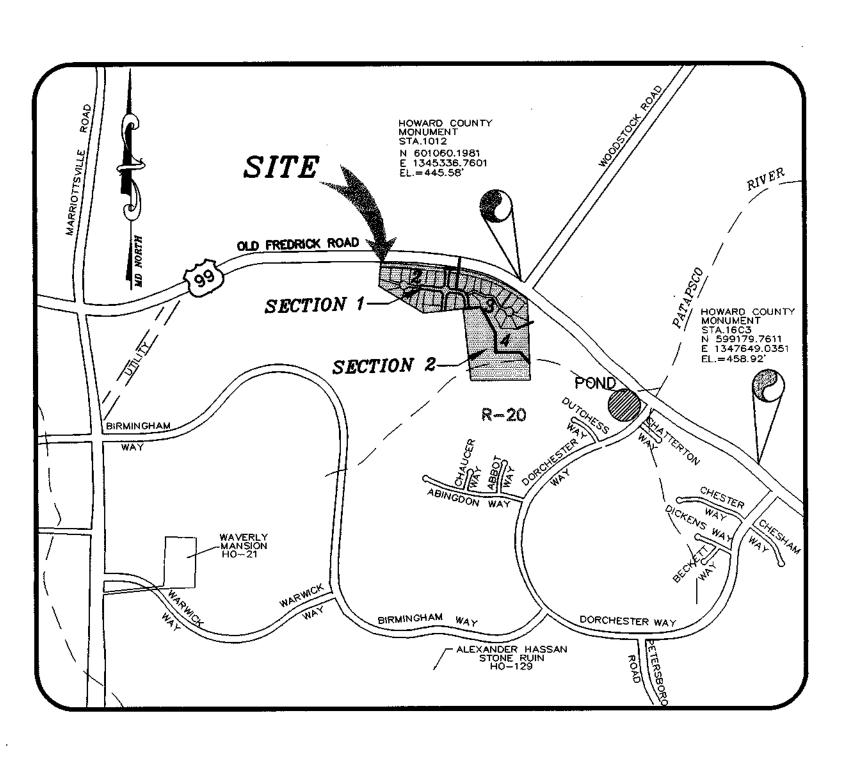
ROAD CONSTRUCTION PLANS TAYLOR FARM, SECTION ONE

SHEET INDEX COVER SHEET ROAD PLANS AND PROFILES ROAD PLANS AND PROFILES ROAD PROFILES GRADING , EROSION AND SEDIMENT CONTROL PLAN GRADING , EROSION AND SEDIMENT CONTROL PLAN EROSION & SEDIMENT CONTROL NOTES AND DETAILS STORM DRAIN PROFILES DRAINAGE AREA & SOILS MAP 10 LANDSCAPE PLAN 11 LANDSCAPE PLAN 12 FOREST CONSERVATION AND REFORESTATION PLAN 13 TRAFFIC CONTROL & PAVING PLAN

LOTS 1 THRU 33 AND BULK PARCEL "A" A RESUBDIVISION OF LOT 4 FRIENDLY FARMS LOTS 2, 3, AND THIRD ELECTION DISTRICT

HOWARD COUNTY, MARYLAND



BY THE DEVELOPER: "I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION "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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. R. TACOB HIKMAT THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL THIS DEVELOPMENT PLAN IS APPROVED CHIEF, DIVISION OF LAND DEVELOPMENT #8



OWNER

TAYLOR FARM DEVELOPMENT CORP C/O LAND DESIGN AND DEVELOPMENT RICHARD W. DOYLE, SR., PRESIDENT 10805 HICKORY RIDGE ROAD COLUMBIA, MARYLAND 21044 (410) 740-2100

SCALE: 1'=1000'

GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS
- 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR
- 3. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

1-800-257-7777 C&P TELEPHONE COMPANY (410) 725-9976 (410) 313-4900 HOWARD COUNTY BUREAU OF UTILITIES AT&T CABLE LOCATION DIVISION (410) 393-3533 (410) 685-0123 BALTIMORE GAS & ELECTRIC STATE HIGHWAY ADMINISTRATION (410) 531-5533 HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION (410) 313-1880

4. PROJECT BACKGROUND:
LOCATION: THIRD ELECTION DISTRICT - TAX MAP 10 - PARCELS 309

TOTAL TRACT AREA (EXCLUDING BULK PARCEL "A"): 16.88 ACRES ± NUMBER OF PROPOSED LOTS: 33 (30 BUILDABLE) ACREAGE OF PROPOSED LOTS: 10.57 ACRES ± (BUILDABLE) OPEN SPACE REQUIRED: 5.06 ACRES ± (30%) OPEN SPACE PROVIDED: 5.21 ACRES ± RECREATIONAL OPEN SPACE REQUIRED (30 UNITS X 200 SQ. FT.) : 6,000 SQ. FT. (0.14 ACRES) RECREATIONAL OPEN SPACE PROVIDED: 6,500 SQ. FT. (.15 ACRES) AREA OF RIGHT OF WAY: 1.11 ACRES± DPZ REFERENCE #:

- S-95-21 APPROVED ON JULY 17, 1995. F-86-14, F-89-235, F-95-174
- 5. TWO FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL TOPOGRAPHY BY WINGS AERIAL MAPPING CO., INC. ON MARCH 12, 1997
- 6. HORIZONTAL AND VERTICAL DATUMS BASED ON (NAD'83) MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.

E 1,347,649.0351 STA No. 1012 N 601,060.1981 EL.= 445.58 E 1,345,336.7601

- 7. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNÉ 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- 8. WATER AND SEWER ARE PUBLIC.
- 9. STORMWATER MANAGEMENT IS PROVIDED BY THE METHOD OF RETENTION UNDER F-95-174. (GTW'S WAVERLY)
- 10. 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.
- 11. COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- 12. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING
- 13. FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.200 OF HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING. GRADING. OF CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OR CONSERVATION EASEMENT ARE ALLOWED.
- 14. FOREST CONSERVATION REQUIREMENTS HAVE BEEN SATISFIED IN PART BY THE PAYMENT OF FEE-IN-LIEU OF FOREST CONSERVATION IN THE AMOUNT OF \$ 44,300.52
- 15. WETLAND DELINEATION PERFORMED BY WILDMAN ENVIRONMENTAL ON APRIL 14, 1998.
- 16. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- 17. OPEN SPACE LOTS WILL BE CONVEYED TO THE HOME OWNER'S ASSOCIATION AND HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
- 18. SLOPES IN EXCESS OF 25% EXIST AND ARE IDENTIFIED WHERE THEY EXCEED 20,000 SQ. FT.
- 19. ALL EXISTING STRUCTURES TO BE REMOVED.
- 20. FLOODPLAIN STUDY PERFORMED BY MILDENBERG, BOENDER AND ASSOC. IN JUNE 1997.
- 21. ACCESS TO ADJACENT PROPERTY TO BE MAINTAINED IN SATISFACTING CONDITIONS THROUGHOUT THE CONSTRUCTION PROCESS.

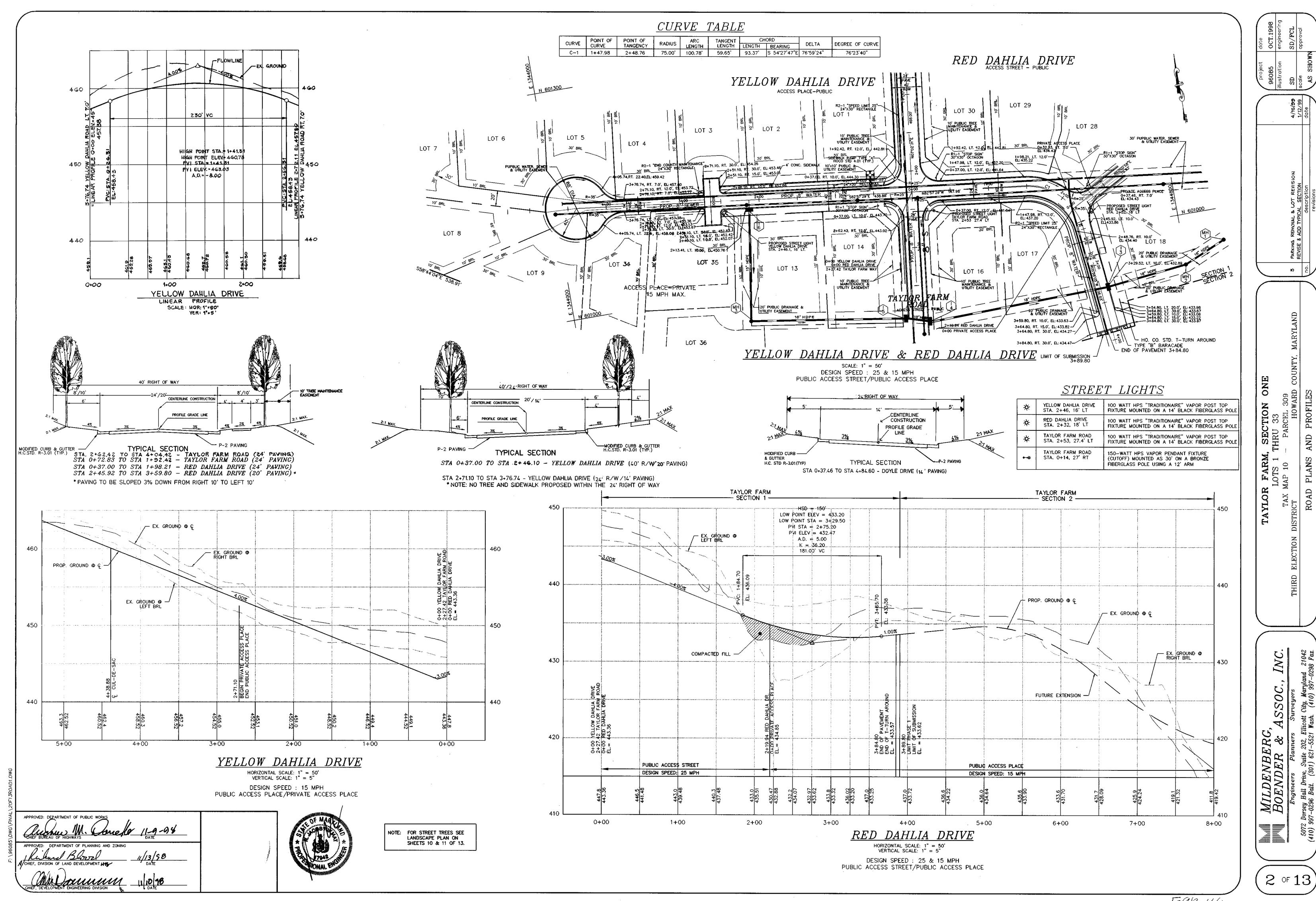
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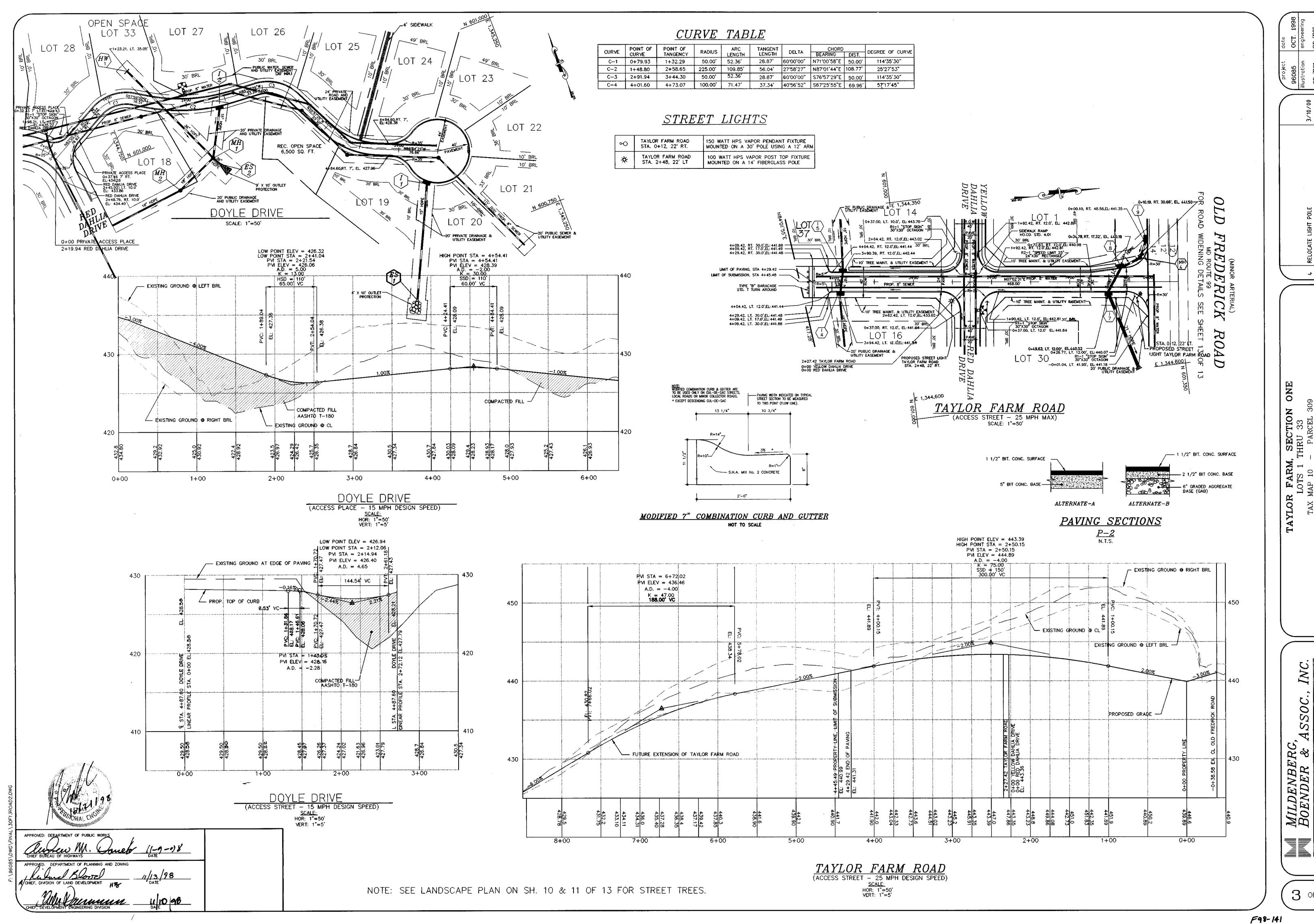
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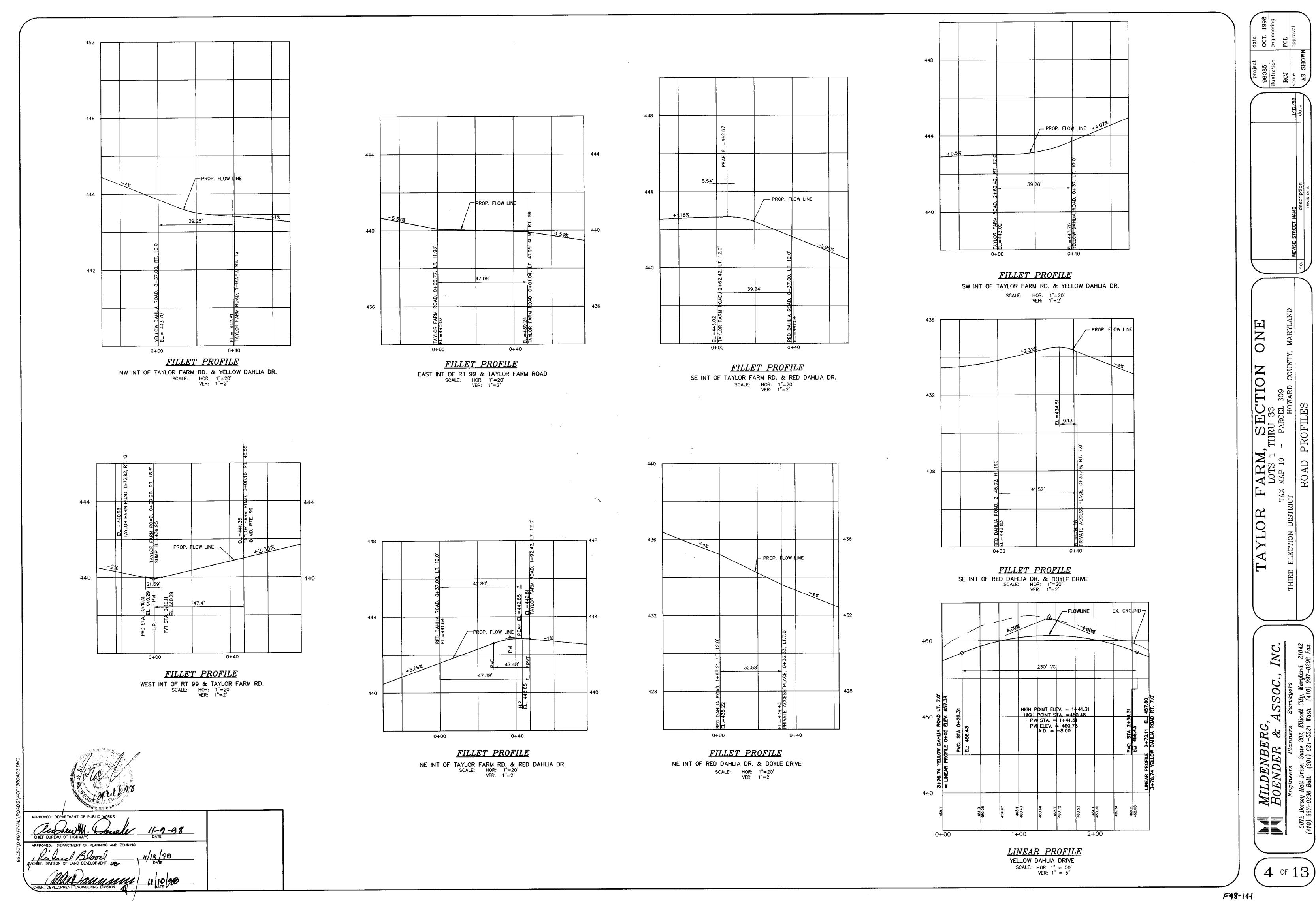




