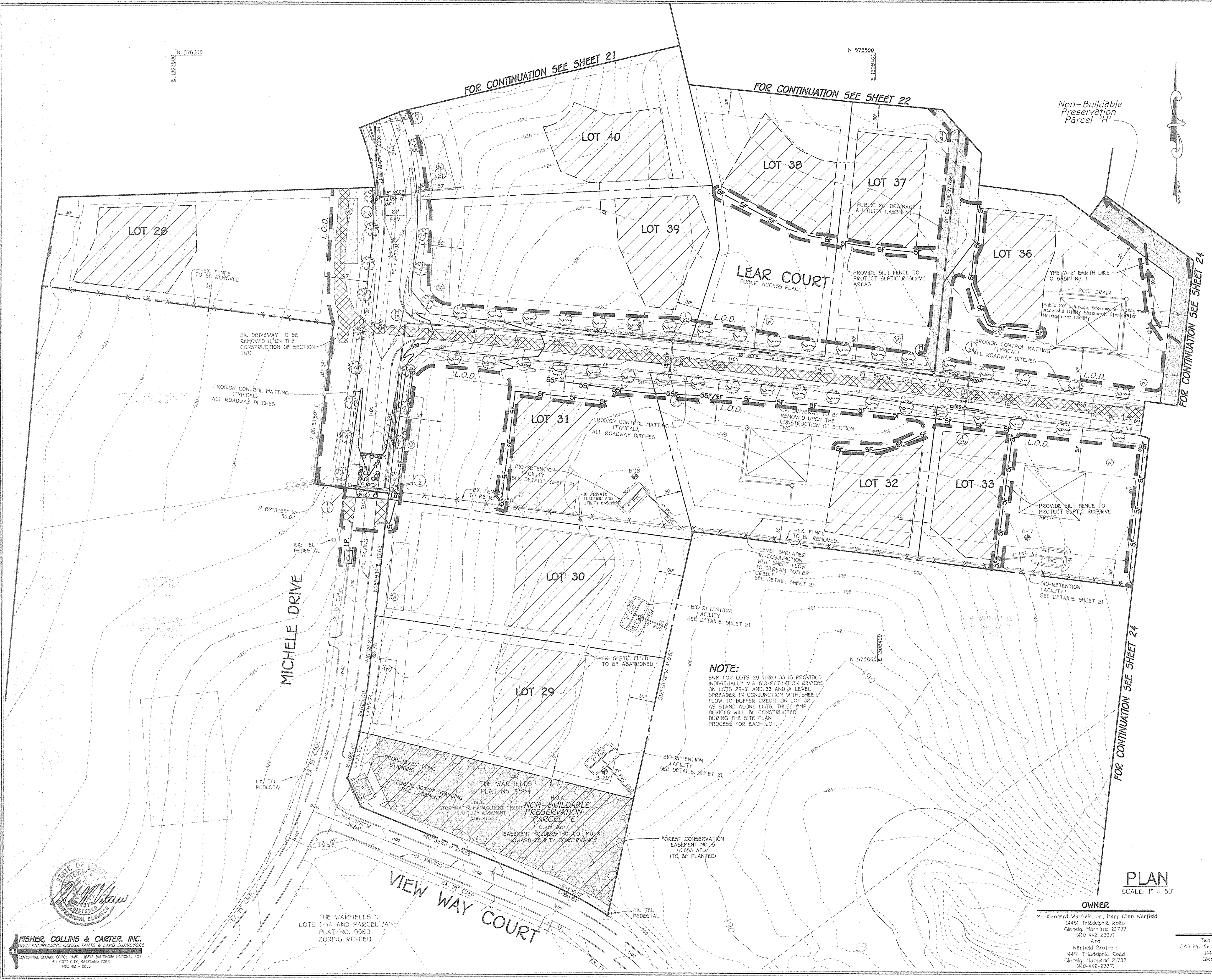
These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.  
*John A. ...*  
Signature  
4/7/08  
Date  
Howard Soil Conservation District

Approved: Department Of Public Works  
*William J. ...*  
Signature  
4-18-08  
Date  
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning  
*John ...*  
Signature  
4/24/08  
Date  
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: \_\_\_\_\_

NOTE: SEE SHEET 32 FOR RISER AND ANTI-SEEP COLLAR DETAILS.  
NOTE: SEE SHEET 20 FOR SPILLWAY AND EMBANKMENT PROFILES.



FOR CONTINUATION SEE SHEET 21

FOR CONTINUATION SEE SHEET 22

FOR CONTINUATION SEE SHEET 24

Non-Buildable Preservation Parcel 'H'

**NOTE:**  
SWM FOR LOTS 29 THRU 33 IS PROVIDED INDIVIDUALLY VIA BIO-RETENTION DEVICES ON LOTS 29-31 AND 33 AND A LEVEL SPREADER IN CONJUNCTION WITH SHEET FLOW TO BUFFER CREDIT ON LOT 32. AS STAND ALONE LOTS, THESE BMP DEVICES WILL BE CONSTRUCTED DURING THE SITE PLAN PROCESS FOR EACH LOT.

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 Of Developer: *Kennard Warfield, Jr.* Date: 12-20-07

Printed Name Of Developer: Kennard Warfield, Jr.

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 Developer That He/She Must 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."

Signature Of Engineer: *Alpo M. ...* Date: 12-20-07

Printed Name Of Engineer: Alpo M. ...

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: 4/2/08

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.  
Signature: *Greg ...* Date: 4/2/08

Approved: Department Of Public Works  
Signature: *William ...* Date: 4-10-07

Approved: Department Of Planning And Zoning  
Signature: *Cindy ...* Date: 4/24/08

Signature: *John ...* Date: 4/22/08

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.

**LEGEND**

- S—S—S— SUPER-SILT FENCE
- S—S—S— SILT FENCE
- TP—TP—TP— TREE PROTECTION FENCE
- S.C.E.— STABILIZED CONSTRUCTION ENTRANCE
- E—E—E— EARTH DIKE
- L.O.D.— DENOTES L.O.D. LIMITS OF DISTURBANCE
- E.C.M.— DENOTES EROSION CONTROL MATTING
- G.I.P.— GABION INFLOW PROTECTION

**NOTE:**  
CONTRACTOR SHALL PLACE EROSION CONTROL MATTING IN ALL ROADWAY DITCHES.

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

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

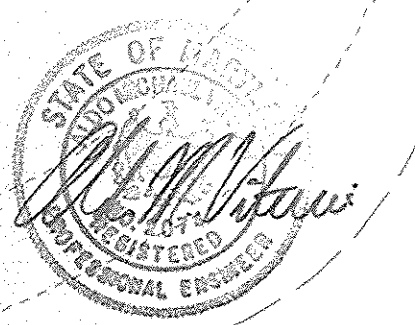
**OWNER**

Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Gleneta, Maryland 21737  
(410-442-2337)  
And  
Warfield Brothers  
14451 Triadelphia Road  
Gleneta, Maryland 21737  
(410-442-2337)

**DEVELOPER**

Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Gleneta, Maryland 21737  
(410-442-2337)

TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 95  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 23 OF 40



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
4100 40 - 2000

LOT 1  
K. & D. STABLES  
PLAT No. 9336  
F-09-35  
ZONED: R

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.

*Kennard Warfield, Jr.*  
Signature Of Developer  
**Kennard Warfield, Jr.**  
Printed Name Of Developer  
Date: **3-18-08**

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 Warned The Developer That He/She Must 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.

*Alvin M. Vitucci*  
Signature Of Engineer  
**Alvin M. Vitucci**  
Printed Name Of Engineer  
Date: **12-22-07**

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: **3-18-08**

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

*Shawn A. ...*  
Signature  
**Shawn A. ...**  
Date: **4/2/08**

Approved: Department Of Public Works  
*William Z. ...*  
Signature  
**William Z. ...**  
Date: **4-10-08**

Approved: Department Of Planning And Zoning  
*Cindy ...*  
Signature  
**Cindy ...**  
Date: **4/14/08**

*...*  
Signature  
**...**  
Date: **4/21/08**

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**
- SSF—SSF—SSF— SUPER-SILT FENCE
  - SF—SF—SF— SILT FENCE
  - TP—TP—TP— TREE PROTECTION FENCE
  - [S.C.E.] STABILIZED CONSTRUCTION ENTRANCE
  - EARTH DIKE
  - L.O.D. — DENOTES L.O.D. LIMITS OF DISTURBANCE
  - [E.C.M.] DENOTES EROSION CONTROL MATTING
  - [G.I.P.] DENOTES GABION INFLOW PROTECTION

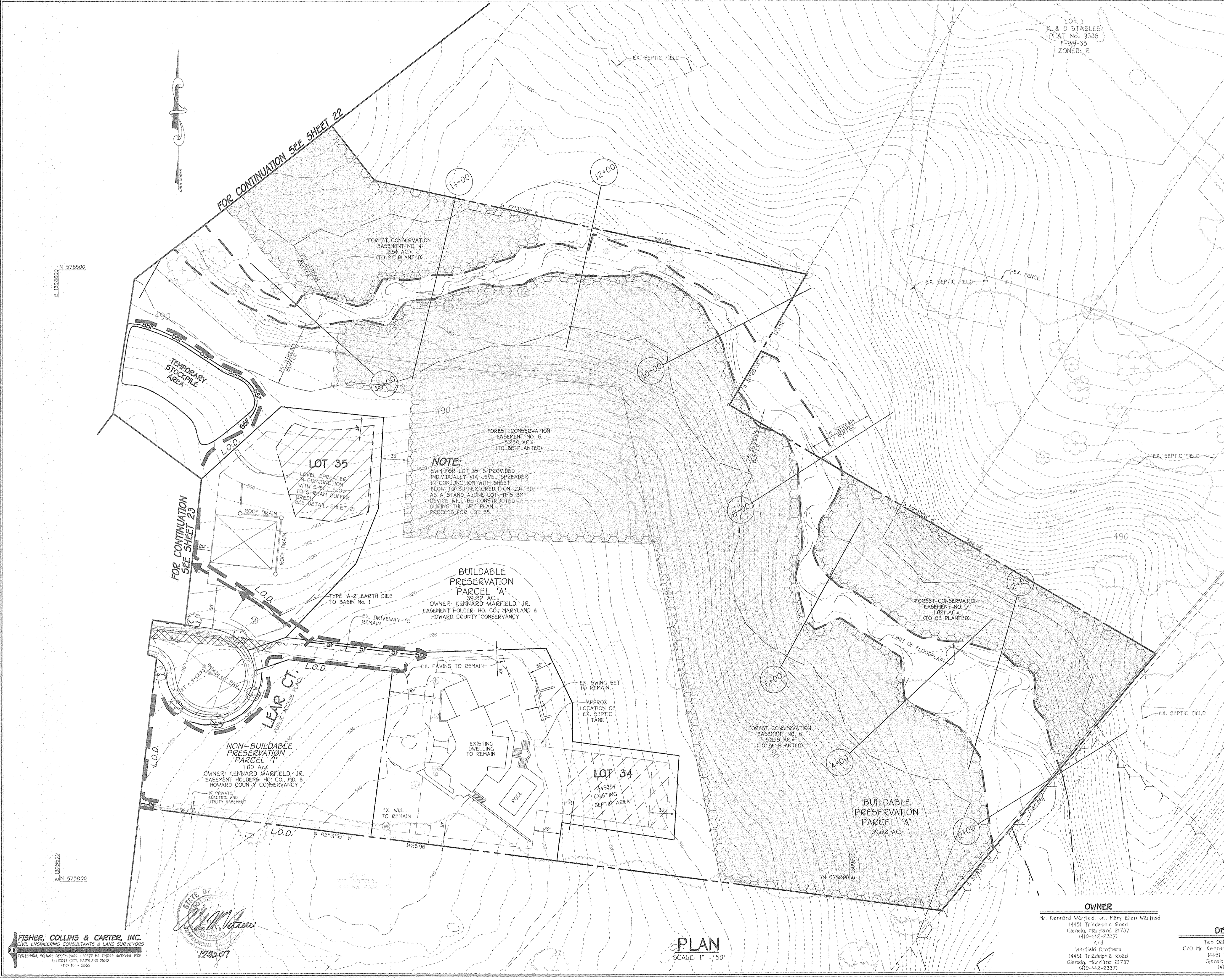
**NOTE:**  
CONTRACTOR SHALL REMOVE ANY AND ALL JUNK, DEBRIS AND TRASH FROM WITHIN THE FLOODPLAIN, BUFFERS AND PRESERVATION PARCELS.

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

**OWNER**  
Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410) 442-2337  
And  
Warfield Brothers  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410) 442-2337

**DEVELOPER**  
Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410) 442-2337

TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 24 OF 40



**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 18272 BALTORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21042  
410-461-1922

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

K:\Drawings\330310 Warfields Homes\Drawings\330310 SECT. 2 SHEET 24 OF 40 STREET TREE AND SEDIMENT CONTROL PLAN.dwg, 12/29/2007 2:44:44 PM





EARTH DIKE

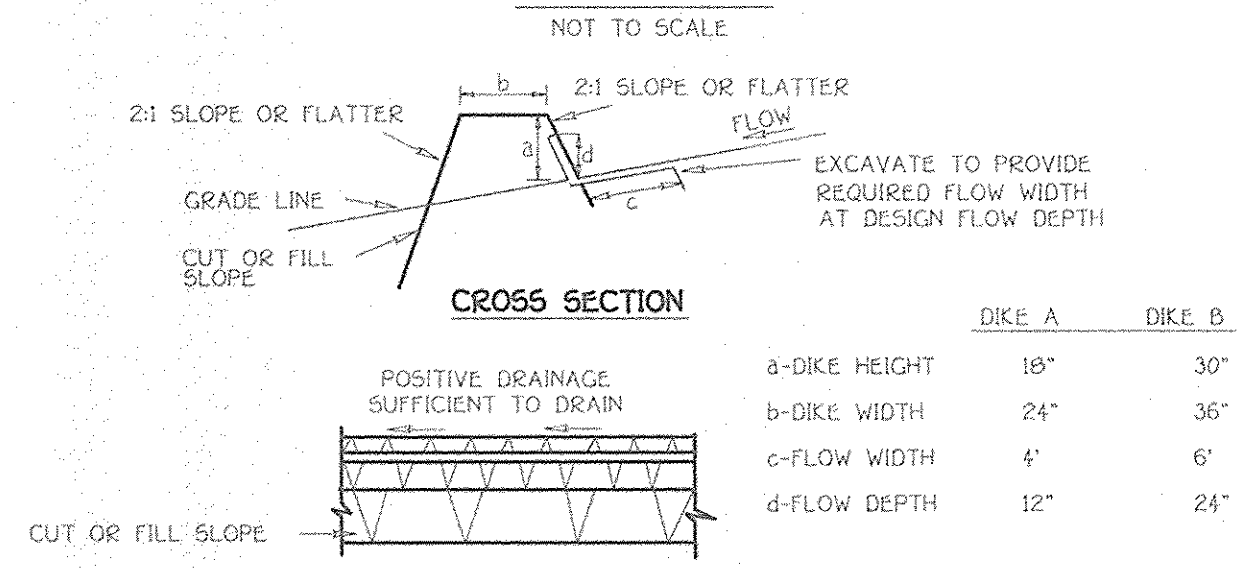


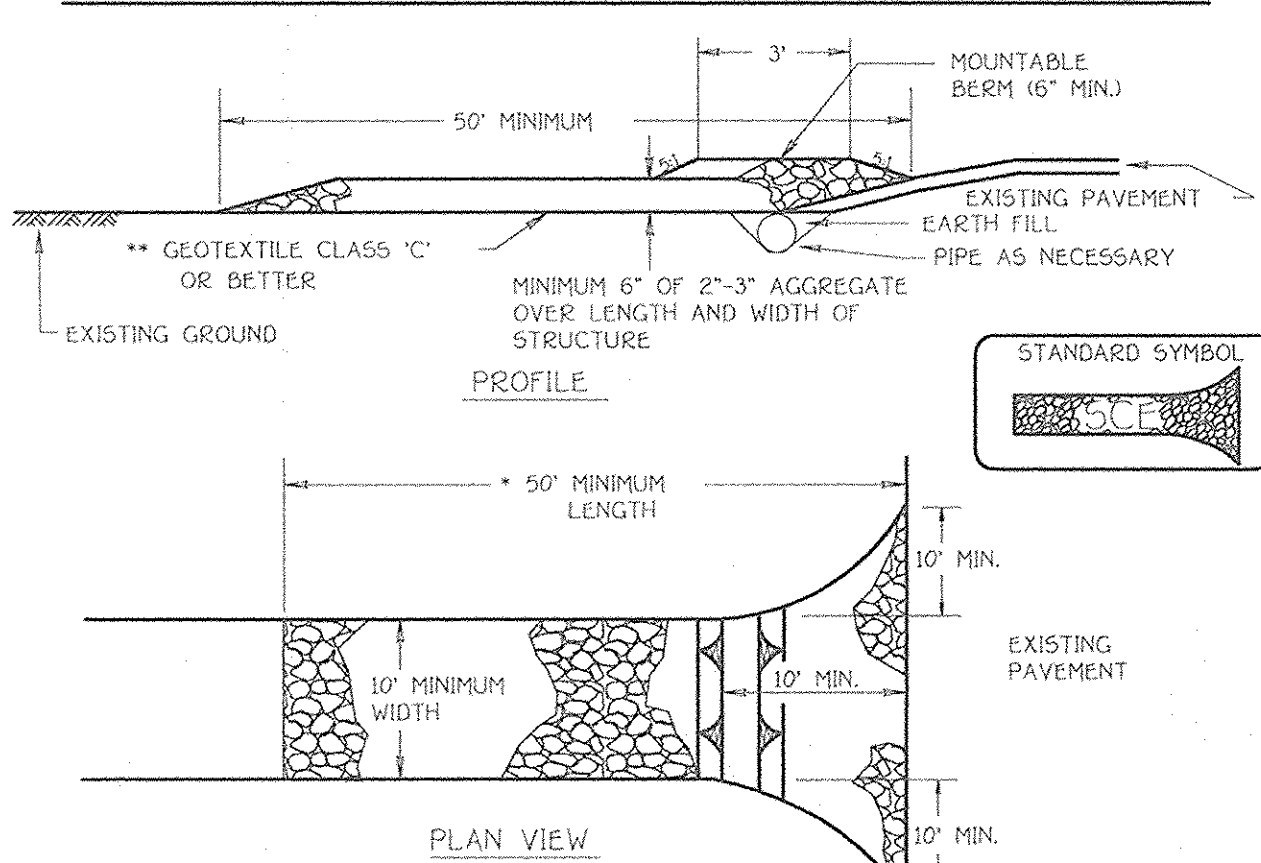
Table with columns DIKE A and DIKE B, and rows for DIKE HEIGHT, DIKE WIDTH, and DIKE DEPTH.

STANDARD SYMBOL A-2 B-3

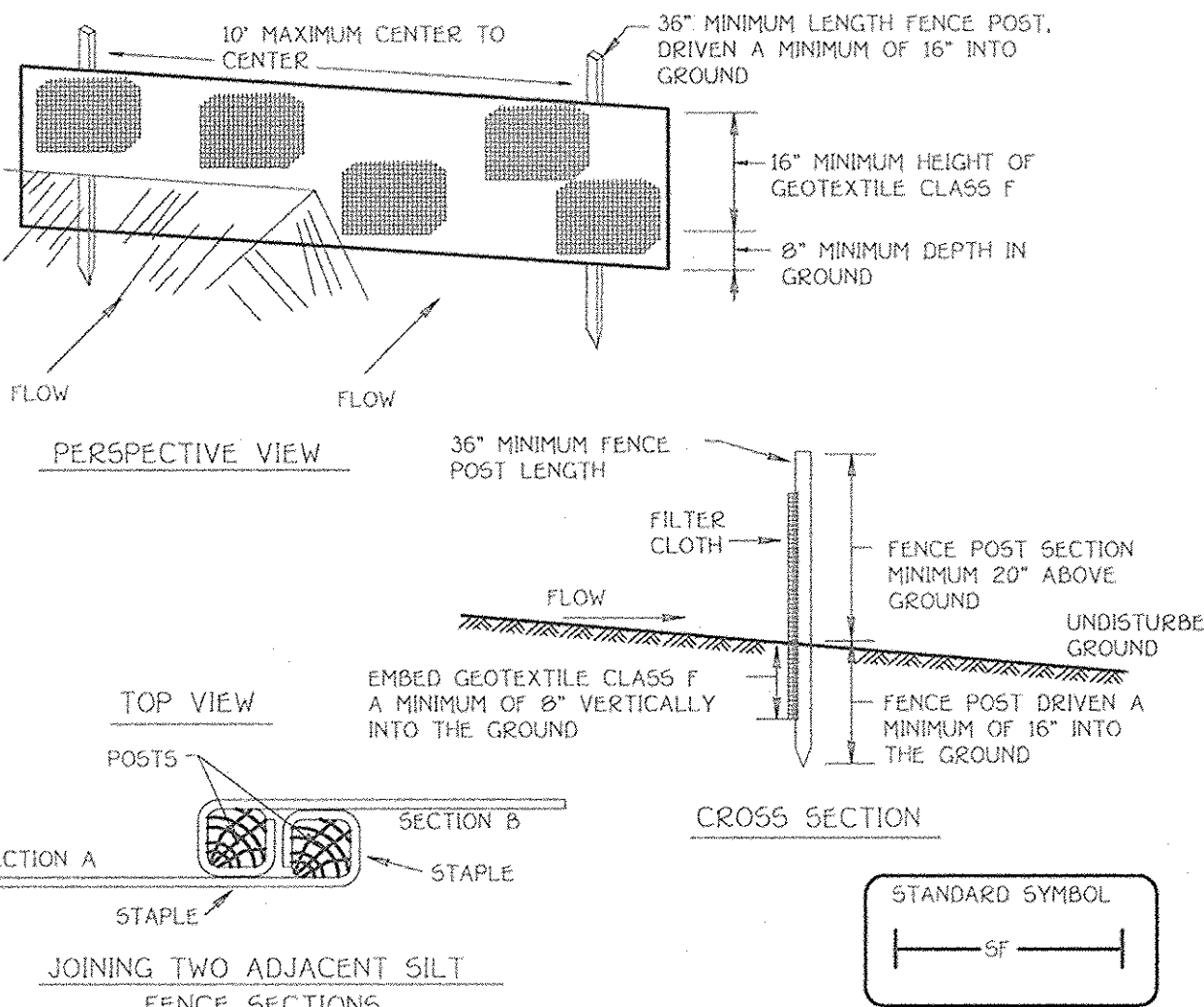
- 1. Seed and cover with straw mulch. 2. Seed and cover with Erosion Control Matting or line with sod. 3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.

- 1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%. 2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

STABILIZED CONSTRUCTION ENTRANCE



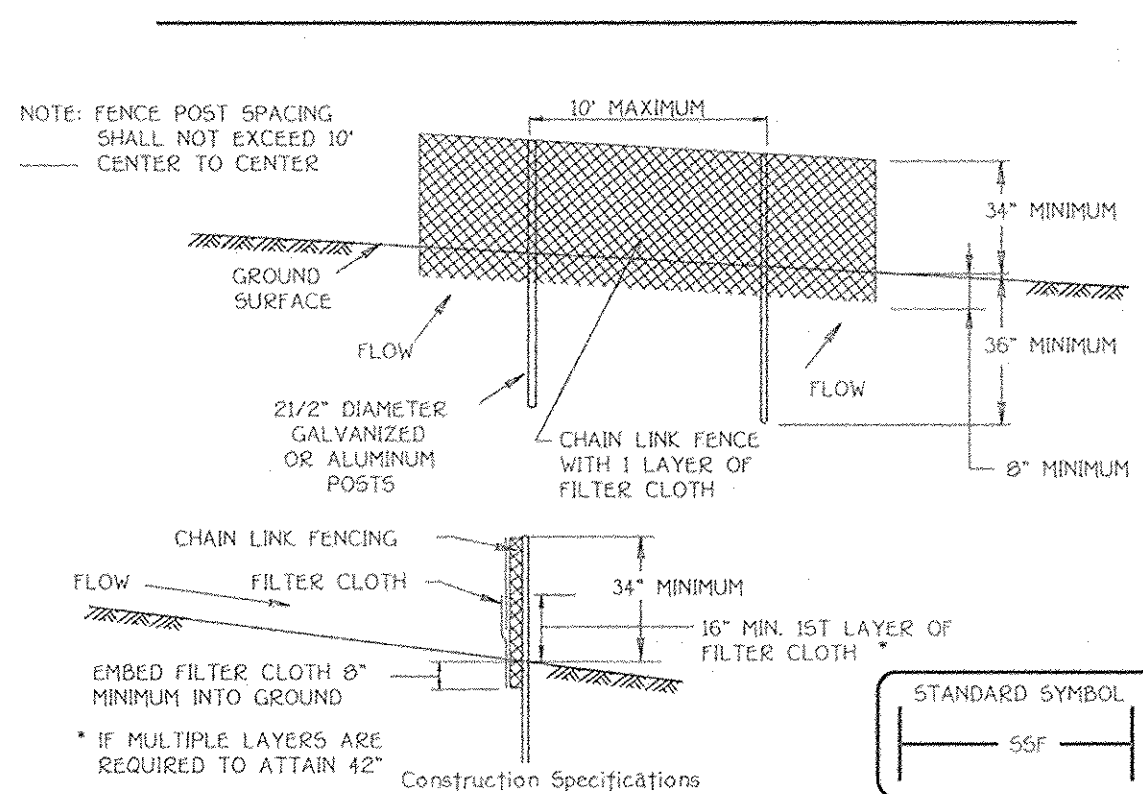
- 1. Length - minimum of 50' (\*30' for single residence lot). 2. Width - 10' minimum, should be flared at the existing road to provide a turning radius. 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone.



- 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.

Table with columns Slope Steepness, (Maximum) Slope Length, and (Maximum) Silt Fence Length.

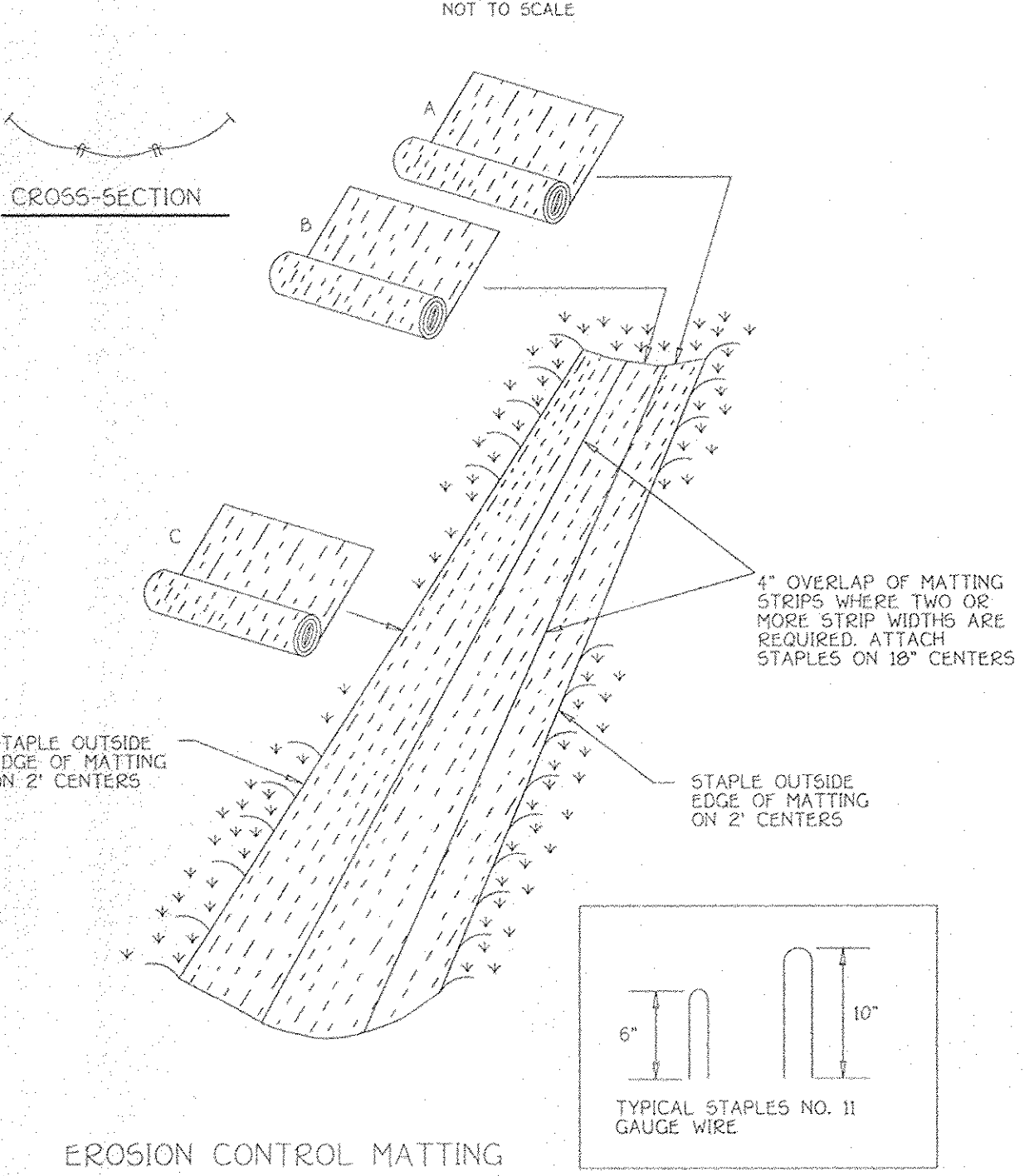
SUPER SILT FENCE



- 1. 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.

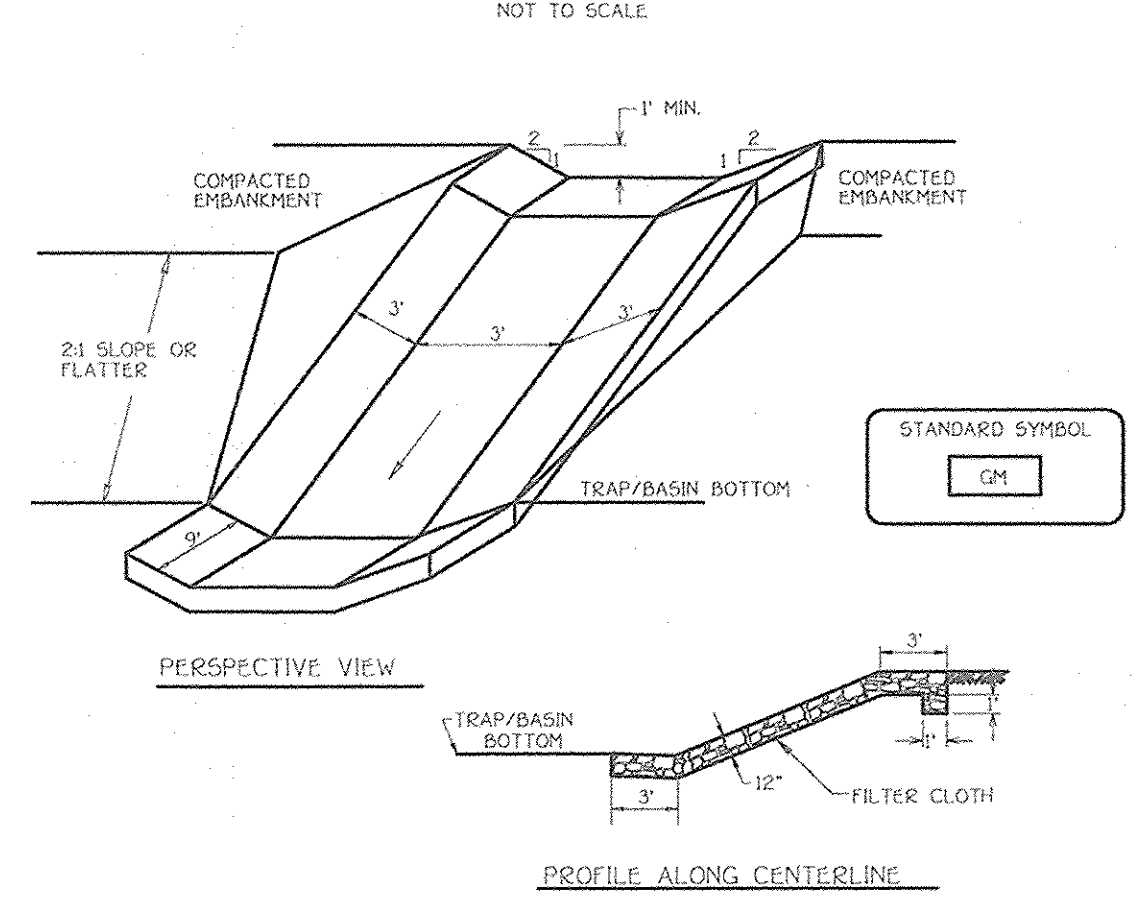
Table with columns Slope, Slope Steepness, Slope Length (maximum), and Silt Fence Length (maximum).

EROSION CONTROL MATTING



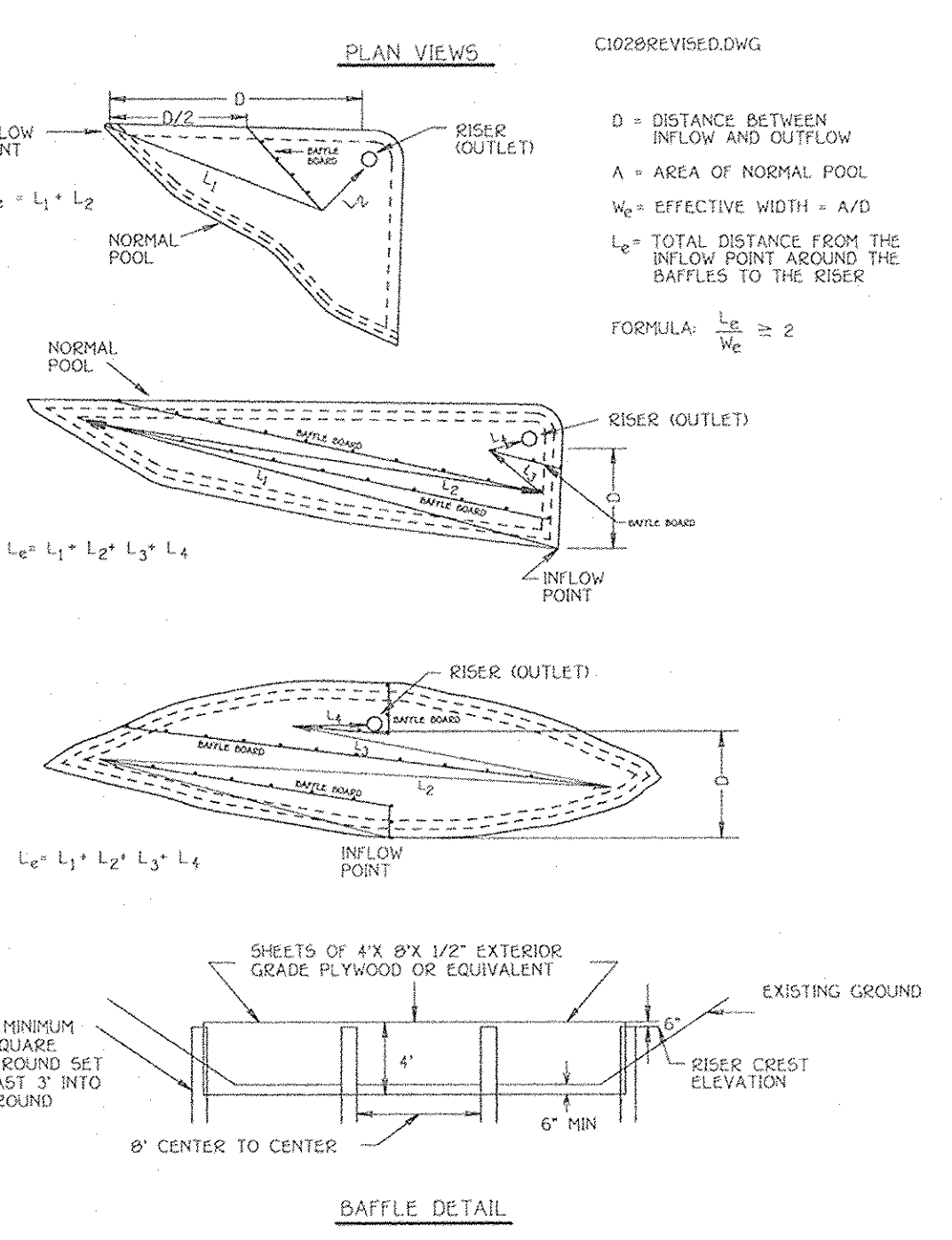
- 1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and trowel firmly to conform to the channel cross-section.

