

SHEET INDEX

| SHEET NO. | DESCRIPTION |
|-----------|---|
| 1 OF 5 | PLAN & PROFILE |
| 2 OF 5 | NOTES, DETAILS AND GRADING PLAN |
| 3 OF 5 | LANDSCAPE PLAN & DRAINAGE AREA MAP |
| 4 OF 5 | FOREST CONSERVATION PLAN |
| 5 OF 5 | FOREST CONSERVATION PLAN, NOTES & DETAILS |

BENCH MARKS

BM 100 ELEV. 323.14 REBAR CAP SET N 98°04'30.70", E 136°25'1.40"
 BM 101 ELEV. 324.00 REBAR CAP SET N 98°05'15.32", E 136°25'55.4744"

HIDDEN VALLEY
TAX MAP 25 PARCEL 270
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ELLICOTT VIEW DRIVE
PLAN AND PROFILE

OWNER AND DEVELOPER:
HOWARD AND WENDY RESNECK
4645 NEW CITT ROAD
ELLICOTT CITY, MARYLAND 21042

SCALE: 1" = 50' DATE: DECEMBER 8, 1995 DWS NO. 1 OF 5
DES. W.K.F. DRN. L.M.A. CLK. W.K.F.

FISHER, COLLINS AND CARTER, INC.
CIVIL ENGINEERS AND LAND SURVEYORS
9171 BALTIMORE NATIONAL PIKE, SUITE 100, ELLICOTT CITY, MARYLAND 21042
TELEPHONE (410) 461-2255

PLAN

| NO. | DATE | BY |
|-----|---------|----|
| 1 | 6/13/94 | M |
| 2 | 6-8-94 | M |

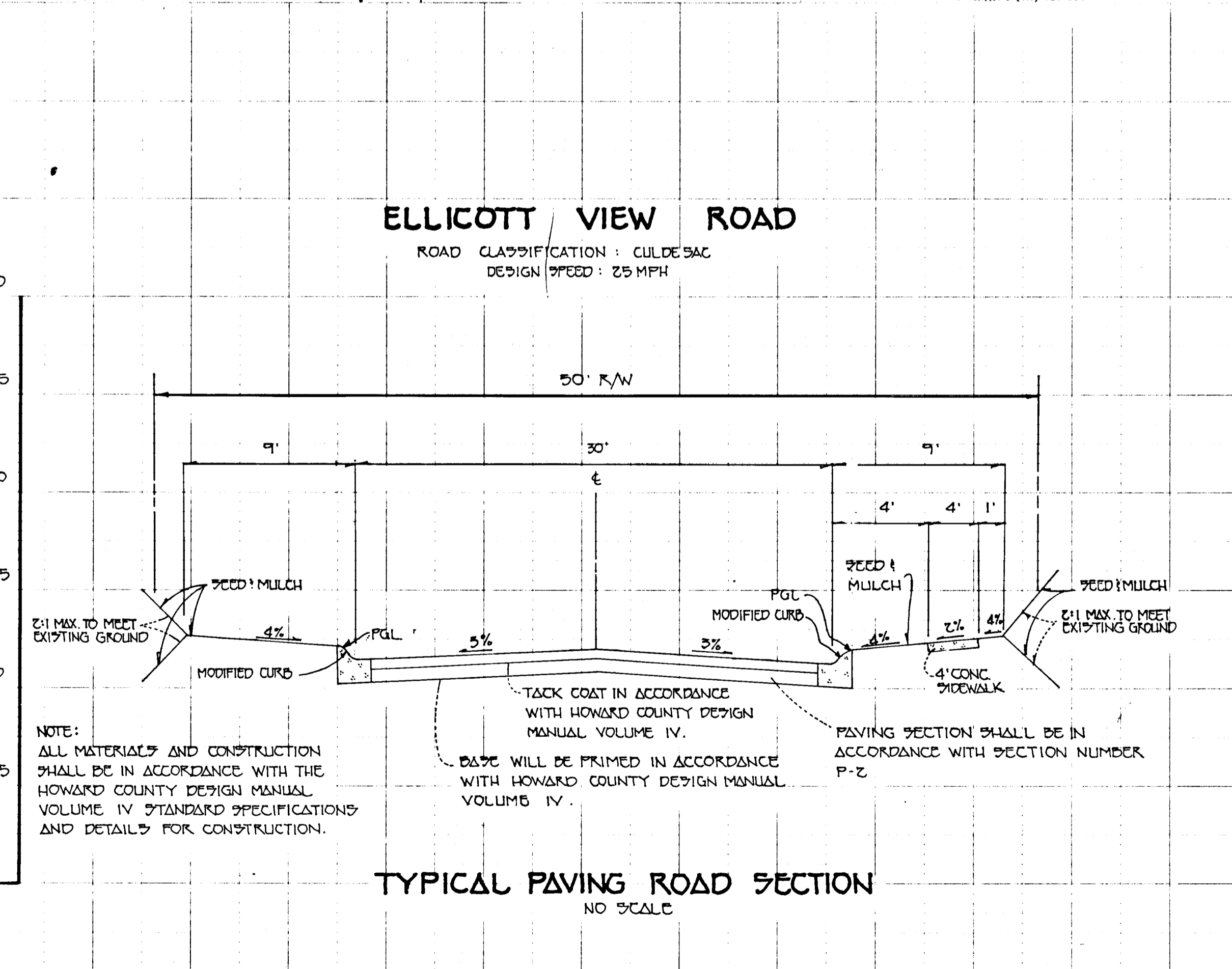
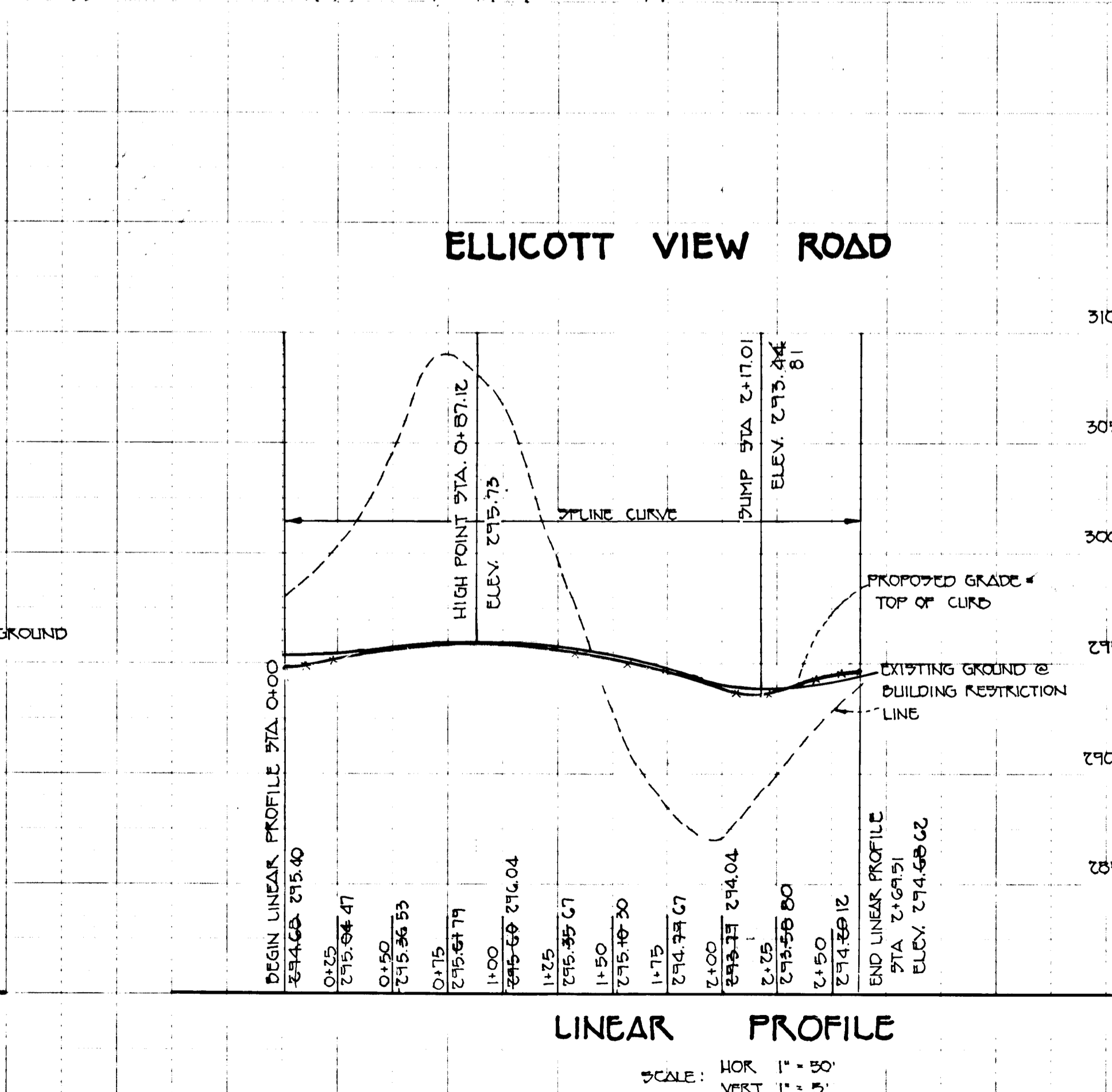
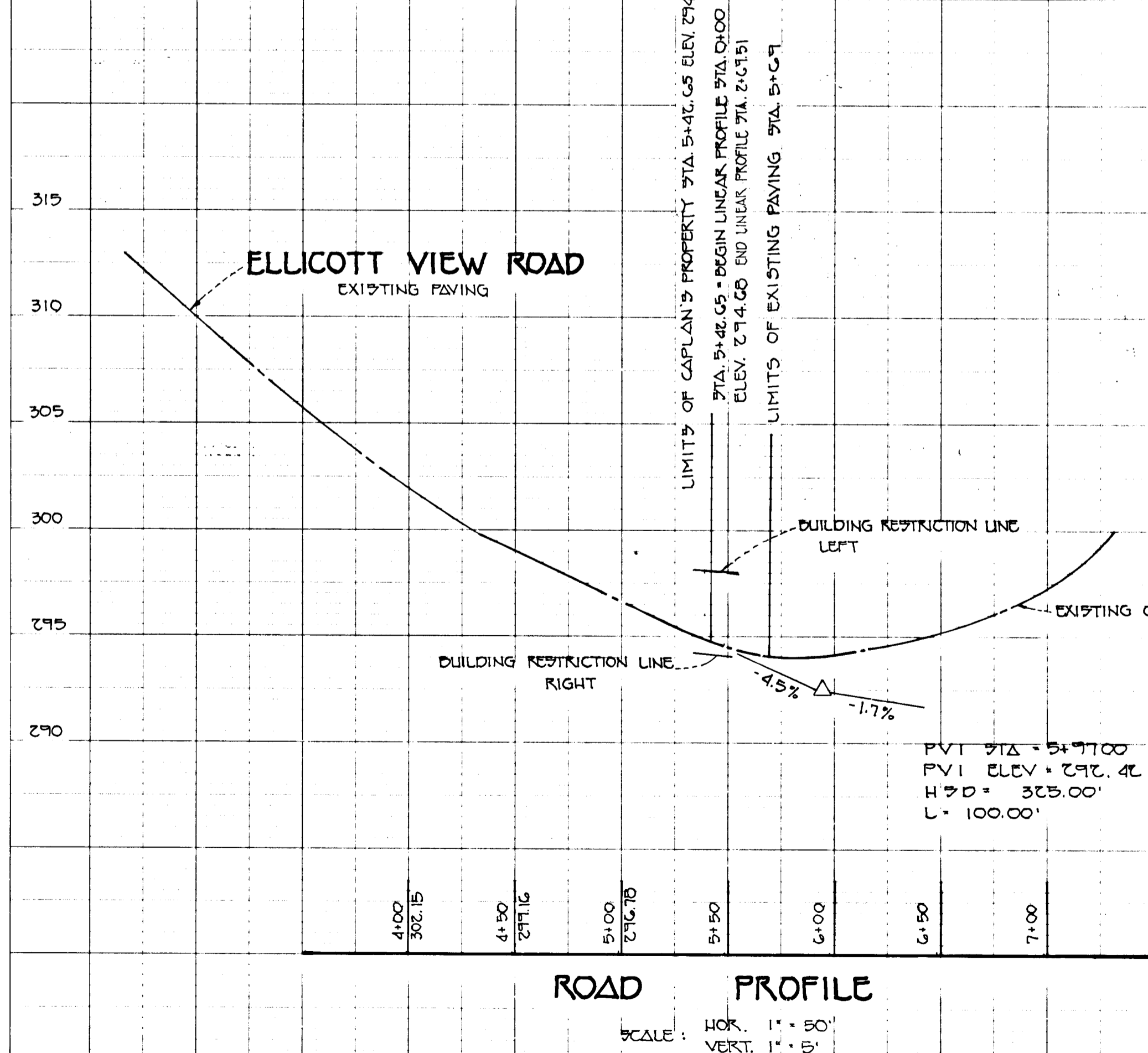
APPROVED DEPARTMENT OF PUBLIC WORKS
John Damman 6/13/94