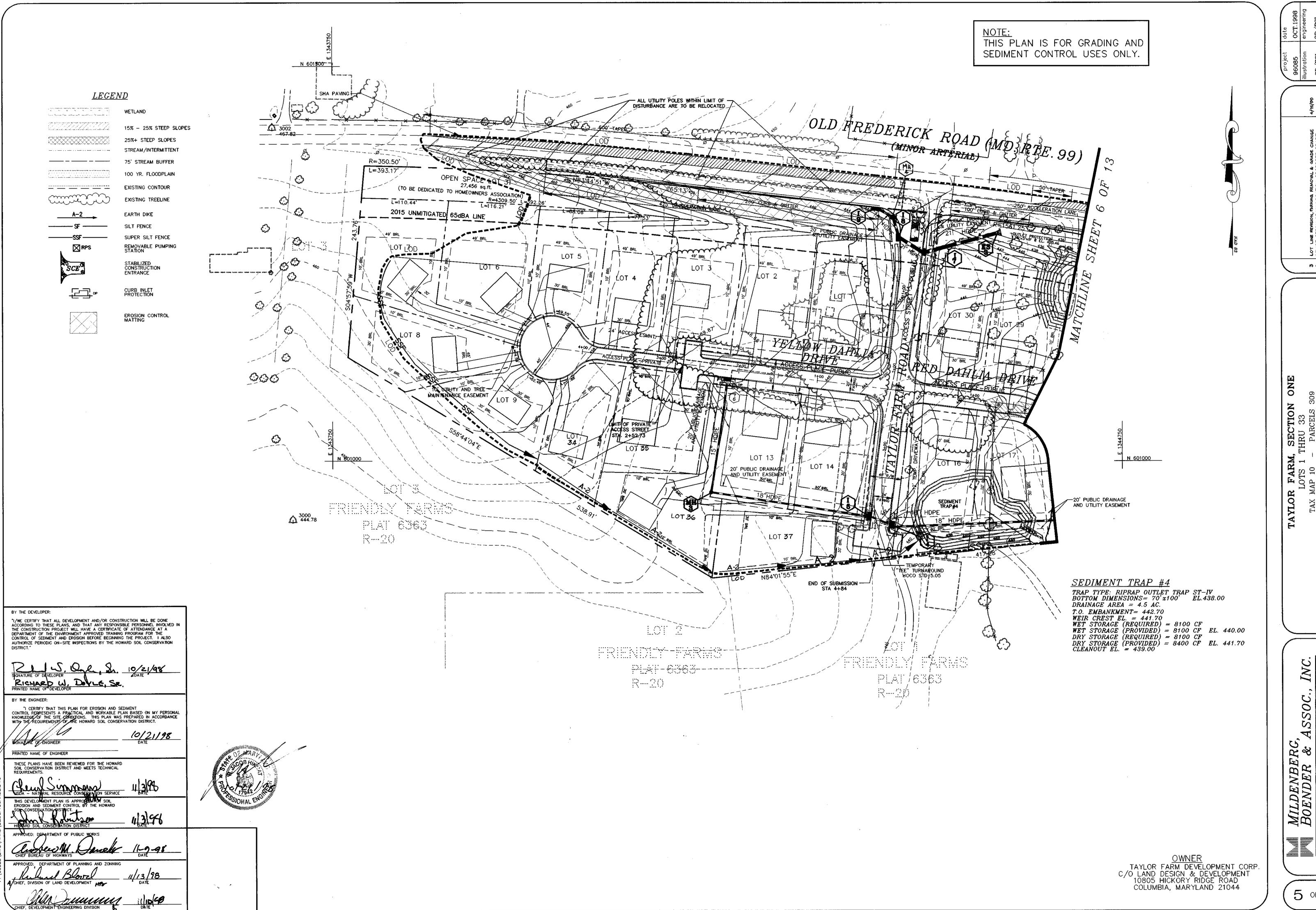
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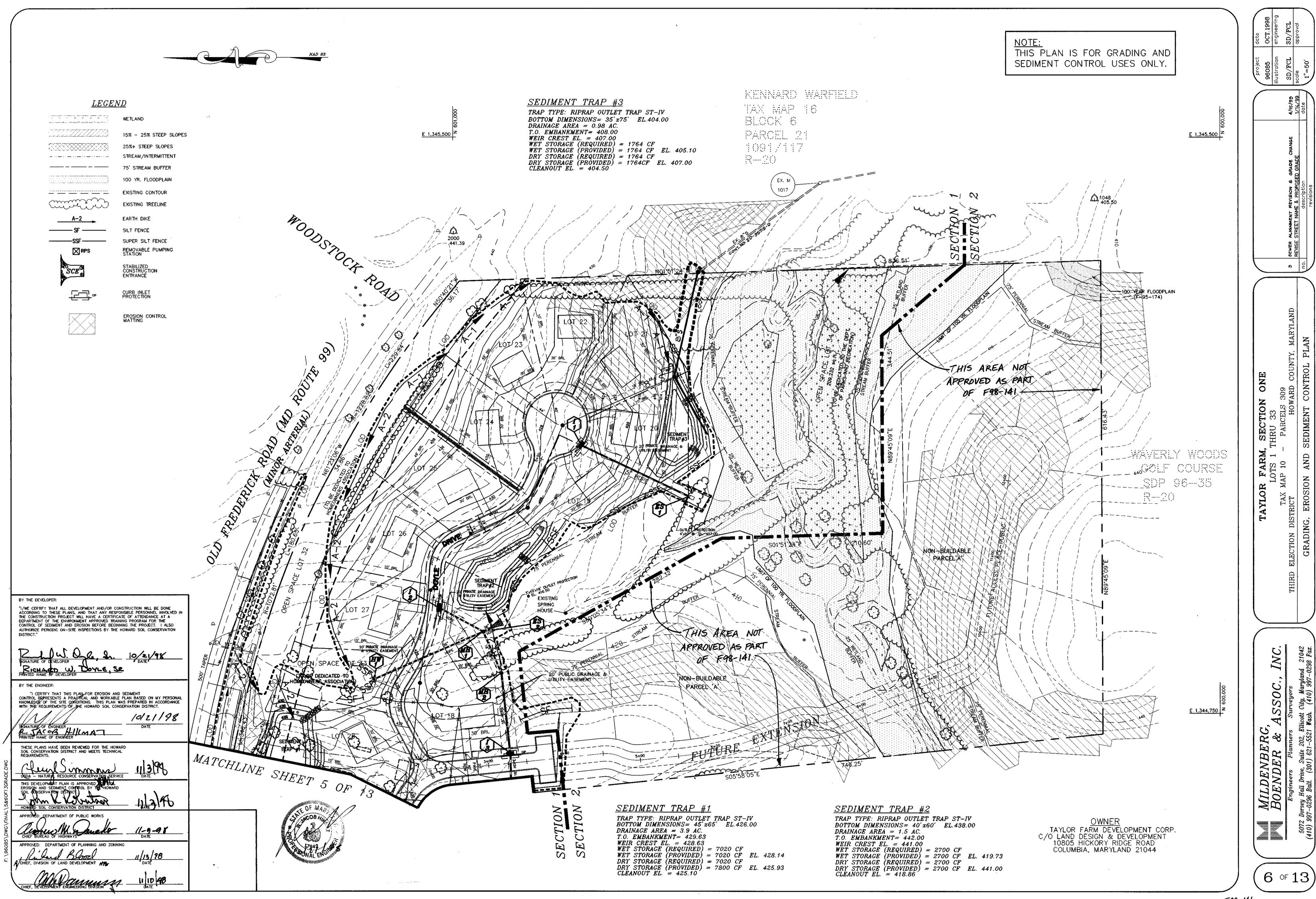
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GRADING,



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AND

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ECTION DIST GRADING,

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: 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 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.). 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 FÉSCUE 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

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 APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED 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.

GEOTECHNICAL RECOMMENDATIONS

- 1. WEATHERED ROCK MATERIALS WERE ENCOUNTERED IN SEVERAL BORINGS. IT IS LIKELY THAT THIS MATERIAL ABOVE 11 FEET CAN BE RIPPED. BLASTING IS NOT RECOMMENDED TO EXCAVATE ROCK IN SWM PONDS.
- 2. CONSTRUCTION DEWATERING SHOULD BE IMPLEMENTED TO FACILITATE EXCAVATION OF POND BOTTOMS
- 3. WHEN DRAINING EXISTING POND, EXCAVATE POND BOTTOM TO STABLE MATERIAL. IF EXISTING FILLS ARE ENCOUNTERED IN THIS AREA, THEY SHOULD BE CAREFULLY REVIEWED TO IDENTIFY AND REMOVE EXISTING FILLS PLACED DURING EMBANKMENT CONSTRUCTION.
- 4. FILLS FOR CUTOFF TRENCH AND EMBANKMENT CONSTRUCTION SHOULD BE CONSTRUCTED IN EIGHT INCH AND COMPACTED TO 95%, ASTM D-698.
- 5. FILLS AROUND OUTFALL WORKS; THE OUTFALL PIPE AND ANTI-SEEP COLLARS SHOULD BE PLACED IN 4-INCH LIFTS AND COMPACTED TO THE SAME STANDARD WITH HAND EQUIPMENT.
- REFER TO GEOTECHNICAL REPORT FOR FURTHER RECOMMENDATIONS AND INFORMATION.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

- CONDITIONS WHERE PRACTICE APPLIES 1. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE
- b. The soil material is so shallow that the rooting zone is not deep enough to support plants OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

| <u></u> | | |
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| | BY THE DEVELOPER: | |
| | "I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTR ACCORDING TO THESE PLANS, AND THAT ANY RESPONSI THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOW DISTRICT." | BLE PERSONNEL INVOLVED IN OF ATTENDANCE AT A PROGRAM FOR THE THE PROJECT. I ALSO |
| | SIGNATURE OF DEVELOPER PRINTED NAME OF DEVELOPER | 10/21/98 |
| Г | BY THE ENGINEER: | |
| | "I CERTIFY THAT THIS PLAN FOR EROSION AND SE CONTROL REPRESENTS A PRACTICAL AND WORKABLE PL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSER | AN BASED ON MY PERSONAL PREPARED IN ACCORDANCE VATION DISTRICT. |
| ļ | N/N/// | 10/2/198 |
| \mathbb{Z} | SIGNATURE OF ENGINEER PRINTED NAME OF ENGINEER | DATE |
| | THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. | |
| _ | USBA - NATURAL RESOURCE CONSERVATION, SERVICE | 11/3/98 |
| | THIS DEVELOPMENT PLAN IS APPROVED TO SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT | 113/98 |
| | APPROVED: DEPARTMENT OF PUBLIC WORKS | |
| | CHIEF BUREAU OF HIGHWAYS | 11-11-18 DATE |
| | APPROVED: DEPARTMENT OF PLANNING AND ZONNING | 11/13/98 |
| 11 | CHIEF, DIVISION OF LAND DEVELOPMENT | DATE * |
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CONSTRUCTION AND MATERIAL SPECIFICATIONS

TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATION. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

- TOPSOIL SPECIFICATIONS SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING: TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
- ii. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSON-SON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING
- III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 YEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - a. PH FOR TOPSOILS SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 - b. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED. d. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL

ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN <u>20.0 VEGETATIVE</u> STABILIZATION — SECTION I — VEGETATIVE STABILIZATION METHODS AND MATERIALS.

- WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
- iii. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
- VI. ALTERNATIVE FOR PERMANENT SEEDING INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW: COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITES HAVING AREAS UNDER 5
 - ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS: a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE

iv. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000

- ENVIRONMENT UNDER COMAR 26.04.06. b. COMPOSTED SLUDGE SHALL CONTAIN AT LEASE 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOURUS, AND 0.2 PERCENT POTASSIUM AND HAVE A Ph OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS,
- THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE. c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

HOWARD SOIL CONSERVATION DISTRICT <u>STANDARD SEDIMENT CONTROL NOTES</u>

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).

SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

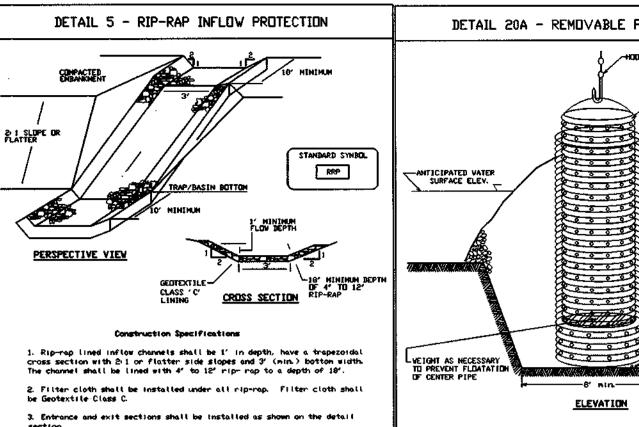
- 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND REVISIONS THERETO.
- 3) FOLLOWING INITIAL SOIL DISTURBANCE OR 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.
- 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. 34), 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
- 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: ACRES AREA DISTURBED: AREA TO BE ROOFED OR PAVED AREA TO BE VEGITATIVELY STABILIZED 6.7 TOTAL CUT TOTAL FILL

GERMINATION AND ESTABLISHMENT OF GRASSES.

- 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
- 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.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (1 DAY)
 CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE. (1 DAY)
- CONSTRUCT SUPER SILT FENCE, TREE PROTECTIVE FENCES AND EARTH DIKES. (3 DAYS) CONSTRUCT SEDIMENT TRAPS. (3 DAYS)
- CONSTRUCT TEMPORARY DRIVEWAY TO SERVE EXISTING LOT 1 OF FRIENDLY FARMS
- WITH 6" GRAVEL W/TAR CHIP OR EQUIVALENT. (5 DAYS)
 INSTALL EROSION CONTROL MATTING ALONG THE EARTH DIKE, SWALE BETWEEN ES-2 & HW-1 AND WHERE SHOWN ON THE PLAN. (3 DAYS) INSTALL THE PROPOSED STROM DRAINS FROM ES-2 TO HW-1. (5 DAYS)
- CONTRUCT PROPOSED STORM DRAINS AND THE OUTLET PROTECTIONS. (15 DAYS)
- INSTALL INLET PROTECTIONS. (1 DAY)
- ANY SEDIMENT CONTROL DEVICES DISTURBED BY THE INSTALLATION OF UTILITIES ARE TO BE REPAIRED IMMEDIATELY.
- PROVIDE TREE PROTECTIVE FENCING AS INDICATED AROUND REFORESTATION AREAS. INSTALL PLANT MATERIAL IN REFORESTATION AREAS AS SPECIFIED. (3 DAYS) CONSTRUCT AND PAVE THE ROAD. (20 DAYS)
- REMOVE THE TEMPORARY DRIVEWAY. (5 DAYS) 15. UPON STABIZATION OF THE SITE AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS. (5 DAYS)



4. Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a storweater management facility. 5. Gabian Inflow Protection may be used in tieu of Rip-rap Inflow

6. Rip-rap should blend into existing ground. 7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale

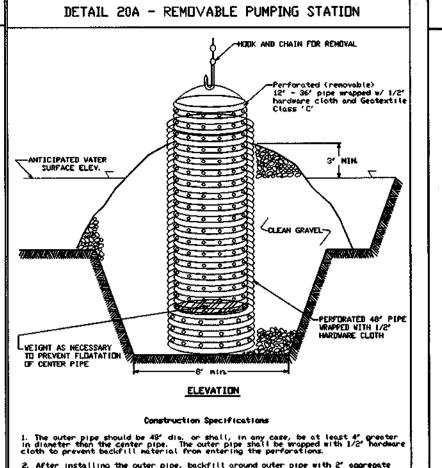
1. Filter cloth shall be embedded a minimum of 8° into the ground.

. When two sections of filter cloth adjoin each other, they shall be overlapped

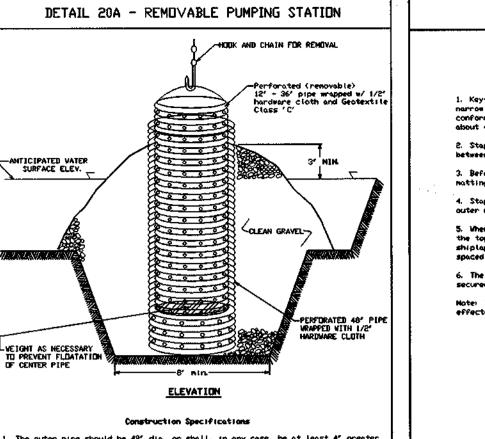
6. Naintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height

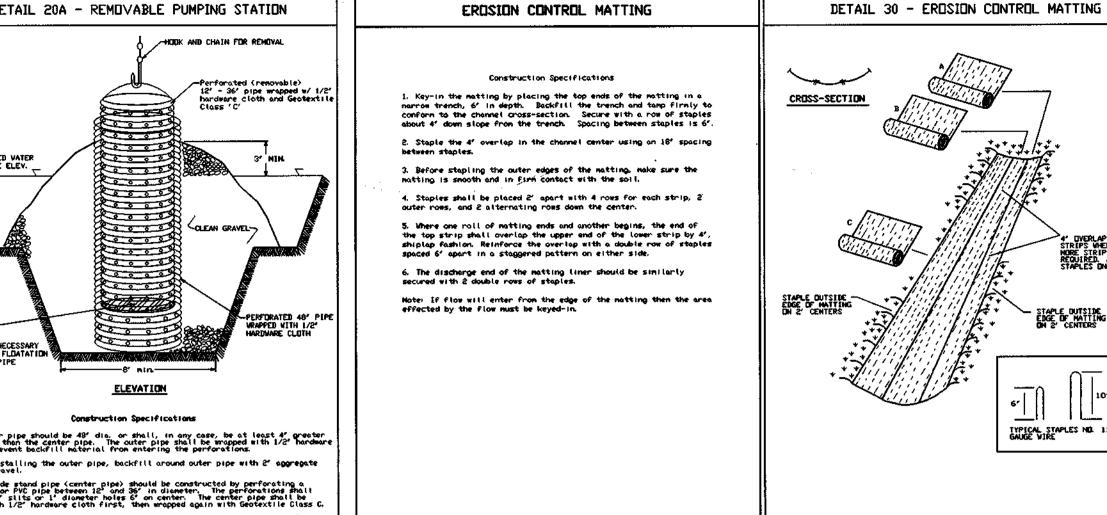
D. 3 gal/ft*/minute (max.)

7. Filter cloth shall be fastened securely to each fence post with wire ties or



2. After installing the outer pipe, backfill around outer pipe with 2' aggregate or clean gravel. 3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12° and 36° in diameter. The perforations shall be 1/2° X 6° stits or 1' diameter holes 6° on center. The center pipe shall be wrapped with 1/2° hardware cloth first, then wrapped again with Geotextile Class C The center pipe should extend 12' to 18' above the anticipated water surface plevation or riser crest elevation when dewatering a ba*in.

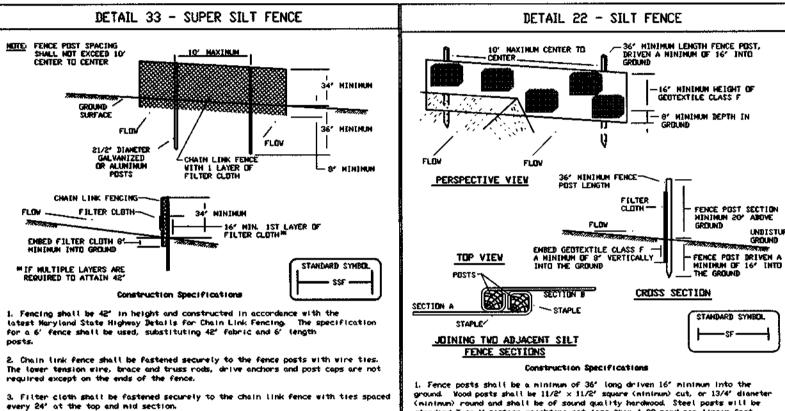




STONE RIP-RAP DUTLET SEDIMENT TRAP - ST IV

vegetation and root mat. The pool area shall be cleared.

2. The fill material for the embanisment shall be free of roots or other woody regetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall



1. Fence posts shall be a minimum of 36' long driven 16' minimum into the ground. Wood posts shall be $11/2^{\circ} \times 11/2^{\circ}$ square (minimum) cut, or 13/4' diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be 2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements 50 tbs/in (min.)

Tensite Modulus 20 lbs/in (min.) Test MSNT 50
Flow Rate 0.3 gal ft*/ ninute (max.) Test MSNT 32
Filtening Efficiency 75% (nin.) Test MSNT 32 Test: HSMT 322 3. Where ends of geotextile fabric came together, they shall be overlapped, 4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SIIL CONSERVATION SERVICE

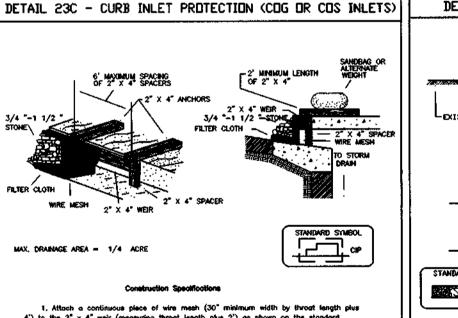
3. All out and fill slopes shall be 2:1 or flatter. 4. Elevation of the top of any dike directing water into trap must equal or Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 9). channelprior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at 7. 4" - 7" stone shall be used to construct the weir and 4" - 12" or Class 8. Outlet - An outlet shall include a means of conveying the discharge in on erosion free monner to an existing stable channel. Protection against soour at the discharge point shall be provided as necessary. 9. Outlet channel must have positive drainage from the trop. 10. Sediment shall be removed and trop restored to its original dimensions when the sediment has accumulated to 1/2 of the wet storage depth of the trop (900 cf/ac). Removed sediment shall be deposited in a such a manner that it will not erade. 11. The structure shall be inspected periodically after each rain and repaired 12. Construction of traps shall be carried out in such a manner that sediment pollution is aboutd. Once constructed, the top and autiside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and mulchurined

erosion free during the life of the trop. 13. The structure shall be dewatered by approved methods, removed and the U.S. DEPARTMENT OF AGRICULTURE PAGE WAYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE PAGE WAYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE C - 9 - 16. VATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE C - 9 - 16. VATER MANAGEMENT ADMINISTRATION

PERSPECTIVE VIEW 2:1MAX. 4' MIN. WIDTH — GEOTEXTILE CLASS C SECTION A-A

STONE RIP-RAP OUTLET SEDIMENT TRAP - ST IV

TOP OF EMBANKMEN



4') to the 2" \times 4" weir (measuring throat length plus 2') as shown on the standard 2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" \times 4" well. 3. Securely noil the 2" \times 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart). 4. Place the assembly against the inlet throat and noil (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight. 5. The assembly shall be placed so that the end spacers are a minimum 1' beyond

6. Form the 1/2 " \times 1/2 " wire mesh and the geotextile fabric to the concrete gutter and points the face of the curb on both sides of the injet. Place clean 3/4 " \times 1 1/2stone over the wire mesh and geotectible in such a manner to prevent water from entering the inlet under or around the geotectible. 7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment. 8. Assure that storm flow does not bypass the inlet by installing a temporary

U.S. DEPARTMENT OF AGRICULTURE PAGE WARYLAND DEPARTMENT OF EN-SOB. CONSERVATION SERVICE E - 16 - 58 WATER MANAGEMENT ADMINIS

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE EXISTING PAVENENT PIPE AS NECESSARY UR GEOTEXTILE CLASS 'C' MINIMUM 6' OF 2'-3' AGGREGATE OVER LENGTH AND WIDTH OF STRUCTURE PROFILE SCE . Length - minimum of 50' (#30' for single residence lot). 2. Width - 10' minimum, should be flared at the existing road to provide a turning

3. Geotextile fabric (fitter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family 4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface Mater - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a nountable bern with 5 i slopes and a minimum of 6° of stane over the pipe. Pipe has no be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6° minimum will be required. 6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance. U.S. REPARTMENT OF AGRICULTURE PAGE MARYLANG DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE F - 17 - 3 VATER MANAGEMENT ADMINISTRATION

DETAIL 1 - EARTH DIKE b 2:1 SLOPE OR FLATTER a-DIKE HEIGHT 18" D-DIKE WIDTH c-FLOW WIDTH d-FLOW DEPTH PLAN VIEW A-2 B-3 _ · _ /_ · _ 1. Seed and cover with straw mulch, 2. Seed and cover with Erasian Control Matting or line with sod. 3, $4^{\circ} = 7^{\circ}$ stone or recycled concrete equivalent pressed into Construction Specification 1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%. 2. Runoff diverted from a disturbed area shall be conveyed to a sediment 3. Runoff diverted from an undisturbed area shall outlet directly into an indisturbed, stabilized area at a non-erosive velocity. 4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

The dike shall be excovated or shoped to line, grade and cross section as required to meet the criterio specified herein and be free of bank projections or other irregularities which will impede normal flow.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

U.S. DEPARTMENT OF AGRICULTURE PAGE WARYLAND DEPARTMENT OF ENVIRONMENT SUBL CONSERVATION SERVICE A -1 - 6 WATER MANAGEMENT ADMINISTRATION