GABION INFLOW PROTECTION

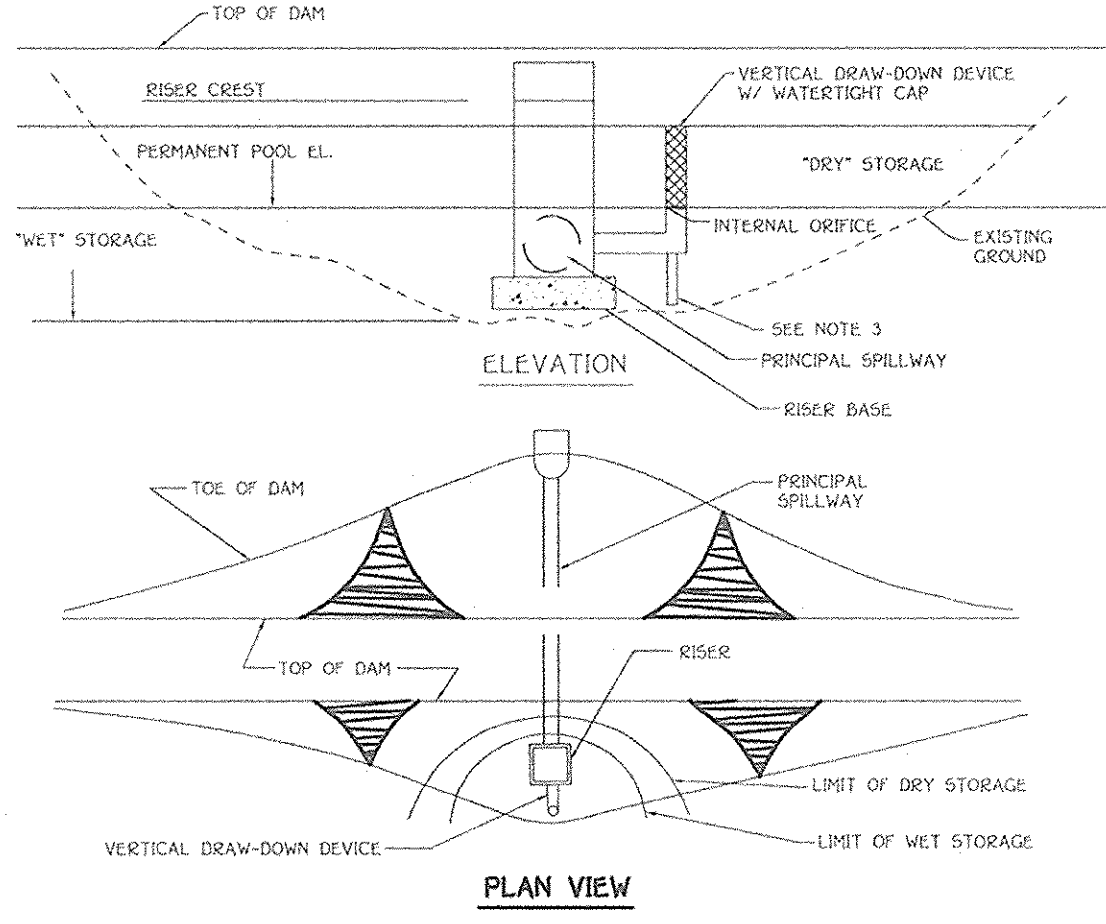


- 1. Gabion inflow protection shall be constructed of 9' x 3' x 9' gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.

SEDIMENT BASIN BAFFLES



- 1. The total area of the perforations must be greater than 2 times the area of the internal orifice.



- 1. PERFORATIONS IN THE DRAW-DOWN DEVICE MAY NOT EXTEND INTO THE WET STORAGE.

ENGINEER'S CERTIFICATE and DEVELOPER'S CERTIFICATE sections with signatures and dates.

Sequence of Construction

- 1. OBTAIN A GRADING PERMIT. 2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777.

SEDIMENT CONTROL DETAILS THE WARFIELDS II SECTION TWO

BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

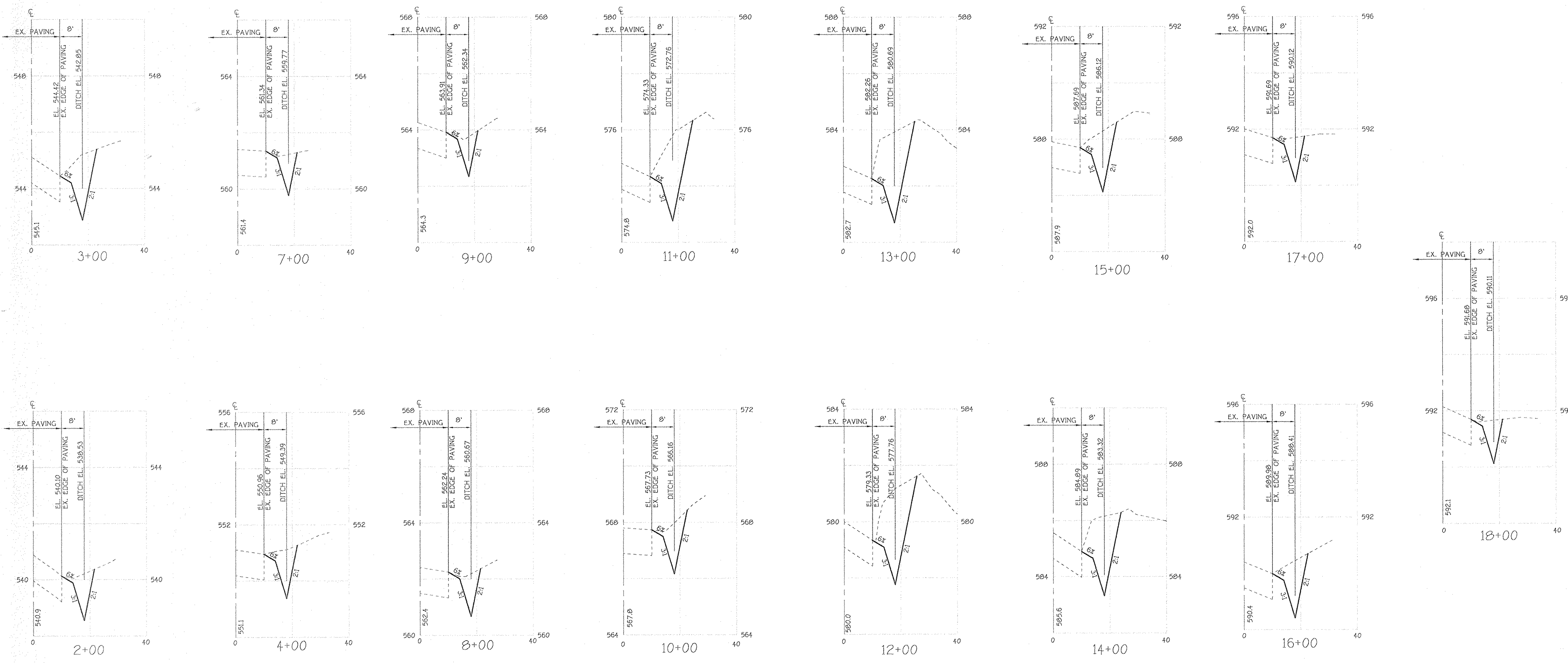
OWNER Mr. Kennard Warfield, Jr., Mary Ellen Warfield 14451 Triadelphia Road Glenelo, Maryland 21737

DEVELOPER Ten Oaks Properties, Inc. C/O Mr. Kennard Warfield, Jr., President 14451 Triadelphia Road Glenelo, Maryland 21737

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

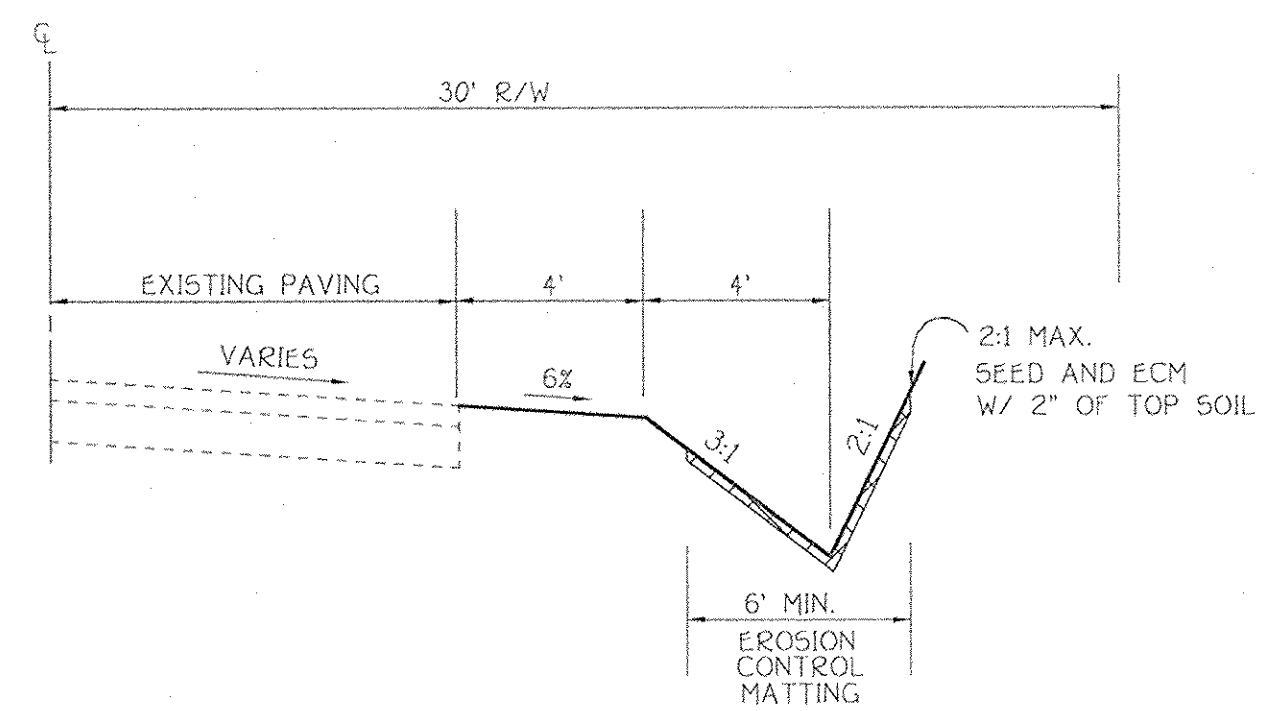


Approved: Department Of Planning And Zoning  
 Chief, Division Of Land Development *Judy Harvett* 4/29/05  
 Date  
 Chief, Development Engineering Division *MD Dawson* 4/26/05  
 Date  
 Approved: Howard County Department Of Public Works  
 Chief, Bureau Of Highways *William R. White* 4-10-05  
 Date



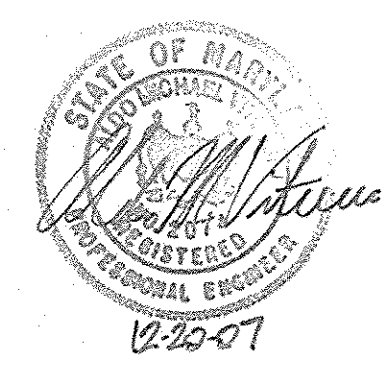
**CROSS-SECTIONS**

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



STA. 1+00 TO STA. 4+02 & STA. 6+32 TO STA. 10+50  
**TYPICAL WIDENING (TRIADELPHIA ROAD)**

NO SCALE



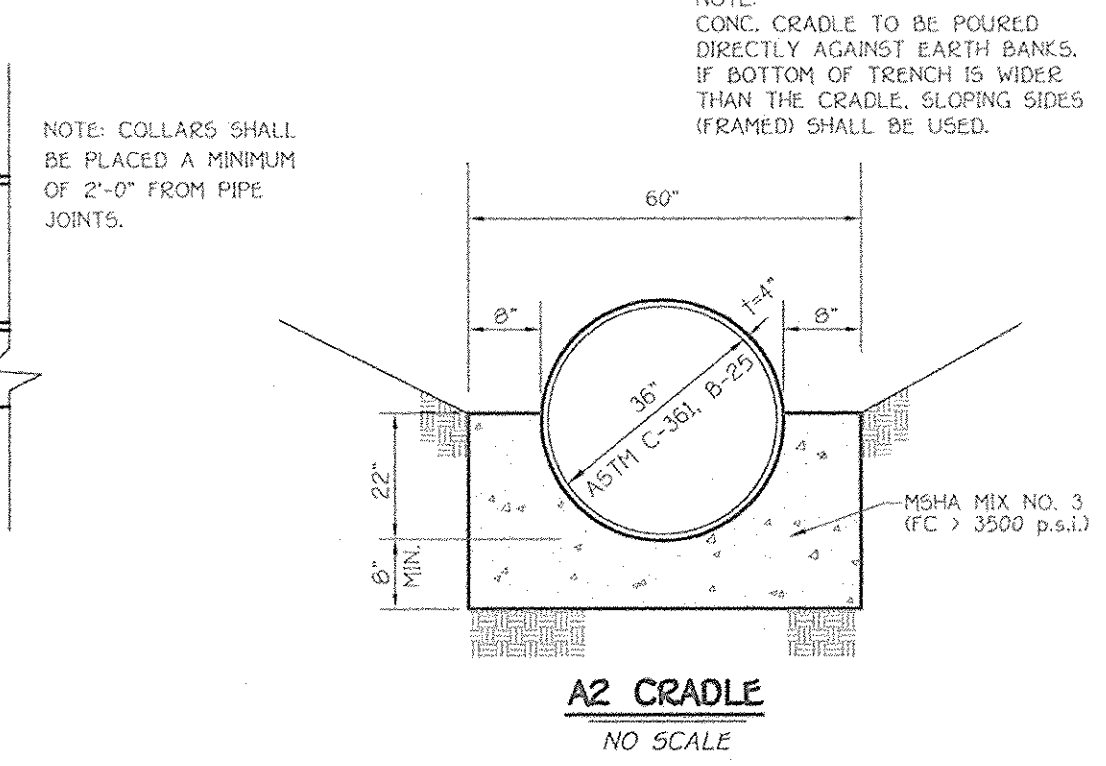
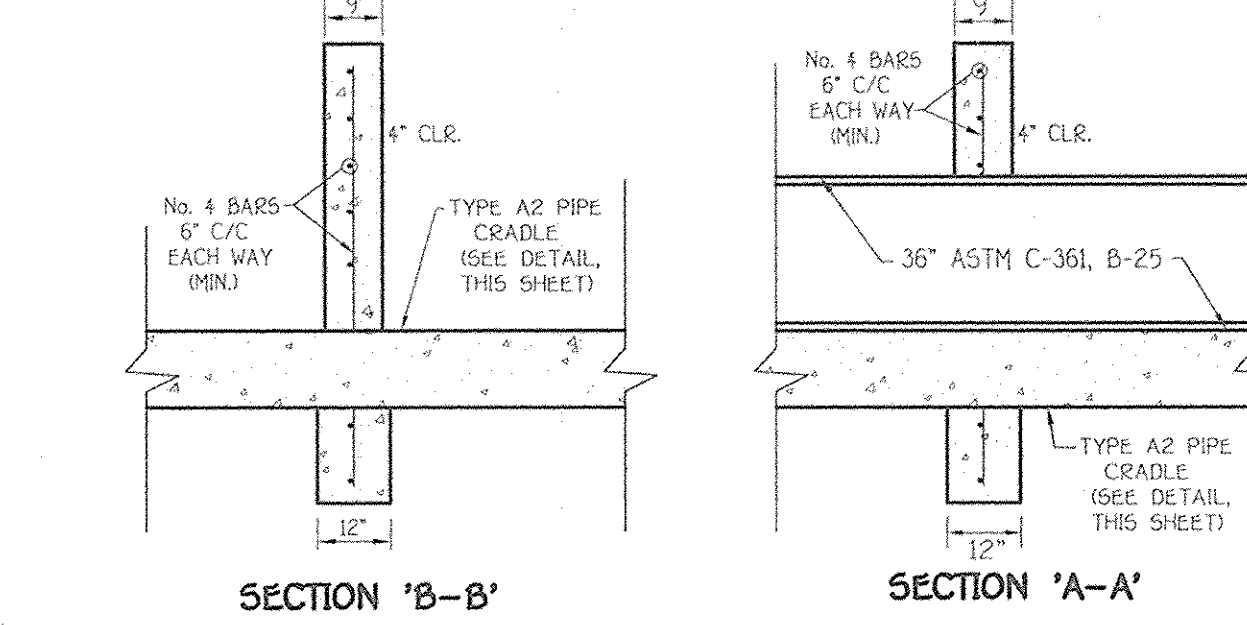
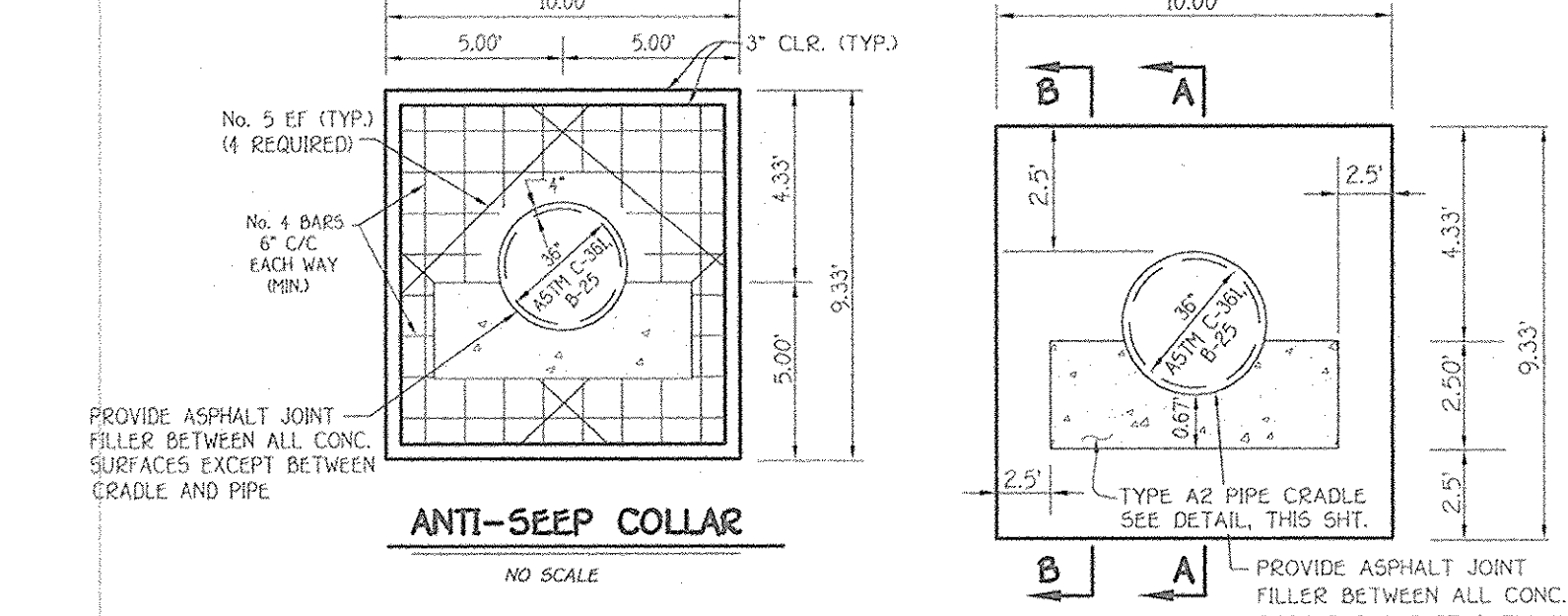
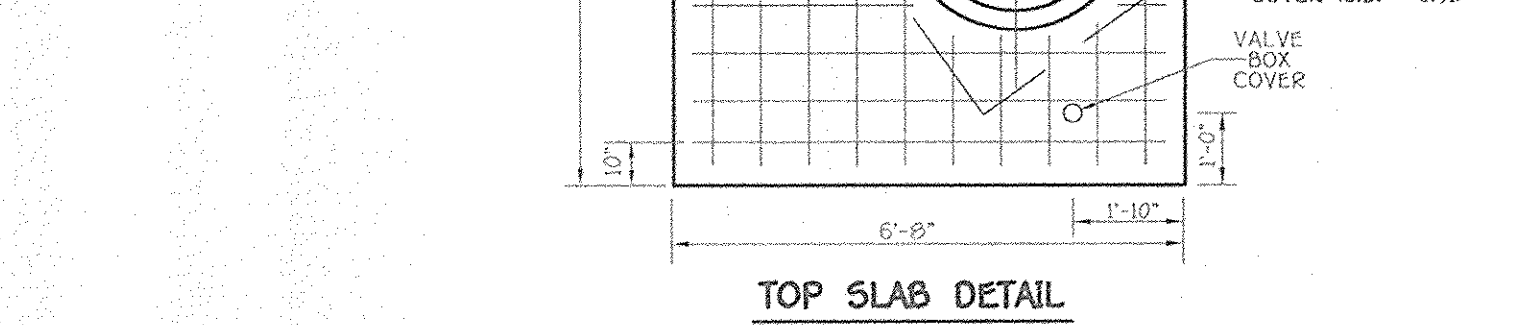
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLESMERE CITY, MARYLAND 21042  
 (410) 461-2855

**OWNER**  
 Mr. Kennard Wörfield, Jr., Mary Ellen Wörfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337  
 And  
 Wörfield Brothers  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337

**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Wörfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337

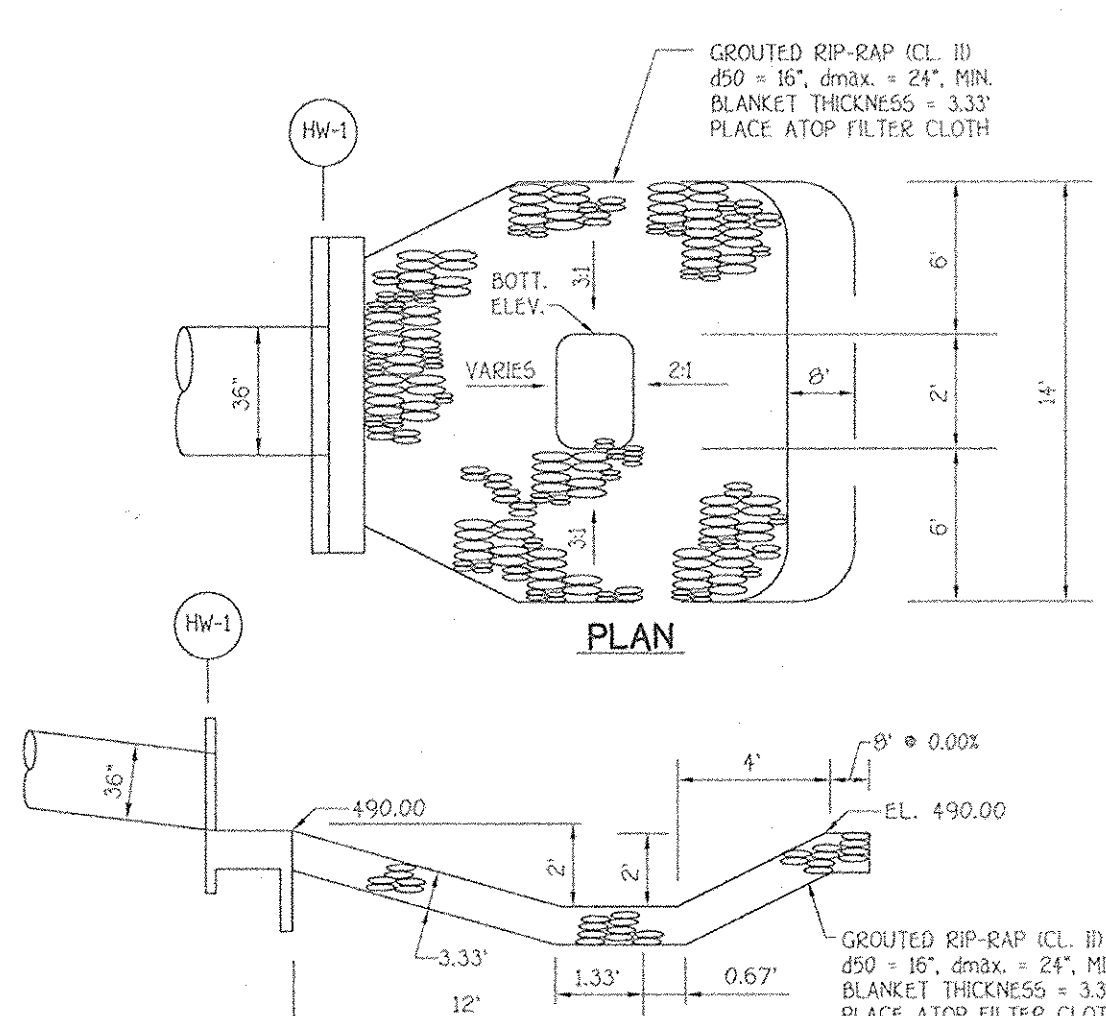
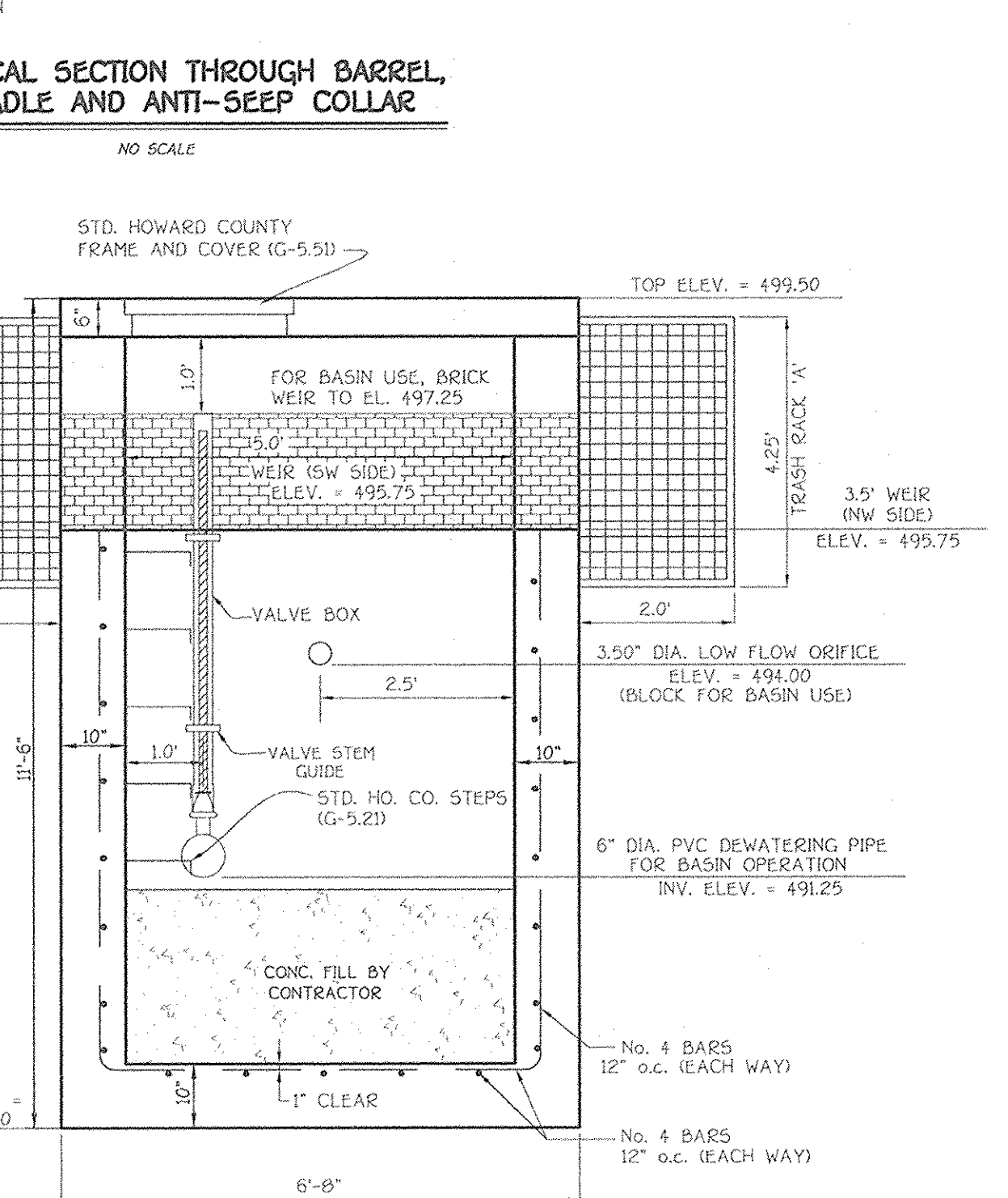
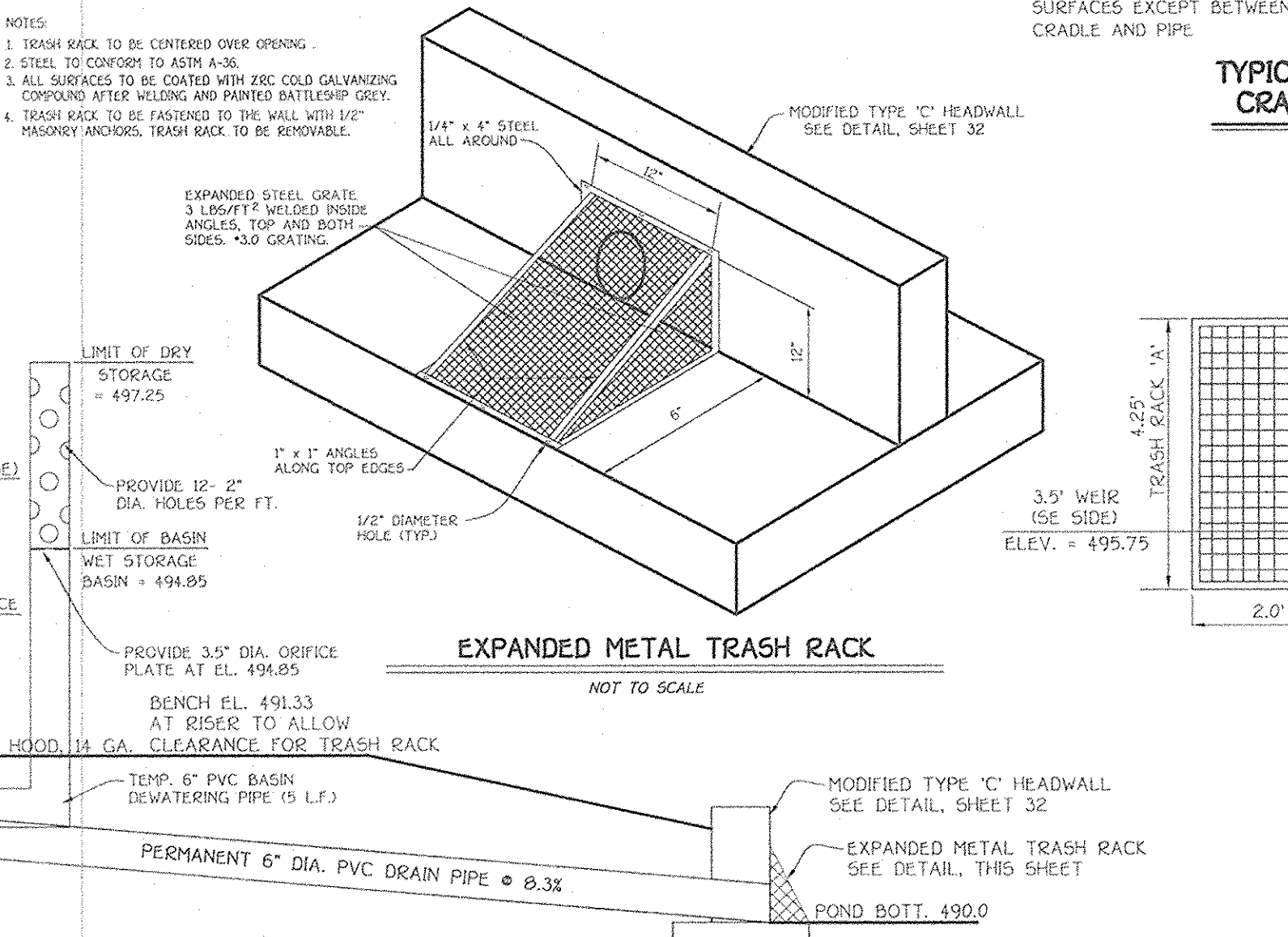
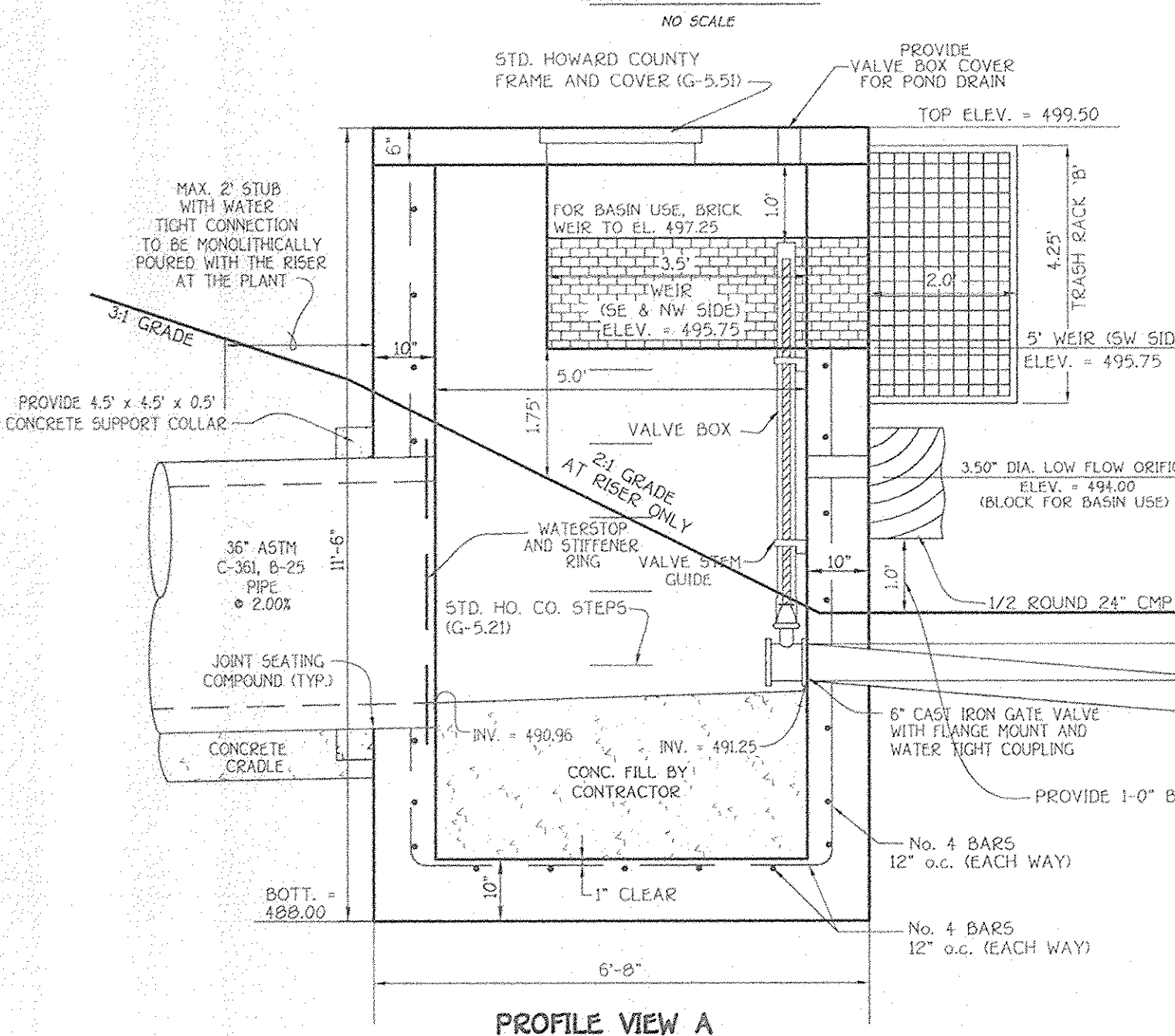
**TRIADELPHIA ROAD CROSS-SECTIONS  
 STA. 2+00 TO STA. 18+00  
 SECTION TWO  
 BUILDABLE LOTS 6-60, OPEN SPACE LOT  
 69, BUILDABLE PRESERVATION PARCEL 'A'  
 AND NON-BUILDABLE PRESERVATION PARCELS  
 'B' THRU 'I'**  
 ZONED RC-060  
 TAX MAP NO. 21 - GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 - GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 27 OF 40

- 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. SCOTFIELD CO. T-9055 FORM LINERS (RANDOM SPLIT-FACE ROCK OPTIONAL. PROVIDE ROUGH BROOM FINISH.)
  4. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECS.
  5. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.



