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FINAL ROAD CONSTRUCTION PLAN

FOX CREEK SUBDIVISION

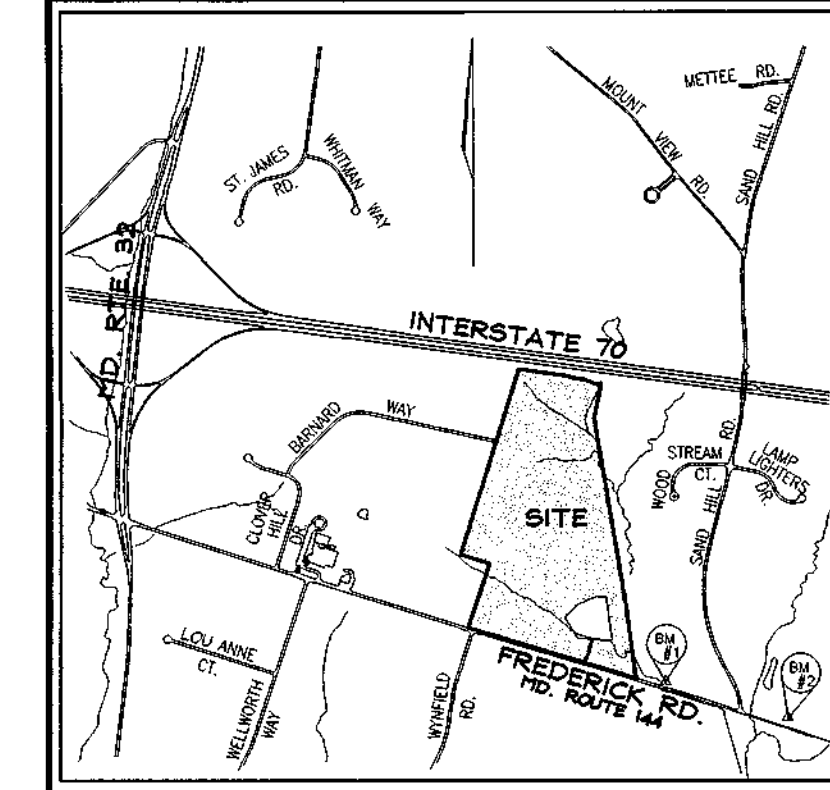
LOTS 1 THRU 28 & PRESERVATION PARCELS A THRU D

HOWARD COUNTY, MARYLAND

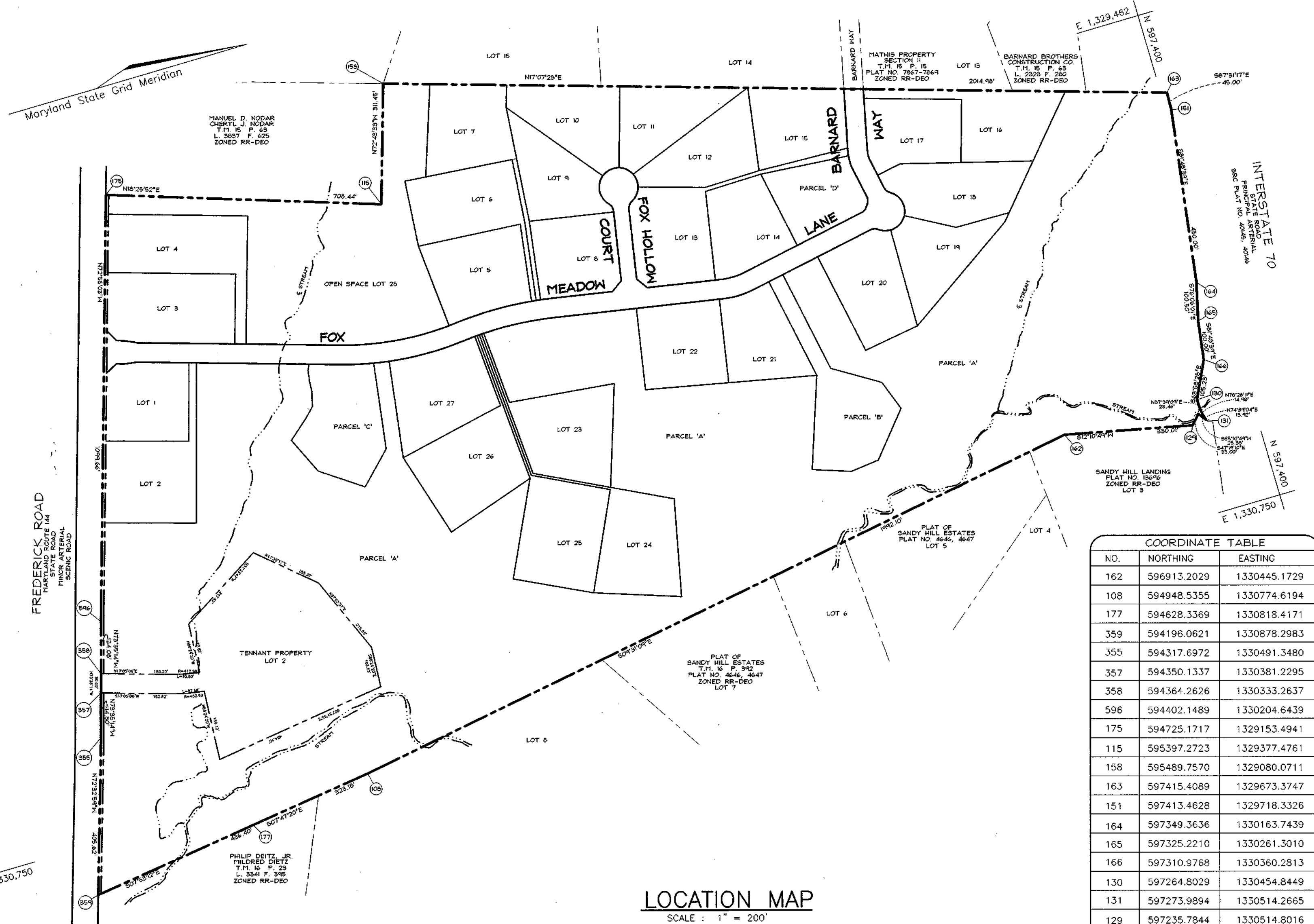
BENCHMARKS

BENCHMARK NO. 1: 16DA
 N 593,712.917
 E 1,332,332.040
 ELEV.=469.673

BENCHMARK NO. 2: 16DC
 N 593,095.513
 E 1,333,961.177
 ELEV.=529.505



VICINITY MAP
 SCALE: 1" = 2000'



SITE DATA

LOCATION: TAX MAP 15, GRIDS 12 & 18 AND TAX MAP 16, GRIDS 7 & 13, PARCEL 183
 3RD ELECTION DISTRICT
 EXISTING ZONING: RR-DEO
 GROSS AREA OF PROJECT: 82,575 AC.
 AREA OF PROPOSED 100 YEAR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: 5.49 AC.
 AREA OF STEEP SLOPES = 1.56 AC. (THERE ARE NO STEEP SLOPES OF 20,000 SF CONTIGUOUS AREA.)
 NET AREA OF PROJECT: 75,595 AC.
 AREA OF PROPOSED LOTS: 30,100 AC.
 AREA OF PROPOSED PRESERVATION PARCEL A: 40.51 AC., B: 1.31 AC., C: 1.27 AC., D: 0.87 AC.
 AREA OF PROPOSED RIGHT-OF-WAY: 3,5310 AC.
 AREA OF OPEN SPACE REQUIRED: 4.13 AC.(5.0%)
 AREA OF OPEN SPACE: 4.98 AC.(5.9%)
 NUMBER OF LOTS/PARCELS PROPOSED: 27 + 1 BULDBLE PRESERVATION PARCEL +
 3 NON-BULDBLE PRESERVATION PARCELS +
 1 OPEN SPACE (TOTAL 32)

GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- DPZ REFERENCES: S-00-03, P-01-01; DEED REFERENCE: 655/281
- DENSITY: (82,575/2) = 41 LOTS
 NUMBER OF ENTITIES PERMITTED BY RIGHT : 82,575/4,25=19 LOTS
 NUMBER OF BULDBLE ENTITIES PROPOSED: 27 CLUSTER LOTS PLUS 1 BULDBLE PRESERVATION PARCEL (TOTAL 28)
 NUMBER OF DEO'S REQUIRES: 9
- THE PROJECT BOUNDARY IS BASED ON A SURVEY BY VOGEL & ASSOCIATES.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AERIAL PHOTOGRAMMETRIC BY POTOMAC AERIAL SURVEYS, INC.
- WATER AND SEWER FOR THIS PROJECT WILL BE PRIVATE.
- STORMWATER MANAGEMENT (2 YR AND 10 YR) TO BE PROVIDED FOR THE PROPOSED ROAD ONLY.
 WATER QUALITY TO BE PROVIDED BY EXTENDED DETENTION. THE FACILITIES WILL BE LOCATED ON PARCELS 'B' AND 'C'. THE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA.
- WETLANDS AND STREAMS SHOWN ONSITE ARE BASED ON A FIELD INVESTIGATION PERFORMED BY EXPLORATION RESEARCH, INC.
- FLOODPLAIN SHOWN ONSITE IS BASED ON FLOODPLAIN ANALYSIS PERFORMED BY VOGEL AND ASSOCIATES DATED JULY 2000.
- FOREST CONSERVATION PLAN PREPARED BY EXPLORATION RESEARCH, INC. DATED JULY 2000.
- APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP DATED JANUARY 4, 2000 APPROVED UNDER S-00-03.
- THERE ARE NO STEEP SLOPES ONSITE WITH A CONTIGUOUS AREA OF 20,000 SF OR GREATER.
- A NOISE STUDY WAS PREPARED BY VOGEL & ASSOCIATES, INC. DATED JULY 2000 APPROVED UNDER S-00-03.
- ALL LANDSCAPING REQUIREMENTS AS SET FORTH IN THE LANDSCAPE MANUAL SHALL BE COMPLIED WITH.
- STREET LIGHTING IS NOT REQUIRED FOR THIS SITE.
- SEDIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
- THIS PROPERTY IS NOT WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETARY LOCATIONS ON SITE.
- PRIVATE SEWERAGE EASEMENTS OF 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL ARE SHOWN ON THIS PLAN (SEE LEGEND). IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- THE EASEMENT HOLDER FOR PRESERVATION PARCEL A WILL BE A HOMEOWNERS ASSOCIATION AND HOWARD COUNTY.
- OPEN SPACE LOT 28 AND PARCELS B & C ARE TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION. PARCEL D TO BE PRIVATELY OWNED WITH THE HOMEOWNER'S ASSOCIATION AND HOWARD COUNTY AS EASEMENT HOLDERS.
- THE ACCESS TO THE EXISTING DWELLING ON PRESERVATION PARCEL A WILL ULTIMATELY BE FROM FOX MEADOW LANE.
- LOT 2 OF THE TENANT PROPERTY IS TO BE PART OF A 3 ACRE MINOR SUBDIVISION. A WAIVER HAS BEEN APPROVED ON 8/10/00 TO SECTION 16.120(a)(1) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATION TO ALLOW A SECOND RESIDENTIAL ACCESS POINT ALONG THE MINOR ARTERIAL ROAD.
- THE PROPOSED STREAM AND WETLANDS CROSSING FOR FOX MEADOW LANE WAS DETERMINED TO BE AN ESSENTIAL ROAD DISTURBANCE TO ACCOMMODATE THE PROPOSED DEVELOPMENT BY THE DEPARTMENT OF PLANNING AND ZONING PER SECTION 16.116(c) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS BASED ON TRAFFIC CIRCULATION AND THAT THE EXISTING ROAD CONNECTION THROUGH BARNARD WAY AND CLOVER HILL DRIVE CURRENTLY HAS INADEQUATE SIGHT DISTANCE AT ITS INTERSECTION WITH FREDERICK ROAD. A PERMIT HAS BEEN FILED WITH THE CORP OF ENGINEERS FOR THE STREAM CROSSING AUGUST 7, 2001. TRACKING #200105484.
- FINANCIAL SURETY FOR THE REQUIRED 132 STREET TREES WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE PROVIDED AS PART OF THE DEVELOPER'S AGREEMENT FOR 155 SHADE TREES AND 72 EVERGREEN TREES IN THE AMOUNT OF \$57,300.00.
- FINANCIAL SURETY FOR THE REQUIRED FOREST CONSERVATION OBLIGATION WILL BE FULFILLED BY RETENTION OF 12.79 ACRES AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$111,900.00.
- DRIVEWAY ENTRANCES ARE TO BE AS PER HOWARD COUNTY DETAIL RD.06 DRIVEWAY APRON ELEVATIONS OR DITCH INVERT ADJACENT TO DRIVEWAYS SHALL BE MODIFIED AS NECESSARY FOR CULVERT INSTALLATION.

NO.	NORTHING	EASTING
162	596913.2029	1330445.1729
108	594948.5355	1330774.6194
177	594628.3369	1330818.4171
359	594196.0621	1330878.2983
355	594317.6972	1330491.3480
357	594350.1337	1330381.2295
358	594364.2626	1330333.2637
596	594402.1489	1330204.6439
175	594725.1717	1329153.4941
115	595397.2723	1329377.4761
158	595489.7570	1329080.0711
163	597415.4089	1329673.3747
151	597413.4628	1329718.3326
164	597349.3636	1330163.7439
165	597325.2210	1330261.3010
166	597310.9768	1330360.2813
130	597264.8029	1330454.8449
131	597273.9894	1330514.2665
129	597235.7844	1330514.8016

LOCATION MAP
 SCALE: 1" = 200'

DEVELOPER

IKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
 3403 OLANWOOD COURT, SUITE 101
 OLNEY, MD. 20832

OWNER

RICHARD TENNANT
 12256 FREDERICK ROAD
 WEST FRIENDSHIP, MD 21794

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 7/19/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 7/23/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 7-17-02
 CHIEF, BUREAU OF HIGHWAYS DATE

- AS A CONSEQUENCE OF ITS SUBMISSION PRIOR TO 11/15/01, THIS SUBDIVISION IS GRANDFATHERED TO THE FOURTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND SINCE THE PRELIMINARY PLAN, P-01-01 RECEIVED SIGNATURE APPROVAL PRIOR TO 11/15/01 THIS PROJECT IS NOT SUBJECT TO COLLECTIVE BILL 50-2001 WHICH AMENDED PORTIONS OF THE ZONING REGULATIONS.
- THE REQUIRED SPEED CONTROL ON FOX MEADOW LANE HAS BEEN WAIVED BY DPW; TRAFFIC ENGINEERING DIVISION ON JANUARY 14, 2003. THE SPEED CONTROL DEVICES WERE REMOVED FROM THE PLANS BY A REDLINE REVISION APPROVED ON MARCH 28, 2003.

COVER SHEET

FOX CREEK SUBDIVISION

LOTS 1 THRU 28 AND PRESERVATION PARCELS A THRU D

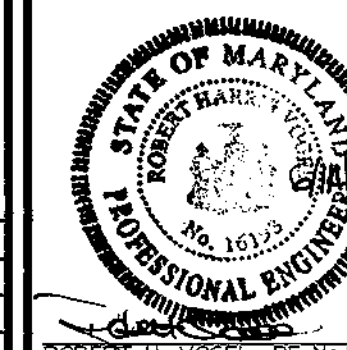
TAX MAP 15 BLOCKS 12 & 18
 TAX MAP 16 BLOCKS 7 & 13
 3RD ELECTION DISTRICT
 REF: S-00-03, P-01-01

PARCEL '183'
 HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: JCO
 DRAWN BY: CMH
 CHECKED BY: R.H.V.
 DATE: FEBRUARY 2002
 SCALE: AS SHOWN
 W.O. NO.: 2019038.0

1 SHEET OF 16

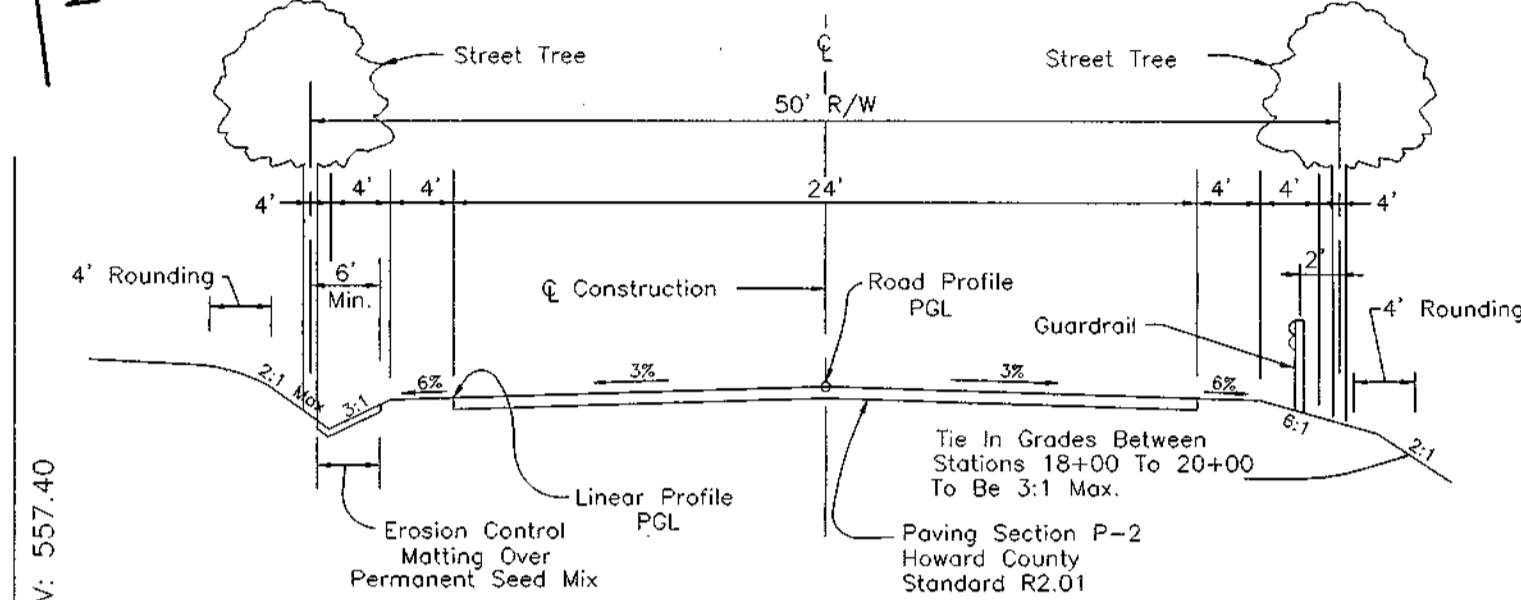
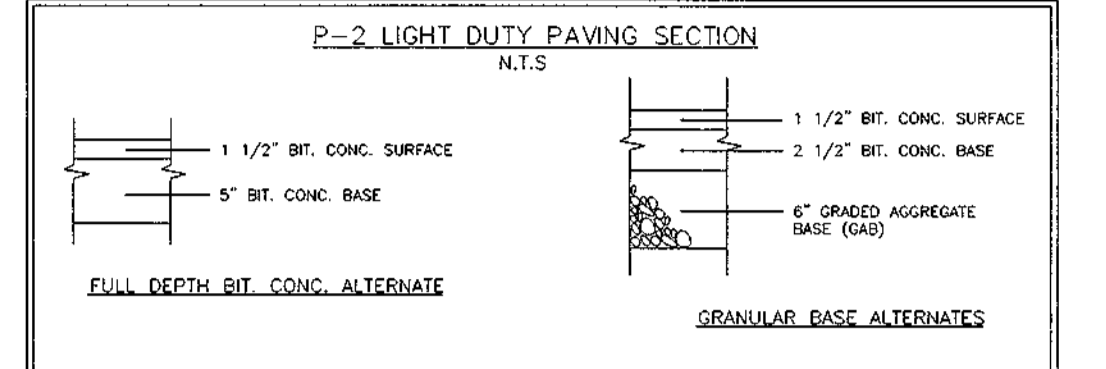


Z	ADD SPEED CONTROL NOTE # 30	3-28-03
1	ADD RETENTION EASEMENT B	9-9-02
NO	REVISION	DATE

FREDERICK ROAD
MARYLAND ROUTE 144
STATE ROAD
MINOR ARTERIAL
SCENIC ROAD

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
C1	313.39	775.00	23°10'8"	158.87	N05°35'01"E	311.26
C2	253.28	900.00	16°7'23"	127.47	S02°03'39"W	252.43



STREET TREE CHART

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
FOX MEADOW LANE	4067/40	102	102
FOX HOLLOW COURT	641/40	16	17
BARNARD WAY	574/40	14	15

OWNER
RICHARD TENNANT
12256 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794

DEVELOPER
IKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
3403 OLANWOOD COURT, SUITE 101
OLNEY, MD. 20832

NO.	REVISION	DATE
2	REMOVE TRAFFIC CONTROL DEVICE	5.23.05

ROAD CONSTRUCTION PLAN
FOX CREEK SUBDIVISION
LOTS 1 THRU 28, AND
PRESERVATION PARCELS 'A' THRU 'D'

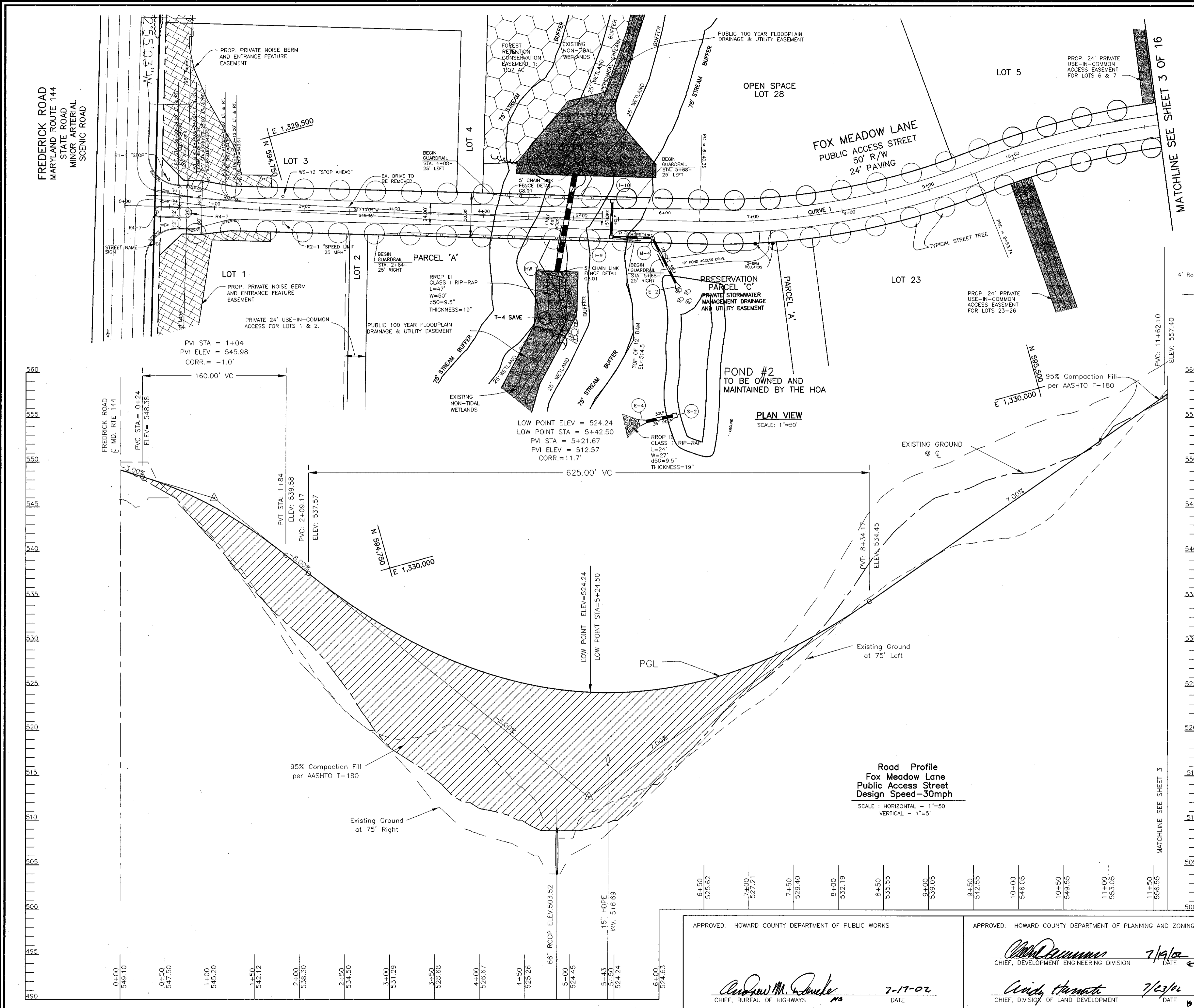
TAX MAP 15 BLOCKS 12 & 18
TAX MAP 16 BLOCKS 7 & 13
3RD ELECTION DISTRICT
REF: S-00-03, P-01-01