APPROVED DEPARTMENT OF PUBLIC WORKS
Andrew M. Smith 6-8-94

APPROVED DEPARTMENT OF PUBLIC WORKS
Elizabeth Anderson 6/13/94

APPROVED DEPT. OF PLANNING AND ZONING
Jim Summary 6/16/94

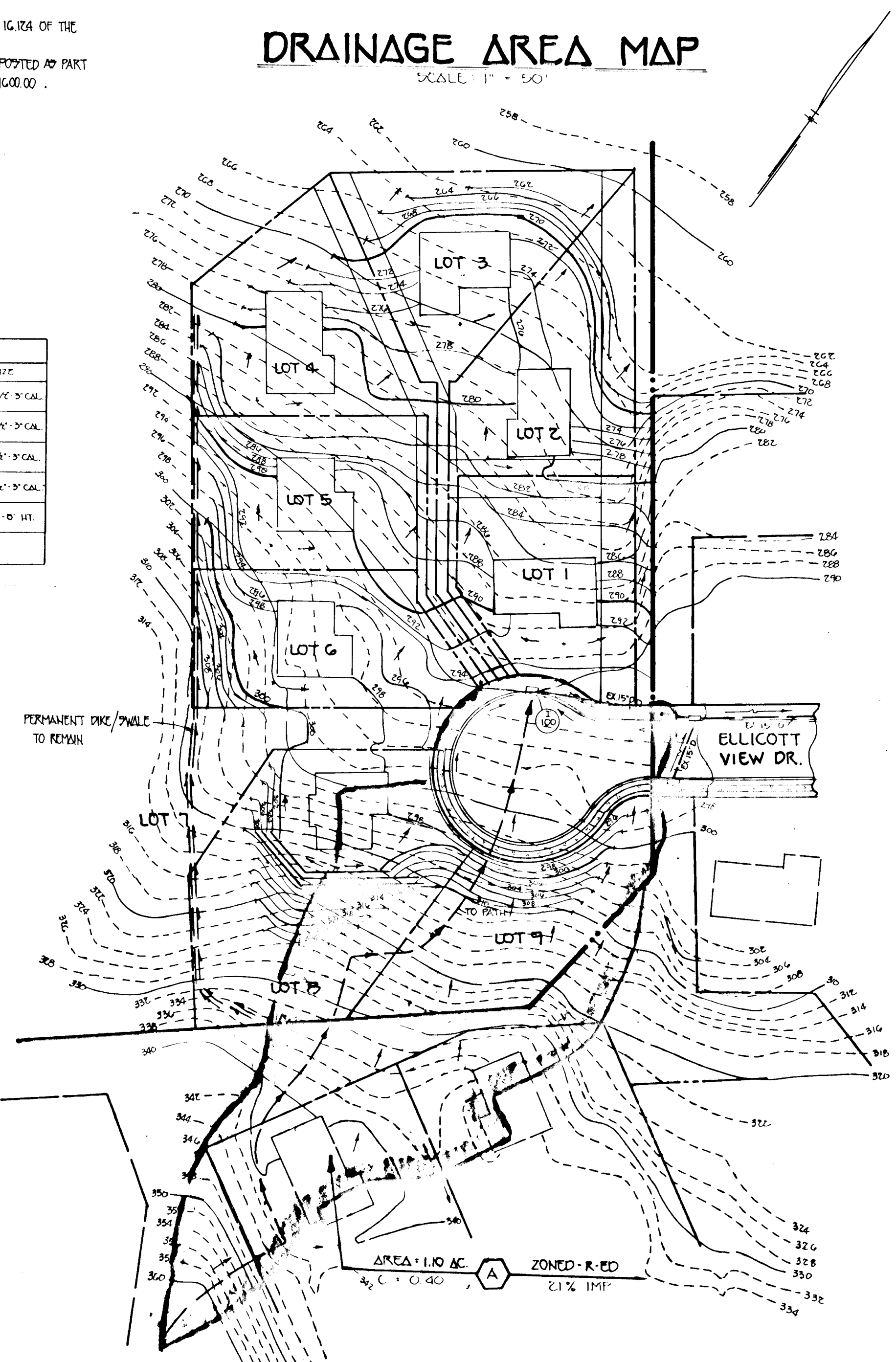
THE HORIZONTAL AND VERTICAL CONTROL IS BASED ON THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATION: NAD 83 STA. NO. 2411 N 57°12'10.74" E 136°40'15.10" STA. NO. 2412 N 50°04'40.70" E 136°41'14.40"