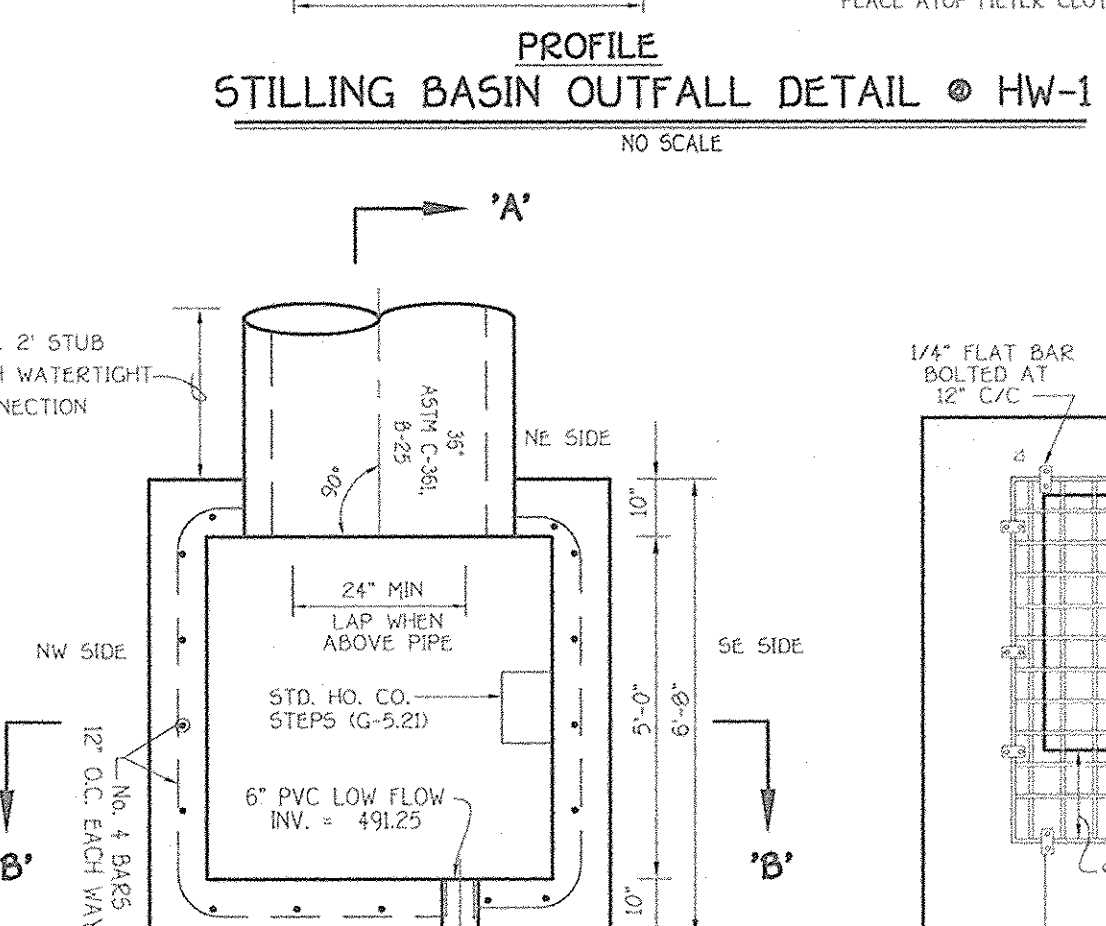
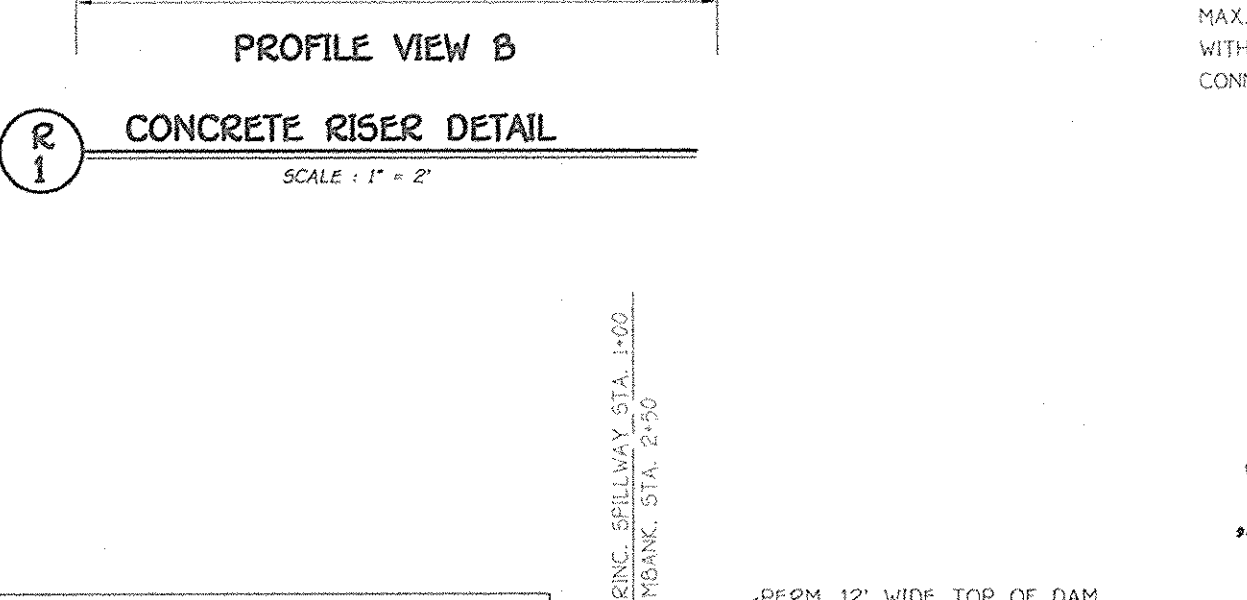
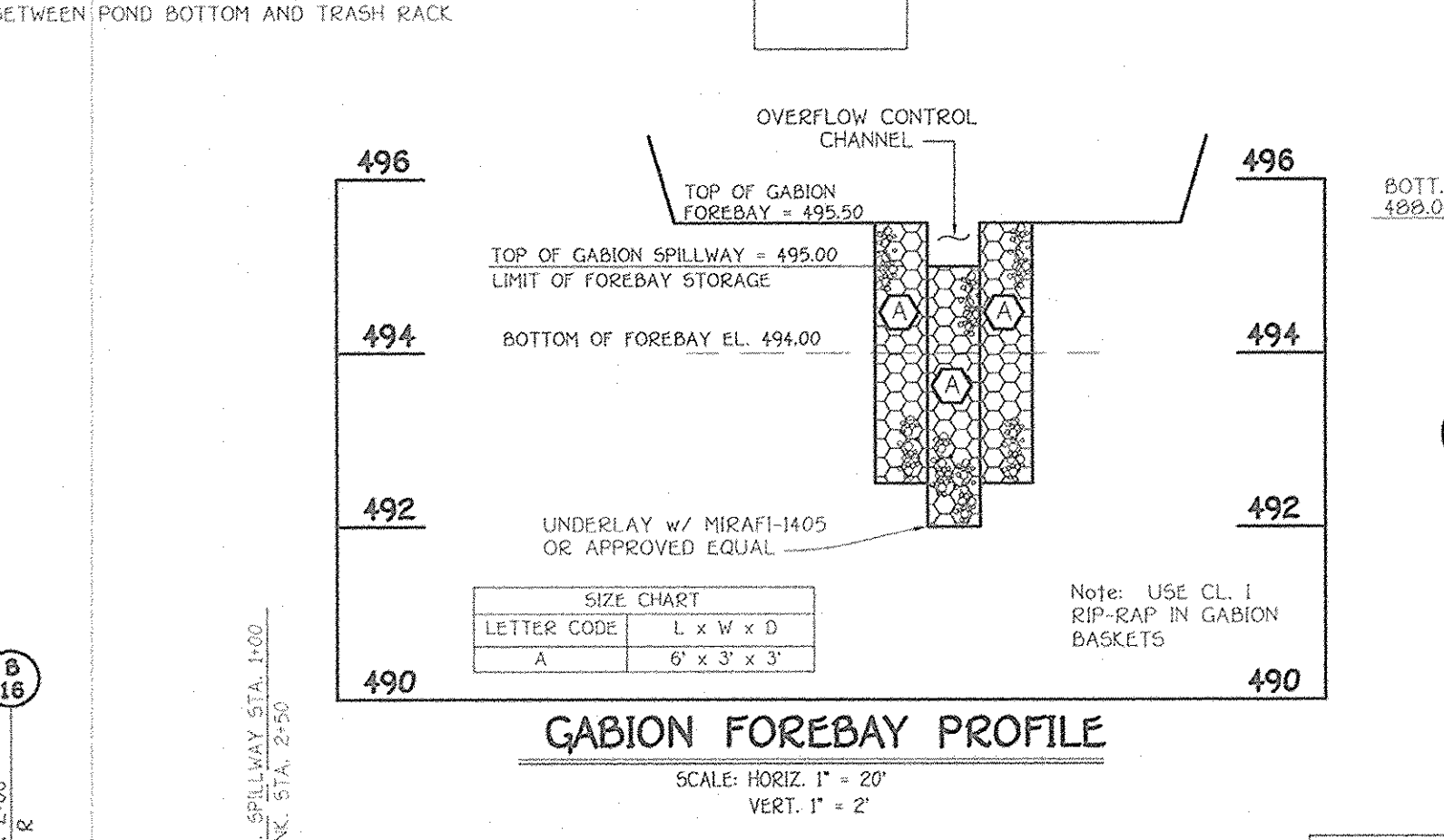
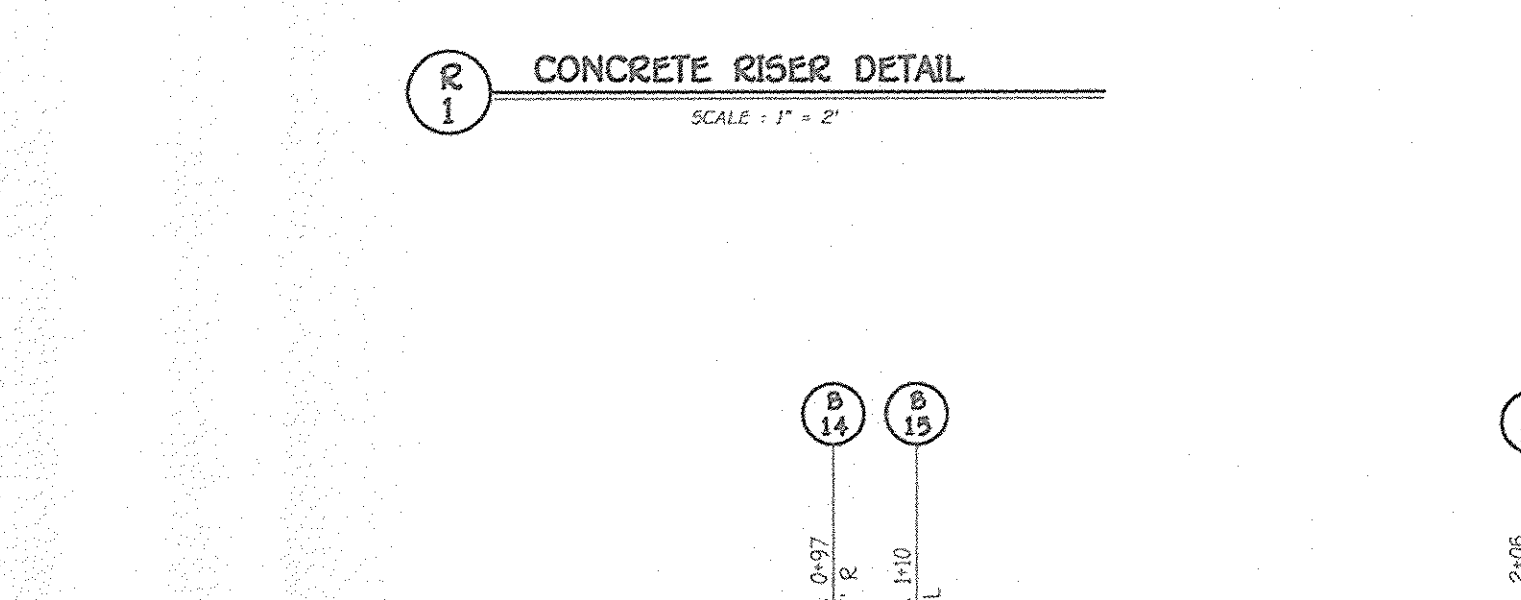
By the Developer:  
Signature of Developer: *Kennard Warfield, Jr.*  
Printed Name of Developer: **Kennard Warfield, Jr.**  
Date: **3-18-08**

By the Engineer:  
Signature of Engineer: *William J. Warfield, Jr.*  
Printed Name of Engineer: **William J. Warfield, Jr.**  
Date: **3-17-08**



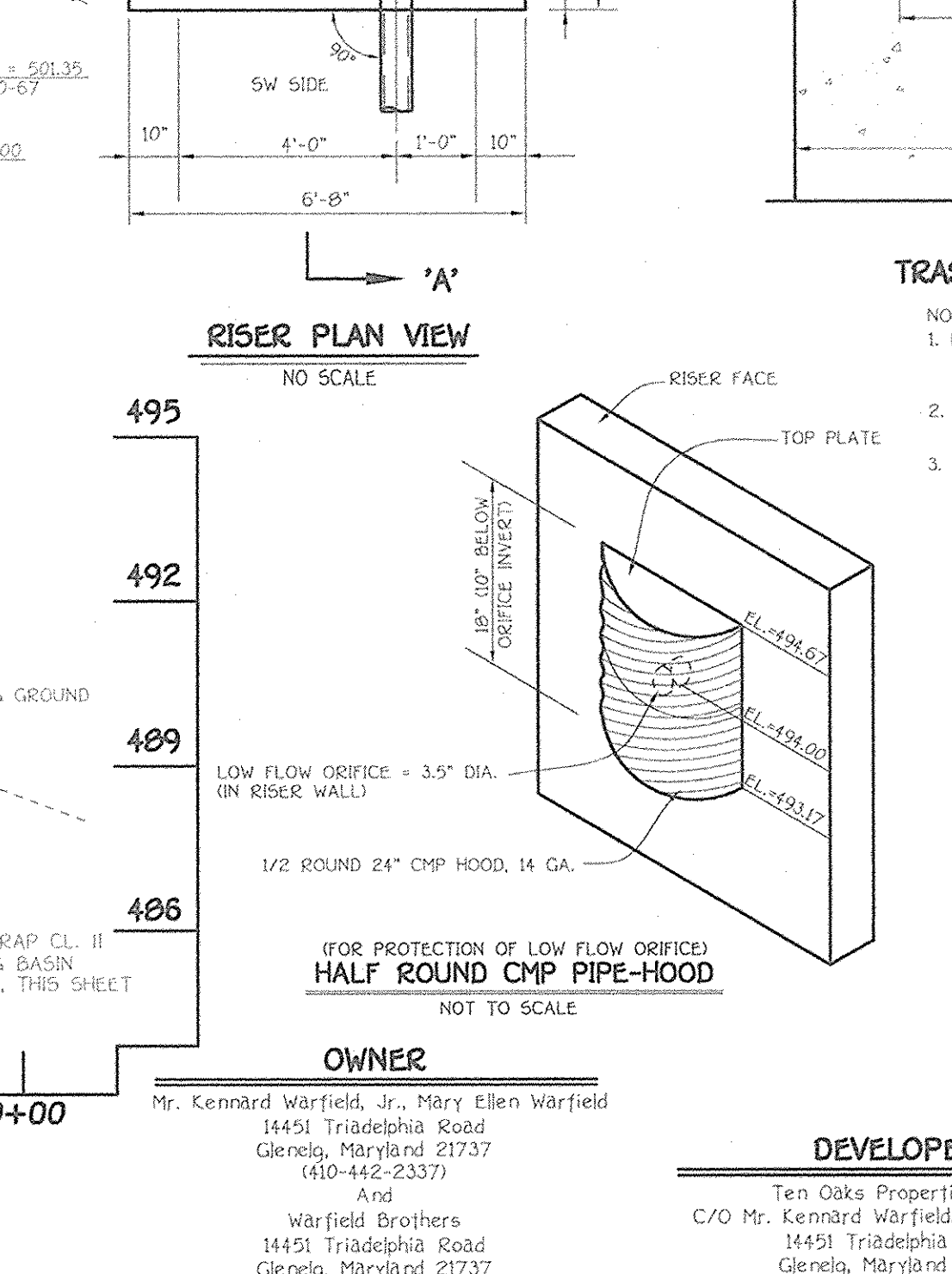
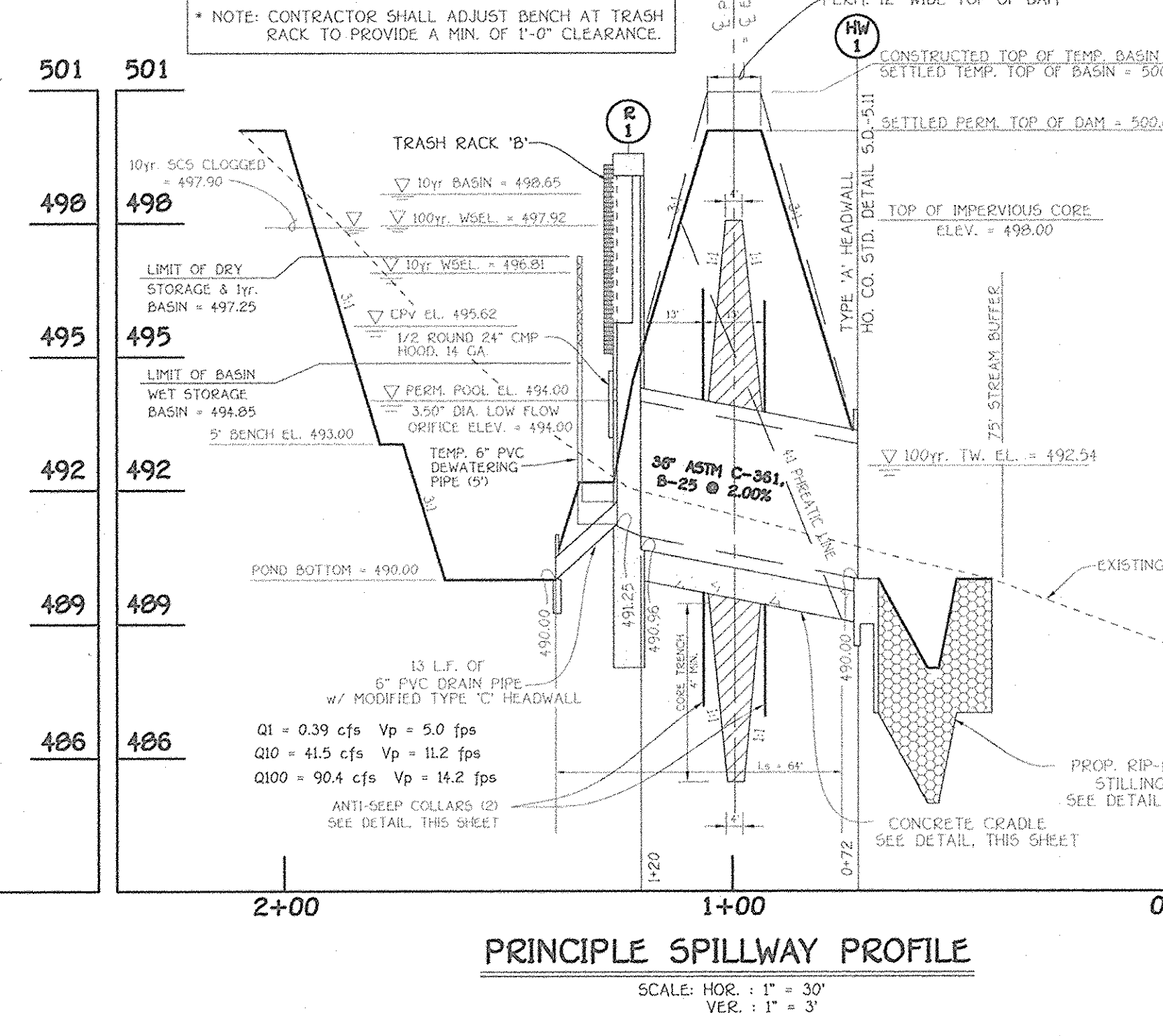
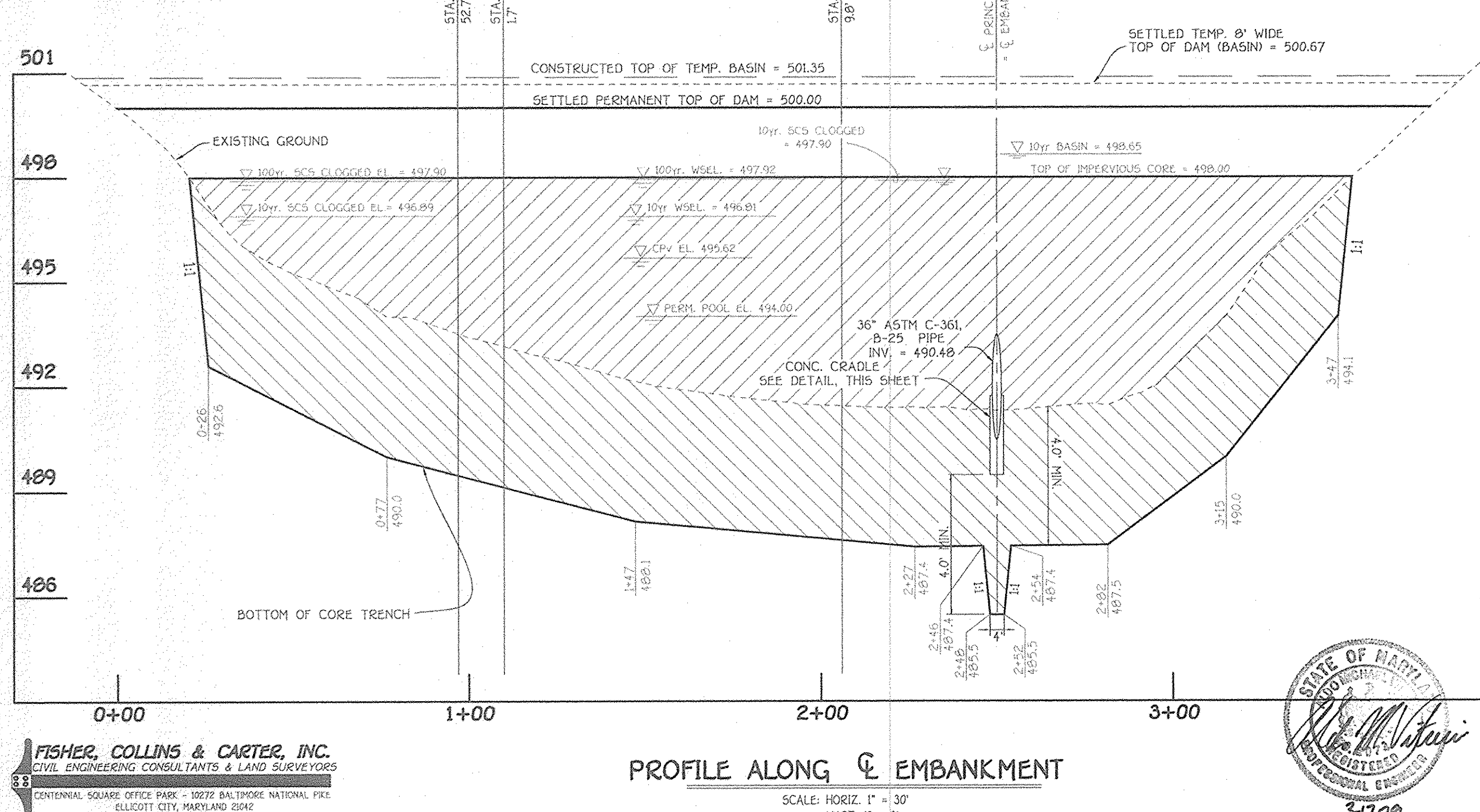
I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Certified The Engineer That He/She Must 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 of Engineer: *William J. Warfield, Jr.*  
Printed Name of Engineer: **William J. Warfield, Jr.**  
Date: **3-17-08**



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: *William J. Warfield, Jr.*  
P.E. No.: **42108**  
Date: **4/2/08**



APPROVED DEPARTMENT OF PUBLIC WORKS  
Signature: *William J. Warfield, Jr.*  
Date: **4-18-08**

APPROVED DEPARTMENT OF PLANNING AND ZONING  
Signature: *Cindy Hantz*  
Date: **4/2/08**

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
1000 SQUARE OFFICE PARK - 10072 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21242  
(410) 461-2000



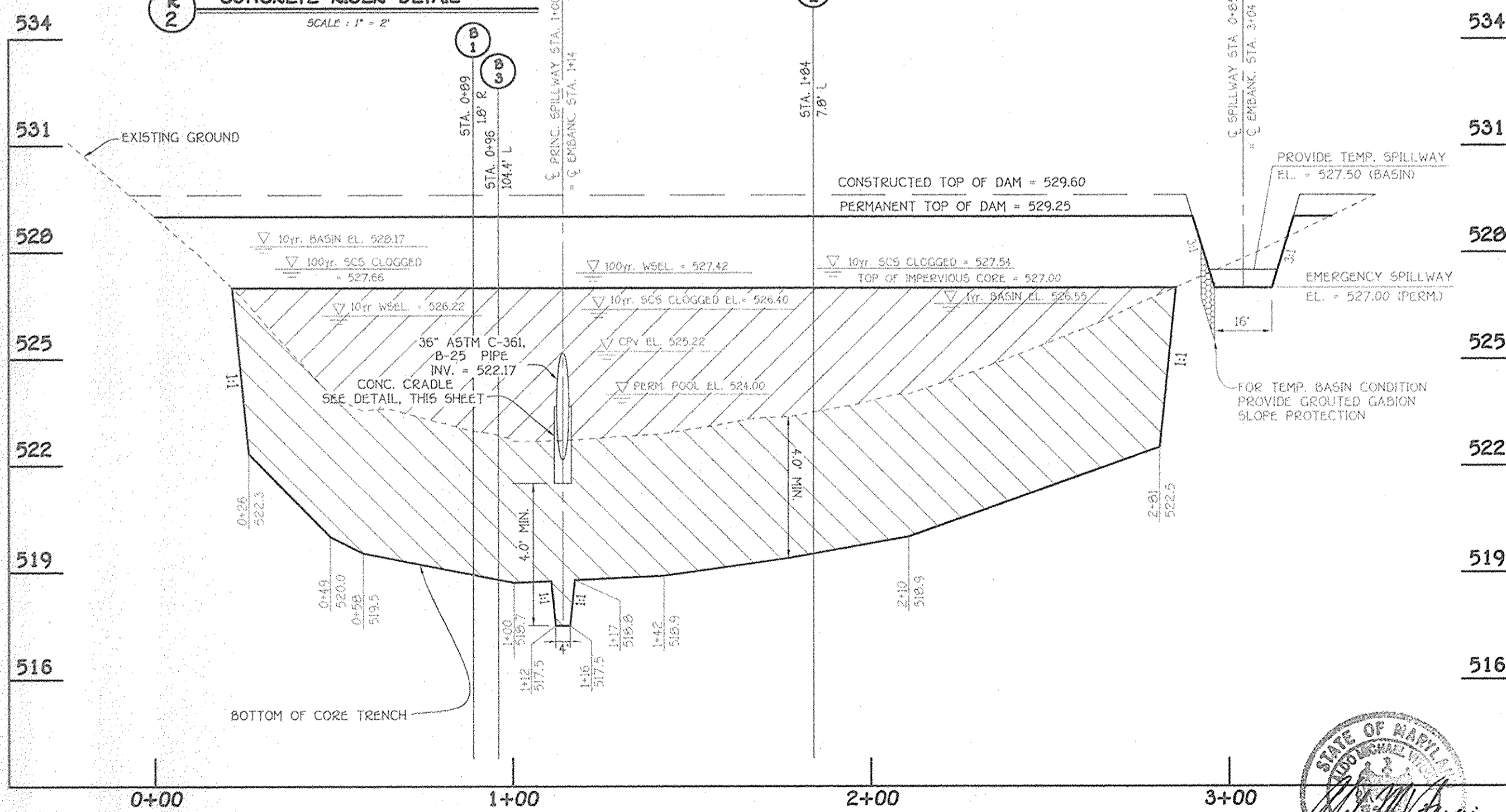
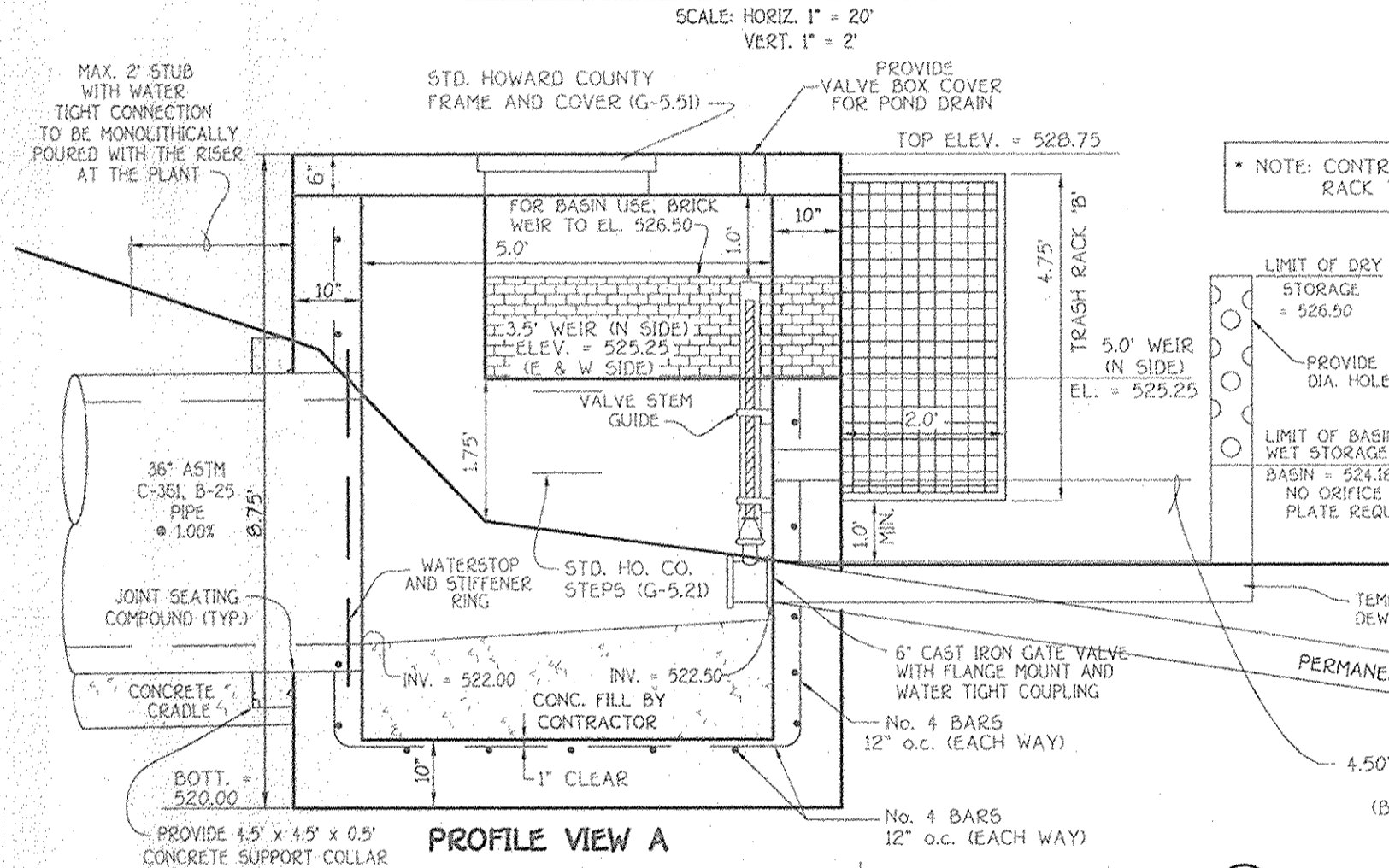
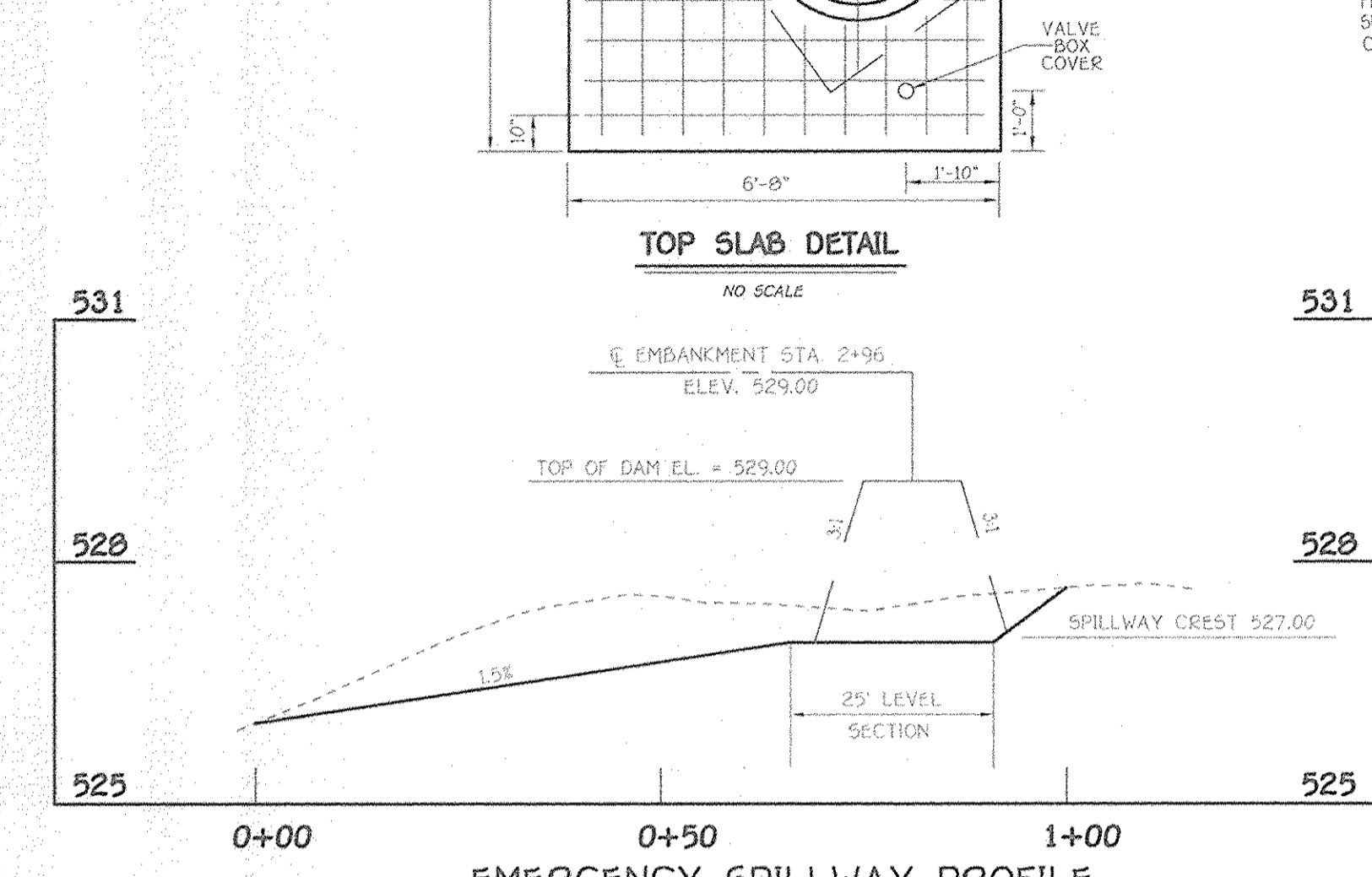
OWNER  
Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410) 442-2337

