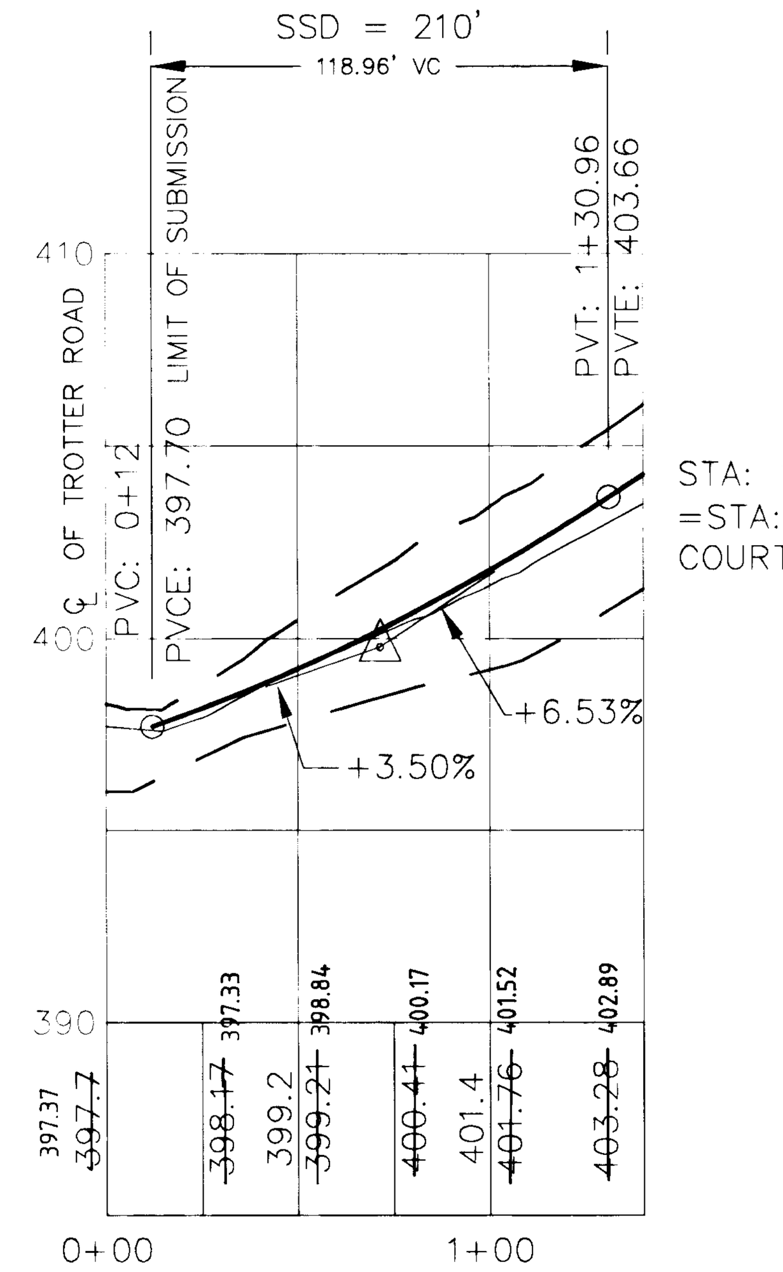
TROTTER RIDGE — ROAD PLAN AND PROFILE

TROTTER RIDGE COURT PROFILE (ENTRANCE)

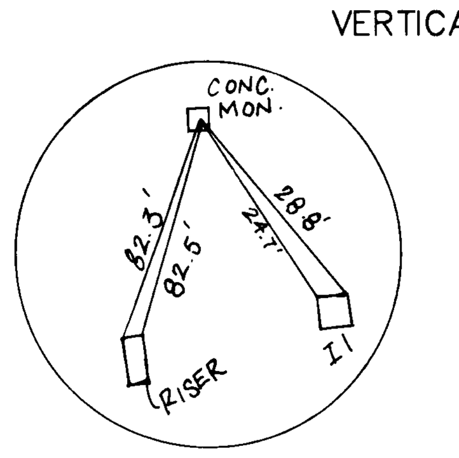
DESIGN SPEED 25 MPH
CLASSIFICATION: LOCAL ROAD

PVI STA = 0+71.48
PVI ELEV = 399.78
A.D. = 3.03
K = 39.30
SSD = 210'

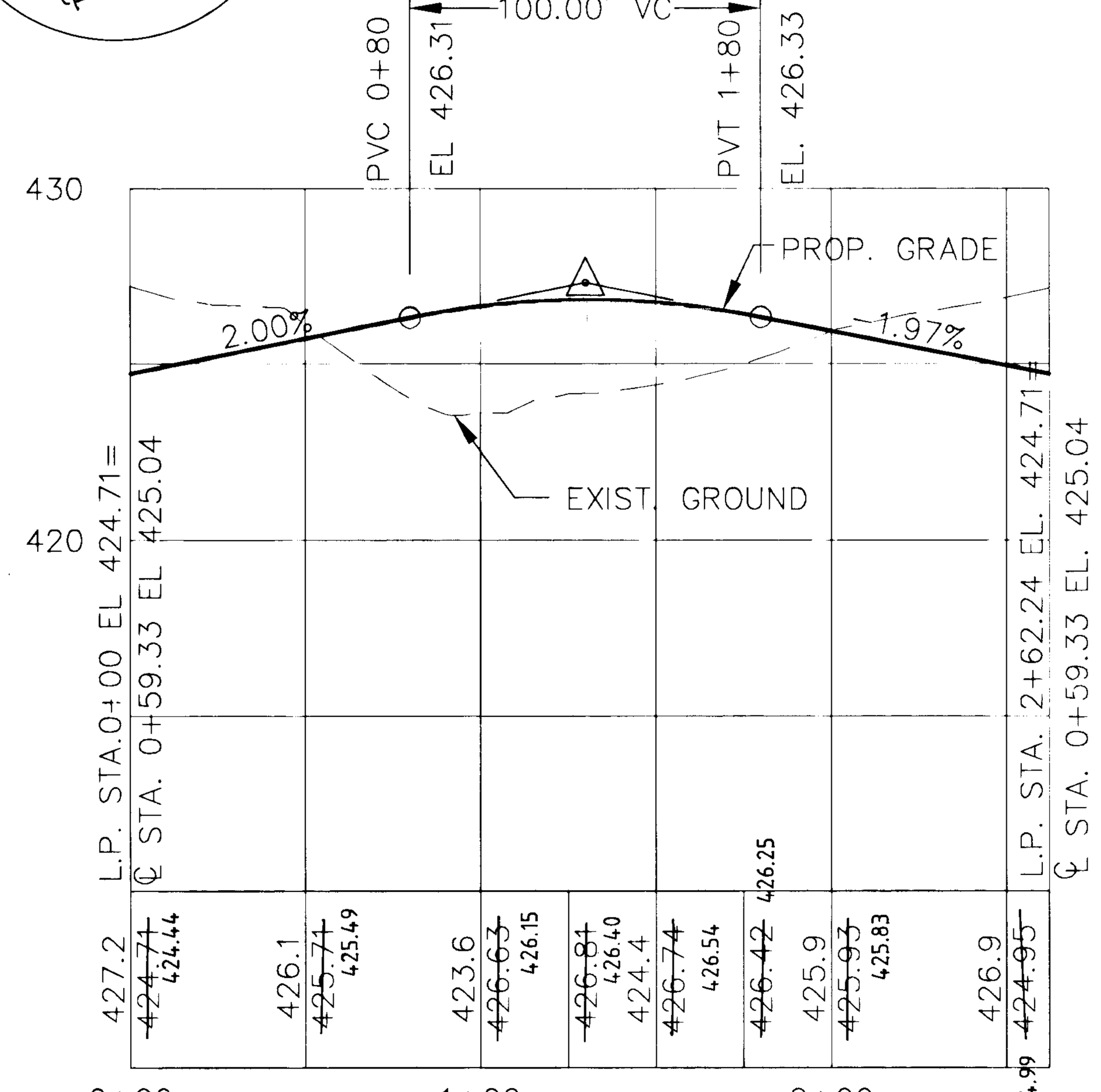
STA: 1+39.96 ELEV: 403.96
=STA: 4+01.02 TROTTER RIDGE COURT/HOLLY RIDGE COURT



TROTTER RIDGE COURT PROFILE (ENTRANCE)
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'



HIGH POINT ELEV = ~~426.81~~ 426.40
HIGH POINT STA = 1+30.43
PVI STA = 1+30
PVI ELEV = 427.31
A.D. = -3.97
K = 25.21



LINEAR PROFILE
TROTTER RIDGE COURT
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