1704

DRAINAGE AREA MAP

SCALE: 1" = 50'



NOTE
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.02A OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE D.P.W. DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$1600.00.

| SYMBOL | SPECIES | NUMBER | DATE |
|--------|--|--------|---------|
| 1 | GREEN HICKORY (QUERCUS VIRGINICA) | 6 | 8/18/94 |
| 2 | RED MAPLE (ACER RUBRUM) | 4 | 8/18/94 |
| 3 | AMERICAN BEECH (FAGUS GRANDIFOLIA) | 5 | 8/18/94 |
| 4 | DOGWOOD (CORNUS FLORIDA) | 4 | 8/18/94 |
| 5 | FRUIT SPURRED CASTERN WHITE PINE (PINUS STROBILIS) | 6 | 8/18/94 |
| 6 | EXISTING PINE TREES PER 90P 92-111 | | |

| CATEGORY | SCHEDULE A PERIMETER LANDSCAPE EDGE | | | | | | | |
|---|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| PERIMETER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| LANDSCAPE TYPE | A | A | A | A | A | A | A | A |
| LINEAR FEET OF PERIMETER | 425 | 45 | 95 | 500 | 970 | 165 | 250 | 120 |
| CREDIT FOR EXISTING VEGETATION (YES/NO, LINEAR FEET) | 210 | 45 | 70 | 285 | 750 | YES | 165 | 120 |
| CREDIT FOR WALL, FENCE OR BERT (YES/NO, LINEAR FEET) | YES | YES | YES | YES | YES | NO | YES | YES |
| CREDIT FOR WALL, FENCE OR BERT (ONE-SIDE IF NEEDED) | NO | NO | NO | NO | NO | NO | NO | NO |
| NUMBER OF PLANTS REQUIRED | 3 | 1 | 1 | 3 | 3 | 2 | 2 | 2 |
| NUMBER OF PLANTS PROVIDED | 3 | 1 | 1 | 3 | 3 | 2 | 2 | 2 |
| NUMBER OF PLANTS SUBSTITUTION REQUIRED (NO SUBSTITUTION REQUIRED IF NEEDED) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

NOTE:
TOTAL NUMBER OF SHADE TREES REQUIRED IS SIXTEEN (16). PERIMETER 1 = SUBSTITUTION OF REQUIRED THREE (3) SHADE TREES WITH SIX (6) EVERGREENS. PROPOSED TREES WILL CONFORM TO EXISTING WHITE PINES (PLANTED PER 90P 92-111).

2.2 RETAINING WALL INSTALLATION

- A. Excavation
 1. The owner contractor shall excavate to the lines and grades shown on the construction drawings.
- B. Foundation Soil Preparation
 1. Foundation soil shall be excavated as required for footing dimensions shown on the construction drawings, or as directed by the Engineer.
 2. Foundation soil shall be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength. Soils not meeting required strength shall be removed and replaced with acceptable material.
 3. Over-excavated areas shall be filled with compacted backfill material. Bearing capacity for natural and compacted fill soils = 2000 psf.
- C. Base Footing
 1. The leveling pad footing shall be placed as shown on the construction drawings with a minimum thickness of 6 inches. The leveling pad material shall consist of graded aggregate meeting the gradation requirements for Maryland BRG base or as approved by a registered professional geotechnical engineer.
 2. Leveling pad footing materials shall be installed upon undisturbed in situ soils or compacted backfill.
 3. Material shall be compacted so as to provide a level hard surface on which to place the first course of units. Compaction will be with mechanical plate compactors to 95% of Standard Proctor (ASTM D-698).
 4. Footing shall be prepared to insure complete contact of retaining wall unit with base. Clips shall not be allowed.
 5. Footing materials shall be to the depths and widths shown.
- D. Unit Installation
 1. First course of concrete wall units shall be placed on the footing. The units shall be directed for leveling and alignment. The first course is the most important in being accurate and acceptable permits.
 2. Insure that units are in full contact with base.
 3. Units are placed side by side for full length of wall alignment. Alignment may be done by means of a string line or offset from base line.
 4. Install fiberglass connecting pins.
 5. Sweep all excess material from top of units and install next course.
 6. Lay up each course insuring that one pin is installed into adjoining courses a minimum of one inch. Two pins are required per unit. Pull each unit forward, away from the embankment, against pins in the previous course and backfill as the course is completed. Repeat procedure to the extent of wall height.
 7. At the end of each course where the wall changes elevation, units shall be turned into the backfill. Units shall be laid as to create the minimum radius possible. A minimum of 1 unit shall be installed into the grade. Only the front face of the units shall be visible from the side of the wall.

3.3 GEORIGID INSTALLATION FOR RETAINING WALLS

- A. The geogrid soil reinforcement shall be laid horizontally on compacted backfill, connected to the concrete wall units and embedded a minimum of 12 inches. Hook grid over fiberglass pins, pull taut, and anchor before backfill is placed on the geogrid.
- B. Sticks in the geogrid at the wall unit connections shall be removed in a manner, and to such a degree, as approved by the Engineer.
- C. Geogrid shall be laid at the proper elevation and orientation as shown on the construction drawings or as directed by the Engineer.
- D. Correct orientation (roll direction) of the geogrid shall be verified by the Contractor.
- E. Geogrid may be secured in-place with staples, pins, and bags, or backfill as required by fill grades, fill placement procedures, or weather conditions, or as directed by the Engineer.
- F. Overlaps
 1. Uniaxial geogrid does not need to be overlapped in the across the roll direction, except to maintain the fill on the slope face when wrap-around facing is used. Uniaxial grid shall be overlapped a minimum of 48 inches in the roll direction, or as directed by the engineer.
 2. A layer of soil a minimum of 4 inches in thickness shall be spread between uniaxial geogrid layers in the area to be overlapped, or as directed.

4. FILL PLACEMENT

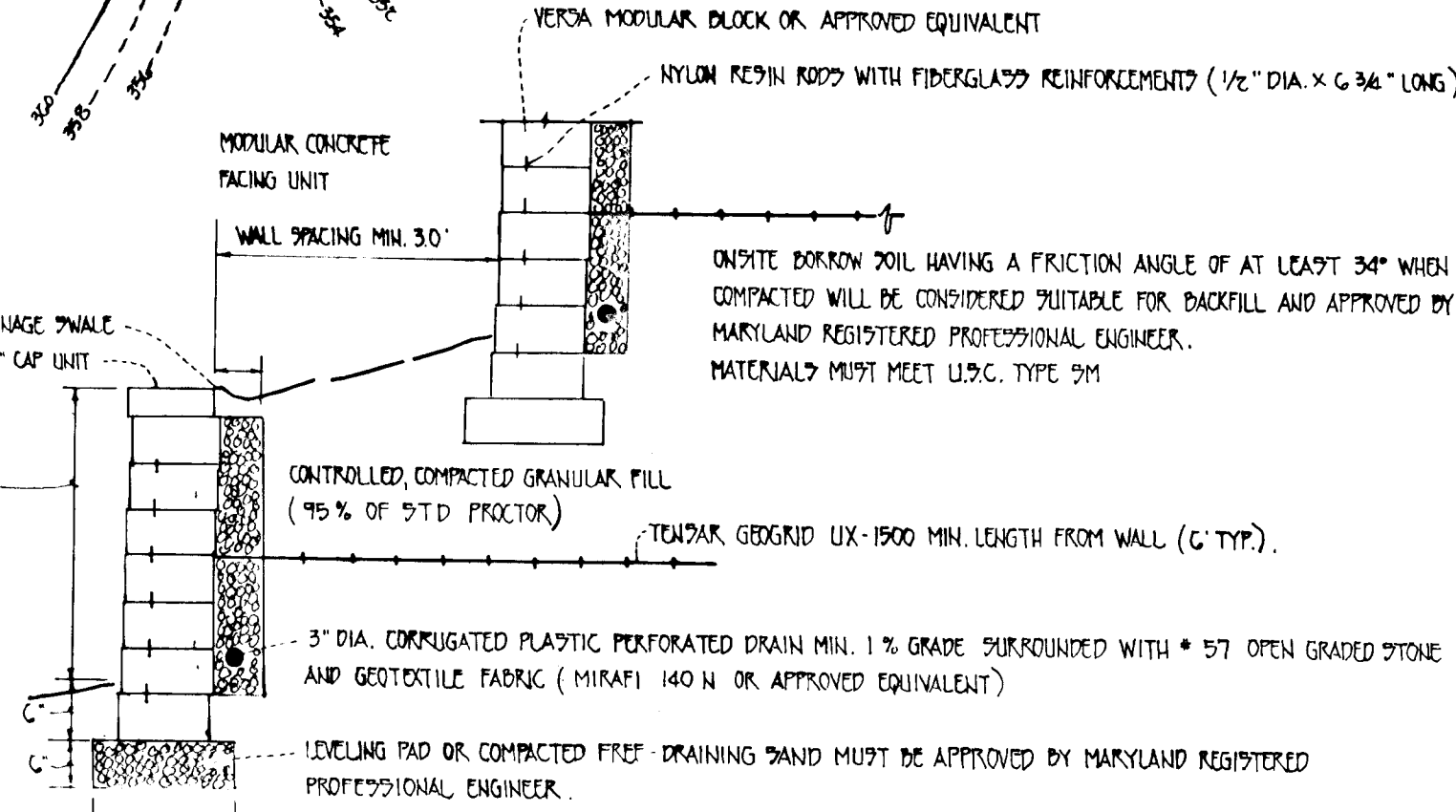
- A. Wall fill material shall be placed in 8-inch lifts and compacted to 95 percent of Standard Proctor (ASTM D-698).
- B. Backfill shall be placed, spread, and compacted in such a manner that minimizes the development of wrinkles in and/or movement of the geogrid. Only hand-operated compaction equipment shall be allowed within 3 feet of the wall face.
- C. Backfill shall be placed from the wall outward to insure that the geogrid remains taut.
- D. Tracked construction equipment shall not be operated directly on the geogrid. Tracked vehicles over the geogrid. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
- F. Rubber-tired equipment may pass over the geogrid reinforcement at slow speed, less than 10 MPH. Sudden braking and sharp turning shall be avoided.