DEVELOPER  
Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410) 442-2337

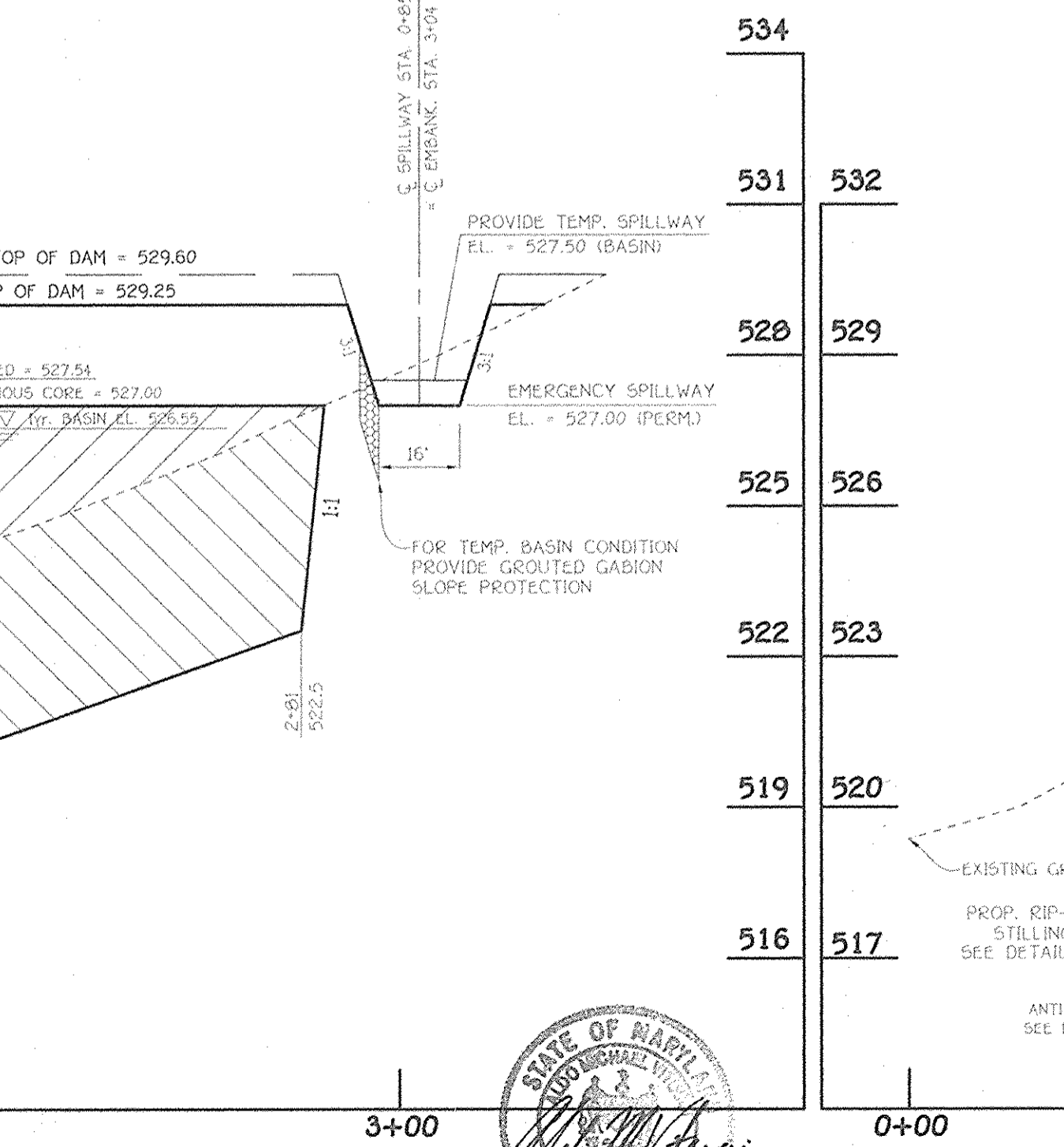
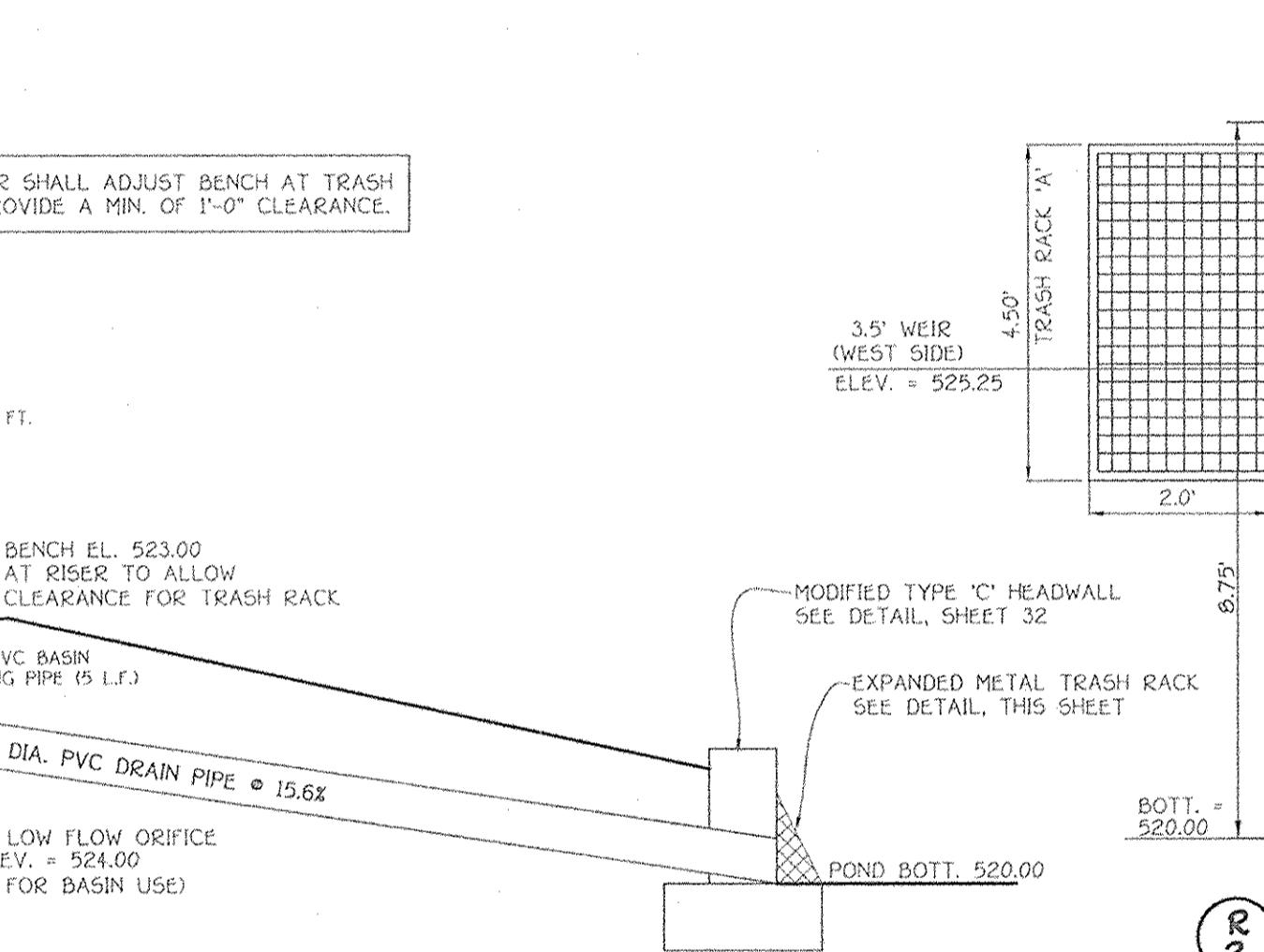
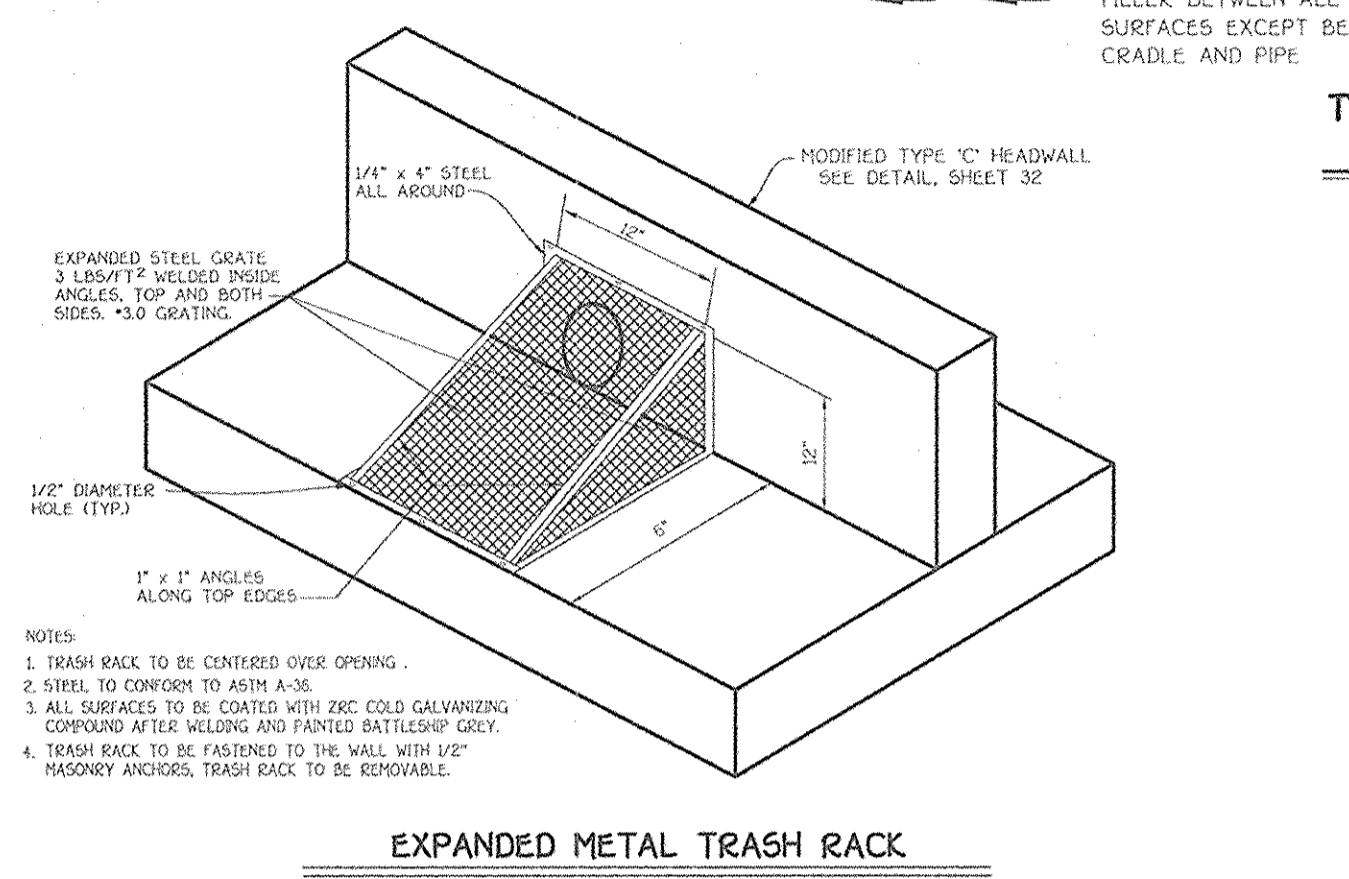
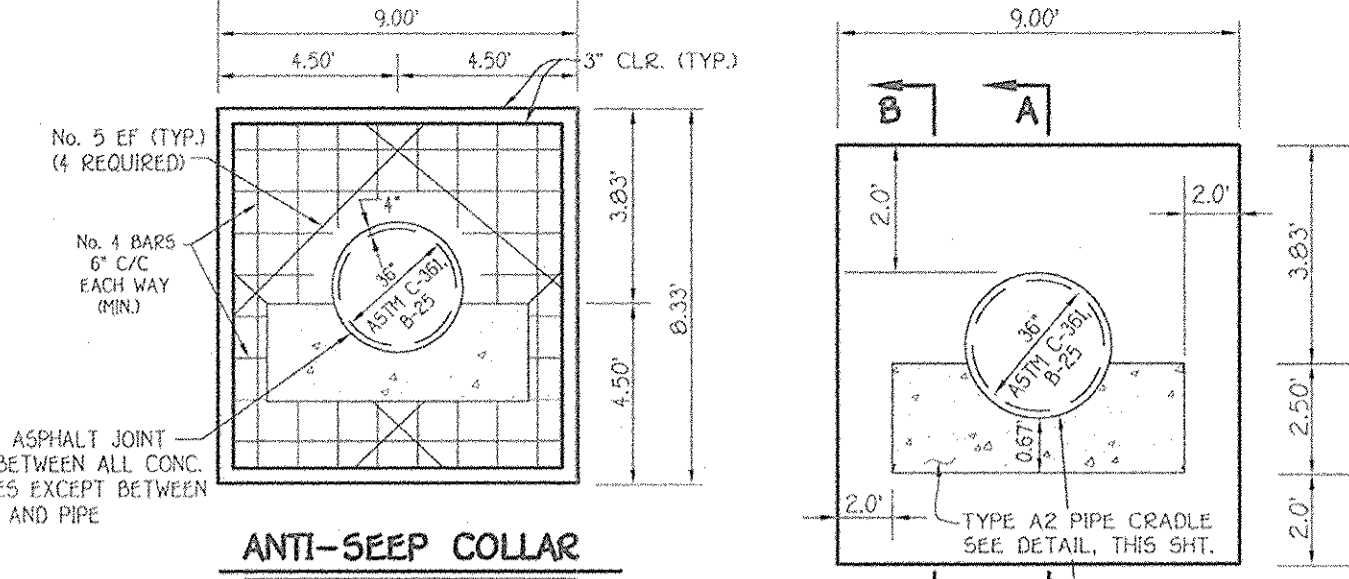
STORMWATER MANAGEMENT PROFILES AND DETAILS  
B.M.P. NO. 1  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-88, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 55, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 28 OF 40

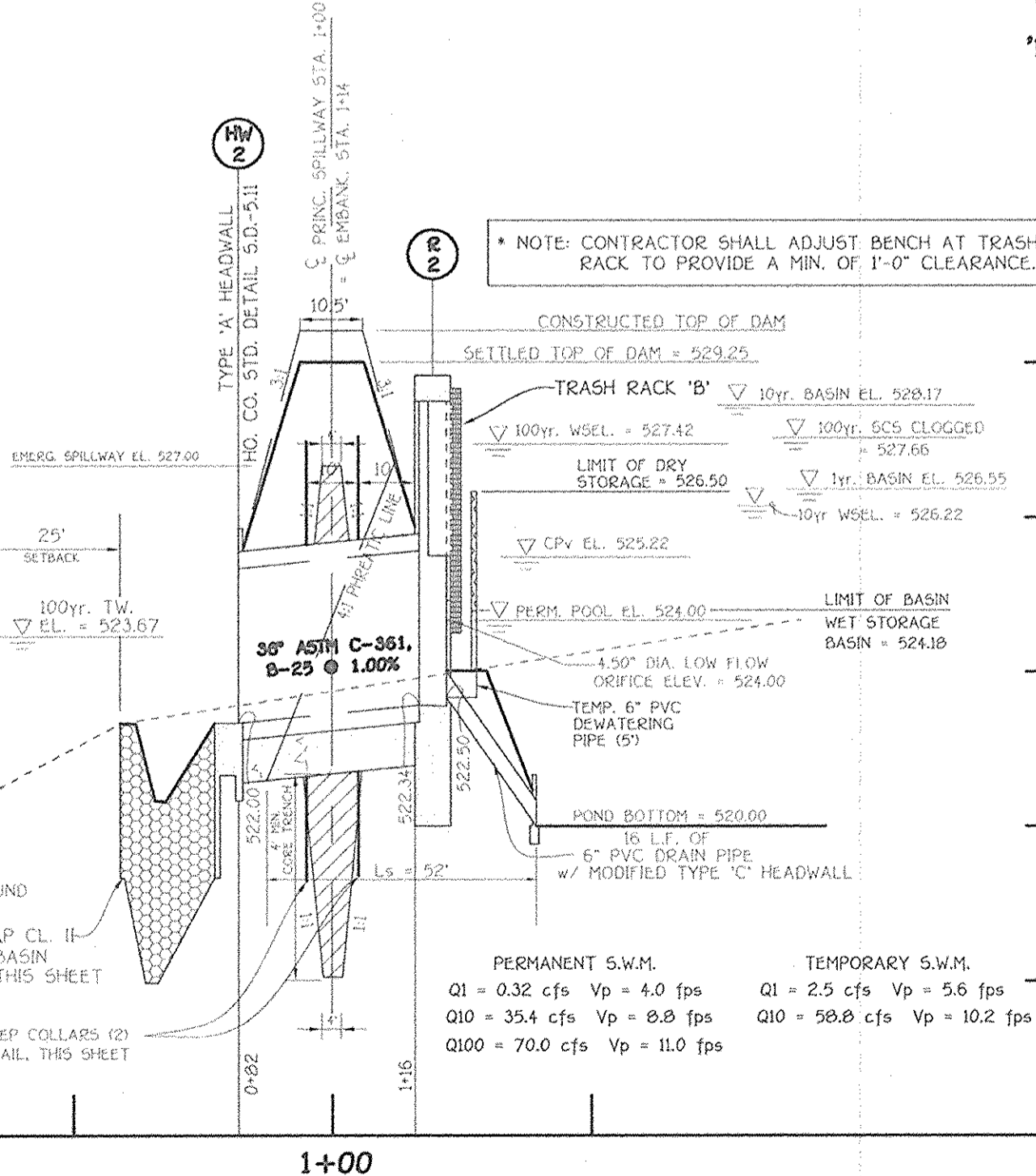
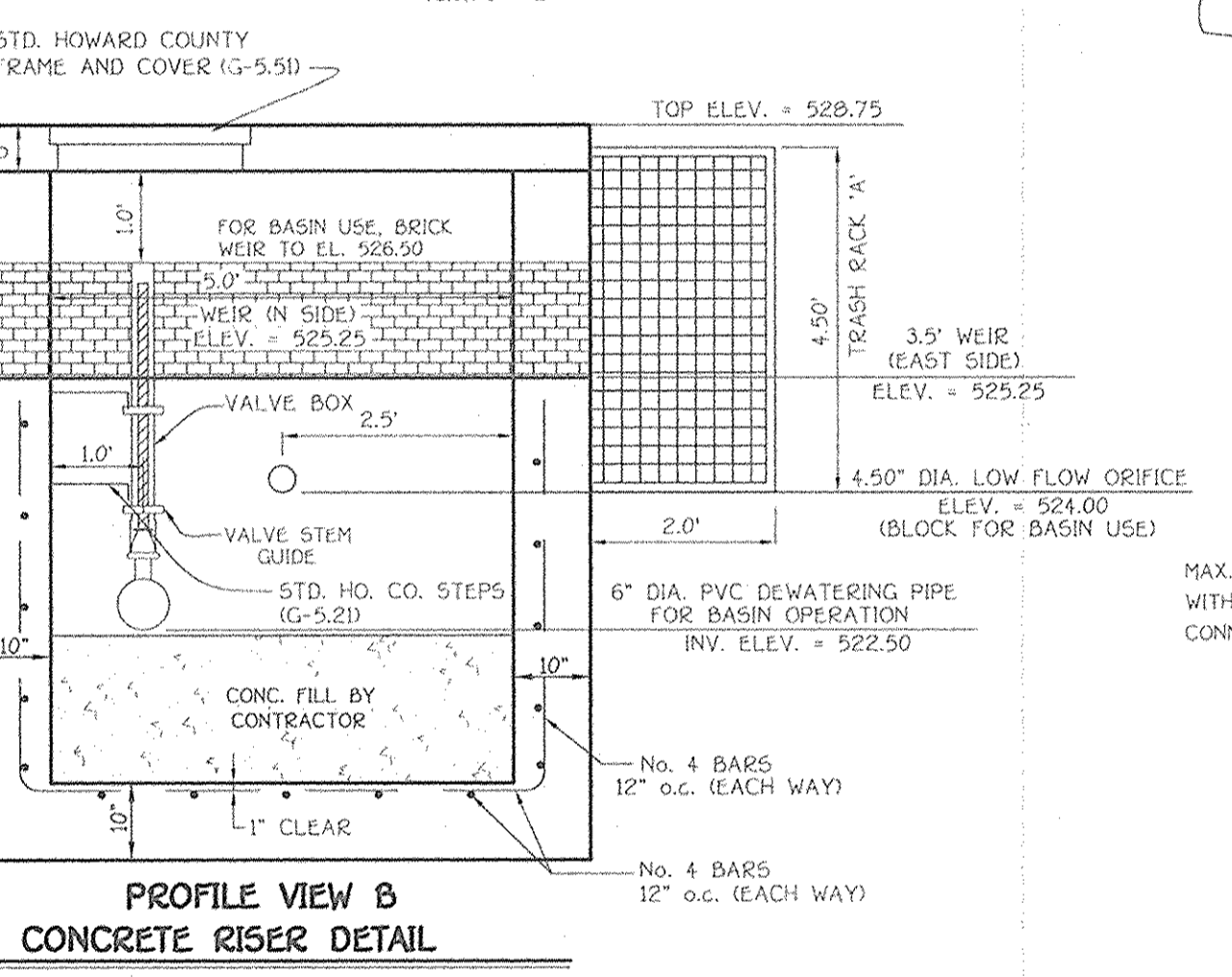
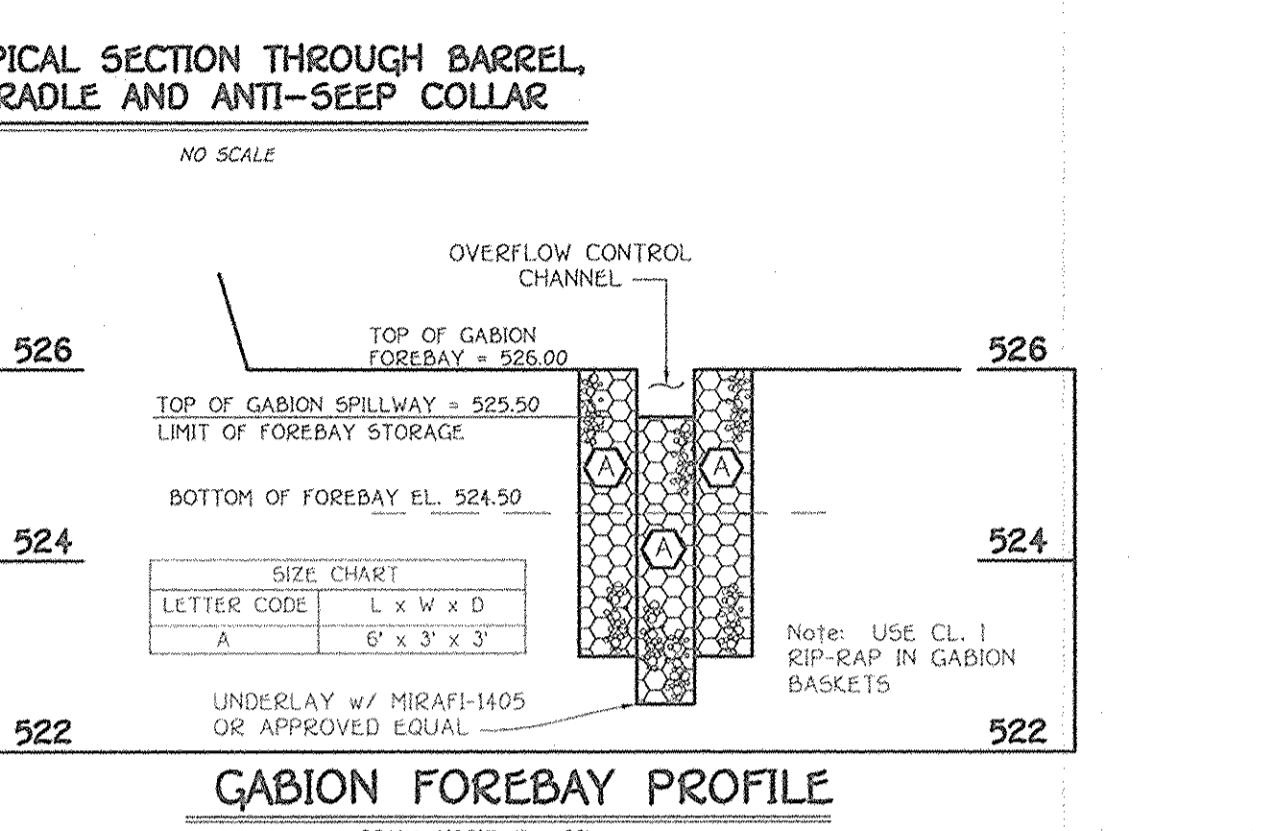
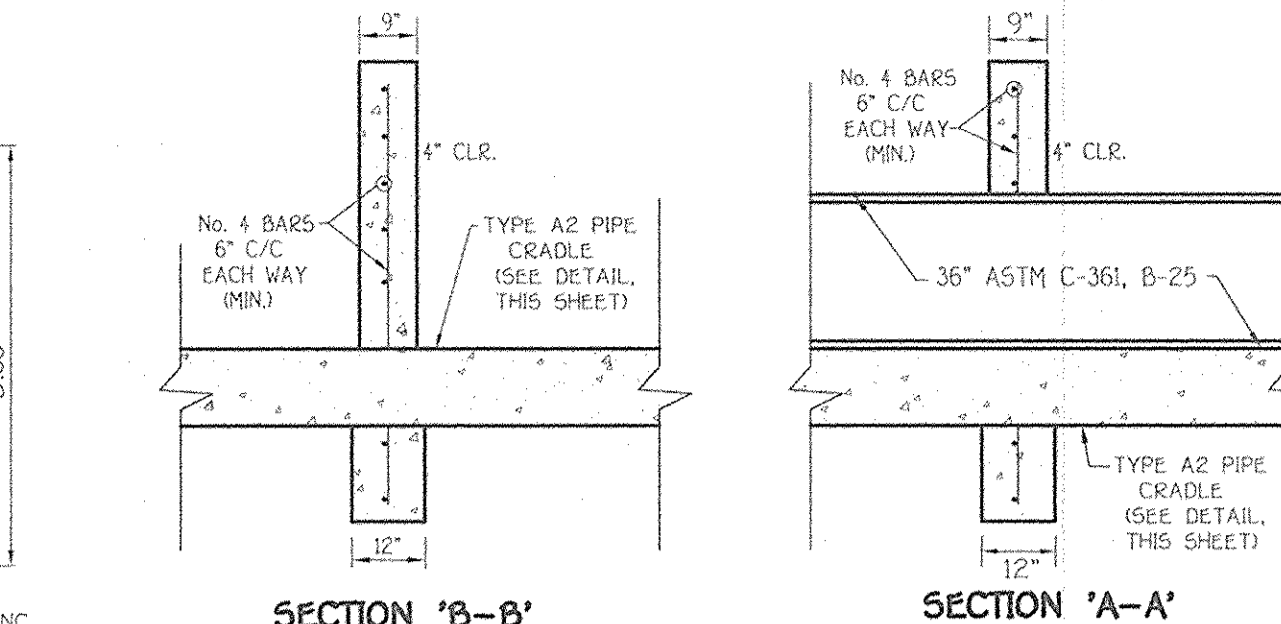
NOTES:  
 1. CONCRETE SHALL BE MSHA MIX NO. 3 (FC = 3,500 P.S.I.)  
 2. REINFORCING STEEL GRADE 60  
 3. FOR WALLS OF STRUCTURE  
 SMALL UTILIZE L.M. SCOFIELD CO. T-9055 FORM LINERS (RANDOM SPLIT-FACE ROCK) OPTIONAL.  
 4. PROVIDE ROUGH-BROOM FINISH.  
 5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECS.  
 6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.



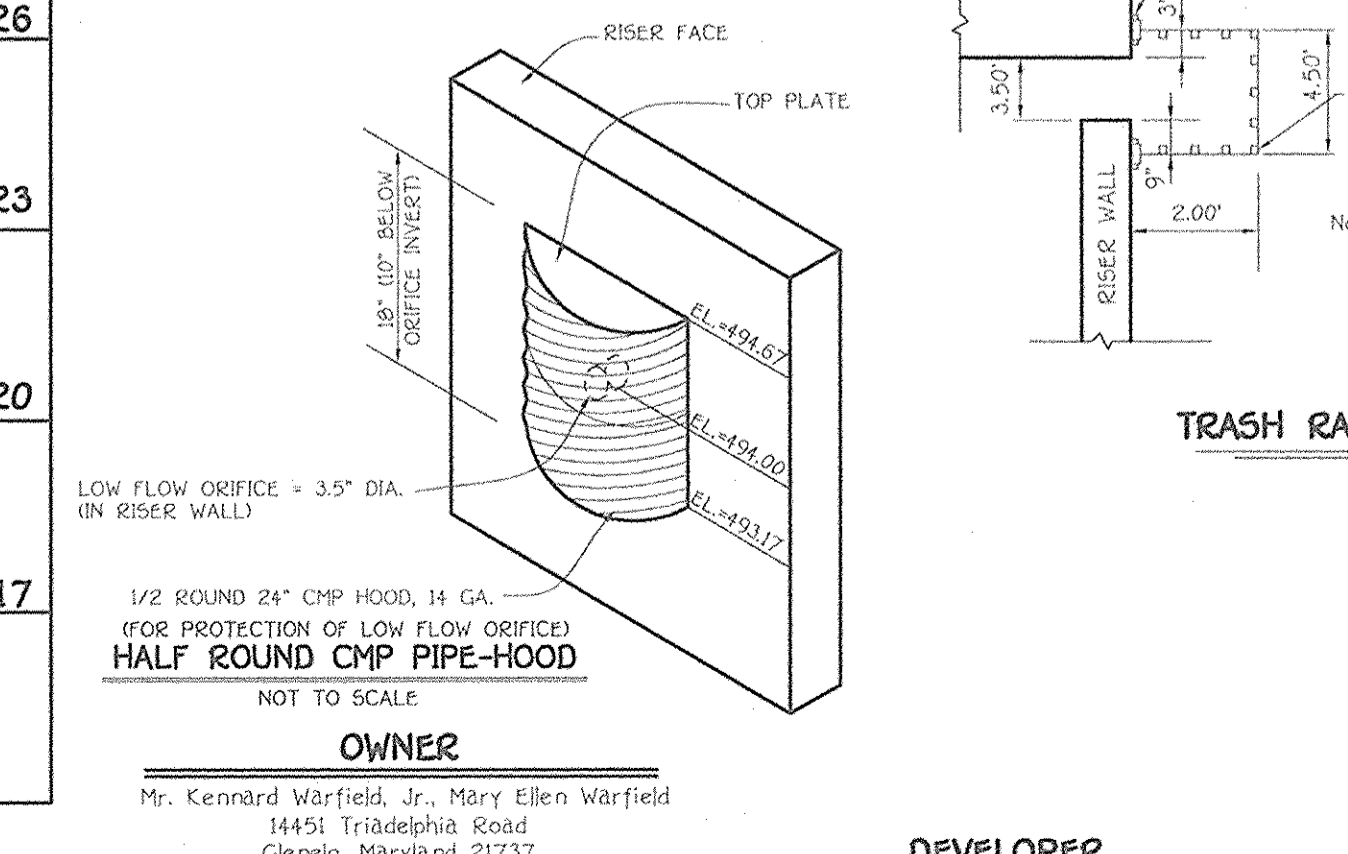
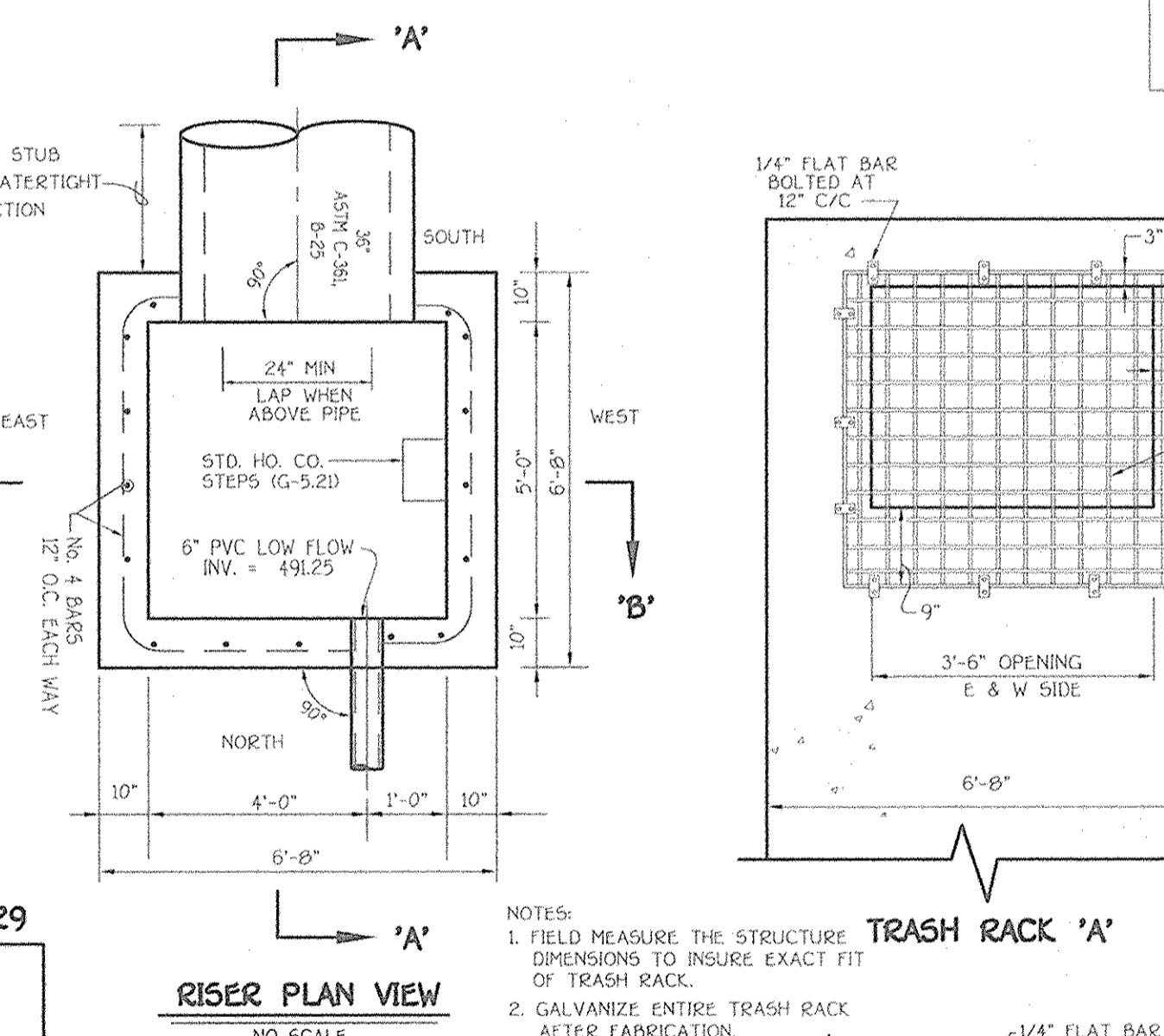
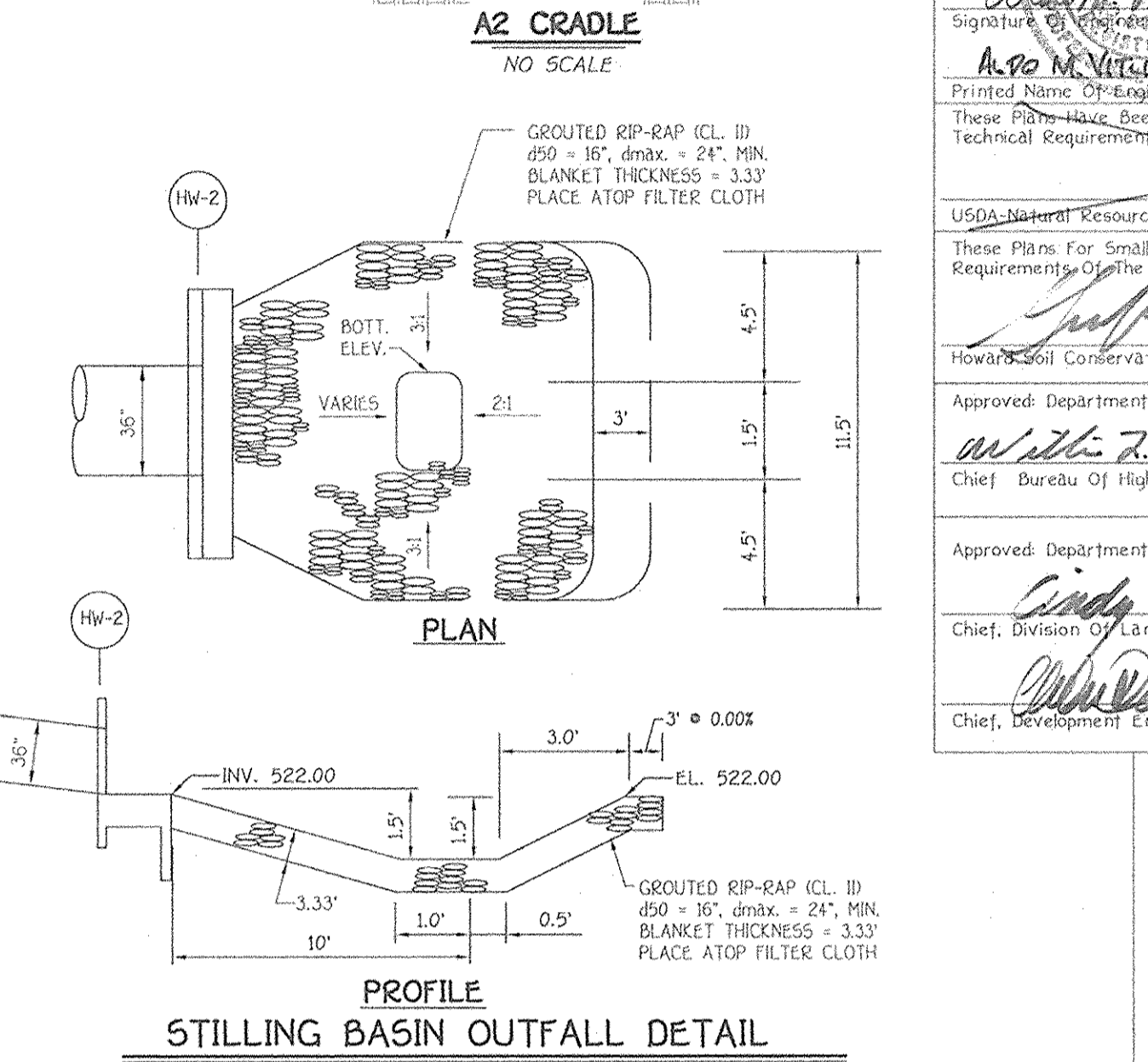
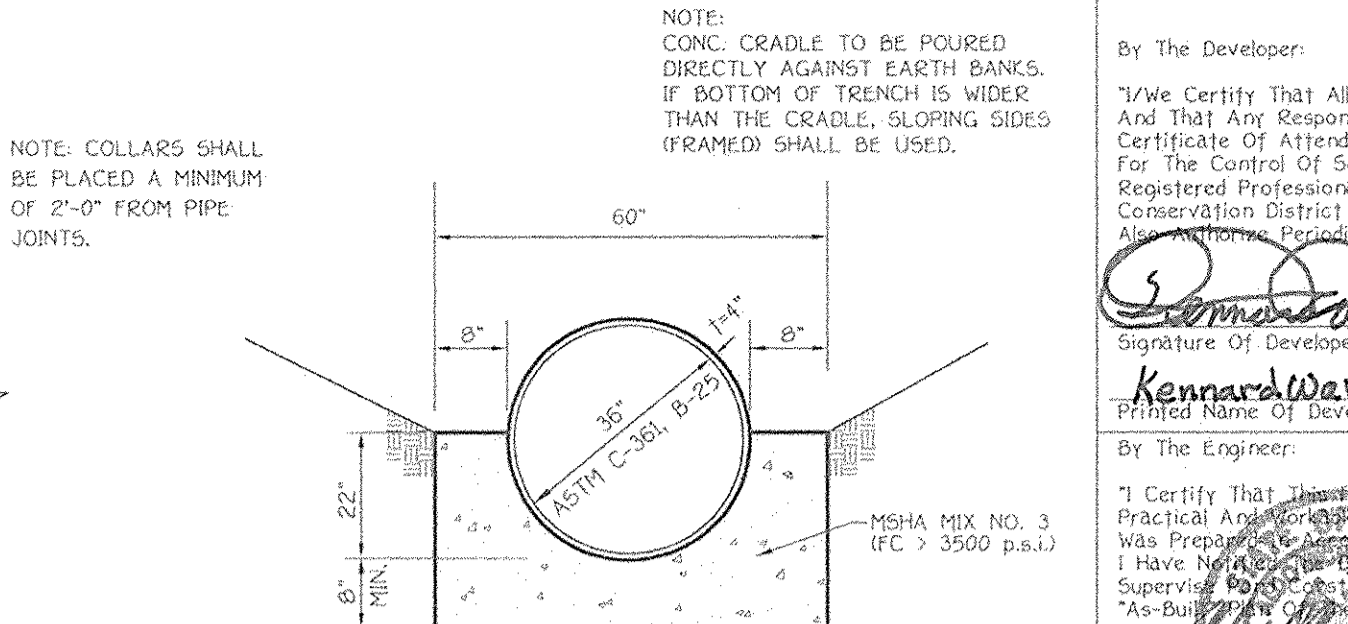
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 NATIONAL SQUARE OFFICE PARK - 3272 BALTIMORE NATIONAL PARK  
 ELLSWOOD CITY, MARYLAND 20424  
 (410) 461-2225



STATE OF MARYLAND  
 PROFESSIONAL SEAL  
 3-1-09



STATE OF MARYLAND  
 PROFESSIONAL SEAL  
 3-1-09



OWNER  
 Mr. Kenneth Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337  
 AND  
 Warfield Brothers  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337

DEVELOPER  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kenneth Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337

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 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.