PARCEL '183'
HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
7125 Riverwood Drive Columbia, Maryland 21046-2354
Engineers
Architects
Surveyors
Phone: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: JCO
DRAWN BY: CMH
CHECKED BY: JCO
DATE: FEBRUARY 2002
SCALE: AS SHOWN
W.D. NO.: 2019035.0

2 SHEET OF 16

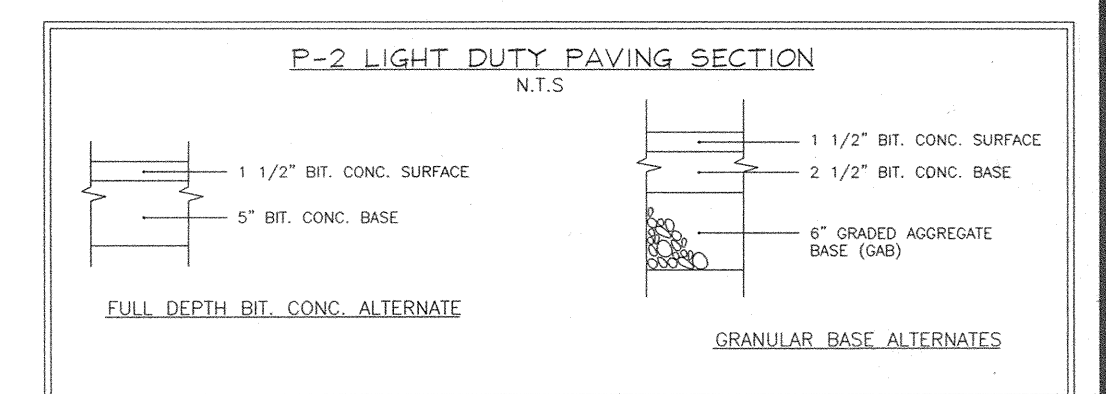
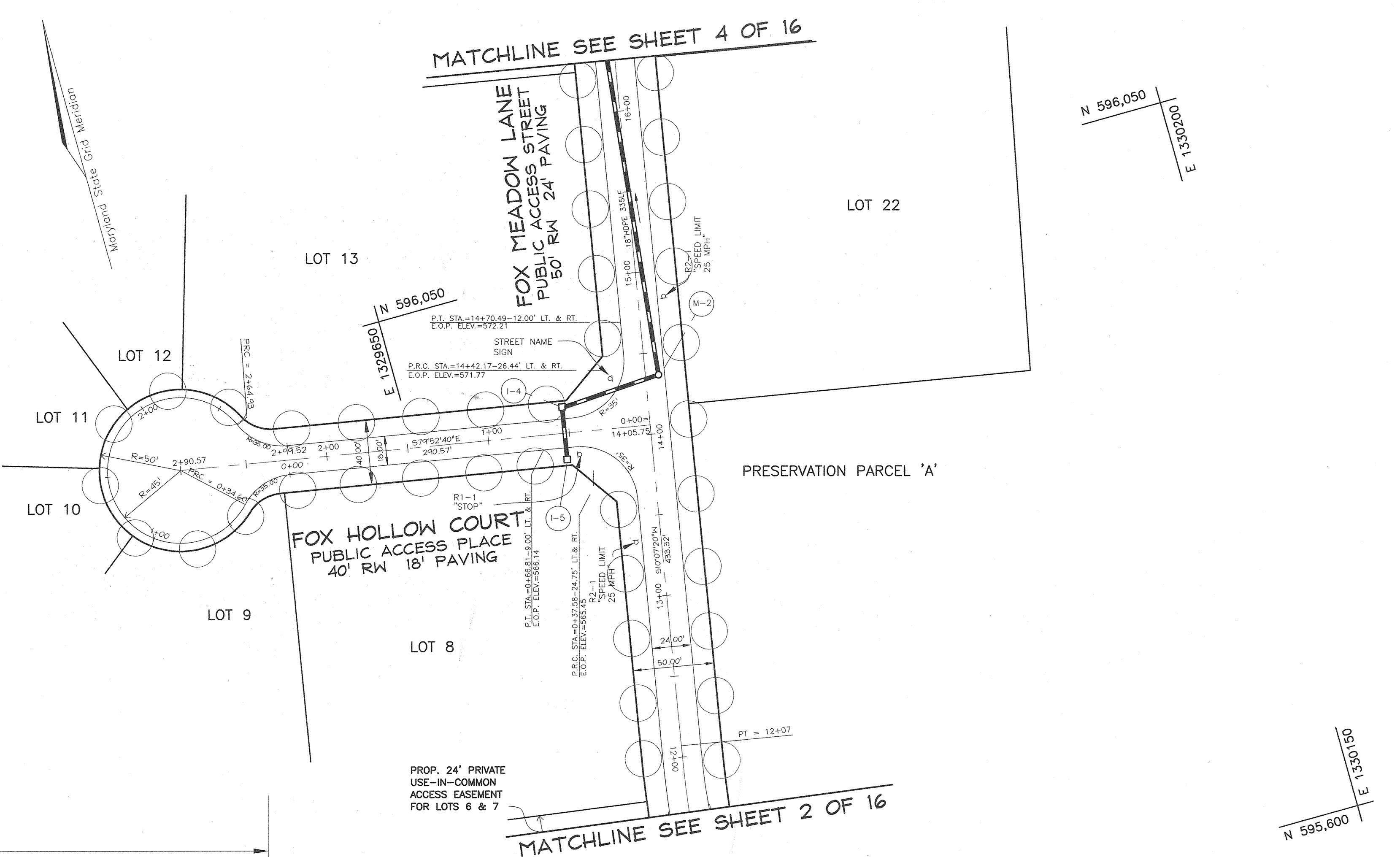
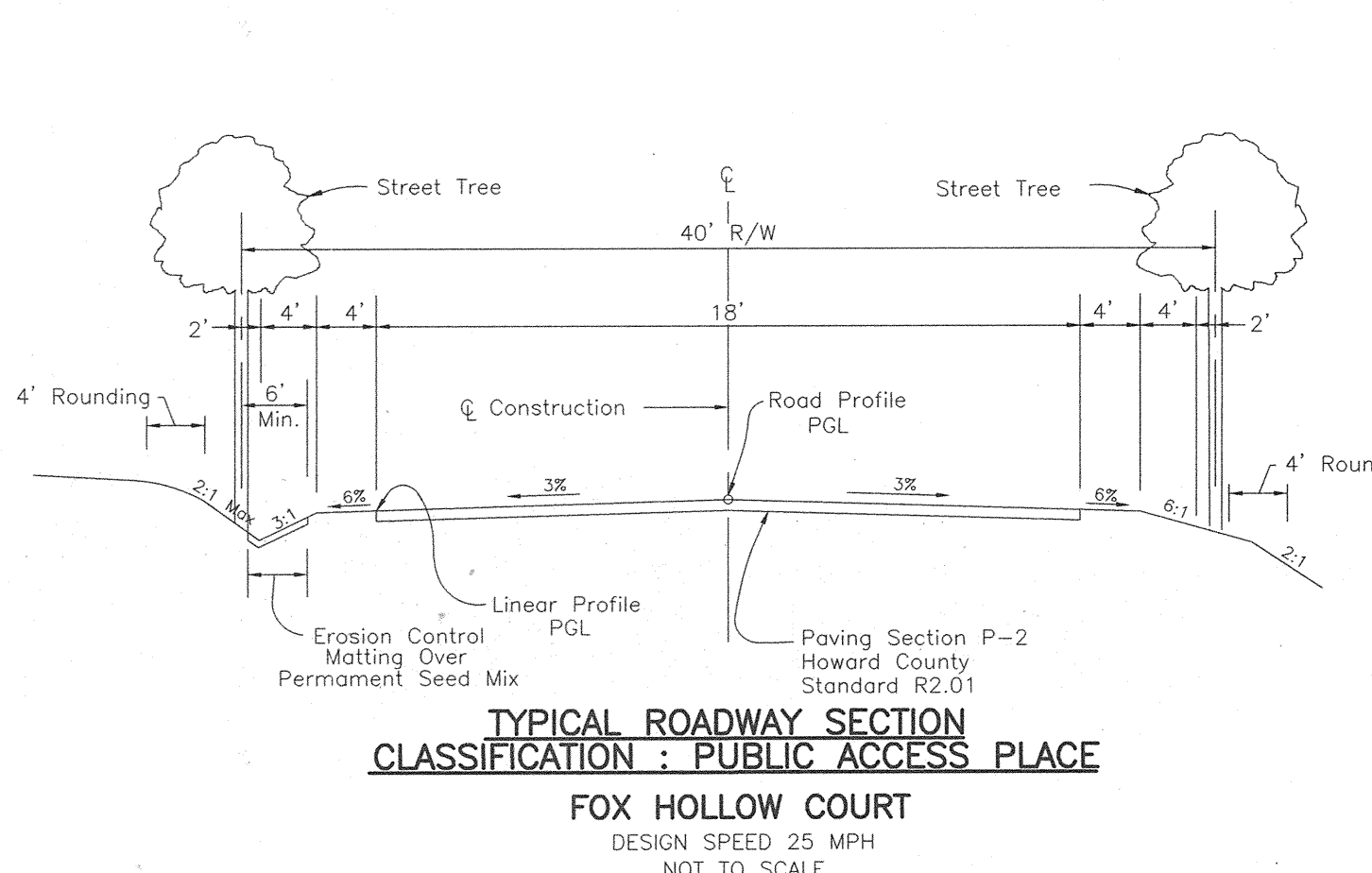


APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Decker 7-17-02
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

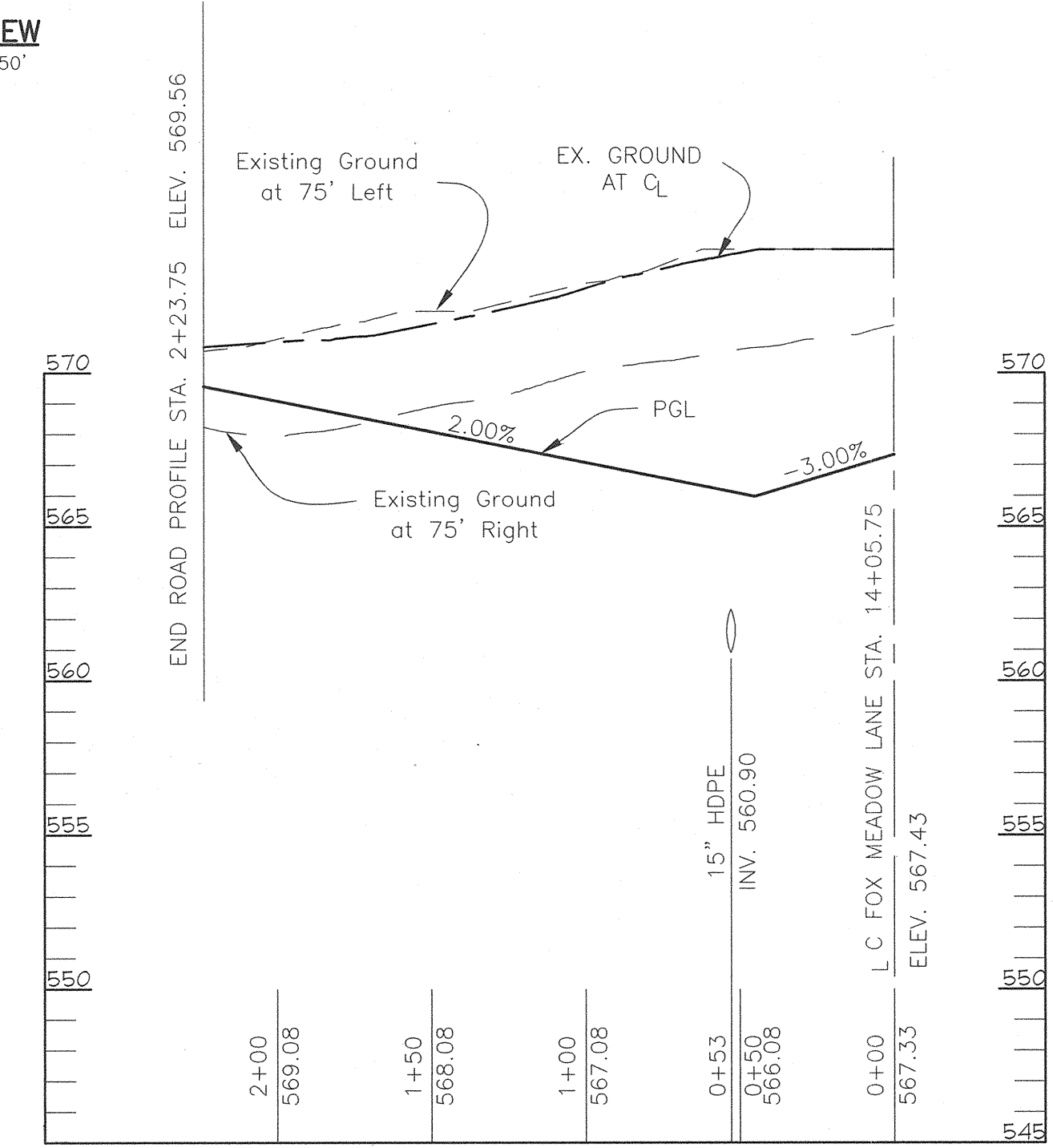
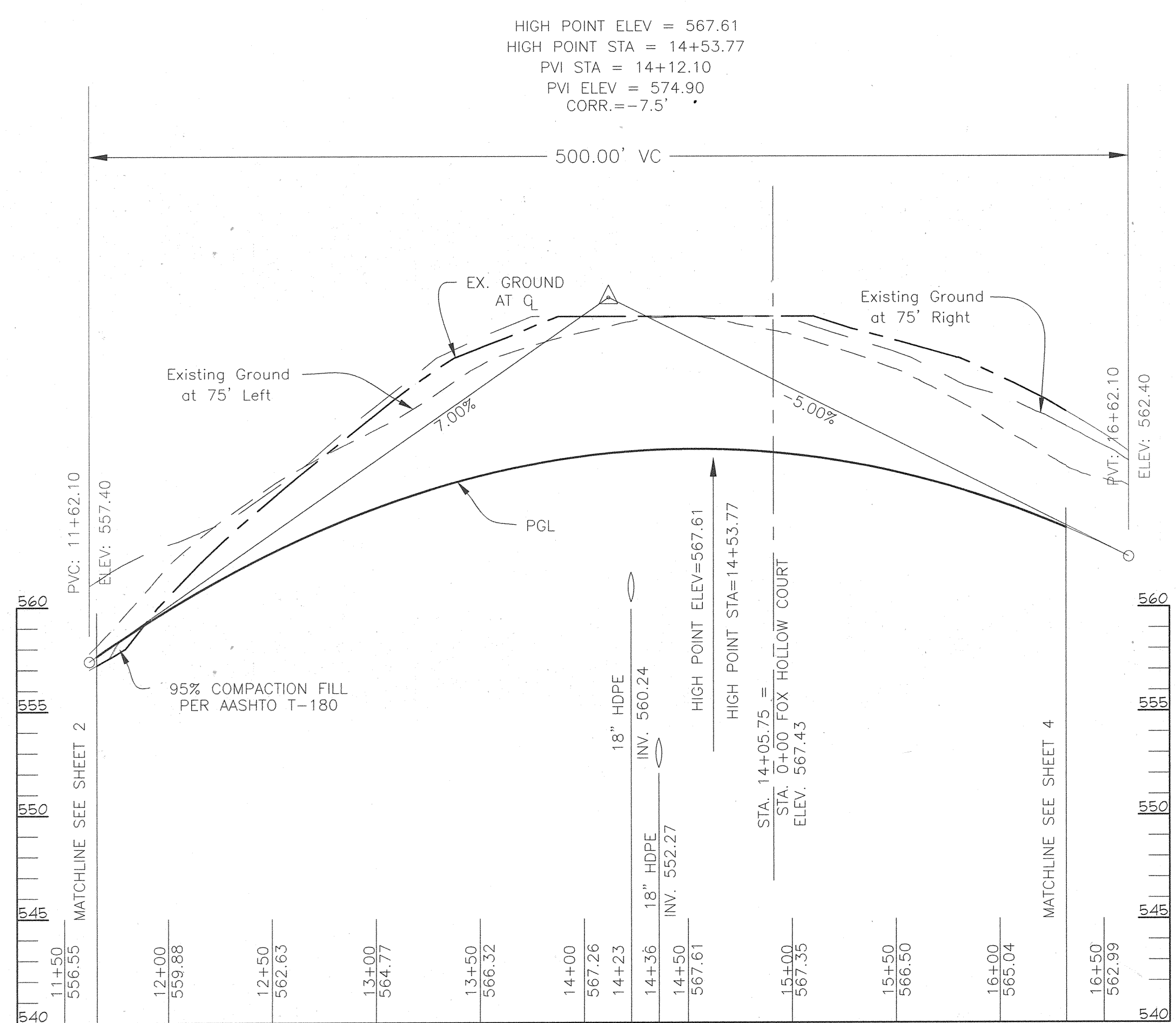
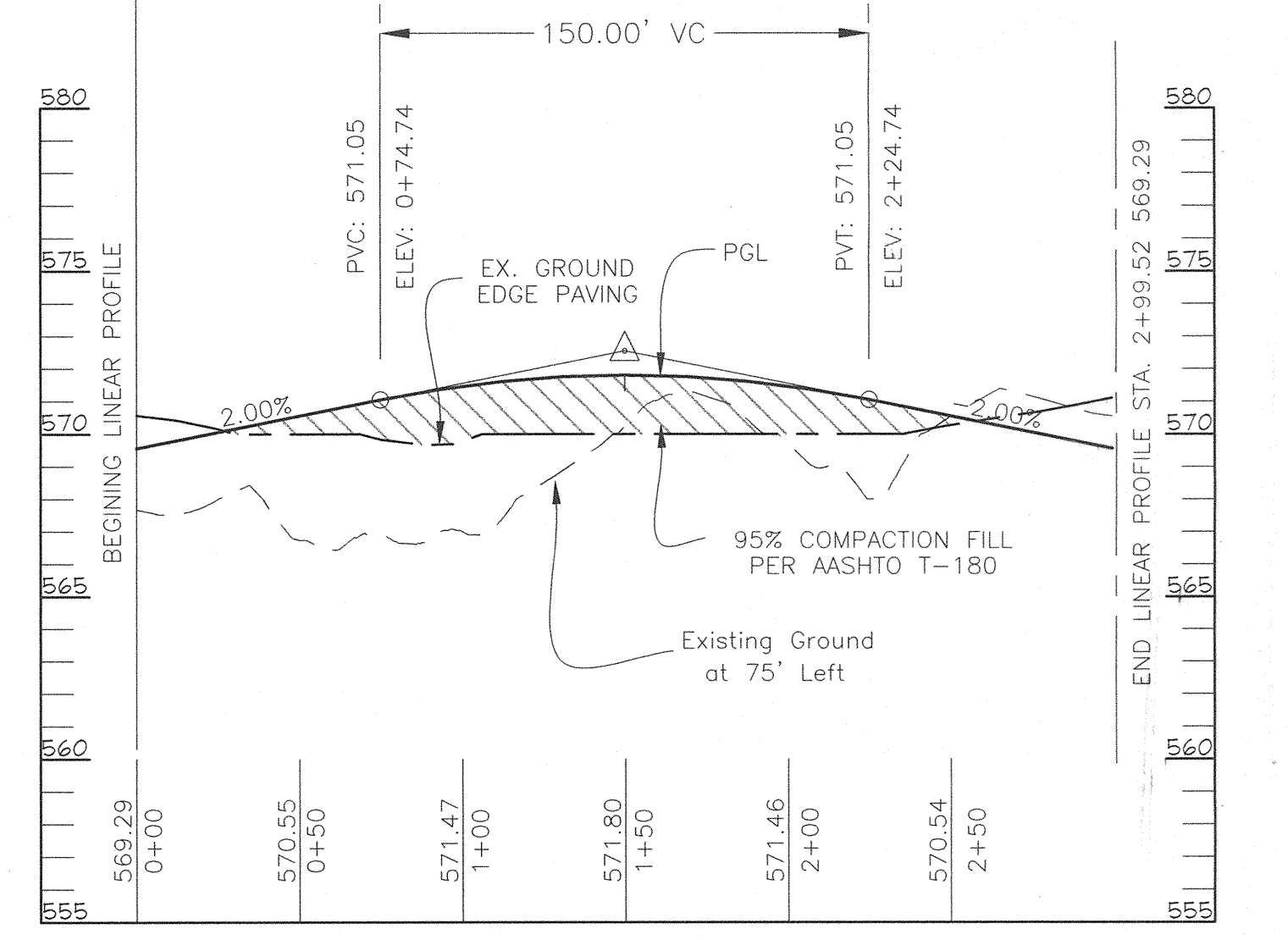
Wanda Hammett 7/23/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE



STREET TREE CHART

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
FOX MEADOW LANE	4067/40	102	102
FOX HOLLOW COURT	641/40	16	17
BARNARD WAY	574/40	14	15

HIGH POINT ELEV = 571.80
HIGH POINT STA = 1+49.74
PVI STA = 1+49.74
PVI ELEV = 572.55
CORR. = -0.75'



OWNER
RICHARD TENNANT
12256 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794

DEVELOPER
IKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
3403 OLANWOOD COURT, SUITE 101
OLNEY, MD. 20832

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Richard M. Penick
7-17-02
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