8. Inspection and maintenance must be provided periodically and after

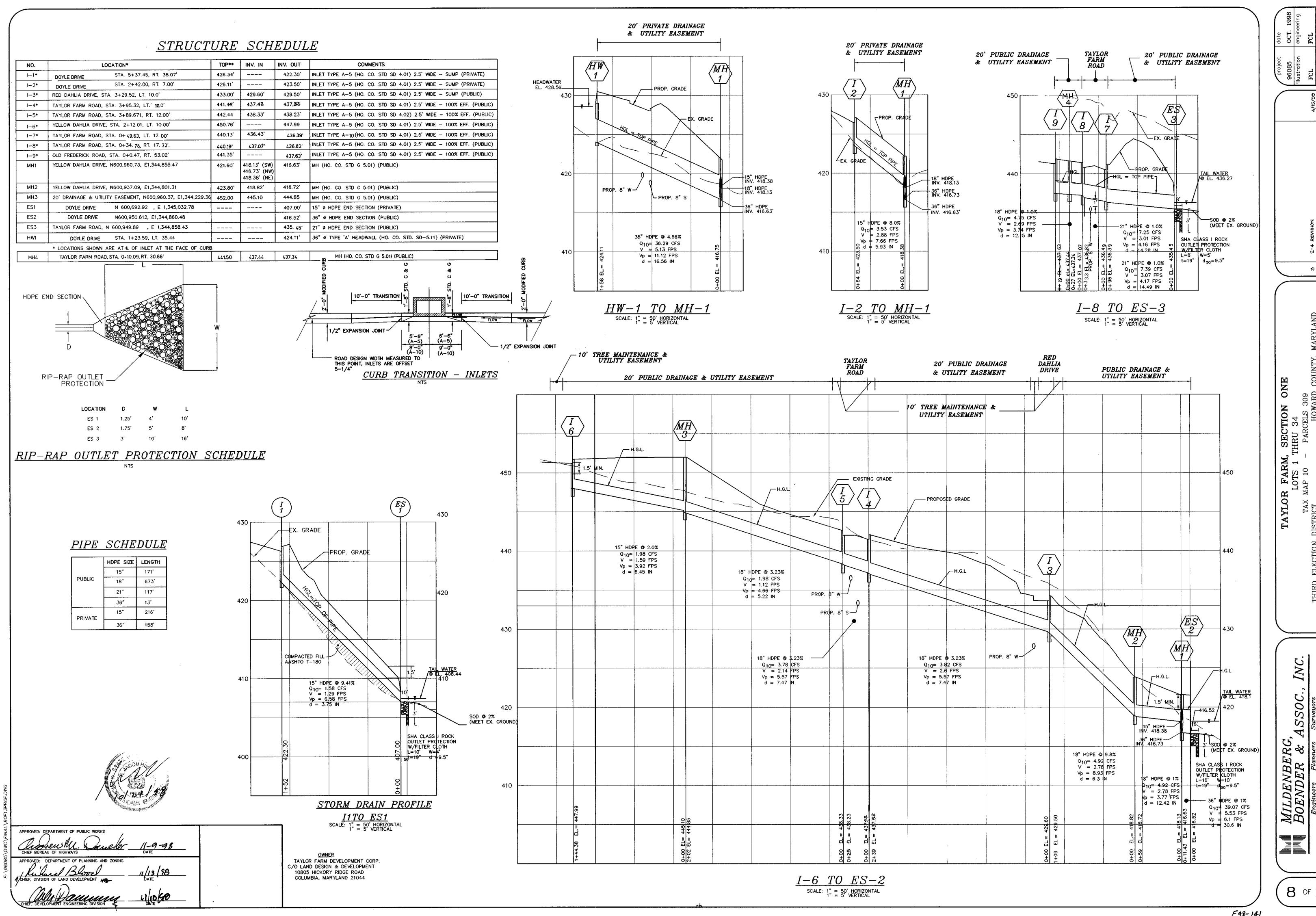
OWNER

TAYLOR FARM DEVELOPMENT CORP C/O LAND DESIGN AND DEVELOPMENT DON REUWER, PRESIDENT 10805 HICKORY RIDGE ROAD COLUMBIA, MARYLAND 21044 (410) 740-2100

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MILDENBERG, BOENDER & 1



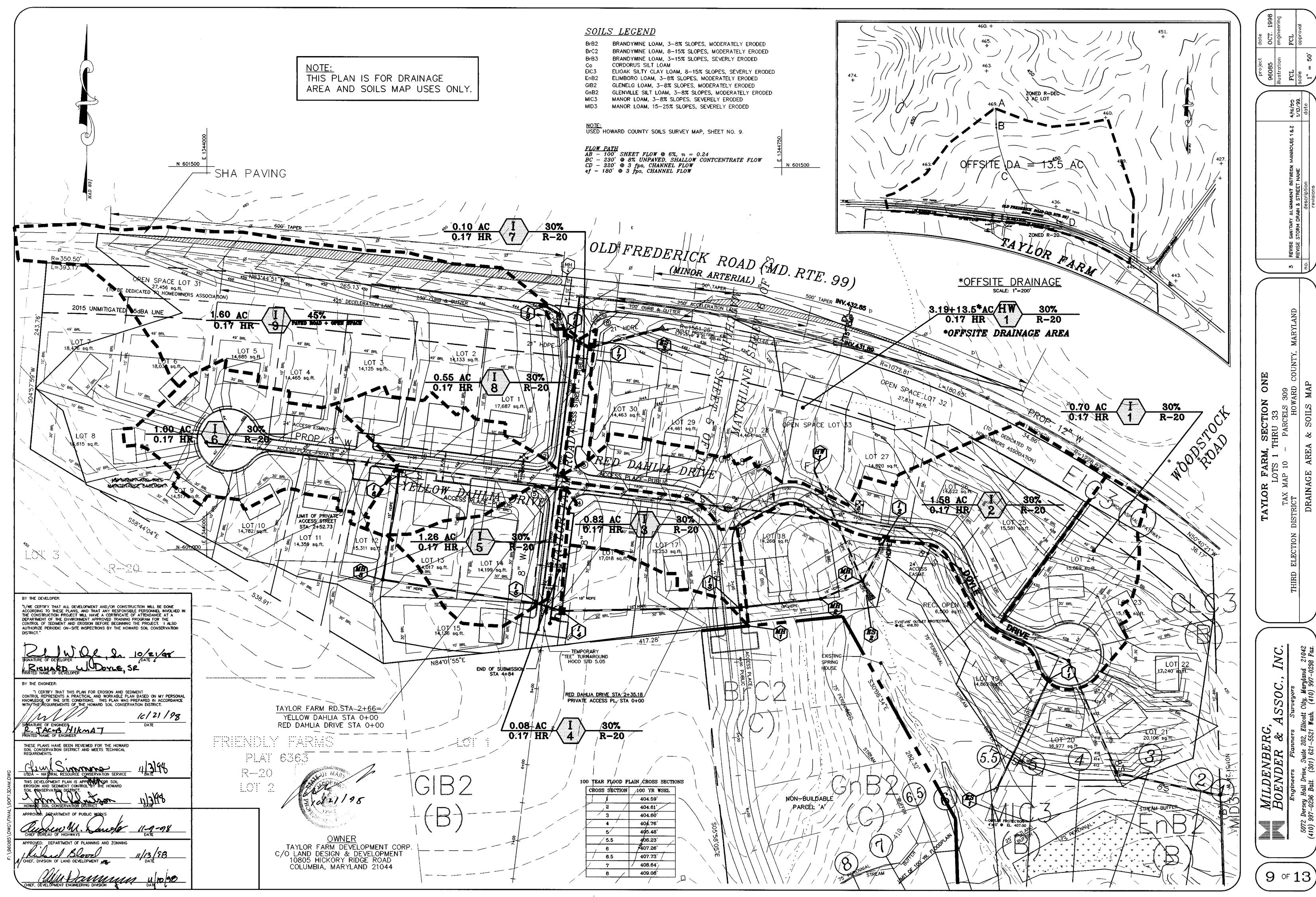
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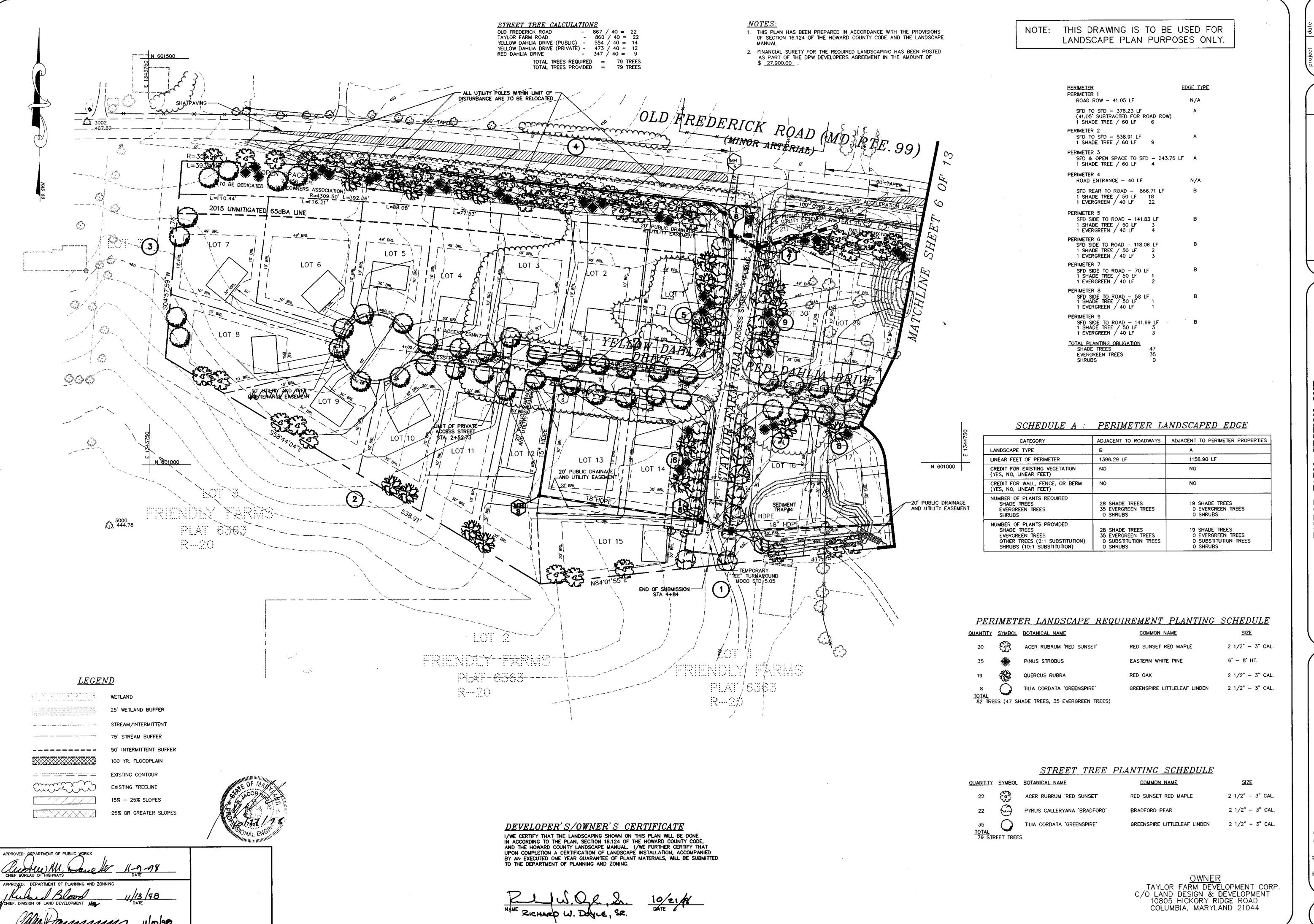
INC.

PROFILES

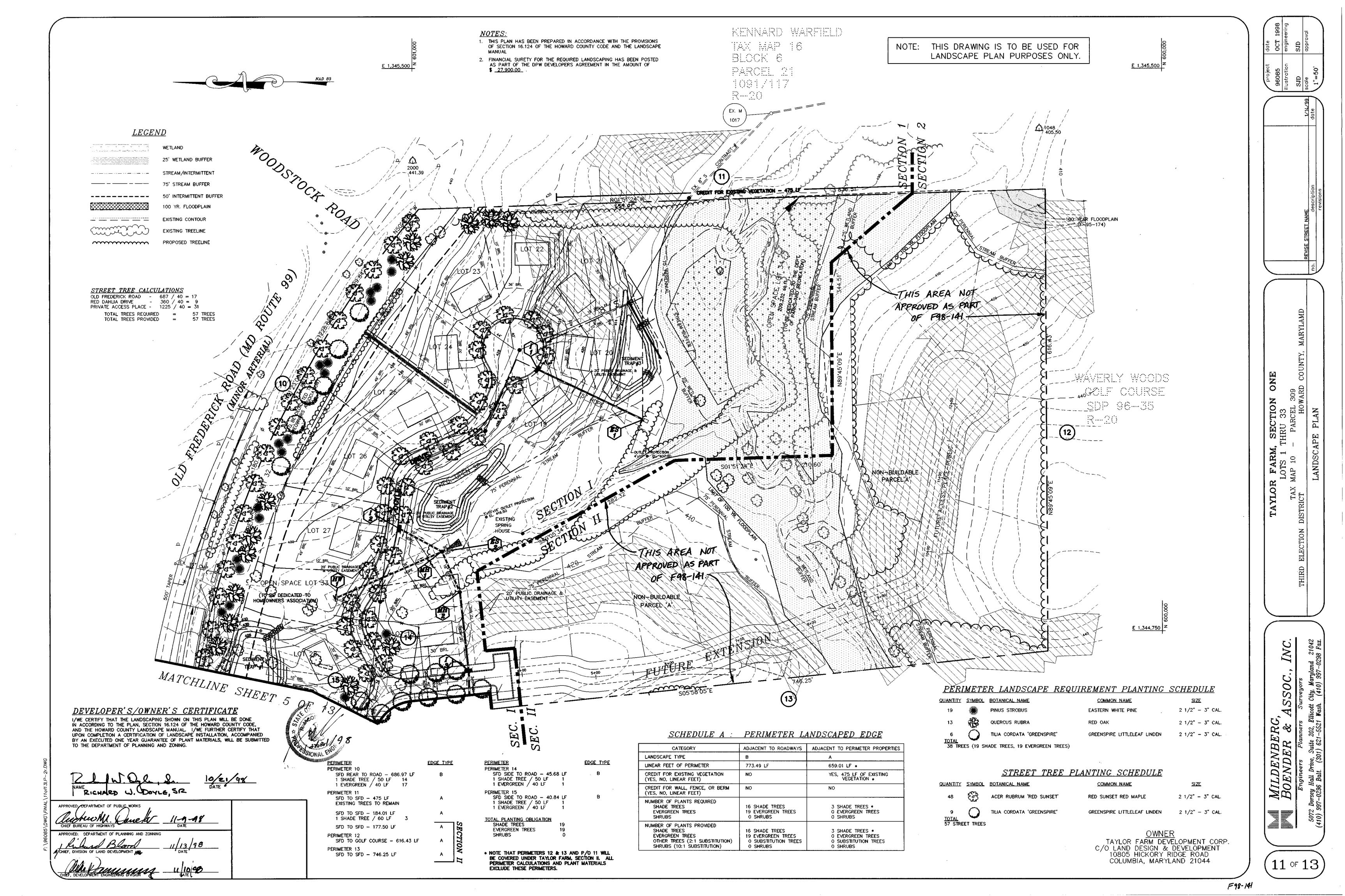
DRAIN

STORM





SSOC.



NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.