GENERAL NOTES

- A. The required leveling pad subgrade bearing capacity shall be certified by a Maryland Registered Professional Geotechnical Engineer prior to footing placement.
- B. Construction of all retaining walls shall be performed under the observations of a Maryland Registered Professional Engineer.

RETAINING WALL NOTES AND DETAILS

NOT TO SCALE



ENGINEER'S CERTIFICATE

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

DATE: 5/19/94

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCE APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PHYSICAL ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

DATE: 5/19/94

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 6/3/94

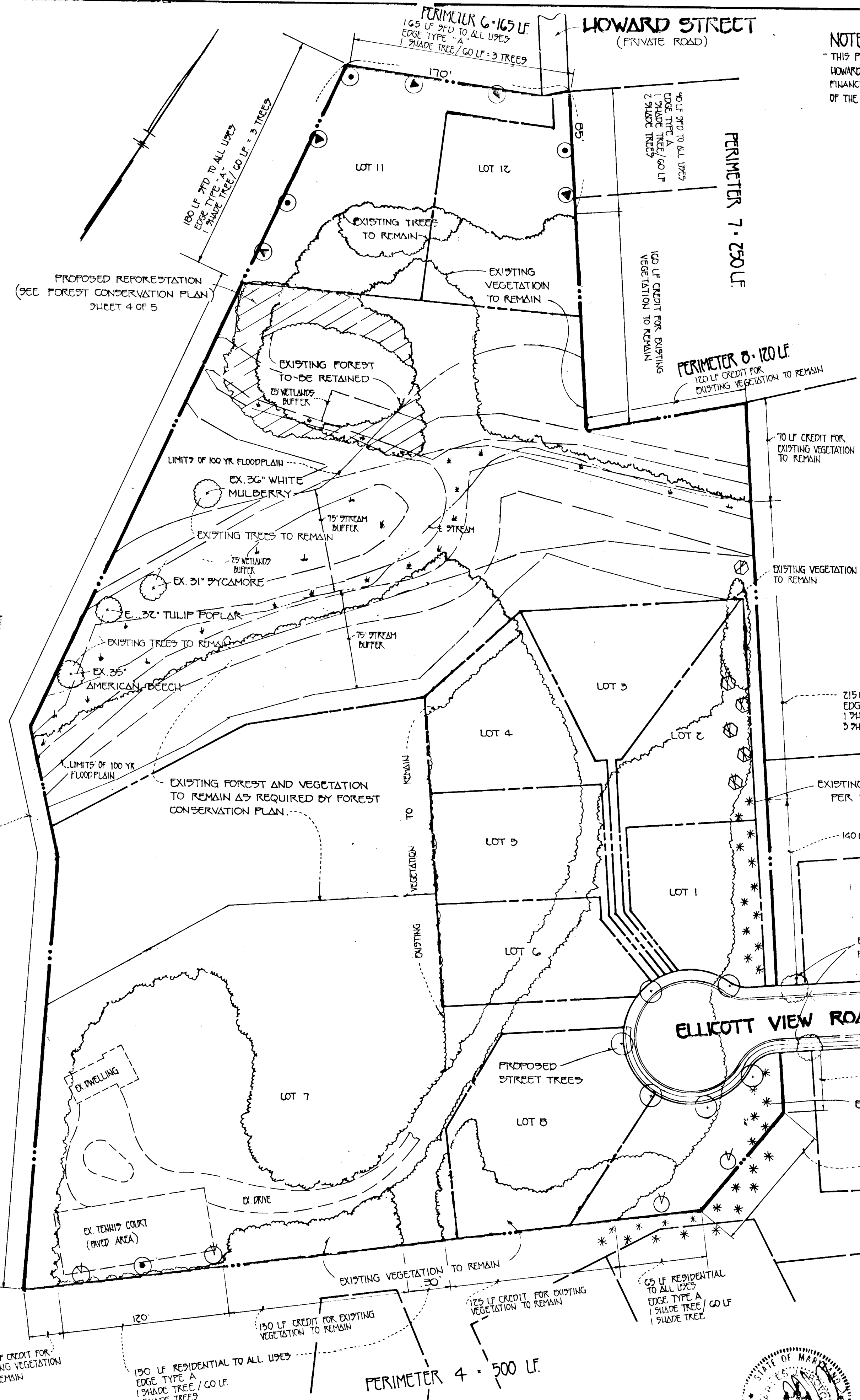
APPROVED: DEPARTMENT OF PUBLIC WORKS
Date: 6/3/94

OWNER/DEVELOPER
HOWARD WILSON KUNICK
4645 NEW CUT ROAD
ELLCOTT CITY, MARYLAND 21042

LANDSCAPING MAP AND DRAINAGE AREA MAP

HIDDEN VALLEY

LOTS 1 THRU 12
TAX MAP 25
SECOND ELECTION DIST.
SCALE: AS SHOWN
PARCEL 278
HOWARD COUNTY, MARYLAND
DATE: DECEMBER 8, 1993
SHEET NO. 3 OF 5



LANDSCAPE PLAN

SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
7971 BALTIMORE NATIONAL PIKE, SUITE 100
ELLCOTT CITY, MARYLAND 21042
TELEPHONE: (410) 461-8899
FAX: (410) 750-3764