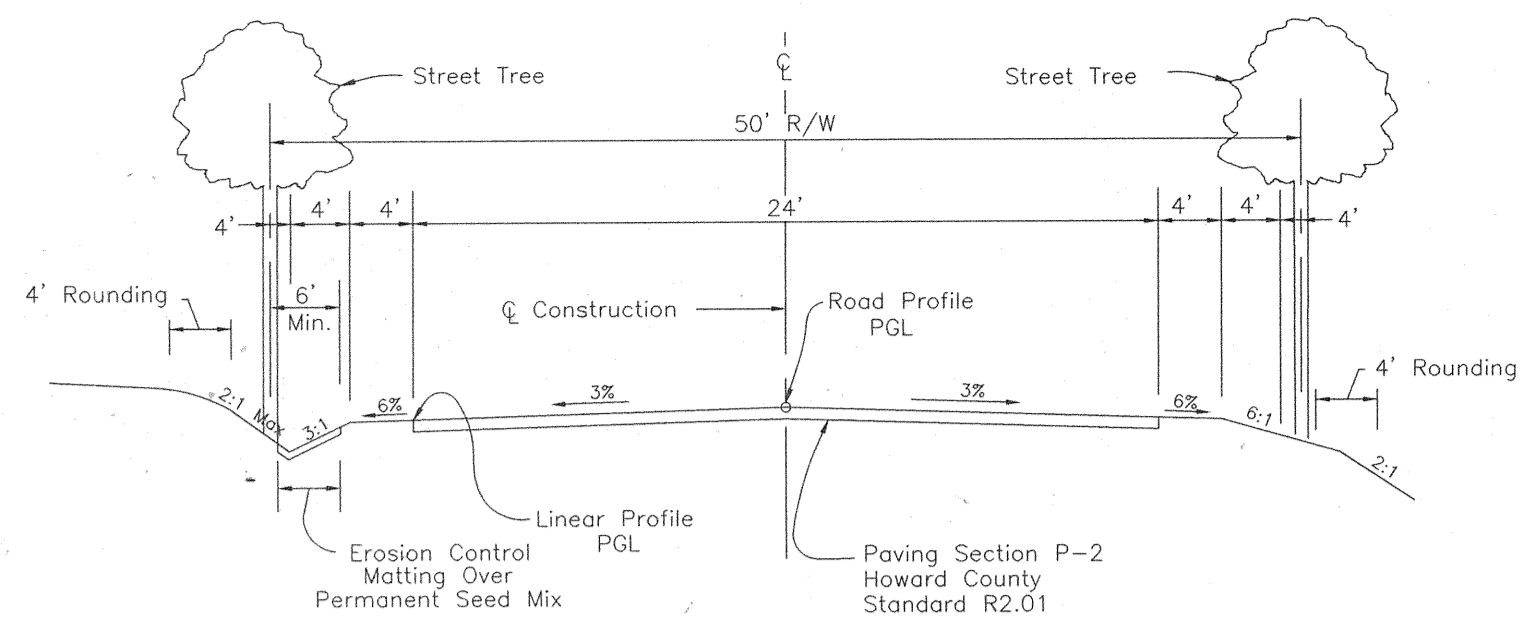
William J. Drummond 7/19/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Wanda Harshbarger 7/23/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ROAD CONSTRUCTION PLAN
FOX CREEK SUBDIVISION
LOTS 1 THRU 28 AND
PRESERVATION PARCELS 'A' THRU 'D'
TAX MAP 15 BLOCKS 12 & 18
TAX MAP 16 BLOCKS 7 & 13
3RD ELECTION DISTRICT
PARCEL '183'
HOWARD COUNTY, MARYLAND
REF: S-00-03, P-01-01

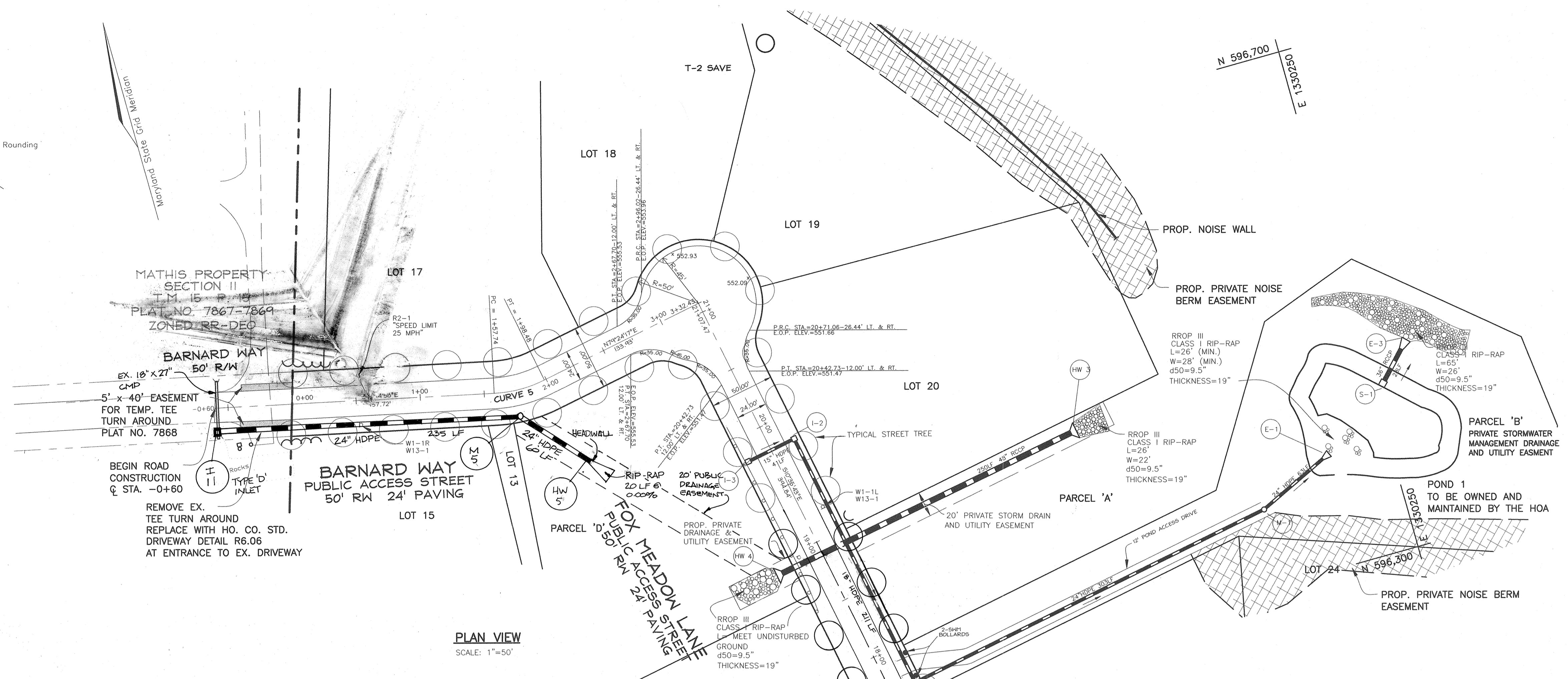
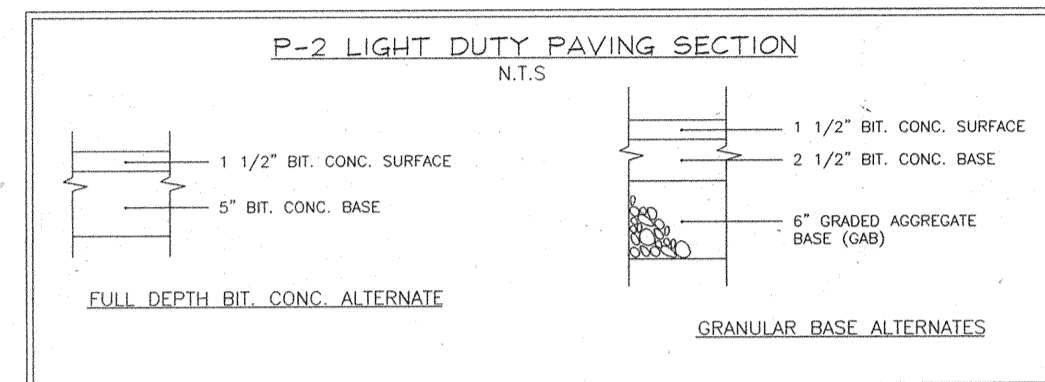
FREDERICK WARD ASSOCIATES, INC.
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: JCO
DRAWN BY: CMH
CHECKED BY: JCO
DATE: FEBRUARY 2002
SCALE: AS SHOWN
W.O. NO.: 2019035.0

3 SHEET OF 16



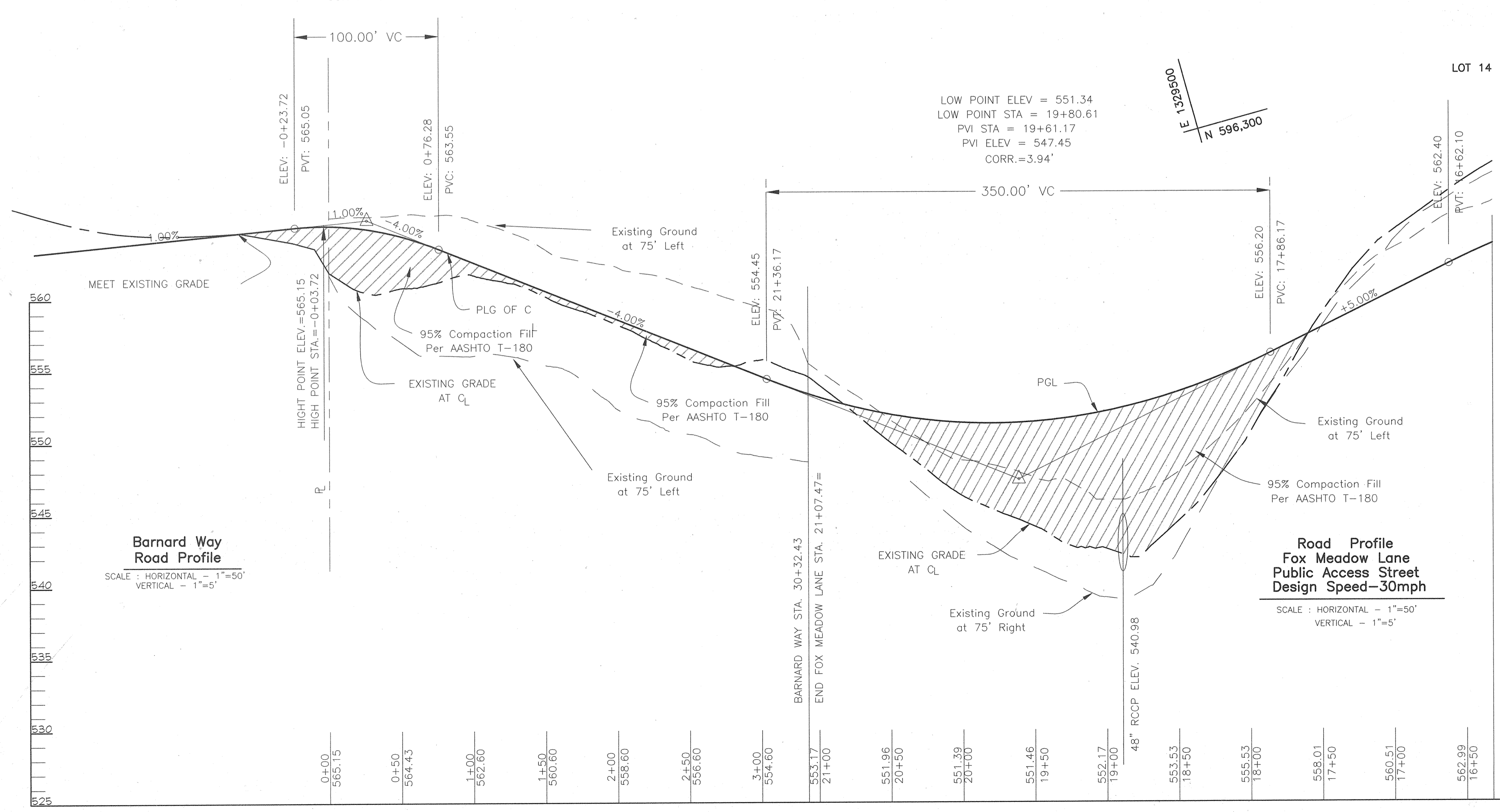
TYPICAL ROADWAY SECTION
CLASSIFICATION : PUBLIC ACCESS STREET
FOX MEADOW LANE
BARNARD WAY
 (-0+60 TO 3+32.43)
 DESIGN SPEED 30 MPH
 NOT TO SCALE



PLAN VIEW
 SCALE: 1"=50'

HIGH POINT ELEV = 565.15
 HIGH POINT STA = -0+03.72
 PVI STA = 0+26.28
 PVI ELEV = 565.55
 CORR. = -0.625'

LOW POINT ELEV = 551.34
 LOW POINT STA = 19+80.61
 PVI STA = 19+61.17
 PVI ELEV = 547.45
 CORR. = 3.94'



Barnard Way Road Profile
 SCALE : HORIZONTAL = 1"=50'
 VERTICAL = 1"=5'

Road Profile
Fox Meadow Lane
Public Access Street
Design Speed-30mph
 SCALE : HORIZONTAL = 1"=50'
 VERTICAL = 1"=5'

MATCHLINE SEE SHEET 3 OF 16

OWNER
 RICHARD TENNANT
 12256 FREDERICK ROAD
 WEST FRIENDSHIP, MD 21794

DEVELOPER
 IKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
 3403 OLANWOOD COURT, SUITE 101
 OUNY, MD. 20832

STREET TREE CHART

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
FOX MEADOW LANE	4067/40	102	102
FOX HOLLOW COURT	641/40	16	17
BARNARD WAY	574/40	14	15

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
C4	72.32	200.00	20°43'4"	36.56	N00°14'11"W	71.92
C5	40.75	100.00	23°20'46"	20.66	S88°55'20"E	40.47

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Danek 7-17-02
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

McDermott 7/19/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Harant 7/23/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

2	ADD STORMDRAIN NEAR LOT 15 & PRES. PARCEL 'D'	5/3/04
1	REMOVE TRAFFIC CONTROL DEVICE	3-28-02
NO.	REVISION	DATE

ROAD CONSTRUCTION PLAN
FOX CREEK SUBDIVISION
 LOTS 1 THRU 28 AND
 PRESERVATION PARCELS 'A' THRU 'D'

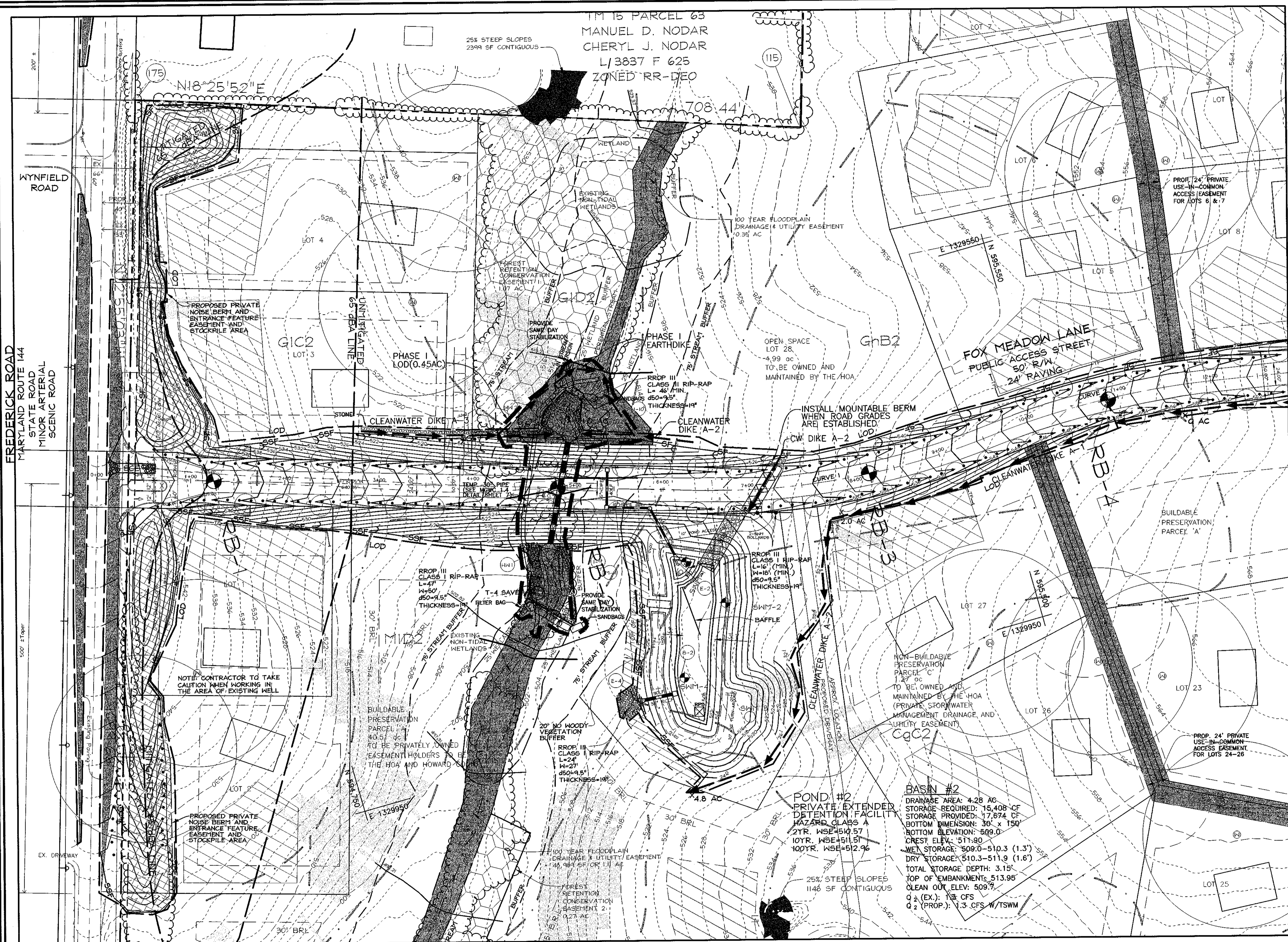
TAX MAP 15 BLOCKS 12 & 18
 TAX MAP 16 BLOCKS 7 & 13
 3RD ELECTION DISTRICT
 REF: S-00-03, P-01-01

PARCEL '183'
 HOWARD COUNTY, MARYLAND

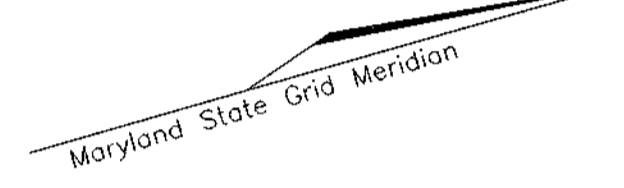
FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: JCO
 DRAWN BY: CMH
 CHECKED BY: JCO
 DATE: FEBRUARY 2002
 SCALE: AS SHOWN
 W.O. NO.: 2019035.0

4 SHEET OF 16



- LEGEND**
- Existing Contour
 - Proposed Contour
 - Existing Trees to Remain
 - 15%-24.99% STEEP SLOPE AREA
 - 25% OR GREATER STEEP SLOPE AREA
 - WETLAND AREA
 - FOREST CONSERVATION EASEMENT
 - FLOODPLAIN EASEMENT
 - NOISEBERM EASEMENT
 - EARTH DIKE
 - SOIL BORING
 - MOUNTABLE BERM
 - STABILIZED CONSTRUCTION ENTRANCE
 - SILT FENCE (ALL FENCE MUST EXTEND UP HILL 2' AT ENDS)
 - TREE PROTECTION FENCE
 - LIMIT OF DISTURBANCE (PHASE 1)
 - LIMIT OF DISTURBANCE (PHASE 2)
 - RIP-RAP INFLOW PROTECTION
 - AREAS TO RECEIVE SAME-DAY STABILIZATION



MATCHLINE SEE SHEET 6 OF 16

OWNER
 RICHARD TENNANT
 12256 FREDERICK ROAD
 WEST FRIENDSHIP, MD 21794

DEVELOPER
 IKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
 3403 OLANWOOD COURT, SUITE 101
 OLNEY, MD 20832

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard M. Dames 7/19/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE CE

Cindy Hurst 7/23/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 8

NO.	REVISION	DATE
1	REMOVE TRAFFIC CONTROL DEVICE	3.28.03

GRADING AND SEDIMENT & EROSION CONTROL PLAN
FOX CREEK SUBDIVISION
 LOTS 1 THRU 28 AND
 PRESERVATION PARCELS 'A' THRU 'D'
 TAX MAP 15 BLOCKS 12 & 18
 TAX MAP 16 BLOCKS 7 & 13
 3RD ELECTION DISTRICT
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FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: JCO
 DRAWN BY: CTH
 CHECKED BY: JCO
 DATE: FEBRUARY 2002
 SCALE: 1"=50'
 W.O. NO.: 2019035.0

5 SHEET OF 16

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

Jim Hayes 7/10/02
 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.

John Sch... 7/10/02
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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/SUBJECT ENGINEER, 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.

Tennant-iko Dev. L.P.
 SIGNATURE OF DEVELOPER DATE 6/17/02

ENGINEER'S CERTIFICATE

"I HEREBY 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.

Robert H. Vogel
 SIGNATURE OF ENGINEER DATE 6/17/02

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Robert H. Vogel 7-17-02
 CHIEF, BUREAU OF HIGHWAYS DATE

MATCHLINE SEE SHEET 7 OF 16

LEGEND

- Existing Contour
- Proposed Contour
- Existing Trees to Remain
- 15%-24.99% STEEP SLOPE AREA
- 25% OR GREATER STEEP SLOPE AREA
- WETLAND AREA
- FOREST CONSERVATION EASEMENT
- FLOODPLAIN EASEMENT
- NOISEBERM EASEMENT
- EARTH DIKE
- SOIL BORING
- MOUNTABLE BERM
- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE (ALL FENCE MUST EXTEND UPHILL 2' AT ENDS)
- TREE PROTECTION FENCE
- LIMIT OF DISTURBANCE (PHASE 2)
- LIMIT OF DISTURBANCE (PHASE 1)
- RIP-RAP INFLOW PROTECTION
- AREAS TO RECEIVE SAME-DAY STABILIZATION

DEVELOPER

IKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
3403 OLANWOOD COURT, SUITE 101
CLNEY, MD, 20852

OWNER

RICHARD TENNANT
12256 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Paulek
CHIEF, BUREAU OF HIGHWAYS
7-17-02
DATE

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

Jim Myers
USDA-NATURAL RESOURCES CONSERVATION SERVICE
7/10/02
DATE

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

Yvette Selig
HOWARD SOIL CONSERVATION DISTRICT
7/10/02
DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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/WE 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.

Tennant, IKO Dev. L.P.
SIGNATURE OF DEVELOPER
6/11/02
DATE

ENGINEER'S CERTIFICATE

"I HEREBY 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.