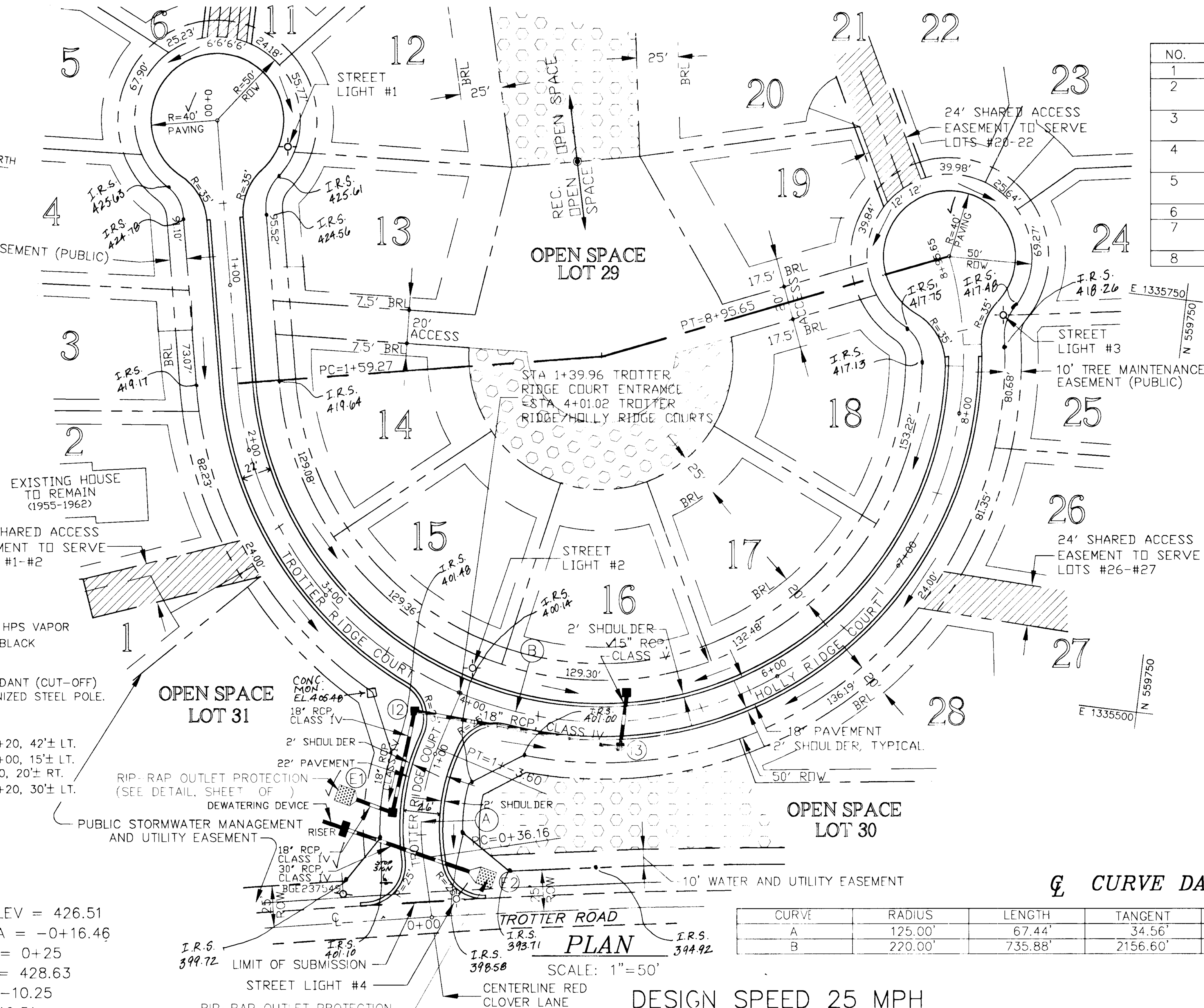
PLAN

STREET LIGHTS:

#1–3	100-WATT "TRADITIONAIRE" HPS VAPOR POST TOP FIXTURE ON 14' BLACK FIBERGLASS POLE.
#4	150-WATT HPS VAPOR PENDANT (CUT-OFF) MOUNTED ON A 30' GALVANIZED STEEL POLE.

STREET LIGHT LOCATIONS:

#1	TROTTER RIDGE CT., STA 0+20, 42'± LT.
#2	TROTTER RIDGE CT., STA 4+00, 15'± LT.
#3	HOLLY RIDGE CT., STA 8+60, 20'± RT.
#4	TROTTER RIDGE CT., STA 0+20, 30'± LT.



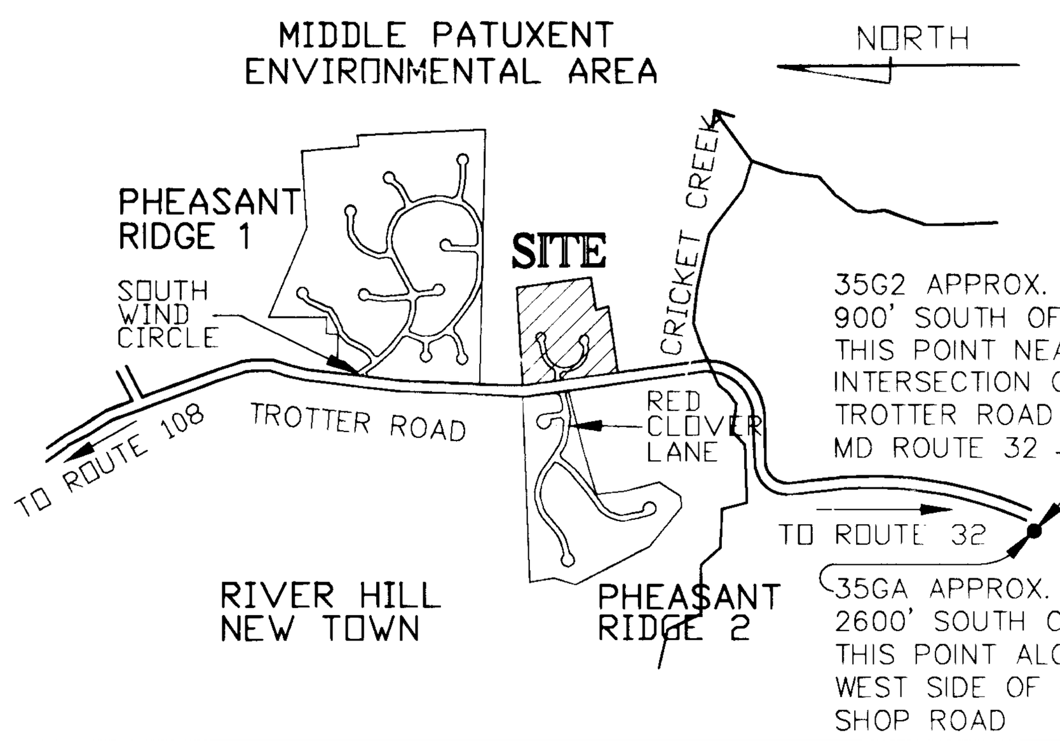
PLAN
SCALE: 1"=50'

℄ CURVE DATA

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
A	125.00'	67.44'	34.56'	66.62'	S89°38'51"E	30°54'43"
B	220.00'	735.88'	2156.60'	437.73'	S17°05'58"E	191°38'58"

SHEET INDEX

NO.	TITLE
1	ROAD PLAN AND PROFILE
2	ROAD GRADING & SEDIMENT CONTROL PLAN
3	SOILS AND DRAINAGE AREA MAP
4	SEDIMENT CONTROL NOTES AND DETAILS
5	DETAILS AND STORM DRAIN PROFILES
6	SWM PROFILES AND DETAILS
7	MD 378 POND SPECIFICATIONS AND BORING PROFILES
8	LANDSCAPE PLAN



VICINITY MAP
SCALE: 1"=2000'

LEGEND

FOREST CONSERVATION EASEMENT

GENERAL NOTES

1. ALL CONTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORK / CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
4. PROJECT BACKGROUND:
   LOCATION: 5th ELECTION DISTRICT, TAX MAP: 35, PARCEL: 24
   ZONING: R-ED
   TOTAL TRACT AREA: 15.0 ACRES
   NUMBER OF PROPOSED LOTS: 32 (28 BUILDABLE)
   DATE PREVIOUS PLANS APPROVED AND DPZ REFERENCE #:
   - S-94-17 APPROVED JULY 6, 1994.
   - P-95-14 APPROVED JAN. 17, 1995.
   - WAIVER (WP-94-32) FROM SECTION 16.134(b)(1) OF THE LAND DEVELOPMENT AND SUBDIVISION REGULATIONS MANUAL APPROVED MARCH 30,1994.
   - WAIVER TO SECTION 10.2.6.4 OF THE DESIGN MANUAL, VOLUME 1, APPROVED DECEMBER 19, 1994.
5. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
6. TWO FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON A FIELD RUN SURVEY BY MILDENBERG ASSOC., INC., COMPLETED AUGUST 1994.
7. HORIZONTAL AND VERTICAL DATUMS BASED ON MARYLAND STATE COORDINATE SYSTEM (NAD 83).
8. LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III, ROADS AND BRIDGES.
9. WATER AND SEWER ARE PUBLIC.
10. STORMWATER MANAGEMENT CONTROL WILL BE PROVIDED BY THE METHOD OF EXTENDED DETENTION.
11. NO FLOODPLAINS OR WETLANDS EXIST ON SITE.
12. GEOTECHNICAL REPORT PREPARED BY HILLIS-CARNES ON AUGUST 10, 1994.
13. EXISTING UTILITIES AREA BASED ON COUNTY AS-BUILT RECORDS.
14. STREET LIGHT TO STREET TREE SPACING SHALL BE A MINIMUM OF 20'.
15. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENT OF SECTION 16.1200 OF THE HOWARD COUNTY CODE – FOREST CONSERVATION ACT. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED GRADING PERMIT OR SITE DEVELOPMENT PLAN.

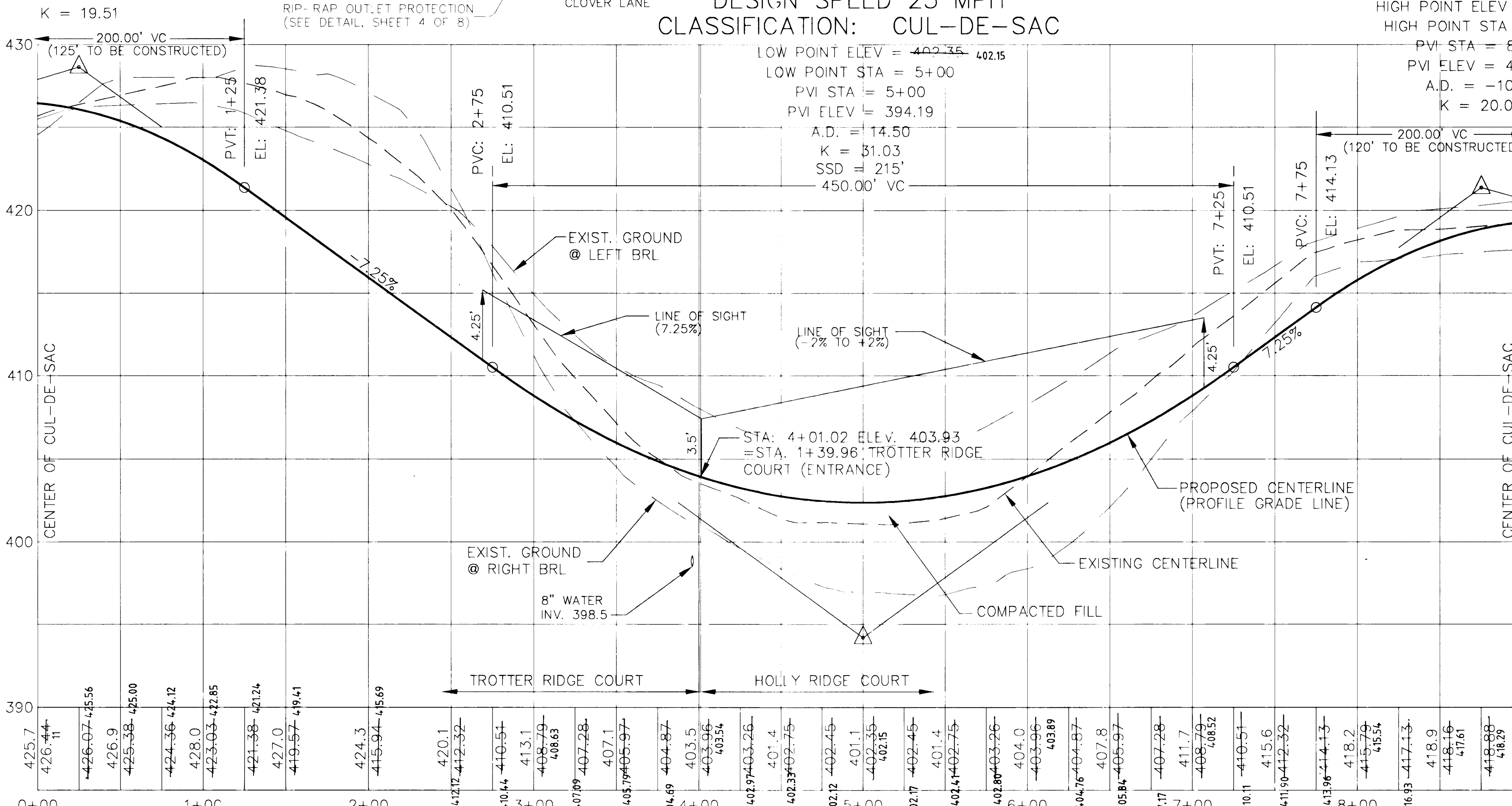
TROTTER RIDGE COURT/HOLLY RIDGE COURT PROFILE