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 6/15/94

APPROVED: DEPARTMENT OF PUBLIC WORKS
Date: 6-8-94

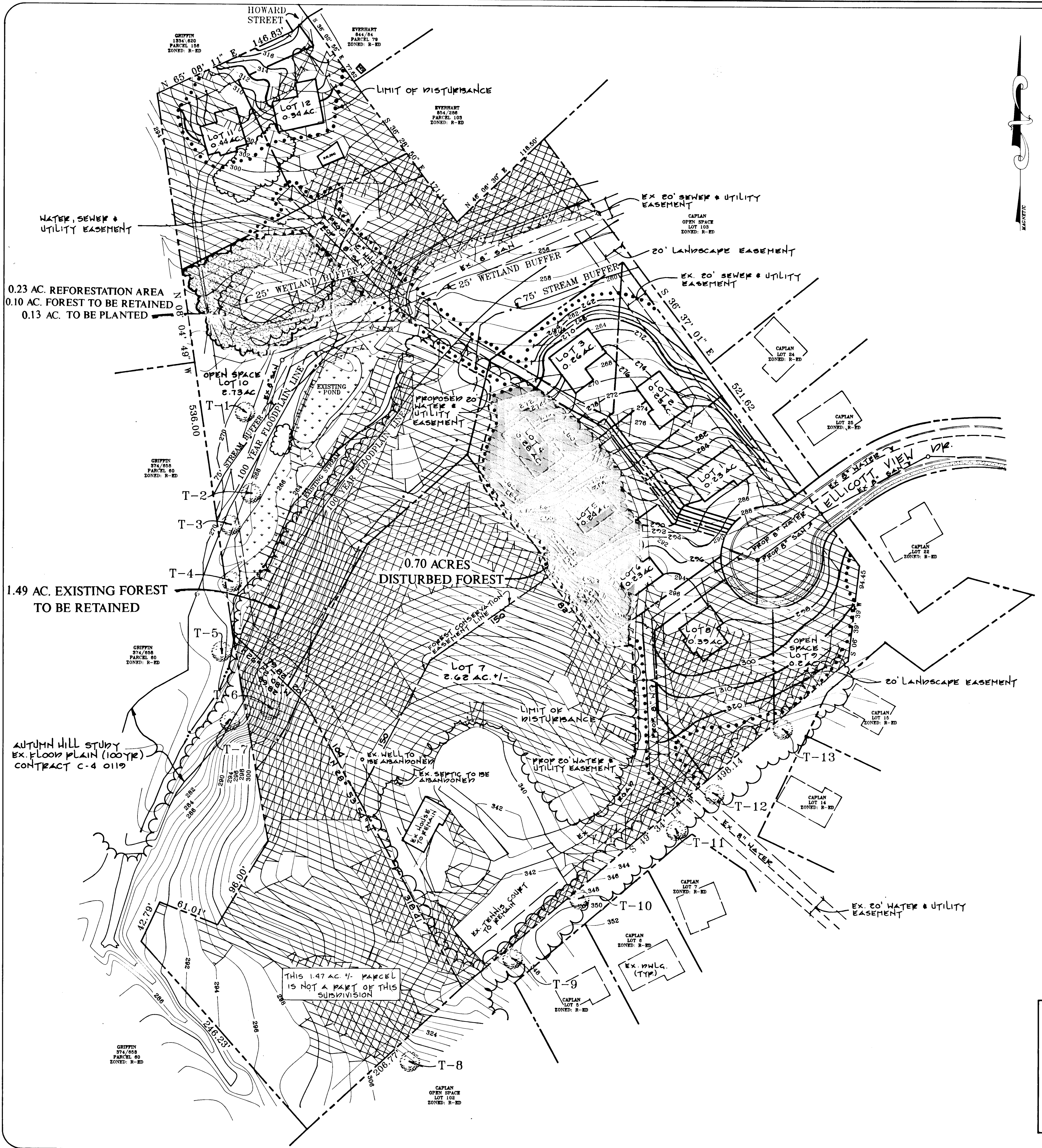
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 6/15/94

APPROVED: DEPARTMENT OF PUBLIC WORKS
Date: 6/15/94



1104

1704



| EXISTING TREES | | | |
|----------------|------|----------------|-------------|
| # | SIZE | TYPE | DESCRIPTION |
| T-1 | 36" | WHITE MULBERRY | TO REMAIN |
| T-2 | 31" | SYCAMORE | TO REMAIN |
| T-3 | 32" | TULIP POPLAR | TO REMAIN |
| T-4 | 35" | AMERICAN BEECH | TO REMAIN |
| T-5 | 37" | RED OAK | TO REMAIN |
| T-6 | 30" | TULIP POPLAR | TO REMAIN |
| T-7 | 31" | AMERICAN BEECH | TO REMAIN |
| T-8 | 33" | GREEN ASH | TO REMAIN |
| T-9 | 41" | WHITE OAK | TO REMAIN |
| T-10 | 35" | WHITE OAK | TO REMAIN |
| T-11 | 38" | BLACK OAK | TO REMAIN |
| T-12 | 32" | GREEN ASH | TO REMAIN |
| T-13 | 32" | AMERICAN BEECH | TO REMAIN |

| LEGEND | |
|----------------------------------|-------|
| LIMIT OF DISTURBANCE | |
| PROPOSED TREE PROTECTIVE DEVICES | ----- |
| 15-25% SLOPES | |
| 25% AND GREATER SLOPES | |
| EXISTING TREE LINE | |
| SPECIMEN TREE | ○ T-2 |
| PROPOSED CONTOUR | --- |
| EXISTING CONTOUR | --- |
| PROPERTY LINE | --- |
| WETLAND | |
| WETLAND BUFFER | |
| STREAM | --- |
| STREAM BUFFER | |

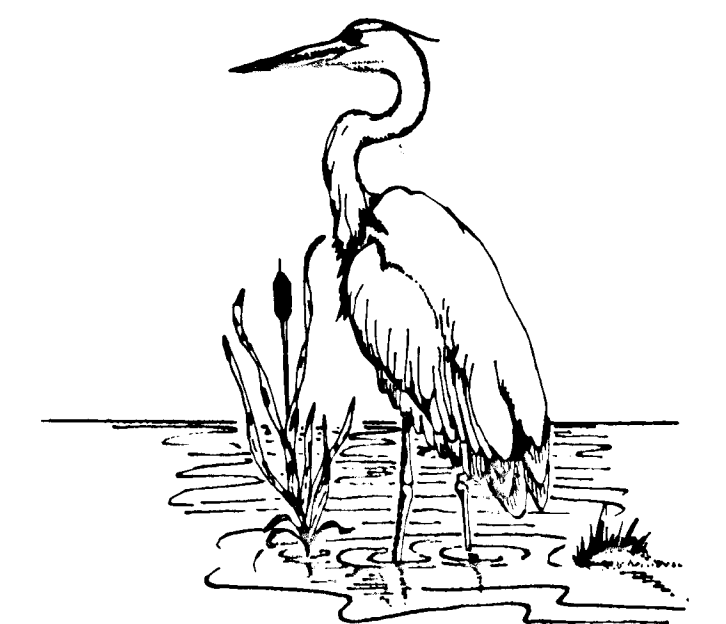
- GENERAL NOTES**
- OWNER/DEVELOPER: HOWARD RESNECK
4845 NEW CUT ROAD
ELICOTT CITY, MARYLAND 21042
 - EXISTING ZONING: R-ED
 - FOREST DELINEATION PREPARED BY: EXPLORATION RESEARCH, INC.
 - ROOT PRUNING WITH A VIBRATORY KNIFE IS REQUIRED ON ALL REMAINING TREES SHOWING DISTURBANCE OF CRITICAL ROOT ZONES. PRUNING TO BE PERFORMED AT THE LIMIT OF DISTURBANCE ONLY.
 - CONCRETE TRUCKS ARE NOT PERMITTED TO WASH CHUTES WITHIN CRITICAL ROOT ZONES.
 - GROSS SITE AREA: 8.44 ACRES +/-
AREA WITHIN FLOODPLAIN: 0.78 ACRES +/-
NET SITE AREA: 7.46 ACRES +/-
 - NUMBER OF PROPOSED LOTS: 12
NUMBER OF BUILDABLE LOTS: 10
 - FIELD SURVEY PREPARED BY FISHER, COLLINS AND CARTER, INC. IN JUNE 1992
 - THE WETLANDS SHOWN HEREON WERE LOCATED BY EXPLORATION RESEARCH, INC. ECOTONES ARE APPROXIMATE
 - OPEN SPACE LOTS WILL BE DEDICATED TO HOWARD COUNTY, MARYLAND.
 - NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLAND AND STREAM BUFFER.
 - THIS FLOODPLAIN IS THE AUTUMN HILL FLOODPLAIN AS APPROVED BY HOWARD COUNTY. CONTRACT NUMBER: C-4-0119

REVISED: 5/13/94 PER COUNTY COMMENTS

Approved: Department of Planning and Zoning
Jana Strumman 6/16/94
 Chief, Division of Land Development and Research

Approved: Department of Public Works
Elizabeth Anderson Calvi 4/13/94
 Chief, Bureau of Engineering