- FEE-IN-LIEU OF REFORESTATION HAS BEEN REQUESTED FOR THE REMAINING AREA REQUIRED TO BE REFORESTED BY THE HOWARD COUNTY FOREST CONSERVATION MANUAL, SEE FOREST CONSERVATION CALCULATIONS THIS SHEET. (6.91 ACRES OF REFORESTATION IS REQUIRED. 3.52 ACRES OF REFORESTATION HAS BEEN SHOWN ON-SITE THE REMAINING 3.39 ACRES WILL BE A PART OF THE FEE-IN-LIEU REQUEST.)

GENERAL NOTES FOREST PROTECTION

- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY AT THE TIME OF INSTALLATION OF THE SILT FENCE. THIS SHALL BE DONE PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES. ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- 4. ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS. INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DEWATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND
- DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES. THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION
- THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE: TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION
 - AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS: INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES; MAKE ALL NECESSARY ADJUSTMENTS: ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS

CONSTRUCTION MONITORING

THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST. THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE

SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

APPROVED: DEPARTMENT OF PUBLIC WORKS

1 Blood

CENT COMENT ENGINEERING DIVISION

DIVISION OF LAND DEVELOPMENT //

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, SOIL COMPACTION, OR EXCAVATION, INTRODUCTION OF TOXIC CHEMICALS OR OTHER DISTURBANCES DETRIMENTAL TO THE LIVE SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION

PLANTING SPECIFICATIONS AND NOTES SITE PREPARATION AND SOILS

PROTECTIVE FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS PER PLAN LOCATIONS. PROTECTIVE FENCING WILL NOT NECESSARY ALONG THOSE PERIMETERS WHERE SILT FENCE HAS BEEN INSTALLED FOR SEDIMENT CONTROL. 2. DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR FACH PLANT.

3. SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE. 4. SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY

INCORPORATE 25% BY VOLUME PEAT MOSS.

5. ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE. 3. PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED. 4. UNTIL PLANTED. ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

PLANT INSTALLATION

- 1. THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
- 2. PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST. CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF
- ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. 4. CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENCIRCLI THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT
- BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
- THE CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5) PER SPECIES, OVER THE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED IN THE PLANT LIST. ** A STRAIGHT GRID PATTERN SPACING IS TO BE AVOIDED. TREES SHALL E PLANTED ON AN AVERAGE SPACING AS INDICATED IN THE PLANT LIST TO
- ORTAIN A MORE NATURAL APPEARANCE. NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP, WELL DRAINED NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.
- ** IN AREAS WHERE REFORESTATION IS ADJACENT TO PROJECT BOUNDARIES, LANDSCAPE SIZE PLANT MATERIAL MUST BE INSTALLED MUST BE INSTALLED FIRST, IN ORDER TO SATISFY PERIMETER BUFFER REQUIREMENTS.

- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT. NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST to determine what is needed.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE Preferred to synthetic fertilizers. Bone meal or seaweed BASED PRODUCTS ARE AVAILABLE COMMERCIALLY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A MINIMUM OF TWO (2) YEAR PERIOD. INSPECT PLANTED STOCK FOR MORTALITY. REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS. EXPECT VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION
- TO OCCUR. DO NOT DISCOURAGE THIS GROWTH UNLESS IT NEGATIVELY EFFECTS THE PLANTED STOCK. MANUALLY REMOVE AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- REMOVE AND DISPOSE OF ANY MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN THE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT S SMOTHERING PLANTING STOCK OR INTERFERES WITH THE REFORESTATION
- 6. A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS WILL BE REQUIRED TO BRING THE PLANTED STOCK SURVIVAL

SUPERVISION

. ALL FOREST CONSERVATION ACTIVITIES SHALL BY DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

OLD REDERICK ROAD (MD. RTE. 99) FOREST CONSERVATION EASEMENT. (REFORESTATION) 0.56 ACRES R-20 LOT 2 FRIENDLY FARMS FRIENDLY FARMS PLAT 6363-PLAT 6363 R-20 PROTECTIVE FENCE DETAIL FOREST BLAZE ORANGE PLASTIC MESH CONSERVATION AREA ANCHOR POSTS SHOULD BE REFORESTATION AINIMUM 2" STEEL 'U' CHANNEL USE 2" X 4" OR 2" X 2" TIMBER, 6' IN LENGTH LUMBER FOR CROSS BRACING PROJECT HIGHLY VISIBLE FLAGGING -FOREST CONSERVATION EASEMENT TREES FOR YOUR (REFORESTATION) 0.71 ACRES FUTURE -MAXIMUM 8 FEET ---EASEMENT (RETENTION) FOREST CONSERVATION FOREST PRESERVATION AREA ANCHOR POSTS MUST BE INSTALLED TO A DEPTH OF USE 8" WIRE 'U' TO SECURE NO LESS THAN 1/3 OF THE TREES FOR YOUR FENCE BOTTOM

FUTURE

TOTAL HEIGHT OF POST FOREST PROTECTION DEVICE ONLY.

RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.

BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING

SIGNAGE DETAIL NOT TO SCALE 3' TO 5' WHIP OR TREE - BACKFILL WITH EXISTING NATIVE SOIL --3"-4" MULCH EXISTING-1" LOWER THAN NURSERY **TOPSOIL** └─ CONVEX BOTTOM

TREE PLANTING DETAIL

CONTAINER GROWN

FOREST CONSERVATION DATA I. BASIC SITE DATA ACRES GROSS SITE AREA 23.49 AREA WITHIN 100 YEAR FLOODPLAIN AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL 0.00 NET TRACT AREA LAND USE CATEGORY RESIDENTIAL (SUBURBAN) II. FOREST CONSERVATION WORKSHEET DATA SUMMARY B. REFORESTATION THRESHOLD (20%) AFFORESTATION MINIMUM (15%) EXISTING FOREST ON NET TRACT AREA 5.43 FOREST AREAS TO BE CLEARED 4.59 FOREST AREAS TO BE RETAINED IV, REFORESTATION CALCULATIONS G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD 0.33 REFORESTATION FOR CLEARING ABOVE THRESHOLD REFORESTATION FOR CLEARING BELOW THRESHOLD 6.58 TOTAL REFORESTATION REQUIRED 6.91 3.52 TOTAL REFORESTATION PROVIDED 3.39 TOTAL FEE-IN-LIEU OF REFORESTATION

<u>LEGEND</u>

STREAM/INTERMITTENT

75' STREAM BUFFER

EXISTING CONTOUR

PROPOSED TREELINE

15% TO 25% SLOPES

FOREST CONSERVATION EASEMENT

(REFORESTATION)

PROTECTIVE

FENCING IN

SEE SHEET

BLOCK 6

1091/117

PARCEL 21

SREST CONSERVATION

FORESTATION)

FOREST CONSERVATION

EASEMENT

(RETENTION)

0.44 ACRES NON-CREDITED FOREST

N 600,000

(RETENTION) 1.26 ACRES

0.65 ACRES CREDITED FOREST

EASEMENT

0.54 ACRES

KENNARD WARFIELD

V 0.82 ACRES

TREE PROTECTIVE FENCING

SLOPES, 25% AND GREATER

FOREST CONSERVATION SIGNAGE

50' INTERMITTENT BUFFER 100 YR. FLOODPLAIN

MD DNR QUALIFIED PROFESSIONAL

ER(

REFORESTATION PLANT LIST (WETLAND & FLOODPLAIN AREAS)

| QTY. | SPECIES | SHADE TOL. | MOIST. REGIME | WET. STATUS | MIN.O.C. SPACING | SIZE & REMARKS |
|---------------------|--|---------------|------------------|----------------|---------------------|-------------------|
| 140 | Acer negundo Box Elder | T | MW | FAC+ | 8, | SEEDLING |
| 140 | Acer rubrum Red Maple | VT | D-W | FAC | 20' | SEEDLING |
| 140 | Fraxinus pennsylvanica Green Ash | I-MT | M-W | FACW | 11' | SEEDLING |
| 129 | Hamamelis virginiana Witch Hazel | T | M-W | FACW- | 6, | SEEDLING |
| 129 | Lindera benzoin Spicebush | Т | М | FACW- | 6' | SEEDLING |
| 140 | Nyssa sylvatica Black Gum | T | M-W | FAC | 20' | SEEDLING |
| 140 | Platanus occidentalis American Sycamore | МT | M-W | FACW- | 11' | SEEDLING |
| 140 | Quercus phellos Willow Oak | 1 | M-W | FAC+ | 20' | SEEDLING |
| 140 | Salix nigra Black Willow | VI | M-W | FACW+ | 20' | SEEDLING |
| 130 | Vaccinium corymbosum Highbush Blueberry | мт | M-W | FACW- | 6' | SEEDLING |
| 130 | Viburnum dentatum Southern Arrowwood | T | М | FACW- | 6' | SEEDLING |
| <u>TOTA</u> 1498 | <u>al</u> Seedlings | | | | | |

REFORESTATION PLANT LIST

(UPLAND AREAS ALONG OLD FREDERICK ROAD)

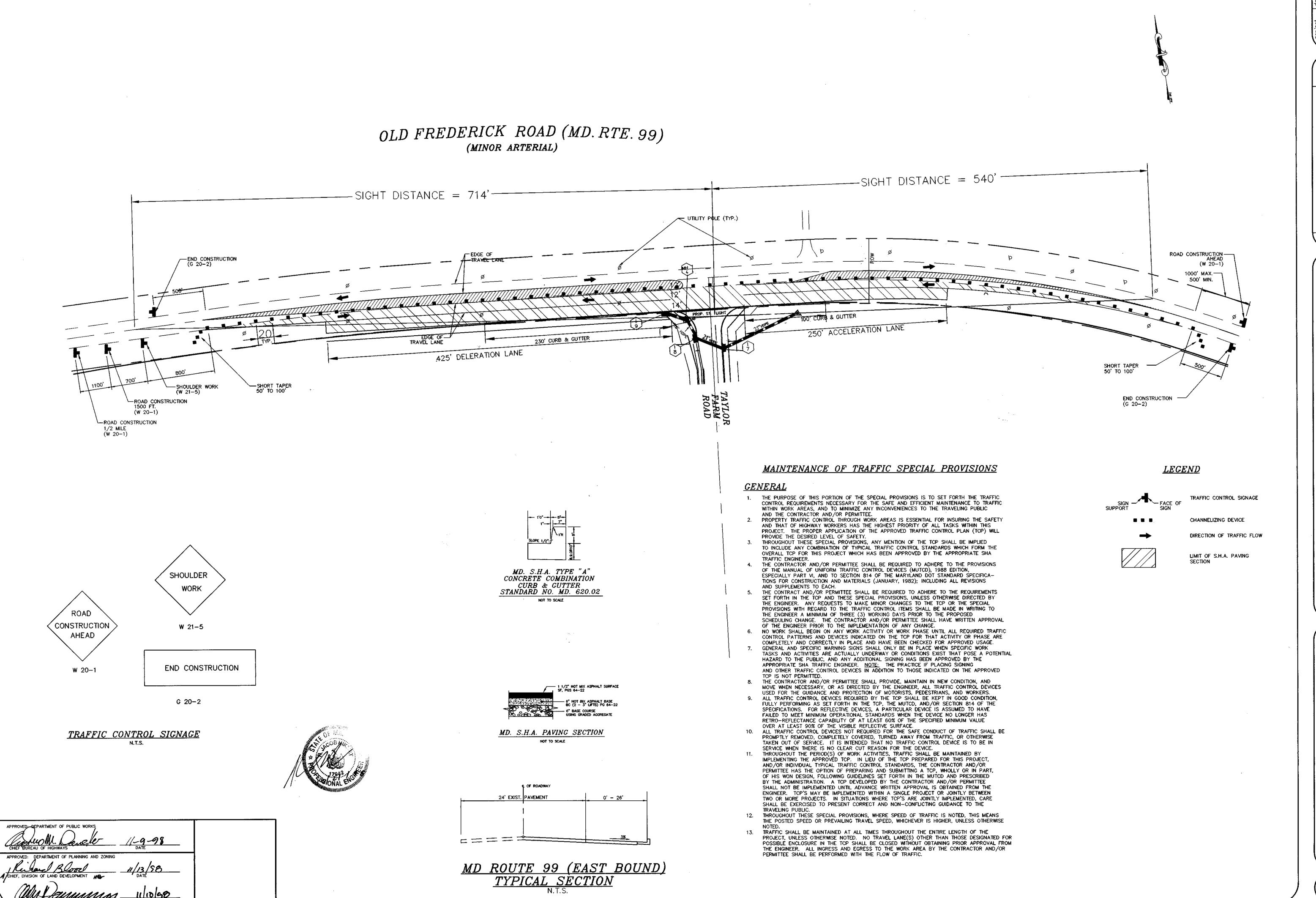
| QTY. | SPECIES | SHADE TOL. | MOIST. REGIME | WET. STATUS | MIN.O.C. SPACING | SIZE & REMARKS |
|----------------------|---|---------------|------------------|----------------|---------------------|-------------------|
| 90 | Acer rubrum Red Maple | VΤ | D- W | FAC | 20' | SEEDLING |
| 84 | Cornus florida Flowering Dogwood | VŤ | D-M | FACU- | - 11' | SEEDLING |
| 90 | Fagus grandifolia American Beech | VT | М | FACU | 20' | SEEDLING |
| 90 | Fraxinus americana White Ash | МТ | D -M | FACU | 11' | SEEDLING |
| 90 | Juglans nigra Black Walnut | VT | М | FACU | 11' | SEEDLING |
| 90 | Liriodendron tulipifera Tulip Poplar | MT | M-W | FAC | 20' | SEEDLING |
| 84 | Nyssa sylvatica Black Gum | T | M-W | FAC | 20' | SEEDLING |
| 84 | Prunus serotina Black Cherry | MT | D- W | FAC | 15' | SEEDLING |
| 90 | Quercus alba White Oak | ı | M-W | FAC+ | 20' | SEEDLING |
| 90 | Quercus rubra Red Oak | МТ | D-M | UPL | 20' | SEEDLING |
| 84 | Sassafras albidum Common Sassafras | МТ | D-M | FACU | 15' | SEEDLING |
| <u>1014</u> 966 S | AL EEDLINGS | | | | | |