Robert H. Vogel
SIGNATURE OF ENGINEER
6/11/02
DATE

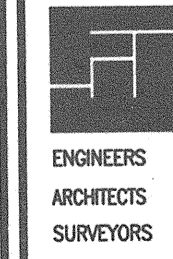
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Mark Dammann
CHIEF, DEVELOPMENT ENGINEERING DIVISION
7/19/02
DATE

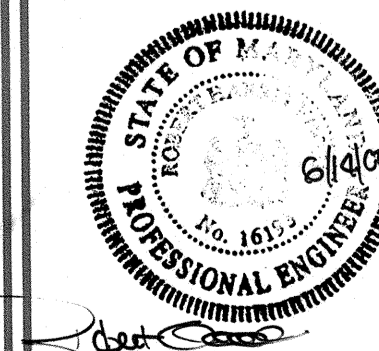
Candy Stewart
CHIEF, DIVISION OF LAND DEVELOPMENT
7/23/02
DATE

3	ADD STORMDRAIN NEAR LOT 15 & PRES. PARCEL 'D'	5/3/04
2	EXPAND LOD FOR ADDITIONAL GRADING	2/23/03
1	REMOVE TRAFFIC CONTROL DEVICE	3.28.03
NO	REVISION	DATE

GRADING AND SEDIMENT & EROSION CONTROL MAP
FOX CREEK SUBDIVISION
 LOTS 1 THRU 28 AND
 PRESERVATION PARCELS 'A' THRU 'D'
 TAX MAP 15 BLOCKS 12 & 18
 TAX MAP 16 BLOCKS 7 & 13
 3RD ELECTION DISTRICT
 REF: S-00-03, P-01-01

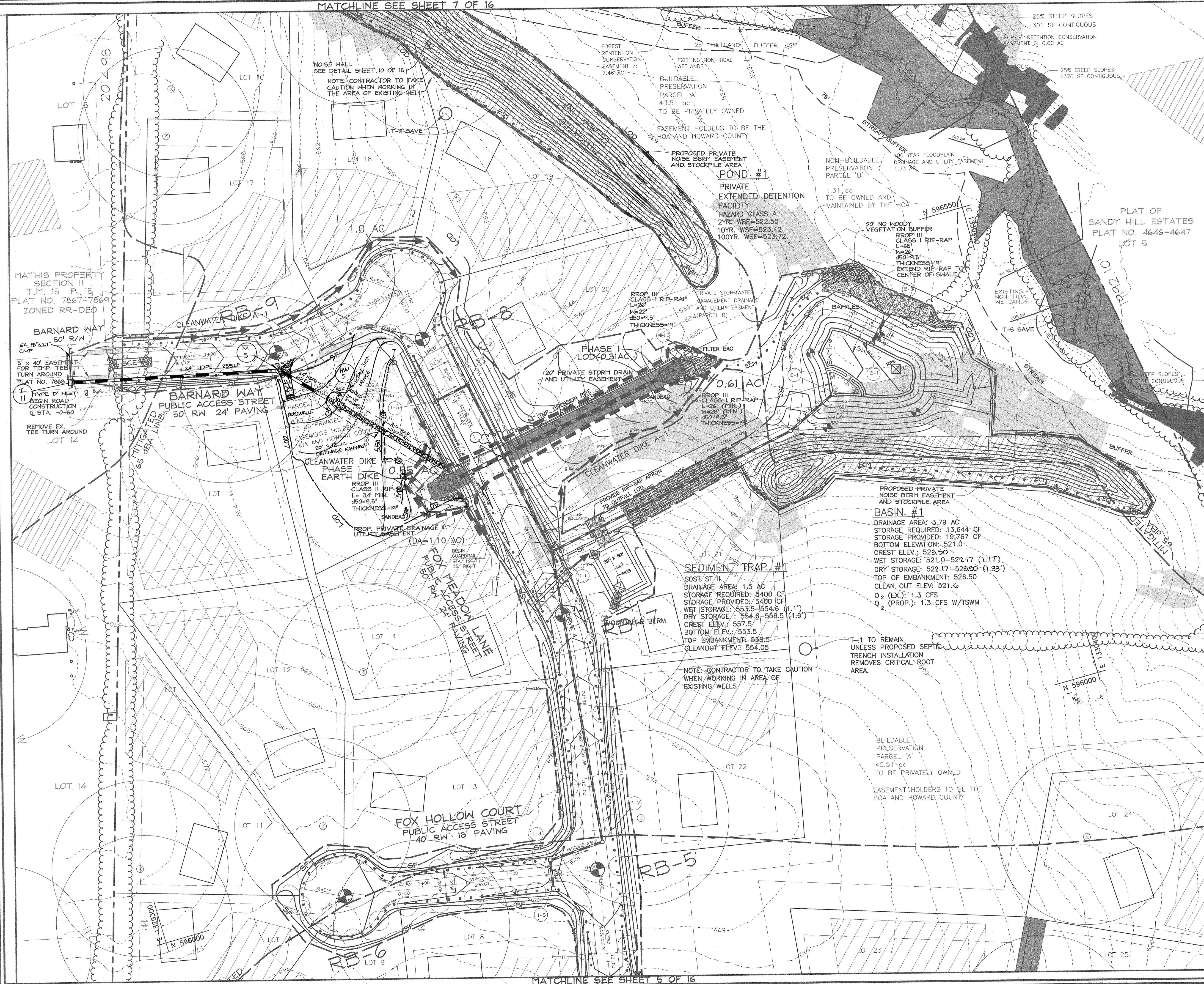


FREDERICK WARD ASSOCIATES, INC.
 7125 Riverwood Drive Columbia, Maryland 21046-2354
 Phone: 410-290-9550 Fax: 410-720-6226
 Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

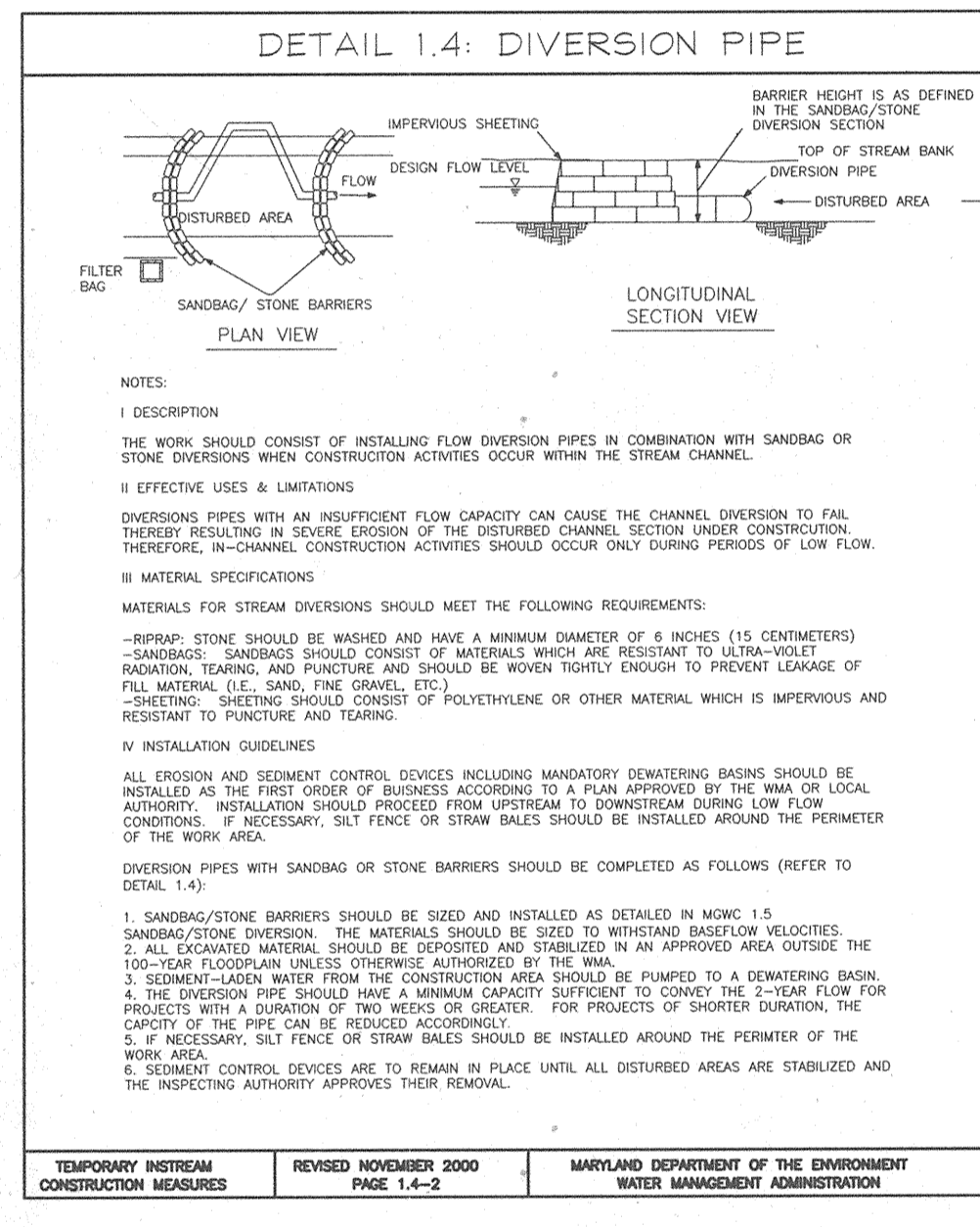
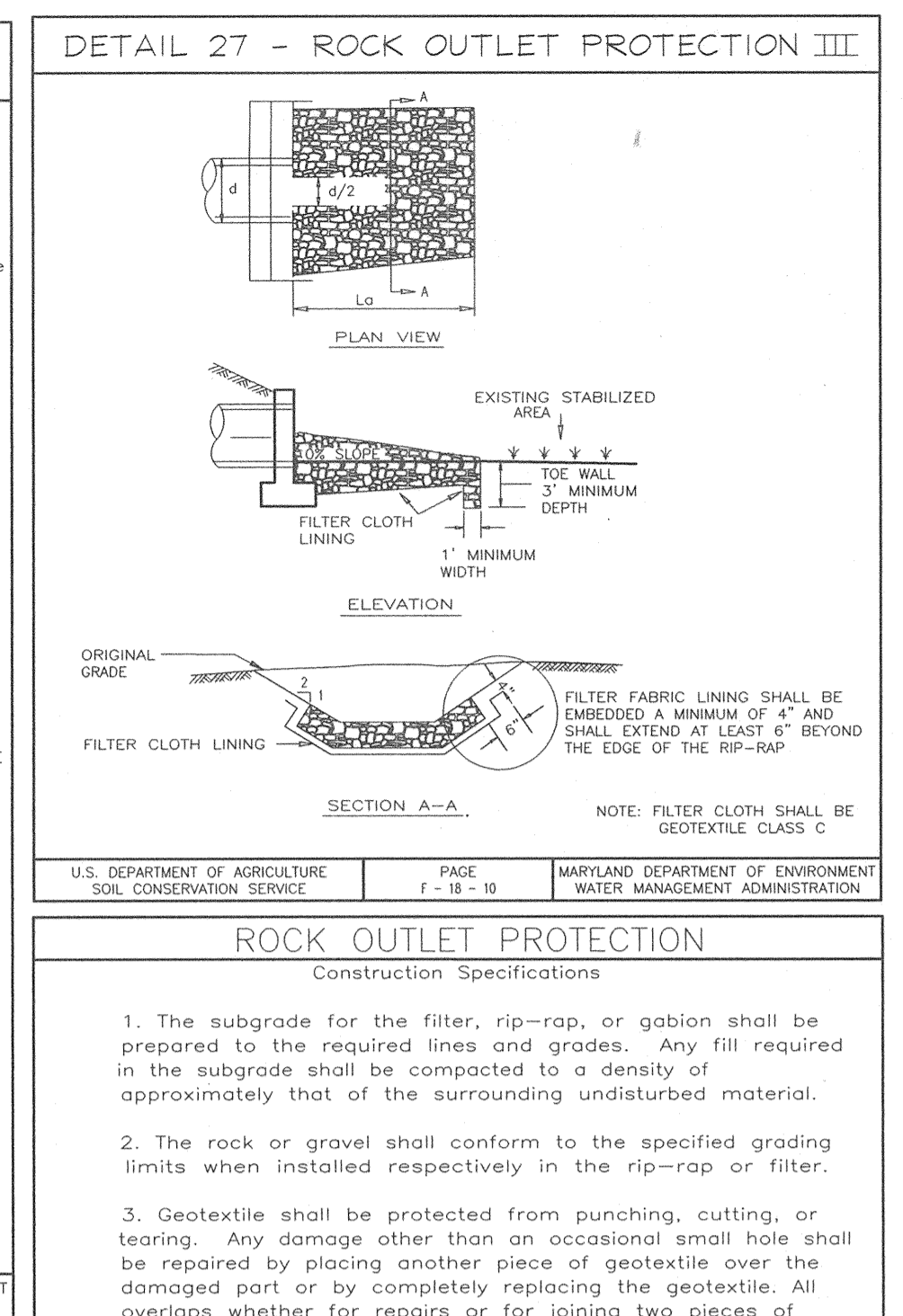
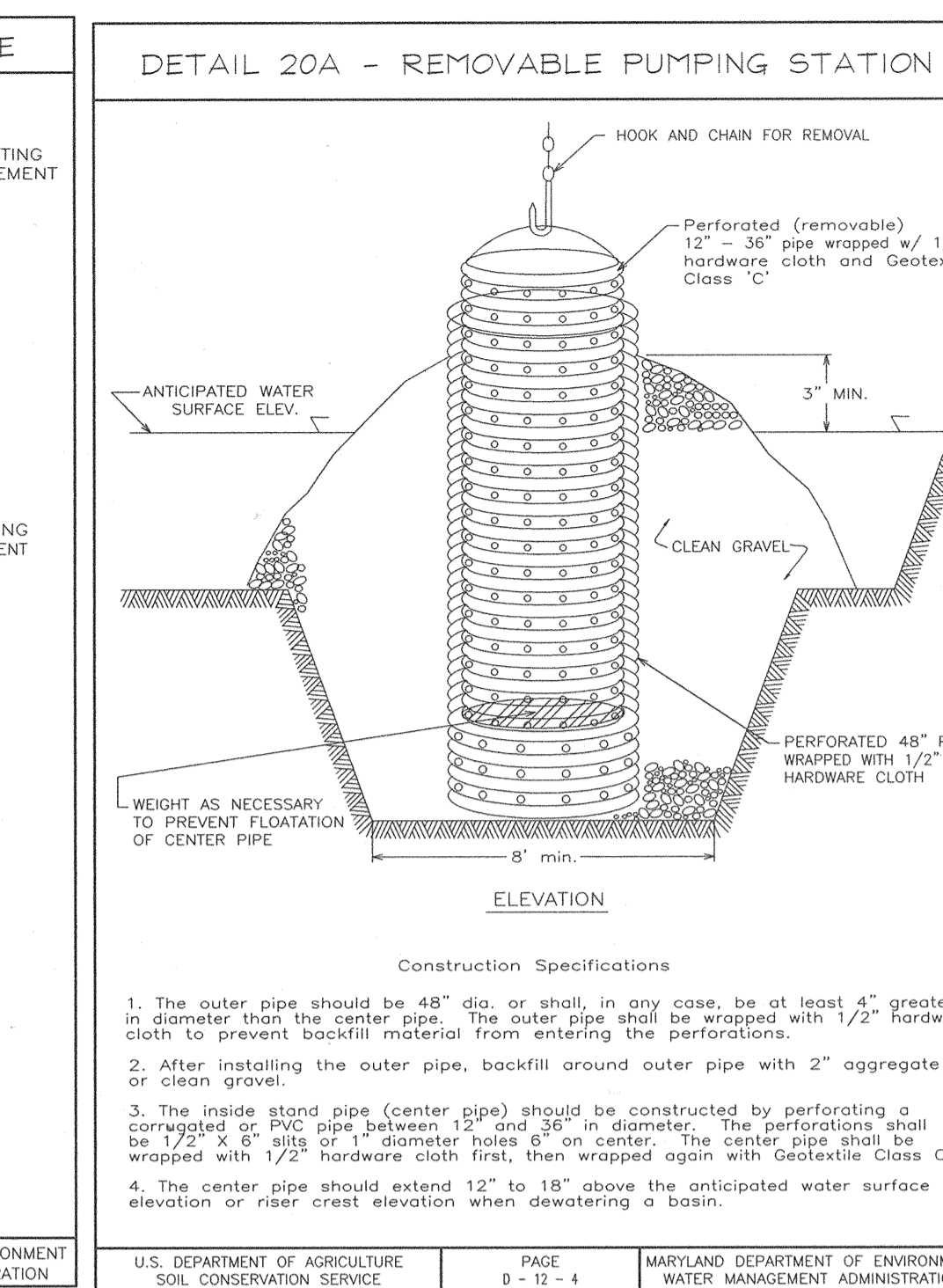
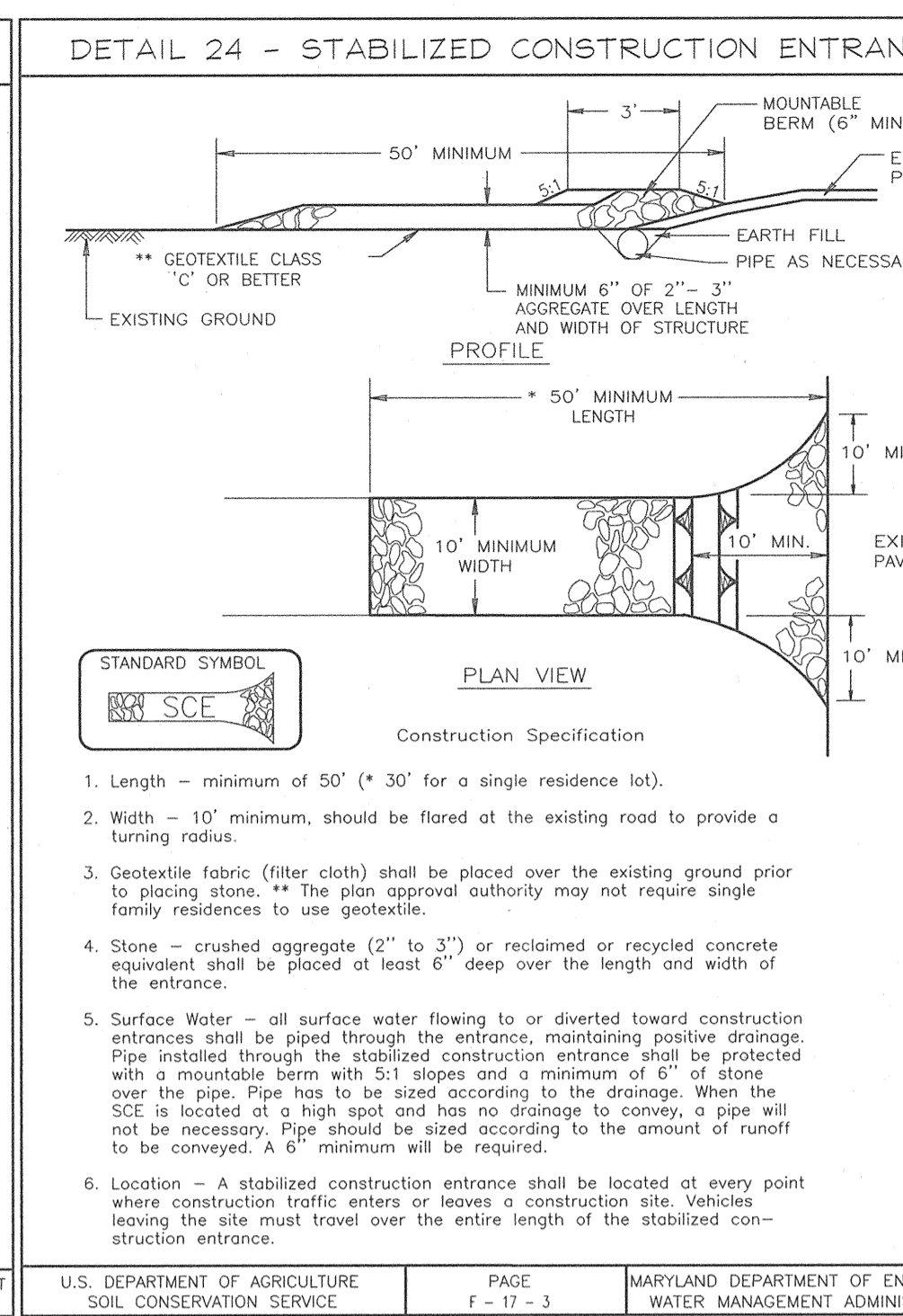
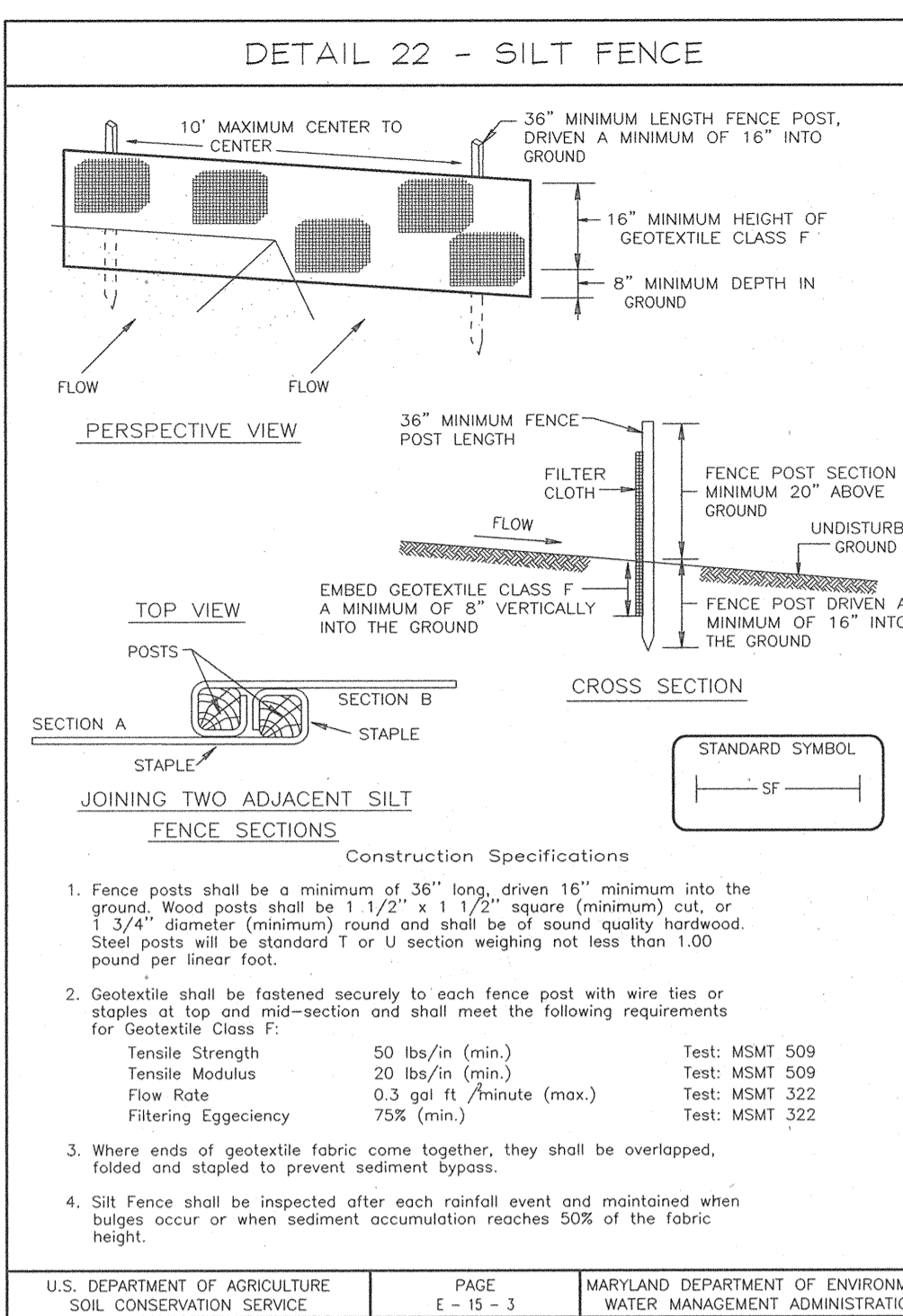
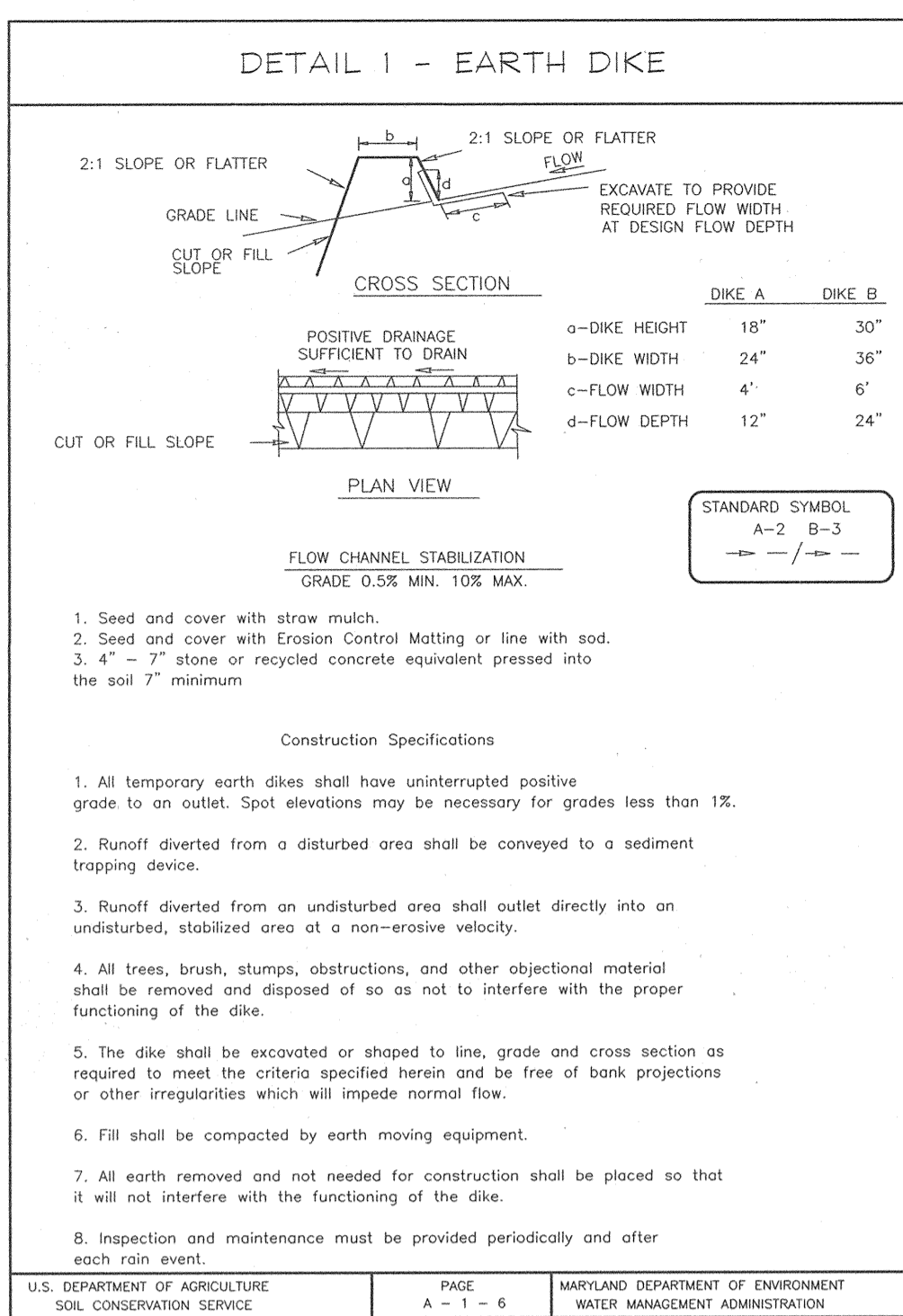
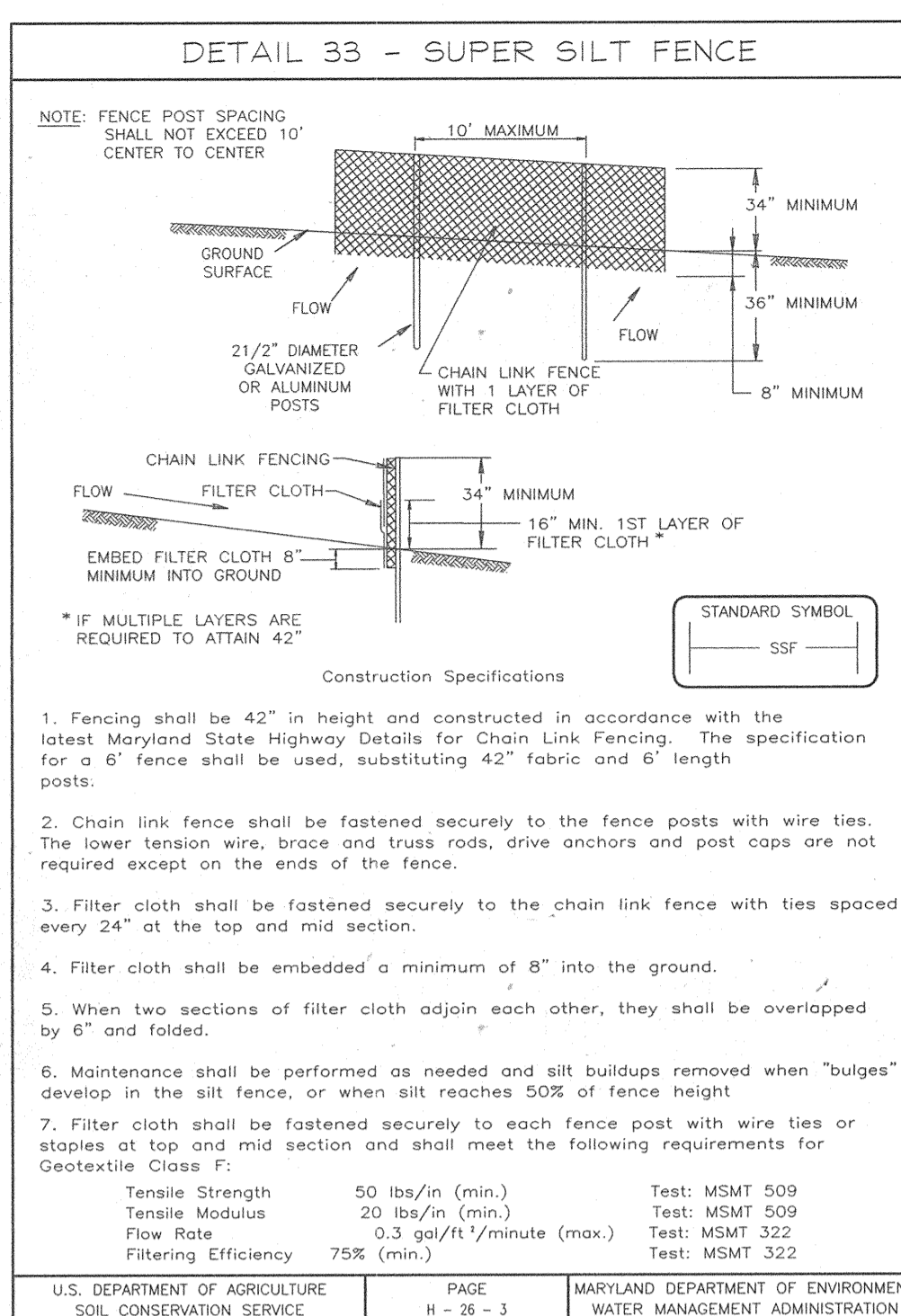