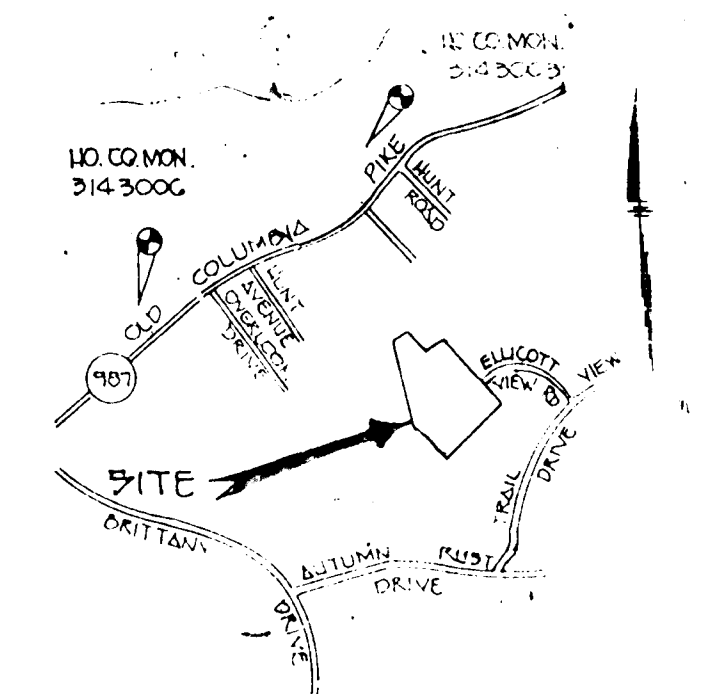
Approved: Howard County Department of Public Works
Andrew M. Decker 6/13/94
 Chief, Bureau of Highways



EXPLORATION RESEARCH, INC.
 ENVIRONMENTAL CONSULTANTS
 838 FORREST STREET
 HISTORIC ELICOTT CITY, MARYLAND 21043
 TEL: (410) 750-1150 FAX: (410) 750-7350

BASE SHEET PREPARED BY:
FISHER, COLLINS & CARTER, INC.
 971 BALTIMORE NATIONAL PIKE, SUITE 100
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2955

FOREST CONSERVATION PLAN
HIDDEN VALLEY
 LOTS 1 THRU 12 TAX MAP 25 PARCEL 278
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

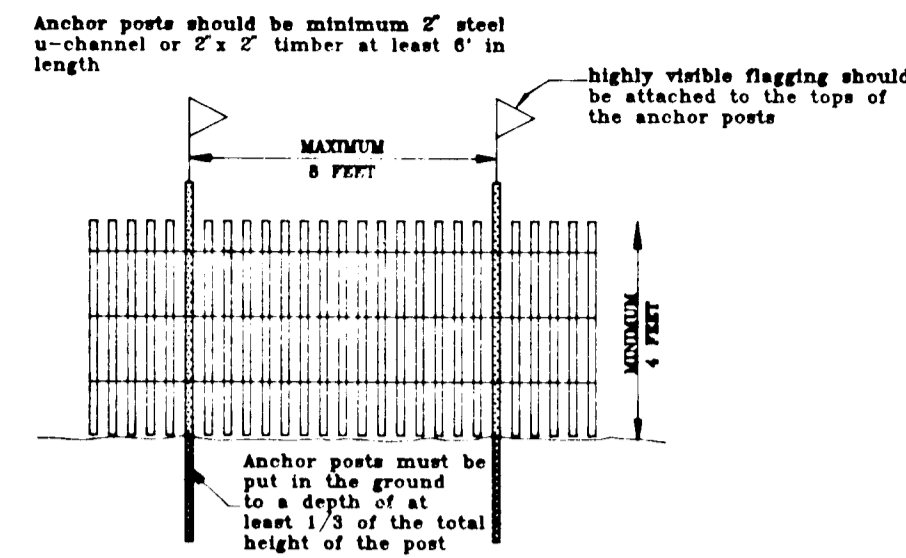


VICINITY MAP
 SCALE: 1" = 1200'

DRAWN BY: M.J. FLOAM SCALE: 1" = 50'
 FIELD WORK BY: G.M.J./N.T.M. DATE: FEBRUARY 93
 CHECKED BY: G.M.J./S.L.H. SHEET 4 OF 5

5/13/94 REVISED PER COUNTY COMMENTS

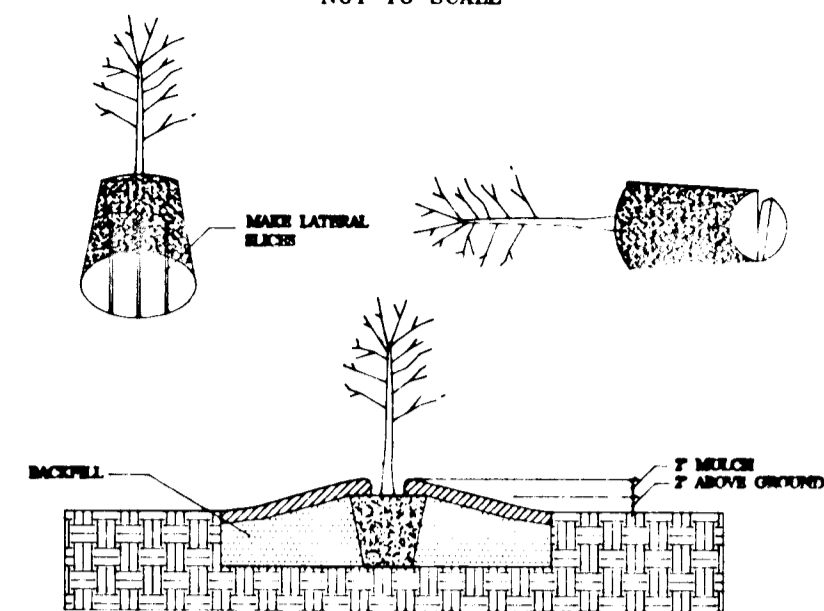
DETAIL 1: TREE PROTECTIVE DEVICE
SOURCE: M-NCPPC, 1989



GENERAL NOTES

- Limits of disturbance will be set as part of the review process for an approved TCP.
- The boundaries of the limits of disturbance should be staked and flagged prior to erecting the protective measures.
- Anchor posts should be placed to avoid severing or damaging large tree roots.
- Fencing material should be fastened securely to the anchor posts.

DETAIL 4: WHIP PLANTING DETAIL
CONTAINER NOT TO SCALE



- PLANTING PROCEDURES FOR POT BOUND CONTAINER GROWN PLANTS**
- REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER.
 - USE A KNIFE TO CUT THROUGH BOTTOM HALF OF THE ROOT BALL.
 - PLANT ABOVE THE EXISTING GRADE WHEN HIGH WATER TABLE CONDITIONS EXIST, OTHERWISE PLANT FLUSH WITH EXISTING GRADE.
 - PLANTING HOLE TO BE THREE TIMES THE DIAMETER OF THE CONTAINER.

CONSTRUCTION TIMETABLE

- OBTAIN GRADING/BUILDING PERMIT AUGUST - SEPTEMBER 1993
- INSTALL TREE PROTECTION FENCE ALONG DISTURBED LIMITS
- EXCAVATE & CONSTRUCT ROADS UNDER AN APPROVED FINAL PLAN.
- COMPLETE HOUSE CONSTRUCTION JANUARY 1994
- REMOVE TEMPORARY TREE PROTECTION DEVICES

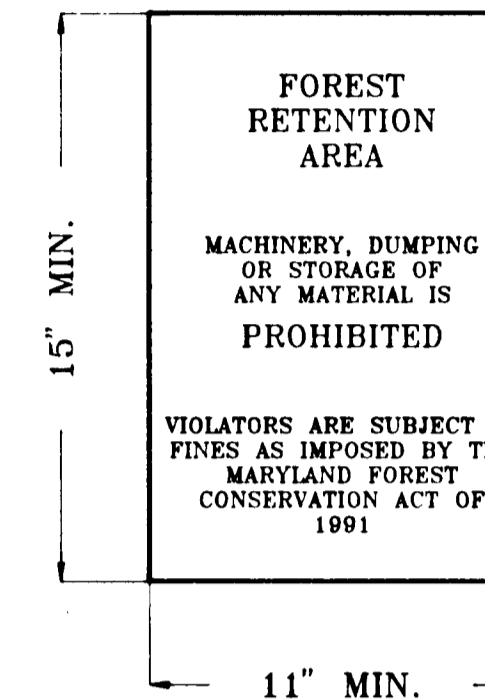
SOIL EROSION AND SEDIMENT CONTROL NOTES

- ALL ACTIVITIES SHALL CONFORM TO THE TERMS, CONDITIONS, AND SCHEDULES OF A SOIL EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- ALL FEASIBLE & PRACTICAL EROSION AND SEDIMENT CONTROL DEVICES WILL BE INTEGRATED INTO THE TREE CONSERVATION PLAN.
- ALL ACTIVITIES SHALL BE DESIGNED TO MINIMIZE SEDIMENTATION AND EROSION INTO AND ADJACENT TO TREE PRESERVATION AREAS.