HIGH POINT ELEV = 426.51
HIGH POINT STA = -0+16.46
PVI STA = 0+25
PVI ELEV = 428.63
A.D. = -10.25
K = 19.51

DESIGN SPEED 25 MPH
CLASSIFICATION: CUL-DE-SAC

LOW POINT ELEV = ~~402.35~~ 402.15
LOW POINT STA = 5+00
PVI STA = 5+00
PVI ELEV = 394.19
A.D. = 14.50
K = 31.03
SSD = 215'

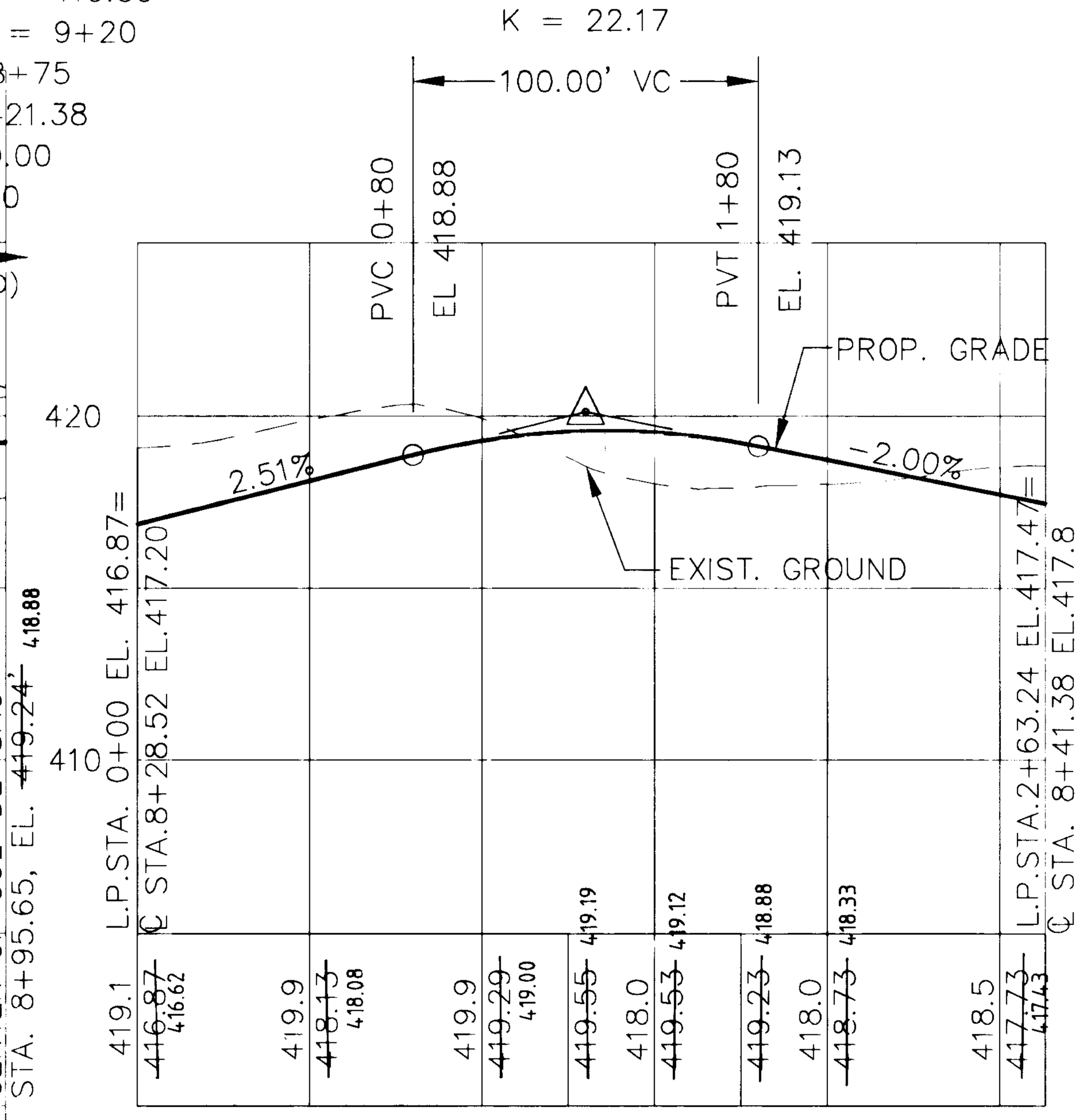
HIGH POINT ELEV = 419.39
HIGH POINT STA = 9+20
PVI STA = 8+75
PVI ELEV = 421.38
A.D. = -10.00
K = 20.00



TROTTER RIDGE COURT/HOLLY RIDGE COURT PROFILE
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

LINEAR PROFILE HOLLY RIDGE COURT

HIGH POINT ELEV = ~~419.58~~ 419.19
HIGH POINT STA = 1+35.66
PVI STA = 1+30
PVI ELEV = 420.13
A.D. = -4.51
K = 22.17



LINEAR PROFILE
HOLLY RIDGE COURT
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

APPROVALS

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — 1-30-96 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONNING
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — 4/30/96
DIRECTOR — 4/30/96

AS BUILT CERTIFICATION
ENGINEER'S SIGNATURE — DATE

CONTRACT PURCHASER/DEVELOPER
J. THOMAS SCRIVENER, INC.
DORSEY HALL PROFESSIONAL PARK
5026 DORSEY HALL DRIVE, SUITE 204
ELLICOTT CITY, MARYLAND 21042
(410) 964-5522

OWNER
RONALD & SUSAN STUP
11609 VIXENS PATH
ELLICOTT CITY, MARYLAND 21042
(410) 992-4650

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

TAX MAP 35 – PARCEL 24
TROTTER RIDGE
5th ELECTION DISTRICT — HOWARD COUNTY
ROAD PLAN AND PROFILE

JOB NO.	DATE	DESIGNED	CHECKED	SCALE
94008	JAN 1996	MP/SJD	RJH	AS SHOWN

F95-165

DEVELOPERS' CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER — 1/4/96 DATE

J. THOMAS SCRIVENER
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICABLE APPROACH TO THE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

STATE OF MARYLAND — R. JACOB HOWARD — No. 17942 — REGISTERED PROFESSIONAL ENGINEER

SIGNATURE OF ENGINEER — 1/4/96 DATE

R. JACOB HOWARD
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Patricia English-Jones — 1/16/96
U.S. NATURAL RESOURCE CONSERVATION SERVICE — DATE

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

Robert W. Jackson Jr. — 1/16/96
HOWARD SOIL CONSERVATION DISTRICT — DATE

AS BUILT CERTIFICATION

ENGINEER'S SIGNATURE — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Charles M. Rauch — 1-30-96
CHIEF BUREAU OF HIGHWAYS — DATE

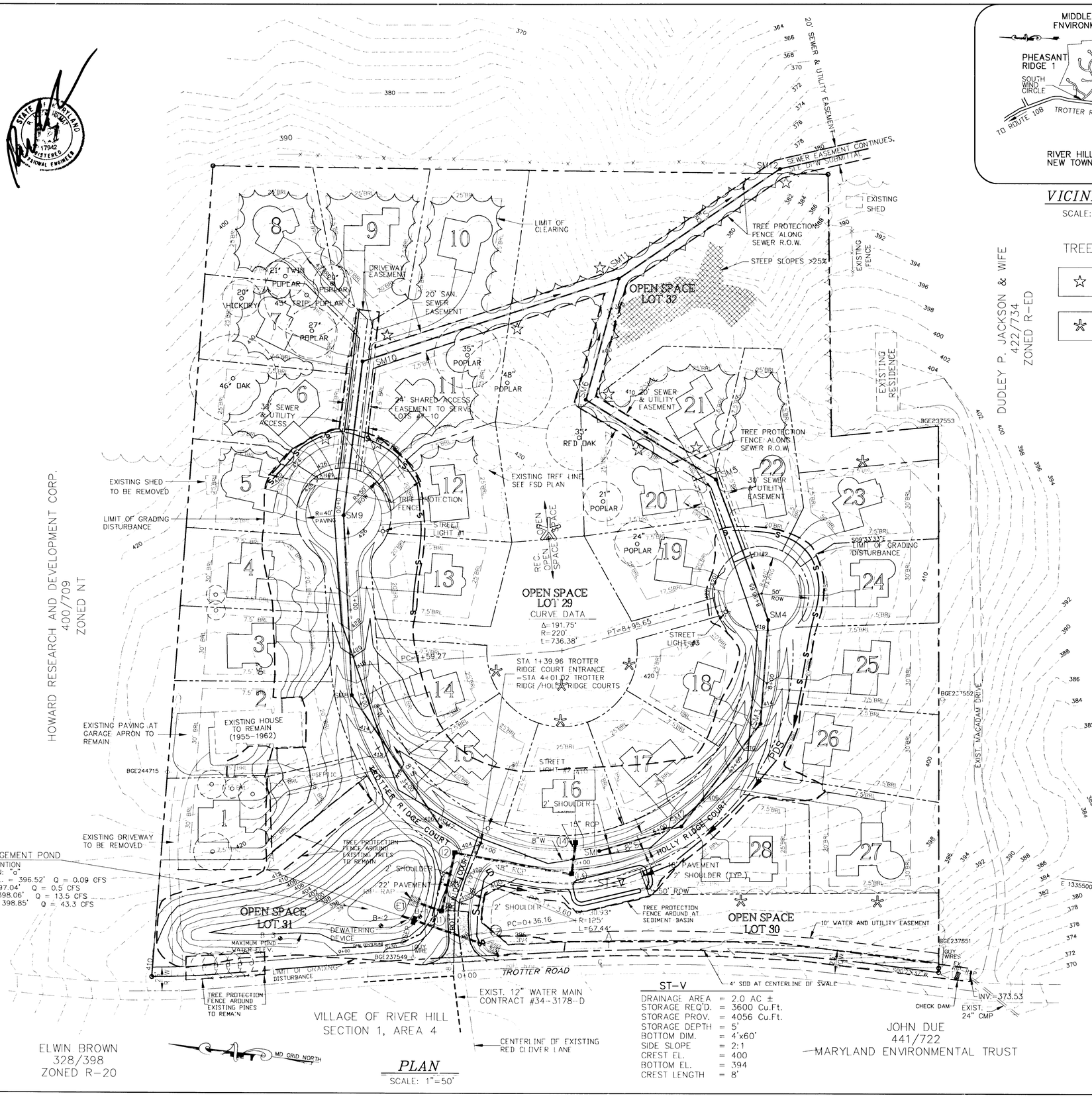
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Gina Fiumefreddo — 4/30/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE

Paul Revelle — 4/30/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

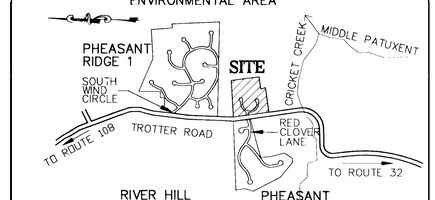
CONTRACT PURCHASER/DEVELOPER
J. THOMAS SCRIVENER, INC.
DORSEY HALL PROFESSIONAL PARK
5026 DORSEY HALL DRIVE, SUITE 204
ELLICOTT CITY, MARYLAND 21042
(410) 964-5522

OWNER
RONALD & SUSAN STUP
11609 VIXENS PATH
ELLICOTT CITY, MARYLAND 21042
(410) 992-4650



PLAN
SCALE: 1"=50'

MIDDLE PATUXENT ENVIRONMENTAL AREA



VICINITY MAP
SCALE: 1"=2,000'

TREE PROTECTION LEGEND

☆ FOREST RETENTION AREA SIGN TO BE REMOVED AT THE COMPLETION OF ROAD AND UTILITY INSTALLATION (SEE DETAIL SHEET 5)

✱ REFORESTATION PROJECT SIGN (SEE DETAIL SHEET 5)

94008	JAN 1996
MP/SJD	RJH
1"=50'	RJH

TAX MAP 35 - PARCEL 24
TROTTER RIDGE
5th ELECTION DISTRICT — HOWARD COUNTY
ROAD GRADING & SEDIMENT CONTROL PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

F95-165

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER — DATE 1/4/96

J. THOMAS SCRIVENER
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

STATE OF MARYLAND — ROBERT J. KMAT — NO. 17942 — REGISTERED PROFESSIONAL ENGINEER

SIGNATURE — DATE 1/4/96

ROBERT J. KMAT
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Patricia English — USDA - NATURAL RESOURCES CONSERVATION SERVICE — DATE 1/19/96

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

Robert W. Zuhn — HOWARD SOIL CONSERVATION DISTRICT — DATE 1/19/96

AS BUILT CERTIFICATION

ENGINEER'S SIGNATURE — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF BUREAU OF HIGHWAYS — DATE 1-30-96

APPROVED: DEPARTMENT OF PLANNING AND ZONNING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 4/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/30/96

CONTRACT PURCHASER/DEVELOPER
J. THOMAS SCRIVENER, INC.
DORSEY HALL PROFESSIONAL PARK
5026 DORSEY HALL DRIVE, SUITE 204
ELLICOTT CITY, MARYLAND 21042
(410) 964-5522

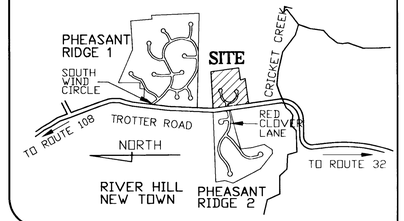
OWNER
RONALD & SUSAN STUP
11609 VIXENS PATH
ELLICOTT CITY, MARYLAND 21042
(410) 992-4650

SOILS LEGEND

CgB2	CHESTER GRAVELLY SILT LOAM, 3-8% SLOPES, MODERATELY ERODED
EkC2	ELIOAK SILT LOAM, 8-15% SLOPES, MODERATELY ERODED
GlC2	GLENELG LOAM, 3-8% SLOPES, MODERATELY ERODED
GlD2	GLENELG LOAM, 15-25% SLOPES, MODERATELY ERODED
GnB2	GLENVILLE SILT LOAM, 3-8% SLOPES, MODERATELY ERODED
MgB2	MANOR GRAVELLY LOAM, 3-8% SLOPES, MODERATELY ERODED
MgC2	MANOR GRAVELLY LOAM, 8-15% SLOPES, MODERATELY ERODED
MlD2	MANOR LOAM, 15-25% SLOPES, MODERATELY ERODED

STATE OF MARYLAND — ROBERT J. KMAT — NO. 17942 — REGISTERED PROFESSIONAL ENGINEER

MIDDLE PATUXENT ENVIRONMENTAL AREA



VICINITY MAP
SCALE: 1"=2,000'

* THIS PLAN IS FOR THE DELINEATION OF PROPOSED DRAINAGE AREA DIVIDES ONLY.

project	date
94008	JAN 1996
plot/section	engineering
SAS	RJH
scale	approval
1"=50'	JBM

no.	description / revisions	date

TAX MAP 35 - PARCEL 24
TROTTER RIDGE
HOWARD COUNTY
5th ELECTION DISTRICT
SOILS AND DRAINAGE AREA MAP

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5321 Wash. (410) 997-0298 Fax.

1806

08-DAM.DWG

F95-165

HOWARD SOIL CONSERVATION DISTRICT
PERMANENT SEEDING NOTES

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

Seedbed Preparation: Loosen upper three inches of soil by raking , disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:
1) Preferred – Apply 2 tons per acres dolomitic limestone (92 lbs/1000 sq.ft.) and 600 lbs. per acre 10–10–10 fertilizer (14 lbs/1000 sq.ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding , apply 400 lbs. per acre 30-0-0 ureoform fertilizer (9 lbs./1000 sq.ft.).
2) Acceptable – Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and 1000 lbs. per acre 10–10–10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disk into upper three inches of soil.

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

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

Maintenance – Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

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

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, for not previously loosened.

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

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

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

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

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 _____ Date _____ PE No. _____

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 by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the engineer nor does an engineer's certification relieve any other party from meeting requirements imposed by contract, employment, or other means, including meeting commonly accepted industry practices.

STANDARD SEDIMENT CONTROL NOTES

1) A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of nay construction, (313–1855).

2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.

3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.

4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec.51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec.52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.

6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

7) Site Analysis:

Total Area of Site:	15 Acres
Area Disturbed:	5.1 Acres
Area to be roofed or paved	0.8 Acres
Area to be vegitatively stabilized	4.3 Acres
Total Cut	7,200 Cu. Yds.
Total fill	3,000 Cu. Yds.
Total waste/borrow area location	4,200 Cu. Yds. Waste

8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

9) Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.

10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

11) Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER _____ DATE 1/4/96

J. THOMAS SCRIVENER
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER _____ DATE 1/4/96

R. ROBERT HEMMAT
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Patricia Engelhart for NATURAL RESOURCES CONSERVATION SERVICE _____ DATE 1/19/96

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

Robert W. Zuhlke for HOWARD SOIL CONSERVATION DISTRICT _____ DATE 1/19/96

AS BUILT CERTIFICATION

ENGINEER'S SIGNATURE _____ DATE _____

APPROVED: DEPARTMENT OF PUBLIC WORKS

Andrew M. Lauchle for CHIEF BUREAU OF HIGHWAYS _____ DATE 1-30-96

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Gina Swimmamyo for CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH _____ DATE 4/30/96

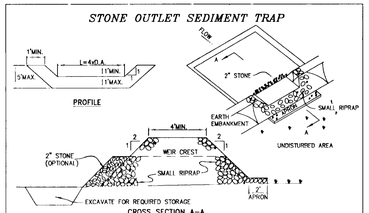
CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE 4/30/96

94008-SUBG

SEQUENCE OF OPERATIONS:

1. OBTAIN GRADING PERMIT.
2. INSTALL CHECK DAM DOWNSTREAM OF THE PROPOSED 30" RCP AND INSTALL THE PIPE.
3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
4. INSTALL TREE PROTECTION FENCE WHERE APPLICABLE.
5. CLEAR AND GRUB AREAS SURROUNDING SEDIMENT CONTROL FEATURES.
6. CONSTRUCT PERMANENT STORMWATER MANAGEMENT POND, AND SEDIMENT TRAP AND STABILIZE USING TEMPORARY SEEDING METHODS.
7. CONSTRUCT SILT FENCE AND EARTH DIKES. STABILIZE EARTH DIKES WITH TEMPORARY SEEDING.
8. CLEAR SIDE PER LIMIT INDICATED.
9. CONSTRUCT SITE TO GRADES INDICATED ON THE PLANS AND CONSTRUCT STORM DRAIN SYSTEM AND UTILITIES.
10. UPON STABILIZATION OF GRADED AREAS, ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE STORM DRAIN SYSTEM.
11. DURING CONSTRUCTION, SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT TRAP AND STORMWATER MANAGEMENT POND WHEN THEIR CLEANOUT ELEVATIONS HAVE BEEN REACHED.
12. STABILIZE ALL RIGHT-OF WAY AREAS WITH PERMANENT SEEDING.
13. INSPECT ALL SEDIMENT CONTROL DEVICES DAILY AND AFTER EACH RAINFALL, REPAIR AS NECESSARY.
14. WHEN ALL CONTRIBUTING AREAS TO SEDIMENT CONTROL DEVICE HAVE BEEN PERMANENTLY STABILIZED, REMOVE SEDIMENT CONTROL DEVICES, GRADE AREAS DISTURBED, AND PROVIDE PERMANENT SEED AND MULCH.
15. CONTRACTOR SHALL REMOVE SEDIMENT AND FLUSH STORM DRAIN SYSTEM AT END OF CONSTRUCTION PERIOD.
16. CONTRACTOR SHALL DEWATER THE STORMWATER MANAGEMENT POND AND REMOVE ACCUMULATED SEDIMENTS. REPLACE THE PERFORATED PIPES SERVING AS DEWATERING DEVICES AND RECONSTRUCT TO FUNCTION AS LOW FLOW OUTLETS FOR THE POND.
17. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE,PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED
    WITHIN A.) 7 CALENDAR DAYS FOR ALL PERIMETER SLOPES AND GREATER THAN 3:1
    B.) 14 DAYS FOR ALL OTHER DISTURBED GRADED AREAS ON THE PROJECT SITE.