DESIGN BY: JCO
 DRAWN BY: CMH
 CHECKED BY: JCO
 DATE: FEBRUARY 2002
 SCALE: 1"=50'
 H.C. NO.: 2019035.0

6 SHEET OF 16



MATCHLINE SEE SHEET 5 OF 16



2.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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

Methods: To provide a suitable seed medium for vegetation growth. Soils of consistent low moisture content, low nutrient levels, low pH, moderate texture, and free of bank projections or other irregularities which will impede normal flow.

Conditions Where Practice Applies:

- This practice is limited to areas having 21\"/>

PERMANENT SEEDING NOTES

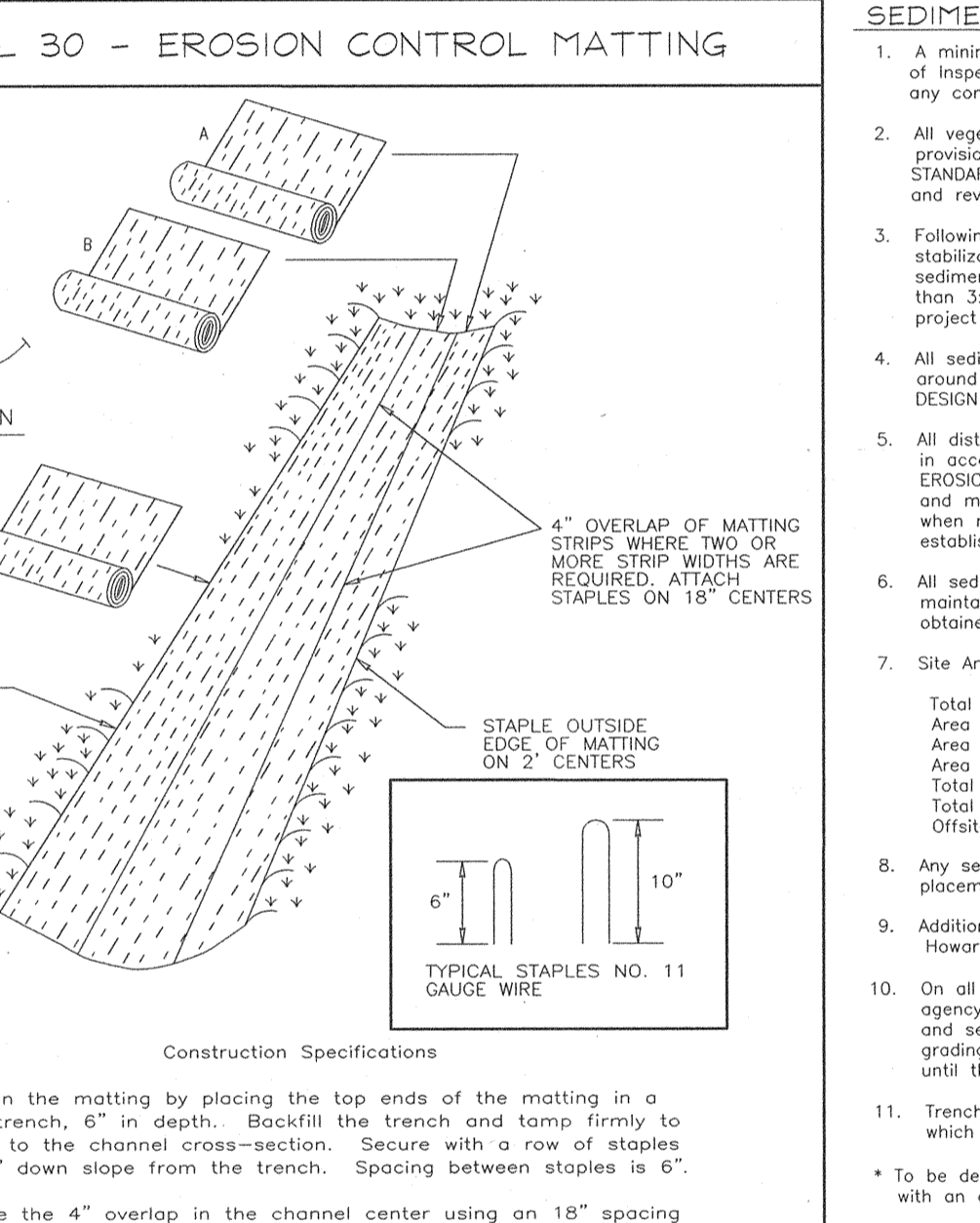
APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-TERM VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding. If not previously loosened, use the following schedule:

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:

- Preferred-Apply 2 tons per acre diammonium phosphate (92 lbs/100 sq ft) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/100 sq ft) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 100 lbs per acre 20-20-20 ureaform fertilizer (9 lbs/100 sq ft).
- Acceptable-Apply 2 tons per acre dolomitic limestone (92 lbs/100 sq ft) and apply 100 lbs per acre 10-10-10 fertilizer (23 lbs/100 sq ft) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For the periods March 1 thru April 30, and August 1 thru October 31, apply 1 1/2 to 2 tons per acre (70 to 90 lbs/100 sq ft) of certified small grain straw immediately after seeding. For the period May 1 thru July 31, seed with 60 lbs per acre of certified small grain straw immediately after seeding. For the period August 1 thru October 31, seed with 2 lbs per acre of certified small grain straw immediately after seeding. For the period November 1 thru February 28, protect site by Option (1) 2 tons per acre certified small grain straw and seed as soon as possible in the spring. Option (2) Use seed. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mow with 2\"/>

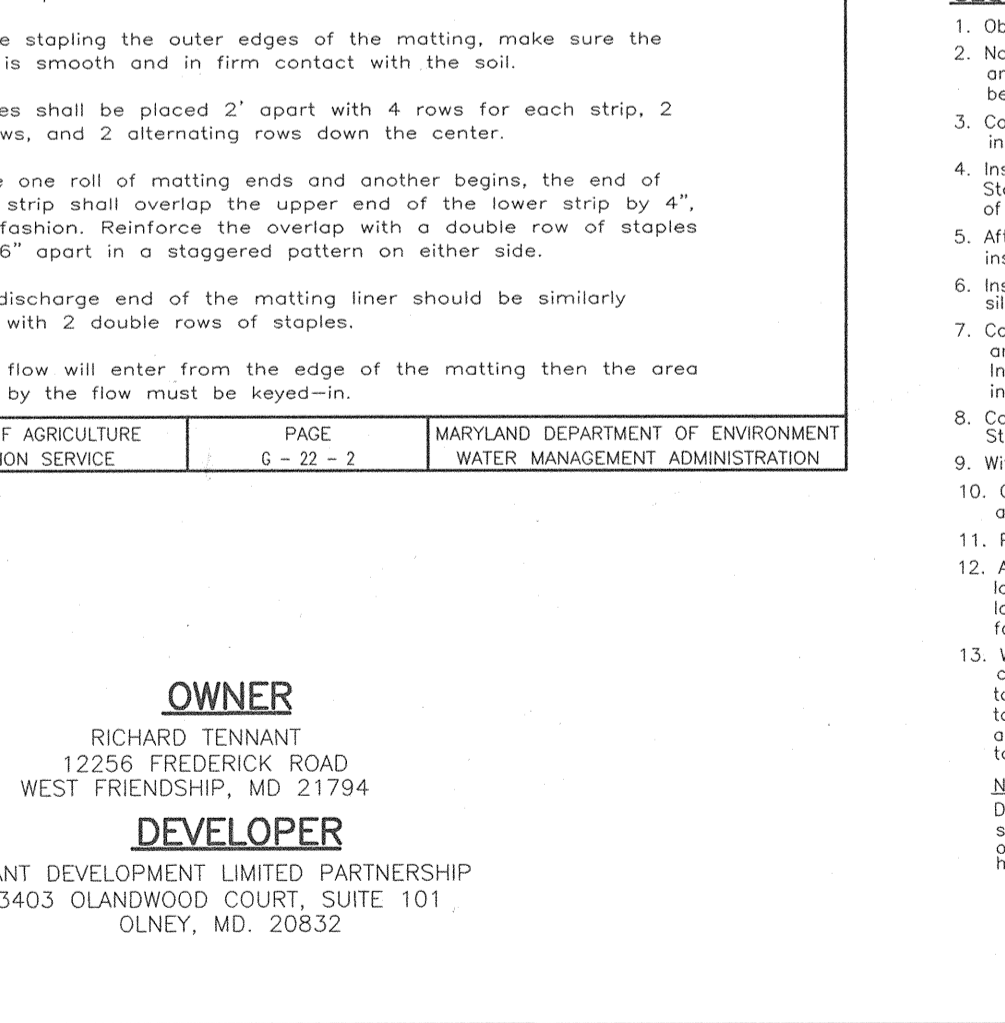
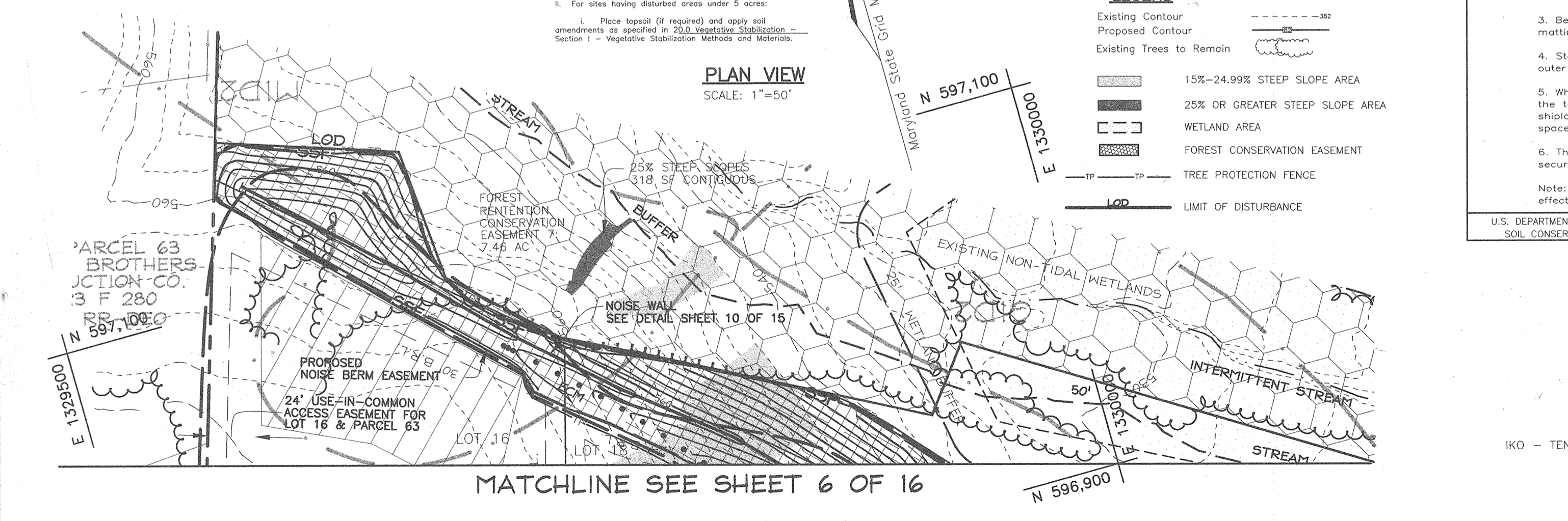


SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1855).
- All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within (7) calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1. (1) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch shall be done when recommended seeding rates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

Site Analysis:

Total Area	20.51 Acres
Area to be seeded or mulched	11.55 Acres
Area to be vegetatively stabilized	10.66 Acres
Total Cut	27,524 Cu Yd
Total Fill	27,224 Cu Yd
Offsite waste/borrow area location	-



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hamster 7/23/02
CHIEF, DIVISION OF LAND DEVELOPMENT

John DeMunnis 7/19/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION

ENGINEER'S CERTIFICATE

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Robert H. Vogel 7/19/02
SIGNATURE OF ENGINEER

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH 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."

Tennant-IRCO Dev. LP. 6/17/02
SIGNATURE OF DEVELOPER

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

Jim Meyer 7/10/02
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.

Jeffrey Selig 7/10/02
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William M. DePue 7-17-02
CHIEF, BUREAU OF HIGHWAYS

NO.	REVISION	DATE

SEDIMENT & EROSION CONTROL DETAILS

FOX CREEK SUBDIVISION

LOTS 1 THRU 28 AND PRESERVATION PARCELS 'A' THRU 'D'

TAX MAP 15 BLOCKS 12 & 13
TAX MAP 16 BLOCKS 7 & 18
3RD ELECTION DISTRICT

PARCEL '183'
HOWARD COUNTY, MARYLAND

REF: S-00-03, P-01-01

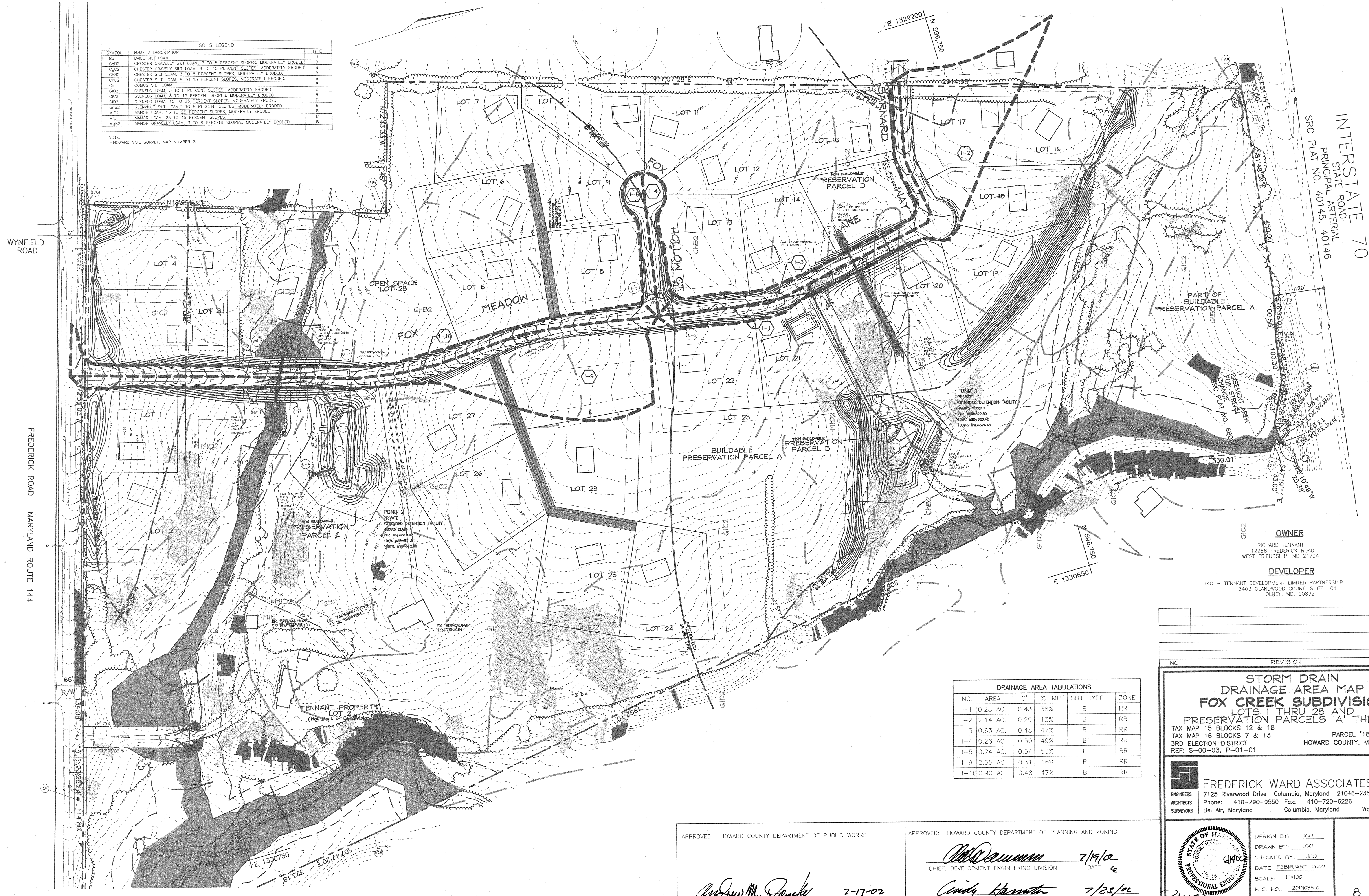
FREDERICK WARD ASSOCIATES, INC.
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Tel: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: JCO
DRAWN BY: CMH
CHECKED BY: JCO
DATE: MAY, 2002
SCALE: AS SHOWN
W.O. NO.: 2019035.0