FENCING AND SIGNAGE NOTES

- WOODLAND CONSERVATION/TREE SAVE AREAS AND LIMITS OF CLEARING WILL BE CLEARLY MARKED PRIOR TO THE BEGINNING OF ANY ACTIVITIES.
- IF DETERMINED TO BE NECESSARY, THE AFFORESTATION AREA WILL BE ENCLOSED BY A POST AND RAIL FENCE, SUITABLY MARKED TO IDENTIFY THE AREA. THE FENCE SHALL BE OF SUFFICIENT CONSTRUCTION TO IMPED ENTRY AND MARKED AT SUITABLE FREQUENCY WITH CONSPICUOUS MARKERS AND SIGNAGE.

SIGNAGE DETAIL



DETAIL 5: GRASS-FORB SEEDING MIXTURE

| SPECIES | AMOUNT (LBS/AC) |
|--------------------|-----------------|
| PERENNIAL RYEGRASS | 5 |
| ORCHARDCRASS | 5 |
| KOREAN LESPEDEZA | 10 |

MIXTURE TO BE SPRING SOWN
SOURCE: VOGAL, 1980

FOREST CONSERVATION WORKSHEET

| | |
|--|----------------------|
| GROSS SITE AREA | 8.44 AC. |
| AREA WITHIN FLOODPLAIN | 0.98 AC. |
| AREA WITHIN AGRICULTURAL USE | 0.00 AC. |
| NET TRACT AREA | 7.46 AC. |
| LAND USE CATEGORY | RESIDENTIAL-SUBURBAN |
| REFORESTATION THRESHOLD (20% x NET TRACT AREA) | 1.49 AC. |
| AFFORESTATION THRESHOLD (15% x NET TRACT AREA) | 1.12 AC. |
| EXISTING FOREST ON NET TRACT AREA | 2.83 AC. |
| FOREST AREA TO BE CLEARED | 0.70 AC. |
| FOREST AREA TO BE RETAINED | 1.49 AC. |

REFORESTATION CALCULATIONS

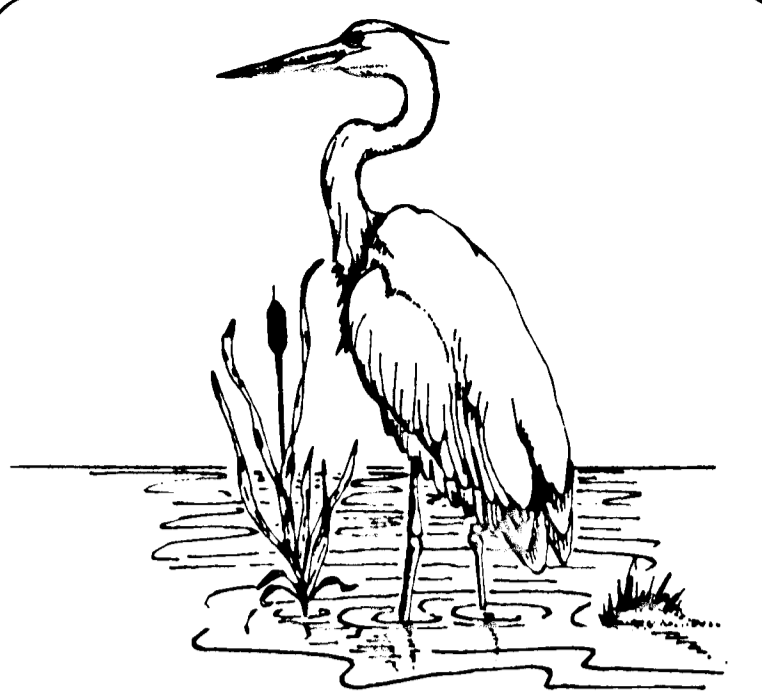
| | |
|--|----------|
| NET TRACT AREA | 7.46 AC. |
| REFORESTATION THRESHOLD | 1.49 AC. |
| EXISTING FOREST ON TRACT AREA | 2.83 AC. |
| FOREST AREAS TO BE CLEARED | 0.70 AC. |
| FOREST AREAS TO BE RETAINED | 1.49 AC. |
| FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD | 0.70 AC. |
| FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD | 0.00 AC. |
| REFORESTATION FOR CLEARING ABOVE THRESHOLD | 0.18 AC. |
| CREDIT FOR FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD | 0.00 AC. |
| TOTAL REFORESTATION REQUIRED | 0.18 AC. |

AFFORESTATION CALCULATIONS

| | |
|-----------------------------------|----------|
| NET TRACT AREA | 7.46 AC. |
| AFFORESTATION MINIMUM | 1.12 AC. |
| EXISTING FOREST ON NET TRACT AREA | 2.83 AC. |
| FOREST AREAS TO BE CLEARED | 0.70 AC. |
| FOREST AREAS TO BE RETAINED | 1.49 AC. |
| TOTAL AFFORESTATION REQUIRED | 0.00 AC. |

REFORESTATION AREA NOTES

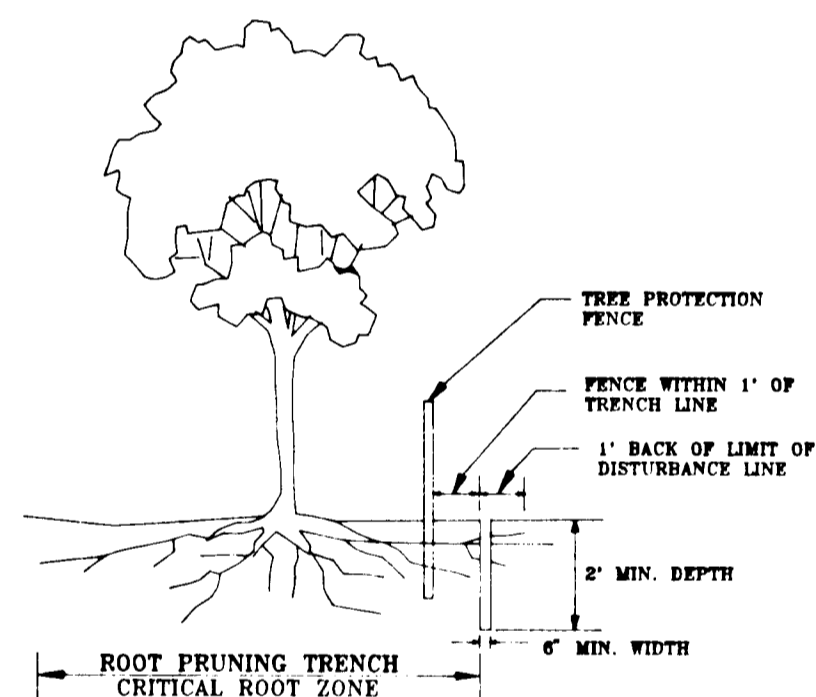
- TOTAL AREA TO BE FORESTED
REQUIRED: 7840 SF (0.18 ACRES)
PROVIDED: 10000 SF (0.23 ACRES)
- SOIL AMENDMENT AND FERTILIZATION RECOMMENDATIONS WILL BE MADE BASED UPON THE RESULTS OF SOIL ANALYSES FOR NITROGEN, PHOSPHORUS, POTASSIUM, ORGANIC MATTER CONTENT, AND Pb. WOODLAND REPLACEMENT AREAS WILL BE PREPARED BY DISCING OR CHISEL-HARROWING TO A DEPTH NOT LESS THAN 6" FROM THE SURFACE. IF REQUIRED TO INCREASE TILTH AND WATER HOLDING CAPACITY, ORGANIC MATTER WILL BE INCORPORATED AT THE TIME OF SURFACE PREPARATION. IF REQUIRED LIME AND FERTILIZER WILL BE APPLIED AS A SIDERAND SIX TO TEN INCHES (6-10") FROM THE CENTERLINE OF THE PLANTING ROWS. THESE MATERIALS WILL BE WORKED INTO THE SOIL USING A DISC OR CHISEL HARROW OR OTHER MORE SPECIALIZED EQUIPMENT. APPLY WOOD CHIPS OR HARDWOOD BARK MULCH IN A 2' MIN. RADIUS AROUND EACH TREE AS SHOWN IN THE DETAIL PROVIDED.
- PLANTING MATERIALS WILL CONSIST OF WHIPSTOCK PLANTED ON 11 X 11 FOOT SPACING. AVERAGE DENSITY OVER THE AFFORESTATION AREA WILL BE 350 TREES/ACRE. HARDWOOD PLANTINGS WILL CONSIST OF A RANDOMIZED MIX OF FOUR MAJOR SPECIES (TULIP POPLAR, SWEET GUM, MIXED OAKS, AND RED MAPLE), AND ONE MINOR SPECIES (FLOWERING DOGWOOD). A TYPICAL PLANTING PLAN IS SHOWN IN PLANT DETAIL 3.