STONE OUTLET SEDIMENT TRAP



OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in place of the embedded filter cloth.

CONSTRUCTION SPECIFICATIONS

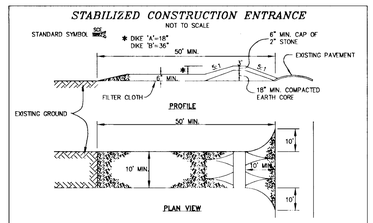
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material.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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STONE OUTLET SEDIMENT TRAP	STANDARD DRAWING ST-V

16.12

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

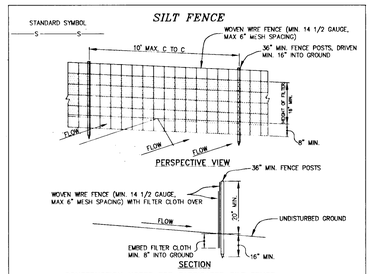


1. Stone size – Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length – As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).
3. Thickness – Not less than six (6) inches.
4. Width – Ten (10) foot minimum, but not less than the full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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STABILIZED CONSTRUCTION ENTRANCE	STANDARD DRAWING SCE-11

16.03

SILT FENCE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24' at top and mid section.
3. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
4. Maintenance shall be performed as needed and material removed when bulges develop in the silt fence.

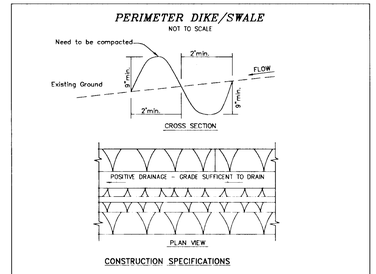
POST: Steel either T or U type or 2" hardwood.
FENCE: Woven wire, 14. Ga. 6" Max. mesh opening.
FILTER CLOTH: Filter X, Mirafi 100x, Stabilinka T140n or approved equal.
PREFABRICATED UNIT: Geofabs, Envirofence, or approved equal.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	SILT FENCE	STANDARD DRAWING SF-1

12.03

PERIMETER DIKE/SWALE

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

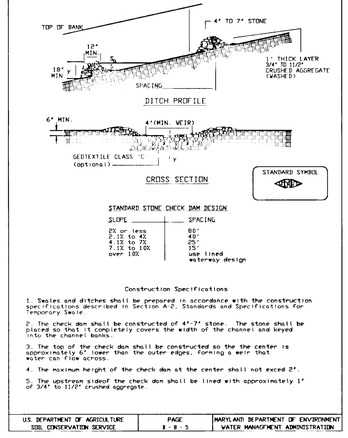
1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTOAN UNDISTURBED STABILIZED AREA AT NON-EROSION VELOCITY.
4. THE SWALE SHALL BE EXCAVATED RO SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.
5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SPACIFICATION FOR SEED AND STRAW MULCH, AND SHALL BE DONE WITHIN 10 DAYS.
6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT

Max. Drainage Area Limit: 2 Acres.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	PERIMETER DIKE/SWALE	STANDARD DRAWING PDS-1

10.03

DETAIL 7 - STONE CHECK DAM



STANDARD STONE CHECK DAM DESIGN

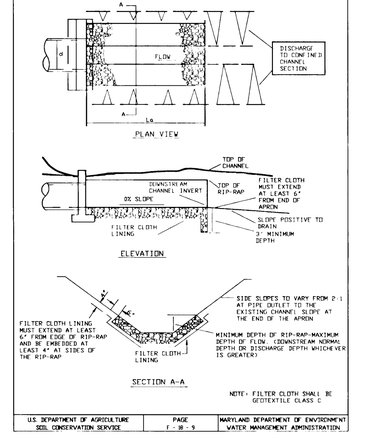
SLOPE	SPACING
2% or less	80'
2.1% to 4%	40'
4.1% to 7%	20'
7.1% to 10%	15'
over 10%	use lined waterway design

Construction Specifications

1. Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2, Standards and Specifications for Temporary Swale.
2. The check dam shall be constructed of 4"-7" stone. The stone shall be placed so that it completely covers the width of the channel and keyed into the channel banks.
3. The top of the check dam shall be constructed so the the center is approximately 6" lower than the outer edges. Forming a weir that water can flow across.
4. The maximum height of the check dam at the center shall not exceed 2'.
5. The upstream sideof the check dam shall be lined with approximately 1' of 3/4" to 1 1/2" crushed aggregate.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H-8-5	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 26 - ROCK OUTLET PROTECTION II



NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F-18-9	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

	L	W	d_{50}	d_{max}	T
E1	10'	10'	9.5"	15"	19"
E2	10'	10'	9.5"	15"	19"

RIPRAP OUTLET PROTECTION

CONTRACT PURCHASER/DEVELOPER
J. THOMAS SCRIVENER, INC.
DORSEY HALL PROFESSIONAL PARK
5026 DORSEY HALL DRIVE, SUITE 204
ELLICOTT CITY, MARYLAND 21042
(410) 964-5522

OWNER
RONALD & SUSAN STUP
11609 VIXENS PATH
ELLICOTT CITY, MARYLAND 21042
(410) 992-4650

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 992-2626 Bell (301) 621-5521 Wash. (410) 461-2208 Fax

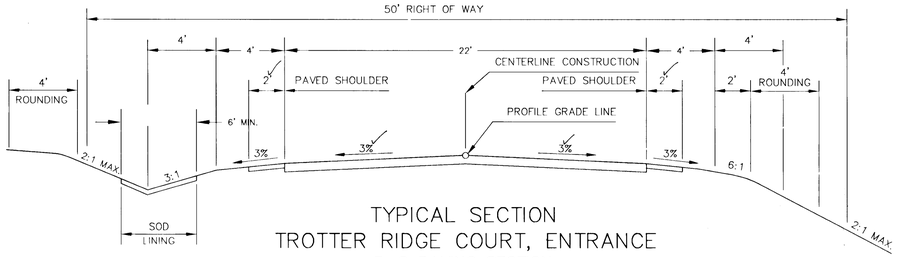
TAX MAP 35 – PARCEL 24
TROTTER RIDGE
5th ELECTION DISTRICT
HOWARD COUNTY

SEDIMENT CONTROL NOTES AND DETAILS

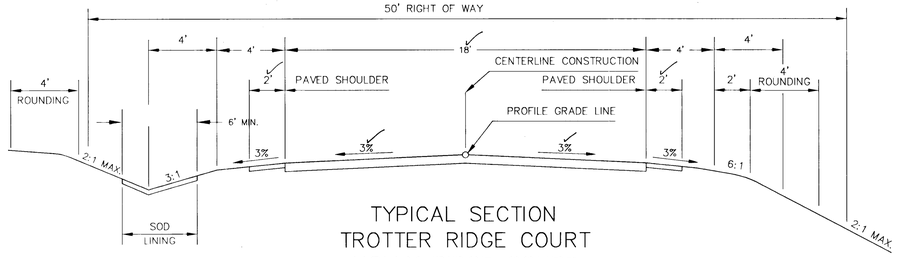
DATE	JAN 1996
JOB NO.	94008
DESIGNED	SJD
DRAWN	RJH
CHECKED	RJH
SCALE	N.T.S.

4 OF 8

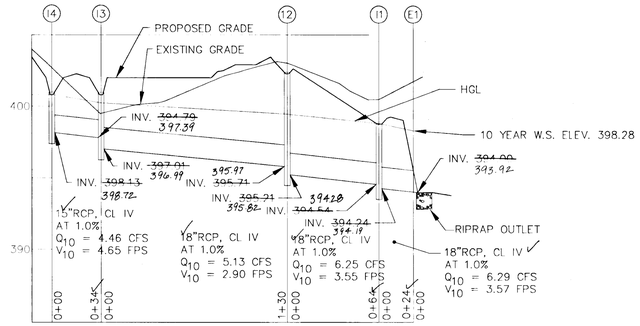
F95-165



TYPICAL SECTION
TROTTER RIDGE COURT, ENTRANCE
P-2 PAVING SECTION

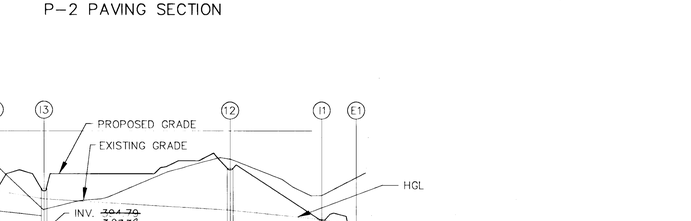


TYPICAL SECTION
TROTTER RIDGE COURT
HOLLY RIDGE COURT
P-2 PAVING SECTION



PIPE PROFILE
HORIZONTAL SCALE : 1" = 50'
VERTICAL SCALE : 1" = 5'

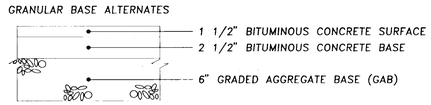
BARBED WIRE PROTECTION FENCE ALTERNATIVE