7 SHEET OF 16

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION		TYPE
Bs	BALE SILT LOAM		D
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED		B
CgC2	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED		B
CnB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED		B
CnC2	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED		B
Cs	COWES SILT LOAM		B
GIB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED		B
GIC2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED		B
GID2	GLENELG LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED		B
GnB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED		B
MD2	MANOR LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED		B
ME	MANOR LOAM, 25 TO 45 PERCENT SLOPES		B
MgB2	MANOR GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED		B

NOTE:
--HOWARD SOIL SURVEY, MAP NUMBER 8



INTERSTATE 70
STATE ROAD
PRINCIPAL ARTERIAL
SRC PLAT NO. 40145, 40146

OWNER
RICHARD TENNANT
12256 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794

DEVELOPER
TKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
3403 OLANWOOD COURT, SUITE 101
OLNEY, MD. 20832

DRAINAGE AREA TABULATIONS					
NO.	AREA	'C'	% IMP.	SOIL TYPE	ZONE
I-1	0.28 AC.	0.43	38%	B	RR
I-2	2.14 AC.	0.29	13%	B	RR
I-3	0.63 AC.	0.48	47%	B	RR
I-4	0.26 AC.	0.50	49%	B	RR
I-5	0.24 AC.	0.54	53%	B	RR
I-9	2.55 AC.	0.31	16%	B	RR
I-10	0.90 AC.	0.48	47%	B	RR

STORM DRAIN DRAINAGE AREA MAP
FOX CREEK SUBDIVISION
LOTS 1 THRU 28 AND
PRESERVATION PARCELS 'A' THRU 'D'
TAX MAP 15 BLOCKS 12 & 18
TAX MAP 16 BLOCKS 7 & 13
3RD ELECTION DISTRICT
REF: S-00-03, P-01-01

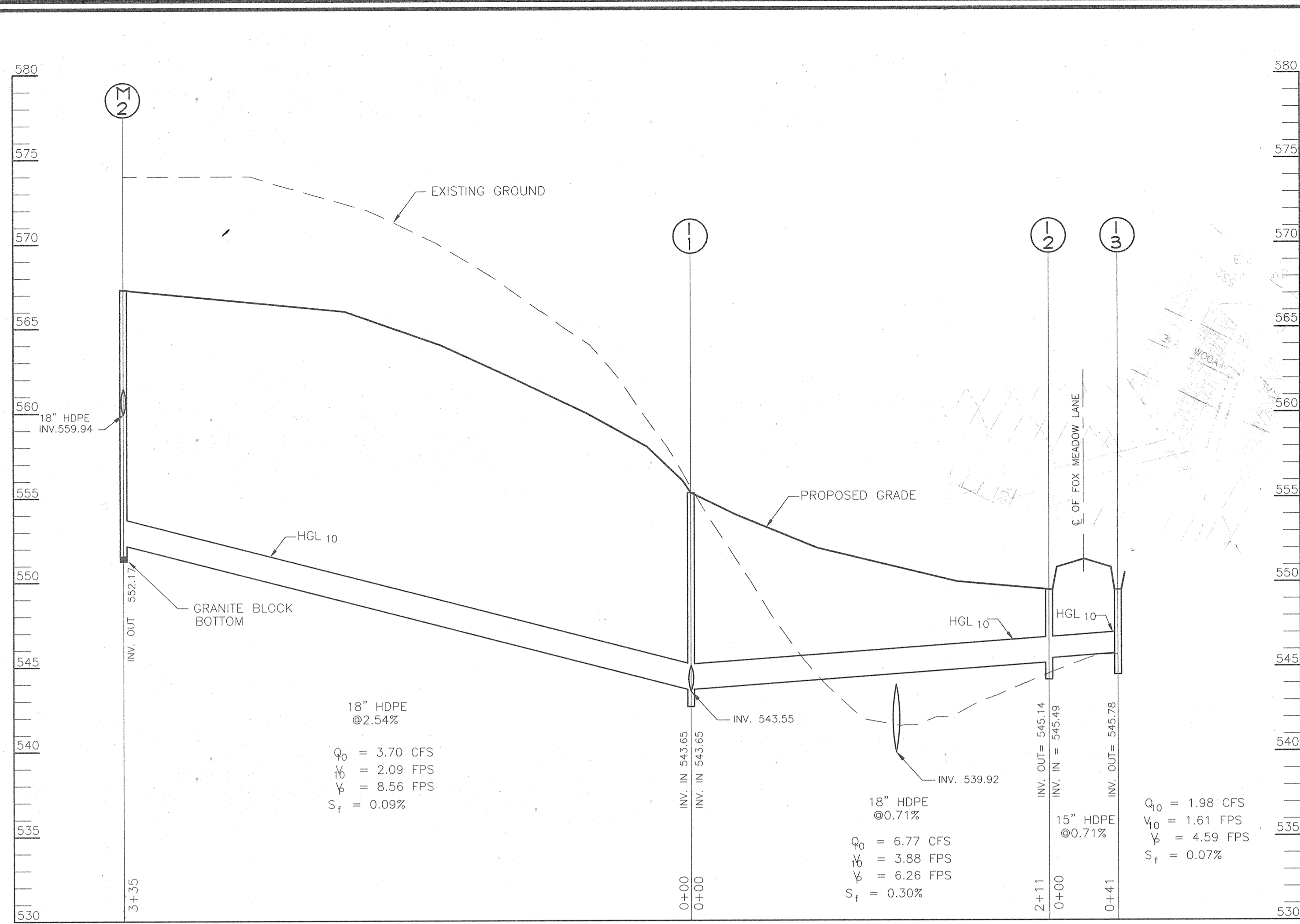
FREDERICK WARD ASSOCIATES, INC.
ENGINEERS ARCHITECTS SURVEYORS
7125 Riverwood Drive Columbia, Maryland 21046-2354
Phone: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: JCO
DRAWN BY: JCO
CHECKED BY: JCO
DATE: FEBRUARY 2002
SCALE: 1"=100'
W.O. NO.: 2019035.0

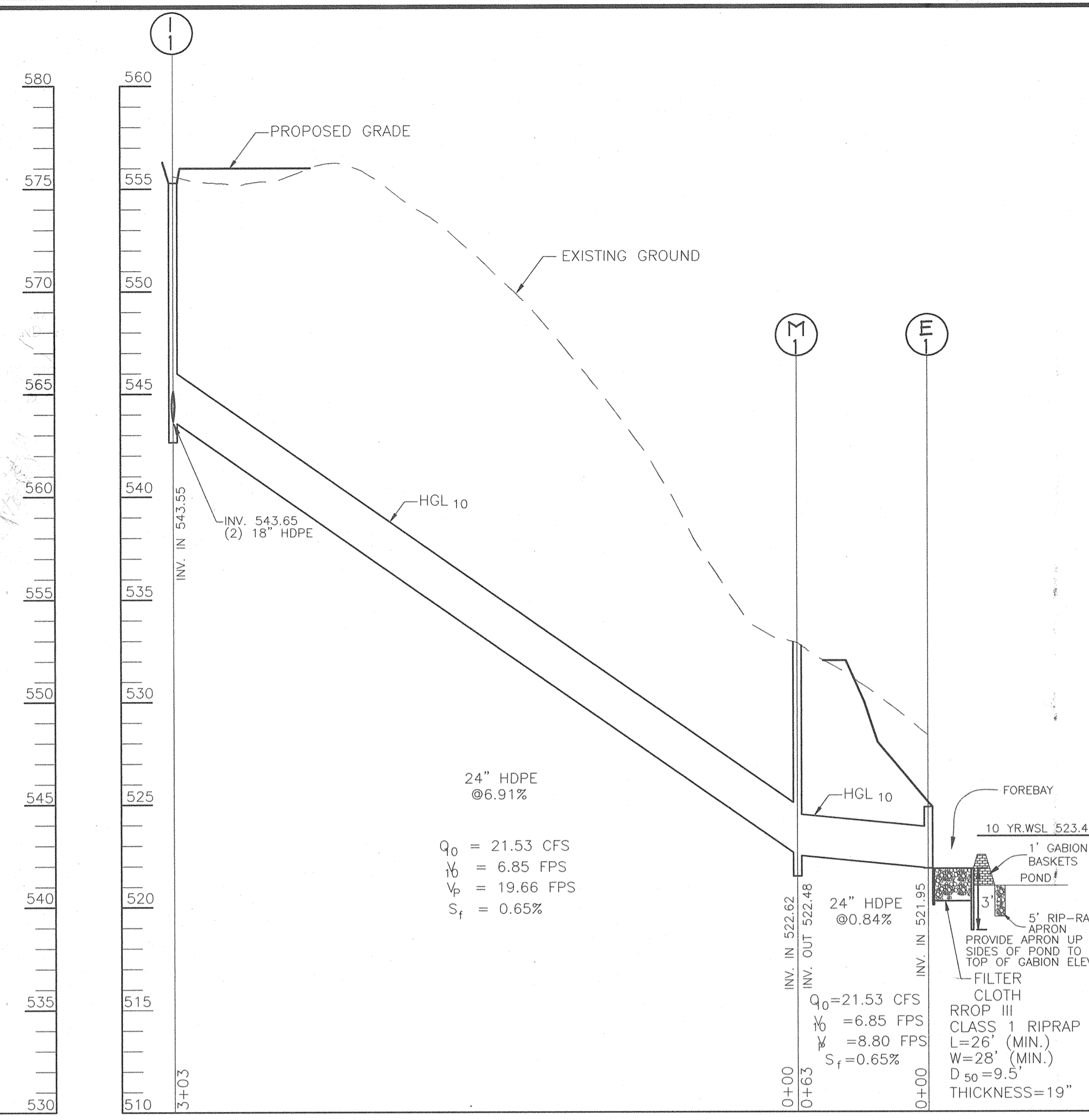
8 SHEET OF 16

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Parke 7-17-02
CHIEF, BUREAU OF HIGHWAYS

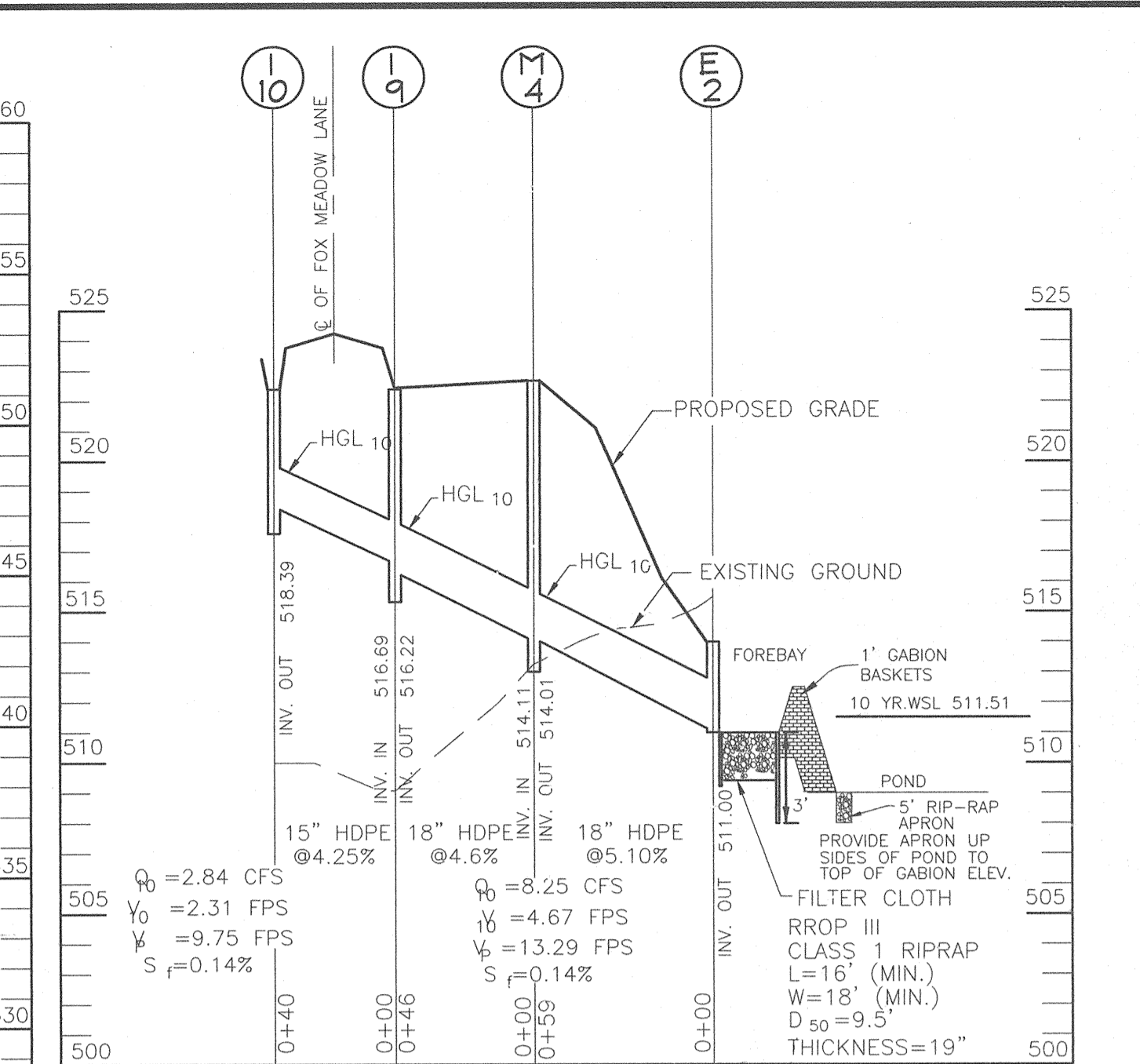
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cheryl Kamm 7/25/02
CHIEF, DIVISION OF LAND DEVELOPMENT



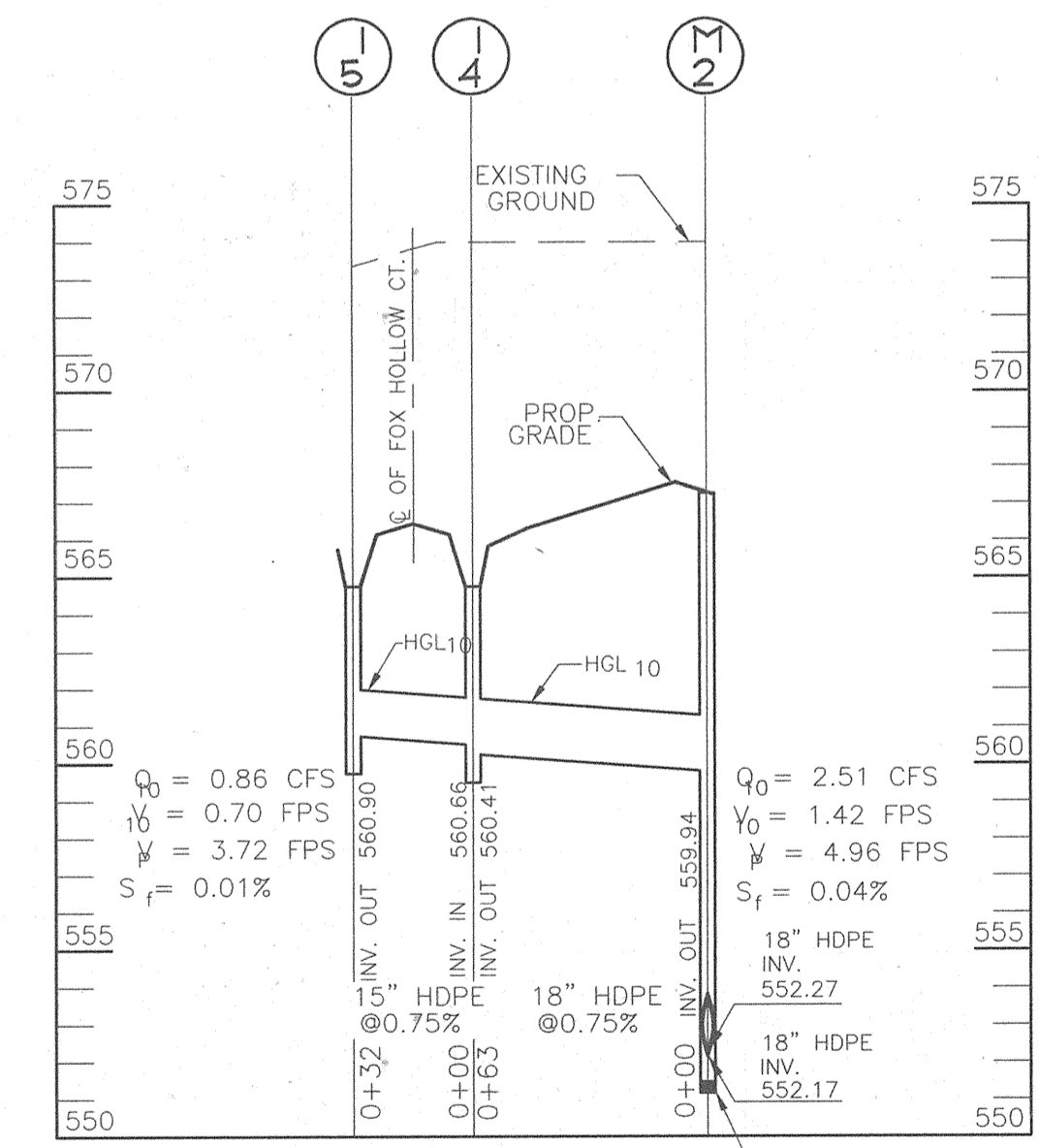
STORM DRAIN PROFILE
 SCALE: 1" = 50' HORZ.
 1" = 5' VERT.



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



STORM DRAIN PROFILE
 SCALE: 1" = 50' HORZ.



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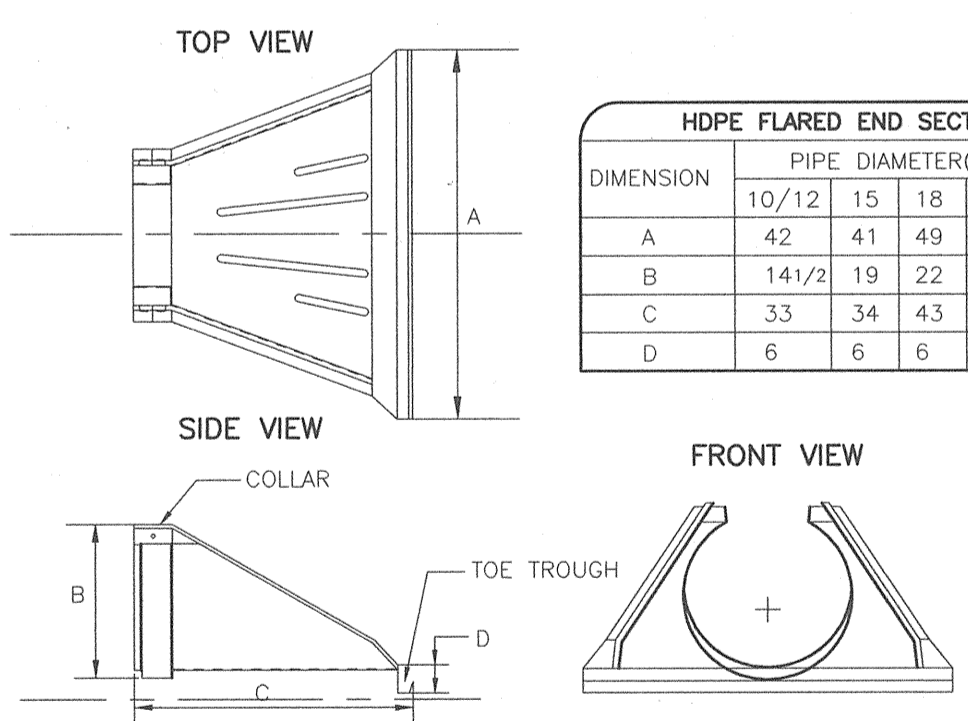
1" = 5' VERT.