Kennard Warfield, Jr.  
 Signature Of Developer  
 3-18-08  
 Date  
 Printed Name Of Developer

By The Engineer:  
 I Certify That These Plans For Pond Construction, Erosion And Sediment Control Represents A Practical Analysis Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Verified That The Plans Meet The Requirements Of The Howard Soil Conservation District For Pond Construction. 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.

A. J. M. [Signature]  
 Signature Of Engineer  
 3-17-09  
 Date  
 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.

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

[Signature]  
 Signature  
 4/17/08  
 Date  
 Approved Department Of Public Works  
 Chief, Bureau Of Highways

[Signature]  
 Signature  
 4/14/08  
 Date  
 Approved Department Of Planning And Zoning  
 Chief, Division Of Land Development  
 [Signature]  
 Signature  
 4/22/08  
 Date  
 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.

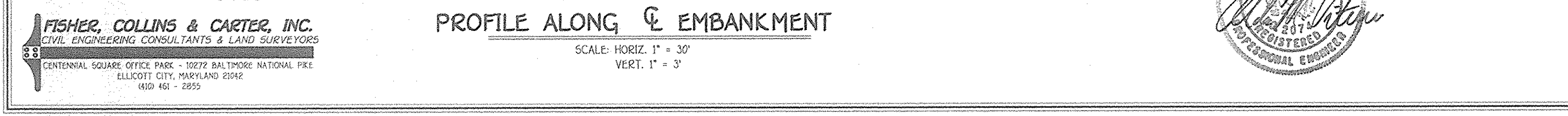
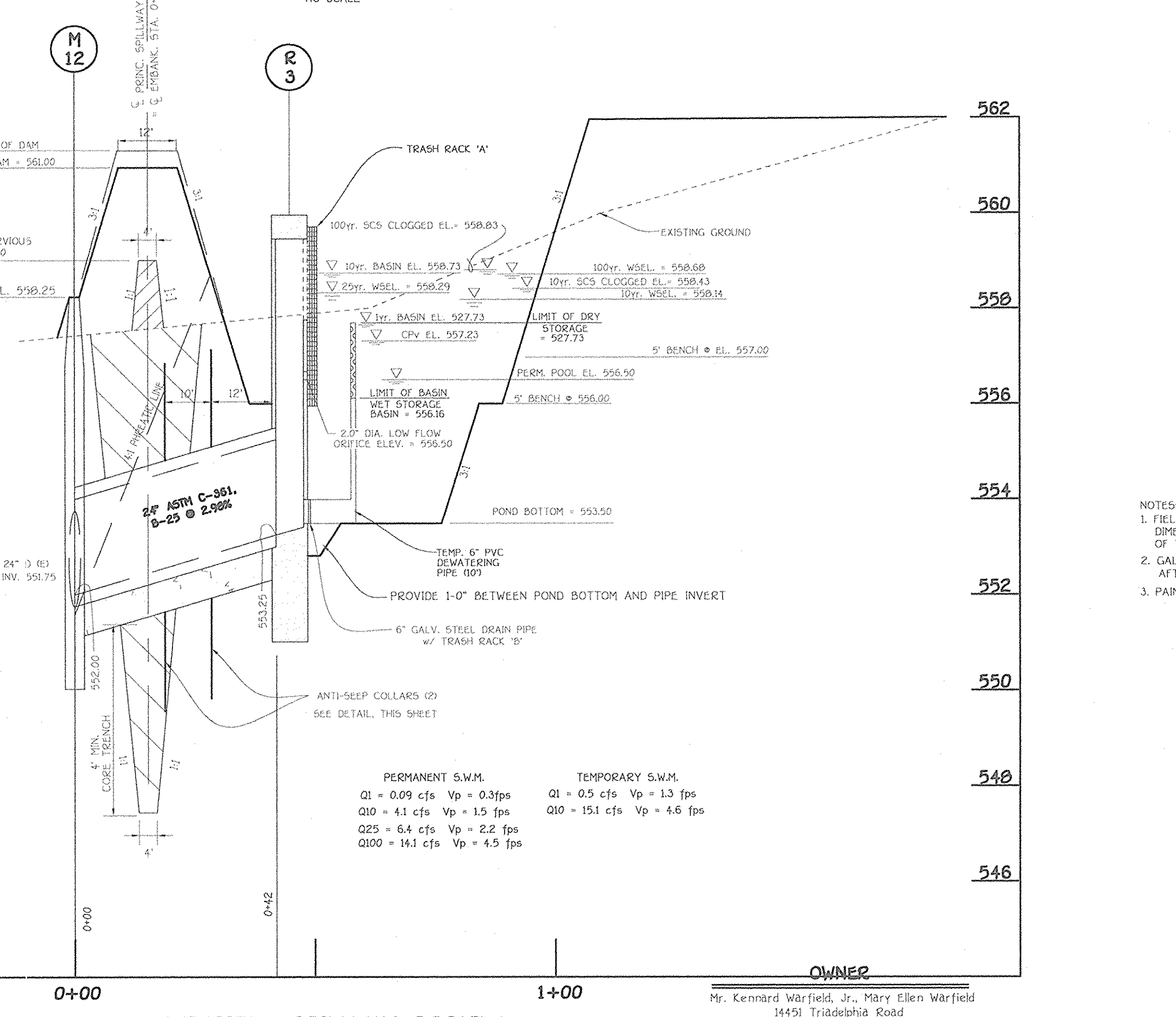
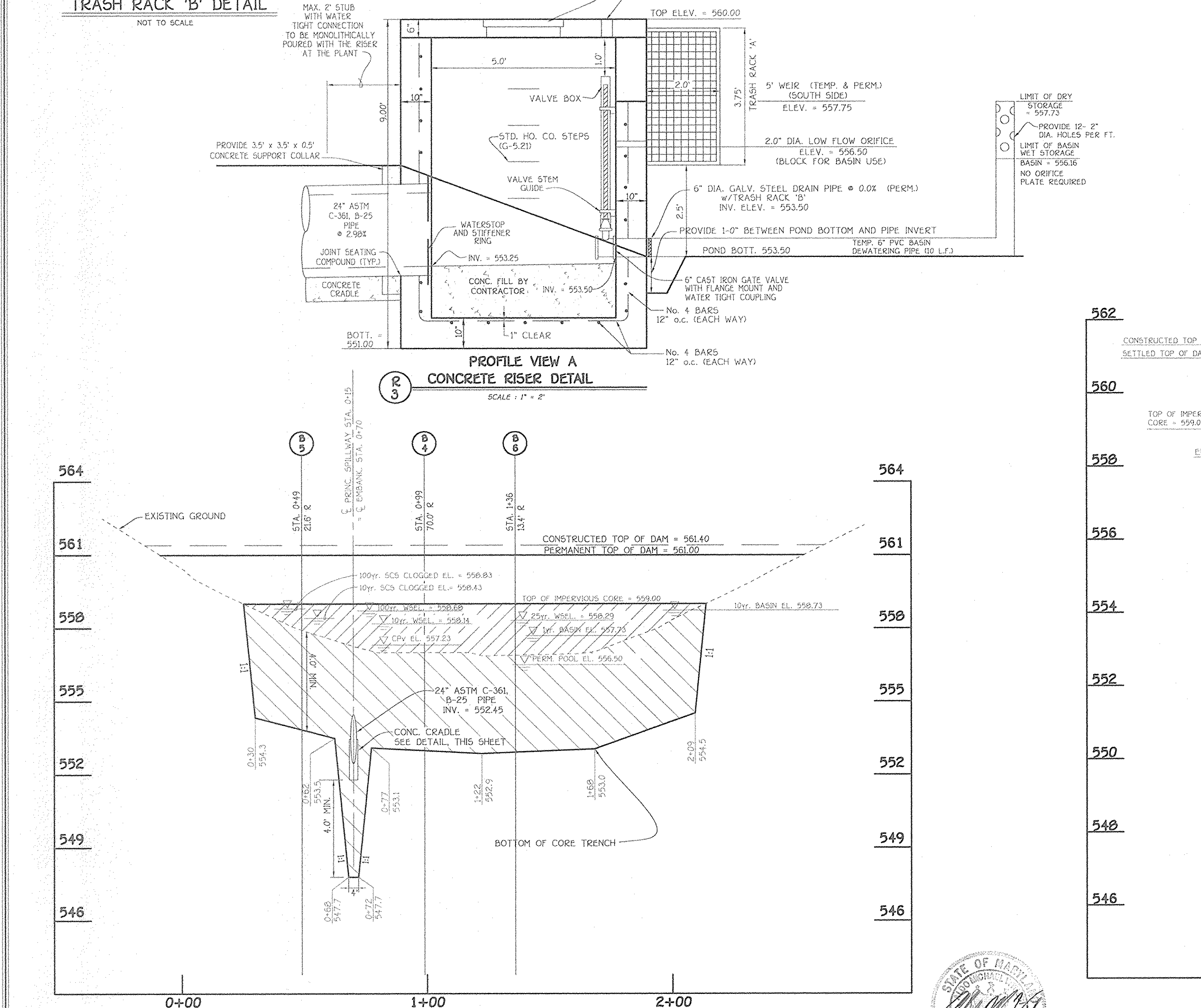
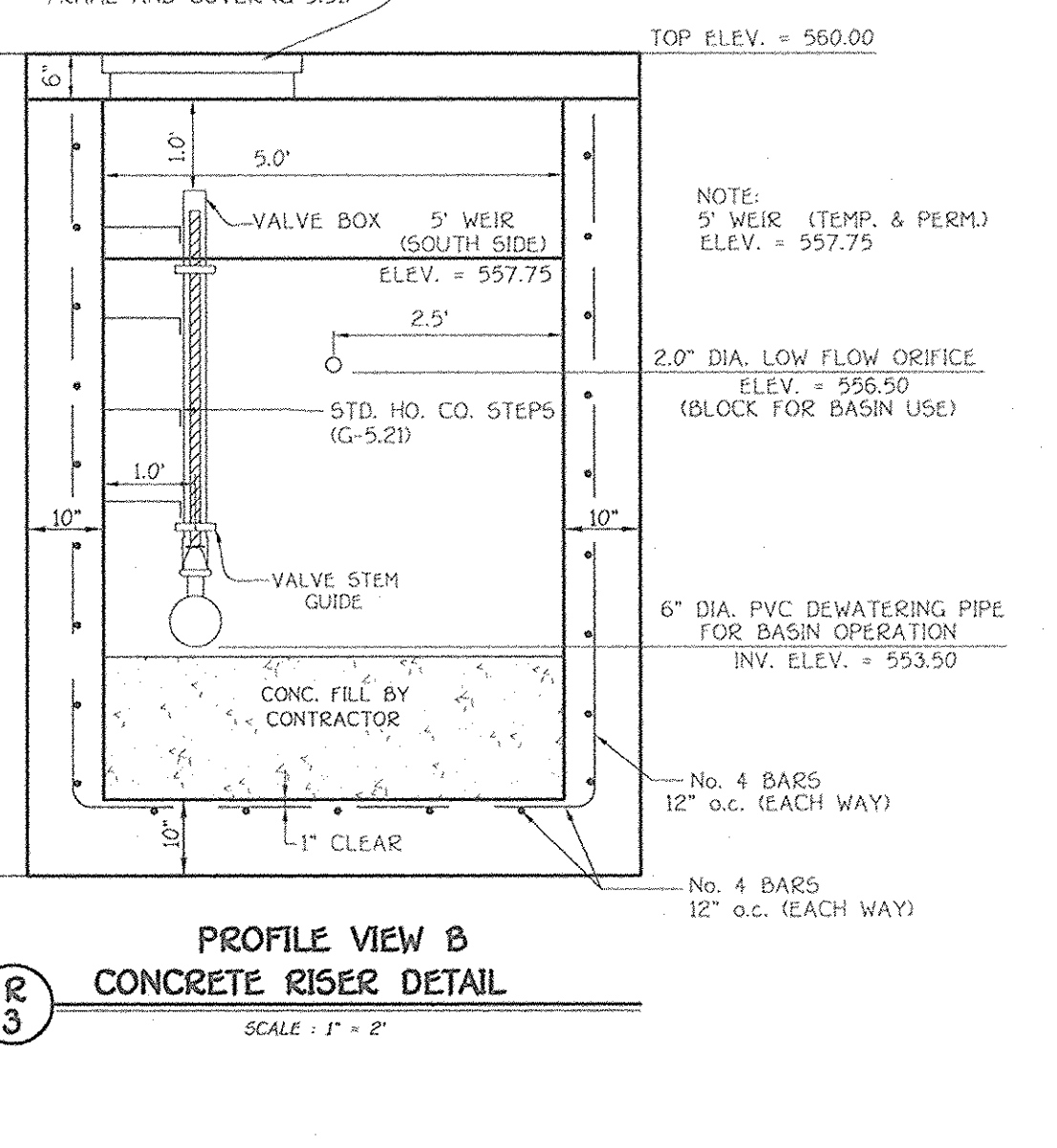
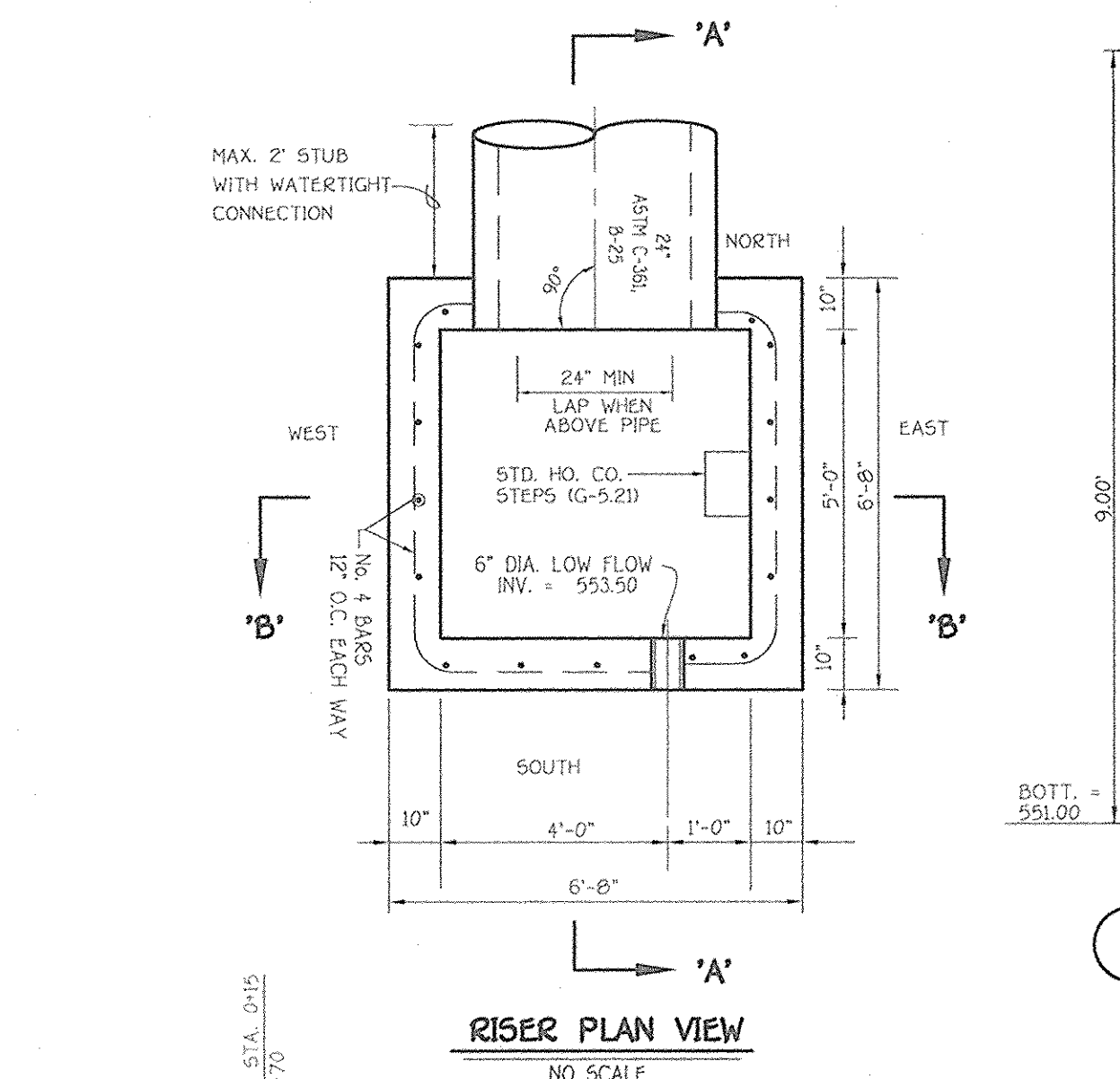
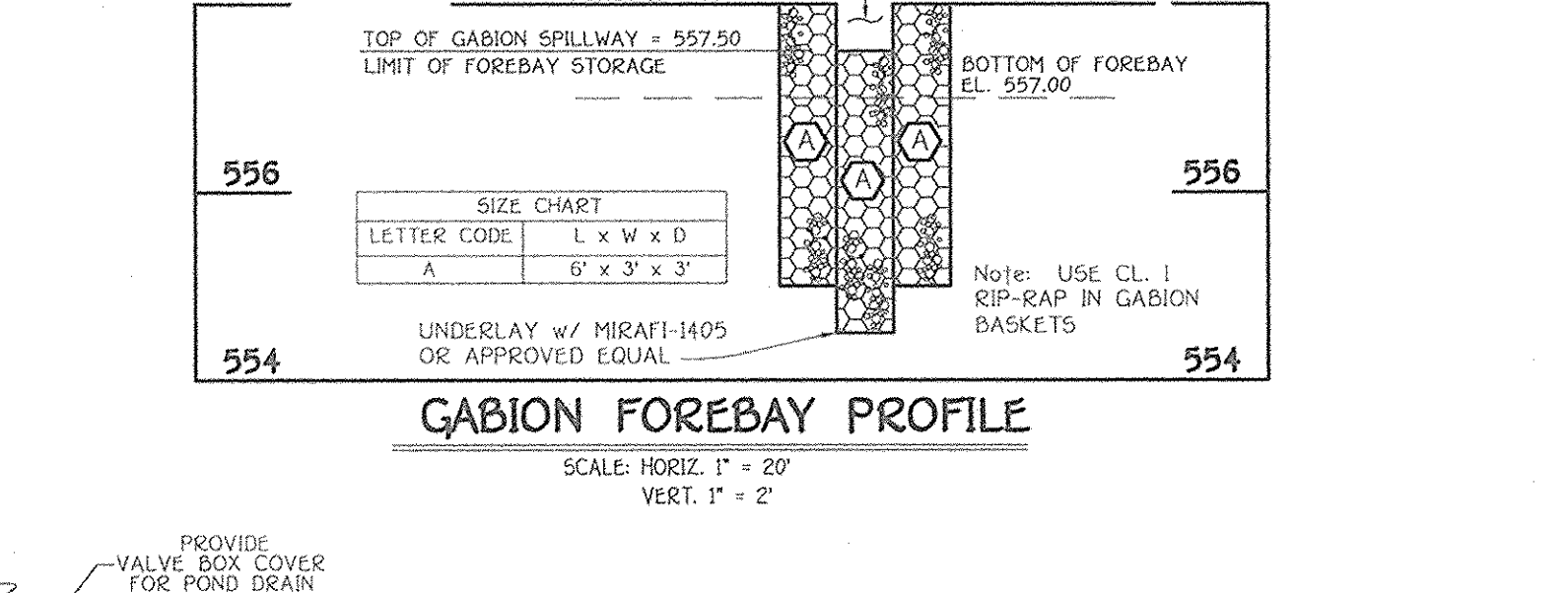
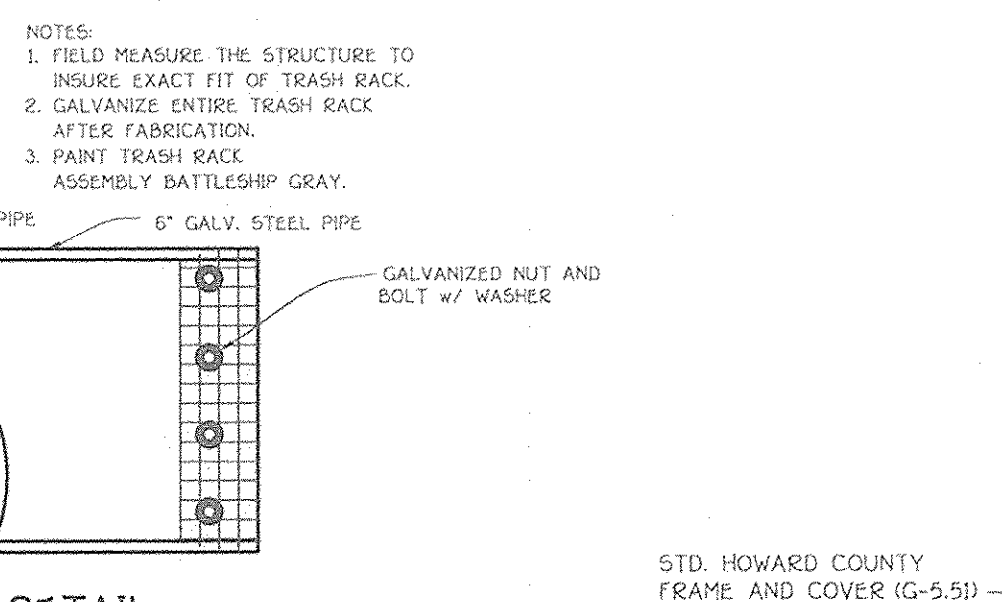
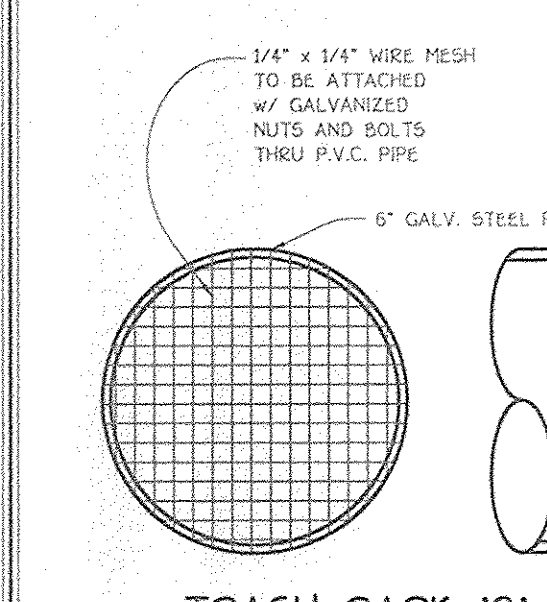
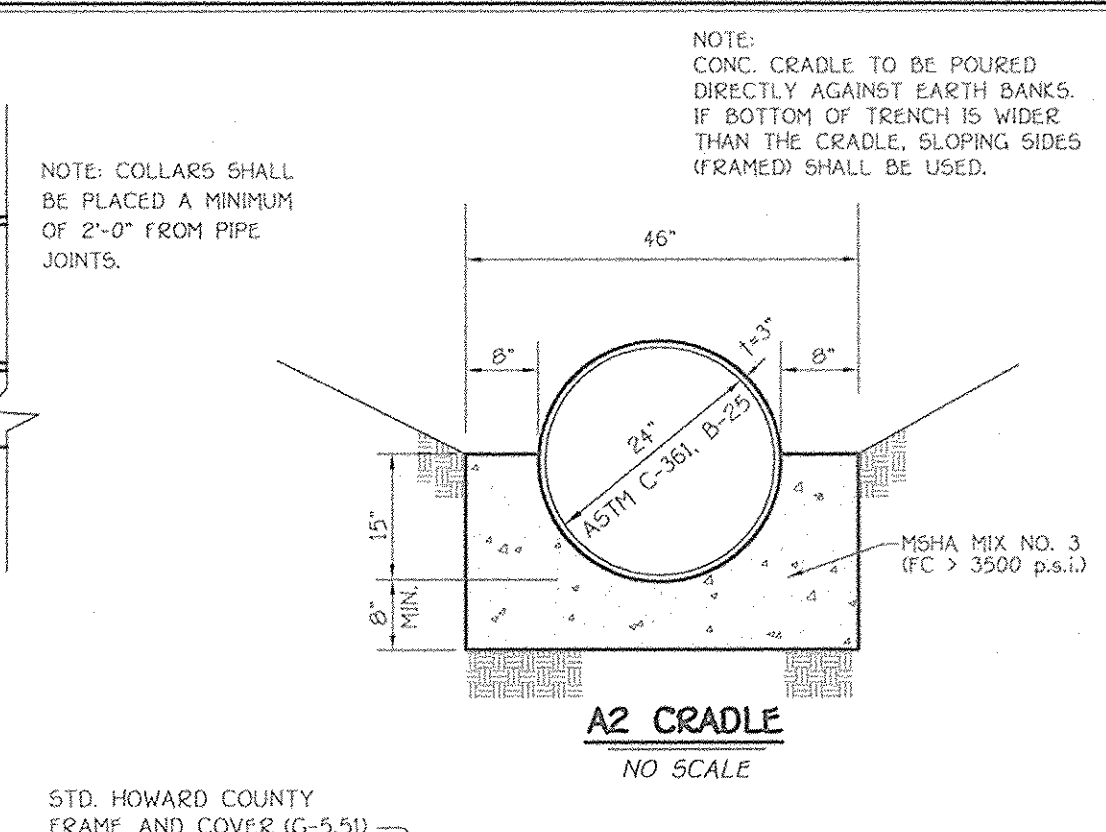
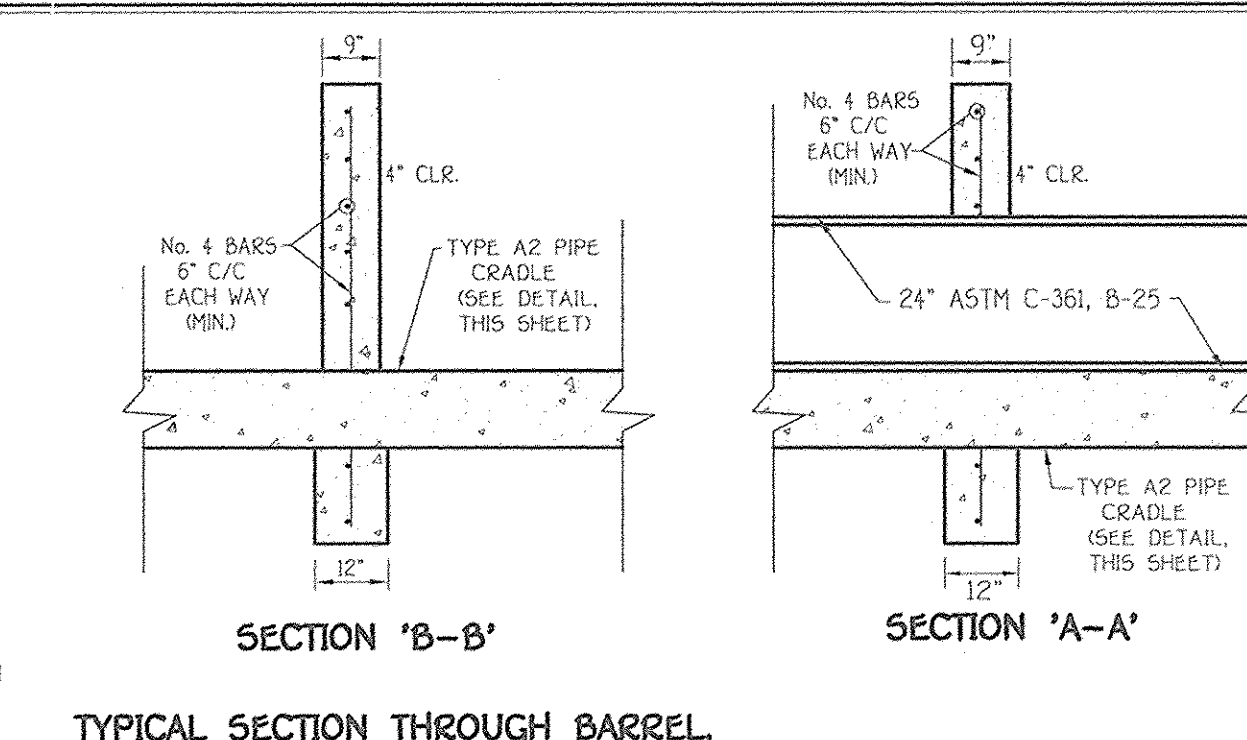
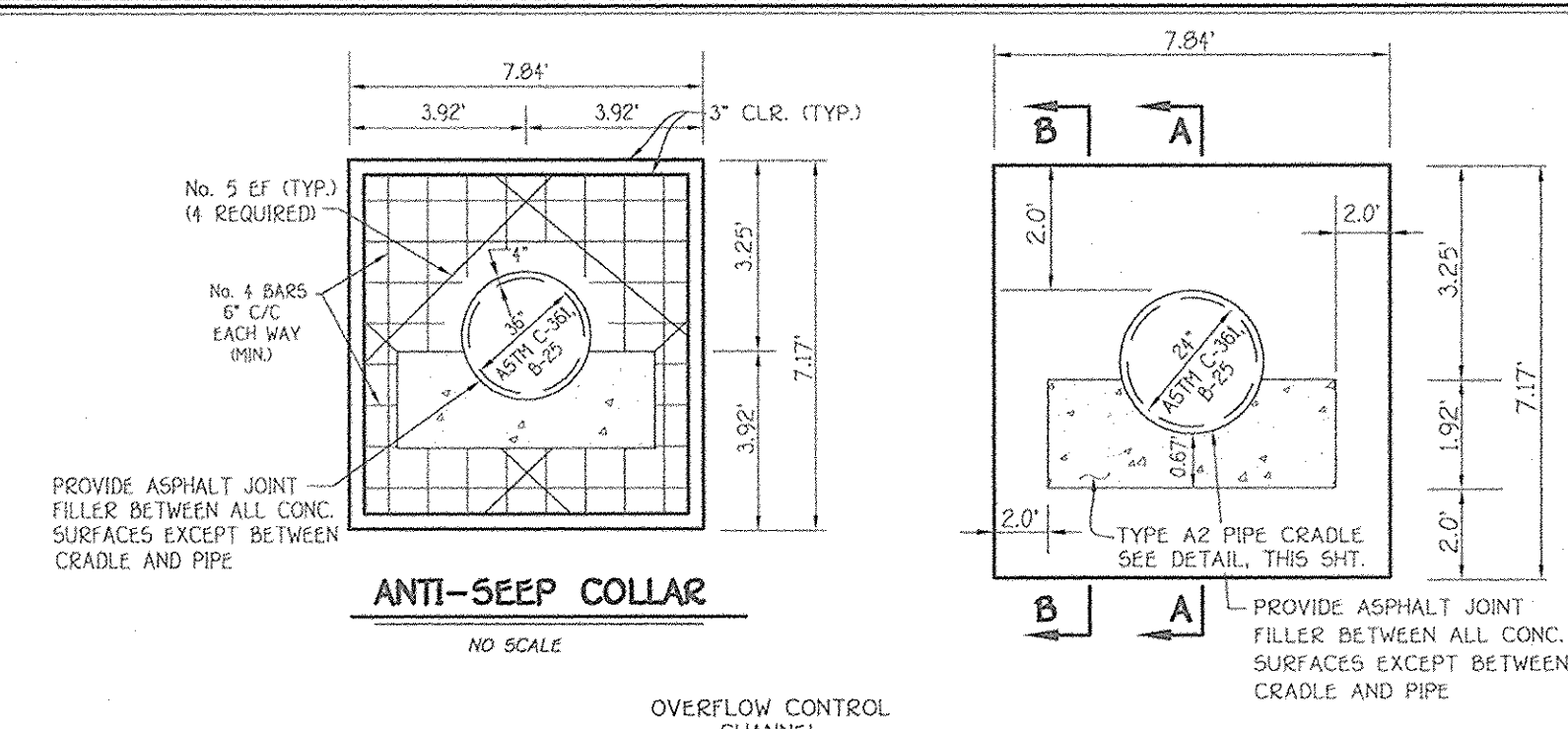
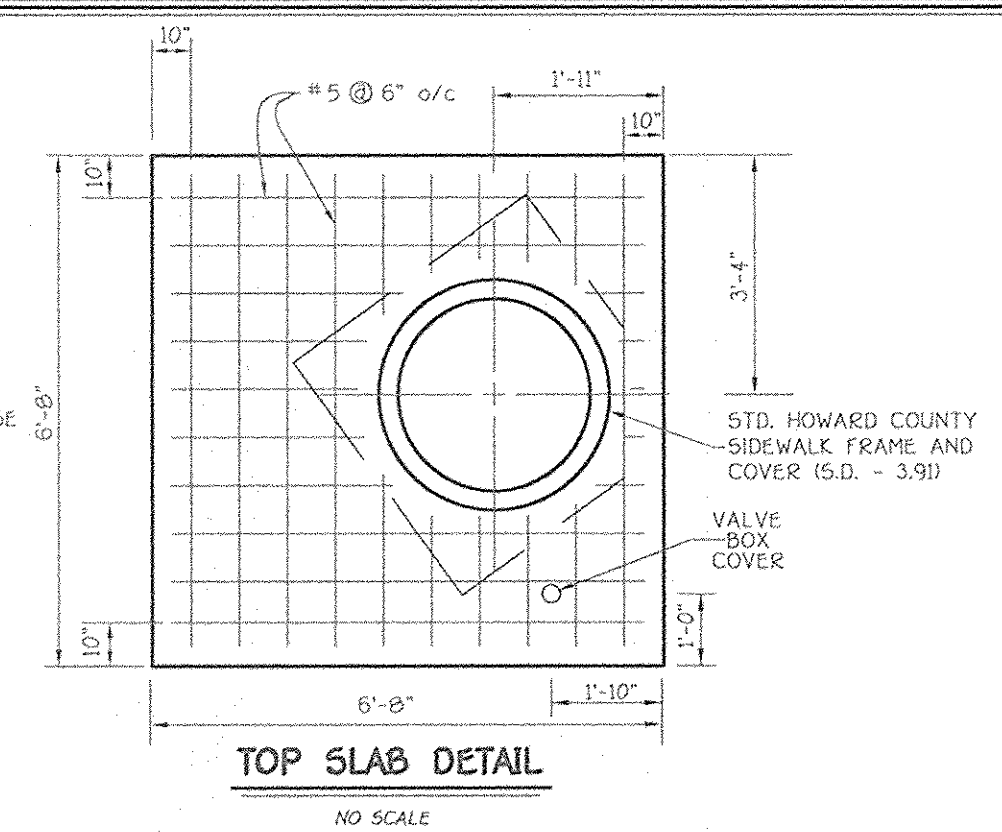
Signature P.E. No. Date

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 These Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Implies A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

**STORMWATER MANAGEMENT PROFILES AND DETAILS  
 B.M.P. NO. 2  
 THE WARFIELDS II  
 SECTION TWO  
 BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'**

TAX MAP NO. 27 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 29 OF 40

- 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. SCOTFIELD CO. T-9055 FORM LINERS (RANDOM SPLIT-FACE ROCK) OPTIONAL.
  4. PROVIDE ROUGH BROOM FINISH IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECS.
  5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 6.07.03.59 OF THE MSHA STANDARDS AND SPECS.
  6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.