"BLAZE ORANGE" PROTECTION FENCE ALTERNATIVE

TREE PROTECTION FENCE ALTERNATIVES NO SCALE

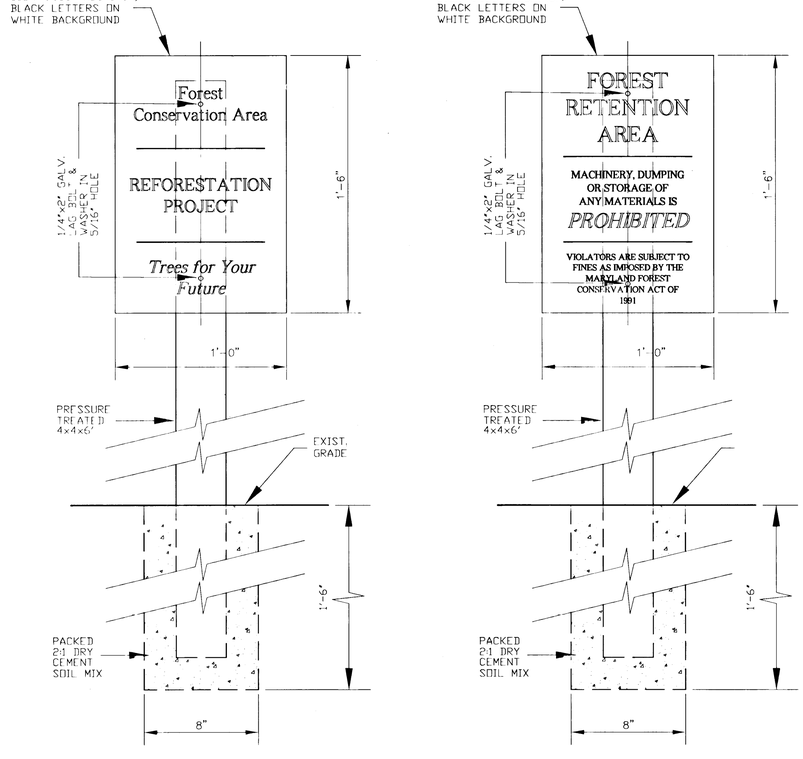
GRANULAR BASE ALTERNATES



P-2 PAVING
NOT TO SCALE

STRUCTURE SCHEDULE

STRUCTURE #	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	STATION	OFFSET	TYPE	STD. DETAIL
I-1	399.23 ~~399.76~~	394.28 ~~394.54~~	~~394.24~~ 394.19	TROTTER RIDGE COURT	0+60	17' LEFT	K & GRATE	4.12 & 4.13
I-2	398.68 ~~402.60~~	395.97 ~~396.71~~	~~396.24~~ 395.82	TROTTER RIDGE COURT	3+80	20' LEFT	K & GRATE	4.12 & 4.13
I-3	400.35 ~~400.63~~	397.39 ~~397.70~~	~~397.01~~ 396.99	HOLLY RIDGE COURT	5+00	17' RIGHT	K & GRATE	4.12 & 4.13
I-4	399.54 ~~400.63~~	398.72 ~~398.13~~	---	HOLLY RIDGE COURT	5+00	17' LEFT	K & GRATE	4.12 & 4.13
E-1	---	---	~~394.00~~ 393.92	---	---	---	18" CONC. E.S.	5.52
E-2	---	---	~~397.00~~ 392.65	---	---	---	30" CONC. E.S.	5.52



(2) TREE PROTECTION SIGNS NO SCALE

CONTRACT PURCHASER/DEVELOPER
J. THOMAS SCRIVENER, INC.
DORSEY HALL PROFESSIONAL PARK
5026 DORSEY HALL DRIVE, SUITE 204
ELLICOTT CITY, MARYLAND 21042
(410) 964-5522

OWNER
RONALD & SUSAN STUP
11609 VIXENS PATH
ELLICOTT CITY, MARYLAND 21042
(410) 992-4650

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER — 1/4/96 DATE

J. THOMAS SCRIVENER
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ENGINEER — 1/11/96 DATE

R. MATT MAT
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Patricia Engle/jmm — 1/19/96
USDA - NATURAL RESOURCES CONSERVATION SERVICE

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

Robert W. Zichum/jmm — 1/19/96
HOWARD SOIL CONSERVATION DISTRICT

AS BUILT CERTIFICATION

ENGINEER'S SIGNATURE — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Andrew M. Robb — 1-30-96
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Gina Swaniger — 4/30/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE

4/30/96
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

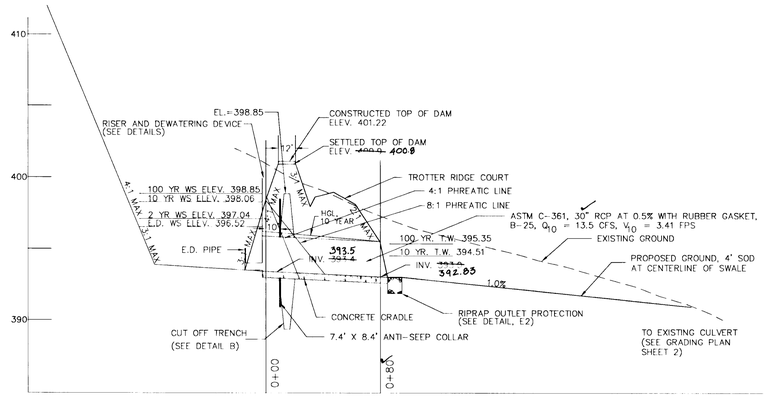
18C16

94008 | SJD | JAN 1996
RJH | AS SHOWN | RJH

TAX MAP 35 - PARCEL 24
TROTTER RIDGE
HOWARD COUNTY
5th ELECTION DISTRICT
DETAILS AND STORM DRAIN PROFILES

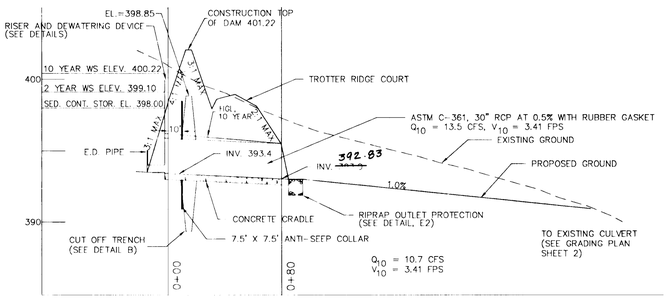
MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax

F95-165



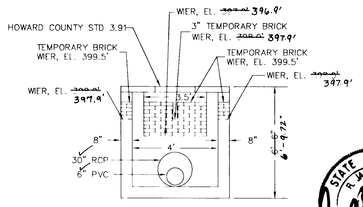
PRINCIPAL SPILLWAY PROFILE (A-A)

HORIZONTAL SCALE : 1" = 50'
VERTICAL SCALE : 1" = 5'



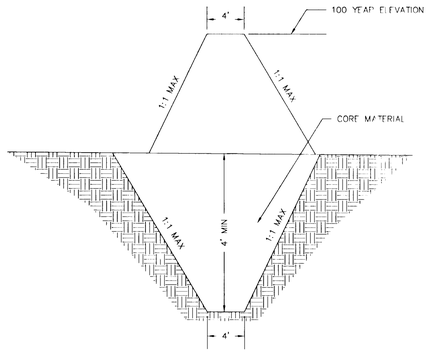
SEDIMENT BASIN & TEMPORARY SWM

HORIZONTAL SCALE : 1" = 50'
VERTICAL SCALE : 1" = 5'



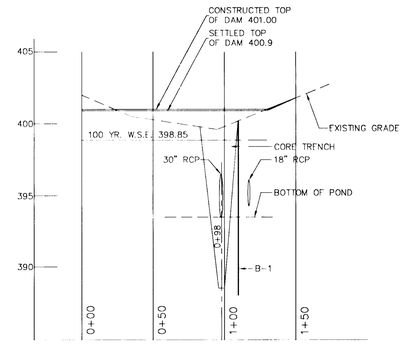
WIER BLOCKING DETAIL

NOT TO SCALE



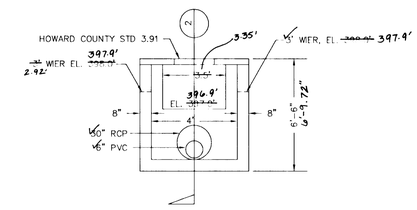
DETAIL
NOT TO SCALE
B

CUT OFF TRENCH & CORE

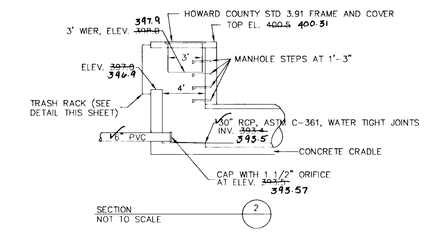


CROSS SECTION OF DAM ALONG CENTERLINE

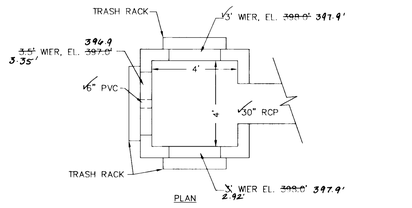
HORIZONTAL SCALE : 1" = 50'
VERTICAL SCALE : 1" = 5'



ELEVATION



SECTION
NOT TO SCALE
2



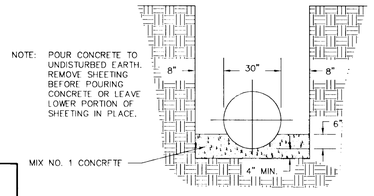
PLAN

RISER

A-5 INLET MODIFIED (SD 4.01)

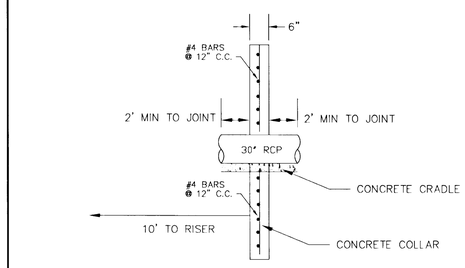
NOT TO SCALE

FOR REINFORCING SEE H.C. SD 4.01



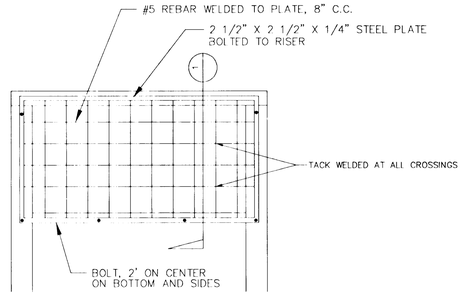
CONCRETE CRADLE DETAIL

NOT TO SCALE

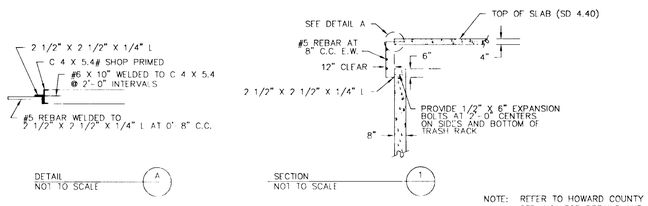


ANTI-SEEP COLLAR

NOT TO SCALE



NOTE: ALL METAL PARTS ARE TO BE GALVANIZED AND PAINTED BATTLESHIP GRAY.