12 of 13

F98-141

8|8

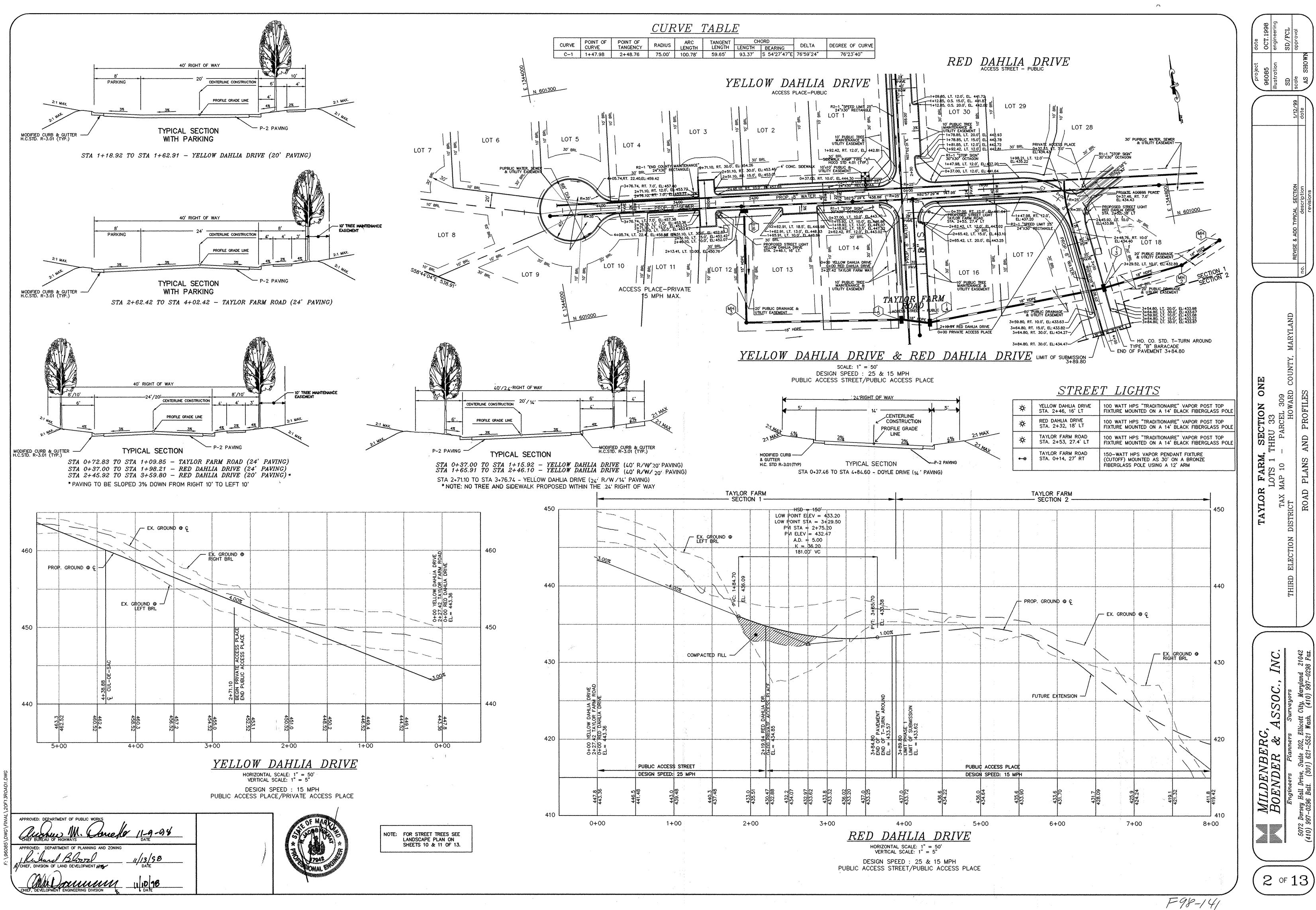
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13 of 13

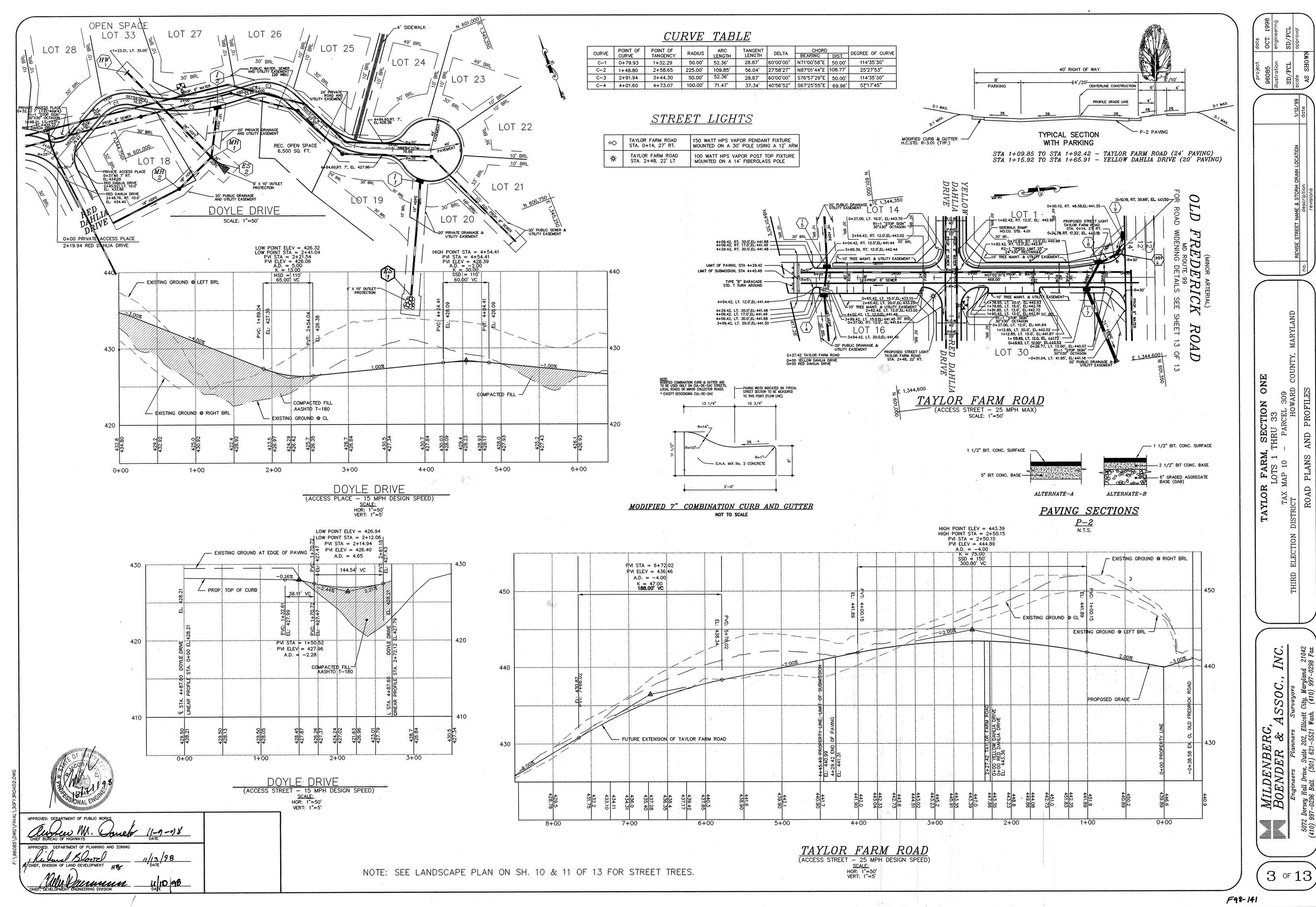
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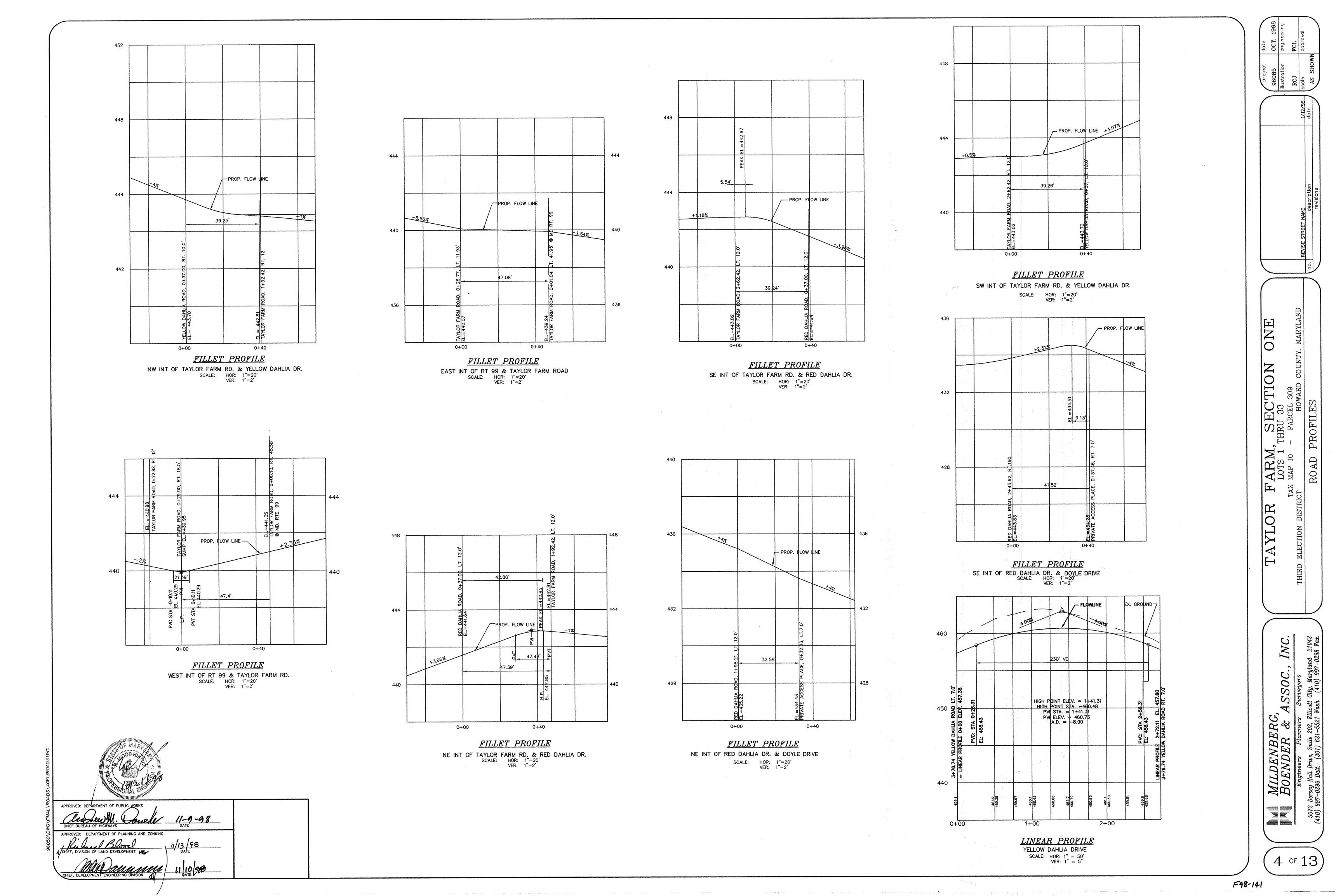
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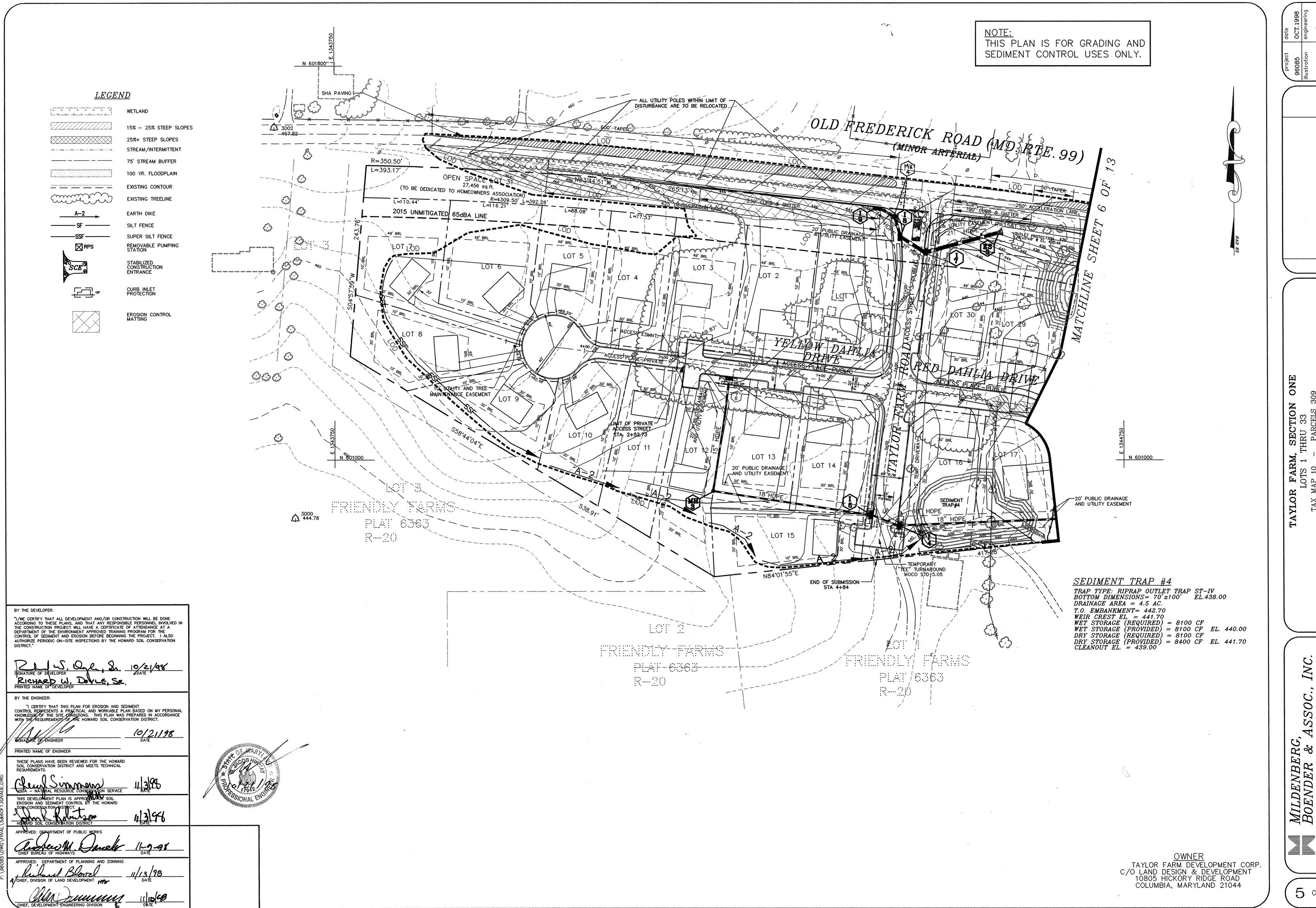