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: *Kenard Warfield, Jr.*  
 Printed Name: Kenard Warfield, Jr.  
 Date: 12-20-07

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 Advised The Developer That He/She Must 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.

Signature: *William J. ...*  
 Printed Name: William J. ...  
 Date: 12-20-07

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: *4/7/08*  
 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: *4/10-08*  
 Approved: Department Of Public Works  
 Chief: Bureau Of Highways

Approved: Department Of Planning And Zoning Date: *4/24/08*  
 Chief: Division Of Land Development

Approved: Department Of Engineering Date: *4/24/08*  
 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: \_\_\_\_\_ 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.

1/4" FLAT BAR BOLTED AT 12" C/C

2" x 2" x 3/16" TUBING AT 6" C/C EACH WAY WELDED AT ALL JOINING SIDES (OR OPTIONAL NO. 3 GALVANIZED REBAR)

5'-0" OPENING SOUTH SIDE ONLY

2.0" DIA. LOW FLOW ORIFICE

6'-8"

**TRASH RACK 'A' DETAIL**  
(NO SCALE)

**STORMWATER MANAGEMENT PROFILES AND DETAILS**  
**B.M.P. NO 3**  
**THE WARFIELDS II**  
**SECTION TWO**  
 BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

**OWNER**  
 Mr. Kenard Warfield, Jr., Mary Ellen Warfield  
 14451 Tridellphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

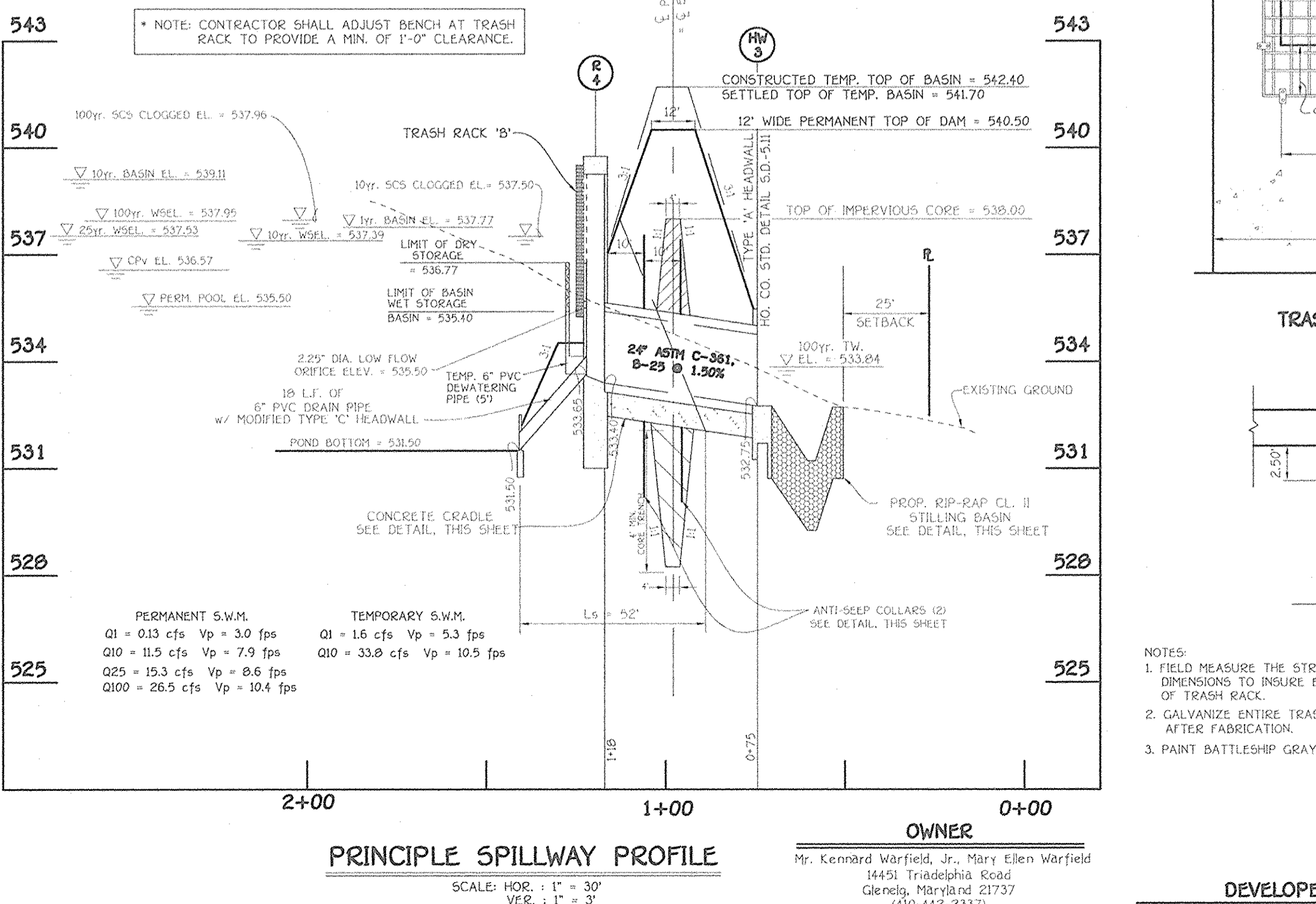
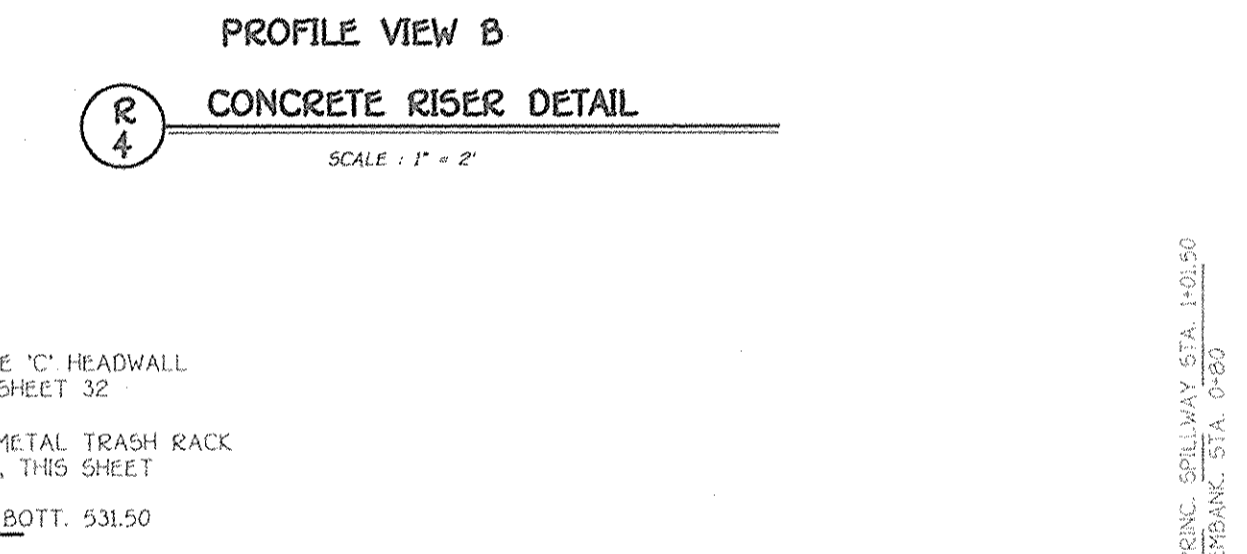
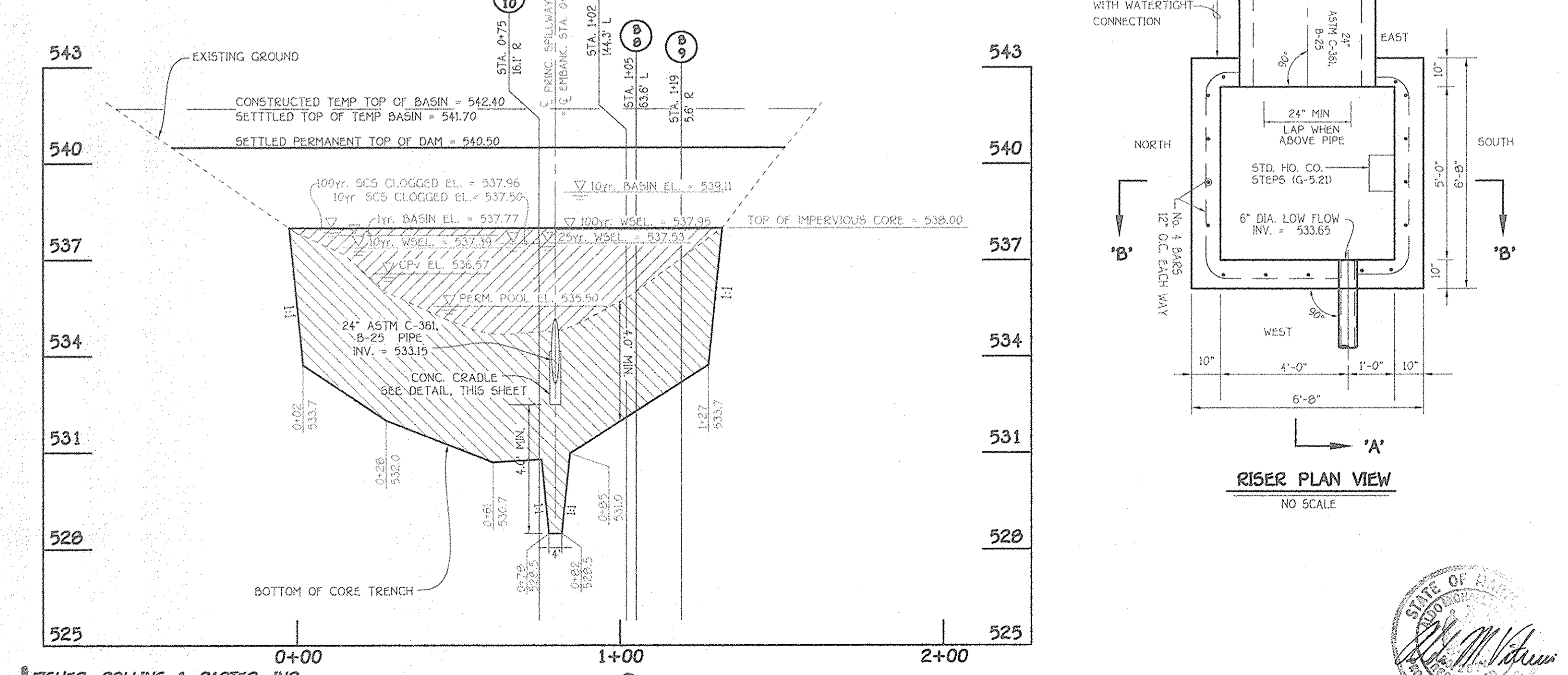
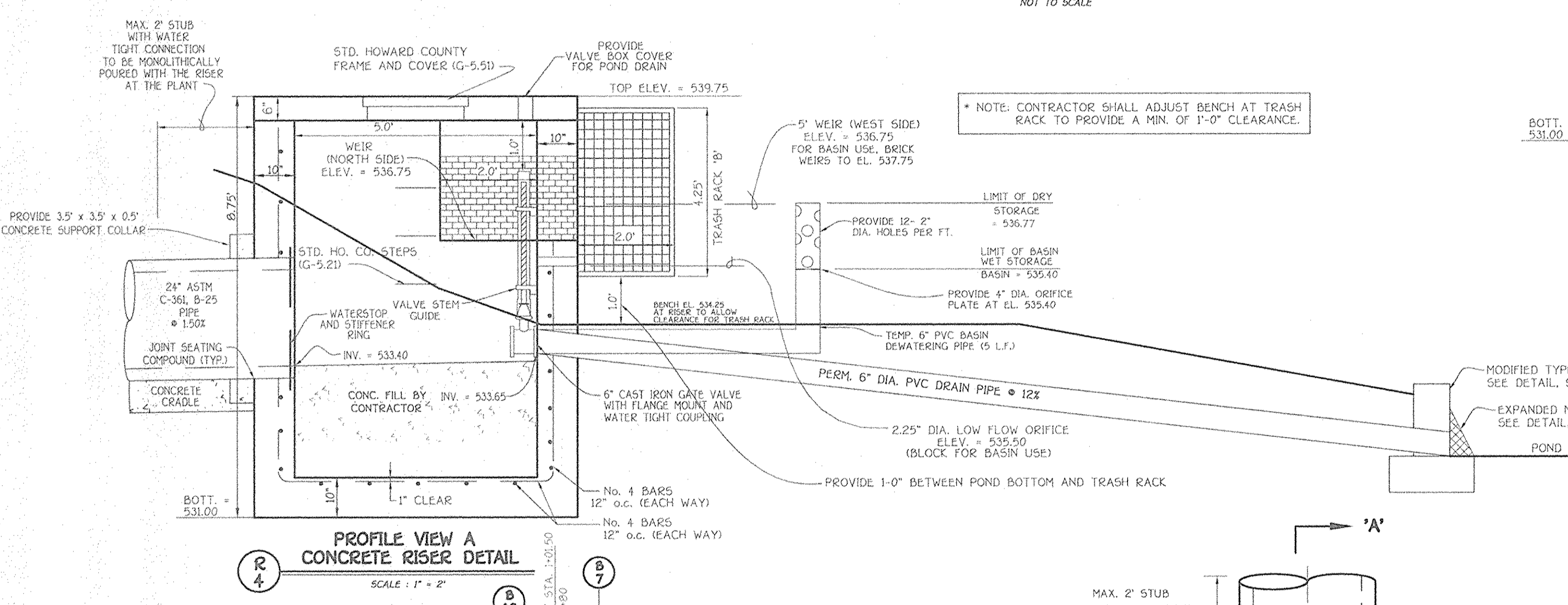
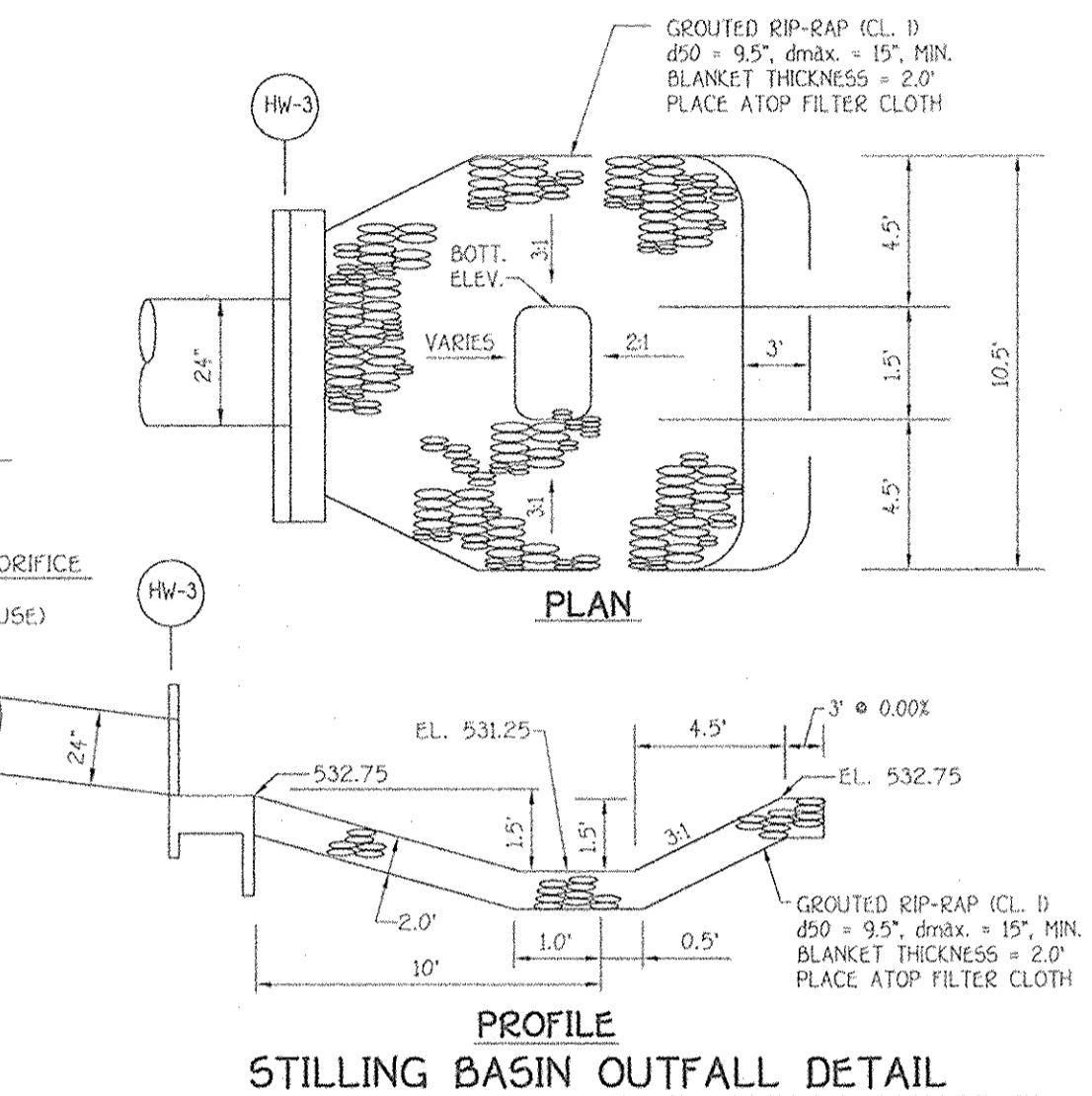
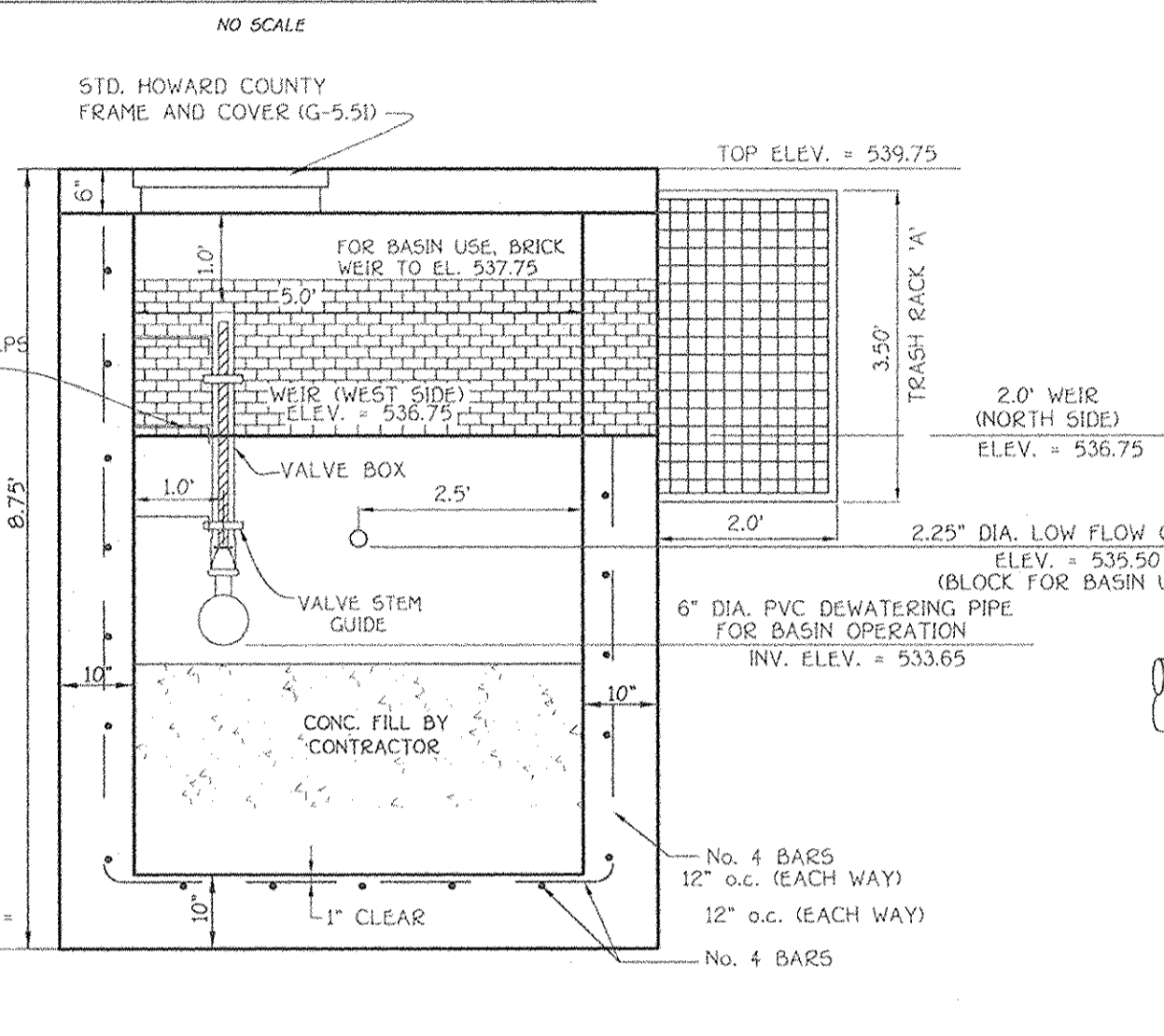
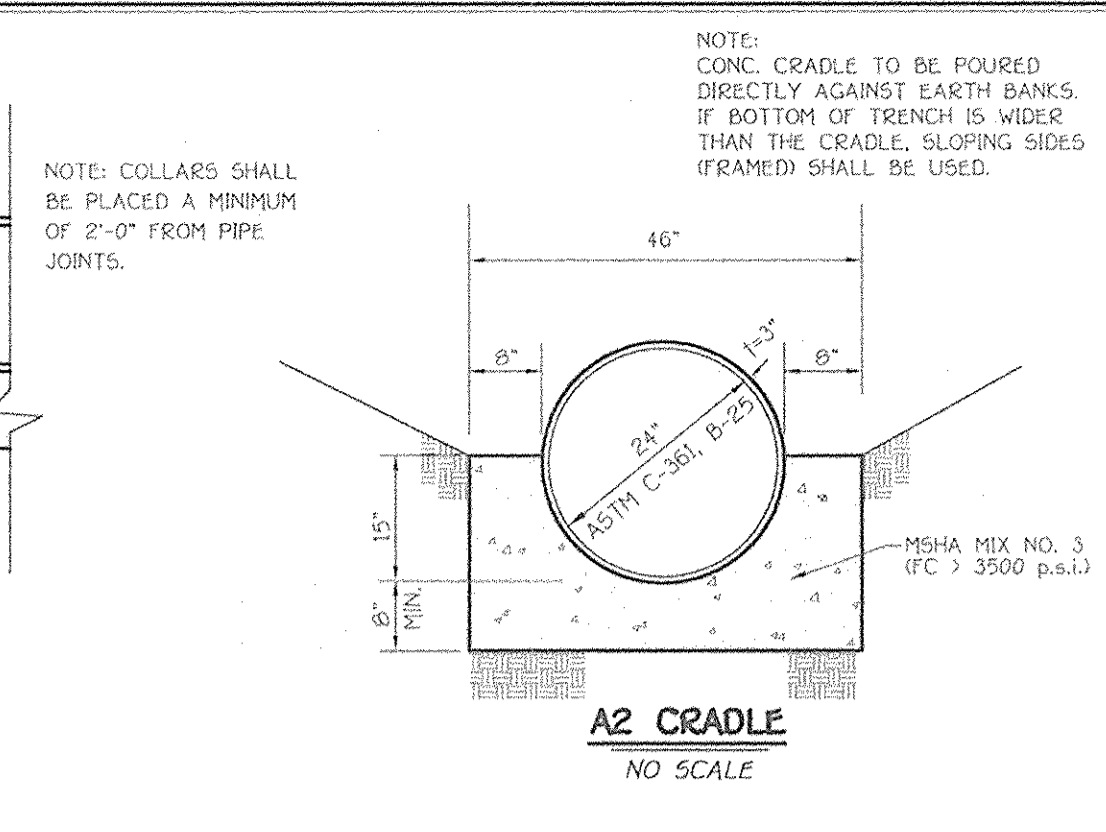
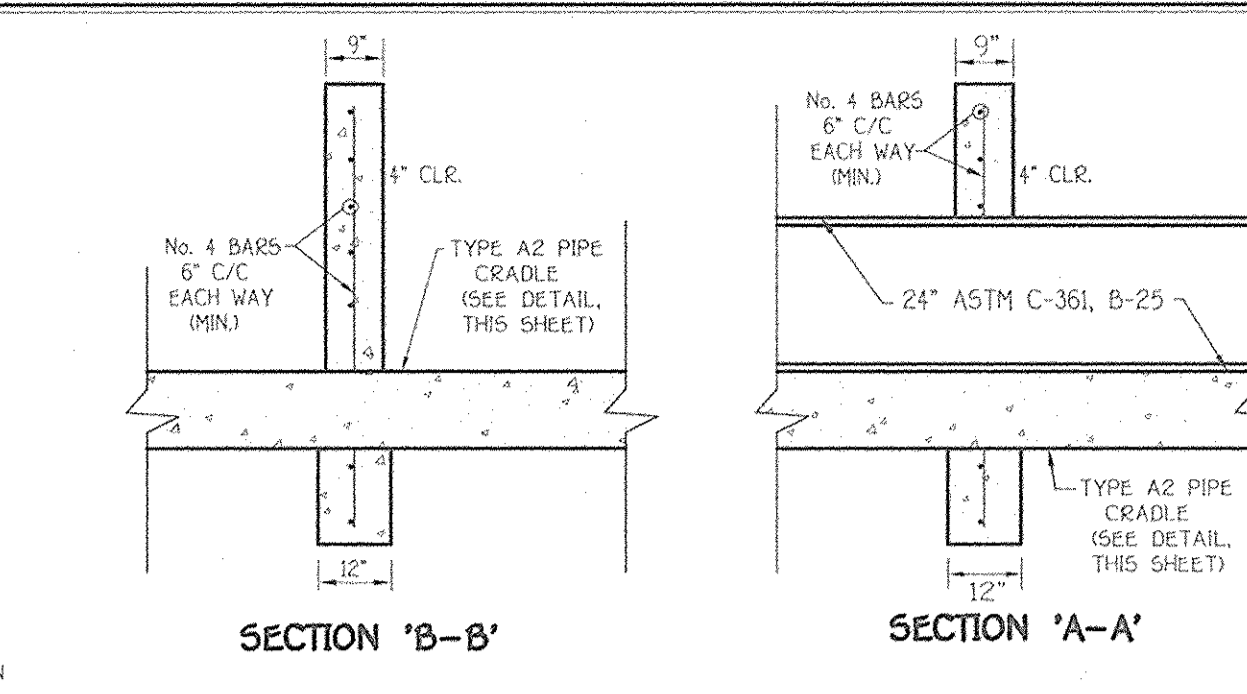
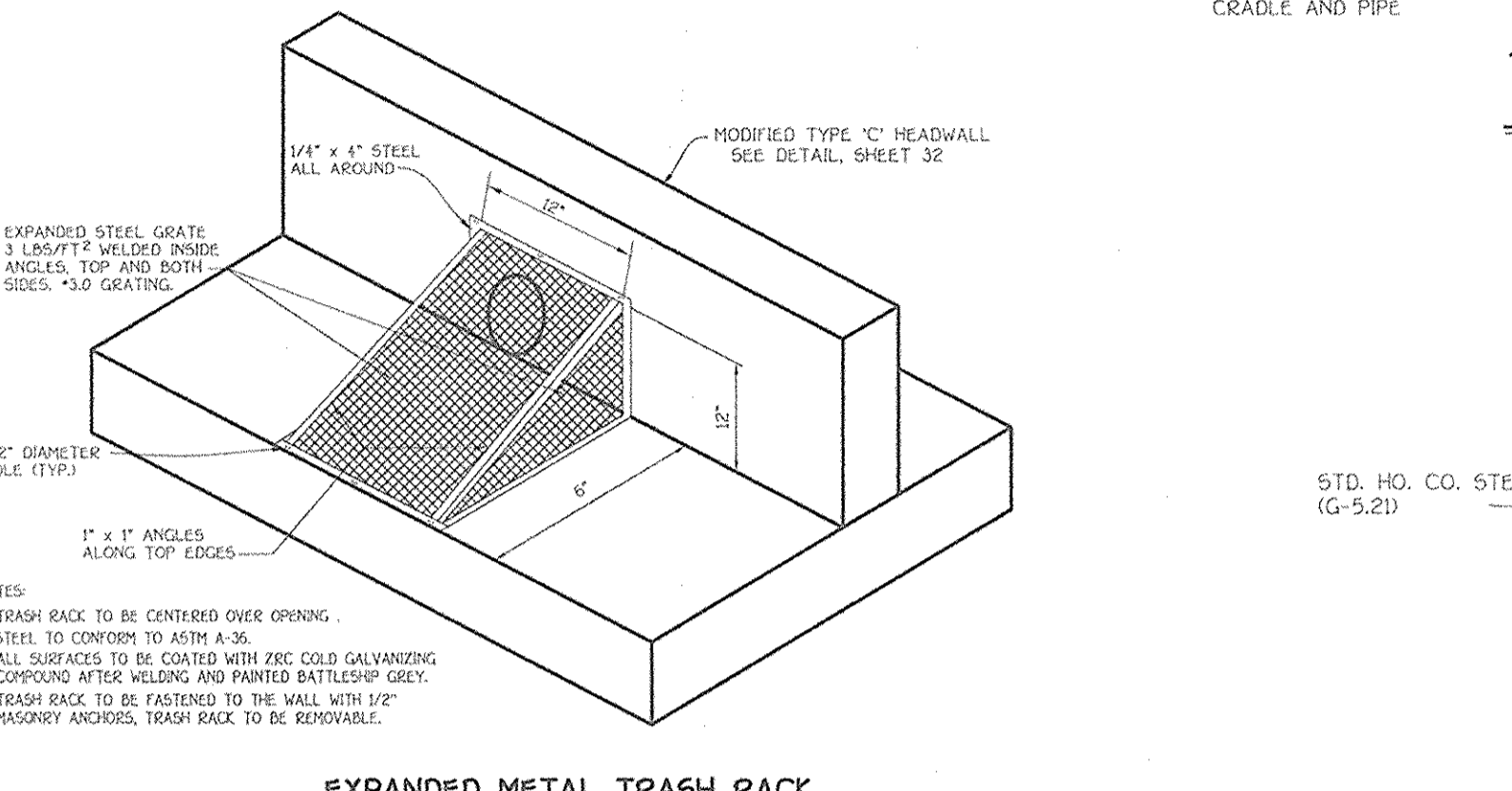
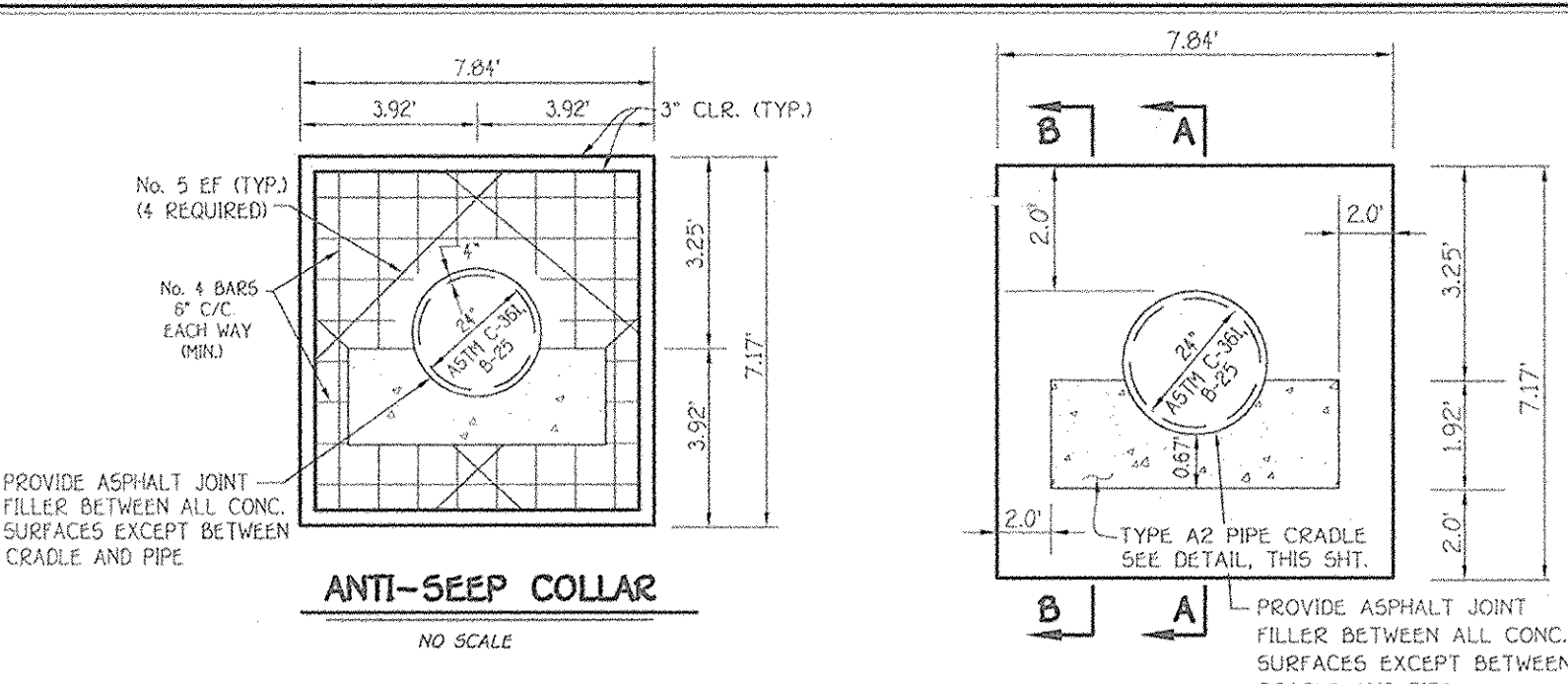
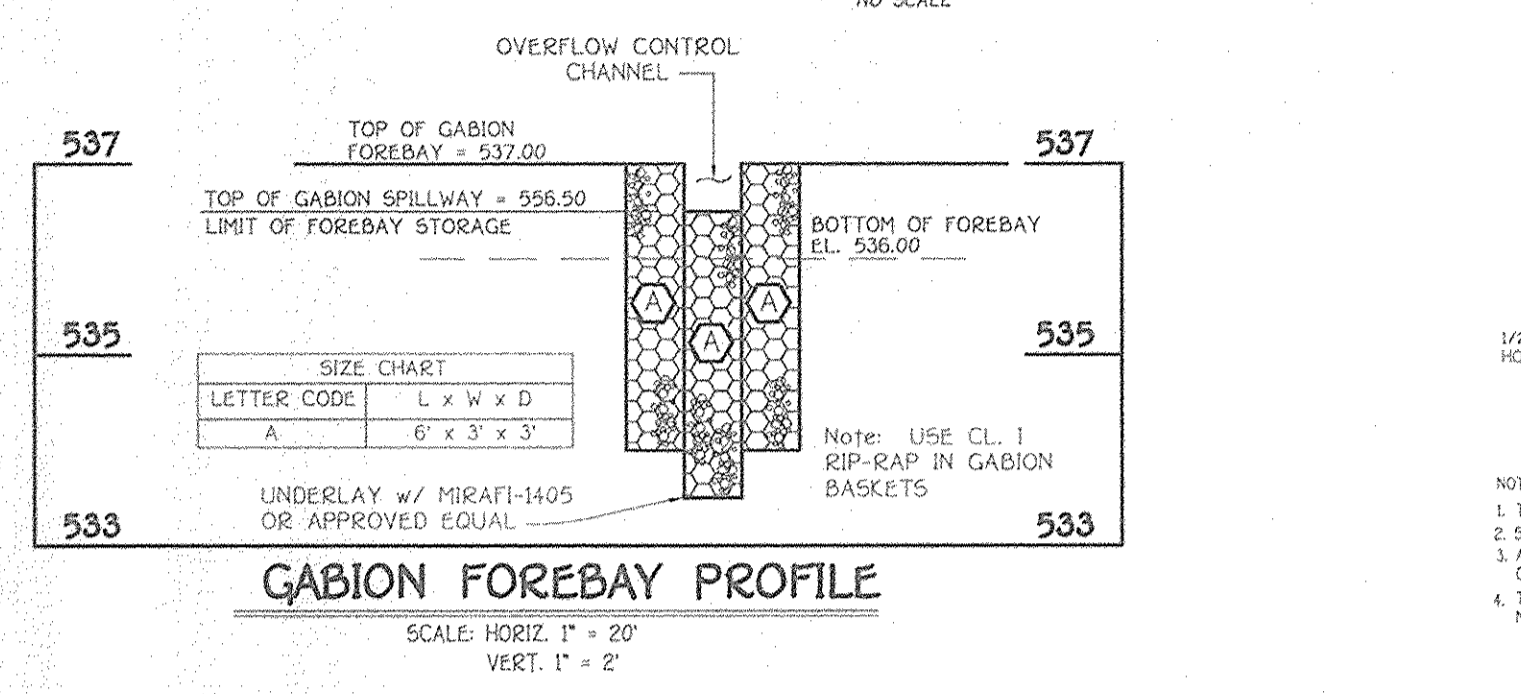
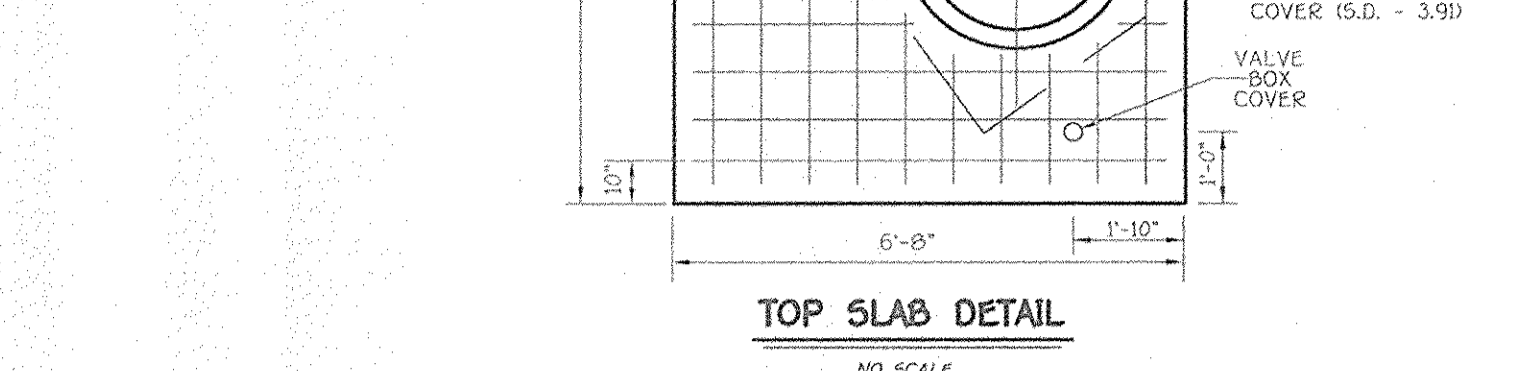
**DEVELOPER**  
 Warfield Brothers  
 14451 Tridellphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

ZONED: RC-DEO  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kenard Warfield, Jr., President  
 14451 Tridellphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)

TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 30 OF 40



- 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. SCOFFIELD CO. T-9055 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 SPECS.
  6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.