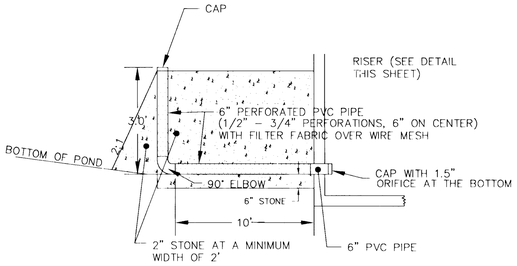
DETAIL
NOT TO SCALE
A

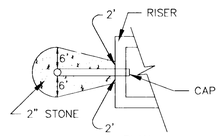
SECTION
NOT TO SCALE
1

TRASH RACK

NOT TO SCALE

NOTE: REFER TO HOWARD COUNTY STD 4.01 FOR DETAILS AND DIMENSIONS NOT SHOWN





PLAN

DEWATERING DEVICE DETAIL

PROFILE

NOT TO SCALE

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER — DATE 1/9/96

J. THOMAS SCRIVENER
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE — DATE 1/9/96

R. RACHAD KMAT
PRINTED NAME & PROFESSIONAL TITLE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Patricia Engle/JRH — 4/19/96
USDA - NATURAL RESOURCE CONSERVATION SERVICE — DATE

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

Robert W. Zirkin/JRH — 4/19/96
HOWARD SOIL CONSERVATION DISTRICT — DATE

AS BUILT CERTIFICATION

ENGINEER'S SIGNATURE — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Andrew M. Rauch/HS — 1-30-96
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Gina Fairnough/JRH — 4/30/96
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE

John Robinson — 4/30/96
DIRECTOR — DATE

CONTRACT PURCHASER/DEVELOPER
J. THOMAS SCRIVENER, INC.
DORSEY HALL PROFESSIONAL PARK
5026 DORSEY HALL DRIVE, SUITE 204
ELLICOTT CITY, MARYLAND 21042
(410) 964-5522

OWNER
RONALD & SUSAN STUP
11609 VIXENS PATH
ELLICOTT CITY, MARYLAND 21042
(410) 992-4650

94008	JAN 1996	
SJD	RJH	
AS SHOWN	RJH	

TAX MAP 35 - PARCEL 24
TROTTER RIDGE
5th ELECTION DISTRICT HOWARD COUNTY
SWM PROFILES AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 465-6105 Fax

6 of 8

F95-165

POND SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD- 378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED TO THE PLANS. TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 50 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUALITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL– THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

PLACEMENT– AREAS ON WHICH FILL IS TO BE SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION– THE MOVEMENT OF AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSE BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT SHALL NOT BE LESS 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 1-99

CUT OFF TRENCH– THE CUFF OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL MATERIAL 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 FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE– ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:
1. MATERIALS- (STEEL PIPE). THIS PIPE AND ITS APPURTENANCE SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A WITH WATERTIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE. THE FOLLOWING COATINGS OR AN APPROVED EQUAL MAY BE USED: NEXION, PLASTI-COTE, BLAC-KOAD, AND BITH-CU-LOY. COATED CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M-245 AND M-246.

MATERIALS- (ALUMINUM COATED STEEL PIPE). THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATERTIGHT COUPLING BANDS OR FLANGES. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND.?

MATERIALS- (ALUMINUM PIPE)- THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-196 OR M-211 WITH WATERTIGHT COUPLINGS BANDS OR FLANGES. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS. THE PH OF THE SURROUNDING SOILS SHALL BE BETWEEN 4 AND 9.

2. COUPLING BANDS, ANTI- SEEP COLLARS, END SECTIONS, ETC., MUST BE COMPOSED OF THE SAME MATERIAL AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE 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.

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE ROLLED AND ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BAND WIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPE LESS THAN 24" IN DIAMETER: FLANGES ON BOTH ENDS OF THE PIPE, A 12" WIDE STANDARD LAP TYPE BAND WITH 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET, AND A 12" WIDE HUGGER TYPE BAND WITH O-RING GASKETS HAVING MINIMUM DIAMETER OF 1/2" GREATER THAN THE CORRUGATION DEPTH. PIPES 24" IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24" LONG ANNULAR CORRUGATED BAND USING RODS AND LUGS. A 12" WIDE BY 3/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED ON THE END OF EACH PIPE FOR A TOTAL OF 24".

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BEAD.

4. BEDDING- THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

6. OTHER DETAILS (ANTI- SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

REINFORCED CONCRETE PIPE– ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE.

1. MATERIALS- REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM DESIGNATION C-361

2. BEDDING- ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THE BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 10% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES, OR AS SHOWN ON THE DRAWINGS.

3. LAYING PIPE- BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

5. OTHER DETAILS (ANTI- SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

POLYVINYL CHLORIDE (PVC) PIPE- ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE.

1. MATERIALS- PVC PIPE SHALL BE PVC- 1120 OR PVC- 1220 CONFORMING TO ASTM D-1785 OR ASTM D- 2241.

2. JOINTS AND CONNECTIONS TO ANTI- SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.

3. BEDDING- THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

5. OTHER DETAILS (ANTI- SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 905.

THE RIPRAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIPRAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS. FILTER CLOTH SHALL BE REPLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 919.12.?

CARE OF WATER DURING CONSTRUCTION

ALL WORK ON THE PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM OF THE REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL AND CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO SUMPS FROM WHICH THE WATER SHALL BE PUMPED.

STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE MARYLAND SOIL CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.

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 THE HEIRS SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON- SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER — DATE 1/9/96

J. THOMAS SCRIVENER
PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE

SIGNATURE OF ENGINEER — DATE 1/9/96

R. TRACY WILKINAT
PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

USDA - NATURAL RESOURCE CONSERVATION SERVICE — DATE 1/19/96

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 1/19/96

AS BUILT CERTIFICATION

ENGINEER'S SIGNATURE — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF BUREAU OF HIGHWAYS — DATE 1-30-96

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 4/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/30/96

STATE OF MARYLAND — R. TRACY WILKINAT — 17942 — REGISTERED PROFESSIONAL ENGINEER

HILLIS – CARNES
ENGINEERING ASSOCIATES, INC.

Page 1 of 1

RECORD OF SOIL EXPLORATION

Project Name Trotter Ridge SWM — Boring # B-1
Location Howard County, Maryland — Job # 94219A

SAMPLER
Datum — Hammer Wt. 140 Lbs. Hole Diameter 8" — Foreman W. Stephens
Surf. Elev. 401 — Hammer Drop 30 Inches Rock Core Dia. — Inspector
Date Started 8-4-94 — Pipe Size 2.0 Inches OD Boring Method HSA — Date Completed 8-4-94

ELEV.	SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion)	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
401.0	SURFACE		0.0					
	Brown, moist, loose, fine sandy silt (ML) (USDA: Loam)			I	4-3-3	1	16"	6" Topsoil Water encountered at 8.0' on rods
399.0		2.0						*Caved at 9.0'
	Brown, moist, medium dense, silt (ML) trace to little fine sand, trace to no clay (USDA: Sandy Clay Loam)		5	I	6-8-12	2	16"	
393.0								
	Orange-brown, moist, loose, micaceous sandy silt (ML)		10	D	2-3-4-6	4	21"	
389.0	Bottom of Boring at 12.0'		20					

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED; PT-PRESSED SHELBY TURE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
GROUND WATER DEPTH: AT COMPLETION 8.5' FT.; AFTER ____ FT.; AFTER ____ FT.
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

HILLIS – CARNES
ENGINEERING ASSOCIATES, INC.

Page 1 of 1

RECORD OF SOIL EXPLORATION

Project Name Trotter Ridge SWM — Boring # B-2
Location Howard County, Maryland — Job # 94219A

SAMPLER
Datum — Hammer Wt. 140 Lbs. Hole Diameter 8" — Foreman W. Stephens
Surf. Elev. 402 — Hammer Drop 30 Inches Rock Core Dia. — Inspector
Date Started 8-4-94 — Pipe Size 2.0 Inches OD Boring Method HSA — Date Completed 8-4-94

EL EV.	SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion)	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
402.0	SURFACE		0.0					
	Brown, moist, loose, fine sandy silt (ML) (USDA: Loam)			I	5-5-4	1	18"	6" Topsoil Water at 8.0' on rods
400.0		2.0						*Caved at 8.5'
	Brown, moist, medium dense, silt (ML) trace to little fine sand, trace to no clay (USDA: Sandy Clay Loam)		5	D	5-11-11	2	16"	
397.5		4.5						
	Orange-brown and tan, moist, medium dense, micaceous silty fine to medium sand (SM)		10	D	6-6-10	3	16"	
			15	D	4-8-9-10	4	24"	
390.0	Bottom of Boring at 12.0'	12.0	20					

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED; PT-PRESSED SHELBY TURE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
GROUND WATER DEPTH: AT COMPLETION 7.5' FT.; AFTER ____ FT.; AFTER ____ FT.
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

HILLIS – CARNES
ENGINEERING ASSOCIATES, INC.

Page 1 of 1

RECORD OF SOIL EXPLORATION

Project Name Trotter Ridge SWM — Boring # B-3
Location Howard County, Maryland — Job # 94219A

SAMPLER
Datum — Hammer Wt. 140 Lbs. Hole Diameter 8" — Foreman W. Stephens
Surf. Elev. 407 — Hammer Drop 30 Inches Rock Core Dia. — Inspector
Date Started 8-4-94 — Pipe Size 2.0 Inches OD Boring Method HSA — Date Completed 8-4-94

ELEV.	SOIL DESCRIPTION (Color, Moisture, Density, Size, Proportion)	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
407.0	SURFACE		0.0					
	Brown, moist, medium dense, fine sandy silt (ML) (USDA: Loam)			D	3-5-7	1	14"	6" Topsoil Water at 9.0' on rods
402.5		4.5						*Caved at 10.0'
	Brown, moist, loose, silt (ML) trace to little fine sand, trace to no clay (USDA: Sandy Clay Loam)		5	I	10-8-9	2	16"	
399.0		8.0		I	2-3-5	3	18"	
	Orange-brown and brown, moist, loose, micaceous silty fine to medium sand (SM)		10					
				D	2-3-4-7	4	22"	
395.0	Bottom of Boring at 12.0'	12.0	15					
			20					

SAMPLER TYPE: DRIVEN SPLIT SPOON UNLESS OTHERWISE NOTED; PT-PRESSED SHELBY TURE; CA-CONTINUOUS FLIGHT AUGER; RC-ROCK CORE
SAMPLE CONDITIONS: D-DISINTEGRATED; I-INTACT; U-UNDISTURBED; L-LOST
GROUND WATER DEPTH: AT COMPLETION 9.5' FT.; AFTER ____ FT.; AFTER ____ FT.
BORING METHOD: HSA-HOLLOW STEM AUGERS; CFA-CONT. FLIGHT AUGERS; DC-DRIVING CASING; MD-MUD DRILLING
STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

CONTRACT PURCHASER/DEVELOPER
J. THOMAS SCRIVENER, INC.
DORSEY HALL PROFESSIONAL PARK
5026 DORSEY HALL DRIVE, SUITE 204
ELLICOTT CITY, MARYLAND 21042
(410) 964-5522

OWNER
RONALD & SUSAN STUP
11609 VIKINS PATH
ELLICOTT CITY, MARYLAND 21042
(410) 992-4650

94008 | JAN 1996 | M.P. | N.T.S. | J.H.