AND

ROAD PLA

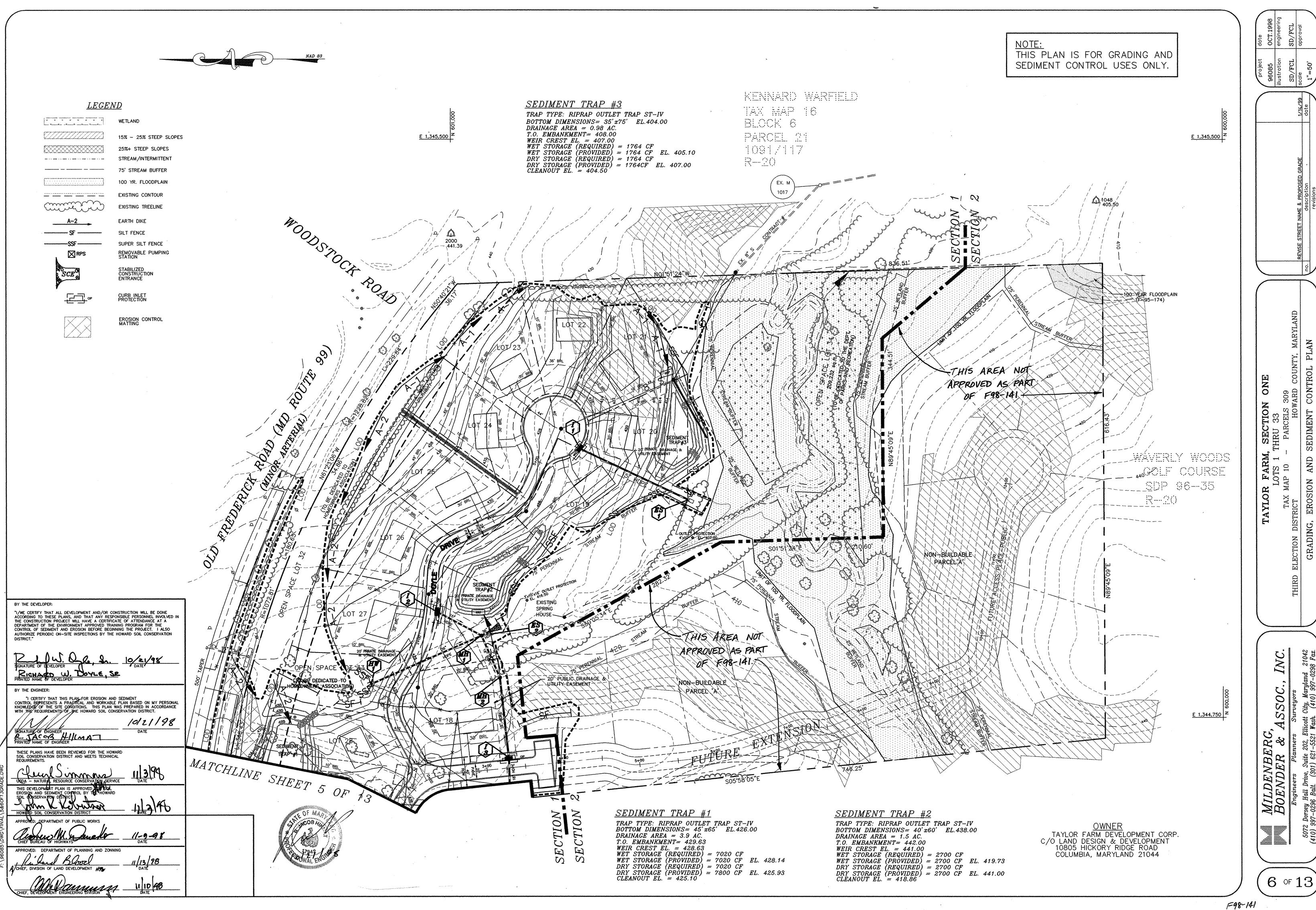






EROSION

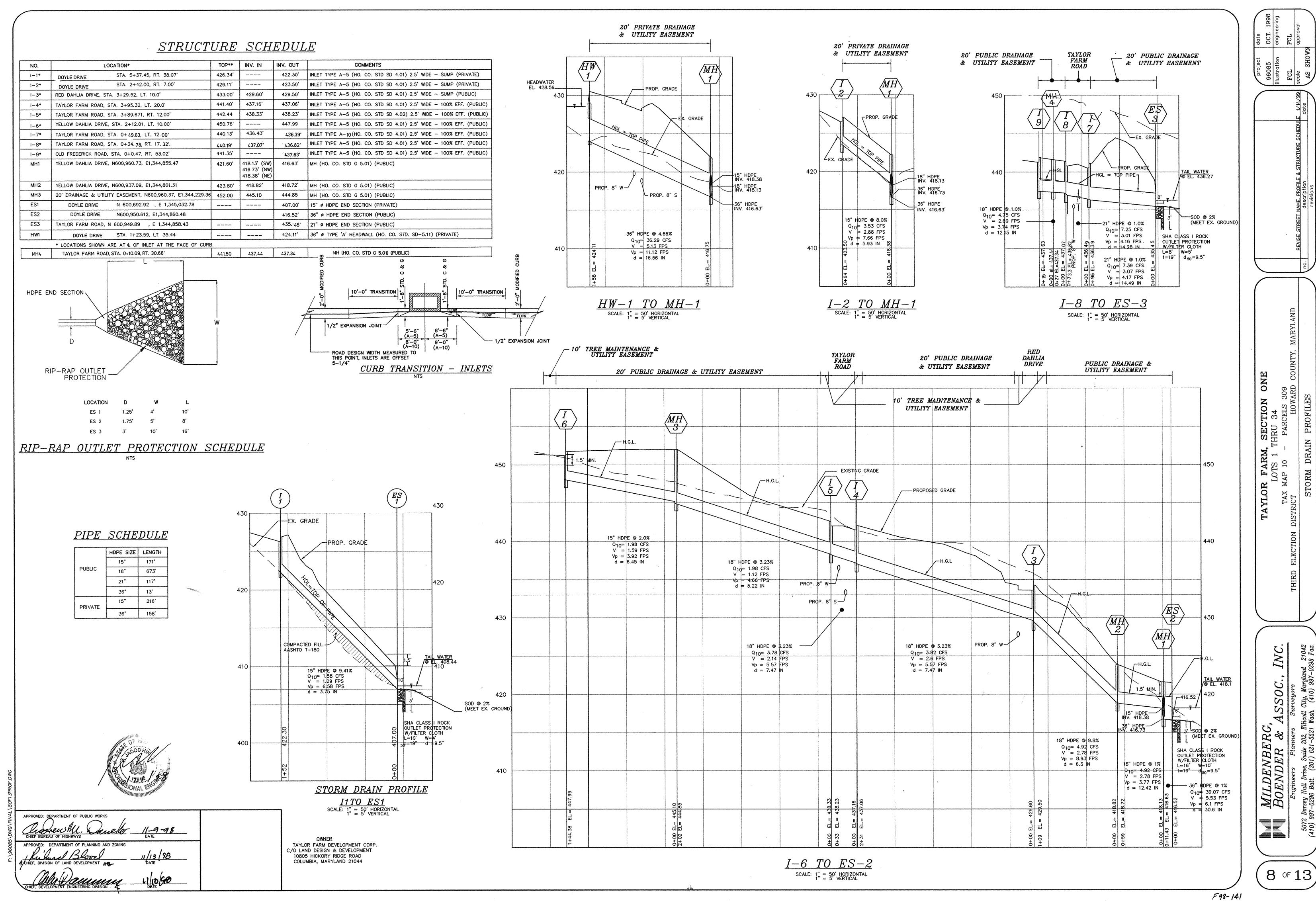
INC.



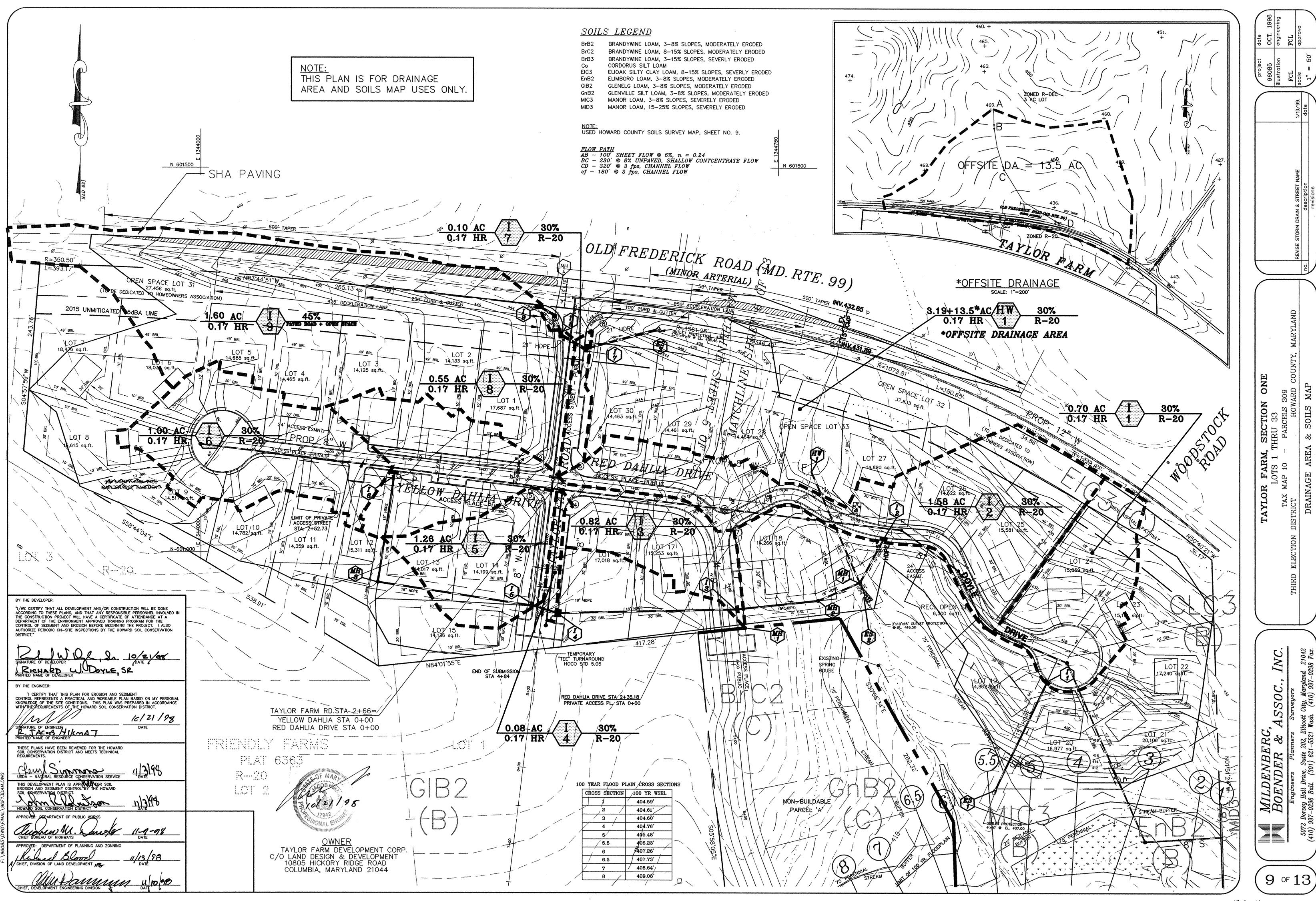
SEDIMENT

AND

6 of 13)