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 Shall Also Engage An On-Site Inspections By The Howard Soil Conservation District.

Signature Of Developer: *Kenard Warfield, Jr.*  
Printed Name Of Developer: **Kenard Warfield, Jr.**  
Date: **3-18-08**

By The Engineer:  
I Certify That These Plans For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Design 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 And I Certify That The Plans Meet 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 Of The Pond Within 30 Days Of Completion.

Signature Of Engineer: *William R. Williams, P.E.*  
Printed Name Of Engineer: **William R. Williams, P.E.**  
Date: **3-17-08**

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.

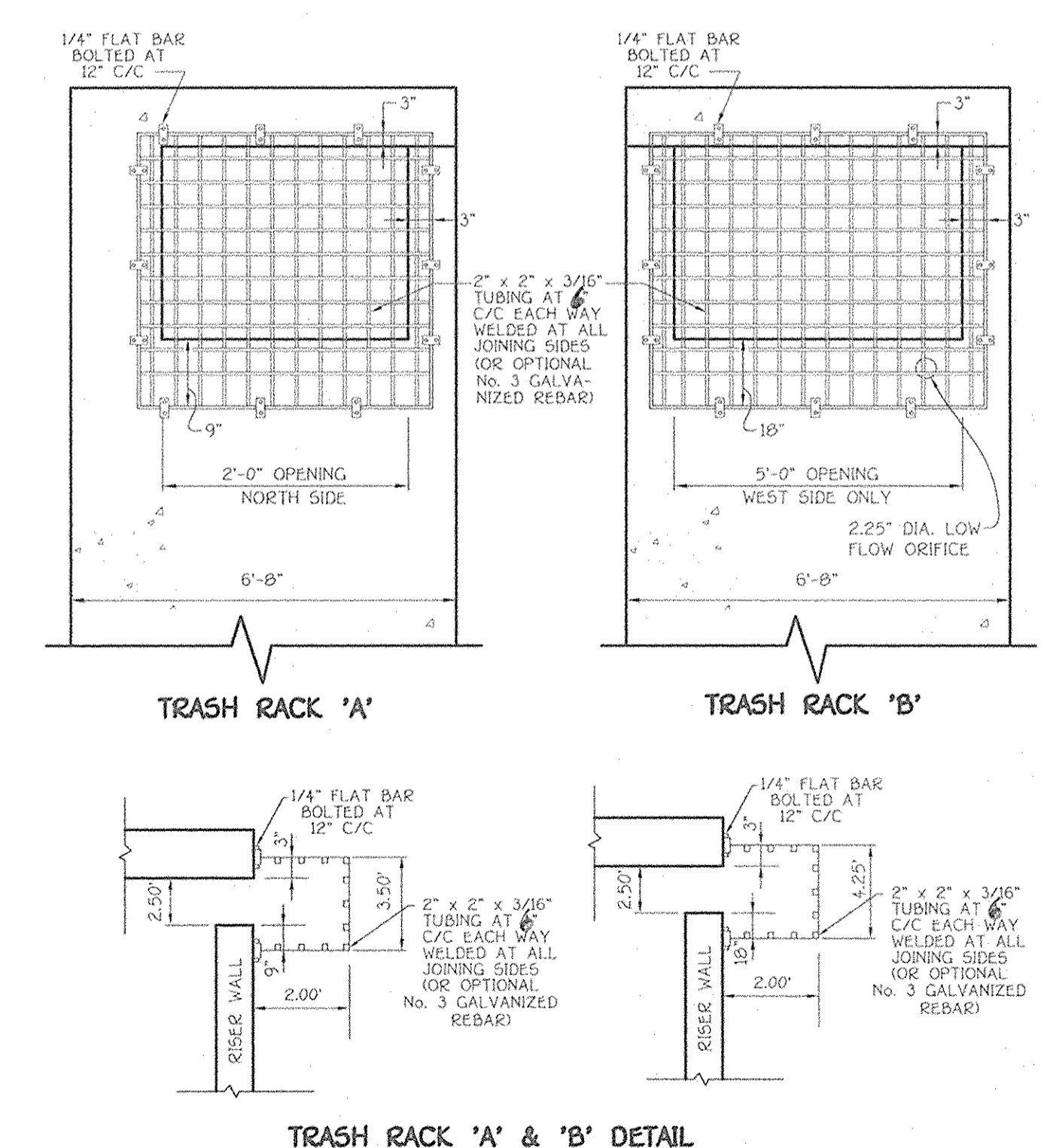
USA Natural Resources Conservation Service Date: *3/17/08*  
These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Howard Soil Conservation District Date: *4/7/08*  
Approved Department of Public Works Date: *4-15-08*  
Chief Bureau Of Highways  
Approved Department of Planning And Zoning Date: *4/24/08*  
Chief, Division Of Land Development  
Chief, Development Engineering Division Date: *4/24/08*

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 Meant 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. Certifier 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.



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.

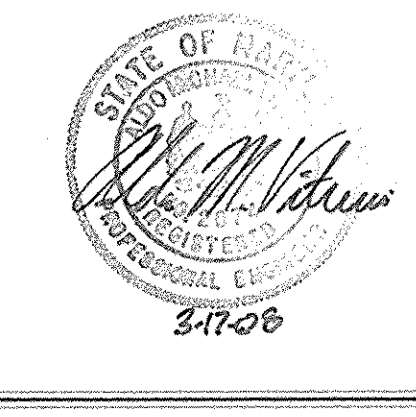
**STORMWATER MANAGEMENT PROFILES AND DETAILS**  
**B.M.P. NO. 4**  
**THE WARFIELDS II**  
**SECTION TWO**  
**BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'**

**OWNER**  
Mr. Kenard Warfield, Jr., Mary Ellen Warfield  
14451 Tridephelia Road  
Glenelg, Maryland 21737  
(410-442-2337)

**DEVELOPER**  
Ten Oaks Properties, Inc.  
C/O Mr. Kenard Warfield, Jr., President  
14451 Tridephelia Road  
Glenelg, Maryland 21737  
(410-442-2337)

ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 31 OF 40

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
1000 E. SOUTH ST., SUITE 100  
BETHESDA, MARYLAND 20814  
410-442-2337



# STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

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

## Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and shrub breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

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 25-foot radius around the inlet structure shall be cleared.

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

## EARTH FILL

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut-off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thickness 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 portion 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 heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density 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 as necessary to obtain that density, and is to be certified by the engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

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.

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

## 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.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 mesh and 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" measured perpendicular to the outside of the pipe or structure shall be under bedding, over and on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all materials shall be bituminous coated. Any adjoining soil 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 shall completely fill all voids adjacent to the flowable fill zone. 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 structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill zone shall be of the type and quality conforming to the specified for the core of the embankment or other embankment materials).

## Pipe Conduits

All pipes shall be circular in cross section.

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

1. Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appearance shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - Aluminum Coated Steel Pipe - This pipe and its appearance shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

Materials - Aluminum Pipe - This pipe and its appearance shall conform to the requirements of AASHTO Specification M-195 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

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

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALDORP NATIONAL PARK  
ELLSWORTH CITY, MARYLAND 21042  
(410) 442-2337

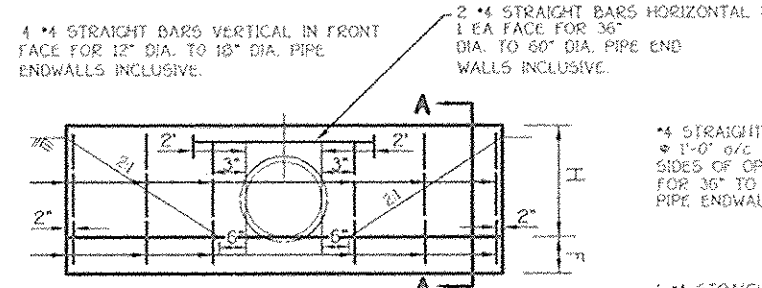
# OPERATION AND MAINTENANCE SCHEDULE FOR HOMEOWNER'S ASSOCIATION OWNED AND JOINTLY MAINTAINED STORMWATER MANAGEMENT FACILITIES

## ROUTINE MAINTENANCE

- The top and side slopes of the embankment shall be mowed a minimum of twice per year. Once in June and once in September. Other side slopes and maintenance access shall be mowed as needed.
- Debris and litter shall be removed during regular mowing operations and as needed.
- When deemed necessary for aesthetic reasons and upon the approval from the department of Public works, sediment shall be removed from the pond.

## NON-ROUTINE MAINTENANCE

- Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
- Sediment shall be removed from the pond, and forebay, no later than when the capacity of the pond or forebay, is half full of sediment, or, when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

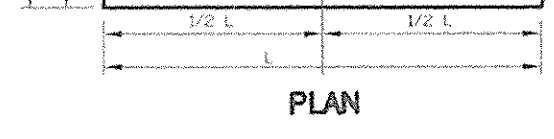


## ELEVATION

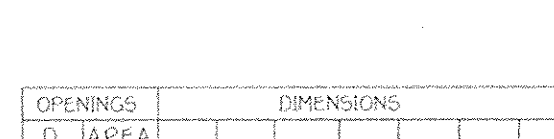
5' DISTANCES FROM INSIDE SURFACE OF PIPE TO VERTICAL BARS IN FRONT AND REAR FACE.  
4" FOR 12" DIA. TO 18" DIA. PIPES INCL.  
6" FOR 24" DIA. TO 36" DIA. PIPES INCL.  
8" FOR 42" DIA. TO 60" DIA. PIPES INCL.



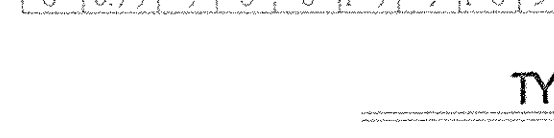
## DISPOSITION OF BARS - DETAIL



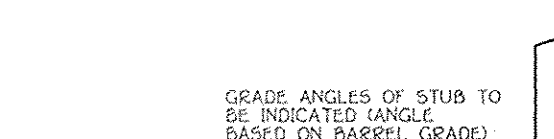
## PLAN



## KEYED JOINT DETAIL WALL SECTION TO WALL SECTION



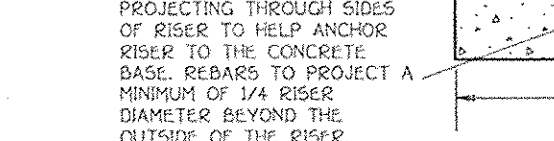
## TYPICAL METAL BOLLARD DETAIL



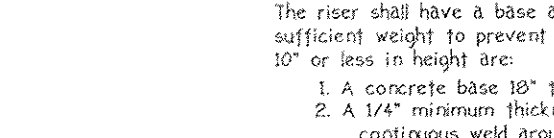
## RISER BASE DETAIL



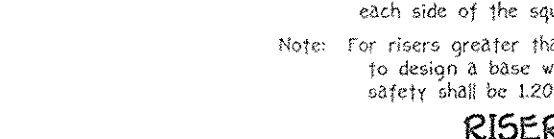
## TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE



## RISER BASE DETAIL



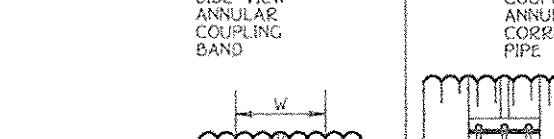
## TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE



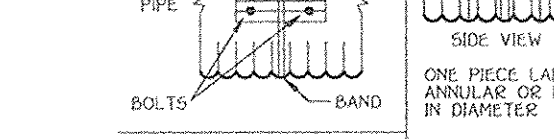
## RISER BASE DETAIL



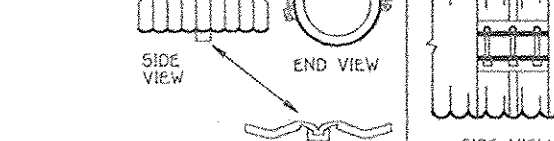
## TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE



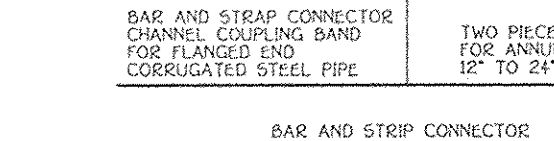
## RISER BASE DETAIL



## TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE



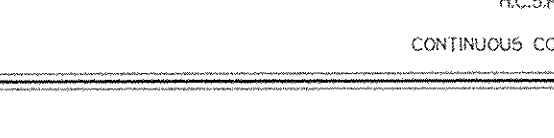
## RISER BASE DETAIL



## TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE



## RISER BASE DETAIL



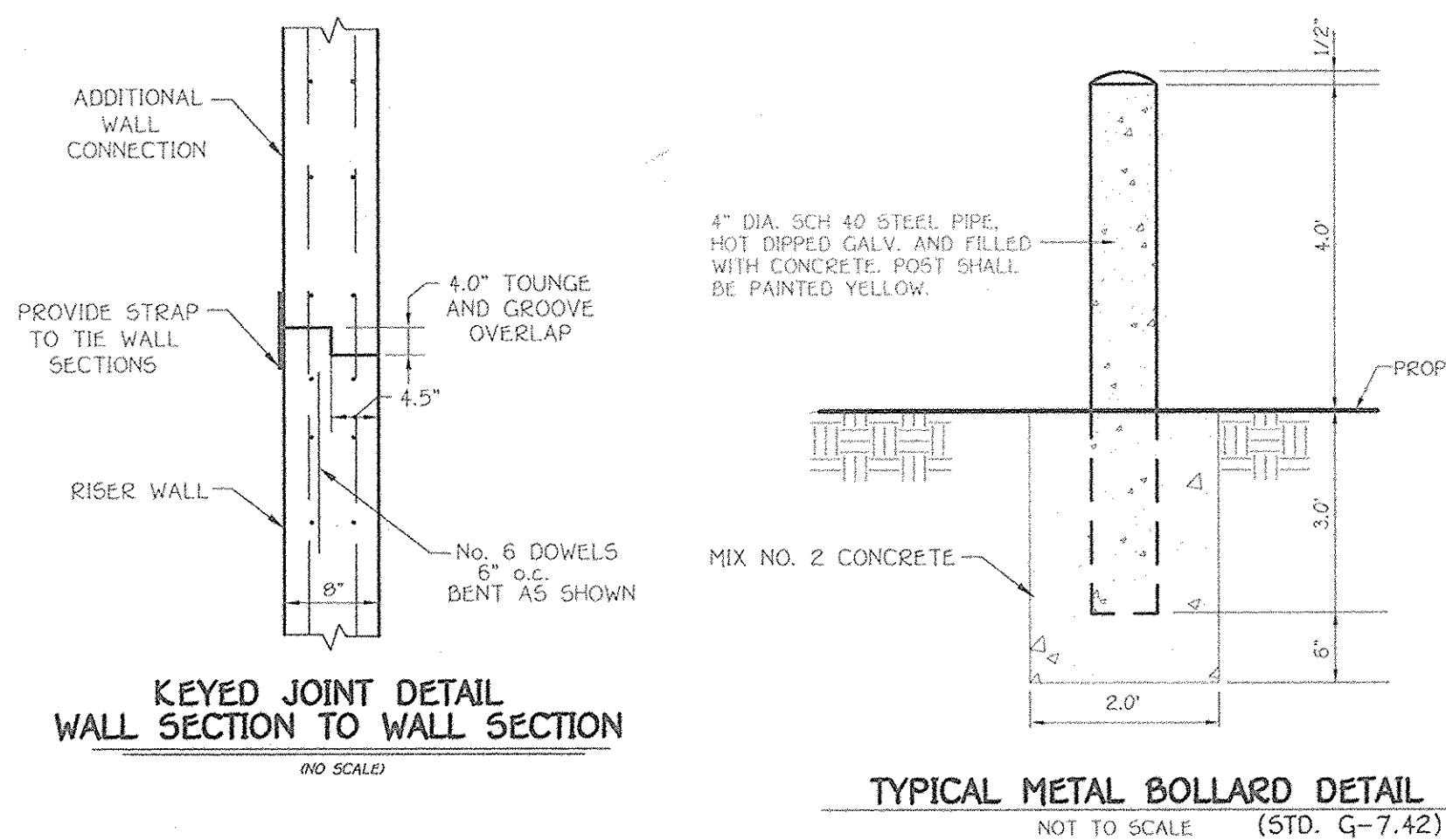
## TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE

## Embankment and Cut-off Trench Construction

The areas of proposed SWM pond facilities should be stripped of topsoil and any other unsuitable materials from the embankment or structure areas in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be proofrolled with a loaded dump truck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.

A representative of the Geotechnical Engineer should be present to monitor placement and compaction of fill for the embankments and cut-off trenches. In accordance with NRCS-MD Code No. 37B Pond Standards/Specifications, soils considered suitable for the centers of embankments and cut-off trenches shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve.

It is our professional opinion that in addition to the soil materials described above a fine-grained soil, including Silt (ML) with a plasticity index of 10 or more can be utilized for the centers of the embankments and core trenches. All fill materials must be placed and compacted in accordance with NRCS-MD Code No. 37B specifications.



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 Shall Provide Periodic On-Site Inspections By The Howard Soil Conservation District.  
**Kennard Warfield, Jr.**  
Signature Of Developer  
Printed Name Of Developer  
3-18-08  
Date

By the Engineer:  
I Certify That This Plan 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 Noticed The Developer That He/She Must 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.  
**W. M. Adams**  
Signature Of Engineer  
Printed Name Of Engineer  
3-18-08  
Date

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.  
**W. M. Adams**  
Signature  
Printed Name  
4/2/08  
Date

Approved: Department Of Public Works  
**W. M. Adams**  
Signature  
Printed Name  
4-10-08  
Date

Approved: Department Of Planning And Zoning  
**W. M. Adams**  
Signature  
Printed Name  
4/24/08  
Date

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 Satisfy 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 Release Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



**OWNER**  
Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410) 442-2337  
AND  
Warfield Brothers  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410) 442-2337

## DEVELOPER

Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr. President  
14451 Triadelphia Road  
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**STORMWATER MANAGEMENT NOTES AND DETAILS**  
**THE WARFIELDS II**  
SECTION TWO  
BUILDABLE LOTS 6-88, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'  
ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 9 PARCEL NO. 58, 109, 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 32 OF 40





HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.  
RECORD OF SOIL EXPLORATION

Page 1 of 1

ELEV.	SOIL DESCRIPTION	STRAI DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
537.0	SURFACE	0.0						9" Topsoil
537.0	Brown, moist, loose, silty sand, trace organics (SM)	2.5		I	3-4-5	1	14"	No groundwater encountered while drilling
	Tan and brown, moist, loose, silty sand, trace gravel and mica (SM)	5.5		UD	2-3-6	2	10"	Caved in at 4.3' at Completion
	Fine, moist, medium dense to dense, silty sand, trace mica (SM)	19.0		UD	6-16-13	3	18"	Caved in at 5.5' after 24 hours
	Bottom of Test Hole at 10.0'	10.0		D	14-25-26	4	16"	
		15.0						Backfilled after 24 hours
		20.0						

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED  
 SAMPLE CONDITIONS: DISINTEGRATED  
 GROUND WATER DEPTH: AT COMPLETION 0.0 FT.  
 BORING METHOD: HSA-HOLLOW STEM AUGERS

HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.  
RECORD OF SOIL EXPLORATION

Page 1 of 1

ELEV.	SOIL DESCRIPTION	STRAI DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
531.0	SURFACE	0.0						9" Topsoil
531.0	Brown, moist, loose silty sand trace mica (SM)	2.5		I	2-2-3	1	14"	No groundwater encountered while drilling
	Gray, moist, medium stiff clay, trace gravel, organic mica (ML)	8.0		UD	2-3-3	2	10"	Caved in at 4.3' at Completion
	Bottom of Test Hole at 8.0'	8.0		D	10-18-17	3	13"	Caved in at 4.0' after 24 hours
		10.0						
		15.0						Backfilled after 24 hours
		20.0						

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED  
 SAMPLE CONDITIONS: DISINTEGRATED  
 GROUND WATER DEPTH: AT COMPLETION 0.0 FT.  
 BORING METHOD: HSA-HOLLOW STEM AUGERS

HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.  
RECORD OF SOIL EXPLORATION

Page 1 of 1

ELEV.	SOIL DESCRIPTION	STRAI DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
540.5	SURFACE	0.0						9" Topsoil
540.5	Brown, moist, loose silty sand, some organics, trace mica (SM)	2.5		UD	1-2-3	1	11"	No groundwater encountered while drilling
	Reddish brown, moist, loose silty sand, trace organics, trace mica (SM)	6.0		UD	2-3-5	2	15"	Caved in at 4.4' at Completion
	Reddish brown, moist, medium dense sandy silt-silty sand, trace mica (ML-SM)	8.0		UD	3-4-0	3	18"	Caved in at 4.4' after 24 hours
	Bottom of Test Hole at 8.0'	8.0						Moved 5.0' and installed a 4.0' In-Situ pipe
		10.0						
		15.0						
		20.0						

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED  
 SAMPLE CONDITIONS: DISINTEGRATED  
 GROUND WATER DEPTH: AT COMPLETION 0.0 FT.  
 BORING METHOD: HSA-HOLLOW STEM AUGERS

HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.  
RECORD OF SOIL EXPLORATION

Page 1 of 1

ELEV.	SOIL DESCRIPTION	STRAI DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
527.0	SURFACE	0.0						9" Topsoil
527.0	Brown, moist, medium, stiff, sandy silt, trace organics, trace mica (ML)	2.5		I	1-3-4	1	17"	No groundwater encountered while drilling
	Reddish brown moist, loose silty sand, trace gravel and mica (SM)	6.0		D	2-4-4	2	10"	Caved in at 3.8' at Completion
	Reddish brown, moist, medium dense silty sand, trace organics (SM)	8.0		D	4-7-9	3	10"	Caved in at 3.8' after 24 hours
	Bottom of Test Hole at 8.0'	8.0						
		10.0						
		15.0						Backfilled after 24 hours
		20.0						

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED  
 SAMPLE CONDITIONS: DISINTEGRATED  
 GROUND WATER DEPTH: AT COMPLETION 0.0 FT.  
 BORING METHOD: HSA-HOLLOW STEM AUGERS

HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.  
RECORD OF SOIL EXPLORATION

Page 1 of 1

ELEV.	SOIL DESCRIPTION	STRAI DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
524.5	SURFACE	0.0						9" Topsoil
524.5	Brown, moist, loose, silty sand, trace organics, trace gravel (SM)	2.5		UD	1-3-2	1	14"	No groundwater encountered while drilling
	Brown, moist, loose, silty sand to sandy silt, trace shale fragments (SM-ML)	5.5		UD	2-5-8	2	15"	Caved in at 4.3' at Completion
	Reddish brown, moist, medium stiff to stiff, miscellaneous sandy silt, with rock fragments (ML)	10.0		UD	3-7-12	3	13"	Moved 5.0' and installed a 4.0' In-Situ pipe
	Bottom of Test Hole at 8.0'	8.0						
		10.0						
		15.0						Backfilled after 24 hours
		20.0						

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED  
 SAMPLE CONDITIONS: DISINTEGRATED  
 GROUND WATER DEPTH: AT COMPLETION 0.0 FT.  
 BORING METHOD: HSA-HOLLOW STEM AUGERS

HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.  
RECORD OF SOIL EXPLORATION

Page 1 of 1

ELEV.	SOIL DESCRIPTION	STRAI DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
485.8	SURFACE	0.0						9" Topsoil
485.8	Brown, moist, loose, silty sand, trace organics, trace mica and organics (SM)	2.5		UD	3-3-4	1	6"	No groundwater encountered while drilling
	Brown, moist, loose, silty sand to sandy silt, trace mica and organics (ML)	5.5		UD	3-4-6	2	14"	
	Reddish brown, moist, medium stiff to stiff, miscellaneous sandy silt, with rock fragments (ML)	10.0		UD	4-5-5	3	13"	Caved in at 6.6' at Completion
	Bottom of Test Hole at 10.0'	10.0			6-18-11	4	12"	Moved 5.0' and installed a 5.0' In-Situ pipe
		15.0						Caved in at 6.5' after 24 hours
		20.0						Backfilled after 24 hours

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED  
 SAMPLE CONDITIONS: DISINTEGRATED  
 GROUND WATER DEPTH: AT COMPLETION 0.0 FT.  
 BORING METHOD: HSA-HOLLOW STEM AUGERS

HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.  
RECORD OF SOIL EXPLORATION

Page 1 of 1

ELEV.	SOIL DESCRIPTION	STRAI DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
483.0	SURFACE	0.0						9" Topsoil
483.0	Brown, moist, loose silty sand, trace mica and organics (SM)	2.5		UD	2-3-3	1	15"	No groundwater encountered while drilling
	Brown, moist, medium stiff sandy silt, trace mica and organics (ML)	6.0		I	1-3-3	2	13"	Moved 5.0' and installed a 4.0' In-Situ pipe
	Brown, moist, medium stiff sandy silt, trace mica and organics (ML)	8.0		I	2-3-5	3	11"	Caved in at 7.6' at Completion
	Reddish brown, moist, loose silty sand sandy silt, trace mica, organics, and gravel (SM-ML)	10.0		UD	2-5-4	4	17"	Caved in at 4.3' after 24 hours
	Bottom of Test Hole at 10.0'	10.0						
		15.0						
		20.0						

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED  
 SAMPLE CONDITIONS: DISINTEGRATED  
 GROUND WATER DEPTH: AT COMPLETION 0.0 FT.  
 BORING METHOD: HSA-HOLLOW STEM AUGERS

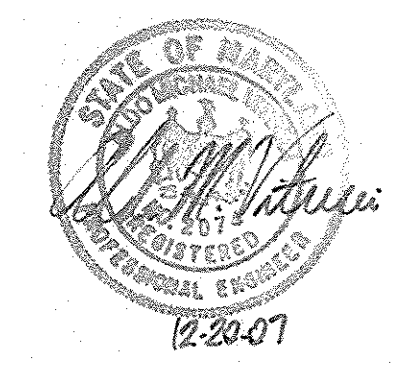
HILLIS - CARNES  
ENGINEERING ASSOCIATES, INC.  
RECORD OF SOIL EXPLORATION

Page 1 of 1

ELEV.	SOIL DESCRIPTION	STRAI DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS	NO.	REC.	BORING & SAMPLING NOTES
481.5	SURFACE	0.0						9" Topsoil
481.5	Brown, moist, loose, silty sand, trace mica and organics (SM)	2.5		I	2-2-4	1	10"	No groundwater encountered while drilling
	Brown, moist, soft, sandy silt, trace mica (ML)	6.0		I	2-2-2	2	9"	
	Brown, moist, medium stiff sandy silt, trace mica and organics (ML)	8.0		I	22-3-4	3	15"	Caved in at 6.7' at Completion
	Bottom of Test Hole at 10.0'	10.0		UD	2-6-5	4	13"	Moved 5.0' and installed a 4.0' In-Situ pipe
		15.0						Caved in at 5.0' after 24 hours
		20.0						Backfilled after 24 hours

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED  
 SAMPLE CONDITIONS: DISINTEGRATED  
 GROUND WATER DEPTH: AT COMPLETION 0.0 FT.  
 BORING METHOD: HSA-HOLLOW STEM AUGERS

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Cindy K... 4/21/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 William Z... 4-10-08  
 CHIEF, BUREAU OF HIGHWAYS



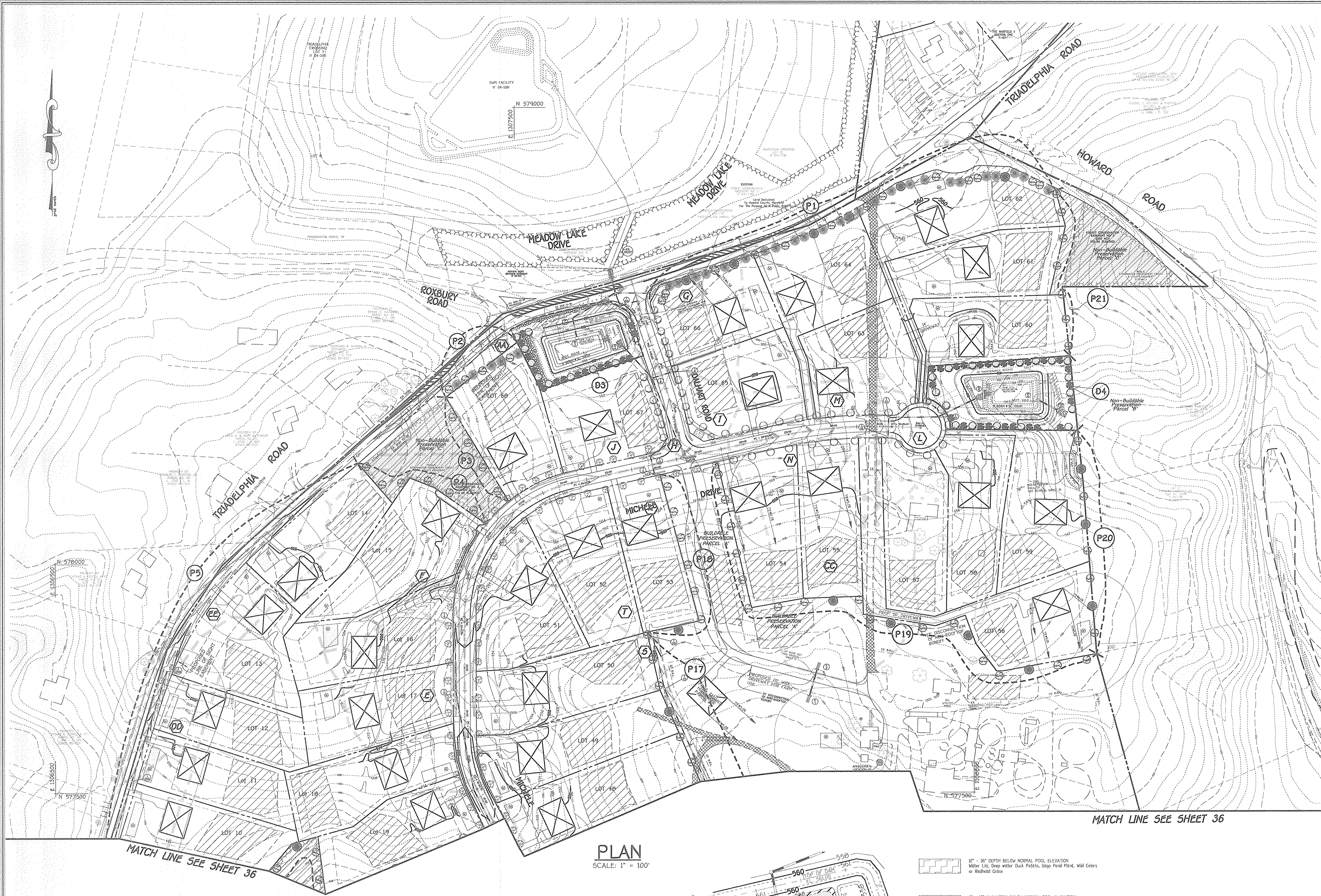
FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 1277 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 468-2859

OWNER: Mr. Kenneth Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)  
 DEVELOPER: Ten Oaks Properties, Inc.  
 C/O Mr. Kenneth Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)  
 SOIL BORINGS THE WARFIELDS II SECTION TWO  
 BUILDABLE LOTS 6-6B, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'  
 ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 C/O Mr. Kenneth Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410-442-2337)  
 DATE: DECEMBER, 2007  
 SHEET 34 OF 40

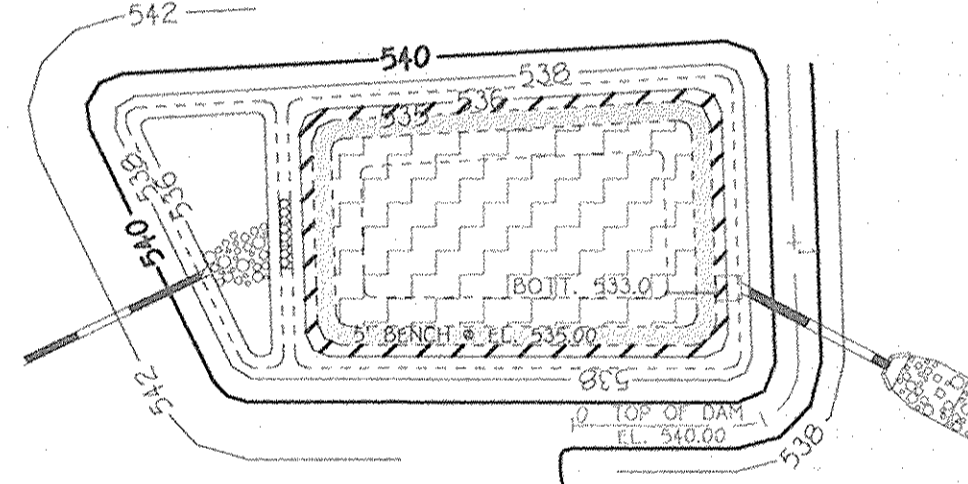
*Cindy Hamer*  
CHIEF, DIVISION OF LAND DEVELOPMENT *ml*  
DATE: 4/24/08

*William J. M...*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION *WJ*  
DATE: 4/22/08