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
E-1	24" HDPE END SECTION	N 596387.26 E 1330199.88	524.85	24" 521.95	521.85	SEE DETAIL
E-2	18" HDPE END SECTION	N 595142.65 E 1329781.42	514.00	18" 511.10	511.00	SEE DETAIL
E-3	36" CONC. END SECTION					SD 5.51
E-4	36" CONC. END SECTION					SD 5.51
I-1	TYPE D INLET	CL STA. 17+68, 20' RT.	555.28 *	(2)18" 543.65	24" 543.55	SD-4.39
I-2	TYPE D INLET	CL STA. 19+80, 20' LT.	549.53 *	15" 545.49	18" 545.14	SD-4.39
I-3	TYPE D INLET	CL STA. 19+80, 20' RT.	549.53 *	15" 545.14	18" 545.14	SD-4.39
I-4	TYPE D INLET	CL STA. 0+53, 16' RT.	564.75 *	15" 560.51	18" 560.41	SD-4.39
I-5	TYPE D INLET	CL STA. 0+53, 16' LT.	564.75 *	15" 560.51	18" 560.75	SD-4.39
I-9	TYPE D INLET	CL STA. 5+43, 20' RT.	522.39 *	15" 516.69	18" 516.22	SD-4.39
I-10	TYPE D INLET	CL STA. 5+43, 20' LT.	522.39 *	15" 516.69	18" 516.22	SD-4.39
I-11	TYPE D INLET	CL STA. 0+58, 18.5' RT.	563.80*	560.50	24" 558.5	SD-4.39
M-1	STANDARD 4" MANHOLE	N 596360.38 E 1330142.30	532.85	24" 522.62	24" 522.48	G-5.12
M-2	STANDARD 4" MANHOLE	CL STA. 14+31, 18' RT.	567.31	18" 569.94	18" 569.17	G-5.12
M-4	STANDARD 4" MANHOLE	CL STA. 5+89, 20' RT.	522.68	18" 514.11	18" 514.01	G-5.12
M-5	STANDARD 4" MANHOLE	CL STA. 2+57.48, 20' RT.	558.0	24" 555.5	24" 555.7	G-5.12
HW-1	TYPE 'A' HEADWALL CIRCULAR	N 595018.62 E 1329730.04	508.30	-	501.50	SD 5.11
HW-2	TYPE 'A' HEADWALL CIRCULAR	N 595066.61 E 1329631.06	512.20	505.20	-	SD 5.11
HW-3	TYPE 'A' HEADWALL CIRCULAR	N 596458.79 E 1330013.83	534.50	-	529.00	SD 5.11
HW-4	TYPE 'A' HEADWALL CIRCULAR	N 596414.55 E 1329767.78	548.50	543.00	-	SD 5.11
HW-5	TYPE 'A' HEADWALL CIRCULAR	N 5916543.99 E 1321645.89	554.0	-	551.0	SD 5.11

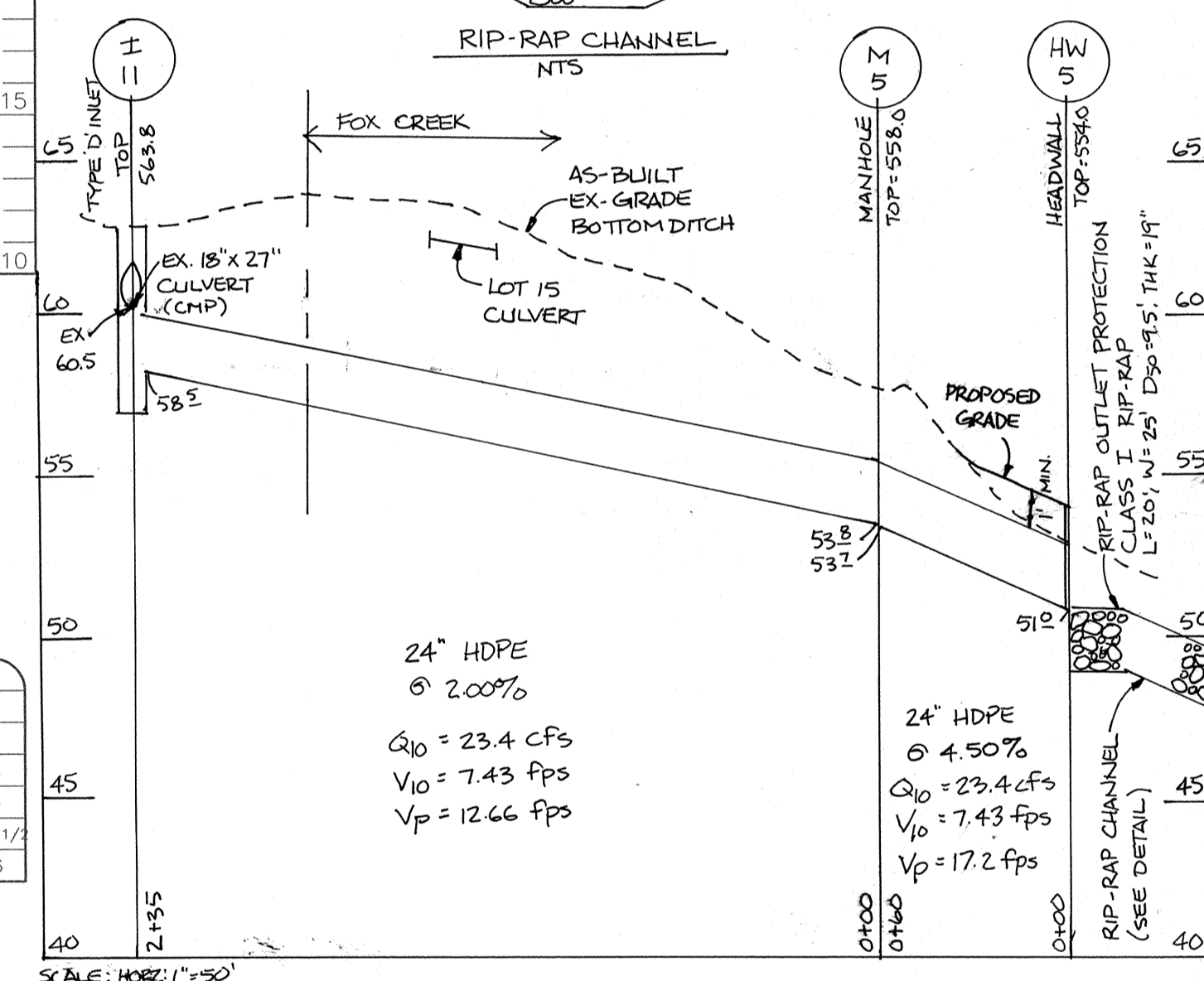
NOTE: ALL STORM DRAIN PIPE TO BE HDPE UNLESS OTHERWISE NOTED.
 TS = TOP OF SLAB, FACE OF STRUCTURE
 TP = TOP OF PIPE
 TR = TOP CENTER OF RIM
 * ELEV. AT THROAT OPENING

PIPE SCHEDULE

PIPE SIZE	TYPE	TOTAL LENGTH
15"	HDPE	396 LF
18"	HDPE	431 LF
24"	HDPE	641 LF
36"	ASTM RCCP C-361	58 LF
48"	RCCP	250 LF
66"	RCCP	110 LF



HDPE END SECTION DETAIL
 NOT TO SCALE



STORM DRAIN PROFILES
FOX CREEK SUBDIVISION
 LOTS 1 THRU 28 AND
 PRESERVATION PARCELS 'A' THRU 'D'

TAX MAP 15 BLOCKS 12 & 18
 TAX MAP 16 BLOCKS 7 & 13
 3RD ELECTION DISTRICT
 REF: S-00-03, P-01-01

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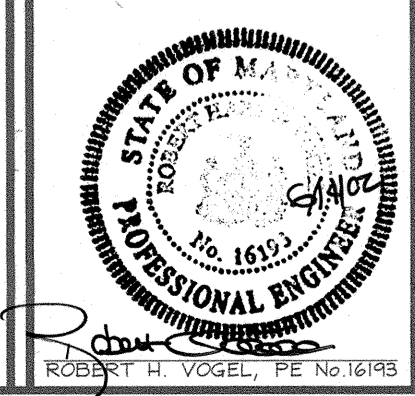
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Jencks 7-17-02
 CHIEF, BUREAU OF HIGHWAYS DATE

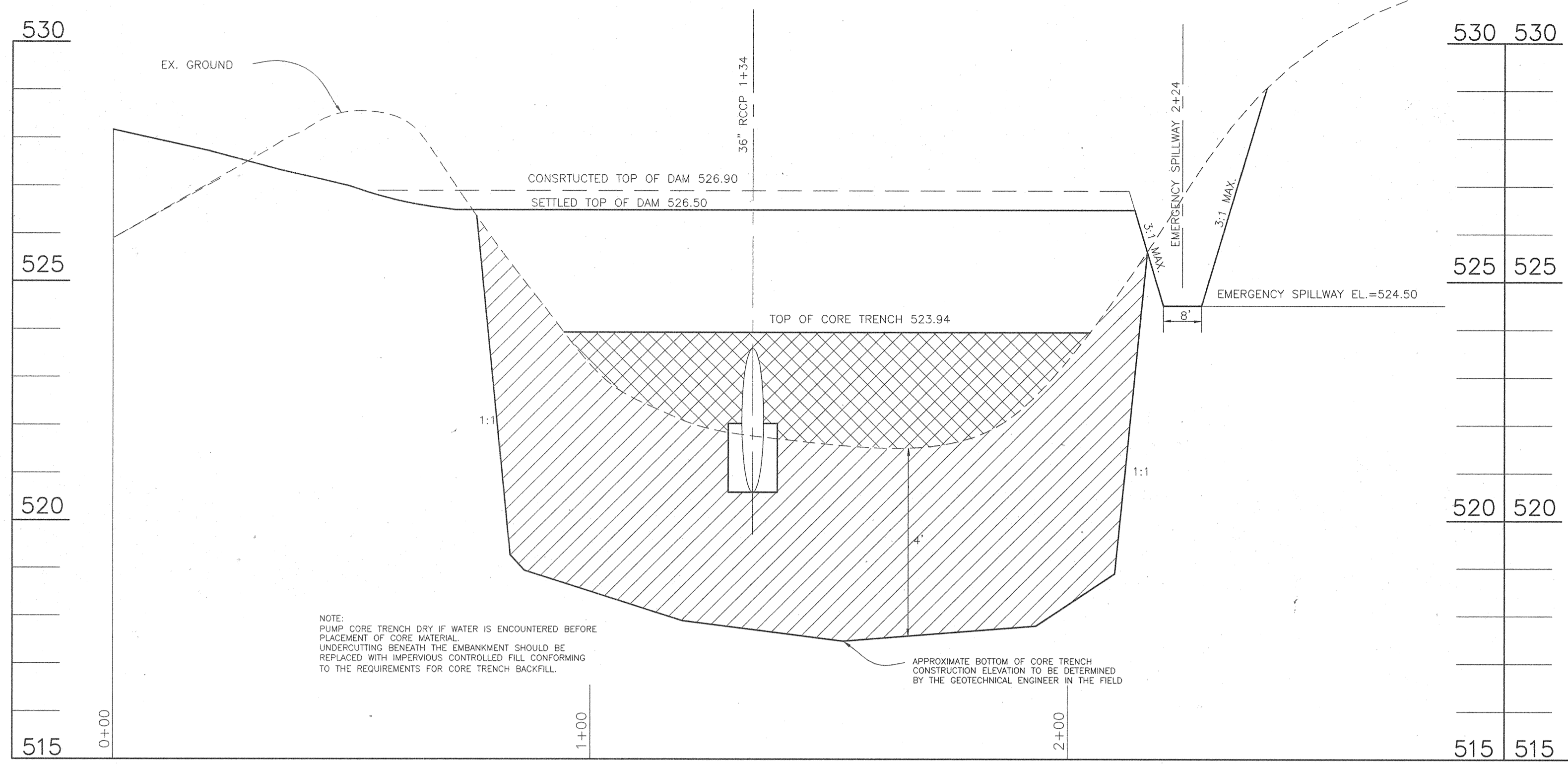
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Michael Dammann 7/19/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

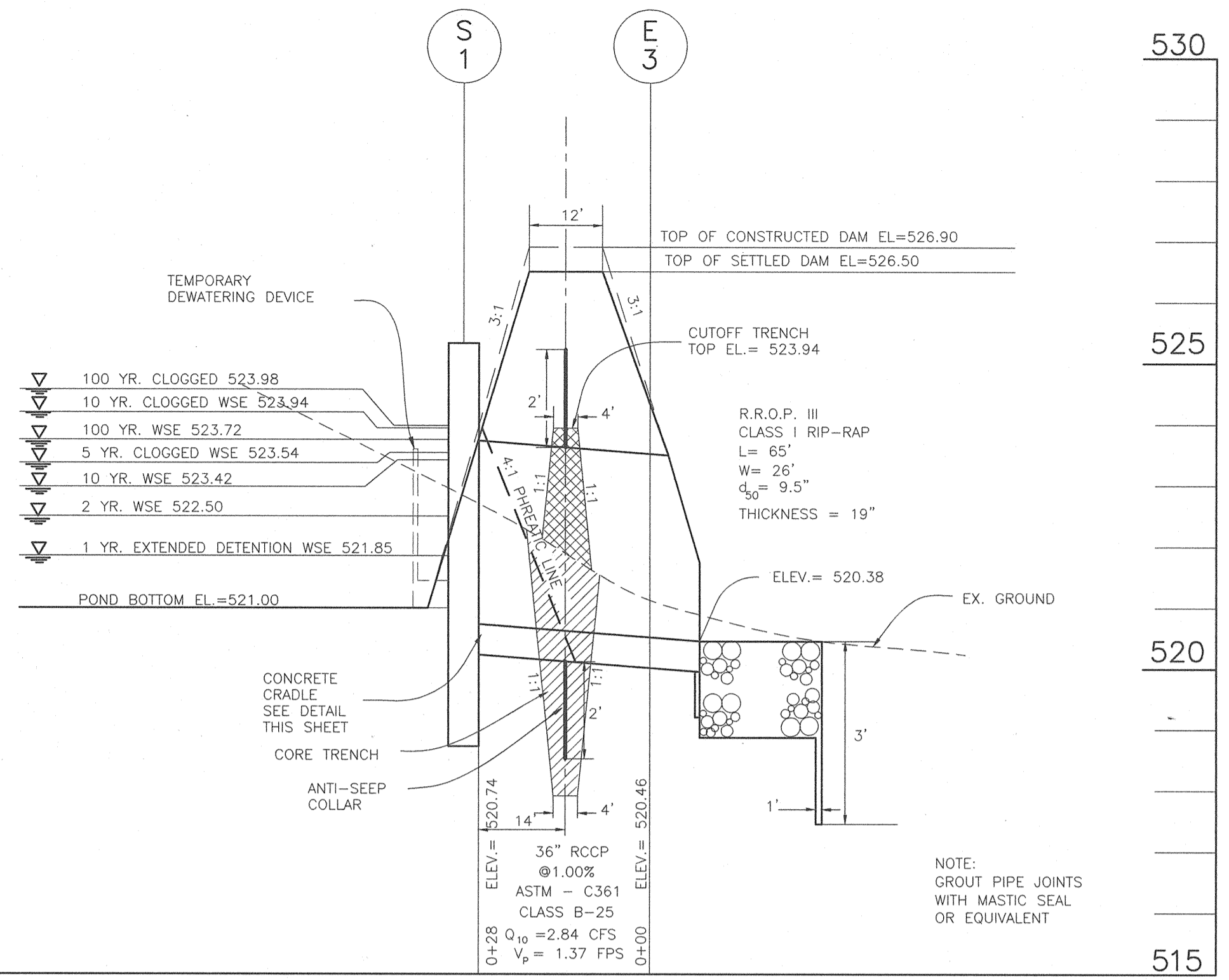
Cindy Hammit 7/23/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



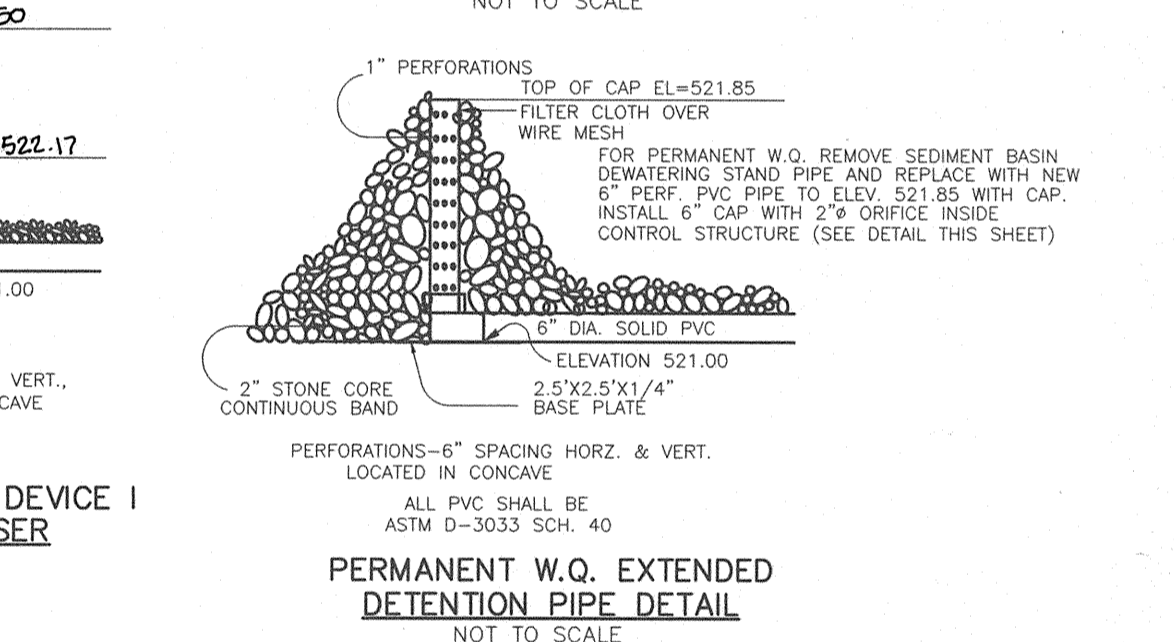
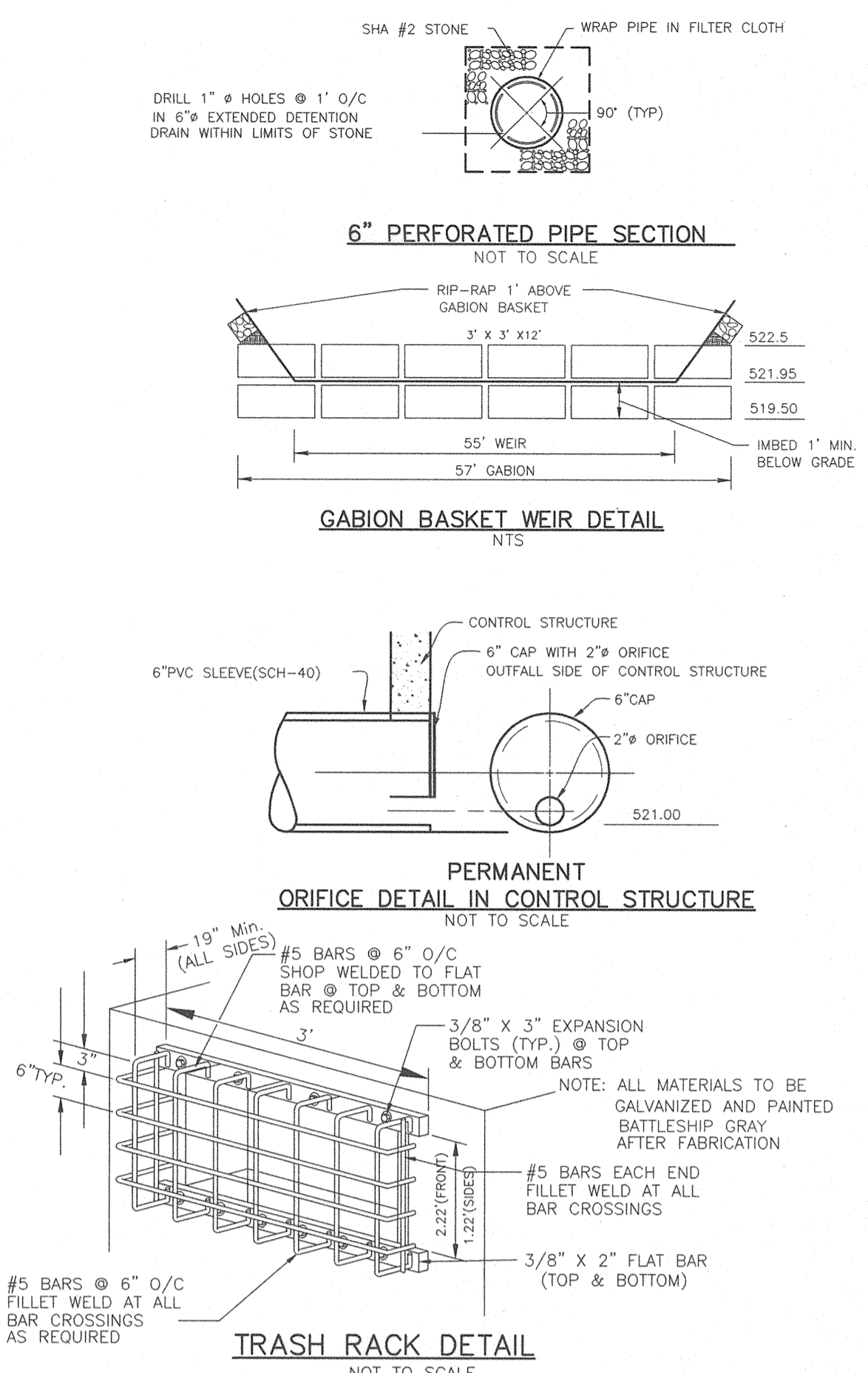
DESIGN BY: JCO/RJ
 DRAWN BY: RJ
 CHECKED BY: JCO
 DATE: FEBRUARY 2002
 SCALE: 1"=50'
 P.L.O. NO.: 2019035.0



PROFILE ALONG C EMBANKMENT
SCALE: 1" = 20' HORZ.
1" = 2' VERT.



POND #1
PRINCIPLE SPILLWAY PROFILE
SCALE: 1" = 20' HORZ.
1" = 2' VERT.

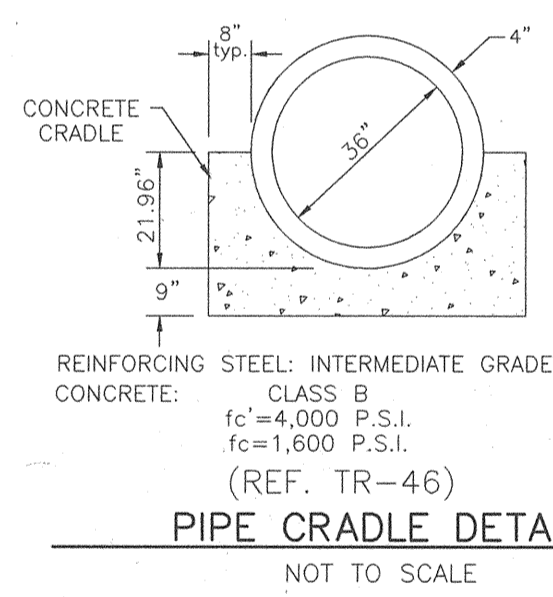


OPERATION AND MAINTENANCE SCHEDULE FOR
STORMWATER MANAGEMENT DETENTION FACILITY

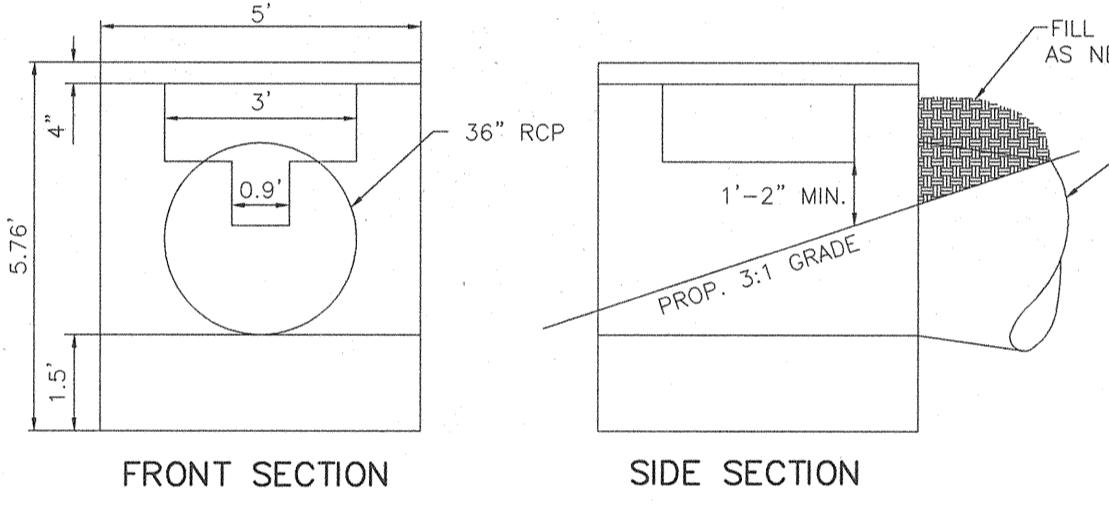
- STORMWATER MANAGEMENT FACILITY
ROUTINE MAINTENANCE
- FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF FUNCTIONING PROPERLY.
 - TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
 - DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
 - VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREAS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- NON-ROUTINE MAINTENANCE
- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
 - SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERE WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

POND #1 SUMMARY

	2 YEAR	10 YEAR	100 YEAR
FLOW INTO POND	4.71 c.f.s.	13.15 c.f.s.	24.03 c.f.s.
FLOW OUT OF POND	0.22 c.f.s.	2.84 c.f.s.	7.73 c.f.s.
W.S. ELEVATION	522.50	523.42	523.72
STORAGE VOLUME	0.21 AC FT	0.36 AC FT	0.66 AC FT