EXPLORATION RESEARCH, INC.
ENVIRONMENTAL CONSULTANTS
8318 FORREST STREET
HISTORIC ELLICOTT CITY, MARYLAND 21043
TEL: (410) 750-1150 FAX:(410) 750-7350

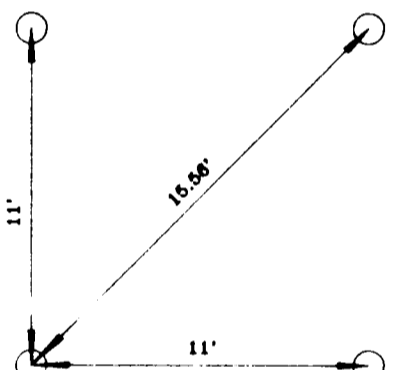
FOREST CONSERVATION NOTES AND DETAILS
HIDDEN VALLEY
LOTS 1 THRU 12 TAX MAP 25 PARCEL 278
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DETAIL 2: ROOT PRUNING



- NOTES:**
- RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS
 - BOUNDARIES OF RETENTION AREAS SHOULD BE STAKED FLAGGED PRIOR TO TRENCHING
 - EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
 - TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR OTHER HIGH ORGANIC SOIL.
 - ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.
- SOURCE: CITY OF GAITHERSBURG, MARYLAND

DETAIL 6: TYPICAL 11' X 11' PLAN VIEW
SCALE: 1" = 4'



FOREST MANAGEMENT NOTES

- PRECONSTRUCTION**
CONDUCT A PRECONSTRUCTION MEETING WITH CONTRACTOR TO ENSURE FOREST PROTECTION MEASURES ARE FOLLOWED.
- DURING CONSTRUCTION**
PROVIDE MAINTENANCE TO TREE PROTECTION DEVICES.
WATER TREES HAVING CRITICAL ROOT ZONE IMPACTS ON A BI-WEEKLY BASIS OR AS NEEDED.
MONITOR CONDITIONS OF REMAINING TREES. I.E. INSECT INFESTATIONS, LEAF DISCOLORATION, EARLY LEAFDROPP, ETC.
- POST CONSTRUCTION TWO (2) YEAR MINIMUM**
INSPECT EXISTING TREES AROUND THE PERIMETER OF DISTURBED LIMITS FOR SIGNS OF ROOT OR TRUNK DAMAGE AND SOIL COMPACTION. *
- EVALUATE REMAINING TREES FOR SIGNS OF STRESS AND CONDUCT APPROPRIATE CULTURAL MANAGEMENT: CROWN REDUCTION, PRUNING, WATERING, SOIL AERATION, FERTILIZING, ETC. REMOVE DEAD OR DYING TREES AND EVALUATE FOR HAZARD TREES. *
- * A LICENSED ARBORIST OR FORESTER SHOULD BE RETAINED FOR THESE SERVICES.

PRESERVATION AREA NOTES

- ALL PROPOSED ACTIVITIES SHALL CONFORM TO THE TERMS, CONDITIONS AND SCHEDULES OF AN APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN.
- SNOW FENCING, [TYPICAL SECTION SHOWN IN PLAN DETAIL 1] SHALL BE INSTALLED ALONG ALL TREE SAVE AREAS THAT ARE WITHIN FIFTY FEET (50') OF PROPOSED CONSTRUCTION ACTIVITIES. THE TREE PROTECTIVE DEVICES SHALL BE IN PLACE AT THE TIME CONSTRUCTION ACTIVITIES COMMENCE. NO PROTECTIVE DEVICES SHALL BE INSTALLED ALONG TREE SAVE AREAS THAT ARE GREATER THAN FIFTY (50') FEET FROM CONSTRUCTION ACTIVITY. THE LOCATION OF ALL TREE PROTECTIVE DEVICES ARE SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN DRAWINGS WHICH WILL BE INCORPORATED INTO THIS TREE CONSERVATION PLAN BY REFERENCE.

DETAIL 3: TYPICAL RANDOMIZED PLANTING PLAN

| ROW | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1 | M | S | T | O | S | M | S | T | O | T | M | T | | | | | | | | |
| 2 | T | D | O | S | T | M | O | D | O | T | S | | | | | | | | | |
| 3 | O | S | D | S | M | T | S | T | O | D | S | | | | | | | | | |
| 4 | T | M | M | S | O | D | D | O | T | S | M | M | | | | | | | | |
| 5 | O | S | O | O | T | O | D | M | O | S | S | T | | | | | | | | |
| 6 | M | O | D | S | M | T | S | M | O | O | M | S | | | | | | | | |
| 7 | T | D | M | M | S | M | O | O | T | T | D | M | | | | | | | | |
| 8 | T | M | M | T | O | T | S | M | T | O | M | T | | | | | | | | |

| | | |
|-------|-------------------|---|
| 22.0% | MIXED OAKS | O |
| 22.0% | SWEET GUM | S |
| 22.0% | TULIP POPLAR | T |
| 22.0% | RED MAPLE | M |
| 10.0% | FLOWERING DOGWOOD | D |

MIXED OAKS WILL CONSIST OF A MINIMUM OF (2) OF THE FOLLOWING: SOUTHERN OR NORTHERN RED, CHESTNUT, BLACK, WHITE, OR SCARLET
ALL TREES TO BE CONTAINERIZED WHIPS 3-4 FEET HEIGHT

PLANTING METHODOLOGY NOTES

- STOCK WILL BE HAND-PLANTED. TYPICAL PLANTING DETAILS FOR PLANTING IS SHOWN IN PLANTING DETAIL 4.
- HOLE SHALL BE DEEP ENOUGH TO PLACE PLANTS WITHOUT RE-CURVING THE ROOT SYSTEM (J-ROOTING) BUT SHALLOW ENOUGH THAT THE SOIL SURFACE IS JUST ABOVE THE PLANT ROOT COLLAR.
- SEED OR SEED FERTILIZER-MULCH MIXTURES WILL BE SPREAD BY THE MOST EFFICIENT AND PRACTICAL MANNER AVAILABLE. ALL SEED REQUIRING PRE-TREATMENT WILL BE THOROUGHLY PREPARED ACCORDING TO THE INSTRUCTIONS OF THE SUPPLIER PRIOR TO INCORPORATION INTO THE SEEDING MIXTURE. ALL SEEDING WITH GRASS OR GRASS-FORB MIXTURES SHALL LEAVE A MULCHED, UNSEEDING AREA OF NO LESS THAN TWO FEET ADJACENT TO ALL TREE PLANTINGS.
- MULCH MAY BE APPLIED BY HAND OR BY SUITABLE EQUIPMENT.
- GRASS-FORB SEEDING MIXTURE FOR HERBACEOUS STRIPS IS INCLUDED IN DETAIL 5.

MONITORING PLAN NOTES

- MONTHLY VISITS DURING THE FIRST GROWING SEASON (YEAR 1) ARE TO ASSESS THE SUCCESS OF THE PLANTINGS AND TO DETERMINE IF SUPPLEMENTAL WATERING OR OTHER ACTIONS ARE NECESSARY. EARLY SPRING VISITS WILL DETERMINE WINTER KILL AND AUTUMN VISITS WILL DETERMINE SUMMER KILL.
- STOCK SURVIVAL IS ESTIMATED TO BE 250 TREES PER ACRE AFTER TWO YEARS. IF SURVIVAL FALLS BELOW 250 TREES PER ACRE, AREAS WILL BE REPLANTED TO MEET AN AVERAGE DENSITY OF 250 TREES PER ACRE OVER THE ENTIRE AFFORESTATION AREA.
- SURVIVAL WILL BE DETERMINED BY A STRATIFIED RANDOM SAMPLING OF THE PLANTINGS. SAMPLE LOCATIONS WILL BE CHOSEN PRIOR TO PLANTING. THE SPECIES COMPOSITION OF THE SAMPLE POPULATION SHOULD BE PROPORTIONATE TO THE AMOUNT OF EACH SPECIES IN THE ENTIRE PLANTING TO BE SAMPLED.

COUNTY SIGNATURE BLOCK

Approved: Department of Planning and Zoning
Gina Swinney 6/16/94
Date

Approved: Department of Public Works
Elizabeth Anderson Calia 4/13/94
Date

Approved: Howard County Department of Public Works
Charles M. ... 6/13/94
Date

Approved: Howard County Department of Public Works
Charles M. ... 6-8-94
Date

DRAWN BY: M.J. FLOAM
DESIGNED BY: M.J. FLOAM
CHECKED BY: G.M.J./S.L.H.

SCALE: N.T.S.
DATE: JANUARY 1993
SHEET 5 OF 5

3/13/94 REVISION PER COUNTY COMMENTS