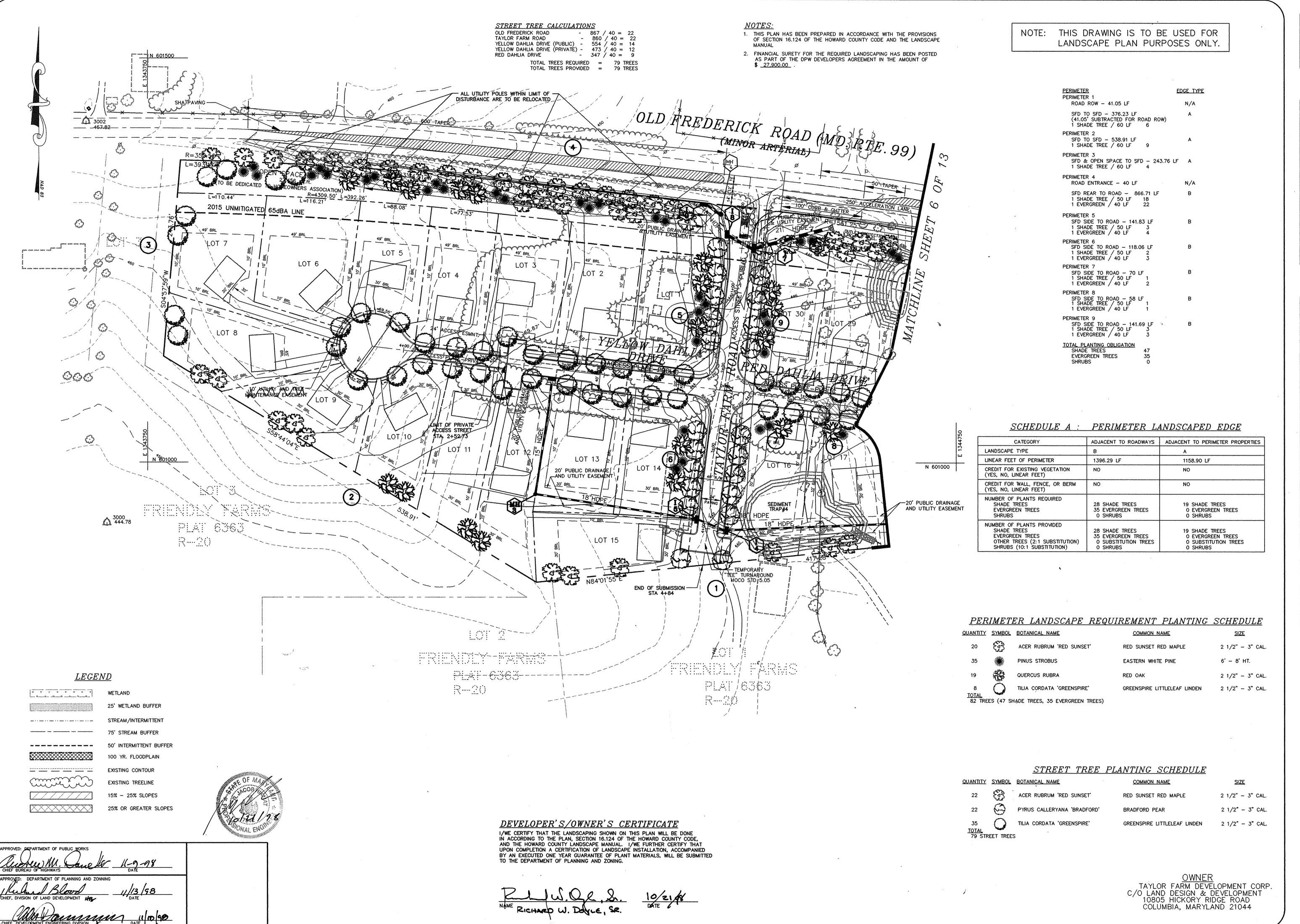
STORM



TAX MAP

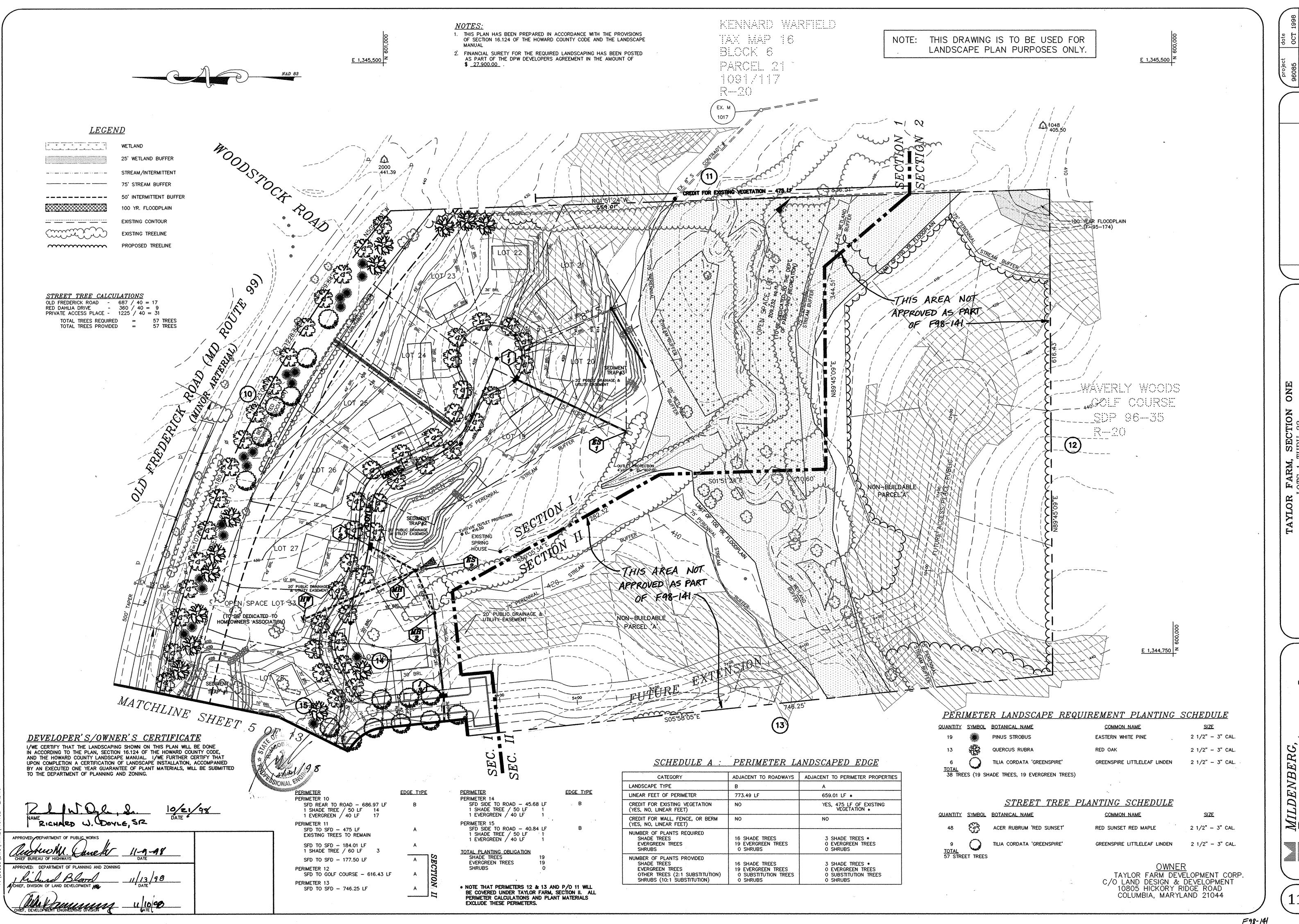
TRICT

DRAINAGE



YLOR

Soc.



 $11 \circ 13$

NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.

- FEE-IN-LIEU OF REFORESTATION HAS BEEN REQUESTED FOR THE REMAINING AREA REQUIRED TO BE REFORESTED BY THE HOWARD COUNTY FOREST CONSERVATION MANUAL, SEE FOREST CONSERVATION CALCULATIONS THIS SHEET. (6.91 ACRES OF REFORESTATION IS REQUIRED. 3.52 ACRES OF REFORESTATION HAS BEEN SHOWN ON-SITE. THE REMAINING 3.39 ACRES WILL BE A PART OF THE FEE-IN-LIEU REQUEST.)

GENERAL NOTES

FOREST PROTECTION ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED

BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY AT THE TIME OF INSTALLATION OF THE SILT FENCE. THIS SHALL BE DONE PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES. THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES. ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE

FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY. ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS. INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DEWATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND

DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES. THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.

THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED. BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:

TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS: INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES; MAKE ALL NECESSARY ADJUSTMENTS: ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS

CONSTRUCTION MONITORING

THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT, A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.

THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS PERMITTED BY THE HOWARD COUNTY

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, SOIL COMPACTION, OR EXCAVATION, INTRODUCTION OF TOXIC CHEMICALS OR OTHER DISTURBANCES DETRIMENTAL TO THE LIVE SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION

PLANTING SPECIFICATIONS AND NOTES SITE PREPARATION AND SOILS

1. PROTECTIVE FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS PER PLAN LOCATIONS. PROTECTIVE FENCING WILL NOT NECESSARY ALONG THOSE PERIMETERS WHERE SILT FENCE HAS BEEN INSTALLED FOR SEDIMENT CONTROL. 2. DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT.

3. SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE 4. SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF

EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD

LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.

5. ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

1. FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE. 2. FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE. 3. PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE

4. UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

APPROVED: DEPARTMENT OF PUBLIC WORKS Blood IEF. DIVISION OF LAND DEVELOPMENT 🦊

PLANT INSTALLATION

1. THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.

2. PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST. CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES.

CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENCIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING

FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY. THE CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO
(2) TO FIVE (5) PER SPECIES, OVER THE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED IN THE PLANT LIST. ** 7. A STRAIGHT GRID PATTERN SPACING IS TO BE AVOIDED. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED IN THE PLANT LIST TO

OBTAIN A MORE NATURAL APPEARANCE. 8. NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP, WELL DRAINED NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.

** IN AREAS WHERE REFORESTATION IS ADJACENT TO PROJECT BOUNDARIES, LANDSCAPE SIZE PLANT MATERIAL MUST BE INSTALLED MUST BE INSTALLED FIRST, IN ORDER TO SATISFY PERIMETER BUFFER REQUIREMENTS.

FERTILIZING

1. DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT. NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE WHAT IS NEEDED. 3. IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALLY AND ARE

RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO

THE PLANT, AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS

NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

MAINTENANCE SCHEDULE

ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A MINIMUM OF TWO (2) YEAR PERIOD. 2. INSPECT PLANTED STOCK FOR MORTALITY. REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.

EXPECT VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION TO OCCUR. DO NOT DISCOURAGE THIS GROWTH UNLESS IT NEGATIVELY EFFECTS THE PLANTED STOCK.

4. MANUALLY REMOVE AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK. REMOVE AND DISPOSE OF ANY MAN-MADE TRASH, INCLUDING ITEMS

CONTAINED WITHIN THE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK OR INTERFERES WITH THE REFORESTATION

6. A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS WILL BE REQUIRED TO BRING THE PLANTED STOCK SURVIVAL

1. ALL FOREST CONSERVATION ACTIVITIES SHALL BY DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

QTY. SPECIES

140 Acer rubrum

Fraxinus pennsylvanica

Hamamelis virginiana

Platanus occidentalis

American Sycamore

Vaccinium corymbosum

Highbush Blueberry

Viburnum dentatum

Southern Arrowwood

Quercus phellos

Willow Oak

140

130

1498 SEEDLINGS

Witch Hazel

Nyssa sylvatica Black Gum

REFORESTATION PLANT LIST

(WETLAND & FLOODPLAIN AREAS)

VT D-W FAC

REGIME STATUS SPACING REMARKS

20,

SEEDLING

SEEDLING

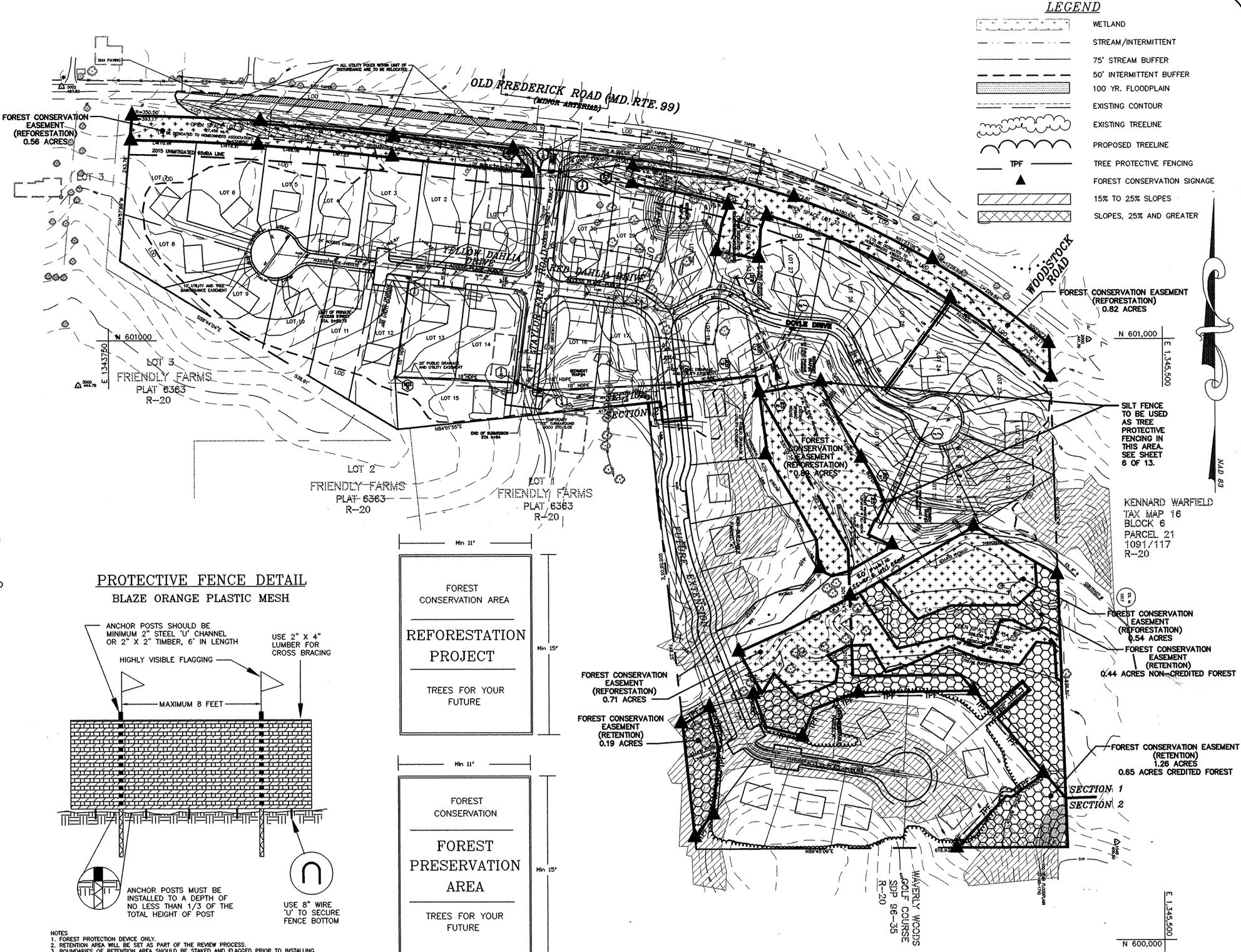
FAC+

M-W FACW-

M-W FACW-

M-W FACW+

FACW-



FOREST PROTECTION DEVICE ONLY.

RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.

BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING 4. ROOT DAMAGE SHOULD BE AVOIDED. 5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

QTY. SPECIES

90 Acer rubrum

Red Maple

90 Fagus grandifolio

Cornus florida

Flowering Dogwood

American Beech

90 Fraxinus americana

Juglans nigra Black Walnut

Nyssa sylvatica

Prunus serotina

Black Cherry

Quercus albo

Quercus rubra

966 SEEDLINGS

Sassafras albidum

Common Sassafras

Black Gum

Liriodendron tulipifero

REFORESTATION PLANT LIST

(UPLAND AREAS ALONG OLD FREDERICK ROAD)

MT D-M

M-W

VT D-W FAC

SHADE MOIST, WET, MIN.O.C. SIZE &

TOL. REGIME STATUS SPACING REMARKS

FACU

FACU

FACU

20'

20'

FACU 11'

FACU- 11' SEEDLING

SEEDLING

SEEDLING

SEEDLING

SEEDLING

SEEDLING

SEEDLING

SIGNAGE DETAIL NOT TO SCALE 3' TO 5' WHIP OR TREE BACKFILL WITH EXISTING NATIVE SOIL _ 3"-4" MULCH "GROUND LINE "LOWER THAN EXISTING -TOPSOIL CONVEX BOTTOM

TREE PLANTING DETAIL

CONTAINER GROWN

FOREST CONSERVATION DATA I. BASIC SITE DATA GROSS SITE AREA AREA WITHIN 100 YEAR FLOODPLAIN AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL NET TRACT AREA LAND USE CATEGORY RESIDENTIAL (SUBURBAN) II. FOREST CONSERVATION WORKSHEET DATA SUMMARY REFORESTATION THRESHOLD (20%) AFFORESTATION MINIMUM (15%) EXISTING FOREST ON NET TRACT AREA FOREST AREAS TO BE CLEARED FOREST AREAS TO BE RETAINED IV, REFORESTATION CALCULATIONS G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD REFORESTATION FOR CLEARING ABOVE THRESHOLD REFORESTATION FOR CLEARING BELOW THRESHOLD TOTAL REFORESTATION REQUIRED TOTAL REFORESTATION PROVIDED TOTAL FEE-IN-LIEU OF REFORESTATION MD DNR QUALIFIED PROFESSIONAL

V 0.82 ACRES

N 601,000

PROTECTIVE

FENCING IN

THIS AREA.

SEE SHEET

KENNARD WARFIELD

TAX MAP 16

BLOCK 6

1091/117

PARCEL 21

PREST CONSERVATION

FORESTATION)

FOREST CONSERVATION

(RETENTION)

0.44 ACRES NON CREDITED FOREST

1.26 ACRES

0.65 ACRES CREDITED FOREST

ACRES

-0.00

20.64

5.43

6.91

3.52

N 600,000

EASEMENT

EASEMENT

S0V

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