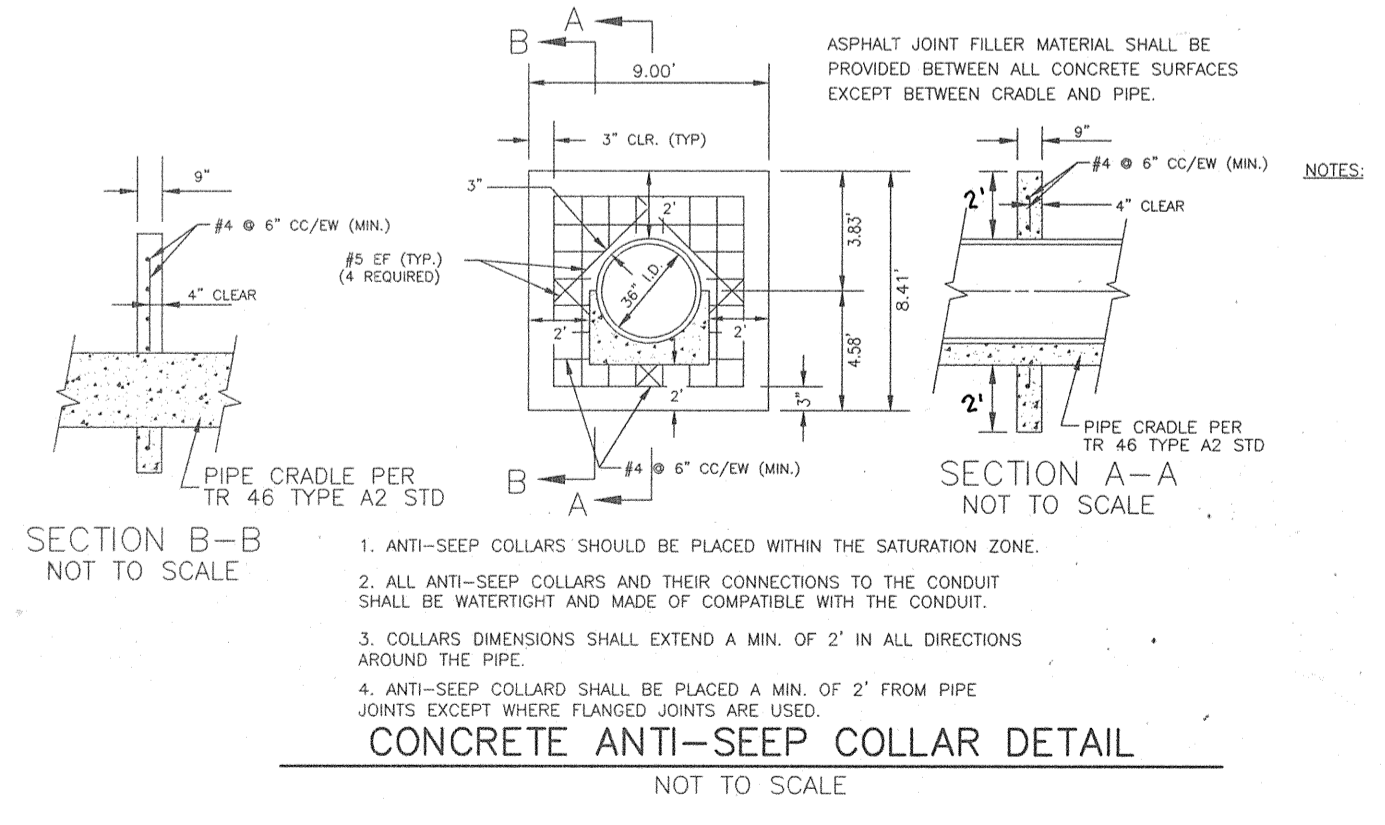
PIPE CRADLE DETAIL
NOT TO SCALE



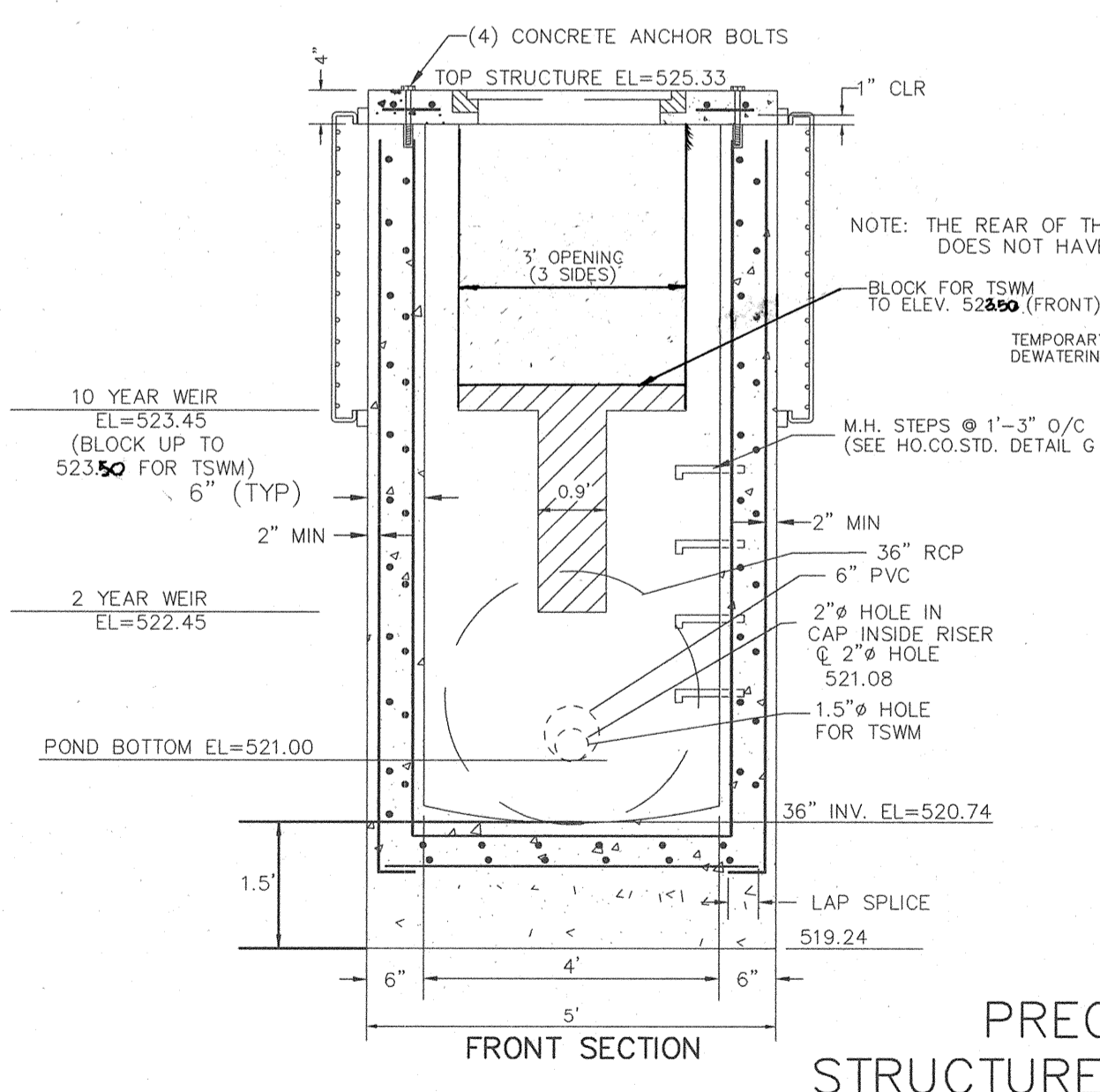
PRECAST STRUCTURE S-1
SCALE: 1" = 3'
*SEE BELOW FOR DETAIL

OPERATION, MAINTENANCE AND INSPECTION

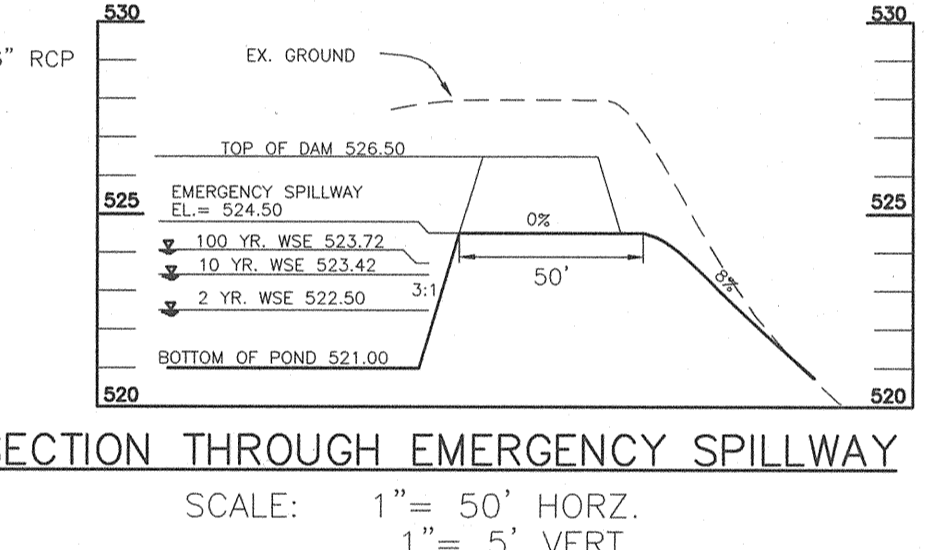
INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.



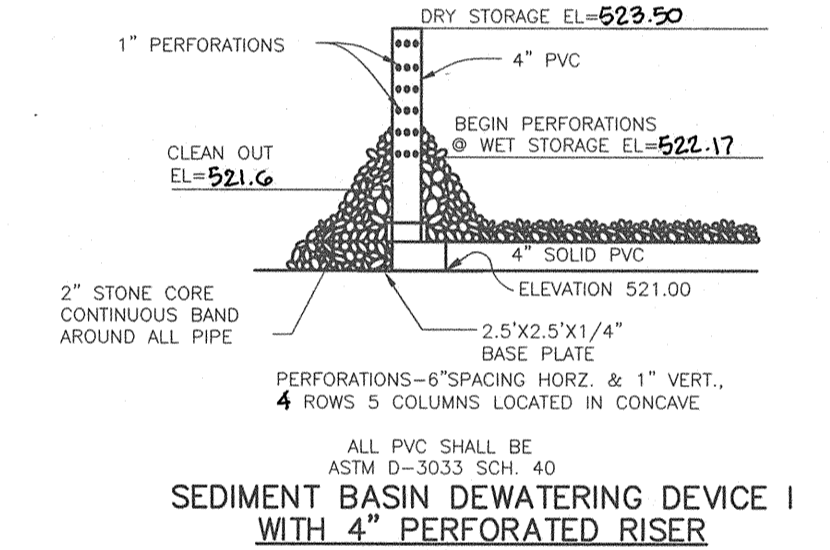
CONCRETE ANTI-SEEP COLLAR DETAIL
NOT TO SCALE



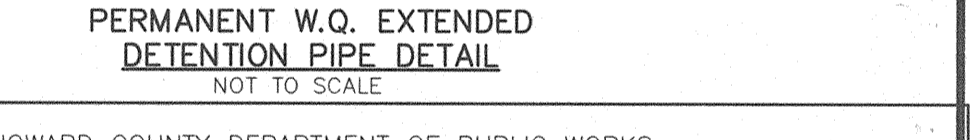
PRECAST STRUCTURE S-1 DETAIL
NOT TO SCALE
(SEE ABOVE FOR SCALED DETAIL)



SECTION THROUGH EMERGENCY SPILLWAY
SCALE: 1" = 50' HORZ.
1" = 5' VERT.



SEDIMENT BASIN DEWATERING DEVICE WITH 4\"/>



PERMANENT W.Q. EXTENDED DETENTION PIPE DETAIL
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Richard M. Penick 7-17-02
CHIEF, BUREAU OF HIGHWAYS
DATE

NO.	REVISION	DATE

PROFILES AND DETAILS
SWM POND #1
FOX CREEK SUBDIVISION
LOTS 1 THRU 28 AND
PRESERVATION PARCELS 'A' THRU 'D'
TAX MAP 15 BLOCKS 12 & 18
TAX MAP 16 BLOCKS 7 & 13
3RD ELECTION DISTRICT
REF: S-00-03, P-01-01
PARCEL '183'
HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
7125 Riverwood Drive Columbia, Maryland 21046-2354
Phone: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: JCO
DRAWN BY: JCO
CHECKED BY: RHV
DATE: FEBRUARY 2002
SCALE: AS SHOWN
W.O. NO.: 2019035.0
11 SHEET OF 16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

William J. ... 7/19/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Cindy Hamrick 7/23/02
CHIEF, DIVISION OF LAND DEVELOPMENT

ENGINEERS CERTIFICATE

"I HEREBY 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 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."
Robert H. Vogel 6/17/02
SIGNATURE OF ENGINEER
ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

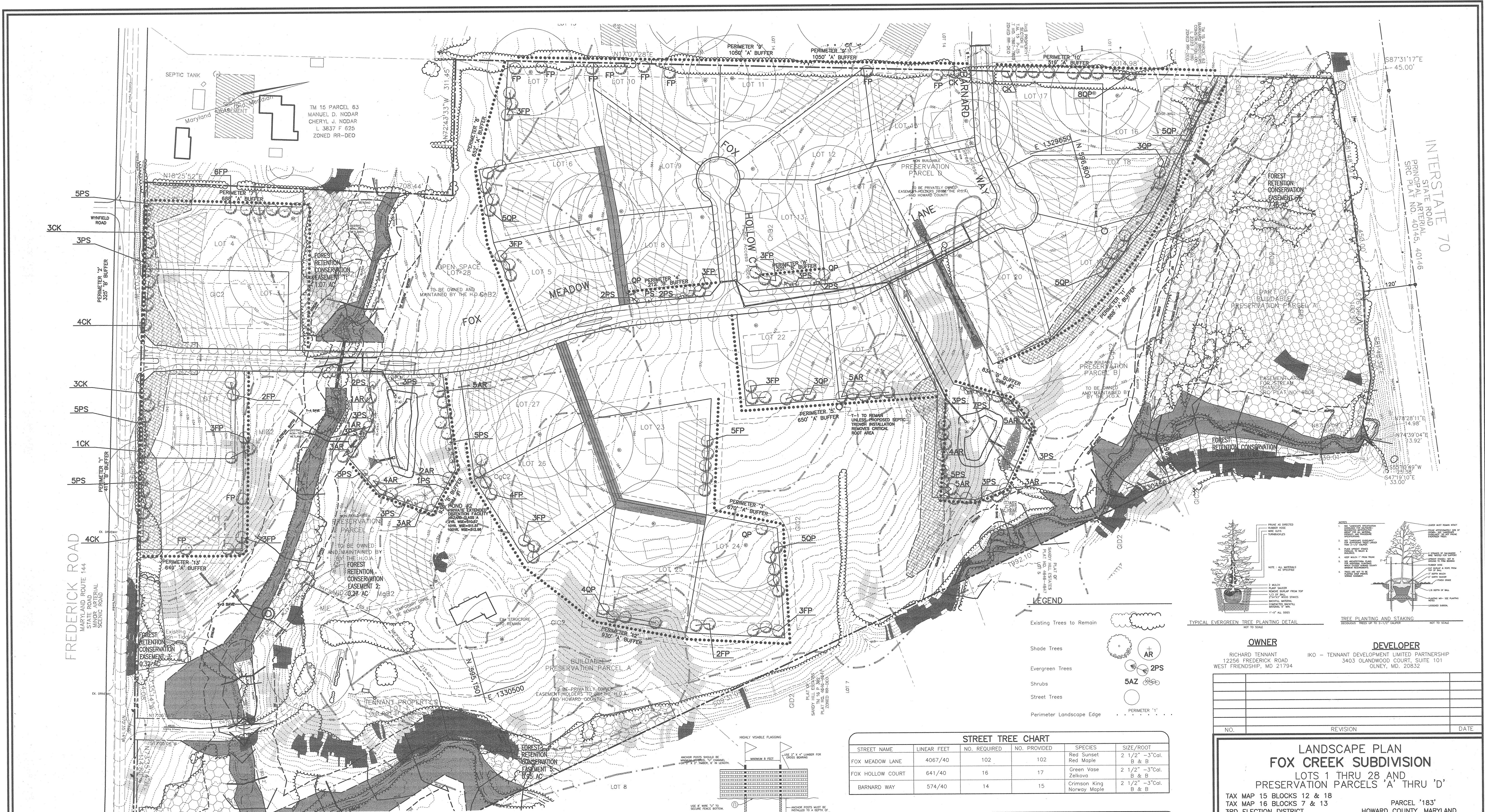
"I WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND 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."
Tennant, Inc. Dev. A.P. 6/17/02
SIGNATURE OF DEVELOPER

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

USDA-NATURAL RESOURCES CONSERVATION SERVICE
Jim ... 7/10/02
DATE
Richard Tennant 7/10/02
DATE
HOWARD SOIL CONSERVATION DISTRICT

DEVELOPER

RICHARD TENNANT
12256 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794
IKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
3403 OLANWOOD COURT, SUITE 101
OLNEY, MD. 20832



I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN AND SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Tennant Development, L.P.
 OWNER/DEVELOPER
 DATE: 6/17/02

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Richard Tennant
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 7-17-02

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	SM #1: 830 LF	SM #2: 834 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND #)	N/A	N/A
NUMBER OF TREES REQUIRED	19 SHADE TREES 23 EVERGREEN TREES	17 SHADE TREES 21 EVERGREEN TREES
NUMBER OF TREES PROVIDED	19 SHADE TREES 23 EVERGREEN TREES	17 SHADE TREES 21 EVERGREEN TREES
OTHER TREES (2:1 SUBSTITUTION)	0 TREES (0 SUBSTITUTION TREES)	0 TREES (0 SUBSTITUTION TREES)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Tennant
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 7/19/02

Cindy Kamstra
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/28/02

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Perimeter/Frontage Designation	8	8	8	8	8	8	8	8	8	8	8	8	8
Linear Feet of Roadway	411	325	212	201	670	650	688	652	1050	519	868	930	649
Frontage/Developer													
Credit for Existing Vegetation (Yes, No, Linear Feet)	No	No	No	No	No	No	No	No	No	No	No	No	No
Credit for Other Landscaping (Yes, No, Linear Feet)	No	No	No	No	No	No	No	No	No	No	No	No	No
Number of Plants Required	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B	1:50 B
Shade Trees	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B	1:40 B
Evergreen Trees	10	7	4	4	11	11	6	11	9	9	13	16	10
Other Trees (2:1 Substitution)	10	7	4	4	11	11	6	11	9	9	13	16	10
Shrubs (10:1 Substitution)	10	7	4	4	11	11	6	11	9	9	13	16	10
Describe Plant Substitution Credits (Date if needed)													

• Existing Woods to Remain

STREET TREE CHART

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED	SPECIES	SIZE/ROOT
FOX MEADOW LANE	4067/40	102	102	Red Sunset Red Maple	2 1/2" - 3" Cal. B & B
FOX HOLLOW COURT	641/40	16	17	Green Vase Zelkova	2 1/2" - 3" Cal. B & B
BARNARD WAY	574/40	14	15	Crimson King Norway Maple	2 1/2" - 3" Cal. B & B

LANDSCAPE SCHEDULE

KEY QUAN.	BOTANICAL NAME	SIZE	REM.
AR 41	Acer rubrum October Glory Red Maple	2 1/2" - 3" Cal.	B & B
CK 17	Acer platanoides 'Crimson King' Crimson King Norway Maple	2 1/2" - 3" Cal.	B & B
FP 56	Fraxinus p. 'Patriota' Patriota Green Ash	2 1/2" - 3" Cal.	B & B
PS 72	Pinus strobus Eastern White Pine	6 - 8' HL	B & B
QP 41	Quercus prinus Pin Oak	2 1/2" - 3" Cal.	B & B

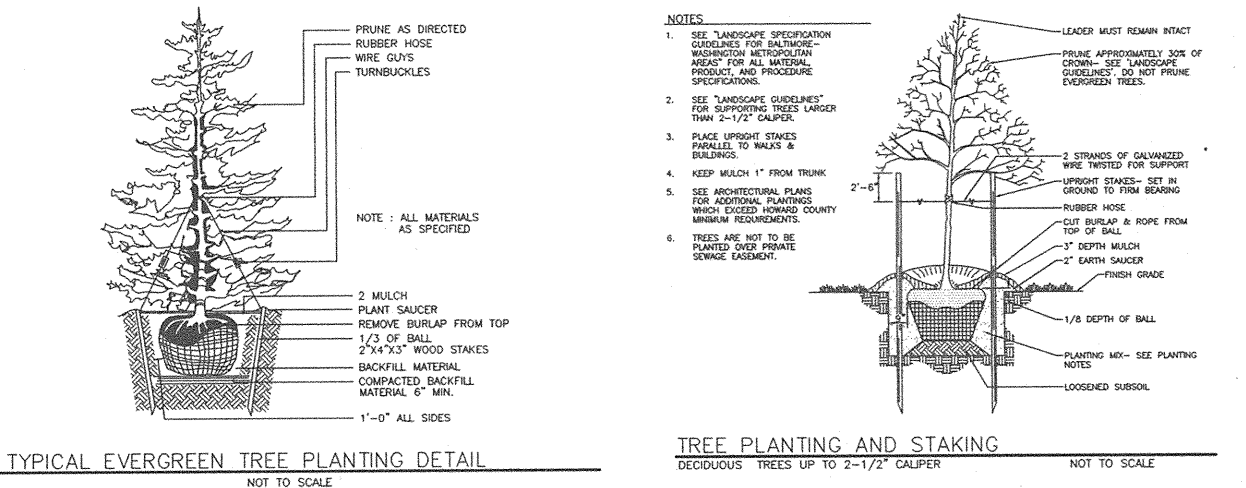
1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LAND PLANTING SPECIFICATIONS AND THE HOWARD COUNTY LANDSCAPE MANUAL.

2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.

3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.

4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

DEVELOPER'S AGREEMENT
 Financial Surety for the required landscaping must be posted as part of the Developer's agreement in the amount of \$57,300.00 for 155 shade trees and 72 evergreen trees.



OWNER
 RICHARD TENNANT
 12256 FREDERICK ROAD
 WEST FRIENDSHIP, MD 21794

DEVELOPER
 IKO - TENNANT DEVELOPMENT LIMITED PARTNERSHIP
 3403 GLANWOOD COURT, SUITE 101
 OLNEY, MD 20832

NO.	REVISION	DATE

LANDSCAPE PLAN
FOX CREEK SUBDIVISION
 LOTS 1 THRU 28 AND
 PRESERVATION PARCELS 'A' THRU 'D'

TAX MAP 15 BLOCKS 12 & 18
 TAX MAP 16 BLOCKS 7 & 13
 3RD ELECTION DISTRICT
 REF: S-00-03, P-01-01

PARCEL '183'
 HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 7125 Riverwood Drive Columbia, Maryland 21046-2354
 Phone: 410-290-9550 Fax: 410-720-6226

ARCHITECTS Bel Air, Maryland
 SURVEYORS Columbia, Maryland
 Warrenton, Virginia

DESIGN BY: MHM
 DRAWN BY: CMH
 CHECKED BY: MHM
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13 SHEET OF 16