*William J. M...*  
CHIEF, BUREAU OF HIGHWAYS *WJ*  
DATE: 4-10-08



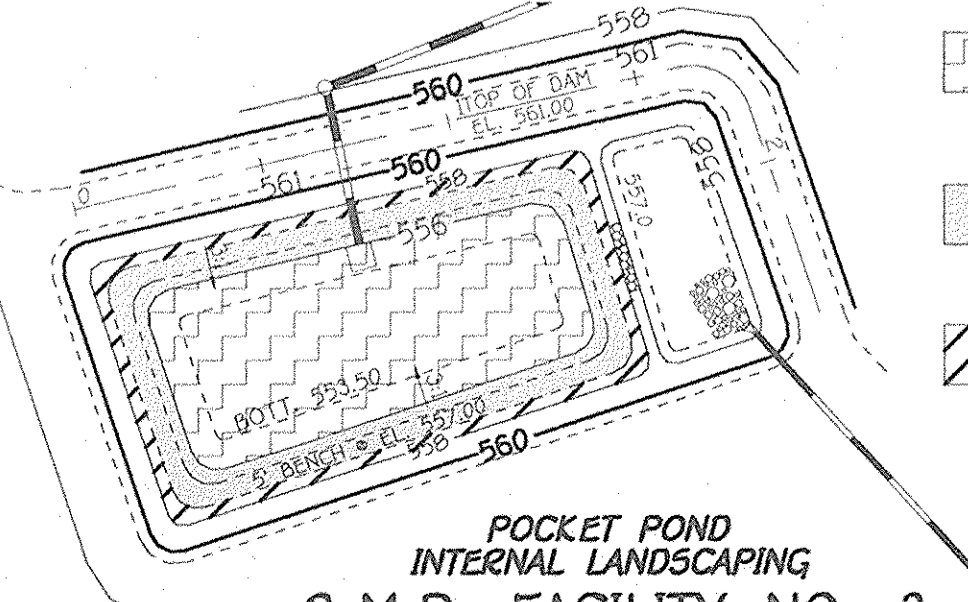
- 12" - 36" DEPTH BELOW NORMAL POOL ELEVATION  
Water Lily, Deep water Duck Potamo, Sago Pond Plant, Wild Celery or Redhead Grass
- 0" - 12" ELEVATION BELOW NORMAL POOL ELEVATION  
Blue Flag Iris, Duck Potamo, Flowering Bulrush, Softstalk Sedge, Lobelia, Pond Cress or Various Asters
- 0" - 12" ELEVATION ABOVE NORMAL POOL ELEVATION  
New England Aster, Marsh Aster, Marsh Marigold, Tussock Sedge, Spotted Joe Pie Weed, Forget Me Not, Inkberry, Purple Oyster Dogwood, Pin Oak, River Birch, Sycamore, Swamp White Oak, Weeping Willow or Dawn Redwood



MICRO POOL EXTENDED DETENTION POND  
INTERNAL LANDSCAPING  
B.M.P. FACILITY NO. 4  
SCALE: 1" = 50'

MATCH LINE SEE SHEET 36

PLAN  
SCALE: 1" = 100'



POCKET POND  
INTERNAL LANDSCAPING  
B.M.P. FACILITY NO. 3  
SCALE: 1" = 50'

- 12" - 36" DEPTH BELOW NORMAL POOL ELEVATION  
Water Lily, Deep water Duck Potamo, Sago Pond Plant, Wild Celery or Redhead Grass
- 0" - 12" ELEVATION BELOW NORMAL POOL ELEVATION  
Blue Flag Iris, Duck Potamo, Flowering Bulrush, Softstalk Sedge, Lobelia, Pond Cress or Various Asters
- 0" - 12" ELEVATION ABOVE NORMAL POOL ELEVATION  
New England Aster, Marsh Aster, Marsh Marigold, Tussock Sedge, Spotted Joe Pie Weed, Forget Me Not, Inkberry, Purple Oyster Dogwood, Pin Oak, River Birch, Sycamore, Swamp White Oak, Weeping Willow or Dawn Redwood

OWNER

Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Glenelo, Maryland 21737  
(410-442-2337)  
And  
Warfield Brothers  
14451 Triadelphia Road  
Glenelo, Maryland 21737  
(410-442-2337)

DEVELOPER

Ten Oaks Properties, Inc  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Glenelo, Maryland 21737  
(410-442-2337)

DRAINAGE AREA MAP AND LANDSCAPE PLAN  
THE WARFIELDS II  
SECTION TWO  
BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 35 OF 40



FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FIRE  
ELLCOTT CITY, MARYLAND 20842  
1001 48 - 2025



MATCH LINE SEE SHEET 35

MATCH LINE SEE SHEET 35

MATCH LINE SEE SHEET 37

MATCH LINE SEE SHEET 37

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Ind. Hanita* 4/24/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT IV  
 DATE

*And Demmer* 4/24/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION IV  
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Walter J. ...* 4-10-08  
 CHIEF, BUREAU OF HIGHWAYS MS  
 DATE

PLAN  
 SCALE: 1" = 100'

**OWNER**

Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelo, Maryland 21737  
 (410-442-2337)  
 And  
 Warfield Brothers  
 14451 Triadelphia Road  
 Glenelo, Maryland 21737  
 (410-442-2337)

**DEVELOPER**

Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelo, Maryland 21737  
 (410-442-2337)

**DRAINAGE AREA MAP AND LANDSCAPE PLAN**  
**THE WARFIELDS II**  
 SECTION TWO  
 BUILDABLE LOTS 6-60, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

ZONED: RC-DEO

TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 36 OF 40

K:\Drawings\330310 Warfields II\Drawings\FINALS\330310 SECT 2 SHEET 35-37 DA MAP AND LANDSCAPE PLAN.dwg, 12/20/2007 1:32:22 PM

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK • 2072 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2955



*Cindy Harmon*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 4/18/08

*Walter D. W. W.*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 4/22/08

*Walter Z. W.*  
CHIEF, BUREAU OF HIGHWAYS  
DATE: 4-18-08

**SCHEDULE D - S.W.M. AREA LANDSCAPING**

LINEAR FEET OF PERIMETER	D-1: 1017'	D-2: 1209'	D-3: 763'	D-4: 913'
NUMBER OF TREES REQUIRED:				
SHADE TREES	20	24	15	18
EVERGREEN TREES	25	30	19	23
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	NO	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO	NO	NO	NO
NUMBER OF TREES PROVIDED:				
SHADE TREES	20	24	9	18
EVERGREEN TREES	25	30	16	23
SHRUBS	-	-	90	-

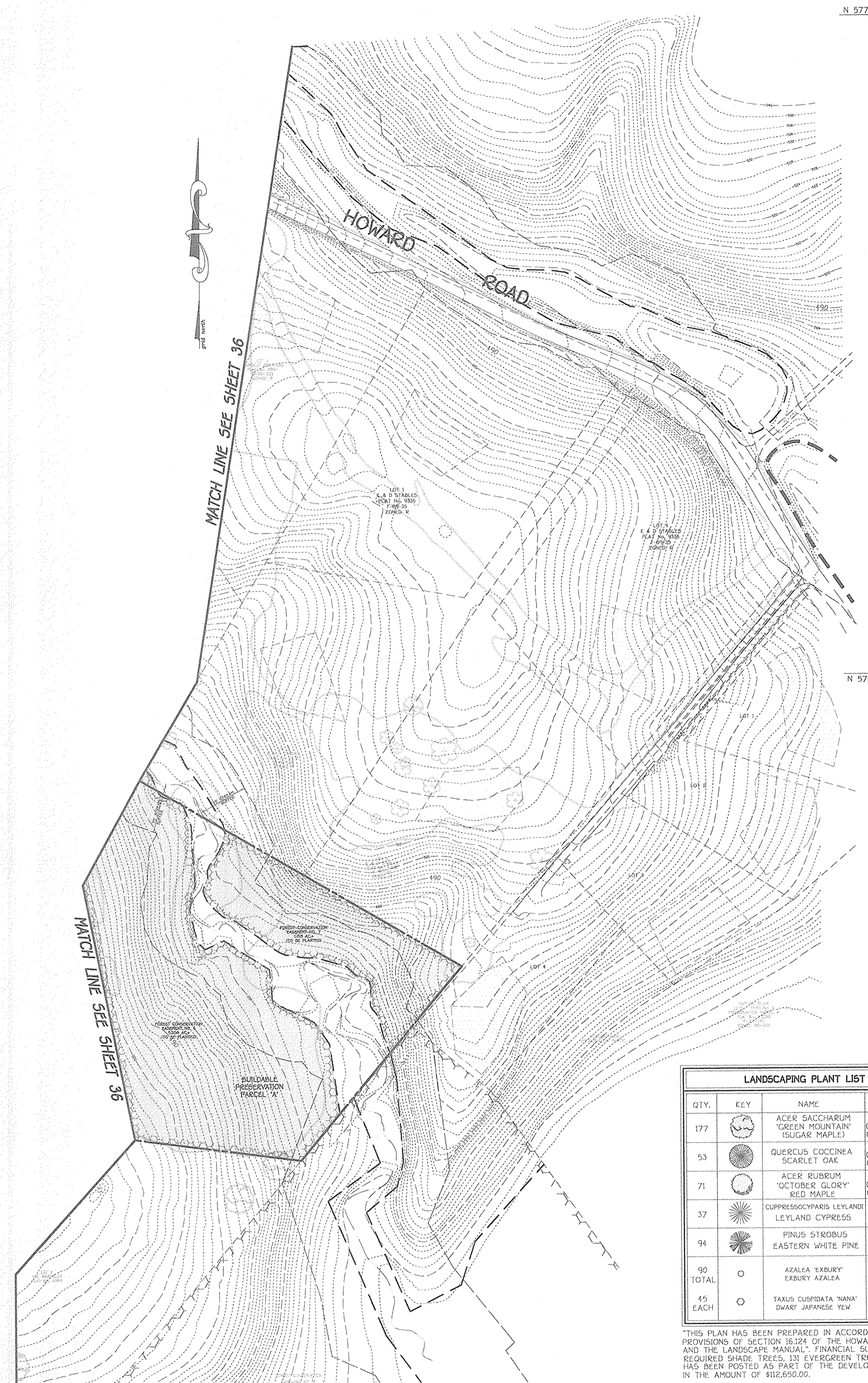
NOTE: FOR PERIMETER D-3, 6 SHADE & 3 EVERGREEN TREES HAVE BEEN SUBSTITUTED WITH 90 SHRUBS. THIS SUBSTITUTION IS PROVIDED FOR SIGHT DISTANCE.

**SCHEDULE A - PERIMETER LANDSCAPE EDGE**

PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED & PROVIDED		
						SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	ADJACENT TO ROAD	B	972'	NO	NO	19	24	-
P-2	ADJACENT TO ROAD	B	197'	NO	NO	4	5	-
P-3	ADJACENT TO PERIMETER	A	265'	NO	NO	4	-	-
P-4	ADJACENT TO PERIMETER	A	377'	NO	NO	6	-	-
P-5	FRONT TO ROAD	N/A	1140'	NO	NO	-	-	-
P-6	ADJACENT TO PERIMETER	A	705'	NO	NO	12	-	-
P-7	FRONT TO ROAD	N/A	685'	NO	NO	-	-	-
P-8	ADJACENT TO PERIMETER	A	524'	NO	NO	9	-	-
P-9	ADJACENT TO PERIMETER	A	786'	NO	NO	13	-	-
P-10	ADJACENT TO PERIMETER	A	1003'	NO	NO	17	-	-
P-11	ADJACENT TO PERIMETER	A	700'	NO	NO	12	-	-
P-12	ADJACENT TO PERIMETER	A	336'	NO	NO	6	-	-
P-13	FRONT TO ROAD	N/A	276'	NO	NO	-	-	-
P-14	ADJACENT TO ROAD	B	322'	NO	NO	6	8	-
P-15	ADJACENT TO PERIMETER	A	993'	NO	NO	17	-	-
P-16	ADJACENT TO PERIMETER	A	2022'	YES (117')	NO	32	-	-
P-17	ADJACENT TO PERIMETER	A	1850'	NO	NO	31	-	-
P-18	ADJACENT TO PERIMETER	A	448'	NO	NO	7	-	-
P-19	ADJACENT TO PERIMETER	A	1202'	NO	NO	20	-	-
P-20	ADJACENT TO PERIMETER	A	491'	NO	NO	8	-	-
P-21	ADJACENT TO PERIMETER	A	401'	NO	NO	7	-	-

**DRAINAGE AREA DATA**

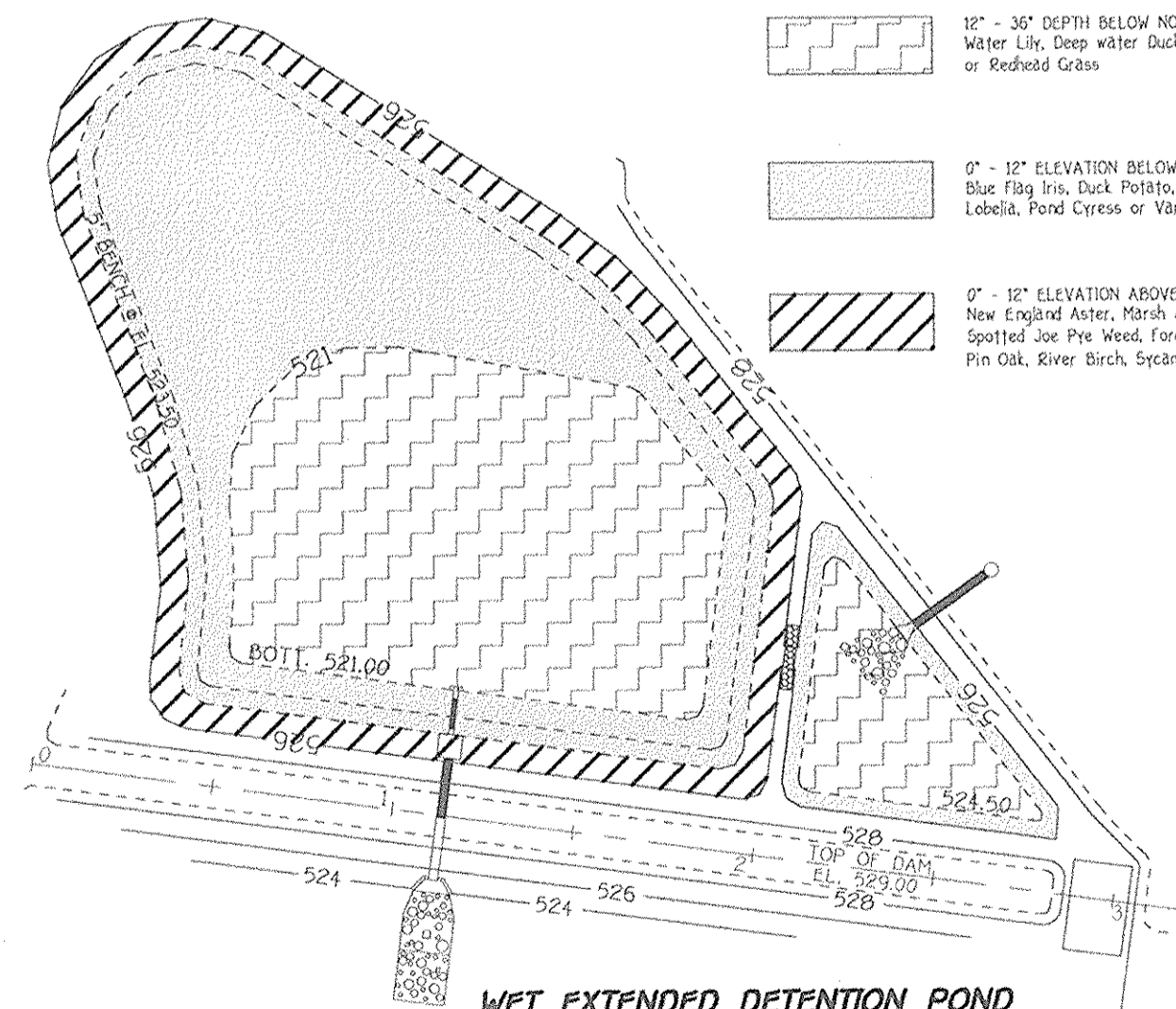
STRUCTURE NO.	DRAINAGE AREA	AREA	C'	ZONED	% IMP.
I-1	A	1.08 AC.	0.31	RC-DEO	20%
I-2	B	0.11 AC.	0.54	RC-DEO	45%
I-3	C	1.08 AC.	0.41	RC-DEO	35%
I-4	D	1.41 AC.	0.37	RC-DEO	34%
I-5	E	1.98 AC.	0.25	RC-DEO	21%
I-6	F	2.54 AC.	0.28	RC-DEO	10%
I-7	G	1.25 AC.	0.37	RC-DEO	65%
I-8	H	0.15 AC.	0.50	RC-DEO	40%
I-9	I	0.51 AC.	0.39	RC-DEO	23%
I-10	J	1.34 AC.	0.31	RC-DEO	26%
I-11	K	1.05 AC.	0.34	RC-DEO	31%
I-12	L	0.87 AC.	0.37	RC-DEO	18%
I-13	M	0.67 AC.	0.35	RC-DEO	43%
I-14	N	0.71 AC.	0.35	RC-DEO	28%
I-15	O	0.90 AC.	0.26	RC-DEO	10%
I-16	P	0.95 AC.	0.26	RC-DEO	5%
I-17	Q	3.25 AC.	0.26	RC-DEO	7%
I-18	R	7.22 AC.	0.26	RC-DEO	13%
I-19	S	0.73 AC.	0.26	RC-DEO	0%
I-20	T	1.17 AC.	0.26	RC-DEO	10%
I-21	U	0.57 AC.	0.40	RC-DEO	28%
I-22	V	2.08 AC.	0.30	RC-DEO	38%
I-23	W	0.31 AC.	0.48	RC-DEO	38%
I-24	X	0.66 AC.	0.41	RC-DEO	26%
I-25	Y	1.25 AC.	0.34	RC-DEO	37%
I-26	Z	0.90 AC.	0.32	RC-DEO	31%
I-26A	AA	1.36 AC.	0.48	RC-DEO	36%
I-21A	BB	0.50 AC.	0.38	RC-DEO	20%
E-2	CC	2.71 AC.	0.26	RC-DEO	10%
I-26A	DD	1.00 AC.	0.30	RC-DEO	26%
I-26B	EE	1.16 AC.	0.33	RC-DEO	25%
I-27	FF	3.31 AC.	0.26	RC-DEO	4%



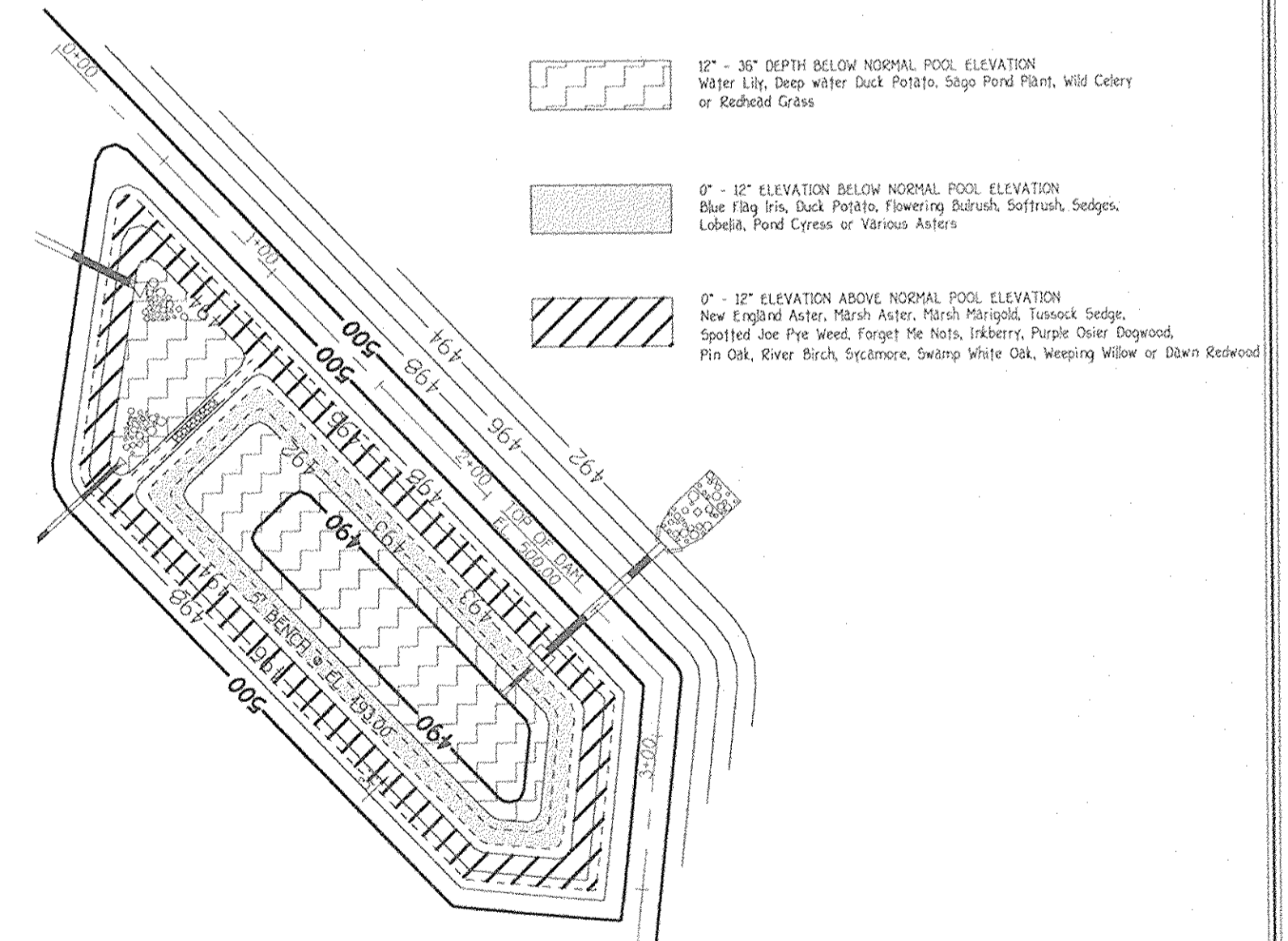
**LANDSCAPING PLANT LIST**

QTY.	KEY	NAME	SIZE
177		ACER SACCHARUM 'GREEN MOUNTAIN' (SUGAR MAPLE)	2 1/2" - 3" CALIPER FULL CROWN, B&B
53		QUERCUS COCCINEA SCARLET OAK	2 1/2" - 3" CALIPER FULL CROWN, B&B
71		ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2" - 3" CALIPER FULL CROWN, B&B
37		CUPRESSOCYPARIS LEYLANDI LEYLAND CYPRESS	5' - 6' HT.
94		PINUS STROBUS EASTERN WHITE PINE	6' - 8' HT.
90		AZALEA 'EXBURY' EXBURY AZALEA	18"-24"SP.
45		TAXUS CUSPIDATA 'NANA' DWARF JAPANESE YEW	18"-24"SP.

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE 301 REQUIRED SHADE TREES, 103 EVERGREEN TREES & 90 SHRUBS HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$12,650.00.



WET EXTENDED DETENTION POND INTERNAL LANDSCAPING B.M.P. FACILITY NO. 2  
SCALE: 1" = 50'



WET EXTENDED DETENTION POND INTERNAL LANDSCAPING B.M.P. FACILITY NO. 1  
SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL Fwy.  
ELLSWORTH CITY, MARYLAND 21042  
(410) 442-2337

PLAN  
SCALE: 1" = 100'

**OWNER**  
Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)  
And  
Warfield Brothers  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

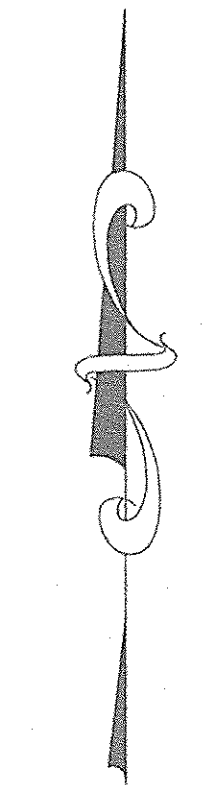
**DEVELOPER**  
Ten Oaks Properties, Inc.  
C/O Mr. Kennard Warfield, Jr., President  
14451 Triadelphia Road  
Glenelg, Maryland 21737  
(410-442-2337)

**DRAINAGE AREA MAP AND LANDSCAPE PLAN THE WARFIELDS II SECTION TWO**  
BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'  
ZONED: RC-DEO  
TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
DATE: DECEMBER, 2007  
SHEET 37 OF 40

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Wanda Harmon* 4/24/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chris Dammann* 4/22/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*William F. Williams* 4-10-08  
 CHIEF, BUREAU OF HIGHWAYS DATE



- LEGEND**
- - - - - EXISTING 2' CONTOURS
  - - - - - EXISTING 10' CONTOURS
  - ~~~~~ EXISTING TREE LINE
  - (W) DENOTES PROPOSED WELL
  - [Hatched Box] DENOTES 15%-24.9% SLOPES
  - [Hatched Box] DENOTES 25% AND GREATER SLOPE
  - [Hatched Box] DENOTES FOREST CONSERVATION EASEMENT
  - [Hatched Box] DENOTES PLANTING AREA

FOREST CONSERVATION DATA		
EASEMENT NO.	AREA	PLANTING/RETENTION
EXISTING NO. 1	1.27 AC.	PLANTING UNDER F-07-39
1	6.05 AC.	PLANTING
2	0.91 AC.	PLANTING
3	0.61 AC.	PLANTING
4	2.54 AC.	PLANTING
5	0.65 AC.	PLANTING
6	5.26 AC.	PLANTING
7	1.02 AC.	PLANTING
TOTAL	18.32 AC.	PLANTING

NOTE: EXISTING F.C.E. NO. 1 HAS BEEN BONDED UNDER SECTION ONE, F-07-039.

MATCH LINE SEE SHEET 39

MATCH LINE SEE SHEET 39

Existing Forest Conservation Easement No. 1  
 1.270 Ac.  
 (To Be Planted)  
 Section One (F-07-039)

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
 ELLEOTT CITY, MARYLAND 22826  
 (410) 461-1200

**Eco-Science Professionals, Inc.**  
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional  
 USACOEL Wetland Delimitator  
 Certification # WDCPS34006100448  
*John P. Canoles* 3/24/08  
 JOHN P. CANOLES



**PLAN**  
 SCALE: 1" = 100'

**OWNER**  
 Mr. Kennard Warfield, Jr., Mary Ellen Warfield  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337

**DEVELOPER**  
 Ten Oaks Properties, Inc.  
 C/O Mr. Kennard Warfield, Jr., President  
 14451 Triadelphia Road  
 Glenelg, Maryland 21737  
 (410) 442-2337

**FOREST CONSERVATION PLAN  
 THE WARFIELDS II  
 SECTION TWO**  
 BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'

ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 38 OF 40



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Cind. Amant* 4/16/08  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chris. Dammann* 4/22/08  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William J. ...* 4-10-08  
 CHIEF, BUREAU OF HIGHWAYS DATE

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 NATIONAL SQUARE OFFICE PARK - 10729 BAI TOWNE NATIONAL PIKE  
 ELLIOTT CITY, MARYLAND 20622  
 (410) 462-1255

**Eco-Science Professionals, Inc.**  
 CONSULTING ECOLOGISTS

MD ONE Qualified Professional  
 USACOE Wetland Delinicator  
 Certification: WDCP93MD00100448  
 JOHN P. CANOLES 3/24/08

STATE OF MARYLAND  
 PROFESSIONAL ENGINEER  
 324.00

**PLAN**  
 SCALE: 1" = 100'

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**FOREST CONSERVATION PLAN II  
 SECTION TWO**  
 BUILDABLE LOTS 6-68, OPEN SPACE LOT 69,  
 BUILDABLE PRESERVATION PARCEL 'A'  
 AND NON-BUILDABLE PRESERVATION PARCELS  
 'B' THRU 'I'

ZONED: RC-DEO  
 TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55  
 TAX MAP NO. 27 GRID NO. 5 PARCEL NO. 56, 109 & 144  
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 DATE: DECEMBER, 2007  
 SHEET 39 OF 40

PLANTING SCHEDULE

Table with columns: Qty, Species, Size, Spacing, Total FCA Units. Includes FCE #1 - 6.06 acres and FCE #5 - 0.65 acres.

Table with columns: Qty, Species, Size, Spacing, Total FCA Units. Includes FCE #2 - 0.9 acres and FCE #3 - 0.6 acres.

Table with columns: Qty, Species, Size, Spacing, Total FCA Units. Includes FCE #4 - 2.54 acres.

Table with columns: Qty, Species, Size, Spacing, Total FCA Units. Includes FCE #7 - 1.0 acres.

APPROVED: DEPARTMENT OF PLANNING AND ZONING. Cindy Simons, 4/24/08. Mike Dauman, 4/22/08. Will R. McNeil, 4-10-09.

Table with columns: Qty, Species, Size, Spacing, Total FCA Units. Includes FCE #6 - 5.26 acres.

Table with columns: Qty, Species, Size, Spacing, Total FCA Units. Includes FCE #7 - 1.0 acres.

Table with columns: Qty, Species, Size, Spacing, Total FCA Units. Includes FCE #7 - 1.0 acres.

FCP NOTES: 1. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE USE AND USES OF THESE AREAS.

Planting/Soil Specifications

- 1. Installation of bareroot plant stock shall take place between March 15 - April 20. B&B/Container stock March 15 - May 30 or September 15 - November 15. Fall planting of B&B stock is not recommended.

Sequence of Construction

- 1. Sediment control shall be installed in accordance with general construction plan for site.

Maintenance of Plantings

- 1. Maintenance of plantings shall last for a period of 2 years.

Guarantee Requirements

- 1. A 75 percent survival rate of forestation plantings will be required at the end of 2 growing seasons.

Surety for Forestation

- 1. The forest conservation requirements per section 161200 of the Howard County Code and the Forest Conservation Manual for this subdivision will be fulfilled by the on-site afforestation of 17.05 (18.32 - 1.27) acres in forest conservation easement.

Planting Notes

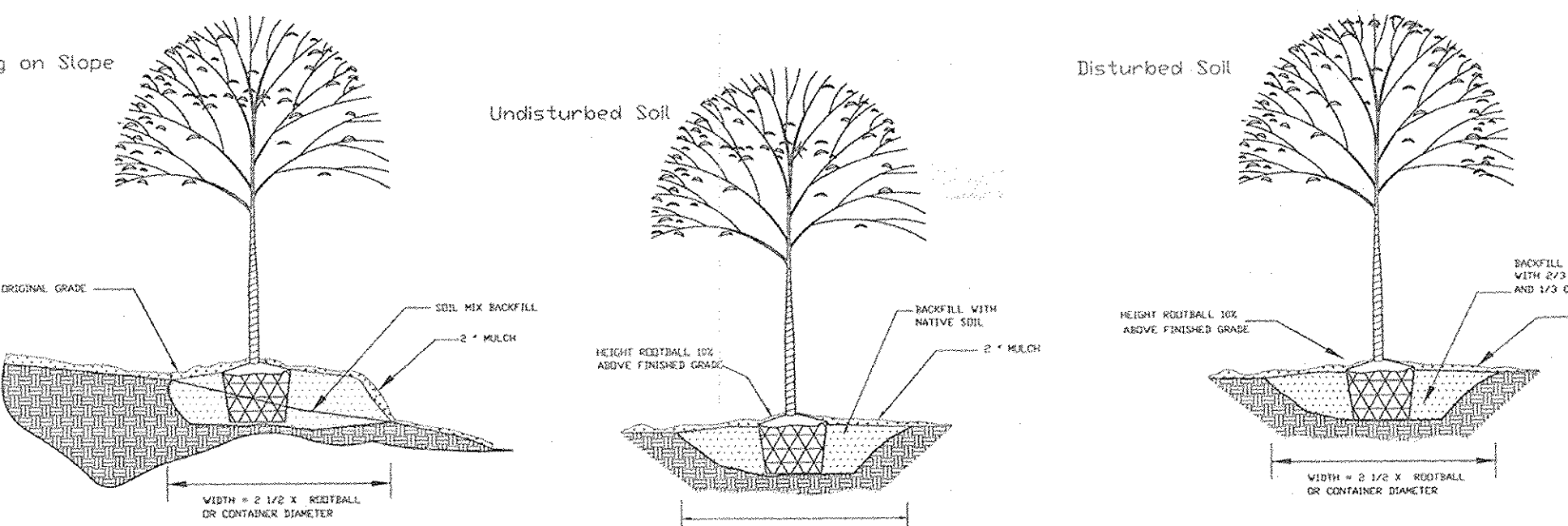
When possible, plants shall be installed within 24 hours of delivery. If installation cannot be performed within this time frame, plant stock shall be watered and protected from desiccation.

FOREST CONSERVATION WORKSHEET

Table with columns: BASIC SITE DATA, ACRES, FOREST CONSERVATION THRESHOLD, AFFORESTATION CALCULATIONS, REFORESTATION CALCULATIONS.

LEGEND: EXISTING 2' CONTOURS, EXISTING 10' CONTOURS, EXISTING TREE LINE, DENOTES PROPOSED WELL, DENOTES 15%-24.9% SLOPES, DENOTES 25% AND GREATER SLOPE, DENOTES FOREST CONSERVATION EASEMENT, DENOTES PLANTING AREA.

PLAN SCALE: 1" = 100'

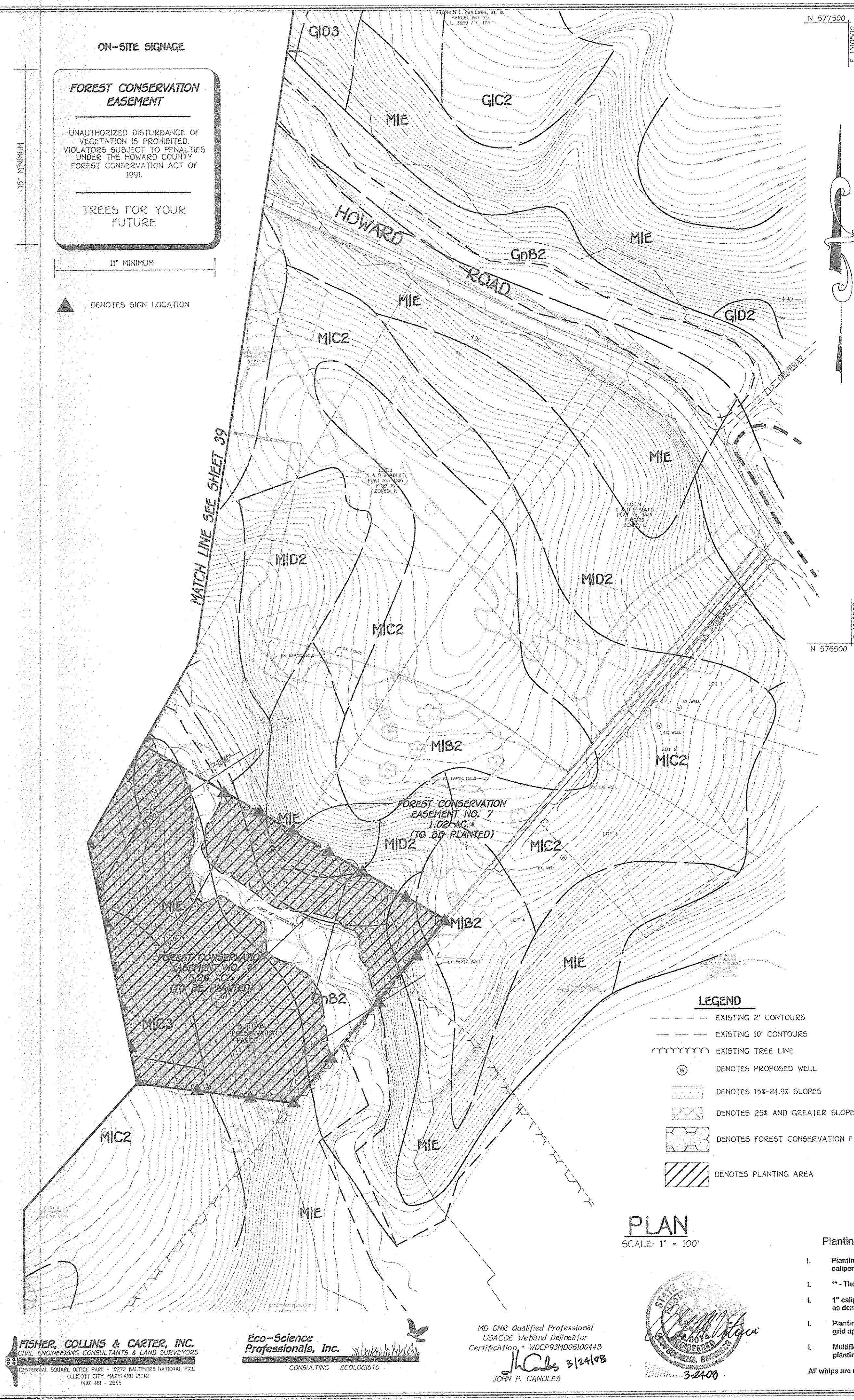


- Planting Notes: 1. Planting density based on 700 planting units per acre. 2" caliper trees = 7 planting units, 1" caliper trees = 3.5 planting units, whips with shelter = 2 planting units.

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DEVELOPER: Ten Oaks Properties, Inc, C/O Mr. Kennard Warfield, Jr., President, 14451 Triadelphia Road, Glenelg, Maryland 21737.

FOREST CONSERVATION PLAN THE WARFIELDS II SECTION TWO BUILDABLE LOTS 6-68, OPEN SPACE LOT 69, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'I'. ZONING: RC-60. TAX MAP NO. 21 GRID NO. 23 PARCEL NO. 55.



FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS. 3333 CONTINENTAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PARK, ELLICOTT CITY, MARYLAND 21117.

Eco-Science Professionals, Inc. CONSULTING ECOLOGISTS. MD DNR Qualified Professional USACOE Wetland Delinator Certification # WD0933MD0500048.

JOHN P. CANOLES, JOHN P. CANOLES, 3/24/08, 3-24-08.

K:\Drawings\3130310 Warfield Homes\3130310.DWG, SHEET 28-40 FOREST PLAN.dwg, 3/24/2008 8:40:57 AM