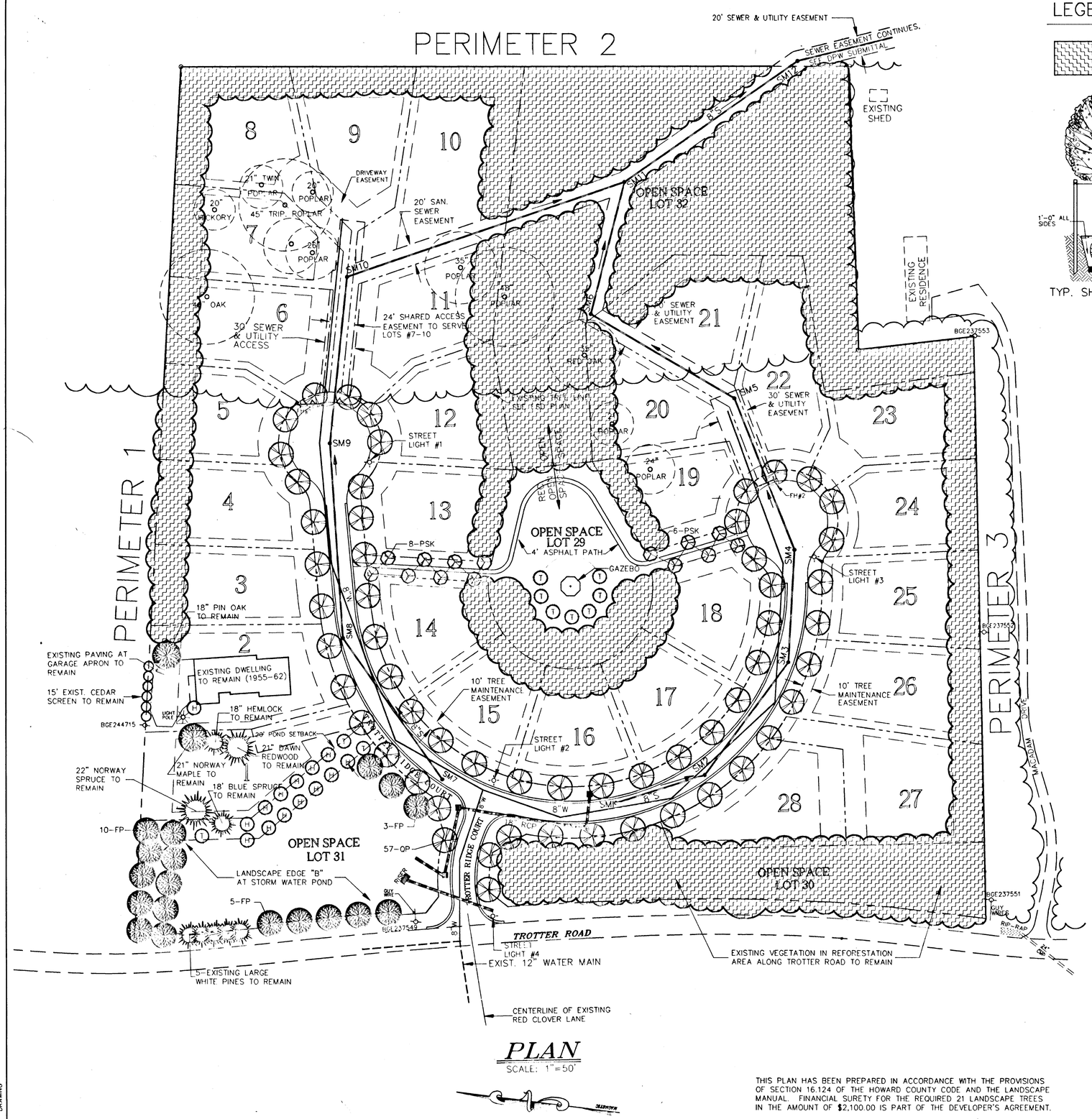
TAX MAP 35 – PARCEL 24
TROTTER RIDGE
5th ELECTION DISTRICT
HOWARD COUNTY
MD 378 POND SPECIFICATIONS AND BORING PROFILES

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

7 OF 8

1806

F9.5-16.5

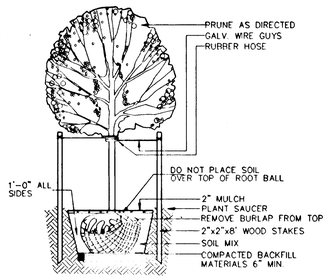


PLAN
SCALE: 1"=50'

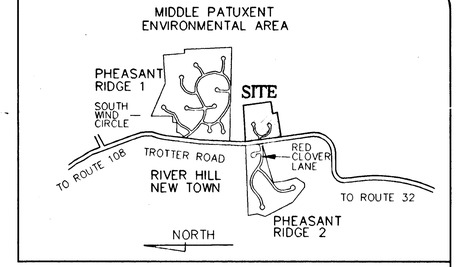
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 21 LANDSCAPE TREES IN THE AMOUNT OF $2,100.00 IS PART OF THE DEVELOPER'S AGREEMENT.

LEGEND

UNDISTURBED EXISTING TREES AND UNDERSTORY VEGETATION



TYP. SHADE TREE PLANTING DET.
NO SCALE



VICINITY MAP
SCALE: 1"=2,000'

NOTES:
1. THE DEVELOPER WILL INSTALL REQUIRED LANDSCAPING AT PUBLIC AREAS, INCLUDING ALL STREET TREES AND POND PLANTINGS. INDIVIDUAL HOMEOWNERS ARE RESPONSIBLE FOR NEW LANDSCAPING AND TREE PRESERVATION ON THEIR OWN LOTS WITH APPROVAL OF THE HOMEOWNER'S ASSOCIATION ARCHITECTURAL REVIEW COMMITTEE.
2. STREET TREES SHALL BE LOCATED 2' INSIDE THE R.O.W.
3. THIS SHEET FOR LANDSCAPE PURPOSES ONLY
4. STREET TREE TO STREET LIGHT SPACING SHALL BE 20' MINIMUM.

LANDSCAPE TABULATIONS

EDGE TYPE

SCHEDULE "A"

PERIMETER 1 (NORTH PROPERTY LINE) — A
SFD REAR TO PARK – 855 LF
EXISTING TREES TO REMAIN FULFILLS PERIMETER TREE OBLIGATION

PERIMETER 2 (EAST PROPERTY LINE) — A
SFD REAR TO PARK – 647 LF
EXISTING TREES TO REMAIN FULFILLS PERIMETER TREE OBLIGATION

PERIMETER 3 (SOUTH PROPERTY LINE) — A
SFD REAR TO R-ED – 954 LF
EXISTING TREES TO REMAIN FULFILLS PERIMETER TREE OBLIGATION

SCHEDULE "D"

STORM WATER POND PERIMETER — B
PERIMETER OUTSIDE 20' WIDE ACCESS – 909 LF
1 SHADE TREE/50 LF = 18 TREES (18 NEW SHADE TREES PROVIDED)
1 EVERGREEN TREE/40 LF = 23 TREES (3 NEW EVERGREEN PROVIDED + 20 EXISTING)

TROTTER ROAD (TROTTER ROAD FRONTAGE)
OPEN SPACE ALONG TROTTER ROAD – 829 LF
EXISTING TREES TO REMAIN FULFILLS STREET TREE OBLIGATION

NEW CUL-DU-SAC ROADS
TOTAL RIGHTS-OF-WAY – 2,294 LF
1 SHADE TREE/40 LF – 57 TREES

PLANT LIST

MARK	BOTANICAL NAME/COMMON NAME	SIZE	ROOT	QUAN.
FP	FRAXINUS PENNSYLVANICA/GREEN ASH	2-1/2" – 3" CAL	B&B	18
PSK	PRUNUS SERRULATA 'KWANZAN'/KWANZAN CHERRY	1-1/2" – 2" CAL	B&B	14
QP	QUERCUS PALUSTRIS/PIN OAK	2-1/2" – 3" CAL	B&B	57
H	ILEX OPACA/AMERICAN HOLLY (EXISTING)	8"–16" CAL	EXISTING	13
T	ILEX OPACA/AMERICAN HOLLY (TRANSPLANT)	8"–12" CAL	90" TREE-SPADE	3

CONTRACT PURCHASER/DEVELOPER
J. THOMAS SCRIVENER, INC.
DORSEY HALL PROFESSIONAL PARK
5026 DORSEY HALL DRIVE, SUITE 204
ELLICOTT CITY, MARYLAND 21042
(410) 964-5522

OWNER
RONALD & SUSAN STUP
11609 VIXENS PATH
ELLICOTT CITY, MARYLAND 21042
(410) 992-4650

STATE OF MARYLAND — RONALD A. STUP — No. 404 — REGISTERED LANDSCAPE ARCHITECT

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS — DATE 1-30-96

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH — DATE 4/30/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/30/96

project 94008 | date JAN.1995
illustration | engineering RJH
SAS/RAS | scale 1"=50' | approval

revisions | date

TROTTER RIDGE
5TH ELECTION DISTRICT
TRACT 60 55, TAX MAP-35, PARCEL 24
CENSUS HOWARD COUNTY, MARYLAND

LANDSCAPE PLAN

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 997-0296 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.

8 OF 8

1806

DRAWING

F-95-165